



**CONSTRUCTION CRAFTS**  
**Intermediate 1**

**Third edition –February 2011**

**NOTE OF CHANGES TO ARRANGEMENTS  
THIRD EDITION PUBLISHED FEBRUARY 2011**

**COURSE TITLE** Construction Crafts (Intermediate 1)

**COURSE NUMBER:** C218 10

**National Course Specification:** The Course Arrangements updated to include  
DX0L 11(Construction Crafts: One Brick Walling)  
FF33 10(Construction Crafts: Stonemasonry)  
DX0T 11(Construction Crafts: Plumbing of Sanitary  
Appliances)



## National Course Specification

### Construction Crafts (Intermediate 1)

**COURSE CODE C218 10**

#### COURSE STRUCTURE

This Course has five mandatory Units and a choice of three from seven optional Units.

The mandatory Units are:

|  |                   |                   |
|--|-------------------|-------------------|
| <i>DM7C 10 Construction Crafts: Employability Skills</i>             | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7G 10 Construction Crafts: Half Brick Walling</i>               | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7K 10 Construction Crafts: Decorative Painting</i>              | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7J 10 Construction Crafts: Site Carpentry and Bench Joinery</i> | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7E 10 Construction Crafts: Plumbing</i>                         | <i>0.5 credit</i> | <i>(20 hours)</i> |

The optional Units are:

|  |                   |                   |
|--|-------------------|-------------------|
| <i>DM7W 10 Construction Crafts: Practical Copper Pipework</i>                    | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM81 10 Construction Crafts: Brickwork Techniques</i>                         | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM82 10 Construction Crafts: Carpentry and Joinery Techniques</i>             | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7Y 10 Construction Crafts: Decorative Finishes Using Water-borne Paints</i> | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7T 10 Construction Crafts: Electrical Installation</i>                      | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7R 10 Construction Crafts: Plasterwork</i>                                  | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DM7N 10 Construction Crafts: Roof Tiling</i>                                  | <i>0.5 credit</i> | <i>(20 hours)</i> |
| <i>DX0T 11 Construction Crafts: Plumbing of Sanitary Appliances</i>              | <i>1 credit</i>   | <i>(40 hours)</i> |
| <i>DX0L 11 Construction Crafts: One Brick Walling</i>                            | <i>1 credit</i>   | <i>(40 hours)</i> |
| <i>FF33 10 Construction Crafts: Stonemasonry</i>                                 | <i>0.5 credit</i> | <i>(20 hours)</i> |

To achieve the Course award the candidate must successfully achieve all the Units which make up the Course.

#### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

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#### Administrative Information

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## National Course Specification: Course details (cont)

### COURSE Construction Crafts (Intermediate 1)

#### PROGRESSION

This Course or its Units may provide progression to:

- ◆ Construction Crafts Intermediate 2
- ◆ Scottish Vocational Qualifications in construction crafts
- ◆ further education
- ◆ training/employment

#### CREDIT VALUE

The Intermediate 1 Course in Construction Crafts is allocated 24 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 is allocated a number of SCQF credit 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 or Core Skills components in this Course.

Opportunities for developing aspects of Core Skills are highlighted in the Support Notes of the Unit Specifications for this Course.

#### LINKS TO NATIONAL OCCUPATIONAL STANDARDS

National Occupational Standards (NOS) are developed by the key employment sectors of the United Kingdom. These standards set the competences required for job roles within a particular employment sector.

The Intermediate 1 Construction Crafts Course has been designed to link broadly to National Occupational Standards, but the standards required of first-year apprentices in the building industry are significantly more onerous than those in this Course.

Compared to Occupational Standards, this Course requires either reduced scale and complexity, or more achievable tolerances, and therefore provides a useful preparation for employment or further training in the construction industry.

The Unit *Construction Crafts: Half Brick Walling* requires candidates to build a straight wall with a stopped end and racked back of given dimensions. In this case, it is the scale of the task which has been reduced, rather than the tolerances required.

In other Units in the Intermediate 1 Construction Crafts Course, the tolerances required are suitably less stringent than those required of trades' apprentices.

## National Course Specification: Course details (cont)

**COURSE** Construction Crafts (Intermediate 1)

### RATIONALE FOR SKILLS FOR WORK COURSES

Skills for Work Courses are designed to help candidates to develop:

- ◆ skills and knowledge in a broad vocational area
- ◆ Core Skills
- ◆ an understanding of the workplace
- ◆ positive attitudes to learning
- ◆ skills and attitudes for employability

A key feature of these Courses is the emphasis on *experiential learning*. This means learning through practical experience and learning by reflecting on experience.

#### Learning through practical experience

- ◆ Teaching/learning programmes should include some or all of the following:
  - learning in real or simulated workplace settings
  - learning through role play activities in vocational contexts
  - carrying out case study work
  - planning and carrying out practical tasks and assignments

#### Learning through reflecting at all stages of the experience

- ◆ Teaching/learning programmes should include some or all of the following:
  - preparing and planning for the experience
  - taking stock throughout the experience — reviewing and adapting as necessary
  - reflecting after the activity has been completed — evaluating and identifying learning points

The Skills for Work Courses are also designed to provide candidates with opportunities for developing *Core Skills* and enhancing skills and attitudes for *employability*.

#### Core Skills

The **five** Core Skills are:

- ◆ Communication
- ◆ Numeracy
- ◆ Information Technology
- ◆ Problem Solving
- ◆ Working with Others

## National Course Specification: Course details (cont)

### COURSE Construction Crafts (Intermediate 1)

#### Employability

The skills and attitudes for employability, including self-employment, are outlined below:

- ◆ *generic skills/attitudes valued by employers*
  - understanding of the workplace and the employee's responsibilities, for example time-keeping, appearance, customer care
  - self-evaluation skills
  - positive attitude to learning
  - flexible approaches to solving problems
  - adaptability and positive attitude to change
  - confidence to set goals, reflect and learn from experience
  
- ◆ *specific vocational skills/knowledge*
  - Course Specifications highlight the links to National Occupational Standards in the vocational area and identify progression opportunities

Opportunities for developing these skills and attitudes are highlighted in each of the Course and Unit Specifications. These opportunities include giving young people direct access to workplace experiences or, through partnership arrangements, providing different learning environments and experiences which simulate aspects of the workplace. These experiences might include visits, visiting speakers, role play and other practical activities.

*A Curriculum for Excellence* (Scottish Executive 2004) identifies aspirations for every young person. These are that they should become:

- ◆ successful learners
- ◆ confident individuals
- ◆ responsible citizens
- ◆ effective contributors

The learning environments, the focus on experiential learning and opportunities to develop employability and Core Skills in these Courses contribute to meeting these aspirations.

## National Course Specification: Course details (cont)

### COURSE Construction Crafts (Intermediate 1)

#### RATIONALE FOR INTERMEDIATE 1 CONSTRUCTION CRAFTS COURSE

The construction industry is a major employer and significant contributor to the Scottish economy. There is a need for trainees in all of the trades in this diverse sector. The Intermediate 1 Course allows candidates to gain an insight into several of the important trades and to make informed choices regarding a career in construction.

The Intermediate 1 Construction Crafts Course has been designed to provide a basis for progression into further education or for moving directly into training in employment within the construction sector. The purpose of the Course is to ensure that candidates start to develop the general skills, practical skills, knowledge and understanding and employability skills needed within the sector.

The primary target group for this Course is school candidates in S3 and S4. It is anticipated that, for this group of candidates, the Course will rely on and build on existing partnerships between schools and colleges (or other agencies). This may be particularly pertinent in the case of the Construction Crafts Course due to the specialist expertise and facilities available in, for example, Further Education colleges and training providers. Nevertheless, the Construction Crafts Course is designed at a level and scope such that it can be delivered in schools, if the school has suitable facilities and teaching expertise. The Course is also suitable for adult candidates who are seeking to enhance their employability and develop introductory vocational skills in the construction sector.

The general aims of the Construction Crafts Course are to:

- ◆ widen participation in vocationally-related learning
- ◆ allow candidates to experience vocationally-related learning
- ◆ provide candidates with a broad introduction to the construction crafts vocational sector
- ◆ encourage candidates to foster a good work ethic, including timekeeping, a positive attitude and other relevant employability skills
- ◆ provide opportunities to develop a range of Core Skills in a realistic context
- ◆ encourage candidates to take charge of their own learning and development
- ◆ provide a range of teaching, learning and assessment styles to motivate candidates to achieve their full potential
- ◆ facilitate progression to further education and/or training

In particular, the aims of this Course in Construction Crafts are to:

- ◆ give candidates the technical knowledge, skills and understanding associated with a range of craft skills in construction at this level
- ◆ develop an awareness that health and safety issues are central to the world of work, and in particular to the construction industry
- ◆ encourage candidates to interact with their peers and tutors to complete practical tasks
- ◆ encourage candidates to develop a positive attitude to waste minimisation and environmental issues
- ◆ enable candidates to develop and apply practical, technical and communication skills as a foundation for future learning and progression
- ◆ encourage candidates to apply their knowledge and understanding of construction by using skills of evaluation and problem-solving in a vocational context
- ◆ encourage candidates to plan their work and review their progress
- ◆ prepare candidates for further learning opportunities, study and training for employment in construction and the built environment sectors and related occupations

## National Course Specification: Course details (cont)

### **COURSE** Construction Crafts (Intermediate 1)

The Intermediate 1 Course in Construction Crafts has been designed with Occupational Standards in mind. There is a link, though not directly, to these Standards. The standards required of first -year apprentices in the building industry are, and should remain, significantly more onerous than those for this Course which is at an introductory level.

While no formal entrance qualifications are required for this Intermediate 1 Course, it would be expected that candidates embarking on the Course would find the following learning skills and aptitudes helpful:

- ◆ basic proficiency in literacy
- ◆ basic proficiency in numeracy
- ◆ some aptitude for graphical forms of communication (the reading of basic drawings is required by the Course)
- ◆ motivation to work independently

This Course supports progression into appropriate further education or for training in employment. The Course provides the basis for candidates to gain an insight into craft occupations such as brickwork and plastering, and to use their studies to help them decide the career they wish to follow.

Candidates studying the *Intermediate 1 Construction Crafts Course* may progress into a craft apprenticeship and undertake a Scottish Vocational Qualification whilst in employment. They may also choose to progress to a full-time pre-vocational Course in a further education college. All candidates will benefit from the transferable employability skills developed in this Course, regardless of which career they choose to follow.

### **COURSE CONTENT**

#### **Summary of Course content**

This Course has a mandatory section of five 20 hour Units. One of these 20 hour Units addresses a range of employability skills related to the Construction Industry. The other four 20 hour Units in this mandatory section focus on four high uptake craft areas.

The optional section requires candidates to take three 20 hour Units from a choice of seven. The Units in this section can be chosen to extend the candidate's experience of some of the craft skills already taken in the mandatory section, or to enable the candidate to gain experience of a wider range of craft skills.

All the craft skills Units, while focusing on specific craft skill areas, also address some generic skills related to checking the quality of their work and health and safety issues.

## National Course Specification: Course details (cont)

### **COURSE** Construction Crafts (Intermediate 1)

#### **Summary of Unit content**

#### **Mandatory Units**

##### **Construction Crafts: Employability Skills (Intermediate 1) (0.5 credit)**

Candidates are required to develop work practices and attitudes that enhance their employability. They will have opportunities to review the skills they have developed. They will also develop skills in measurement and interpretation of drawings.

##### **Construction Crafts: Half Brick Walling (Intermediate 1) (0.5 credit)**

Candidates are required to set out and build short sections of half-brick thick wall in accordance with given drawings and to prescribed tolerances.

##### **Construction Crafts: Decorative Painting (Intermediate 1) (0.5 credit)**

Candidates will carry out work with decorative finishes involving the use of brushes and rollers as well as stencilling.

##### **Construction Crafts: Site Carpentry and Bench Joinery (Intermediate 1) (0.5 credit)**

Candidates are required to carry out small-scale tasks in both first-fix and second-fix joinery. They will learn skills in measurement, cutting and fixing of timbers and sheet materials.

##### **Construction Crafts: Plumbing (Intermediate 1) (0.5 credit)**

Candidates are required to cut, assemble and join plastic pipework in accordance with given drawings using proprietary bends and tee-pieces.

#### **Optional Units**

##### **Construction Crafts: Practical Copper Pipework (Intermediate 1) (0.5 credit)**

Candidates will learn how to cut, assemble and join copper pipework in accordance with given drawings.

##### **Construction Crafts: Brickwork Techniques (Intermediate 1) (0.5 credit)**

Candidates are required to set out and build extended sections of half -brick thick wall. This extended work will require the use of builders' line. Once again, the work will be carried out in accordance with given drawings and to prescribed tolerances.

##### **Construction Crafts: Carpentry and Joinery Techniques (Intermediate 1) (0.5 credit)**

Candidates are required to erect a small-scale framed and panelled assembly and to fabricate and replace one panel to carefully match existing.

## National Course Specification: Course details (cont)

### **COURSE** Construction Crafts (Intermediate 1)

#### **Construction Crafts: Decorating Finishes Using Water-borne Paints (Intermediate 1) (0.5 credit)**

Candidates are required to carry out additional paintwork tasks with purely water-borne paints. This will include a proprietary two-coat system.

#### **Construction Crafts: Electrical Installation (Intermediate 1) (0.5 credit)**

Candidates are required to wire up and connect a number of different fittings.

#### **Construction Crafts: Plasterwork (Intermediate 1) (0.5 credit)**

Candidates will work with a range of plastering equipment and materials and will be required to apply plaster to walls and manufacture plaster mouldings.

#### **Construction Crafts: Roof Tiling (Intermediate 1) (0.5 credit)**

Candidates are required to complete a small-scale exercise in single lap roofing tiling to correct gauge and lap.

#### **Construction Crafts: Plumbing of Sanitary Appliances (Intermediate 2) (1 credit)**

Candidates are required to assemble and install a significant piece of standard sanitaryware and connect and fix associated pipework.

#### **Construction Crafts: One Brick Walling (Intermediate 2) (1 credit)**

Candidates will learn how walls of one brick thick are bonded. They will carry out practical work employing at least one of the standard one-brick bonds.

#### **Construction Crafts: Stonemasonry (Intermediate 1) (0.5 credit)**

Candidates will build a short length of coursed rubble wall, select and maintain tools and produce surface finishes.

### **ASSESSMENT**

To achieve the Course award the candidate must successfully achieve all the Units which make up the Course.

#### **Assessment objectives**

Assessment across the Units in this Course will address the applied knowledge, skills and understanding associated with a range of craft skills in construction at Intermediate 1. In particular, assessment will focus on:

- ◆ practical vocational skills
- ◆ skills for employment in a Construction Craft context

## National Course Specification: Course details (cont)

**COURSE**            Construction Crafts (Intermediate 1)

### Unit assessment

**Construction Crafts: Employability Skills (Intermediate 1)            (0.5 credit)**

The assessment in this Unit is based on the completion of a candidate review sheet on four different occasions throughout the Course. This review allows the candidate to record development in employability skills in the context of different craft trades.

### All other Units

In all of the Units which focus on the development of specific craft skills, the assessment follows a similar pattern involving a range of practical activities which will produce evidence for all the Outcomes. The evidence will be confirmed by the use of an assessor checklist which will cover:

- ◆ the appropriate use of tools and materials
- ◆ successful involvement in the completion of a task, product or assembly
- ◆ quality checking of their work by the candidate to prescribed standards and tolerances
- ◆ attention to health and safety aspects of working in a workshop or similar environment

Further details about Unit assessment for this Course can be found in the Unit Specifications and the National Assessment Bank (NAB) materials.

## QUALITY ASSURANCE

The Units of all National Courses are subject to internal verification and may also be chosen for external verification by SQA. This is to ensure that national standards are being applied across all subjects.

To assist centres, Senior Verifier reports are published on SQA's website [www.sqa.org.uk](http://www.sqa.org.uk)

## GUIDANCE ON LEARNING/TEACHING AND ASSESSMENT APPROACHES FOR THIS COURSE

The Course has five mandatory Units and three optional Units selected from a choice of seven. The mandatory Units offer a broad range of different construction craft experiences. Units can be attempted in any order, but the mandatory Employability Skills Unit should span the Course, allowing candidates ample opportunity and time to develop and review employability skills and attitudes over a range of crafts and over a reasonable period of time.

Candidates may choose their three optional Units from a selection which includes broadening Units in the same trade crafts as the mandatory Units, and Units in new crafts.

If candidates undertake the mandatory Unit in a particular trade and the optional Unit in the same trade, there may be advantages in undertaking these Units consecutively, or even concurrently. The advantages in so doing may arise in terms of learning and teaching and also with regard to integration of assessment.

## **National Course Specification: Course details (cont)**

### **COURSE     Construction Crafts (Intermediate 1)**

#### **Learning and Teaching**

The Course has been designed to ensure that candidates learn through practical experiences. The main focus in each of the trade specific Units is on practical work. General vocational skills, such as selecting and maintaining tools and equipment, are integrated with practical craft activities within the Units. As well as carrying out practical tasks, candidates will also learn from brief lessons on health and safety and workshop protocol. Teaching and learning approaches will also include demonstrations of practical work by tutors. Short lessons on specific aspects of trade practice and the correct use of tools will prove invaluable at intervals throughout the learning experience. These may be followed by brief practice sessions in which the candidates practice the skill emphasised by the demonstration. Given the practical nature of teaching/learning and assessment, centres should ensure that teaching blocks are of sufficient time to allow a meaningful experience for candidates.

Reflecting on practical experiences and learning from them is an approach which is embedded in the Course. Throughout the learning experiences, the emphasis should be on helping candidates to develop an awareness of the employability skills and attitudes needed for the construction industry, for example, good timekeeping, co-operating with others, taking instructions, and a positive attitude to learning. Opportunities to develop these skills and attitudes aspects arise naturally in the work of the Course. Candidates should be aware that these generic skills are just as important as the practical craft skills they are developing.

For example, it is important for workshop activities to be carried out to effective schedules; candidates will have opportunities to demonstrate good timekeeping in the context of these schedules. Candidates will have to co-operate with others regarding shared workspace, tools and equipment. They will have to co-operate and communicate regarding the transfer of materials, tools and equipment safely around and across the workshop.

Candidates will be encouraged to develop a positive attitude to waste minimisation and environmental issues regarding the use of materials. The work of the Course will increase awareness that health and safety issues are important in the world of work generally and in construction in particular.

Although candidates are required to carry out a limited number of formal reviews for assessment purposes, they should be encouraged to review their work throughout the Course and on an ongoing basis. They should come to appreciate that reviewing their work is good practice and can encourage improvement.

In carrying out trades activities, candidates will learn that there are correct and incorrect ways to use tools and equipment. Tutors will have opportunity to demonstrate good practice to candidates, who will learn the importance to self and others of following instructions. Such positive experiences will foster a positive attitude to learning.

Teaching and learning approaches should help to inform candidates of realistic prospects in construction crafts or in construction generally. They should become aware of steps to employment or further training. Through their experiences of the various practical crafts in the Course, they should become better equipped to make valid personal choices regarding careers and further study.

## National Course Specification: Course details (cont)

### **COURSE** Construction Crafts (Intermediate 1)

Opportunities to develop aspects of Core Skills should be used where they arise naturally. For example, in order to carry out building trade activities in a workshop environment candidates will develop aspects of numeracy when making calculations and taking measurements. They will also have to communicate with tutors and fellow candidates regarding craft practices, materials and tools, health and safety and working together in the workplace. Aspects of problem solving will arise in the carrying out of practical building work.

Teaching and learning approaches should encourage candidates to take responsibility for their own learning and development. In the practical Units in the Course, candidates need to carry out quality checks on their own work. This provides a good opportunity to motivate candidates to take pride in their work. In the Employability Skills Unit, candidates will take responsibility for seeking feedback and identifying action points for improvement. This should help them to develop confidence in taking advice and in asking for direction and assistance where necessary.

#### **Preparation for practical activities, visiting speakers, visits**

Throughout the Course, the need for correct preparation for practical activities should be stressed. However, such preparation should not take a long time to complete. Teaching correct trades practice, effective use of tools and equipment and a positive view of health and safety should help to ensure that preparation for practical work is comprehensive yet concise.

Candidates will require supervision during practical work — both on a crafts level and for health and safety. The learning environment should be designed to minimise risks and provide a safe context for carrying out tasks. For example, when undertaking the task of laying roofing tiles on a pitched roof slope, the slope will be a simulated roof at floor level and not one that entails working at heights.

It is recommended that each practical session be preceded by a ‘tool box’ talk on an aspect of health and safety relevant to the work in hand. It is recommended that candidates be given regular but short practice sessions in the correct use of the materials to be used in each session as well as coaching in the correct use of associated tools and equipment.

Centres are encouraged to establish links with local industry. Local construction companies, trades associations, builders’ merchants and chambers of commerce may be happy to offer support, for example, in the form of visits from representatives of their organisations. Visitors from industry will be able to give candidates a realistic view of jobs and conditions in the construction industry.

It may be possible for centres to arrange visits to building sites as part of the candidates’ learning experience. Visits to housing developments are often particularly useful because work in progress will be at different stages and candidates can see all of the different trades working at the same time. They may also be able to see different stages of house building on the same visit. Site visits, or visits to builders’ merchants’ premises, should be carefully arranged, organised and authorised. It would be preferable for those responsible for such visits to have prior knowledge of the site in question.

## National Course Specification: Course details (cont)

### **COURSE** Construction Crafts (Intermediate 1)

#### **Approaches to assessment**

Approaches to assessment which promote the efficient and effective gathering of evidence are to be encouraged.

The *Employability Skills* Unit should be integrated with the trades specific Units. Candidates can readily gather evidence for assessment during their work in these practical trades Units. Reviewing progress with generic employability skills and attitudes will take place in the practical context of work in the different craft trades activities. Candidates will complete a minimum of four review sheets in four different trade activities. Assessment of Outcome 3 which focuses on interpreting drawings, could also take place during the work in trades specific practical Units.

Within the trades' specific practical Units, the candidate will produce evidence as a natural part of the learning and teaching process. Candidates will first learn and practise the correct techniques and methods for each of the trades they undertake. Assessment of the various practical tasks will take place at appropriate points throughout the Course, allowing time for candidates to make quality checks of their finished products against the prescribed tolerances, before being submitted for assessment.

#### **Health and Safety**

Risk assessment and compliance with health and safety legislation is of paramount importance in this Course. Due to the health and safety implications involved in working on building sites, the Construction Crafts Units have been designed so that they can be taught and assessed in a workshop environment. Legislation effectively precludes work placement for 14-16 year olds on building sites; this Course does not require work placement.

It is the centre's responsibility to produce risk assessments. Centres should ensure that they comply with all current legislation.

The Intermediate 1 Course in Construction Crafts requires access to safe and suitably equipped, classrooms, workshops or work areas to deliver and assess the vocational craft options. These workshops or work areas should be of an appropriate size and have sufficient tools, equipment and resources to deliver and assess the Units for the number of learners in the class group. This may take the form of a combined workshop/project area divided into suitable work areas for each craft, or separate workshops for each trade. Storage areas for materials and personal protective equipment (PPE) should be provided. Washing and drying facilities will be required to allow candidates to clean themselves after working with construction materials.

It is recognised that some centres will not have facilities available to deliver all of the options in these qualifications; in these cases, appropriate partnership arrangements would provide the learning environments and/or expertise necessary to deliver the Course. In such situations, all partners involved should discuss health and safety and safe systems of work as a priority. They should also set up arrangements for ongoing communication between partners on health and safety.

## **National Course Specification: Course details (cont)**

**COURSE**     Construction Crafts (Intermediate 1)

### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Course Specification: Course details (cont)

**COURSE** Construction Crafts (Intermediate 1)

**Appendix:** Employability Skills Profile

In addition to the specific, vocational skills developed and assessed in this Course, employability skills are addressed as detailed in the table below. For the purposes of the table, the Units are referred to as A–L as indicated.

|  |     |
|--|-----|
| <b>Construction Crafts: Employability Skills</b>                         | = A |
| <b>Construction Crafts: Half Brick Walling</b>                           | = B |
| <b>Construction Crafts: Decorative Painting</b>                          | = C |
| <b>Construction Crafts: Site Carpentry and Bench Joinery</b>             | = D |
| <b>Construction Crafts: Plumbing</b>                                     | = E |
| <b>Construction Crafts: Practical Copper Pipework</b>                    | = F |
| <b>Construction Crafts: Brickwork Techniques</b>                         | = G |
| <b>Construction Crafts: Carpentry and Joinery Techniques</b>             | = H |
| <b>Construction Crafts: Decorative Finishes Using Water-borne Paints</b> | = I |
| <b>Construction Crafts: Electrical Installation</b>                      | = J |
| <b>Construction Crafts: Plasterwork</b>                                  | = K |
| <b>Construction Crafts: Roof Tiling</b>                                  | = L |
| <b>Construction Crafts: Plumbing of Sanitary Appliances</b>              | = M |
| <b>Construction Crafts: One Brick Walling</b>                            | = N |
| <b>Construction Crafts: Stonemasonry</b>                                 | = O |

| Employability skill/attitude                           | Evidence   |
|--|------------|
| ◆ timekeeping  | A          |
| ◆ attendance   | A          |
| ◆ following instructions                               | A          |
| ◆ taking advice and dealing with constructive feedback | A          |
| ◆ maintaining tidy work area                           | A          |
| ◆ working co-operatively with others                   | A          |
| ◆ planning and preparation                             | All        |
| ◆ checking quality of own work                         | All        |
| ◆ positive attitude to learning                        | A          |
| ◆ review and self-evaluation                           | A          |
| ◆ awareness of health and safety issues                | All        |
| ◆ interpretation of graphic information                | A, B, F, G |

### Assessment evidence in all Units:

A = Candidate Review Sheet

B–O = Practical activity, supported by assessor observation checklist; candidate quality check

## National Unit Specification: general information



**UNIT** Construction Crafts: Employability Skills (Intermediate 1)

**CODE** DM7C 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is a mandatory Unit within the Construction Crafts Course Intermediate 1. This Unit is suitable for candidates with no previous construction or employment experience. Outcomes 1 and 2 require candidates to develop work practices and attitudes that enhance their employability. Outcome 3 concentrates on the development of practical measurement and interpretation of drawing skills that are common to all parts of the construction industry, while Outcome 4 provides candidates with an opportunity to review the skills they have developed across a range of practical experiences.

### OUTCOMES

- 1 Demonstrate work practices which enhance employability in construction crafts.
- 2 Demonstrate attitudes which enhance employability in construction crafts.
- 3 Use building drawings to take, record and check measurements.
- 4 Review and evaluate own skills developed in practical contexts.

### RECOMMENDED ENTRY

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

### 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.*

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Employability Skills (Intermediate 1)

### **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: Employability Skills (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**

Demonstrate work practices which enhance employability in construction crafts.

##### **Performance Criteria**

Undertake necessary planning and preparation prior to practical work.

Work co-operatively with others.

Maintain tidy work areas in accordance with health and safety requirements.

Check own practical work in accordance with prescribed schedule and standards.

#### **OUTCOME 2**

Demonstrate attitudes which enhance employability in construction crafts.

##### **Performance Criteria**

(a) Demonstrate positive attitudes to learning.

Show a willingness to follow instructions from person responsible.

Respond positively to advice and feedback on performance.

#### **OUTCOME 3**

Use building drawings to take, record and check measurements.

##### **Performance Criteria**

(a) Using a ruler take accurate measurements from a scaled building project drawing.

Scale up the measurements taken to give full size values.

Check calculated full size values against actual recorded measurements.

#### **OUTCOME 4**

Review and evaluate own skills developed in practical contexts.

##### **Performance Criteria**

(a) Identify strengths and weaknesses.

Identify learning points.

Identify action points for improvement.

## **National Unit Specification: statement of standards (cont)**

### **UNIT**            Construction Crafts: Employability Skills (Intermediate 1)

#### **EVIDENCE REQUIREMENTS FOR THE UNIT**

Performance evidence, supported by candidate review sheets and assessor observation checklists are required to show that all Outcomes and Performance Criteria have been achieved.

Candidates will demonstrate the appropriate working practices and attitudes in practical contexts. They will then review and evaluate their own performance on candidate review sheets and plan for improvement. Candidates will also demonstrate basic skills in interpreting drawings and undertake practical measurement tasks. The evidence required will be:

- ◆ a minimum of four candidate review sheets, signed by the assessor, relating to a minimum of four practical activities
- ◆ an assessor observation checklist confirming that the candidate has successfully completed the practical measuring tasks as specified

The National Assessment Bank item for this Unit (NAB) contains candidate review sheets and an assessor observation checklist. The NAB illustrates the national standard required for this Unit. Centres who wish to devise their own assessments should refer to the NAB to ensure a comparable standard.

## **National Unit Specification: support notes**

### **UNIT            Construction Crafts: Employability Skills (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 and context of this Unit is at a basic, introductory level. The main purpose of the Unit is to prepare candidates for employment in the construction industry. To this end the Unit focuses on encouraging candidates to develop the correct work practices and attitudes for employment such as good time-keeping and attendance, working co-operatively with others, willingness to learn, checking the quality of own work, maintaining tidy work space. Candidates will be provided with an opportunity to review how well they have progressed in developing these work practices and attitudes by comparing their own evaluation with that of their assessors. Candidates will also be encouraged to develop skills in interpretation of drawings and taking and recording measurements: skills that are common to all parts of the construction industry.

#### **GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT**

Where this Unit is taken as part of Construction Crafts Course, it is recommended that delivery is integrated with other Units in the Course. For example, with regard to Outcomes 1, 2 and 4, candidates should be actively encouraged to develop the correct work practices and attitudes in each of the trade specific Units they undertake. Likewise, Outcome 3 should be delivered and assessed around construction activities the candidates are undertaking as part of the Construction Crafts: Introduction Course.

The Construction Craft: Course should also be seen as an opportunity for candidates to develop Core Skills within a practical construction craft context. For example, there are opportunities to develop numeracy skills when scaling up measurements. Opportunities to develop oral communication skills will arise when undertaking reviews.

#### **Core Skills**

There are opportunities to develop aspects of the Core Skill *Problem Solving* in this Unit. Candidates are required to review and evaluate their own skills.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

A National Assessment Bank pack is available to support assessment of this Unit. If centres wish to develop their own assessment instruments these should be of a comparable standard. The process of review and evaluation using the checklist provided should take place at regular intervals to show progression and development.

#### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Half Brick Walling (Intermediate 1)

**CODE** DM7G 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is suitable for candidates with no previous brickwork experience. The Unit is based on practical workshop activities such as setting out simple brickwork, selecting and maintaining tools, and building short lengths of half brick walls. Candidates will also develop safe working practices and general skills which will enhance employability.

The Unit is a mandatory Unit in the Intermediate 1 Construction Crafts 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 brickwork at Intermediate 1 or Intermediate 2.

### OUTCOMES

- 1 Select, use and maintain basic bricklaying tools and equipment.
- 2 Measure and set out half brick walls.
- 3 Build half brick walls.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

### CREDIT VALUE

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

*\*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.*

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Half Brick Walling (Intermediate 1)

### **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: Half Brick Walling (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 basic bricklaying tools and equipment.

##### **Performance Criteria**

- (a) The selection of tools and equipment is appropriate for the work to be done.
- (b) The tools are used in the correct manner.
- (c) The tools are used solely for the purpose which they are intended.
- (d) The tools are cleaned, maintained and stored correctly.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Measure and set out half brick thick walls.

##### **Performance Criteria**

- (a) The walls are measured accurately and to the prescribed tolerance.
- (b) The walls are marked and set out correctly and in accordance with good practice.
- (c) The bond is set out correctly.
- (d) The levels at both ends are established in accordance with good practice.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Build half brick walls.

##### **Performance Criteria**

- (a) The walls are built in accordance with given working drawings.
- (b) The walls are built to the prescribed standards and tolerances.
- (c) Health and safety requirements are complied with during all activities.
- (d) A quality check is carried out on the finished work against the prescribed standards and tolerances.

## National Unit Specification: statement of standards

### UNIT Construction Crafts: Half Brick Walling (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:

- ◆ choosing the correct tools for particular tasks, using these 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
- ◆ measuring out accurately, setting out the shape of the wall, setting out the correct bond and establishing levels at ends of the walls
- ◆ building basic walls working from information given on three-dimensional drawings:
  - the half brick walls will include:
    - 1 a straight wall with a stopped end and the other end racked back;
    - 2 a return corner racked back on both returns
  - the walls will be built within the stated tolerances
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ 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: Half Brick Walling (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 brickwork 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 brickwork terms and will be able to demonstrate knowledge and understanding of these terms in everyday practice. The main content of the Unit will be learning the preparatory tasks and skills required in measuring and setting out half brick walls; and the skills and techniques used in building small-scale half-brick thick walls. 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.

Candidates should be encouraged to use and develop techniques suited to their own physical strength and abilities, eg use of small trowels to spread mortar, use of light weight bricks (LBC commons).

In addition to the vocational content, candidates should be encouraged to focus on the general skills and attitudes which employers value. 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.

#### 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\*

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Half Brick Walling (Intermediate 1)

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 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.

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. For example, learning how to use of a gauge rod in checking brick courses against tolerance would be helpful for candidates. 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 brick debris around the workspace could be a tripping hazard; they will learn how to use hand 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 setting out brickwork; they will also calculate lengths and heights in brick walls and check work against prescribed tolerances. These are good opportunities for developing aspects of numeracy.

Candidates will also 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 activities, interpretation of drawings, 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 Unit *Construction Crafts: Employability Skills*, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which employer’s value. 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.

## **National Unit Specification: support notes (cont)**

### **UNIT**            Construction Crafts: Half Brick Walling (Intermediate 1)

#### **Core Skills**

There are opportunities to develop aspects of the Core Skill *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.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

It is expected that candidates will be given as much practice as possible in bricklaying techniques, prior to being set the assessment tasks. The National Assessment Bank item for the Unit details the quality and quantity of brickwork 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.

#### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Decorative Painting (Intermediate 1)

**CODE** DM7K 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit will be suitable for candidates who have limited or no experience of painting and decorating craft practices. The Outcomes require the candidate to select the correct tools and materials required to produce groundcoats, broken-colour effects and stencils. The candidate will mix and colour scumble glazes, produce examples of hair stippling, rag rolling, sponge stippling and dragging. They will also develop safe working practices and general skills that will enhance employability.

The Unit is a mandatory 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 at Intermediate 1 or Intermediate 2.

### OUTCOMES

- 1 Select, use and manage tools and materials.
- 2 Produce uniform broken-colour effects.
- 3 Produce a stencilled decorative effect.

### RECOMMENDED ENTRY

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

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Decorative Painting (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: Decorative Painting (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 manage tools and materials.

##### **Performance Criteria**

- (a) The selection of tools is appropriate for the allocated work.
- (b) The selection and preparation of materials needed for groundcoats are correct and in accordance with good practice.
- (c) The selection and preparation of glazes, paints and stainers needed for the work are correct and in accordance with good practice.
- (d) Tools are cleaned and maintained correctly and in accordance with good practice.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Produce uniform broken-colour effects.

##### **Performance Criteria**

- (a) The groundcoat is applied to recommended standards.
- (b) A variety of broken-colour effects are produced to the recommended standards.
- (c) In each case, the broken-colour effect is applied in a uniform manner.
- (d) A quality check is carried out on the finished work against the recommended standards.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Produce a stencilled decorative effect.

##### **Performance Criteria**

- (a) A stencil plate is cut neatly from a given design.
- (b) The design is set out and transferred on to a suitable surface to a given specification.
- (c) A quality check is carried out on the finished work against the recommended standards.
- (d) Health and safety requirements are complied with during all activities.

## National Unit Specification: statement of standards (cont)

### UNIT Construction Crafts: Decorative Painting (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
- ◆ selecting suitable water-borne and solvent-borne groundcoats with regard to surface texture and colour
- ◆ select the correct scumble glaze materials, paints and stainers for the work
- ◆ applying groundcoat to recommended standards
- ◆ producing uniform broken-colour effects, hair stippling, rag rolling, sponge stippling and dragging
- ◆ producing broken-colour effects to recommended standards
- ◆ cutting a neat stencil plate from a given simple design using a stencil knife or craft knife and pre-prepared stencil card, acetate sheet or oiled paper
- ◆ accurately setting out and transferring the design three times on a suitable surface
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ 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: Decorative Painting (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 decorative painting activities at an introductory level. The candidate is required to develop the ability to select and use tools and materials 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 painterwork terms and will be able to demonstrate knowledge and understanding of these terms in everyday practice. The main content of the Unit will be to learn the skills for preparing and applying uniform broken-colour effects and stencilled decorative effects. Candidates should be taught good working practices at each stage and should learn how to carry out a quality check on their own work throughout the tasks and on completion.

Candidates should be able to recognise the range of tools, brushes and equipment needed to produce broken-colour effects, ie hair stripping, rag rolling, sponge stippling and dragging. They should know the difference between water-borne and solvent-borne materials, both for groundcoats and glazes and know the correct stainers and fillers to use with those materials.

From a given simple design, candidates should be able to cut a neat stencil plate from pre-prepared stencil card, acetate sheet or oiled paper. They will learn to use a stencil knife or craft knife. They will learn which surfaces are suitable for cutting stencils and how to carry out this work safely.

Candidates should be able to set out and consistently transfer the design accurately, a minimum of three times, to a given area and apply it neatly and cleanly. Brushes, sponges or spray equipment may be used to apply the design. Candidates should be able to clean, maintain and store tools, brushes and their undamaged stencil plates.

Broken-colour work should be carried out on area of an appropriate size, eg a hardboard sheet measuring 2440mm by 1220mm can be cut into six panels of approximately 813mm by 610mm. Any panels, wall areas or card of similar size would be suitable.

Strong contrasts of value or colour between groundcoat and glazing colour should be avoided, as these will make it unnecessarily difficult for candidates to achieve visually acceptable broken-colour effects.

Candidates should be made aware of the property of all coating known as ‘wet-edge time’ or ‘open-edge time’. Candidates need to learn how adept the operative has to be in order to produce a uniform broken-colour effect within the open-edge time of the coating. This can be learned without the candidate having to study in depth the science and technology of paint drying.

Stencil designs should be kept simple. It is not intended, for example, that the design takes the form of a continuously repeating pattern.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Decorative Painting (Intermediate 1)

In addition to using stencil brushes to apply the design, candidates should be taught how to apply translucent colour effects and how to use sponges and/or spray equipment.

In addition to the vocational content, candidates should be encouraged to focus on the general work practices and attitudes which employers value. These should be delivered as an integral part of the Unit. Opportunities will arise in various practical contexts to discuss the value of, for example, good time-keeping and attendance; thorough planning and preparation, working co-operatively; maintaining a clean, tidy and organised workplace; checking own work to ensure it is of an appropriate standard; adopting a positive attitude to learning; demonstrating a willingness to follow instructions and taking a positive attitude to receiving feedback on performance. 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.

Working practices must conform with health and safety legislation making use of protective clothing, gloves and barrier creams as necessary.

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.

#### 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.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Decorative Painting (Intermediate 1)

#### 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 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.

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 is a very useful skill and habit that candidates can develop during their work. 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 leaving paint tins, crumpled dust sheets, ladders and other equipment around the workspace could be a tripping hazard; they will learn how to use hand tools, brushes, paints and solvents in a safe manner and how to clean and maintain brushes and other tools; 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 or estimates of the amount of groundcoat or finishing coat materials needed. This presents an opportunity for developing aspects of numeracy. Candidates will need to read instructions for work activities, including information about different paints and solvents; they will also take part in discussions with peers and tutors regarding work activities, interpretation of drawings, materials, use of tools and workshop protocols. They will need to demonstrate, at all times, clear and courteous communication with their peers, supervisors and technicians. All of these activities present opportunities for developing oral and reading 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 work practices and attitudes which employers value. Integrated activities will involve the candidate assessing his/her own performance on time-keeping and attendance, planning and preparation, working co-operatively, maintaining a tidy and safe work area, checking their own work, demonstrating a positive attitude to learning, showing a willingness to follow instructions and responding positively to feedback on performance. 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.

#### 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 are required to review and evaluate their work.

## **National Unit Specification: support notes (cont)**

**UNIT**            Construction Crafts: Decorative Painting (Intermediate 1)

### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

It is expected that candidates will be given as much practice as possible in decorative painting and stencilling techniques, prior to being set the assessment tasks. The National Assessment Bank item for the Unit gives the details of the practical assignment to be produced for the Unit assessment.

Standards required for the assessment tasks are significantly less onerous than those required by National Occupational Standards. Nevertheless, such an approach 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.

### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Site Carpentry and Bench Joinery  
(Intermediate 1)

**CODE** DM7J 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is suitable for candidates with no previous experience in carpentry and joinery. The Unit is based on practical workshop activities such as making timber frames or supports, mitring of dressed timbers and the cutting and fitting of sheet materials. Candidates will be required to correctly select and properly maintain tools. They will also develop safe working practices and general skills that will enhance employability.

The Unit is a mandatory Unit in the Intermediate 1 Construction Crafts 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 carpentry and joinery at Intermediate 1 or Intermediate 2.

### OUTCOMES

- 1 Select, use and manage hand tools and materials.
- 2 Carry out tasks involving site carpentry skills.
- 3 Carry out tasks involving bench joinery skills.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

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#### Administrative Information

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Site Carpentry and Bench Joinery  
(Intermediate 1)

### **CREDIT VALUE**

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

*\*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.*

### **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*.

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## **National Unit Specification: statement of standards**

### **UNIT            Construction Crafts: Site Carpentry and Bench Joinery (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 manage hand tools and materials.

##### **Performance Criteria**

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

#### **OUTCOME 2**

Carry out tasks involving site carpentry skills.

##### **Performance Criteria**

- (a) Work is set out correctly with regard to subsequent fixing of components.
- (b) Timber and sheet materials are marked out to given sizes.
- (c) Timber and sheet materials are cut to given sizes and within prescribed tolerances.
- (d) Timber and sheet materials are fixed to given positioning.
- (e) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (f) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Carry out tasks involving bench joinery skills.

##### **Performance Criteria**

- (a) Materials are correctly marked out prior to tool application.
- (b) The work piece is secured during tool application.
- (c) Materials are cut, shaped and jointed to given sizes and in accordance with good practice.
- (d) Components are manufactured to given sizes and within prescribed tolerances.
- (e) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (f) Health and safety requirements are complied with during all activities.

## National Unit Specification: statement of standards (cont)

**UNIT**            Construction Crafts: Site Carpentry and Bench Joinery  
                         (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 for particular tasks, transporting them and positioning them correctly between 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
- ◆
- ◆ measuring out accurately, setting out the lengths of timbers and length and breadth of sheet materials
- ◆ cutting, shaping and jointing of timbers and sheet materials in accordance with good practice
- ◆ constructing, from given two and three-dimensional drawings:
  - an assembly comprising grounds or framing, sheet materials and dressed mitred facings or beads; all to produce a freestanding or wall mounted panel of minimum overall dimensions 600 x 600mm
- ◆ candidates carrying out a quality check on their own work against given tolerances before submitting for final assessment
- ◆ 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: Site Carpentry and Bench Joinery (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 carpentry and joinery 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 carpentry and joinery terms and 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 measuring, cutting, fitting and fixing dressed and sawn timbers and sheet material. 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.

The Unit will focus on basic skills in manufacturing and fixing components to plumb, level and line. 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 (PPE).

Outcome 1 requires the candidate to select tools, and to handle, transport, position, and store tools and materials. Candidates should become aware of 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 be off the saw and pre-dressed softwoods, hardboard and either medium density fibreboard or plywood. Tools are likely to include setting out tools, claw hammer, nail punch, saws, hand plane, spokeshave and hand drill.

Outcome 2 entails tasks in site carpentry and is mainly related to first fixing grounds or framing and the tools and methods used to position these to plumb, level and line. The use of plumb bob, spirit level with straight edge, and a string line will increase the candidate's awareness of techniques common to this area of work.

Outcome 3 should enable the candidate to develop practical skills in using hand tools during bench work. The correct positioning and retention of components during tool application should be emphasised. Cutting and fitting beads or facings should be carried out carefully. Candidates should be aware that these are finishing timbers.

## **National Unit Specification: support notes (cont)**

### **UNIT            Construction Crafts: Site Carpentry and Bench Joinery (Intermediate 1)**

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.

#### **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 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.

## National Unit Specification: support notes (cont)

### UNIT            Construction Crafts: Site Carpentry and Bench Joinery (Intermediate 1)

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. For example, learning how to use a retractable steel tape to check dimensions against tolerance would be helpful for candidates. 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 around the workspace could be a tripping hazard; they will learn how to use hand 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 materials to prescribed or 'to fit' lengths; they will also check various dimensions and verticality, etc against prescribed tolerances. These are good opportunities for developing aspects of Numeracy.

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, interpretation of drawings, 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 Unit *Employability Skills for Construction*, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which 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.

Outcome 1 should be integrated with Outcomes 2 and 3. 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: Site Carpentry and Bench Joinery  
                      (Intermediate 1)

### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

It is expected that candidates will be given as much practice as possible in carpentry and joinery techniques, prior to being set the assessment tasks. The National Assessment Bank item for the Unit details the quality and quantity of 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.

### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Plumbing (Intermediate 1)

**CODE** DM7E 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit will be suitable for candidates who have limited or no experience of plumbing practices. The Unit is based on practical workshop activities which involve the selection and use of a range of relevant tools and materials in plumbing work. The Unit involves cutting, fitting and connecting plastic pipework. The work throughout will be based on recognised plumbing craft practices. Candidates will be encouraged to develop good work practices and attitudes.

The Unit is a mandatory Unit in the Intermediate 1 Construction Crafts Course but can also be taken as a free-standing Unit. Candidates who achieve this Unit should feel confident in progressing to plumbing Units demanding a higher level of knowledge and skills.

### OUTCOMES

- 1 Select, use and maintain basic plumbing tools and materials.
- 2 Complete practical activities involving measuring, cutting and fabricating basic plumbing materials and associated fittings.

### RECOMMENDED ENTRY

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

### CREDIT VALUE

0.5 credit at Intermediate 1 (3 SCQF credits 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.*

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Plumbing (Intermediate 1)

### **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: Plumbing (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 basic plumbing tools and materials.

##### **Performance Criteria**

- (a) The tools are used in the correct manner.
- (b) The tools are used solely for the purpose which they are intended.
- (c) The tools are cleaned, maintained and stored correctly.
- (d) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Complete practical activities involving measuring, cutting and fabricating basic plumbing materials and associated fittings.

##### **Performance Criteria**

- (a) The product is free from excessive marking.
- (b) The product is completed to within prescribed tolerances.
- (c) All pipework is cut square, free from burrs and completed using associated fittings.
- (d) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (e) Health and safety requirements are complied with during all activities.

#### **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 assessor checklists. This evidence will be generated from assignments consisting of two practical activities carried out in supervised workshop conditions. The evidence may be gathered at different points throughout the Unit. The practical activities will cover:

- ◆ measuring and cutting plastic pipework correctly for subsequent assembly
- ◆ fabricating plastic pipework and associated fittings into assemblies in accordance with given drawings and specifications
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ candidates maintaining a clean and tidy workplace and adhering to health and safety requirements throughout all activities

## **National Unit Specification: statement of standards (cont)**

### **UNIT**            Construction Crafts: Plumbing (Intermediate 1)

The National Assessment Bank item (NAB) for this Unit provides an assessor checklist and details of the practical assignments to 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: Plumbing (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 plumbing work 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 plumbing work terms and will be able to demonstrate knowledge and understanding of these terms when carrying out practical activities. The main content of the Unit will be learning the tasks and skills required to cut and assemble plastic pipework and fittings into an overall assembly in accordance with given drawings. 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.

In addition to the vocational content, candidates should be encouraged to focus on the general work practices and attitudes which employers value. These should be delivered as an integral part of the Unit. Opportunities will arise in various practical contexts to discuss the value of, for example, good time-keeping and attendance; thorough planning and preparation, working co-operatively; maintaining a clean, tidy and organised workplace; checking own work to ensure it is of an appropriate standard; adopting a positive attitude to learning; demonstrating a willingness to follow instructions and taking a positive attitude to receiving feed back on performance. 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.

#### 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

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Plumbing (Intermediate 1)

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. For example, one of the key aspects of this Unit is that candidates learn how to use plumbing tools and materials in a correct and safe manner. This can best be achieved by candidates undertaking practical plumbing activities in a workshop environment.

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.

During the delivery of this Unit candidates should be encouraged to learn and use common plumbing terms with a view to helping them remember these terms. Individual candidates should be encouraged to use and develop techniques suited to their own physical strengths and abilities.

It is recommended that, prior to candidates commencing any practical activity, that the teacher/lecturer demonstrates the correct and safe way to undertake this activity. Candidates should also be provided with simple working drawings of exercises to assist them in undertaking these exercises.

If this Unit is delivered as part of the Construction Craft Course, teachers/lecturers should seek every opportunity to build up an understanding of work practices, behaviours and attitudes 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. For example, in undertaking the various plumbing practical exercises in this Unit, candidates should check that all work is completed within prescribed tolerances. 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 leaving plumbing tools, equipment and materials randomly around a workspace could be a tripping hazard; they will learn how to use tools and equipment in a safe manner and how to clean and maintain tools; 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. For example, candidates will be required to read instructions for work activities, including information about different materials and jointing compounds; they will also take part in discussions with peers and tutors regarding work activities, interpretation of drawings, materials, use of tools and workshop protocols. They will need to demonstrate, at all times, clear and courteous communication with their peers, supervisors and technicians. All of these activities present opportunities for developing oral and reading communication skills.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Plumbing (Intermediate 1)

Where this Unit is taken alongside the *Construction Crafts: Employability Skills* Unit, candidates will have additional opportunities to develop an awareness of the general work practices and attitudes which employers value. Integrated activities will involve the candidate assessing his/her own performance on time-keeping and attendance, planning and preparation, working co-operatively, maintaining a tidy and safe work area, checking own work, demonstrating a positive attitude to learning, showing a willingness to follow instructions and responding positively to feedback on performance. 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.

#### 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.

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Candidates should be made aware of what will be required of them in order to achieve credit for the Unit. They should be encouraged to discuss the work with the lecturer and with their colleagues. Help and encouragement should be given throughout the Unit so that the candidates become confident in their ability to achieve the Performance Criteria.

It is expected that candidates will be given as much practise as possible in practical plumbing techniques prior to being set the assessment tasks. The National Assessment Bank items for the Unit detail the quality and quantity of practical work to be produced for the Unit assessment. Standards required from the assessment tasks are significantly less onerous than those required by National Occupational Standards. Nevertheless, such an approach 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 and details of the practical assignments to exemplify the national standard. Centres may develop their own instruments of assessment but these must be of a comparable standard to the NAB.

The assessment of both Outcomes can be integrated, since completing the practical activities required for Outcome 2 also provides evidence that candidates can meet the requirements of the first Outcome.

Examples of the kind of activities which could be used for the assessment of this Unit would be:

#### Practical Exercise 1

The candidate will be provided with A4 size working drawings indicating the dimensions of the exercise. The exercise will consist of the following:

An arrangement of pipework and fittings of no more than 110mm UPVC, will be connected using strap on bosses, multifit joints and solvent weld joints.

## **National Unit Specification: support notes (cont)**

### **UNIT**            Construction Crafts: Plumbing (Intermediate 1)

#### **Practical Exercise 2**

The candidate will be provided with A4 size working drawings indicating the dimensions of the exercise. The exercise will consist of the following:

An arrangement of pipework and fittings of size not exceeding 22mm diameter employing a proprietary flexible push-fit pipework system and associated fittings.

#### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Practical Copper Pipework  
(Intermediate 1)

**CODE** DM7W 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is suitable for candidates who have limited or no experience of plumbing craft practices. The Unit is based on practical workshop activities in plumbing work such as cutting, fitting and connecting and assembling copper pipework. Candidates will also develop safe working practices and general skills which will enhance employability.

The Unit is an optional Unit in the Intermediate 1 Construction Crafts 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 plumberwork at Intermediate 1 or Intermediate 2.

### OUTCOMES

- 1 Select, use and maintain basic plumbing tools and materials.
- 2 Join copper pipes using compression fittings.
- 3 Fabricate a copper pipework arrangement using proprietary fittings and by forming bends.

### RECOMMENDED ENTRY

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

### 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.*

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Practical Copper Pipework  
                      (Intermediate 1)

### **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: Practical Copper Pipework (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 basic plumbing tools and materials.

##### **Performance Criteria**

- (a) The selection of tools and materials is appropriate for the work to be done.
- (b) The tools are used in the correct manner.
- (c) The tools are used solely for the purpose which they are intended.
- (d) The tools are cleaned, maintained and stored correctly.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Join copper pipes using compression fittings.

##### **Performance Criteria**

- (a) The pipes are free from excessive marking.
- (b) The product is completed to within prescribed tolerances.
- (c) All pipework is cut square, free from burrs and completed using associated fittings.
- (d) A quality check is carried out on the finished work against prescribed standards and tolerances.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Fabricate a copper pipework arrangement using proprietary fittings and by forming bends.

##### **Performance Criteria**

- (a) The pipework is free from excessive marking.
- (b) The exercise is completed to within prescribed tolerances.
- (c) All pipework is cut square, free from burrs and completed using associated fittings.
- (d) A quality check is carried out on the finished work, including bends, to ensure prescribed standards and tolerances are met.
- (e) Health and safety requirements are complied with during all activities.

## National Unit Specification: statement of standards (cont)

### UNIT Construction Crafts: Practical Copper Pipework (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 assessor checklists. This evidence will be generated from a number 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 the activities
- ◆ measuring and cutting copper pipework correctly for subsequent assembly
- ◆ joining copper pipes using compression fittings
- ◆ fabricating and forming copper pipework and associated fittings into assemblies (to include bends) in accordance with given drawings and specifications
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ 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 together with details of the practical assignment for Outcome 3. 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: Practical Copper Pipework (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 plumbing work 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 plumbing work terms and will be able to demonstrate knowledge and understanding of these terms when carrying out practical activities. The main content of the Unit will be learning the skills required to cut, form and assemble copper pipework and fittings into an overall assembly in accordance with given drawings. 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.

In addition to the vocational content, candidates should be encouraged to focus on the general work practices and attitudes which are valued by employers. These should be delivered as an integral part of the Unit. Opportunities will arise in various practical contexts to discuss the value of, for example, good time-keeping and attendance; thorough planning and preparation; working co-operatively; maintaining a clean, tidy and organised workplace; checking own work to ensure it is of an appropriate standard; adopting a positive attitude to learning; demonstrating a willingness to follow instructions and taking a positive attitude to receiving feedback on performance. 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.

#### 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\*

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Practical Copper Pipework (Intermediate 1)

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. For example, one of the key aspects of this Unit is that candidates learn how to use plumbing tools and materials in a correct and safe manner. This can best be achieved by candidates undertaking practical plumbing activities in a workshop environment.

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.

During the delivery of this Unit candidates should be encouraged to learn and use common plumbing terms with a view to helping them remember these terms. Individual candidates should be encouraged to use and develop techniques suited to their own physical strengths and abilities.

It is recommended that, prior to candidates commencing any practical activity, the tutor demonstrates the correct and safe way to undertake this activity. Candidates should also be provided with simple working drawings of exercises to assist them in undertaking these exercises.

If this Unit is delivered as part of the Construction Crafts, teachers/lecturers should seek every opportunity to build up an understanding of work practices and attitudes 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. For example, in undertaking the various plumbing practical exercises in this Unit candidates should check that all work is completed within prescribed tolerances. 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 leaving plumbing tools, equipment and materials randomly around a workspace could be a tripping hazard; they will learn how to use tools and equipment in a safe manner and how to clean and maintain tools; 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. For example, candidates will be required to read instructions for work activities, including information about different materials and jointing compounds; they will also take part in discussions with peers and tutors regarding work activities, interpretation of drawings, materials, use of tools and workshop protocols. They will need to demonstrate, at all times, clear and courteous communication with their peers, supervisors and technicians. All of these activities present opportunities for developing oral and reading Communication Skills.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Practical Copper Pipework (Intermediate 1)

Where this Unit is taken alongside the *Construction Crafts: Employability Skills* Unit, candidates will have additional opportunities to develop an awareness of the general work practices and attitudes which employers value. Integrated activities will involve the candidate assessing his/her own performance on time-keeping and attendance, planning and preparation, working co-operatively, maintaining a tidy and safe work area, checking own work, demonstrating a positive attitude to learning, showing a willingness to follow instructions and responding positively to feedback on performance. 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.

#### 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.

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Candidates should be made aware of what will be required of them in order to achieve credit for the Unit. They should be encouraged to discuss the work with the teacher/lecturer and with their colleagues. Help and encouragement should be given throughout the Unit so that the candidates become confident in their ability to achieve the Performance Criteria.

It is expected that candidates will be given as much practice as possible in practical plumbing techniques prior to being set the assessment task. The National Assessment Bank items for the Unit detail the quality and quantity of practical work to be produced for the Unit assessment. The standards required for the assessment task are significantly less onerous than those required by National Occupational Standards. Nevertheless, such an approach 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.

The use of observation checklists is recommended when gathering performance evidence. Examples of checklists are given in the NAB items for this Unit. Centres may develop their own instruments of assessment but these must be of a comparable standard to the NABs.

#### 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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Brickwork Techniques (Intermediate 1)

**CODE** DM81 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is suitable for candidates with no previous brickwork experience. The Unit is based on practical workshop activities such as setting out the working area, selecting and preparing tools and materials and building straight lengths of half brick wall. Candidates will also learn basic employment/industrial disciplines such as good timekeeping, reliability and co-operating with others in the workplace.

The Unit is an optional Unit in the Intermediate 1 Construction Crafts Course but can also be taken as a free-standing Unit. Candidates who achieve this Unit should feel confident about progressing to further Units in brickwork at Intermediate 1 or Intermediate 2 levels.

### OUTCOMES

- 1 Select, use and maintain basic bricklaying tools and equipment.
- 2 Set up mortar boards and stack bricks.
- 3 Build a racked back half brick pyramid.
- 4 Build a straight length of half brick walling.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

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#### Administrative Information

**Superclass:** TG

**Publication date:** April 2007

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Brickwork Techniques (Intermediate 1)

### **CREDIT VALUE**

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

*\*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.*

### **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: Brickwork Techniques (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 basic bricklaying tools and equipment.

##### **Performance Criteria**

- (a) The selection of tools and equipment is appropriate for the work to be done.
- (b) The tools are used in the correct manner.
- (c) The tools are used solely for the purpose which they are intended.
- (d) The tools are cleaned, maintained and stored correctly.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Set up mortar boards and stack bricks.

##### **Performance Criteria**

- (a) Mortar boards are positioned correctly for work activities.
- (b) Bricks are located correctly and in accordance with good practice.
- (c) Bricks are stacked securely.
- (d) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Build a raked back half brick pyramid.

##### **Performance Criteria**

- (a) The wall is built to the working drawing.
- (b) The wall is built to the prescribed standards and tolerances.
- (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: Brickwork Techniques (Intermediate 1)

#### OUTCOME 4

Build a straight length of half brick walling.

#### Performance Criteria

- (a) The wall is built to the working drawing.
- (b) The wall is built to the prescribed standards and tolerances.
- (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.

#### EVIDENCE REQUIREMENTS FOR THIS UNIT

Performance evidence and additional 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:

- ◆ choosing the correct tools required, using them in a correct and safe manner, using them solely for the purpose for which they are designed, and cleaning and storing them after use
- ◆ transporting and stacking bricks to the correct location in relation to where the wall is to be built
- ◆ setting up the mortar board(s) and placing the mortar on them
- ◆ measuring and setting out the wall, dry bonding the first course and establishing the levels of the two end bricks of the wall
- ◆ building the walls conforming to the working drawings:
  - a raked back half brick pyramid (minimum five bricks long at base)
  - a straight length of half brick wall (including a racking back and a stopped end with these two features built eight to twelve brick lengths away from each other such that a builders' line is required to be used.)
  - the walls will be built to within the stated tolerances
- ◆ candidates carrying out a quality check on their own work and completing a given checklist which will then be submitted for confirmation and checking to the assessor
- ◆ candidates maintaining a clean and tidy workplace at all times, and adhering to health and safety requirements throughout all activities
- ◆ candidates clearing up the workplace at the end of each working session

The National Assessment Bank (NAB) item for this Unit provides a candidate/assessor checklist and details of the practical assignment which exemplify the national standards 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: Brickwork Techniques (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 of this Unit covers practical bricklaying activities at an introductory level. The main focus of the Unit is workshop/site based and therefore candidates must be taught to comply with safe working practices at all times.

During the process of practical work the candidate will become accustomed to the use of basic brickwork terms and therefore will develop a knowledge and understanding of these terms. The main content of the Unit will be acquiring the skills and knowledge to measure, set out and build half brick thick walls in stretcher bond.

Candidates will be taught good working practices at each stage and should be shown how to check their own work using prescribed checklists.

Candidates should be encouraged to use and develop techniques suited to their own physical strength and abilities, eg use of small trowels to spread mortar, use of light weight bricks eg LBC commons.

In addition to the vocational content, candidates should be encouraged to focus on the general industrial disciplines and attitudes which employers value. These should be taught as an integral part of the Unit, typically as follows: the candidate should be on time, be dressed appropriately with suitable personal protective equipment (PPE) including protective clothing when required prior to commencing work, check the tools that are going to be used and have organised the workplace and materials prior to commencing work. Thereafter the candidate should learn to work in a conscientious manner at all times.

Relevant aspects of current health and safety legislation and any local regulations or systems of work should be explained and adhered to as part of the work of this Unit.

#### 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\*

## **National Unit Specification: support notes (cont)**

### **UNIT            Construction Crafts: Brickwork Techniques (Intermediate 1)**

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 and hands on learning is the main approach recommended for this Unit. This involves learning through practical experiences and activities. Candidates should experience workplace conditions and industrial type disciplines and should be encouraged to perform tasks and conduct themselves in a manner appropriate to the workplace. Visiting construction sites is to be encouraged as a learning experience.

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 ask questions and set themselves goals to build competence and confidence in understanding tasks.

In this Unit there are many opportunities to develop an understanding of the realities of work and the behaviours required of construction employees and employers. Checking standards of work against prescribed tolerances is a very useful skill and habit that candidates can develop during their work. For example, learning how to use a gauge rod in checking brick course heights would be helpful for candidates. The construction industry is very keen on producing work that is ‘right first time’ and regular checking of work, is an inherent part of learning a trade in the industry. Candidates can be encouraged to approach their work with care and build in checking processes as part of normal habits and working practices. Responsible, safe behaviour in the workplace can be demonstrated and practised as part of the routine essential work, eg candidates will learn that a build up of brick and mortar debris around the workplace is a hazard. They will also learn how to use hand 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 Core Skills should be incorporated where they arise naturally in the teaching and learning process. Communication skills could be developed during workshop practices while taking instructions from tutors, transmitting requests and instructions to fellow candidates. Working co-operatively with others is a skill which could be developed when team work or working in pairs is needed to move and stack materials and during ‘clear -up’ at the end of the working period. Instructions will be given and received on how to use tools and also how to apply health and safety requirements. All of these activities present opportunities for developing aspects of communication skills.

Practical problem solving will feature on an ongoing basis when candidates resolve issues of where and how to stack materials, sequence work activities and read and interpret drawings. These situations will provide ample opportunity for developing the ability to solve problems.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Brickwork Techniques (Intermediate 1)

In this Unit, aspects of Numeracy could be developed when translating the working drawings into setting out information. Candidates will also calculate lengths and heights of brick walls and check work against prescribed tolerances. These are good opportunities for developing aspects of numeracy. Working co-operatively with others will be part of many practical activities as the candidate may be required to interact with various people which could include other candidates, store persons, technicians, assessors, trades apprentices in the Course of training and visitors from industry. It is common in the construction industry to work in teams. Bricklayers work in squads more often than not. There will be many opportunities therefore, to develop the abilities, knowledge and skills required to work well with and help others.

Where this Unit is taken as part of the Construction Crafts Course, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which construction employer's value. Integrated activities with the *Construction Crafts: Employability Skills* Unit 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 tutor/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 improve their prospects of employment in the construction industry.

#### 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. They also plan and prepare before beginning tasks.

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

It is necessary to give candidates as much practice as they need in bricklaying techniques prior to being set the assessment tasks. It would be expected for example that the brick pyramid would be built on several occasions before any assessment takes place. The National Assessment Bank for the Unit details the quality and quantity of brickwork to be produced for the Unit assessment. The tolerances set are significantly less stringent than those required by national occupational standards. They are nevertheless both worthwhile and achievable. The tolerances set introduce the candidate to the quality regime they will experience if and when they work 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.

#### 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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Carpentry and Joinery Techniques  
(Intermediate 1)

**CODE** DM82 10

**COURSE** Construction Crafts (Intermediate1)

### SUMMARY

This Unit is suitable for candidates who have limited or no knowledge of craft practices in carpentry and joinery. Candidates will learn to use and care for a basic range of hand tools and materials whilst undertaking skilled tasks associated with site carpentry and joinery. In particular, they will work on freestanding or wall-mounted timber-framed and panelled assemblies. Skills developed will help candidates to progress to further study in carpentry and joinery. Candidates will also develop safe working practices and general skills which will enhance employability.

The Unit is an optional Unit in the Intermediate 1 Construction Crafts Course but can also be taken as a free -standing Unit. Candidates who achieve this Unit should feel confident in progressing to other Units in carpentry and joinery at Intermediate 1 or 2.

### OUTCOMES

- 1 Select, use and maintain basic carpentry and joinery tools and equipment.
- 2 Erect a prefabricated timber assembly.
- 3 Replace a designated timber panel.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

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#### Administrative Information

**Superclass:** TG

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Carpentry and Joinery Techniques  
(Intermediate 1)

### **CREDIT VALUE**

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

*\*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.*

### **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: Carpentry and Joinery Techniques (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 basic carpentry and joinery tools and equipment.

##### **Performance Criteria**

- (a) The selection of tools and equipment is appropriate for the work to be done.
- (b) The tools are used correctly and solely for the purpose for which they were intended.
- (c) The tools are serviced, maintained, cleaned and stored in accordance with good practice.

#### **OUTCOME 2**

Erect a prefabricated timber assembly.

##### **Performance Criteria**

- (a) A prefabricated assembly is erected in a prescribed sequence.
- (b) The assembly is erected in accordance with drawings.
- (c) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Replace a designated timber panel.

##### **Performance Criteria**

- (a) The designated panel is identified and removed from an erected assembly.
- (b) The replacement panel is constructed to match the existing panel in accordance with working drawings.
- (c) Joints and fixings of the replacement panel are in accordance with working drawings and given specification.
- (d) A quality check is carried out on the finished work against prescribed standards and tolerances.
- (e) Health and safety requirements are complied with during all activities.

## **National Unit Specification: statement of standards (cont)**

**UNIT**            Construction Crafts: Carpentry and Joinery Techniques  
(Intermediate 1)

### **EVIDENCE REQUIREMENTS FOR THIS UNIT**

Performance evidence is required to show that all Outcomes and Performance Criteria have been met. Performance evidence will be supported by assessor checklists. This evidence will be generated from an integrated assessment 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:

- ◆ choosing the correct hand tools for particular tasks, using these tools in a correct and safe manner, using them solely for the purpose for which they were intended, sharpening them when necessary and storing them correctly after use
- ◆ correctly erecting a prefabricated timber assembly
- ◆ constructing a replacement timber panel using prescribed joints and fixing methods
- ◆ candidates carrying out a quality check of own work against given standards and tolerances before submitting for final assessment
- ◆ maintaining a clean, tidy and safe working area 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: Carpentry and Joinery Techniques (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 of this Unit covers practical carpentry and joinery at an introductory level. The candidate is required to develop the ability to select and use hand tools correctly and safely. It is therefore important that the learning takes place in a workshop/site environment. Basic safe working practices will be included in the content as it is important that the candidates learn to adhere to these at all times.

During the process of practical work, the candidate will become accustomed to the use of carpentry and joinery terms and will be able to demonstrate a knowledge and understanding of these terms in everyday practice. The main content of the Unit will be learning the basic skills and techniques required to: erect a freestanding or wall-mounted timber framed assembly, including joining timber sections together and fixing sheet materials; and to replace a designated timber panel to match the existing. Candidates should be taught good working practices at each stage and should quality check their own work on completion.

In addition to the vocational content, candidates should be encouraged to focus on general skills and attitudes that employers value; 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 work area, planning and thorough preparation. The context for learning should include the requirement to be clean, presentable and appropriately dressed for the working environment, including wearing personal protective equipment (PPE) including protective clothing when required.

Relevant aspects of current health and safety legislation and any local regulations or systems of work should be explained and adhered to as part of the work of this Unit.

#### **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

## National Unit Specification: support notes (cont)

### UNIT                      Construction Crafts: Carpentry and Joinery Techniques (Intermediate 1)

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 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.

In this Unit there are many opportunities to build up an understanding of the workplace ethos and the behaviours and practice required of employees. Checking standards of work against prescribed tolerances is a very useful skill and habit that candidates can develop during their work. For example, learning how to use a marking gauge to ensure that repeated joints are cut to the same depth, or the process of ‘measure twice, cut once’ to ensure accuracy in sizing and jointing, would be helpful to candidates. 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 should 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 for work, for example, candidates will learn how to use hand tools and equipment in a correct and safe manner. They will also learn, under supervision, how to care for, maintain and sharpen tools. Daily routines in the workplace will include maintaining a clean, tidy and safe workplace.

Opportunities for developing Core Skills should be incorporated where they arise naturally in the teaching and learning process. In this Unit, candidates will take timber and sheet materials sizes from the given drawing and check them against actual sizes required and check their work against prescribed tolerances. This work presents opportunities for developing aspects of numeracy. Candidates will also read instructions for work activities, including the specification of materials required for the practical activity; they will also take part in a discussion with peers and tutors regarding work activities, interpretation of drawings, 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 the workspace, tools and health and safety issues. All of these activities present opportunities for the development of communication skills.

Where this Unit is taken as part of the Intermediate 1 *Construction Crafts* Course, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which employers value. 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 candidates and help to enhance employability.

## National Unit Specification: support notes (cont)

### UNIT            Construction Crafts: Carpentry and Joinery Techniques (Intermediate 1)

#### 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.

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

It is expected that candidates will be given as much practice as possible in basic carpentry and joinery skills prior to being set assessment tasks. This will include tasks such as measuring and marking timber/sheet materials, cutting timber/sheet materials with saws and chisels and marking out joints. The National Assessment Bank item for the Unit details the quality and quantity of practical work to be carried out 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 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.

#### 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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Decorative Finishes Using Water-borne Paints (Intermediate 1)

**CODE** DM7Y 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is suitable for candidates who have limited or no experience of painting and decorating craft practices. The Outcomes require the candidate to select and use the correct tools, equipment and materials required to produce a variety of finishes using water-borne paints, including matt finish, silk finish, eggshell finish and a manufactured dual application paint finish. The work throughout will be based on recognised craft practices including working in an organised and safe manner. Candidates will also develop general skills which will enhance employability.

The Unit is an optional Unit in the Intermediate 1 Construction Crafts 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 painterwork at Intermediate 1 or Intermediate 2.

### OUTCOMES

- 1 Select, use and manage tools, equipment and materials.
- 2 Produce matt, silk and eggshell finishes using water-borne paints.
- 3 Produce a simple proprietary dual application finish using water-borne materials.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

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#### Administrative Information

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## **National Unit Specification: statement of standards**

### **UNIT            Construction Crafts: Decorative Finishes Using Water-borne                          Paints (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 manage tools, equipment and materials.

##### **Performance Criteria**

- (a) The selection of tools is correct for specified tasks.
- (b) The selection of equipment is correct for specified tasks.
- (c) The selection of materials is correct for producing specified finishes.
- (d) Tools and equipment are cleaned, maintained and stored correctly in accordance with good trade practice.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Produce matt, silk and eggshell finishes using water-borne paints.

##### **Performance Criteria**

- (a) A water-borne paint to produce a matt finish is applied in accordance with a given specification.
- (b) A water-borne paint to produce a silk finish is applied in accordance with a given specification.
- (c) A water-borne paint to produce an eggshell finish is applied in accordance with a given specification.
- (d) Quality checks against recommended standards are carried out on the finished work.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Produce a simple, proprietary dual application finish using water-borne materials.

##### **Performance Criteria**

- (a) A proprietary water-borne base coat is applied correctly.
- (b) A proprietary water-borne top coat is applied and finished correctly.
- (c) A quality check against recommended standards is carried out on the finished work.
- (d) Health and safety requirements are complied with during all activities.

## National Unit Specification: statement of standards (cont)

### UNIT Construction Crafts: Decorative Finishes Using Water-borne Paints (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:

- ◆ choosing the correct tools and materials for particular tasks, using them in a correct and safe manner, and cleaning and storing them correctly after use
- ◆ producing and applying matt, silk and eggshell finishes using water-borne paint on a prepared wall area or sample board
- ◆ applying a water-borne basecoat correctly
- ◆ applying and finishing a water-borne topcoat correctly
- ◆ producing a simple, proprietary dual application finish correctly using water-borne materials
  - applying a water-borne basecoat correctly
  - applying and finishing a water-borne topcoat correctly
- ◆ keeping surrounding areas clean and free from debris
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ candidates maintaining a clean and tidy workplace and adhering to health and safety
- ◆ requirements throughout all activities

Examples of each specified matt, silk and eggshell finish should be presented on suitably prepared wall areas or sample boards, which each measure no less than two square metres in area.

An example of the proprietary dual application finish should be presented on a suitably prepared wall area or sample board which measures no less than one square metre in area.

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: Decorative Finishes Using Water-borne Paints (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 the practical tasks involved in producing matt, silk and eggshell finishes, and in producing a proprietary dual application finish. Candidates will learn to recognise the range of tools and equipment needed to produce examples of the stated paint finishes. They will also learn to identify and explain the differences between the various finishes. Candidates will develop skills in producing acceptable examples of each type of finish.

It is 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 painterwork terms and will be able to demonstrate knowledge and understanding of these terms in everyday practice. 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.

Candidates should be made aware of different application methods such as brushes and paint rollers. Manufacturers' information and marketing materials should be readily available to raise candidates' awareness of products. They should also learn to use equipment to keep surrounding areas clean and undamaged, eg masking tape, dust sheets, etc. Some awareness of the ecological benefits of using exclusively water-borne materials may be incorporated as supplementary underpinning knowledge.

Different methods of application should be used to allow candidates sufficient practice with brushes and paint rollers and to experience the various types of finish, prior to being assessed. Candidates should complete their tasks using the following guidelines: brush application for the silk and eggshell finishes and roller application for the matt and proprietary dual application finishes.

In addition to the vocational content, candidates should be encouraged to focus on the general skills and attitudes which employers value. 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: Decorative Finishes Using Water-borne Paints (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 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.

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 is a very useful skill and habit that candidates can develop during their work. For example, candidates can compare their own basecoat and topcoat work against sample panels of both prepared by their tutor.

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 must not leave open cans of paint in situations where they might readily be spilled, thus causing a slipping hazard; daily routines in the workplace will include maintaining a clean and tidy workspace.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Decorative Finishes Using Water-borne Paints (Intermediate 1)

Opportunities for developing aspects of Core Skills should be incorporated where they arise naturally in the teaching and learning process. In this Unit, candidates can make estimates of the quantity of paint required for different tasks. In doing so, they will deal with coverage and volume calculations.

This is a good opportunity for developing aspects of numeracy. Candidates will also read instructions on paint tins and health and safety data sheets; they will communicate with tutors, peers and visitors as they carry out their practical activities. Candidates will also 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 activities, 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.

Candidates will also develop skills in working co-operatively with others regarding the use of shared materials, tools and equipment. They will also have to co-operate regarding the layout of the workshop and shared workspace.

Where this Unit is taken alongside the Unit *Construction Crafts: Employability Skills*, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which employers value. 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.

#### 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 are required to review and evaluate their work.

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

It is expected that candidates will be given as much practice as possible in the relevant techniques, prior to being set the assessment tasks. The National Assessment Bank item for the Unit details the quality and quantity of work to be produced for the Unit assessment.

Candidates should be made aware of what will be required of them in order to achieve the Unit. They should be encouraged to discuss the work with their teacher/lecturer and with their peers. Support and encouragement should be given throughout the Unit so that candidates become confident in their ability to achieve the Performance Criteria.

Previously finished examples should be shown and explained to candidates to enable them to become familiar with the different types of finishes and their uses.

## **National Unit Specification: support notes (cont)**

### **UNIT**            Construction Crafts: Decorative Finishes Using Water-borne Paints (Intermediate 1)

Different methods of application should be used to allow candidates sufficient practice with brushes and paint rollers and to experience the various types of finish, prior to being assessed. Candidates should complete their tasks using the following guidelines: brush application for the silk and eggshell finishes and roller application for the matt and proprietary dual application finishes.

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.

#### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Electrical Installation (Intermediate 1)

**CODE** DM7T 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is suitable for candidates who have no experience in or knowledge of craft practices in electrical work. Candidates will become familiar with a range of basic hand -tools and accessories commonly used in the installation of electrical systems, and will work with an introductory range of cable types and sizes. The Unit is based on practical workshop activities and candidates will develop the skills to complete a number of activities such as connecting a range of lighting and power fittings. They will also develop safe working practices and general skills that will enhance employability.

The Unit is an optional Unit in the Intermediate 1 Construction Craft Course but can also be taken as a freestanding Unit. Candidates who achieve this Unit should feel confident in progressing to further Units in electrical work at Intermediate 1 or Intermediate 2.

### OUTCOMES

- 1 Select and use basic hand-tools required in the electrical installation industry.
- 2 Select and use a range of accessories required in the electrical installation industry.
- 3 Connect a range of electrical fittings and appliances.

### RECOMMENDED ENTRY

Entry is at the discretion of the centre.

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Electrical Installation (Intermediate 1)

### **CREDIT VALUE**

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

*\*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.*

### **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: Electrical Installation (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 and use basic hand-tools required in the electrical installation industry.

##### **Performance Criteria**

- (a) The selection of basic hand-tools tools is appropriate for the work to be done.
- (b) The tools are used in the correct manner.
- (c) The tools are used solely for the purpose which they are intended.
- (d) The tools are maintained and stored correctly.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Select and use a range of accessories required in the electrical installation industry.

##### **Performance Criteria**

- (a) The selection of accessories is appropriate for the work to be done.
- (b) The accessories are used in the correct manner.
- (c) The accessories are maintained and stored correctly.
- (d) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Connect a range of electrical fittings and appliances.

##### **Performance Criteria**

- (a) Appropriate tools, accessories and flexible cord are selected.
- (b) The cord cores for termination are prepared in compliance with safe working practices.
- (c) The cord cores to the accessories are terminated using safe working practices.
- (d) All terminations are checked to ensure that they are mechanically and electrically sound.
- (e) Health and safety requirements are complied with during all activities.

## National Unit Specification: statement of standards (cont)

### UNIT Construction Crafts: Electrical Installation (Intermediate 1)

#### EVIDENCE REQUIREMENTS FOR THIS UNIT

Performance evidence and additional 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 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, accessories and flexible cord for particular applications
- ◆ preparing correctly flexible cord cores for termination
- ◆ terminating correctly the prepared flexible cord to the required connection accessories
- ◆ using tools correctly throughout all activities
- ◆ in particular, candidates selecting each of a load connection accessory, a control accessory, a supply connection accessory and appropriate flexible cord for each
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ 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 to exemplify the national standard. Centre wishing to develop their own assessments should refer to the NAB to ensure a comparable standard.

## **National Unit Specification: support notes**

### **UNIT            Construction Crafts: Electrical Installation (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 electrical work activities at an introductory level. The candidate is required to develop the ability to select and use tools and accessories correctly and safely. It is therefore important that the learning takes place in a supervised workshop 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 electrical work terms and 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 and connecting flexible cord to electrical appliances and fittings. Selection of the correct tools and flexible cord will be an essential prerequisite to the practical activities. Candidates should be taught good working practices at each stage and should learn how to carry out a quality check on their own work throughout the tasks and 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 practice in the workshop.

Tools are likely to include some of the following: cable insulation strippers, cable side-cutters, cable-cutting pliers, a variety of screwdrivers, grips and pliers as well as spanners hacksaws and hammers. Accessories are likely to include some of the following: plug-tops, industrial connector, ceiling roses, various fuses, switches, lamp holders and bell Units. Candidates should also be able to select the appropriate sizes and types of flexible cable associated with the accessories.

Candidates will have the opportunity to develop practical skills in using hand-tools during electrical work exercises. Candidates should select an appropriate load connection accessory and choose the most suitable flexible cord in terms of its current rating and the environmental conditions in which it is to operate. An appropriate control accessory and supply connection accessory (including cartridge fuse where appropriate) will also be selected. The cores of the flexible cord will be prepared for termination.

The prepared flexible cord will be terminated to the load connection, control and supply connection accessories respectively. The cord terminations will be checked for mechanical and electrical soundness and all in compliance with good electrical trade practices.

In addition to the vocational content, candidates should be encouraged to focus on the general work practices and attitudes which employers value. These should be delivered as an integral part of the Unit. Opportunities will arise in various practical contexts to discuss the value of, for example, good time-keeping and attendance thorough planning and preparation, working co-operatively, maintaining a clean, tidy and organised workplace, checking own work to ensure it is of an appropriate standard; adopting a positive attitude to learning, demonstrating a willingness to follow instructions and taking

## National Unit Specification: support notes

### UNIT Construction Crafts: Electrical Installation (Intermediate 1)

a positive attitude to receiving feedback on performance. 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.

#### 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 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.

Candidates must learn about the correct tools and accessories to be used for different tasks, and this should be through the actual use of the items rather than through diagrams or illustrations. Candidates should be encouraged to handle and examine the tools and accessories throughout delivery of this Unit so that they become familiar with these items, their use, capabilities and limitations. The safe and correct use of tools in preparing cords for termination should first be demonstrated prior to providing the candidates with opportunities to carry out the required cord termination exercises.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Electrical Installation (Intermediate 1)

Candidates should be taught to appreciate the limitations in the use of tools and the correct applications of these. They should also be taught an appreciation of the relationship between the rating of load devices and the cord/cable and accessories being used to supply and control these loads.

This Unit should be delivered in a wholly practical manner, ideally in a workshop environment adopting an experiential approach to learning. This involves learning through practical experiences and activities. Candidates should experience workplace conditions and should be encouraged to perform tasks and conduct themselves in a manner appropriate to the workplace.

If this Unit is delivered as part of the Construction Craft Course lecturers should seek every opportunity to build up an understanding of work practices, behaviours and attitudes required of employees and employers. Checking standards of work is a very useful skill and habit that candidates can develop during their work. For example, candidates should be encouraged to check all terminations to ensure they are neat and no bare wires are showing. The construction and electrical industries are very keen on producing work that is 'right first time' and quality checks are an inherent part of the work in these industries. 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, eg candidates will learn that leaving ladders, tools, cables accessories and equipment around the workspace could be a tripping hazard; they will learn how to use a wide range of tools in a safe manner and how to maintain these tools; daily routines in the workplace will include maintaining a clean and tidy workspace.

Opportunities for developing the Core Skills of Communication, Numeracy, Information Technology, Working with Others and Problems Solving should be incorporated where they arise naturally in the teaching and learning process. For example, candidates should be encouraged to do simple fuse rating calculations using the equation  $P = VI$ . Such calculations will help to develop numeracy skills. Candidates will also be required to read instructions for work activities; they will also take part in discussions with peers and tutors regarding work activities, interpretation of drawings, materials, use of tools and workshop protocols. They will need to demonstrate, at all times, clear and courteous communication with their peers, supervisors and technicians. All of these activities present opportunities for developing oral and reading 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 work practices and attitudes which employers value. Integrated activities may involve the candidate assessing his/her own performance on time-keeping and attendance, planning and preparation, working co-operatively, maintaining a tidy and safe work area, checking own work, demonstrating a positive attitude to learning, showing a willingness to follow instructions and responding positively to feedback on performance. Candidates may also seek the views of tutors/supervisors and identify areas for improvement and take responsibility for action plans. These activities can add value to the candidate's experience and help to enhance employability.

#### 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 criteria and are required to review and evaluate their work.

## **National Unit Specification: support notes (cont)**

### **UNIT            Construction Crafts: Electrical Installation (Intermediate 1)**

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

It is expected that candidates will be given as much practice as possible in electrical work techniques, prior to being set the assessment tasks. The National Assessment Bank items for the Unit detail the quality and quantity of practical work to be carried out for the Unit assessment. The use of the standards and quality checking introduced in this Unit helps candidates to appreciate 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.

The assessment of all three Outcomes can be integrated, since completing the practical activities required for Outcome 3 also provides evidence that candidates can meet the requirements of the first two Outcomes.

Examples of the kind of activities which could be used for the assessment of this Unit would be:

- ◆ Connect a brass bayonet-cap lamp holder (table lamp) to a flexible cord switch and a plug and socket
- ◆ Connect a moulded (non-metallic) bayonet-cap lamp holder to a ceiling rose.
- ◆ Connect a fused switch to a 13A plug-top.

For each activity, the candidate would be expected to:

- ◆ select an appropriate accessory and flexible cord
- ◆ select tools appropriate for the exercise
- ◆ prepare the cord cores for termination in compliance with safe working practices
- ◆ terminate the cord cores to the accessories using safe working practices
- ◆ ensure that all terminations are mechanically and electrically sound

#### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Plasterwork (Intermediate 1)

**CODE** DM7R 10

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is suitable for candidates who have no experience in or knowledge of craft practices in plasterwork. The Unit is based on practical activities such as applying plaster to walls and manufacturing a short length of plaster moulding. Candidates will be required to correctly select and care for a basic range of tools. They will work with an introductory range of plastering equipment and materials. They will develop safe working practices and general skills that will enhance employability.

The Unit is an optional Unit in the Intermediate 1 Construction Crafts 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 plasterwork at Intermediate 1 or Intermediate 2.

### OUTCOMES

- 1 Select, use and manage the use of hand tools, materials and equipment.
- 2 Carry out tasks involving solid plasterwork skills.
- 3 Carry out tasks involving plasterwork bench skills.

### RECOMMENDED ENTRY

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

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## **National Unit Specification: general information (cont)**

**UNIT**            Construction Crafts: Plasterwork (Intermediate 1)

### **CREDIT VALUE**

0.5 credit at Intermediate 1 (3 SCQF credit points 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: Plasterwork (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 manage the use of hand tools, materials and equipment.

##### **Performance Criteria**

- (a) The selection of tools is appropriate for the work to be carried out.
- (b) Tools, materials and equipment are handled and transported correctly and in accordance with good practice.
- (c) Tools and equipment are used, cleaned and maintained correctly and in accordance with good practice.
- (d) Tools, materials and equipment are stored correctly after use.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Carry out tasks involving solid plasterwork skills.

##### **Performance Criteria**

- (a) A given background area is prepared and treated in accordance with good practice.
- (b) Materials are correctly mixed according to the given specification.
- (c) The straightening coat is applied in accordance with the given specification.
- (d) The finishing coat is applied to the straightened area in accordance with the given specification.
- (e) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (f) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Carry out tasks involving plasterwork bench skills.

##### **Performance Criteria**

- (a) The bench is prepared for running of the moulding in accordance with the given specification.
- (b) Materials are correctly mixed according to the given specification.
- (c) The run moulding is produced to given shape and size as in the specification.
- (d) The moulding is removed from bench without damage.
- (e) Mitres and cuts are formed in accordance with the specification and to given tolerances.
- (f) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (g) Health and safety requirements are complied with during all activities.

## National Unit Specification: statement of standards (cont)

### UNIT Construction Crafts: Plasterwork (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 for particular tasks, transporting them and positioning them correctly between 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
- ◆ preparing backgrounds, benches and supplied running mould and work areas for subsequent work
- ◆ measuring out accurately, lengths of battens for grounds and lengths of moulding
- ◆ measuring out accurately plaster materials for mixing
- ◆ cutting, shaping and jointing of mouldings in accordance with good practice
- ◆ producing from given two-dimensional drawings:
  - two coats lightweight plaster to a flat walled background of minimum area 1m<sup>2</sup>, the plasterwork to be plumb, straight, flat face and with proper surface finish
  - one short length (minimum 1m) of plaster moulding forming one mitred intersection and two squared ends
  - all of the above to be carried out to given tolerances and specification
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ 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: Plasterwork (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 plasterwork activities at an introductory level. The candidate is required to develop the ability to select and use tools and materials 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 plasterwork terms and 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 mixing and applying plaster to walls and in mouldings. Candidates should be taught good working practices at each stage and should learn how to carry out a quality check on their own work throughout the tasks and on completion.

The Unit will focus on basic skills in applying plaster to a wall in the workshop. This will be to a specified standard and tolerance. Candidates will also learn skills associated with the production of lengths of plaster moulding in the workshop. 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 that 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 and the importance of good health and safety and personal protective equipment.

Outcome 1 requires the candidate to select tools, and to handle, transport, position, and store tools and materials. Candidates should become aware of 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 will include various plasters in dry and wet form. Candidates will learn to handle these materials correctly and will be given an appreciation of the hazards associated with skin contact and inhalation of plaster dust. Proper PPE (personal protective equipment) will be worn, whenever necessary, in the carrying out of practical tasks. Tools are likely to include mixing drums, plunger, board and stance, hawk, trowel, gauger, spirit level, straightedge, scribe/splash brush, small tool, saw, square and mitre box.

Outcome 2 entails tasks in solid plasterwork skills and is mainly related to the application of two-coat lightweight plasters to a flat walled (brick/block) background. The importance of preparing the background correctly and proper mixing of materials will be stressed. The use of dots and screeds or fully bedded timber rods together with a spirit level will help the candidate to become familiar with techniques common in this area of work.

Outcome 3 will enable the candidate to develop practical skills in using hand -tools during the bench work production of a short length of panel moulding. Again, both the correct preparation of the bench area and the mixing of materials will be stressed. Running techniques, including the importance of the running rule/rod, together with back-stripping and methods incorporating reinforcement into the run, should be demonstrated and explained. The cutting of mitre and squared ends of the panel mould may include measured cuts or the use of a mitre box.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Plasterwork (Intermediate 1)

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 and wearing PPE (personal protective equipment), 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.

#### 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 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.

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. For example, learning how to use a spirit level or straightedge to check work against a required standard would be helpful for candidates. The construction industry is very keen on producing work

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Plasterwork (Intermediate 1)

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.

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. For example, learning how to use a spirit level or straightedge to check work against a required standard would be helpful for candidates. 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 an accumulation of wet plaster on the floor of the workspace could constitute a slipping hazard; they will learn how to use hand-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 translating dry plaster into wet mixed quantities for a given area; they will also check straightness and plumb, etc against prescribed tolerances. These are good opportunities for developing aspects of numeracy.

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, interpretation of drawings, 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 Unit *Construction Crafts: Employability Skills*, 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.

Outcome 1 should be integrated with Outcomes 2 and 3. Where it is possible to do so, underpinning knowledge should be integrated with practical activities in the workshop or project area.

## **National Unit Specification: support notes (cont)**

### **UNIT**            Construction Crafts: Plasterwork (Intermediate 1)

#### **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.

#### **GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT**

It is expected that candidates will be given as much practice as possible in plastering techniques, prior to being set the assessment tasks. The National Assessment Bank item for the Unit details the quality and quantity of solid and bench plasterwork 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.

#### **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](http://www.sqa.org.uk/assessmentarrangements)

## 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.

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## **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.

#### **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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: One Brick Walling (Intermediate 2)

**CODE** DX0L 11

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is a mandatory Unit in the *Intermediate 2 Construction Crafts Course* and is designed to be taken as part of this Course.

This Unit is suitable for candidates with no previous brickwork experience and may also provide progression for candidates who have successfully completed the *Intermediate 1 Construction Crafts Course* or Units.

The Unit is based on practical workshop activities such as selecting and maintaining tools, measuring and setting out brickwork and building short lengths of one-brick walls. Candidates will learn how walls of one brick thick are bonded. They will have to carry out practical work employing at least one of the standard one-brick bonds. These are more complex than those involved with half-brick walling.

Candidates studying this Unit will also develop safe working practices and general skills and attitudes which will enhance employability.

Candidates who achieve this Unit should feel confident in widening their experience in brickwork by taking other Intermediate 2 Units in this trade area.

### OUTCOMES

- 1 Select, use and maintain basic bricklaying tools and equipment.
- 2 Measure and set out one brick walls.
- 3 Build one brick walls.

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## National Unit Specification: general information (cont)

**UNIT**            Construction Crafts: One Brick Walling (Intermediate 2)

### RECOMMENDED ENTRY

While entry is at the discretion of the centre, it would be beneficial for candidates to have attained the following Unit or equivalent:

- ◆ *Intermediate 1 Construction Crafts: Half-Brick Walling Unit*
- ◆ *Intermediate 1 Construction Crafts: Brickwork Techniques Unit*

### CREDIT VALUE

1 credit at Intermediate 2 (6 SCQF credit points at SCQF level 5\*).

*\*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.*

### 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: One Brick Walling (Intermediate 2)**

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 basic bricklaying tools and equipment.

##### **Performance Criteria**

- (a) Selection of tools and equipment is appropriate for the work to be done.
- (b) Tools are used in the correct manner.
- (c) Tools are used solely for the purpose which they are intended.
- (d) Tools are cleaned, maintained and stored correctly.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Measure and set out one-brick thick walls.

##### **Performance Criteria**

- (a) Walls are measured accurately and to the prescribed tolerance.
- (b) Walls are marked and set out correctly.
- (c) Bonds are set out correctly.
- (d) Levels at both ends are established correctly.
- (e) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Build one-brick walls.

##### **Performance Criteria**

- (a) Walls are built in accordance with given working drawings.
- (b) Walls are built to the prescribed standards and tolerances.
- (c) Surplus materials are returned to store in accordance with good practice.
- (d) Health and safety requirements are complied with during all activities.
- (e) A quality check is carried out on the finished work against prescribed standards and tolerances.

## National Unit Specification: statement of standards

### UNIT Construction Crafts: One Brick Walling (Intermediate 2)

#### 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 observation 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:

- ◆ choosing the correct tools and equipment for particular tasks
- ◆ using tools and equipment in a correct and safe manner, using them solely for the purpose for which they are designed
- ◆ cleaning, maintaining and storing tools and equipment correctly after use
- ◆ measuring out accurately, setting out the shape of the walls, setting out the correct bond and establishing levels at ends of the walls
- ◆ building **two** basic one-brick thick walls (of minimum height **six** courses) to stated standards and tolerances, working from information on given drawings and employing **two** from the following brick bonds: English Bond, Flemish Bond, English Garden Wall Bond and Flemish Garden Wall Bond
- ◆ returning surplus materials to store in accordance with good practice
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ candidates maintaining a clean and tidy workplace and adhering to health and safety requirements throughout all activities

The NAB item for this Unit provides an assessor observation 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: One Brick Walling (Intermediate 2)

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

The content in this Unit covers practical brickwork activities at an introductory level. The candidate is required to develop the ability to select and use tools and equipment correctly and safely. It is therefore important that the learning takes place in a supervised workshop/site environment. Standard and site-specific safe working practices must be learned and it is important that candidates adhere to these at all times.

During the process of practical work the candidate will become accustomed to the use of brickwork terms and will be able to demonstrate knowledge and understanding of these terms in everyday practice. This will help discussions of technical matters with tutors.

The main content of the Unit will be learning the preparatory skills required in measuring, setting out and building small-scale, one-brick walls. Candidates should be taught good working practices at each stage and should learn how to carry out quality checks on their own work throughout the task and on completion.

There are a number of standard brickwork bonds that can be employed in one-brick walling. Candidates should be shown a number of these, including: English Bond, Flemish Bond, English Garden Wall Bond and Flemish Garden Wall Bond. Candidates should be given opportunity to practice building walls using each of these brick bonds which are, by nature, more complex than simple half-brick thick 'stretcher' bond.

Candidates should be encouraged to use and develop techniques suited to their own physical strength and abilities. This might include the use of small trowels to spread mortar and the use of light weight bricks (for example, London Brick (LBC) commons).

Outcome 1 requires the candidate to select tools, and to use, clean and maintain them correctly. Materials used will almost exclusively be common bricks and an appropriate mortar. It is recommended that a lime/sand mortar is employed to facilitate the reuse of materials. The bricklayers' trowel will be the prime tool that candidates will use to build the walls, but they should also learn how to use builders' line and other small tools where appropriate.

Outcome 2 entails skills in measuring and setting out for subsequent building of brick walls. This task requires the reading of drawings, use of tape measures, chalk and, where appropriate, setsquare. This task requires the calculating of the lengths of walls and transferring this information to the workshop floor. Candidates must be made aware of the tolerances that will be acceptable for this task and will be allowed to practise particular skills until they have become competent in them to the standards required.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: One Brick Walling (Intermediate 2)

Outcome 3 requires the candidate to build short lengths of one-brick wall. Care will be taken in the application of mortar to beds and joints and the dimensions of the beds and joints. Care must be taken to keep the wall face clean of mortar. Candidates will learn how to point the brickwork beds and joints to provide a finished face to a brick wall.

The overall wall must in each case be built to given standards and tolerances. Candidates will, themselves, carry out a quality check on their walls against the tolerances given.

In addition to the vocational content of this Unit, candidates should be encouraged to develop the general skills and attitudes that are valued by construction employers. These employability skills 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 and working in small teams; planning for practical activities; thorough preparation; taking advice; showing appreciation of health and safety issues and maintaining a clean, tidy and organised workplace.

Candidates should learn about waste minimisation and sustainability. In a practical way they can contribute to this by careful use of materials and by promptly returning surplus materials to the store.

Relevant aspects of current health and safety legislation, current COSHH (Control of Substances Hazardous to Health) Regulations and any systems of work relevant to the workshop/workplace should be explained to candidates. It is important that the legislation is adhered to as part of the work of this Unit. Candidates should be encouraged to be clean, presentable and appropriately dressed for the workshop. The wearing of Personal Protective Equipment (PPE) including protective clothing when required should be emphasised.

If candidates are taking this Unit as part of the *Intermediate 2 Construction Crafts Course* they may be required to carry out basic risk assessments for brickwork activities or workspaces.

### 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 actual or 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 not just strengths but also areas for improvement. It is important to encourage candidates throughout this brickwork Unit to evaluate their own work and progress. They should be encouraged to seek advice and set themselves goals, building both confidence and competence in undertaking tasks.

Candidates undertaking this Unit at Intermediate 2 with little or no prior experience of practical brickwork may benefit from extra practice in dry bonding exercises. They may also benefit from tutoring in one particular aspect of basic half-brick walling — the return corner. This exercise will permit them to move with confidence to the comparatively more complex work found in one-brick walls, and in particular, for example, the one-brick thick return corner.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: One Brick Walling (Intermediate 2)

Candidates will be helped to evaluate their practical brickwork skills by learning how to use checklists. These will detail measurable standards and tolerances to which the candidate should compare his/her own brickwork exercises. Candidates should learn how to use a gauge rod in checking brick courses against tolerance. 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.

Candidates will also require constructive feedback on peripheral aspects of the brickwork task such as the transporting of tools and materials to the workspace, the planning and setting out of the work area and use of the trowel and other tools. Often such feedback is best delivered on a one-to-one basis.

Responsible, safe behaviours in the workplace can be demonstrated and practised as part of the essential work for routine example: candidates will learn that a build-up of brick debris around the workspace could be a tripping hazard (this may be particularly applicable for one-brick walling exercises as opposed to half-brick walling exercises because potentially twice the amount of debris could be left lying around). They will learn how to use hand tools and equipment in a safe manner and how to clean and maintain them. The daily routine in the workplace will include maintaining a clean and tidy workspace. The candidates should learn that they have a certain routine to follow as far as health and safety is concerned.

Opportunities for developing aspects of Core Skills should be incorporated where they arise naturally in the learning and teaching process. In this Unit, candidates will make calculations in setting out brickwork and in estimating the amount of brickwork materials required for particular exercises. They will also calculate lengths, heights and thicknesses in brick walls, and check work against prescribed tolerances. These are good opportunities for developing aspects of Numeracy.

Candidates will read instructions for work activities, including annotations on drawings and specifications of materials. They will also take part in discussions with peers and tutors regarding work activities, materials, and use of tools, workshop protocol and the interpretation of drawings. These activities present opportunities for developing aspects of Communication.

Where this Unit is taken alongside the *Intermediate 2 Construction Crafts: Employability Skills Unit*, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which employers value. 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 to learning. Candidates should seek the views of tutors/supervisors and will identify areas for improvement. They should take responsibility for action plans. These activities will all add value to the candidate's experience and help to enhance employability.

Outcome 1 should be integrated with Outcomes 2 and 3. Candidates can naturally select, use and maintain hand tools, equipment and materials when carrying out practical brickwork tasks. Where it is possible to do so, underpinning knowledge should be integrated with practical activities in the workshop or project area. Nevertheless, underpinning knowledge is not assessed separately in this Unit. Applied knowledge is assessed by observation as candidates complete each practical task.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: One Brick Walling (Intermediate 2)

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

It is expected that candidates will be given as much practice as possible in bricklaying techniques, prior to being set the assessment tasks. This is important when candidates are working on walls of one brick thick or more because the candidates must be confident and competent in dealing with brick bonding significantly different to that encountered in half-brick walling. In particular, candidates need to practise one-brick exercises dealing with English bond, English Garden Wall bond, Flemish bond and Flemish Garden Wall bond. The Evidence Requirements for the Unit detail the quality and quantity of brickwork to be produced for the Unit assessment.

The NAB item contains brickwork exercises and assessor observation checklists.

The NAB requires that brickwork exercises be completed to prescribed standards and tolerances. Tolerances required by the NAB 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 bricklayer in the construction industry.

Assessors are required to check the quality of candidates' work against prescribed standards and tolerances. Candidates themselves are required to carry out a quality check on their brickwork against these same standards. It is recommended that candidates be allowed to carry out their own quality check **prior** to the assessor's check. It is further recommended that centers allow sufficient time in assessment sessions to permit this checking of practical work by both candidate and assessor. This is important because it is unlikely, in most centers, that brickwork models can be retained from one workshop session to the next.

Assessor observation checklists and other assessment records should be maintained and kept up to date to keep track of candidate progress and to provide evidence for internal and external moderation purposes. The NAB for this Unit provides an assessor observation checklist.

Centres may develop their own instruments of assessment but these must be of a comparable standard to the NAB. Pre-moderation of own instruments of assessment by SQA is strongly recommended.

#### 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](http://www.sqa.org.uk/assessmentarrangements)

## National Unit Specification: general information



**UNIT** Construction Crafts: Plumbing of Sanitary Appliances  
(Intermediate 2)

**CODE** DX0T 11

**COURSE** Construction Crafts (Intermediate 1)

### SUMMARY

This Unit is an optional Unit within the *Intermediate 2 Construction Crafts Course* and has been designed to be taken as part of that Course.

The Unit is suitable for candidates with no previous plumberwork experience and may also provide progression for candidates who have successfully completed the *Intermediate 1 Construction Crafts Course* or Units.

The Unit is based on practical workshop activities which involve the assembly and installation of a significant piece of standard sanitaryware such as a kitchen sink, a wash hand basin or a WC. Candidates will also install, connect and fix associated pipework to the sanitary appliances. Candidates will select and use of a range of relevant plumberwork tools and materials and develop safe working practices and general skills that will prepare them more fully for the workplace.

Candidates who achieve this Unit should feel confident in widening their experience in plumberwork by taking other Intermediate 2 Units in this trade area.

### OUTCOMES

- 1 Select, use and maintain plumbing tools and materials.
- 2 Assemble, fit and fix a sanitary appliance.
- 3 Install pipework to a sanitary appliance.

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### Administrative Information

**Superclass:** TH

**Publication date:** April 2007

**Source:** Scottish Qualifications Authority

**Version:** 02

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## **National Unit Specification: general information**

**UNIT**                    Construction Crafts: Plumbing of Sanitary Appliances  
(Intermediate 2)

### **RECOMMENDED ENTRY**

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

- ◆ *Intermediate 1 Construction Crafts: Plumbing Unit*
- ◆ *Intermediate 1 Construction Crafts: Practical Copper Pipework Unit*

### **CREDIT VALUE**

1 credit at Intermediate 2 (6 SCQF credit points at SCQF level 5\*).

*\*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.*

### **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: Plumbing of Sanitary Appliances (Intermediate 2)**

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 plumbing tools and materials.

##### **Performance Criteria**

- (a) Selection of tools and materials is appropriate for the work to be done.
- (b) Tools are used in the correct manner.
- (c) Tools are used solely for the purpose which they are intended.
- (d) Tools are cleaned, maintained and stored correctly.
- (e) Surplus materials are carefully stored correctly.
- (f) Health and safety requirements are complied with during all activities.

#### **OUTCOME 2**

Assemble, fit and fix a sanitary appliance.

##### **Performance Criteria**

- (a) The appliance is assembled in accordance with manufacturer's instructions.
- (b) The assembled appliance is free from damage and excessive marking.
- (c) The appliance is positioned correctly, levelled and secured in accordance with manufacturer's instructions.
- (d) Associated fittings are fitted and fixed in accordance with manufacturer's instructions.
- (e) A quality check is carried out on the finished work against prescribed standards and tolerances.
- (f) Health and safety requirements are complied with during all activities.

#### **OUTCOME 3**

Install pipework to a sanitary appliance.

##### **Performance Criteria**

- (a) Pipe material and associated fittings are selected correctly for a given appliance and location.
- (b) Pipework is free from excessive marking.
- (c) Pipework is cut square and free from burrs.
- (d) Pipework is completed using appropriate fittings and in accordance with current industry practice.
- (e) A quality check is carried out on the finished work against the prescribed standards tolerances.
- (f) Health and safety requirements are complied with during all activities.

## National Unit Specification: statement of standards (cont)

### UNIT Construction Crafts: Plumbing of Sanitary Appliances (Intermediate 2)

#### 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 assessor observation checklists. This evidence will be generated from assignments 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 appropriate tools
- ◆ using tools in a correct manner and solely for the purpose for which they are intended
- ◆ cleaning, maintaining and returning tools to store on completion
- ◆ selecting appropriate materials
- ◆ carefully storing surplus materials correctly
- ◆ assembling, fitting, positioning and fixing **one** sanitary appliance in accordance with manufacturer's instructions
- ◆ fitting and fixing associated fittings to the sanitary appliance
- ◆ measuring, cutting, fitting and fixing associated pipework to sanitary appliance in accordance with good practice (both plastic and copper pipework to be covered and each service to a length not exceeding 3 metres; the copper pipework to include forming bends)
- ◆ carrying out a quality check on completed work before submitting for final assessment
- ◆ maintaining a clean and tidy workplace and adhering to health and safety requirements throughout all activities

The NAB item for this Unit provides an assessor checklist and details of the practical assignments to 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: Plumbing of Sanitary Appliances (Intermediate 2)**

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**

The content in this Unit covers plumbing work activities at an introductory level, however, candidates will be working with full-size kitchen and bathroom appliances and the associated pipework they will carry out is realistic in nature. The sanitary appliances will be fixed in position and the pipework will have to be carefully planned and accurately installed in order to connect to the fixed position of the appliances.

In this Unit the candidate is required to develop the ability to select and use tools correctly and safely. At Intermediate 2 candidates will use a variety of tools. It is therefore important that the learning takes place in a supervised workshop/site environment as safe use of tools is an important aspect of this Unit.

Candidates with little or no prior experience in plumbing crafts work will benefit from practice in pipework cutting, bending and jointing exercises. Once they have gained some proficiency in these tasks they can proceed to the more specific tasks required of the Unit.

During the process of practical work the candidate will become accustomed to the use of plumberwork terms and will be able to demonstrate knowledge and understanding of these terms when carrying out practical plumbing tasks. The main content of the Unit will be learning the methods and skills required to assemble, fit and fix an item of sanitaryware with associated fittings and pipework, all in accordance with given drawings or manufacturer's instructions. Candidates should be taught good working practices at each stage and should learn how to carry out a quality check on their own work at suitable intervals and on completion.

Outcome 1 requires the candidate to select tools, and to handle, transport, position, and store both tools and materials. Materials used will include copper and plastic pipes and fittings and the sanitary appliances themselves along with their own particular fittings and fixings. Candidates will use standard plumbing tools and proprietary pipecutters.

Outcome 2 covers the assembly of sanitary appliances. This normally requires assembly in accordance with a particular manufacturer's instructions. However, having learned how to follow one set of instructions, candidates are likely to be in a good position to interpret instructions for a different appliance or the same type of appliance from a different manufacturer. Techniques in fixing appliances to wall and floor surfaces may differ according to the nature of the background or surface. Candidates should become familiar with a small variety of fixing types.

Outcome 3 requires the candidate to install pipework to the assembled and fixed sanitary appliance. Both copper and plastic pipework will be included. Candidates will learn the requirements for supply, waste and overflow pipes as is relevant to each appliance and will practise these installations. Sundry fittings such as valves should be included in pipework assemblies. Copper pipework installations will include forming bends in pipework. Care should be taken in the planning of pipework routes to the appliance and in measuring pipework to length for connections. Pipework will include joints in the running length as well as pipeclips as required. The overall pipework assembly must be built to given standards and tolerances. Candidates will carry out a quality check on their own work against the tolerances given.

## **National Unit Specification: support notes (cont)**

### **UNIT                    Construction Crafts: Plumbing of Sanitary Appliances (Intermediate 2)**

In addition to the vocational content in this Unit, candidates should be encouraged to develop the general work practices and attitudes which are valued by employers. These employability skills should be delivered as an integral part of the Unit. Opportunities will arise in various practical contexts to discuss the value of, for example, good time-keeping and attendance; thorough planning and preparation, working co-operatively and in small teams; acknowledging safe systems of work; maintaining a clean, tidy and organised workplace; checking own work to ensure it is of an appropriate standard; adopting a positive attitude to learning; demonstrating a willingness to follow instructions and taking a positive attitude to feedback on performance.

Candidates should learn about waste minimisation and sustainability. In a practical way they can contribute to this by careful use of materials and by promptly returning surplus materials to the store.

Relevant aspects of current health and safety legislation, current COSHH Regulations, manual handling 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. Candidates should be helped to appreciate the requirement to be clean, presentable and appropriately dressed for the workshop. The wearing of Personal Protective Equipment (PPE), including protective clothing when required, should be emphasised.

#### **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. For example, one of the key aspects of this Unit is that candidates learn how to use plumbing tools and materials in a correct and safe manner. This can best be achieved by candidates actually undertaking practical plumbing activities in a supervised workshop environment.

Experiential learning also involves reflecting on experiences/activities, identifying strengths and areas for improvement. It is important to encourage candidates throughout this plumbing Unit to evaluate their own work and progress. They should be encouraged to seek advice and set themselves goals to build confidence and competence in undertaking tasks. Teaching candidates how to use checklists containing realistic standards and tolerances will help them to evaluate their practical plumbing skills. They will also require constructive feedback on peripheral aspects of the plumberwork task such as using tools, planning and setting out the work area and health and safety procedure. Often such feedback is best delivered on a one-to-one basis.

Candidates who undertake this Unit at Intermediate 2 with little or no prior experience of practical plumberwork may benefit from extra practice in pipe jointing exercises. They should learn how to cut, bend and connect pipework as well as the work in connection with the installation of sanitary appliances. The time taken developing competence in the different aspects of pipe installations will permit candidates to move with confidence to the more complex work in fabricating pipework installations for a fixed kitchen or bathroom appliance.

Checking standards of work against prescribed tolerances is a very useful skill and habit that candidates will develop during the Unit. For example, in undertaking various plumbing practical exercises, candidates should check that all work is completed accurately and within measured tolerances. 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.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Plumbing of Sanitary Appliances (Intermediate 2)

During the delivery of this Unit candidates should be encouraged to learn and use common plumbing terms with a view to helping them remember these terms. This will help discussions of technical matters with tutors.

Individual candidates should be encouraged to use and develop techniques suited to their own physical strengths and abilities. Nevertheless, good trade practice should be emphasised at all times.

It is recommended that, prior to candidates commencing any practical activity, that the teacher/lecturer demonstrates the correct and safe way to undertake the activity. Candidates should also be provided with simple diagrammatic drawings of exercises to assist them in undertaking these practical tasks.

Responsible, safe behaviours in the workplace can be demonstrated and practised as part of the essential work routine, for example: candidates will learn that leaving plumbing tools, equipment and materials randomly around a workspace could be a tripping hazard. Candidates will learn how to use tools and equipment in a safe manner and the correct ways to clean and maintain tools. Daily routines in the workplace will include ongoing hazard identification and the maintenance of 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. For example, candidates will be required to read instructions for work activities, including information about different materials and jointing compounds; they will also take part in discussions with peers and tutors regarding work activities, interpretation of drawings, materials, use of tools and workshop protocols. They will need to demonstrate, at all times, clear and courteous communication with their peers, supervisors and technicians. All of these activities present opportunities for developing oral and reading communication skills.

Opportunities for developing other aspects of Core Skills will arise when candidates measure and cut pipes and make allowances for the length of fittings. It will be particularly important to get measurements to fixed positions correct. These will include dimensions to fixed appliances such as the waste outlet or incoming cold water connection for a wash hand basin. These are all aspects of Numeracy.

Sanitary appliances are sometimes awkward to manually handle and manoeuvre into position. This may require two or more people to cooperate in lifting the appliance and provide opportunity to develop skills in Working with Others.

Where this Unit is taken alongside the *Intermediate 2 Construction Crafts: Employability Skills Unit*, candidates will have additional opportunities to develop an awareness of the general work practices and attitudes that employers value. Integrated activities will involve the candidate assessing his/her own performance on time-keeping and attendance, planning and preparation, working co-operatively and in teams, maintaining a tidy and safe work area, checking own work, demonstrating a positive attitude to learning, showing a willingness to follow instructions and responding positively to feedback on performance. Candidates will also seek the views of teachers/lecturers 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.

## National Unit Specification: support notes (cont)

### UNIT Construction Crafts: Plumbing of Sanitary Appliances (Intermediate 2)

Outcome 1 should be integrated with Outcomes 2 and 3. Candidates can naturally select, use and manage hand tools, equipment and materials when carrying out practical plumberwork tasks. Where it is possible to do so, underpinning knowledge should be integrated with practical activities in the workshop or project area. Nevertheless, underpinning knowledge is not separately assessed in this Unit. Applied knowledge is assessed by observation as candidates complete each practical task.

#### GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

It is expected that candidates will be given as much practice as possible in practical plumbing techniques prior to being set the assessment tasks. This is important in this Unit because candidates are dealing with sizeable kitchen or bathroom appliances and if they are incorrectly handled or not fixed correctly the whole exercise could be jeopardised and even be hazardous.

The Evidence Requirements for the Unit detail the quality and quantity of practical work to be produced for the Unit assessment. Standards required from the assessment tasks are significantly less onerous than those required by National Occupational Standards. Nevertheless, such an approach introduces candidates to the kind of quality regime they will experience if and when they pursue a career as a plumber in the construction industry.

The assessment of all three Outcomes can be integrated since completing the practical activities required for Outcomes 2 and 3 also provides evidence that candidates can meet the requirements of the Outcome 1 regarding the selection and use of tools, equipment and materials.

Examples of the kind of activities that could be used for the assessment of this Unit would be the assembly, fitting and fixing of **one** of the following:

- ◆ a wash hand basin
- ◆ a kitchen sink
- ◆ a shower tray and showerhead
- ◆ a WC complete with pan and cistern

In each case the relevant standard fittings would be fitted by the candidate. For example, the wash hand basin would require a waste, handwheels (taps) and a plug and chain.

Candidates would also be required to install and connect the soil or waste pipework or overflow where applicable, plus one other piped service to the appliance, for example, the cold supply or hot supply.

Assessor observation checklists and other assessment records should be maintained and kept up to date to keep track of candidate progress and to provide evidence for internal and external moderation purposes. The NAB for this Unit provides an assessor observation checklist.

Centres may develop their own instruments of assessment but these must be of a comparable standard to the NAB. Pre-moderation of own instruments of assessment by the SQA is strongly recommended.

## **National Unit Specification: support notes (cont)**

**UNIT**            Construction Crafts: Plumbing of Sanitary Appliances  
(Intermediate 2)

### **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](http://www.sqa.org.uk/assessmentarrangements)



## **National Unit specification: general information**

**Unit title:** Construction Crafts: Stonemasonry

**Unit code:** FF33 10

**Superclass:** TG

**Publication date:** February 2011

**Source:** Scottish Qualifications Authority

**Version:** 01

### **Summary**

This Unit is suitable for candidates with no previous stonemasonry experience. The Unit is based on practical workshop activities such as setting out simple coursed rubble wall, selecting and maintaining tools, producing surface finishes and building short lengths of coursed rubble walls. Candidates will also develop safe working practices and general skills which will enhance employability. The stone to be used can either be sandstone or limestone. For centres with dust extraction facilities available then either stone can be used, if not then limestone should be used.

The Unit is an optional Unit in the Intermediate 1 Construction Crafts 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 stonemasonry at Intermediate 1 or Intermediate 2.

### **Outcomes**

- 1 Select, use and maintain basic stonemasonry tools and equipment.
- 2 Select and use tools to produce surface finishes.
- 3 Measure and set out a coursed rubble wall with dressed corner stones.
- 4 Build a coursed rubble wall with dressed corner stones.

### **Recommended entry**

Entry is at the discretion of the centre.

## National Unit specification: General information (cont)

**Unit title:** Construction Crafts: Stonemasonry

### Credit points and level

0.5 National Unit credit at SCQF level 4: (3 SCQF credit points at SCQF level 4\*)

*\*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.*

### Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill                      None

Core Skill component                      *Critical Thinking* at SCQF level 4

There are also opportunities to develop aspects of the Core Skills of *Communication*, *Problem Solving* and *Working with Others* in this Unit, although there is no automatic certification of these Core Skills or Core Skills components.

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 title:** Construction Crafts: Stonemasonry

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**

Select, use and maintain basic stonemasonry tools and equipment.

##### **Performance Criteria**

- (a) The selection of tools and equipment is appropriate for the work to be done.
- (b) The tools are used in the correct manner.
- (c) The tools are used solely for the purpose which they are intended.
- (d) The tools are cleaned, maintained and stored correctly.
- (e) Health and safety requirements are complied with during all activities.

#### **Outcome 2**

Select and use tools to produce surface finishes.

##### **Performance Criteria**

- (a) The selection of tools is appropriate for the work to be done.
- (b) Surface finishes are set out in accordance with the specification.
- (c) Surface finishes are produced in accordance with the specification.
- (d) Health and safety requirements are complied with during all activities.

#### **Outcome 3**

Measure and set out a coursed rubble wall with dressed corner stones.

##### **Performance Criteria**

- (a) The wall is measured accurately and to the prescribed tolerance.
- (b) The bond is set out correctly in accordance with good practice.
- (c) The levels at both ends are established in accordance with good practice.
- (d) Health and safety requirements are complied with during all activities.

## National Unit specification: statement of standards (cont)

**Unit title:** Construction Crafts: Stonemasonry

### Outcome 4

Build a coursed rubble wall with dressed corner stones.

#### Performance Criteria

- (a) The wall is built in accordance with given working drawings.
- (b) The wall is built to the prescribed standards and tolerances.
- (c) The wall is pointed and finished in accordance with the specification.
- (d) A quality check is carried out on the finished work against the prescribed standards and tolerances.
- (e) Health and safety requirements are complied with during all activities.

#### 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:

- ◆ choosing the correct tools for particular tasks, using these 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
- ◆ measuring out accurately, setting out the shape of the wall, setting out the correct bond and establishing levels at ends of the walls
- ◆ building basic walls working from information given on three-dimensional drawings:

The coursed rubble walls will include:

- a straight wall with dressed corner stones
- a tooled margin surface finish on each corner stone
- a broached surface finish on each corner stone
- walls that are built within the stated tolerances
- ◆ candidates carrying out a quality check on their own work before submitting for final assessment
- ◆ candidates maintaining a clean and tidy workplace and adhering to health and safety requirements throughout all activities.

## **National Unit specification: statement of standards (cont)**

**Unit title:** Construction Crafts: Stonemasonry

It is suggested that candidates work together, ideally in pairs, to complete Outcomes 3 and 4. Where it is not feasible to work in pairs, small groups (comprising a minimum of two candidates) should be formed.

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 title:** Construction Crafts: Stonemasonry

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 stonemasonry 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 stonemasonry terms and will be able to demonstrate knowledge and understanding of these terms in everyday practice. The main content of the Unit will be learning the preparatory tasks and skills required in measuring and setting out coursed rubble walls, using stonemasonry tools to apply or strike two different tooled finishes onto a stone surface, and the skills and techniques used in building small-scale coursed rubble walls. In keeping with the level of the Unit, cutting (to change the shape of stone) is not covered. 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.

Candidates should be encouraged to use and develop techniques suited to their own physical strength and abilities, eg use of small trowels to spread mortar, use of short lengths of coursed rubble and small course heights.

In addition to the vocational content, candidates should be encouraged to focus on the general skills and attitudes which employers value. 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 (high-visibility vests, steel-toed boots, dust masks, gloves, eye protection glasses and overalls) 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 title:** Construction Crafts: Stonemasonry

### 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 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.

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. For example, learning how to use a spirit level for checking stonework for level and plumb against tolerances would be helpful for candidates. 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.

## National Unit specification: support notes (cont)

### Unit title: Construction Crafts: Stonemasonry

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 stone debris around the workspace could be a tripping hazard; they will learn how to use hand 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 setting out stonework; they will also calculate lengths and heights in stone walls and check work against prescribed tolerances. These are good opportunities for developing aspects of numeracy.

Candidates will also 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 activities, interpretation of drawings, 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 Unit *Construction Crafts: Employability Skills*, candidates will have additional opportunities to develop an awareness of the general employability skills and attitudes which employers value. 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.

### Opportunities for developing Core Skills

Achievement of this Unit gives automatic certification of the Core Skill component of *Critical Thinking* at SCQF level 4. There are also opportunities to develop aspects of the Core Skills of *Communication*, *Problem Solving* and *Working with Others* in this Unit. As candidates complete practical tasks, they will be expected to communicate with others using the correct terminology, tone and style suited to the workplace. Candidates are required to check their own practical work against given standards and tolerances and are required to review and evaluate their work. As it is suggested that candidates work in pairs or small groups to complete Outcomes 3 and 4, they will need to agree responsibilities and provide support and information to one other during the assessment. After the assessment, they should be encouraged to consider how effectively they supported one other.

## **National Unit specification: support notes (cont)**

**Unit title:** Construction Crafts: Stonemasonry

### **Guidance on approaches to assessment for this Unit**

It is expected that candidates will be given as much practice as possible in stonemasonry techniques, prior to being set the assessment tasks. The National Assessment Bank item for the Unit details the quality and quantity of stonework 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.

### **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 e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

### **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](http://www.sqa.org.uk/assessmentarrangements)

## History of changes to Unit

| Version | Description of change | Date |
|---------|-----------------------|------|
|         |                       |      |
|         |                       |      |
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