



## National Unit Specification: general information

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

**Unit code:** H0RJ 12

**Superclass:** TG

**Publication date:** March 2012

**Source:** Scottish Qualifications Authority

**Version:** 02 (24 March 2017)

## Summary

This unit is suitable for learners working towards a Modern Apprenticeship in Carpentry and Joinery and will develop the learners craft skills in transferring vertical and horizontal datum points and constructing ground and upper floors; including openings and boring and notching for other trades. It is also designed to enable learners to develop their knowledge and understanding in carpentry and joinery terminology, techniques and practices.

## Outcomes

- 1 Demonstrate knowledge and understanding of ground and upper floor terminology, components and fixings.
- 2 Plan and set out a floor to a given specification.
- 3 Construct a floor to given specification.

## Recommended entry

While entry is at the discretion of the centre, learners undertaking the Professional Development Award in Carpentry and Joinery at SCQF level 6 must meet the requirements of the Modern Apprenticeship, which includes being employed in the relevant craft industry. Learners would normally be expected to have attained *Workshop Practice Skills* at SCQF level 6 before undertaking this unit.

## **General information (cont)**

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

### **Credit points and level**

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

### **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 Core Skills which are highlighted in the Support Notes of this unit specification.

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

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

### **Outcome 1**

Demonstrate knowledge and understanding of ground and upper floor terminology, components and fixings.

#### **Performance criteria**

- (a) Define ground and upper floor construction terminology correctly.
- (b) Identify ground and upper floor components correctly.
- (c) Describe the function of ground and upper floor timber components correctly.
- (d) Describe the use of ground and upper floor fixing devices and connectors correctly.

### **Outcome 2**

Plan and set out a floor to a given specification.

#### **Performance criteria**

- (a) Plan layout of both ground and upper floor construction correctly.
- (b) Calculate quantity of materials correctly.
- (c) Transfer vertical and horizontal datum points correctly.
- (d) Comply with current health and safety regulations in all activities.

### **Outcome 3**

Construct a floor to given specification.

#### **Performance criteria**

- (a) Correctly cut floor components.
- (b) Correctly position and fix floor structural components.
- (c) Cut and fix hatch as work proceeds.
- (d) Cut hatch in-situ after flooring has been fixed.
- (e) Bore and notch joists to given specification.
- (f) Comply with current health and safety regulations in all activities.

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

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

### Evidence requirements for this unit

Evidence is required to demonstrate that the learners have achieved this unit to the standard specified in all outcomes and performance criteria. All working practices must be in line with relevant and current Health and Safety legislation and regulations. A Risk Assessment and Method Statement must be completed prior to any practical activities taking place.

Written and/or oral evidence is required which demonstrates that the learner has achieved Outcome 1 to the standard specified. Evidence will be required to demonstrate that the learner can describe the terminology, function of components and forms of construction and fixing associated with floor construction. The evidence for this outcome will be obtained under closed-book supervised conditions.

Product and performance evidence supplemented with an assessor observation checklist should be used to show that the learner has achieved Outcomes 2 and 3 to the standard specified in the performance criteria. As this is a group activity, each learner will be observed individually to show that they can achieve all of the performance criteria.

In Outcome 3, each learner, as part of a team, must fix a minimum of three joists (minimum joist size: 38 mm x 100 mm x 2 m in length) and floor out the area. Engineered 'I' joists should be incorporated with solid timber joists at the discretion of the training centre. Learners must also cut and fix a hatch as work proceeds, cut a hatch in-situ after flooring has been fixed, and bore and notch joists of other trades.

Health and Safety and Sustainability are integral and key to the construction industry therefore throughout the unit emphasis will be placed where appropriate on the application of Health and Safety and Sustainability. Safety working practices will be looked at in accordance with current safety codes of practice and regulations. Learners should be working towards the following standards:

### Transferring vertical and horizontal datum points

- ◆  $\pm 2$  mm per 3.0 m

### Positioning and securing joists

- ◆ Correct joist bearing  $\pm 5$  mm
- ◆ Joist positioned to required centres  $\pm 5$  mm
- ◆ Joist positioned with camber uppermost and level, no deviation more than 6 mm in 3.0 m
- ◆ Outer joists adjacent to walls (minimum 50 mm gap and maximum gap 60 mm)
- ◆ Openings formed to size +5 mm
- ◆ All joists tight fit and securely held
- ◆ Joists securely fixed in position as specification
- ◆ Strutting positioned as specification
- ◆ Strutting securely fixed without protruding above or below joist

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

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

### **Positioning and securing joist coverings**

- ◆ Openings formed to size +5 mm
- ◆ All joists tight fit and securely held
- ◆ Joist covering clear from walls minimum of 12 mm and maximum of 20 mm
- ◆ Nail punched below surface or screwed
- ◆ Sheet material joist covering positioned and supported as manufacturer's instructions

These evidence requirements and standards will be met by the completion of the Carpentry and Joinery Training and Assessment Programme (TAP)



## National Unit Specification: support notes

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

This part of the unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this unit is at the discretion of the centre, the notional design length is 40 hours.

### Guidance on the content and context for this unit

This unit has been developed as a mandatory unit in the Professional Development Award (PDA) in Carpentry and Joinery at SCQF level 6, which is a mandatory component of the Modern Apprenticeship in Carpentry and Joinery.

The unit would be offered to learners from the construction and related services industries. The skills and knowledge and understanding are transferable within different working environments but the unit is primarily aimed at learners whose normal place of work would be a site, workshop or similar environment.

The content and context of this unit is aimed at learners pursuing a career in the craft of Carpentry and Joinery. Learners should gain an understanding of the correct function of components, terminology, transferring datum points, construction details and sequence of operations in ground and upper floor construction, calculating quantities of materials required and will gain practical experience in constructing floors with openings. Learners will also learn how to work as a team and the importance of good communication.

Content should include:

- ◆ Structure: single and double floors
- ◆ Terminology: wallplate, bridging joist, trimming joist, trimmer joist, trimmed joist
- ◆ Types: solid timber, laminated and Engineered 'I' type joist
- ◆ Support: wallplate and joist hangers
- ◆ Introduction to current methods of transferring vertical and horizontal datum points, including spirit level, plumb bob, water level and laser level
- ◆ Strutting: solid herringbone and steel
- ◆ Fitting restraining straps and strutting
- ◆ Joist layout including openings
- ◆ Boring and notching joists
- ◆ Floor coverings: Tongue and groove and chipboard
- ◆ Method for laying floor coverings to include forming access hatch or trap

## National Unit Specification: support notes (cont)

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

There would be opportunity to integrate aspects of this unit with others in the Carpentry and Joinery PDA, eg *Carpentry and Joinery: Woodworking Machine Skills*; *Woodworking Power Tool Skills* and *Carpentry and Joinery: Repairs and Maintenance* at SCQF level 6. It should be delivered as part of a structured programme of training and orientated to the context of the learner's work and area of responsibility.

Health and Safety and Sustainability are integral and key to the construction industry therefore throughout the unit emphasis will be placed where appropriate on the application of Health and Safety and Sustainability. Safety working practices should be looked at in accordance with current safety codes of practice and regulations. Sustainability should include reference to criteria affecting sustainability, impact of not implementing sustainability on the environment and the legislation promoting sustainability.

### Guidance on learning and teaching approaches for this unit

The learner should be given the opportunity to further develop their skills of measuring, setting out, cutting and fixing timber components in line with given specifications and drawings. The teaching approach should ensure the learner is acquiring the underpinning knowledge required for the unit. This should include basic principles of damp prevention, spacing, size, support and covering of joists, commercial length of timber, insulation, ventilation. Drawing and sketching should be integrated into the learning and teaching to assist in clarifying construction details. Terminology used, transference of vertical and horizontal datum points and health and safety in floor construction should be integrated into the practical tasks.

Where appropriate, opportunities should be taken throughout delivery of this unit to meet the requirements of the generic units of the Training and Assessment Programme including:

- ◆ *Conform to Productive Working Practices*
- ◆ *Conform to General Workplace Health, Safety and Welfare*
- ◆ *Move, Handle and Store Resources*
- ◆ *Confirm Work Activities and Resources for the Work*
- ◆ *Develop and Maintain Good Working Relationships*
- ◆ *Confirm the Occupational Method of Work*

The learner should be given the opportunity to further develop their skills through visual aids, electronic presentations, DVDs, e-learning, reference books, classroom exercises and group discussions. The function of each component should be thoroughly demonstrated and practised by each learner through elevations, sections, plans and detailed drawings. Learners must follow good working practices in order to demonstrate good techniques in measuring, drawing, marking out, plumbing and levelling, fitting and fixing components. This teaching approach should ensure the learner is acquiring the underpinning knowledge and skills required for the unit.

## National Unit Specification: support notes (cont)

**Unit title:** Carpentry and Joinery: Ground and Upper Floor Construction (SCQF level 6)

### Guidance on approaches to assessment for this unit

The Carpentry and Joinery Training and Assessment Programme (TAP) provides detailed assessment material for this unit. It is advised to use the TAP which has been developed centrally by SQA. Any other instruments of assessment used must be comparable to the TAP and have been through prior verification. It is expected that learners will be given as much practise as possible, prior to being set assessment tasks.

For Outcome 1 the learners' knowledge and understanding of terminology, components and fixings in relation to floor construction will be assessed through a question paper and conducted under controlled supervised conditions.

For Outcomes 2 and 3, learners will be required to plan and construct a floor to a given specification. Evidence will be gathered for Outcomes 2 and 3 through observation that the learners have met the given standards and tolerances during the practical activity. An assessor observation checklist can be used to record this evidence. Assessment should be conducted under controlled, supervised conditions.

### Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. 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)*.

### Opportunities for developing Core Skills

The Core Skill of *Problem Solving* could be developed as learners undertake this unit. Learners will need to take account of a range of factors in order to work efficiently and safely, such as the choice of tools, appropriate materials, safety issues, safety equipment and sustainability.

There are opportunities for learners to develop the Core Skill of *Working with Others* to SCQF level 4, specifically in Outcome 3 as this practical assessment will be carried out in pairs or groups. Learners can provide support and information to each other during the practical group activities and should be encouraged to consider how effectively they supported each other.

The Core Skill of *Numeracy* to SCQF level 4 could be developed through the interpretation of information from working drawings and the practical use of calculation and measuring scales required for the practical activities.



## National Unit Specification: support notes (cont)

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The Core Skill of *Communication* to SCQF level 4 could be developed as learners complete practical tasks. Individual discussions with peers and assessors and the use of role-play (ie assuming position of general foreman/team leaders) could be used to enhance the evaluation of efficient working practices. Learners should be expected to communicate with others using the correct terminology, tone and style suited to the workplace.

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

## History of changes to unit

Version	Description of change	Date
02	Evidence requirements updated with information on engineered joists ('I' Beams).	24/03/17

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