



This version of this unit replaces all previously published versions with effect from January 2012. This unit should be used by all learners registering for qualifications that include it in their structure from this date.

<b>Unit title:</b>	<b>Fabricating post and beam components in the workplace</b>
<b>Unit reference number:</b>	K/503/2489
<b>QCF level:</b>	3
<b>Credit value:</b>	33
<b>Guided learning hours:</b>	110
<b>Start date:</b>	January 2012

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### **Unit summary**

The aim of this unit is to develop the skills, knowledge and understanding required to confirm competence in fabricating post and beam components in the workplace within the relevant sector of industry.

### **Assessment requirements/evidence requirements**

This unit must be assessed in a work environment, in accordance with:

- The Additional Requirements for Qualifications using the title NVQ in QCF
- The ConstructionSkills' Consolidated Assessment Strategy for Construction and the Built Environment.

Assessors for this unit must have verifiable, current industry experience and a sufficient depth of relevant occupational expertise and knowledge, and must use a combination of assessment methods as defined in the Consolidated Assessment Strategy.

Workplace evidence of skills cannot be simulated.

## Assessment recording

This unit is assessed in the workplace. The table on the following pages shows the learning outcomes and the assessment criteria for this unit. The table includes space for learners to enter the types of evidence they are presenting for assessment and the submission date against each assessment criterion. Alternatively, centres can use their own documentation.

## Learning outcomes and assessment criteria

Learning Outcome		Assessment Criterion	Evidence type	Portfolio reference	Date
1	Interpret the given information relating to the work and resources needed when fabricating post and beam components.	1.1	Interpret and extract relevant information from drawings, specifications, schedules, method statements, risk assessments and manufacturers' information.		
		1.2	Comply with information and/or instructions derived from risk assessments and method statements.		
		1.3	State the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented.		
		1.4	Describe different types of information, their source and how they are interpreted in relation to: <ul style="list-style-type: none"> <li>- drawings, specifications, schedules, method statements, risk assessments, manufacturers' information and regulations governing buildings.</li> </ul>		

Learning Outcome	Assessment Criterion	Evidence type	Portfolio reference	Date
<p>2 Know how to comply with relevant legislation and official guidance when fabricating post and beam components.</p>	2.1	<p>Describe their responsibilities under current legislation and official guidance whilst working:</p> <ul style="list-style-type: none"> <li>- in the workplace, below ground level, in confined spaces, at height, with tools and equipment, with materials and substances, with movement/storage of materials and by manual handling and mechanical lifting.</li> </ul>		
	2.2	<p>Describe the organisational security procedures for tools, equipment and personal belongings in relation to site, workplace, company and operative.</p>		
	2.3	<p>Explain what the accident reporting procedures are and who is responsible for making reports.</p>		
	2.4	<p>State the types of fire extinguishers available when fabricating post and beam components and describe how and when they are used.</p>		

Learning Outcome	Assessment Criterion	Evidence type	Portfolio reference	Date
3 Maintain safe working practices when fabricating post and beam components.	3.1 Use health and safety control equipment and access equipment safely to carry out the activity in accordance with legislation and organisational requirements when fabricating post and beam components.			
	3.2 Explain why and when health and safety control equipment should be used, relating to fabricating post and beam components, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to: <ul style="list-style-type: none"> <li>- collective protective measures</li> <li>- personal protective equipment (PPE)</li> <li>- respiratory protective equipment (RPE)</li> <li>- local exhaust ventilation (LEV).</li> </ul>			
	3.3 Describe how the relevant health and safety control equipment should be used in accordance with the given instructions.			
	3.4 State how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with fires, spillages, injuries and other task-related hazards.			

Learning Outcome		Assessment Criterion	Evidence type	Portfolio reference	Date
4	Select the required quantity and quality of resources for the methods of work to fabricate post and beam components.	4.1	Select resources associated with own work in relation to materials, components, fixings, tools and equipment.		
		4.2	Describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to: <ul style="list-style-type: none"> <li>- measuring and marking equipment</li> <li>- draw pins or podgers, wedges, clamps and trestles</li> <li>- lifting equipment and ancillaries</li> <li>- hand tools and hand-held powered tools, specialist power tools/machines and equipment.</li> </ul>		
		4.3	Describe how the resources should be used correctly and how problems associated with the resources are reported.		
		4.4	Explain why the organisational procedures have been developed and how they are used for the selection of required resources.		
		4.5	Describe any potential hazards associated with the resources and method of work.		
		4.6	Describe how to calculate quantity, length, area and wastage associated with the method/procedure to fabricating post and beam components.		

Learning Outcome		Assessment Criterion		Evidence type	Portfolio reference	Date
5	Minimise the risk of damage to the work and surrounding area when fabricating post and beam components.	5.1	Protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.			
		5.2	Minimise damage and maintain a clean work space.			
		5.3	Dispose of waste in accordance with legislation.			
		5.4	Describe how to protect work from damage and the purpose of protection in relation to general workplace activities, other occupations and adverse weather conditions.			
		5.5	Explain why the disposal of waste should be carried out safely in accordance with environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance.			
6	Complete the work within the allocated time when fabricating post and beam components.	6.1	Demonstrate completion of the work within the allocated time.			
		6.2	State the purpose of the work programme and explain why deadlines should be kept in relation to: <ul style="list-style-type: none"> <li>- types of progress charts, timetables and estimated times</li> <li>- organisational procedures for reporting circumstances which will affect the work programme.</li> </ul>			

Learning Outcome	Assessment Criterion	Evidence type	Portfolio reference	Date
7 Comply with the given contract information to fabricate post and beam components to the required specification.	<p>7.1 Demonstrate the following work skills when fabricating post and beam components:</p> <ul style="list-style-type: none"> <li>- levelling, plumbing, measuring, marking out, cutting, shaping, fitting, finishing, positioning and securing.</li> </ul> <p>7.2 Fabricate and carpenter mark post and beam components for the following assemblies to given working instructions:</p> <ul style="list-style-type: none"> <li>- wall frame with soleplate, post or jowl post, stud, rail, wall braces and top plate</li> <li>- tied or closed truss to include: king post truss with tie beam, king post, king struts and principal rafters or heavy tied truss with tie beam, principle rafters and curved internal members (collar or queen struts)</li> <li>- hip and valley construction to include hip beam or rafter, dragon beam, dragon tie, valley beam or rafter and jack rafters.</li> </ul>			



Learning Outcome	Assessment Criterion	Evidence type	Portfolio reference	Date
	7.3 Fabricate and carpenter mark post and beam components for trusses with two of the following to given working instructions: <ul style="list-style-type: none"> <li>- interrupted tie</li> <li>- curved sling brace</li> <li>- hammer beams and braces</li> <li>- collar and arched braces</li> <li>- scissor braces</li> <li>- curved tension braces</li> <li>- cruck blades.</li> </ul>			
	7.4 Fabricate and carpenter mark post and beam components for roof construction to include wind bracing and two of the following to given working instructions: <ul style="list-style-type: none"> <li>- purlins scarfed</li> <li>- purlins trenched and cogged</li> <li>- purlins secured with free/slip tenons or splines</li> <li>- clasped purlins</li> <li>- crown plate/collar purlins.</li> </ul>			
	7.5 Safely use and handle materials.			
	7.6 Safely use hand tools, portable power tools and ancillary equipment.			

Learning Outcome	Assessment Criterion	Evidence type	Portfolio reference	Date
	7.7 Safely store the materials, tools and equipment used when fabricating post and beam components.			
	7.8 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to: <ul style="list-style-type: none"> <li>- lay out frames</li> <li>- mark out components for fabrication, plumb scribe, square rule and mapping</li> <li>- apply the theorem of Pythagoras</li> <li>- determine geometrical angles</li> <li>- determine graded timber tree anatomy and growth rates, shrinkage and defects</li> <li>- fabricate post and beam components for roof, wall, cross and floor frames</li> <li>- form specialist joints associated with heavy structural timber framework</li> <li>- identify principle structural components and load paths.</li> </ul>			

Learning Outcome	Assessment Criterion	Evidence type	Portfolio reference	Date
	<p>7.9 Describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:</p> <ul style="list-style-type: none"> <li>- work with lifting and hoisting equipment (an awareness of the necessity for user certification)</li> <li>- use hand tools, hand-held power tools, specialist power tools/machines and equipment</li> <li>- work at height</li> <li>- use access equipment.</li> </ul>			
	<p>7.10 Describe the needs of other occupations and how to effectively communicate within a team when fabricating post and beam components.</p>			
	<p>7.11 Describe how to maintain the tools and equipment used when fabricating post and beam components.</p>			

Learner name: \_\_\_\_\_ Date: \_\_\_\_\_

Learner signature: \_\_\_\_\_ Date: \_\_\_\_\_

Assessor signature: \_\_\_\_\_ Date: \_\_\_\_\_

Internal verifier signature: \_\_\_\_\_ Date: \_\_\_\_\_  
*(if sampled)*