Unit 314 Erecting roof structure carcassing components in the workplace

Level: 3

Unit aim:
The aim is to provide you with the necessary skills and knowledge to:

- interpreting information
- adopting safe and healthy working practices
- selecting materials, components and equipment
- preparing and carrying out carcassing for roofs with gables, hips, valleys and dormers

*PER – Portfolio evidence reference SO – Site observation OQ – Oral question WQ – Written question WT – Witness testimony
PS – Product supplementary PD – Professional discussion

Assessment criteria that are practical activities are highlighted in bold.

1. Interpret the given information relating to the work and resources when erecting roof structure carcassing components.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
1.1 **interpret and extract relevant information from:**							
a. **drawings**							
b. **specifications**							
c. **schedules**							
d. **method statements**							
e. **risk assessments**							
f. **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:							
a. drawings							
b. specifications							
c. schedules							
d. digital information and 3D modelling							
e. method statements							
f. risk assessments							
g. manufacturers' information							
h. official guidance and current regulations governing buildings associated with erecting roof structure carcassing components							

2. Know how to comply with relevant legislation and official guidance when erecting roof structure carcassing components.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
2.1 describe your responsibilities official guidance and current regulations governing buildings associated with erecting roof structure carcassing components whilst working:							
a. in the workplace							
b. in confined spaces							
c. at height							
d. with tools and equipment							
e. with materials and substances							
f. with movement and storage of materials by manual handling and mechanical lifting							

2.2 describe the organisational security procedures for tools, equipment and personal belongings in relation to:							
a. site							
b. workplace							
c. company							
d. operative							
e. vehicles							
2.3 explain what the accident reporting procedures are and who is responsible for making reports							
2.4 describe the types of fire extinguishers available when erecting roof structure carcassing components and describe how and when they are used.							

3. Maintain safe working practices when erecting roof structure carcassing components.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
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 erecting roof structure carcassing components**							
3.2 Demonstrate compliance with given information and relevant legislation when designing and fabricating structural timber connections for two of the following							
a. safe use of access equipment							
b. safe use, storage and handling of materials, tools and equipment							
c. specific risks to health							
3.3 explain why and when health and safety control equipment, identified by the principles of protection, should be used, relating to erecting roof structure carcassing components, and the types, purpose and limitations of each type, the work situation and general work environment, in relation to:							

a. collective protective measures							
b. Personal Protective Equipment (PPE)							
c. Respiratory Protective Equipment (RPE)							
d. Local Exhaust Ventilation (LEV)							
3.4 describe how the relevant health and safety control equipment should be used in accordance with the given instructions							
3.5 describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with:							
a. fires							
b. spillages							
c. injuries							
d. other task-related hazards.							
4. Select the required quantity and quality of resources for the methods of work to erect roof structure carcassing components.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
4.1 **select resources associated with own work in relation to:**							
a. **materials**							
b. **components**							
c. **fixings**							
d. **tools and equipment**							
4.2 describe the characteristics, quality, uses, sustainability, limitations and defects associated with the resources in relation to:							
a. timber and timber based materials							
b. sheet metal							

c. metals							
d. trussed rafters							
e. prefabricated frames							
f. adhesives							
g. sealants							
h. fixings							
i. fittings and associated ancillary items							
j. hand tools, portable power tools and equipment							
4.3 describe how to confirm that the resources and materials conform to the specification.							
4.4 describe how the resources should be used correctly and how problems associated with the resources are reported							
4.5 explain why the organisational procedures have been developed and how they are used for the selection of required resources							
4.6 describe any potential hazards associated with the resources and method of work							
4.7 describe how to calculate:							
a. quantity							
b. length							
c. area							
d. wastage associated with the method/procedure to erecting roof structure carcassing components.							

5. Minimise the risk of damage to the work and surrounding area when erecting roof structure carcassing components.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD

5.1 **protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures.**							
5.2 **maintain a clear and tidy work space.**							
5.3 **dispose of waste in accordance with current legislation.**							
5.4 describe how to protect work from damage and the purpose of protection in relation to:							
a. general workplace activities							
b. other occupations							
c. adverse weather conditions							
5.5 explain why the disposal of waste should be carried out safely in accordance with:							
a. environmental responsibilities							
b. organisational procedures							
c. manufacturers' information							
d. statutory regulations and official guidance.							

6. Complete the work within the allocated time when erecting roof structure carcassing components.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
6.1 **demonstrate completion of the work within the allocated time**							
6.2 describe the purpose of the work programme and explain why deadlines should be kept in relation to:							
a. types of productivity targets and time scales							
b. how times are estimated							

c. organisational procedures for reporting circumstances which will affect the work programme.							

7. Comply with the given contract information to erect roof structure carcassing components to the required specification.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
7.1 **demonstrate the following work skills when erecting roof structure carcassing components:**							
a. **measuring**							
b. **marking out**							
c. **fitting**							
d. **finishing**							
e. **positioning**							
f. **securing**							
7.2 **use and maintain hand tool, portable power tools and ancillary equipment.**							
7.3 **incorporate at least two of the following to given working instructions on timber frame roofs**							
a. **hips and/or valleys**							
b. **roof verge and eaves**							
c. **parapet finishings**							
d. **false chimneys**							
e. **openings** (e.g. windows, hatches, dormers, roof lights and vents)							
7.4 **determine the specification of cut roof component bevels and lengths**							
7.5 describe how to apply safe work practices, follow procedures, report problems and establish the authority needed to rectify them, to:							

a. extract and transfer data from drawings for the installation of roof structure carcassing							
b. provide information for Building Information Modelling (BIM)							
c. identify roof structure carcassing components							
d. check existing levels and setting out lines							
e. prepare and fix trussed rafters							
f. apply geometry to determine bevels and lengths for cut, equal and unequal, gabled and hipped roofs, with valleys and dormers							
g. form joints associated with carcassing							
h. make and assemble cut roofs							
i. install on timber frame roofs: hips and valleys, timber and plastic verge and eaves, parapet finishings, false chimneys, openings (e.g. windows, hatches, dormers, roof lights and vents)							
j. work with plant and machinery to lift and transfer loads							
k. install insulation to achieve the specified energy and carbon performance							
l. avoid thermal bridging, bypassing and condensation							
m. apply the principles of airtightness and ventilation							
n. recognise and determine when specialist skills and knowledge are required and report accordingly							
o. identify and follow the installation quality requirements							
p. work with, around and in close proximity to plant and machinery							
q. direct and guide the operations and movement of plant and machinery							
r. use hand tools, power tools and equipment							
s. work at height							
t. use access equipment							

u. economise use of water, report leaks and turn taps off							
v. recycle materials and minimise waste							
7.6 describe the needs of other occupations and how to effectively communicate within a team when erecting roof structure carcassing components							
7.7 describe how to maintain the tools and equipment used when erecting roof structure carcassing components.							

Unit 314 Erecting complex roof structure carcassing components in the workplace

Declaration

I confirm that the evidence supplied for the above unit is authentic and a true representation of my own work. The work logged is my own work carried out during my normal work duties.

Candidate name:	
Candidate signature:	
Date:	

I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

Assessor name:	
Assessor signature:	
Date:	

IQA name:	
IQA signature:	
Date:	