

COSVR31 – SQA Unit Code HM32 04

Fabricate structural timber framework



Overview

This standard is about

- 1 interpreting information
- 2 adopting safe and healthy working practices
- 3 selecting materials, components and equipment
- 4 fitting and assembling components for fabricated structural timber floors, walls and roofs

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Performance criteria

- You must be able to:*
- P1 interpret the given information relating to the work and resources to confirm its relevance
 - P2 comply with the given, relevant legislation and official guidance to carry out your work and maintain safe work practices
 - P3 select the required quantity and quality of resources for the methods of work
 - P4 comply with organisational procedures to minimise the risk of damage to the work and surrounding area
 - P5 comply with the given contract information to carry out the work efficiently to the required specification
 - P6 complete the work within the allocated time, in accordance with the programme of work

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Knowledge and understanding

You need to know and understand:

Performance Criteria 1

Interpretation of information

- K1 the organisational procedures developed to report and rectify inappropriate **information** and unsuitable **resources**, and how they are implemented
- K2 the types of **information**, their source and how they are interpreted
- K3 the organisational procedures to solve **problems** with the **information** and why it is important they are followed

Performance Criteria 2

Safe work practices

You need to know and understand:

- K4 the level of understanding operatives must have of **information** for relevant, current **legislation and official guidance** and how it is applied
- K5 the types of **fire extinguishers** and how and when they are used
- K6 how **emergencies** should be responded to and who should respond
- K7 the organisational **security procedures** for tools, equipment and personal belongings
- K8 what the accident reporting procedures are and who is responsible for making the report
- K9 why, when and how **health and safety control equipment** should be used

Performance Criteria 3

Selection of resources

You need to know and understand:

- K10 the characteristics, quality, uses, sustainability, limitations and defects associated with the **resources** and how defects should be rectified
- K11 how the **resources** should be used and how any **problems** associated with the **resources** are reported
- K12 the organisational procedures to select **resources**, why they have been developed and how they are used
- K13 the **hazards** associated with the **resources** and **methods of work** and how they are overcome

Performance Criteria 4

Minimise the risk of damage

You need to know and understand:

- K14 how to **protect work** from damage and the purpose of protection
- K15 why **disposal of waste** should be carried out safely and how it is achieved

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You need to know and understand:

Performance Criteria 5

Meet the contract specification

- K16 how **methods of work**, to meet the specification, are carried out and **problems** reported
- K17 how **maintenance** of tools and equipment is carried out

You need to know and understand:

Performance Criteria 6

Allocated time

- K18 what the **programme** is for the work to be carried out in the estimated, allocated time and why deadlines should be kept

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Additional Information

Scope/range related to performance criteria

Performance Criteria 1

- 1 interpretation of drawings, specifications, schedules, method statements, risk assessments, cutting lists and information related to the work to be carried out

Performance Criteria 2

- 2 avoidance of risk by following the given information relating to the following
 - 2.1 methods of work
 - 2.2 safe use of health and safety control equipment
 - 2.3 safe use of access equipment/working platforms
 - 2.4 safe use, storage and handling of materials
 - 2.5 safe use, storage and maintenance of tools and equipment

Performance Criteria 3

- 3 selection of resources associated with own work
 - 3.1 materials and structural components
 - 3.2 timber and metal fixings
 - 3.3 tools, machines and equipment

Performance Criteria 4

- 4 protection of the work and its surrounding area from damage
- 5 minimise damage and maintain a clean work space
- 6 disposal of waste in accordance with legislation

Performance Criteria 5

- 7 demonstration of work skills to measure, mark out, joint, fit, mark, finish, position and secure
- 8 use and maintain hand tools, hand-held portable power tools, power tools/machines and ancillary equipment
- 9 fabricate, assemble and carpenter mark components to given working instructions for
 - 9.1 timber wall and floor components (structural and/or non-structural)
 - 9.2 timber pitched roof components
- 10 store components ready for transportation/use

Performance Criteria 6

- 11 completion of own work within the estimated, allocated time to meet the needs of other occupations and/or client

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Scope/range related to knowledge and understanding

Disposal of waste

- 1 environmental responsibilities, organisational procedures, manufacturers' information, statutory regulations and official guidance

Emergencies

- 2 operative's response to situations in accordance with organisational authorisation and personal skills when involved with
 - 2.1 fires, spillages, injuries
 - 2.2 emergencies relating to occupational activities

Fire extinguishers

- 3 water, CO₂, foam, powder and their uses

Hazards

- 4 those identified by risk assessment, method of work, manufacturers' technical information, statutory regulations and official guidance

Health and safety control equipment

- 5 identified by the principles of protection for occupational use, types and purpose of each type, work situations and general work environment
 - 5.1 collective protective measures
 - 5.2 personal protective equipment (PPE)
 - 5.3 respiratory protective equipment (RPE)
 - 5.4 local exhaust ventilation (LEV)

Information

- 6 drawings, specifications, method statements, risk assessments, cutting lists and information relating to historical timber framing and post and beam construction

Legislation and official guidance

- 7 this relates to the operative's responsibilities regarding potential accidents and health hazards whilst working in the workplace, 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

Maintenance

- 8 operative care of hand tools and/or portable power tools, machines and ancillary equipment

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Methods of work

- 9 application of knowledge for safe work practices, procedures and skills, relating to the method/area of work and materials used, to
 - 9.1 cut, shape, fit and assemble components to fabricate structural and/or non- structural timber walls and floor components
 - 9.2 cut, shape, fit and assemble components for structural timber pitched roofs
 - 9.3 mark and drill offset peg holes
 - 9.4 make different types of pegs
 - 9.5 make carpenter marks
 - 9.6 use roofing squares and layout methods
 - 9.7 apply the theorem of Pythagoras
 - 9.8 determine geometrical angles
 - 9.9 determine graded timber tree anatomy and growth rates, shrinkage and defects
 - 9.10 assess the milling and cleaving process
 - 9.11 form specialised joints associated with heavy structural timber framework components
 - 9.12 store components ready for transportation and use
 - 9.13 work with lifting and hoisting equipment (an awareness of the necessity for user certification)
 - 9.14 use hand tools, hand-held power tools, specialised power tools/machines and equipment
 - 9.15 work at height
 - 9.16 use access equipment
- 10 team work and communication
- 11 needs of other occupations associated with fabrication of structural timber framework

Problems

- 12 those arising from information, resources and methods of work
 - 12.1 own authority to rectify
 - 12.2 organisational reporting procedures

Programme

- 13 types of progress charts, timetables and estimated times
- 14 organisational procedures for reporting circumstances which will affect the work programme

Protect work

- 15 protect work against damage from general workplace activities, other occupations and adverse weather conditions

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Resources

- 16 materials, components and equipment relating to types, quantity, quality, sizes and sustainability of standard and/or specialist
 - 16.1 timber, manufactured sheet material
 - 16.2 pegs and metal fixings
 - 16.3 marking and levelling tools and equipment
 - 16.4 hand tools and hand-held power tools and equipment
 - 16.5 powered tools/machines
- 17 methods of calculating quantity, length, area and wastage associated with the method/procedure to fabricate structural timber framework

Security procedures

- 18 site, workplace, company and operative

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