Unit 218: Timber frame erection core knowledge

# Delivery guide

Unit information

This unit covers the overarching knowledge required for this pathway. The content listed in this document is deemed generic as it is consistent through many of the skills units in this qualification. The content should be taught, and will be assessed both generically and in relation to the following skills units (where appropriate):

* Erect timber walls and floors
* Erect timber roof structures

Learners may be introduced to this unit by asking themselves questions  
such as:

* Why are site inductions important?
* What’s the difference between a job card and a time sheet?
* Who are Cadw and what do they do?

Learning outcomes

1. Understand how to interpret and maintain information
2. Understand safe work practices
3. Understand how to minimise the risk of damage
4. Understand working to deadlines

Suggested resources

Textbooks

* Peter Brett, P. (2010) *Carpentry and Joinery: Book One Job Knowledge,* 3rd edition. Cheltenham: Nelson Thornes. ISBN 978-1-4085-0650-9
* Peter Brett, P. (2010) *Carpentry and Joinery: Book Two: Practical Activities*, 3rd edition (Complete Reference Guide). Cheltenham: Nelson Thornes. ISBN 978-1-4085-0648-6
* Chudley, R. and Greeno, R. (2020) *Chudley and Greeno’s Building Construction Handbook*, 12th edition. Oxford: Routledge.   
  ISBN 978-0-3671-3543-60
* Jones, S., Redfern, S., Fearn, C. (2019) *The City & Guilds Textbook: Site Carpentry and Architectural Joinery for the Level 2 Apprenticeship (6571), Level 2 Technical Certificate (7906) & Level 2 Diploma (6706)*. London: Hodder Education. ISBN 978-1-5104-5813-0

Websites

* [Homepage | Cadw (gov.wales)](https://cadw.gov.wales/)
* [Home Building & Renovating | Timber Frame: The Fast, Flexible & Energy Efficient Build System](https://www.homebuilding.co.uk/advice/timber-frame-guide)
* [Vision Development | About Timber Frame](https://www.timber-frame-suppliers.co.uk/about-timber-frame/)
* [TRADA | Timber Research and Development Association](https://www.trada.co.uk/) Homepage
* [GOV.UK | Building regulations approval](https://www.gov.uk/building-regulations-approval)
* [HSE | RIDDOR Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013](https://www.hse.gov.uk/riddor/)
* [HSE | First aid at work - your questions answered](https://www.hse.gov.uk/pubns/indg214.pdf)
* [netregs | A simple guide to site waste management plans](https://www.netregs.org.uk/media/1718/a-simple-guide-to-site-waste-management-plans.pdfnetregs)

| **Learning outcomes** | **Criteria** | **Delivery guidance** |
| --- | --- | --- |
| 1. Understand how to interpret and maintain information | * 1. The organisational procedures developed to report and rectify inappropriate information and unsuitable resources, and how they are implemented | * Learners to understand the benefits of a site induction and the reasons why induction is an important part of the safety process. * Learners to be familiar with toolbox talks and why they are used for specific site safety issues and incidents. * Learners to have a knowledge of and be able to recognise the chain of command, including hierarchy charts and who to report to when communicating problems and incidents in both large and small company structures. Learners could design a hierarchy chart for a company structure of a given size. |
| * 1. The types of information, their source and how they are interpreted | * Learners to understand the features and uses for a range of drawings and various scales, including roofing plan, joist plan, floor plan, range drawings, component range and elevation, and to show actual examples of working drawings. * Learners to be able to state the difference between a method statement and a risk assessment and to compare actual documentation that relates to timber framed structures. * Learners to research the Building Control process to gain knowledge on building regulations. * Learners to research information on documents used widely in construction, such as: drawings and plans, specifications, schedules, manufacturers’ information and their interrelationships and to compare actual documentation that relates to timber framed structures. * Learners to identify a range of site notices and safety signs. |
| * 1. The organisational procedures to solve problems with the information and why it is important they are followed | * Learners to know the procedure to report to the correct chain of command any problems arising from misheard instructions, inaccurate information and misinterpretation of method statements. * Learners to identify the types of problems arising from unsuitable resources and potential hazards, including unsuitable materials, adverse weather conditions and changing circumstances. |
| * 1. The importance of maintaining documentation | * Learners to be familiar with all site paperwork including job cards, worksheets, material/resources list and time sheets. * Learners to complete a time sheet and material/resources list for a small project. Learners could complete documentation as examples that are linked to a timber wall construction project. |
| 1. Understand safe work practices | * 1. The level of understanding operatives must have of information for relevant, current legislation and official guidance and how it is applied   . | * Learners to be aware of the types of legislation that are used in construction and the penalties and consequences of non-compliance, including: Working at Height Regulations (WAH), Health and Safety at Work Act (HASAWA), Provision and Use of Work Equipment Regulations (PUWER), Approved Codes of Practice (ACOPs), Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), Construction (Design and Management) Regulations (CDM), Control of Substances Hazardous to Health Regulations (COSHH), Personal Protective Equipment (PPE), Lifting Operations and Lifting Equipment Regulations (LOLER), MEWP, Manual Handling Regulations, Noise at Work Regulations. * Learners to understand the role of the local authority with regards to planning and Building Control. * Learners to research Building Control specific to Cadw regarding heritage structures and to recap on main points as an exercise. |
| * 1. How emergencies should be responded to and who should respond | * Learners to know how to respond in the correct manner should an emergency arise, including fires, spillages, injuries and emergencies. * Learners to know the procedure to report to the correct chain of command any emergency that may arise. * Learners to research types of fire extinguishers and list what each one should be used for. * Learners to understand what is meant by the fire triangle (fuel, oxygen and heat) in relation to what all fires need to start. * Learners to refer back to the induction process on how to respond to emergencies regarding immediate actions to be taken, evacuation procedures and muster points. * Learners to know the types of common injuries and responsibilities including first aider, first aid kit and accident reporting for emergencies relating to occupational activities, including prevention, emergency procedures, emergency services, reporting procedures, access and egress for emergency vehicles. |
| * 1. The organisational security procedures for tools, equipment and personal belongings | * Learners to be aware of site security on entering and exiting site, e.g. signing in and out. * Learners to know about security for safekeeping of tools and resources on site, e.g. secure site cabins, tool strong boxes. * Learners to know about site security for personal belongings and use of the welfare facilities such as personal lockers. * Learners to state the difference in procedures for domestic work compared to site work. |
| * 1. What the accident reporting procedures are and who is responsible for making the report | * Learners to understand the process for recording and reporting accidents or injuries. Learners can complete actual documentation. * Learners to know who is responsible for completing accident forms. * Learners to describe the role of a first aider. * Learners to research how and when to report to the Health and Safety Executive (HSE) under RIDDOR for relevant incidents. * Learners to state how many first aiders there should be in ratio to staff according to HSE guidelines. * Learners to complete an accident form for a named accident. * Learners to state the difference in procedures for domestic work compared to site work. * Learners to know how to use the reporting book for minor accidents and how to record near misses and the reasons for doing so. * Learners to understand the process to review and re-evaluate procedures in place. |
| * 1. Why, when and how health and safety control equipment should be used | * Learners to list and describe equipment and resources required for use of safety control equipment. * Learners to know how to maintain and use the PPE, including glasses/goggles (high-impact), ear defenders, safety boots, gloves, hard hats, high visibility (Hi-Viz) jackets, dust masks, safety harnesses, fall arrest equipment, bags, mats, netting, guard rail, intermediate rails, brick guards. * Learners to state who is responsible for issue, replacement and maintenance of safety control equipment. * Learners to recognise safety equipment that relates to timber framed erection, including safety harnesses, appropriate gloves, fall arrest bags, crash mats, scaffold guard rail and netting etc. * Learners to explain the necessity of first fix nail gun training and second fix nail gun training for timber framed structures. |
| * 1. How to comply with environmentally responsible work practices to meet current legislation and official guidance | * Learners to state procedures for waste management and recycling in construction under current legislation and good practice around sustainability and the built environment. * Learners to state roles and responsibilities of all parties within the Site Waste Management Plan (SWMP), i.e. client, operatives, principal contractor, subcontractor. * Learners to recap the main points of the SWMP. * Learners to recognise the reasons for recycling, reuse and segregated waste. |
| 1. Understand how to minimise the risk of damage | * 1. How to protect work from damage and the purpose of protection | * Learners to complete a method statement for a small timber framed extension to include protection of surrounding area. * Learners to list suitable resources for protecting the working area from other trade areas and members of the public. * Learners to state how to ensure protection of materials and resources from theft, damage and adverse weather conditions. * Learners to know how to correctly store materials before, during and after the work, including stacking, racking, loading and handling. |
| * 1. Why disposal of waste should be carried out safely and how it is achieved | * Learners to research current legislation on the disposal of waste, allowing for organisational procedures, Manufacturers’ Technical Instructions (MTI) for specific disposal of waste (controlled tipping) and current environmental responsibilities regarding segregation and recycling of waste, and to feed back key points. * Learners to know the different methods of disposal, including designated skips, recycling, segregation of waste, local waste collection point and biofuel. |
| 1. Understand working to deadlines | * 1. How work is carried out to meet the programme in the scheduled time and the importance of deadlines | * Learners to research and familiarise themselves with work programmes used to help meet deadlines and track schedules, e.g. Gantt charts. * Learners to complete a small work programme for a timber frame structure. * Learners to state situations which may affect the deadlines outlined on a work programme, e.g. adverse weather, availability of labour and materials that may lead to an extension of time on the contract. * Learners to research what penalty clause fees and retention fees are related to the contract. * Learners to state how a work programme and timings for activities are calculated. * Learners to know the methods and documentation required to produce a work programme. * Learners to understand the effects of delays on reputation and on other trades. |