Unit 216: Maintain non-structural carpentry work

# Delivery guide

Unit information

This unit is about the maintenance of non-structural carpentry components within domestic properties.

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

* What is the difference between non-structural and structural carpentry work?
* What health and safety issues do I need to consider when carrying out repairs?
* When do I replace something rather than splicing?
* How do I change sash cords?

Learning outcomes

1. Understand resource selection
2. Understand working to a contract specification
3. Comply with the given contract information to carry out the work safely and efficiently to the required specification

Suggested resources

* BS 8000-5:1990. *Workmanship on building sites. Part 5: Code of practice for carpentry, joinery and general fixings.*
* BS 8000-0:2014. *Workmanship on construction sites. Part 0: Introduction and general principles.*
* BS EN 13647:2021. *Wood flooring and wood panelling and cladding. Determination of geometrical characteristics.*
* ISO 19049:2016. *Timber structures. Test method. Static load tests for horizontal diaphragms including floors and roofs.*
* BS 8233:2014. *Guidance on sound insulation and noise reduction for buildings.*

Websites

* [Cadw (gov.wales) | Homepage](https://cadw.gov.wales/)
* [TRADA | Timber Research and Development Association](https://www.trada.co.uk/)
* [NHBC Standards 2021 | House-Building Standards](https://nhbc-standards.co.uk/)
* [BWF | Homepage](https://www.bwf.org.uk/)

Legislation

Approved Codes of Practice (ACOPs)

* [GOV.UK (www.gov.uk) | Structure: Approved Document A](http://Structure:%20Approved%20Document%20A%20-%20GOV.UK%20(www.gov.uk))
* [GOV.UK (www.gov.uk) | Fire safety: Approved Document B](https://www.gov.uk/government/publications/fire-safety-approved-document-b)
* [GOV.UK (www.gov.uk) | Protection from falling collision and impact: Approved Document K](https://www.gov.uk/government/publications/protection-from-falling-collision-and-impact-approved-document-k)
* [GOV.UK (www.gov.uk) | Conservation of fuel and power: Approved Document L](https://www.gov.uk/government/publications/conservation-of-fuel-and-power-approved-document-l)

Suggested resources (continued)

Legislation

* GOV.UK (www.gov.uk) | Access to and use of buildings: Approved Document M
* [GOV.UK (www.gov.uk) | Material and workmanship: Approved Document 7](https://www.gov.uk/government/publications/material-and-workmanship-approved-document-7)
* [GOV.UK (www.gov.uk) | Building regulations approval](https://www.gov.uk/building-regulations-approval)
* [GOV.UK (www.gov.uk) | The Personal Protective Equipment at Work Regulations 1992](https://www.legislation.gov.uk/uksi/1992/2966/contents/made#:~:text=The%20Personal%20Protective%20Equipment%20at%20Work%20Regulations%201992,9%20Information%2C%20instruction%20and%20training%20More%20items...%20)
* [GOV.UK (www.gov.uk) | The Manual Handling Operations Regulations 1992](https://www.legislation.gov.uk/uksi/1992/2793/made)
* [GOV.UK (www.gov.uk) | The Control of Noise at Work Regulations 2005](https://www.legislation.gov.uk/uksi/2005/1643/made)
* [HSE | Working at height: A brief guide](https://www.hse.gov.uk/pubns/indg401.pdf)
* [HSE | Woodworking Publications - Free leaflets](https://www.hse.gov.uk/pubns/woodindx.htm)
* [HSE | Safe use of woodworking machinery](https://www.hse.gov.uk/pubns/books/l114.htm)
* [HSE | Health and Safety at Work Act 1974 explained](https://www.hse-network.com/health-and-safety-at-work-act-1974-explained)
* [HSE | Health and safety in the woodworking industry](https://www.hse.gov.uk/woodworking/index.htm)
* [HSE | Construction Design and Management Regulations 2015](https://www.hse.gov.uk/construction/cdm/2015/index.htm)
* [HSE | PUWER](https://www.hse.gov.uk/work-equipment-machinery/puwer.htm)
* [HSE | RIDDOR](https://www.hse.gov.uk/riddor/)
* [HSE | COSHH](https://www.hse.gov.uk/coshh/)
* [HSE | LOLER](https://www.hse.gov.uk/work-equipment-machinery/loler.htm)

Suggested resources (continued)

Textbooks

* 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

* Burdfield, M., Jones, S., Redfern, S., Fearn, C. (2020) *The City & Guilds Textbook: Site Carpentry & Architectural Joinery for the Level 3 Apprenticeship (6571), Level 3 Advanced Technical Diploma (7906) & Level 3 Diploma*. London: Hodder Education.

ISBN 978-1-5104-5815-4

| **Learning outcomes** | **Criteria** | **Delivery guidance** |
| --- | --- | --- |
| 1. Understand resource selection | * 1. Characteristics of the resources | * Learners to understand the characteristics and suitability of materials when selecting resources for the maintenance and replacement of non-structural carpentry and joinery components, including: * how to recognise the profiles used in window and door frame construction * how to identify and match materials used to splice, repair or replace timber components * the selection of ironmongery used in maintaining and repairing carpentry items, windows: casement stays, catches, hinges (storm proof), butt, sliding sash pulleys, catches, locks * door furniture: locks (rim, sash, cylinder night, mortice, euro latches, mortice, roller ball), hinges, hinge bolts, tower bolts, letterplate, handles (lever and knob), security viewers * how to identify and select matching ironmongery materials including steel, brass, nickel, chrome, black jap. * Learners to know how to identify defects that can affect structural integrity when components need replacing and those defects that only affect the aesthetics. * Learners to be able to suggest sustainable alternatives e.g., total replacement and upgrades. |
| * 1. Use of resources | * Learners to know which materials to use in specific locations: * to splice window cills, jambs, rails and stiles * to make repairs to door frames and linings * to replace sash cords. * Learners to know the ironmongery required to replace defective components. * Learners to know the equipment required to work at height, making repairs to eaves and verge finishes. * Learners to know the profile to ensure repairs to mouldings match. * Learners to know which protective coatings to use to seal end grain and protect surfaces. * Learners to know the procedures for reporting problems with selected resources, including defective materials found at point of delivery and during the construction process. * Learners to know how to work with and around chemicals and preservatives. |
| * 1. Organisational procedures to select resources | * Learners to know the process for selecting materials using technical information sources including drawings, specifications, schedules and manufacturers’ information. * Learners to know how to requisition and order resources to complete a specific task using organisational procedures, including: * completing a requisition order form * compiling a material list for a range of second fix carpentry tasks. |
| * 1. Hazards | * Learners to understand the hazards associated with the maintenance and replacement of non-structural carpentry components and the correct method of work required to complete tasks safely. |
| 1. Understanding working to a contract specification | * 1. Methods of work | * Learners to know how to write a method statement for the maintenance and replacement of non-structural carpentry and joinery components, as well as the procedure required to report a problem found, ensuring all relevant parties are informed. |
| * 1. Tools and equipment | * Learners to know how to safely sharpen, maintain and store hand and power tools and how to check, store and maintain equipment required to maintain and replace non-structural carpentry and joinery components and record any faults found. * Hand tools to include: hand saw, coping saw, measuring equipment (tapes and rules), slot and pozidriv screwdrivers, bradawl, hammers (claw, lump and pein), combination square, try square, sliding bevel, bevel edged chisels, sharpening stone, nail punches, pinchers, smoothing plane, block plane, levels, string line, chalk line, scrapers, filler knives, paint brushes, trimming knife, auger, spade and High-speed Steel (HSS) bits, clamps, abrasive papers sanding blocks, marking gauge. * Power tools to include chop saw, circular saw, jig saw, multi-cutter, brad nailer, sanders (orbital and belt), drill/driver, routers and cutters, planer. * Access equipment to include hop ups, mobile/static tower scaffold, ladders, step ladders, saw stools. |
| 1. Comply with the given contract information to carry out the work safely and efficiently to the required specification | * 1. Demonstrate work skills to measure, mark out, cut, splice, fit, finish, position and secure materials | * Learners to know how to: * carry out repairs to doors and window frames, including the replacement or splicing of defective components * carry out repairs or splicing of rotten or damaged decorative mouldings * hang replacement doors * replace single- and double-glazed units and carry out repairs to sashes * splice and replace defective eaves and verge components * replace sash cords * apply primers and clear preservative coatings during the repair and replacement process * use fillers and sealers * prepare timber surfaces for required surface finish such as oils, stains and paints. |
| * 1. Use and maintain hand and power tools to either repair or replace four of the following: * frames * mouldings * doors * windows (including replacement glazing) * door and or window ironmongery * verge and or eaves * sash cords * prime the repair work | * Learners to know how to select, safely set up, use and maintain the different types of hand tools, power tools and associated equipment. * Hand tools to include: hand saw, coping saw, measuring equipment (tapes and rules), slot and pozidriv screwdrivers, bradawl, hammers (claw, lump and pein), combination square, try square, sliding bevel, bevel edged chisels, sharpening stone, nail punches, pinchers, smoothing plane, block plane, levels, string line, chalk line, scrapers, filler knives, paint brushes, trimming knife, auger, spade and HSS bits, clamps, abrasive papers sanding blocks, marking gauge. * Power tools to include chop saw, circular saw, jig saw, multi-cutter, brad nailer, sanders (orbital and belt), drill/driver, routers and cutters, planer. * Learners to know how to select, safely handle, stack and store resources using the correct manual handling techniques. |