Unit 214: Install second fixing components

# Delivery guide

Unit information

This unit is about setting out and fixing second fix site carpentry components including hanging doors, fitted units, service encasements.

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

* What is second fixing?
* What tasks will I be doing in second fixing carpentry?
* How will I know what ironmongery to use when hanging an external door?
* How do I measure up for decorative mouldings?
* What building regulations cover stairs?
* How do I set out and fit kitchens?

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/)
* [NHTG | Homepage](https://www.the-nhtg.org.uk/)
* [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 (continued)

* 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 | 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 installation of second fix components, including: * doors: flush, panelled, framed, ledged and braced, fire, half or fully glazed, double doors (with rebated meeting stiles), sliding doors. * decorative mouldings: architrave, skirting, dado rail, frieze rail, corner and plinth blocks, common sizes and profiles, softwood, hard wood Medium Density Fibreboard (MDF) and foil wrapped. * ironmongery: size and types of hinges, locks, latches, lever and knob furniture, push/kick plate, security hinge bolts, tower bolts, concealed bolts, cranked bolts, security viewer (as required for the above list of doors). * service encasements: traditional skeleton framed, slab construction, pre-formed Unplasticized Polyvinyl Chloride (UPVC) and composite profiles. * prefabricated units and fitments: worktops – solid wood, laminated, post-formed and square-edged, natural and composite, method of jointing in length, internal and external corners. * cladding and panelling: cedar, larch, composite boards, UPVC, timber-based sheet material, oak. Jointing details at internal and external corners. * stair components: handrails, spindles/balusters, newel posts (full, half, pendant, intermediate/common) newel caps, string capping, spacers. * Learners to know how to identify defects that can affect the structural integrity e.g., knots splits, shakes, grain direction (sloping) and those that only affect the aesthetics e.g., blue stain. * Learners to know the uses and limitations of resources and sustainable alternatives, including use of Forest Stewardship Council (FSC) certified timbers and engineered timber. |
| * 1. Use of resources | * Learners to know which materials to select, use or install in specific locations, including: * the correct door from a schedule * the decorative moulding to use from a specification * the correct ironmongery from a schedule * materials required to construct service encasements in a range of locations to include areas of high moisture content, acoustic insulation for plumbing services, access panels * cladding materials for internal or external use, decorative and structural finishes * the correct materials for fixing a full balustrade including adhesives, mechanical fixings and draw bored dowels. * Learners to know the procedures for reporting problems with selected resources, including defective materials found at point of delivery and during the construction process. |
| * 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/order resources to complete a specific task using organisational procedures, including: * completing a requisition order form * compiling a material/resource list for a range of secondfix carpentry tasks. |
| * 1. Hazards | * Learners to know the hazards and risks associated with the installation of second fix carpentry components and the correct method of work required to complete tasks safely. * Learners to understand the hazards and risks, including: muscular/skeletal injuries from lifting, carrying and poor working posture, injuries from using tools incorrectly, entrapment, repetitive strain, cuts, bruising, lacerations, vibration white finger/Von Willebrand Factor (VWF) (Raynaud’s syndrome) from using vibrating handheld machinery, irritants affecting the eyes, nose and throat, carcinogenic dusts, hearing impairment from machine noise. |
| 1. Understand working to a contract specification | * 1. Methods of work | * Learners to know how to write a method statement for the installation of second fix carpentry components and the procedure to follow to report a problem, 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 install second fix carpentry components and record any faults found. * Components include: * side hung doors * decorative mouldings (architrave skirting, dado etc.) * ironmongery (as listed above) * service encasements (boxing in) * prefabricated units or fitments including worktops with returns and apertures * cladding and panelling * stair components (as listed above). * Tools and equipment include measuring equipment, planes (hand and electric), saws (hand types and chop), circular saws, jigsaws, chisels, gauges, marking or utility knives, hammers/mallets, bradawl, screwdrivers, cordless drill driver with pilot bit and screwdriver bits, square, bevel, scribing block, nails, punches, finishing nailer, levels, routers, cutters, jigs, worktop bolts, fixings. |
| 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, fit, finish, position and secure materials | * Learners to know: * how to fit and hang a door on hinges with hand and power tools. * how to cut and fit a range of decorative mouldings with internal, external intersections and returns (to wall and floor). * how to install a range of commercially available door and window ironmongery. * how to fabricate and install vertical and horizontal service encasements with access panels. * how to set out and install prefabricated units or fitments to include base and wall units, worktops and decorative panels and profiled mouldings. * how to fit and install a range of cladding and panelling. * how to set out, cut and fit balustrading in compliance with the building regulations. * how to select, safely set up, use and maintain the different types of hand tools, power tools and associated equipment listed above. * how to select, safely handle, stack and store resources using correct manual handling techniques. |
| * 1. Select, use and maintain hand and power tools to install at least five of the following to given working instructions: * side hung doors * mouldings (architrave, skirting) * ironmongery * service encasement * prefabricated units or fitments * cladding or panelling * stair components (balustrades, handrails, spindles) |