Unit 208: Produce setting out details for routine products

# Delivery guide

Unit information

This unit is about setting out details prior to marking out components for manufacturing routine joinery products.

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

* What do I need to know about the resources required to manufacture joinery products?
* What tools and equipment are required to set out joinery products?
* How do I set out for a straight flight of stairs?

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 efficiently to the required specification

Suggested resources

* BS 459:1988. *Specification for Matchboarded wooden door leaves for external use.*
* BS 585-1:1989. *Wood stairs – Part 1: Specification for stairs with closed risers for domestic use, including straight and winder flights and quarter or half landings.*
* BS 585-2:1989. *Wood stairs – Part 2: Specification for performance requirements for domestic stairs constructed of wood-based materials*.
* BS 644:2012. *Timber windows and doorsets. Fully finished factory-assembled windows and doorsets of various types – Specification*.
* BS EN 942:2007. *Timber in joinery – General requirements*.
* BS EN ISO 19650-1:2018. *Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM). Information management using building information modelling – Part 1: Concepts and principles*.
* BS EN ISO 19650-2:2018 & Revised NA. *Organization and digitization of information about buildings and civil engineering works, including building information modelling (BIM). Information management using building information modelling – Part 2: Delivery phase of the assets*.
* BS EN ISO 9001:2000. *Quality management systems. Requirements*.

Suggested resources (continued)

Websites

* [Cadw (gov.wales) | Homepage](https://cadw.gov.wales/)
* [BWF | Homepage](https://www.bwf.org.uk/)

Legislation

* Approved Codes of Practice (ACOPs)
* [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 | Health and safety in the woodworking industry](https://www.hse.gov.uk/woodworking/index.htm)
* [HSE | Health and Safety at Work Act 1974 explained](https://www.hse-network.com/health-and-safety-at-work-act-1974-explained)
* [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 (features) and suitability (final use) of resources when selecting them for setting out details for routine products. * Learners to know how to assess the quality of the resources, including grading of timber for a particular use when appearance, strength and durability is important. * Learners to be able to identify a range of manufactured boards available (types of fibreboard, ply, solid core boards, fire resistant boards). * Learners to be able to identify a range of timbers, including: * European redwoods and whitewoods * Douglas fir * European oak * American red and white oak * ash * sapele * idigbo * Iroko * maple * acetylated/heat treated softwoods * plywood * fibreboard * solid core boards (blockboard etc.). * Learners to be able to identify a range of ironmongery, including: * hinges (butt, loose pin, rising, concealed, storm proof, friction, T, friction back flaps) * locks (rim, mortice, sash mortice, Suffolk latches, drawer and cupboard locks) * casement fasteners and stays, pivot centres * pulley wheels, fitch fasteners, sash lifts * glazing rebates suitable to accept glass (single, double, treble and secondary). * Learners will know how to identify defects and when to remove them during the selection process for the production of shaped work. Defects to include: * knots * twist * bowing * cupping * sloping grain * heart, cup, star, and thunder shakes * case hardening * end checks * waney edge. |
| * 1. Use of resources | * Learners to know how and when to: * select the most suitable type of timber and manufactured products in the setting out process, to include consideration of internal and external application, the environment, temperature and ambient moisture content * report problems with resources when setting out details for routine products (to supervisor, architect, client). |
| * 1. Organisational procedures to select resources | * Learners to understand the process for selecting materials using technical information sources, including drawings, specifications, schedules and manufacturers’ information when setting out details for routine products. |
| * 1. Hazards | * Learners to understand the hazards and risks associated with resources used in the setting out process within a workshop environment. * Learners to understand the importance of dust control and the correct use of dust extraction. * Learners to know about the use of particle board and related health issues, to include respiratory problems (bronchitis, asthma and emphysema). * Learners to know about the use of certain hardwoods and their related health issues, including cancer. * Learners to understand the importance of hearing protection and know the effects of noise, including deafness and tinnitus. |
| 1. Understand working to a contract specification | * 1. Methods of work | * Learners to know how set out for the joinery products listed in 1.1. * Learners to know how to produce templates where required. * Learners to be able to compile a cutting list and material requisition order sheets. * Learners to be able to calculate the quantity of materials required. |
| * 1. Tools and equipment | * Learners to understand the features and benefits of tools and equipment and understand their suitability for use. * Learners to be able to measure with scale and steel rules, tape measures and Vernier callipers. * Learners to understand setting out and marking out using Tee, try and set squares, straight edge, combination square, line runner (panel gauge), compass, trammel. * Learners to be able to transfer measurements and draw the necessary plan and height sections, front and auxiliary elevations, where required for workshop rods. To include mouldings, rebated and grooved profiles for the joinery products listed in 1.1. |
| 1. Comply with the given contract information to carry out the work efficiently to the required specification | * 1. Demonstrate work skills to measure, mark out and draw | * Learners to understand how to set out: * match boarded, panelled and glazed doors * traditional casement, single- and double-glazed windows * dwarf, dado, frieze and full height panelling incorporating sunk, beaded and raised panels * unit and fitment carcass construction to include drawers * internal and external jointing details for cladding * straight flights of stairs, closed string and open riser. |
| * 1. Use and maintain hand and power tools to produce setting out details and cutting lists for routine products to given working instructions for at least two from the following: * doors * windows with opening lights * units and/or fitments (panelling or cladding) * staircases (straight) | * Learners to understand how to: * select, safely set up, use and maintain the appropriate tools and equipment to include measuring tools, scale rule, steel rules, tape measure, Vernier callipers * use setting out and marking out tools: Tee, try and set squares, straight edge, combination square, line runner (panel gauge), compass, trammel * select, safely handle, stack and store resources using correct manual handling techniques. |