Unit 241: Strip and reclaim roof coverings

# Delivery guide

Unit information

This unit is about interpreting information, adopting safe, healthy, and environmentally responsible work practices, selecting, and using materials, components, tools, and equipment and removing and reclaiming roof coverings for future use, disposing of unsuitable materials, and preparing surfaces for reroofing.

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

* What is a fly batten used for?
* Why are old lead flashings not put into general waste bins?
* What can cause delamination of clay roof tiles?

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

British Standards

* BS 5534:2014+A2:2018 *Slating and tiling for pitched roofs and vertical cladding – Code of Practice.*
* BS 8000-6:2013 *Workmanship on building sites – Code of Practice for slating and tiling of roofs and claddings.*
* BS 8000-0:2014 *Workmanship on construction sites: Introduction and general principles.*

Websites

* [Roof Tile Association Roof Tile Association](https://rooftileassociation.co.uk/) | Home
* [National Federation of Roofing Contractors (NFRC) | Technical Bulletins](https://www.nfrc.co.uk/knowledge-hub/NFRC-publications)

Textbooks

* Health and Safety Executive (5th edition) HSG33 *Health and safety in roof work* (2020) Norwich: The Stationery Office.

ISBN 978-0-71766-722-2

* Building Regulations Conservation of Fuel and Power: *Approved Document L1B: conservation of fuel and power in existing dwellings*, 2010 edition. Newcastle Upon Tyne: RIBA Bookshops.

ISBN 978-1-85946-744-2

Building Regulations Conservation of Fuel and Power: *Approved Document L2B: conservation of fuel and power in existing buildings other than dwellings*, 2010 edition. Newcastle Upon Tyne: RIBA Bookshops. ISBN 978-1-85946-746-6

| **Learning outcomes** | **Criteria** | **Delivery guidance** |
| --- | --- | --- |
| 1. Understand resource selection | * 1. Characteristics of the resources | * Learners to know: * the types, sizes and weights of existing natural and/or stone slates * the types, sizes and weights of existing clay tiles * the types, sizes and weights of existing concrete tiles and why some types are now being reclaimed (discontinued, valuable) * the types, sizes and weights of man-made slates and why they are normally unsuitable for re-use * the defects, including softness, loss of nibs, interlocks/overlocks, damaged or blocked nail holes and delamination, which can make natural slates, clay tiles and fittings not fit for re-use * the types, condition and sizes of ridge and hip tiles and other fittings * the differences in weight of the existing roof covering compared to the new roof covering and how this relates to building regulations (any increase including wet weight that exceeds 15% may require a structural survey) * the common defects such as splits, cracks, misshaped materials and general damage caused during manufacturing process or by poor manual handling/transport * about repair materials such as specialist fixing kits and hooks/clips/tingles and how they are used to repair broken slates/tiles and components. |
| * 1. Use of resources | * Learners to know how reclaimed slates, stone slates, fittings and flashings are stacked neatly to avoid damage with quantities noted. * Learners to know how reclaimed materials are returned to stock or used on the roof with shortfall made up with similar, as required. * Learners to know how to select appropriate quantities from given information. * Learners to understand the purpose of the resources and how they are used on the roof. * Learners to know how to identify and report defective materials or shortages and how to correctly transport, handle, store and protect materials. |
| * 1. Organisational procedures to select resources | * Learners to demonstrate knowledge and understanding of: drawings, specifications, Manufacturers’ Technical Information (MTI), job cards and other working instructions from the employer. * Learners to know how to use the internal storage systems when selecting materials from their own yard or compound. * Learners to demonstrate knowledge and understanding of site compounds when selecting materials on-site. * Learners to know to organise deliveries direct to site. * Learners to know to use plant and tool hire shops when specialist equipment is needed. * Learners to know how to use a range of resources, including natural slates, fittings, fixings, ridge and hip tiles, dry fix systems, ventilation systems, mortar mixes and additives in relation to types, quantity, quality and sizes. |
| * 1. Hazards | * Learners to understand Risk Assessment Method Statements (RAMS) relating to: * working at height * accidents associated with installing the materials and components, particularly when disc cutting requires personal protective equipment (PPE) or dust suppression using water or mechanical extraction * safe manual handling when moving, loading and unloading materials * safe use of hand tools when hammering and cutting * safe use of hazardous materials when dealing with lead or solvents * bird and vermin droppings found in old roofs * dust from stripping old slates/tiles/battens * fragile roof structures whilst stripping roof coverings. |
| 1. Understand working to a contract specification | * 1. Methods of work | * Learners to demonstrate knowledge and understanding of: * stripping old roof coverings, fittings and flashings for re-use * stripping and safely disposing of old battens, felt and all other materials deemed unsuitable for re-use * checking tiles, slates and/or stone slates and fittings for signs of softness, delamination, cracks, enlarged or blocked nail holes, loss of nibs, coatings and discolouration, which may or may not make them suitable for salvage * cleaning, sorting and storage of material deemed suitable for re-use * de-nailing old battens and existing roof timbers * counting quantities of reclaimed materials in relation to what is required to re-cover the roof * checking and reporting on any damaged timbers which may need replacing before the roof is re-covered * lowering waste safely by chutes, forklift, cage/belt driven hoists. |
| * 1. Tools and equipment | * Learners to know how and where in the contract the following tools are used: * hammers and/or crowbars for removing slates, tiles, fittings, felt, battens, flashings and components * slate rippers for removing isolated or small areas of natural slate * knee pads for comfort and protection when kneeling on battens * hand brush and bucket for clearing dust/debris * dust mask, long sleeves and trousers, safety glasses, boots and gloves. |
| 1. Comply with the given contract information to carry out the work safely and efficiently to the required specification | * 1. Demonstration of work skills to use safe access to inspect, remove, reclaim, de-nail, re-hole, re-size, clean and sort | * Learners to practically demonstrate how to check: * tiles for delamination and/or softening, cracking and other damage before cleaning for re-use * slates and/or stone slates for delamination and/or softening, cracks, enlarged holes and other damage before cleaning for re-use * re-holing of natural slates is done accurately from the back of the slate to produce neat new counter-sunk holes of no more than 5mm diameter * effective re-use of partially damaged slates for eaves, toppers and halves, where appropriate * ridge and hip tiles for delamination, cracking and other damage before removing old mortar and cleaning for re-use * lead flashings for splits, thinning and general condition before removing for re-use or safe storage away from other reclaimed materials * existing battens and whether they are fit for re-use and provide a secure foothold * existing roof timbers and whether they are weak or undersized and need cleaning down of nails and debris before new materials are installed. |
| * 1. Use and maintain hand tools, power tools and ancillary equipment to remove, reclaim and/or dispose of weathering materials and ancillary components to given working instructions, plus at least two of the following: * natural slates * plain tiles * single-lap tiles * stone slates | * Learners to know how to ensure the safe use and maintenance of hand tools, portable power tools and ancillary equipment, including regular inspection and replacement where appropriate. * Range to include using tools and equipment to remove materials and components at eaves, verges, hips, ridges, valleys, abutments, openings, penetrations and general areas. |