

## Unit 19: Developing Advanced Skills in Roof Slating Operations

Unit code: Y/503/5761

QCF Level: 3

Credit value: 20

Guided learning hours: 200

### Unit aim

This unit enables learners to understand the tools, equipment and working techniques used to perform roofing slating operations to complex shapes, using random sized slates and artificial products. It gives learners the opportunity to use modern and traditional techniques on a variety of complex slating systems.

### Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

Learning outcomes	Assessment criteria
1 Understand the preparation required to form valleys to roof layouts	1.1 describe the setting out method for a valley in a double lap roof covering 1.2 identify tools and equipment associated with a valley construction, including personal protective equipment 1.3 calculate the quantity of resources associated with a valley construction 1.4 explain how to carry out a raking cut to a single lap tiled valley 1.5 describe the construction details for a sheet metal valley in a double lap roof covering 1.6 prepare a method statement for a roof slater to lay a double lap random sized slate to a mono pitched roof with a valley 1.7 describe the hazards and risks to the roofer when constructing a valley in

	<p>extreme weather</p> <p>1.8 describe the use of site protocols that are provided by the main contractor</p> <p>1.9 explain a waste reduction technique to minimise waste when forming a swept valley in a slated roof</p>
<p>2 Be able to construct valleys in roof coverings safely</p>	<p>2.1 select equipment for a valley to a single lap interlocking artificial slate roof system</p> <p>2.2 carry out inspections of equipment used for a valley to a single lap interlocking artificial slate roof system to ensure that the equipment is fit for purpose</p> <p>2.3 construct a lead valley in a random sized slate roof, complying with current legislation</p> <p>2.4 construct a slated valley to a single lap interlocking roof, complying with current legislation</p> <p>2.5 prepare a risk assessment for constructing a hipped end to a double lap slated roof</p>
<p>3 Understand the preparation required to form hips to roof layouts</p>	<p>3.1 describe the setting out method for a hip ended double lap random sized slate roof</p> <p>3.2 calculate the tile and batten requirements from a given roof plan with a valley and hip layout</p> <p>3.3 explain how to carry out a sheet capped hip end to a single lap interlocking slate roof</p> <p>3.4 describe the construction details for a hipped end to a single lap interlocking roof system</p> <p>3.5 explain the safety inspections that are carried out prior to accessing a roof to construct a hipped end</p>
<p>4 Be able to construct hip ends to various roof layouts safely</p>	<p>4.1 select equipment for a lead capping to a hip in a double lap random sized slated roof system</p> <p>4.2 carry out inspections of equipment used for a lead capping to a hip in a double lap random sized slated roof to ensure that the equipment is fit for purpose</p> <p>4.3 construct a lead hip capping to a single lap slated roof, complying with current legislation</p>

	<p>4.4 construct an ornamental hip to a double lap slated roof, complying with current legislation</p> <p>4.5 prepare a risk assessment for constructing a hipped end to a double lap slated roof</p>
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## Unit content

### 1 Understand the preparation required to form valleys to roof layouts

*Roof:* mono pitched (L-shaped plan, dormers, abutments); duo pitched (asymmetrical, various pitch, L-shaped on plan, complexed pitches); warm roof; cold roof

*Roof covering:* slating (regular, random, double lap, single lap interlocking, ornamental)

*Valley:* simple (straight); complex (mixed pitch, split direction); double lap tiling (regular, random, ornamental); construction (traditional lair board, preformed proprietary valley; proprietary valley tile.

*Tools and equipment:* hoist provided by main contractor, material handling (manual, mechanical); portable power tools (cutting, forming, shaping, site electrical, portable); personal protective clothing.

*Site protocol:* entry; inductions; site logistics; first aid; emergency; standing scaffold; office facilities

*Legislation:* site logistics; material movement; storage, mechanical and small plant and equipment (lifting, transporting, fixing, forming cutting and fixing)

*Waste:* carbon reduction methods (roofing operations only)

### 2 Be able to construct valleys in roof coverings safely

*Roof:* mono pitched (L-shaped plan, dormers, abutments); duo pitched (asymmetrical, various pitch, L-shaped on plan, complexed pitches); warm roof; cold roof

*Equipment:* hoist provided by main contractor, material handling (manual, mechanical); portable power tools (cutting, forming, shaping, site electrical, portable); personal protective clothing

*Valley (tiles):* simple (straight); complex (mixed pitch, split direction); double lap tiling (regular, random, ornamental); construction (traditional, preformed proprietary valley; swept valley tile; metal; polymer

*Valley (slates):* simple (straight); complex (mixed pitch, split direction); double lap tiling (random, various gauges, ornamental); single lap (traditional, preformed proprietary valley; proprietary valley slate)

*Roof system:* tiling (plain double lap, single lap interlocking, ornamental); proprietary tiled valley; metal

*Risk assessment:* hazards; control; rating

*Legislation:* main contractor's responsibility for the site inspections (safety, health, welfare), site logistics; sub-contractor's legal, statutory and contractual responsibilities under plant and equipment (hand, portable power tools); emergencies; fire; accident; weather; criminal activity

*Slate:* regular; random; double lap; single lap interlocking; ornamental

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### 3 Understand the preparation required to form hips to roof layouts

*Roof:* mono pitched (L-shaped plan, dormers, abutments); duo pitched (asymmetrical, various pitch, L-shaped on plan, complexed pitches); warm roof; cold roof

*Hip:* simple (straight); complexed (mixed pitch, split direction); double lap tiling (plain, various gauges, ornamental); single lap tiling; hip tiles (plain straight, profiled, ornamental); proprietary hip tile; metal; polymer

*Roof system:* tiling (regular, random, double lap, single lap, single lap interlocking, ornamental); proprietary hip; metal capping

*Legislation:* working at height; COSHH; manual handling; Lifting Operations and Lifting Equipment Regulations (LOLER); Provision and Use of Working Equipment Regulations (PUWER); noise; health monitoring; site safety inspections and monitoring; accident reporting (site, organisation, RIDDOR); scaffolding

### 4 Be able to construct hip ends to roof layouts safely

*Roof:* mono pitched (L-shaped plan, dormers, abutments); duo pitched (asymmetrical, various pitch, L-shaped on plan, complexed pitches); warm roof; cold roof

*Hip ends:* simple (straight); complex (mixed pitch, split direction); double lap tiling (regular, random, ornamental); slating (single lap, double lap); proprietary hip tiles; metal capping

*Roof system:* slating (double lap, single lap, single lap interlocking, ornamental)

*Inspection:* visual; statutory examination; recording; testing

*Equipment:* hoist provided by main contractor, material handling (manual, mechanical); portable power tools (cutting, forming, shaping, site electrical, portable); personal protective clothing

*Legislation – main contractor site safety:* induction; inspections; examination; coordination; shared facilities (safety, health and welfare); site layout (site logistics, walkways, traffic control)

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