

GLOSSARY

OF

STONE SLATE ROOFING



Backer: narrow slates laid roughly centrally over a wide slate to accommodate the increasing number of slates in each course as work progresses up the roof.



Stone Roofing Association
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Apron

a panel of lead laid over slating at a top abutment or underneath it usually at a horizontal valley. A sacrificial lead apron is a similar panel installed to protect the valley lead from corrosive chemicals in water runoff.

Backer

narrow slates laid roughly centrally over a wide slate to accommodate the increasing number of slates in each course as work progresses up the roof. Synonym bachelor.

Band see head lap.

Ballast

stone (usually rubble) used to support the eaves slating in some systems.

Bachelor

see backer.

Batten

sawn wooden support for hanging or nailing stone slates. Synonym: lath. In slate and stone roofing guides the word lath is usually reserved for split supports.

Batten gauge

spacing of battens or laths up the rafter. In random slating it always varies.



Batten gauge Reduced gauges at the first course of shorter slates

Bedding

of rocks: a plane parallel to the surface of deposition of a rock. The plane along which stone slates often, but not invariably, split

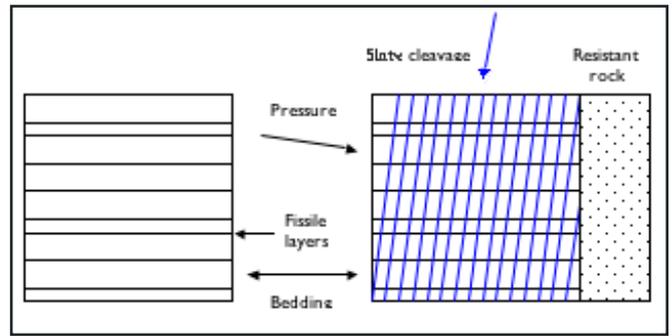
of slating: use of mortar in spots or fillets to prevent stone slates from rocking. In some areas, it is used to improve weather tightness. qv head bedding, full bedding

Bevel

The shape of the edge of stone-slates produced by dressing them to size and shape. Bevels take a variety of local or regional forms which are important to the local distinctiveness of roofs.

Breeze

a mixture of clinker and lime or cement. When used to bed slates it could be crushed down to fill any gaps without excessive separation of the slates.



Bedding and cleavage Stone slates split along fissile bedding planes. Metamorphic slates split along slaty cleavage planes.

Cleavage

slaty cleavage is developed in fine grained rocks following metamorphism. Under the influence of pressure and heat the pre-existing minerals are partially re-crystallised and aligned perpendicular to the pressure. Slates cleave parallel to these platy minerals. qv fissile.

Clete

spike bent at right angles and driven into the rafter below thin laths to hold them with out splitting.

Clive (Collyweston)

setting frost cracked log (qv) on edge and gently tapping with a Collyweston slater's hammer on each side in turn until the splitting is complete. Synonym cleve.

Counter-batten

batten laid up the rafter to raise the level of the slating battens. Commonly used to prevent pegs piercing an underlay or to provide a drainage gap between the battens and an underlay. If the underlay can be installed with a sag between the rafters a counter-batten to provide drainage will not be necessary.

Course

single row of slates across the roof.

Coursing

setting out the courses of slates. In random slating the coursing has to be adjusted to take account of reducing slate lengths.

Cresting

ridge stones or tiles.

Cusome:

the eaves detail in Cotswold slating where the under-eaves slate is supported over the wall head on stone packing and with its head placed under the first batten or lath.

Delph, delve

dialect term for a shallow quarry, especially in the north of England.

Diamond pattern

a slating system using 'diamond' shaped pieces of stone hung from one corner. The shape is actually hexagonal to avoid three layers where adjacent slates and courses

meet. An ancient method found on many Roman sites and today in, for example, Dumfriesshire and Angus.

Diminishing

the system whereby slates are sorted by length and laid with the longest at the eaves, diminishing to the smallest at the ridge. It is essential that the minimum head lap is maintained when there is a change of slate length between two courses. This also ensures that each successive margin is the same size or smaller than those below qv pig.

Double battening

the use of two battens to prevent the fixing peg tilting. For conservation the mortar methods (head bedding or torching) are more appropriate.

Double lap

stone slates laid so that each course overlaps the course next but one below. In some regions and in some special applications, single lap slating (where each course overlaps the course immediately below) is adopted qv Horsham.

Dressing

the process of shaping the stone slate and producing the edge detail using either a special hammer or a bladed tool. Regional differences exist for the edge detail which may be square or bevelled. Synonyms: trimming, fettling (Yorks, Lancs) crapping (Cotswolds), napping (Collyweston).

Eaves

the short course laid at the eaves under the first full course. The method of placing and supporting the eaves stone slates varies regionally. Synonyms: under eave(s), cussome (Cotswolds)



Diamond pattern. New Red Sandstone slates in Dumfriesshire

Eaves tilt

see tilt. Synonym, eaves kick.

Exposure

to weather: most commonly the conditions of wind and rain which apply to a roof or location. Less commonly the severity or frequency of frost.

of slates: the area of the slate or course of slates not covered by the overlying slates or course.



Hand dressing Cotswold slates at Down Ampney delph

Facies

geological term. The sum of features such as sedimentary rock type, mineral content, sedimentary structures, bedding characteristics and fossil content which characterise a sediment as having been deposited in a given environment.

Fissile

rock which can be split along bedding planes. qv cleavage.

Fixings

nails, pegs or cleats.

Full bedding

setting slates in a bed of mortar at the tail and across the full slate's width. Although common in some regions the technique is prone to trapping water within the slating with the risk of leaks.

Gallet

small pieces of stone slate or metamorphic slate bedded in lime mortar at the head of a slate to support the slate above. Synonym: shale.

Gauge

the spacing of laths or battens up the roof slope. In stone slating, the gauge is always variable.

Gauging stick

wooden rod set with traditional marks used to measure slate lengths and to gauge the lathing of the roof. The names of the slate sizes associated with each mark are traditional and regional. Synonym: slate rule qv wippet & www.stoneroof.org.uk/sticks.html

Head

the top edge of a stone slate as laid.

Head bedding

setting the head of slates in a bed of mortar across part or the full slate's width.

Head lap

in double lap slating (the normal slating method), the amount by which a slate overlaps the slate in the course next but one below. In single lap slating such as diamond pattern or Horsham single lap, it is the amount by which each slate overlaps the one immediately below and side lap. Synonym: band, end lap.

Heal, healing

old term for roofing

Heap (Collyweston)

a quantity of dressed slates on the ground made up of 7 hundreds plus 13 large ones

a hundred = 40 cases = 120 slates

a case = 3 slates

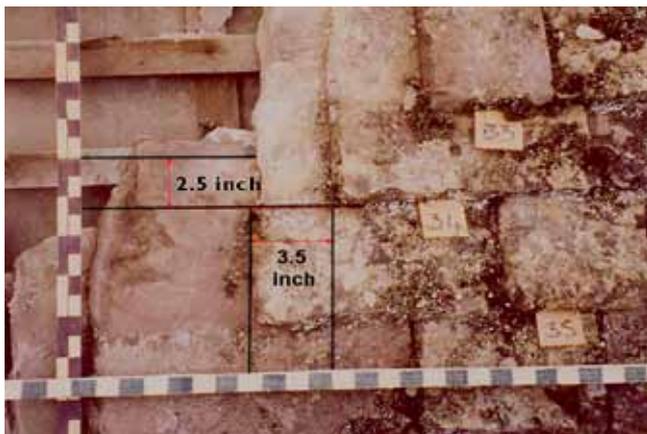
Horsham slating

single lap system used in Surrey, Sussex and Kent.

qv www.stoneroof.org.uk/horshamguide.html

Lath

split wooden support for hanging stone slates. Synonym: batten. In slate and stone roofing guides, the word batten is usually reserved for sawn supports.



Head lap side lap The head lap is 2.5 inches; the side lap 3.5 inches (64 & 89 mm)

Log (Collyweston)

the mined stone which is suitable for frost splitting to make slates.

Listing

tiles, slates or stone pieces set into mortar flashings at abutments with walls.

Margin

strictly the area, but more commonly the length, of the exposed part of the slate.

Metamorphism

the process, involving heat, pressure or both, which changes the direction in which sedimentary rocks split. Metamorphic rocks such as true slates split along cleavage planes which are usually unrelated to their original bedding. Sometimes the cleavage and bedding are parallel.

True slates are formed by low grade metamorphism -

not much heat or pressure is involved. Higher grades of metamorphism produce rocks with larger mineral crystals which can be seen without magnification. Examples include schists, quartzite and gneiss. Generally such rocks cannot be split thin enough to use for roofing, but there are some examples.



Listing Clay tile listing on a Horsham stone roof

Mossing

use of moss or other vegetable material to windproof the joints and gaps between stone-slates.

Mossing iron

tool used to force moss etc. between slates to prevent drafts.

Oversailing

verges which are carried beyond the outer face of a gable wall.

Overburden

in quarrying: useless material which overlies a bed of useful material.

Parting Collyweston

a set of slates of the same length

Peg

wooden or metal peg used to hang slates from laths or battens. Metal pegs are a modern innovation.



Pigs Incorrect gauging in a Carboniferous sandstone roof

Pendle

generally a quarrying term for any fissile rock. For stone slates in the Cotswolds region, it is used specifically for rock which is split by frosting - qv presents.

Pied Collyweston

a method of storing logs (qv) during the Summer to prevent drying out.

Pig, pig course

a course with a larger margin than the course(s) below resulting from poor setting out and a failure to maintain adequate head laps.

Pit

mine or quarry

Pitch

the angle of the rafters to the horizontal. The pitch of the stone slates will be significantly less because they are resting on each other, but this is taken into account by the traditional rafter pitch and lap relationship for the slate and the locality.



Random slates Mixed length and width Collyweston slates

Pointing

use of mortar to fill the vertical joints and to seal the tail gap of stone slating. Pointing may show (undesirable) or be raked or held back. Often associated with bedding.

Presents (Cotswolds)

stone slates formed by natural, including peri-glacial, weathering in near surface deposits. They are often thicker than hand-split stone slates produced from deeper layers qv pendle.

Random

of stone slate: variable length and width.

of roofing: slates laid with reducing length up the roof slope and the widths selected and placed so that they provide at least the minimum side lap over the slates in the course below.

Recording

a roof: compiling a photographic and/or written record of the construction of a roof. Typically it will involve measuring the slate lengths, margins, laps, and batten gauges and describing the detailing at valleys, hips, ridges, abutments etc.

Regularly

of diminishing or random slating: the system whereby each successive margin is the same height or smaller than those below. It does not mean that there are an equal

number of courses of each margin size.

Rod

a timber the length of the rafter (today usually a batten) marked with the gauging for each course and used to mark out the courses on the rafters.

Sarking

originally wooden boards fixed to the rafters to which slates were nailed. Today the term is applied to any material laid under slating to reduce wind effects synonym felt, membrane

Secret gutter or valley

sheet metal, usually lead, gutter or valley hidden by carrying the slating over it. Most commonly used at abutments especially where the use of soakers and flashings is prevented by a coping etc.

Sedimentary

rocks which have been formed from other rocks which have been broken down by weathering, or rocks formed by biological or chemical actions. If they can be split to make roofing (fissile) it will be along bedding planes - qv metamorphism.

Shadow

a thin piece of (usually metamorphic) slate used in the Horsham district to improve the weather resistance of the roofs when (possibly because of a shortage of stone slate) the head lap is reduced to less than the normal minimum. Originally the shadow was a thin piece of Horsham stone. It is always used in conjunction with mortar bedding and pointing.

a thin piece of slate or stone used to block the entry of wind-driven rain where the shouldering of stone-slates does not provide sufficient cover with adjacent slates qv shale.



Shale Example in Collyweston slating used to support the slate above and pointing any penetrating water onto the slate below

Shale

small pieces of stone slate or metamorphic slate bedded in lime mortar at the head of a slate to support the slate above. Where they are used with heavily shouldered stone slates (most commonly limestones) they have the effect of preventing wind driven rain passing through the slating. Synonym: gallet.

Shoulder, shouldering

the absence or deliberate removal of the top (as laid) corners of stone slates. The technique increases the amount of stone which can be used for roofing, makes it

easier for uneven or twisted slates to lie flat and reduces the roof loading.

the top corners of stone slates. Excessive shouldering can result in a leaking roof.

Side lap

the amount by which a stone slate laterally overlaps the stone slate in the course below - qv headlap

Single lap

slating or tiling system where each slate overlaps the slate immediately below. It is uncommon in slating but is the normal system for interlocking tiles.

Slate, stone slate

there are different preferences for terms to describe sandstone, limestone and similar non-metamorphic roofing products. The most frequently encountered traditional and colloquial terms are stone slates or grey slates but they are also called flags, flagstones, thackstones, stone tiles, sclaites or grey sclaites (in Scotland), slats or slatts.

Each of these terms is used to distinguish them from metamorphic or 'blue' slates. The objection to the term stone slate is that sandstones and limestones are not, petrographically, slates. That is, they have not been metamorphosed and consequently they split along bedding rather than cleavage planes. This is certainly true and some geologists prefer the retronym tilestone to distinguish them from real slates. However the term slate meaning any flat rectangular roofing product has historical precedence, since it predates the science of geology by hundreds of years and is the term in common use. In this document stone slate is used

Slate rule (Collyweston) see gauging stick

Sprocket

of a roof: the reduced pitch at the eaves

of the roof structure: the additional piece of timber fixed to the main rafter to carry the roof covering over the outer face of the wall and providing the eaves tilt - qv tilt.

Spot bedding

the use of small spots of mortar to prevent uneven stone slates rocking. The minimum of mortar should be used and should not lift the slates.

Square

one hundred square feet of roof or slating.

Stone slate

a sedimentary roofing slate generally a sandstone or limestone but there are other types.

Tail

the bottom edge of a stone slate as laid.

Thack, thacking

old term for roofing cf thatching

Tiering see torching.

Tilestone

term used by some geologists for stone slates. In stone slating it is capitalised and its use reserved for the stone

slates from the Silurian age Long Quarry beds at Llandeilo, across South Wales, Hereford and into the Downton Castle Formation in Shropshire.



Slate Old metamorphic slates and a limestone slate

Tilt

at the eaves course and at back abutments - the lift provided to ensure that successive courses lie correctly without gaps at the tail. On the main areas of the roof slope, the tail of each stone slate rests on two thicknesses of stone slate in the courses below. At the eaves, the first full course rests on only one thickness - the eaves slate. Essentially, the tilt replaces the missing thickness, but a little more is needed to allow a slate to bridge between the lath at its head and the underlying slate at its tail. The required amount of tilt can be provided by a tilting fillet, by building up the wall head underneath the eaves course or by setting the rafter back from the outside edge of the wall. Facia boards can also be used to provide tilt but historically they were not used on stone roofs.

at verges and side abutments - the lift provided by raising a rafter relevant to the roof slope or by use of a batten or tilting fillet to tilt the slating into the roof thus directing water onto the slope and away from vulnerable abutments.

at lead valleys - use of a wooden fillet to support the edge of the valley slates and to fill the gap between the lead and the slates thus preventing water driving into the slating. The lead must be laid over the tilt.

Tilting fillet

length of wood used to provide tilt. In modern construction an eaves vent often provides the tilt.

Tingle

metal strap fixed to the slating batten or lath and hooking under the tail of the slate as a temporary repair. Typically lead or copper. Many stone-slates are too heavy for this to be a successful repair.

Torching

lime and hair mortar applied to the underside of stone slates to render them wind proof. Synonym: tiering.

half torching: application of lime and hair mortar between the top edge of the lath or batten and the underside of the slates. Synonym: single torching.

full torching: application of lime and hair mortar to the underside of the slates between the top and bottom edges of the laths or battens. single torching: see half torching.



Torching Full torching in a Cotswold roof.

Undercloak

slate (or other material) laid under the verge slating to form a neat finish.

Under course

the first, short course of stone-slates laid at the eaves - qv eaves.

Underlay

flexible sheet material laid under slating, primarily to prevent wind blowing through it.

Unweathered

of stone roofing: rock which is too deep to have been subjected to weathering and consequently has to be split by mechanical action or frosting after extraction.

Valley

the pitched or horizontal intersection of two roof slopes forming an internal angle. A variety of methods are used to weather pitched intersections including, Welsh, chevron, laced and swept.

Weathering

the process by which rocks are broken down and decomposed by the action of external agencies such as wind, rain, temperature changes, plants and bacteria. In the development of weathered stone slates, it is often very thin clay or mica beds which are weathered out.

the use of lead etc or stone shales, shadows or shivers to block the entry of wind-driven rain where the shouldering of stone-slates does not provide sufficient cover with adjacent slates

the use of lead etc to prevent water leaks at roof junctions

Wippett wibbit Pennine

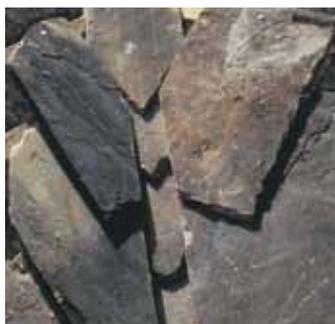
see gauging stick

Widebutt

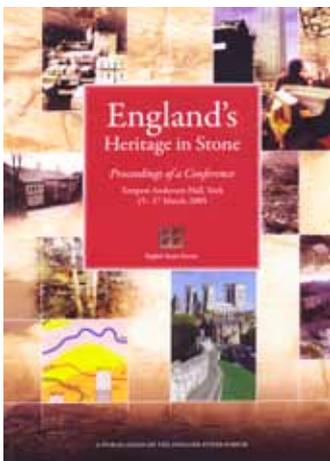
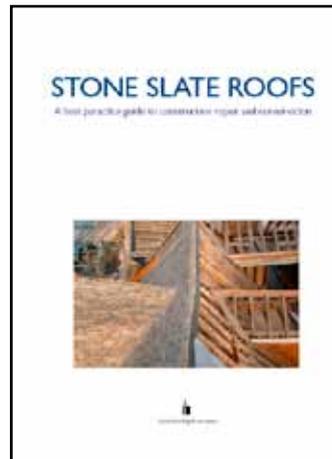
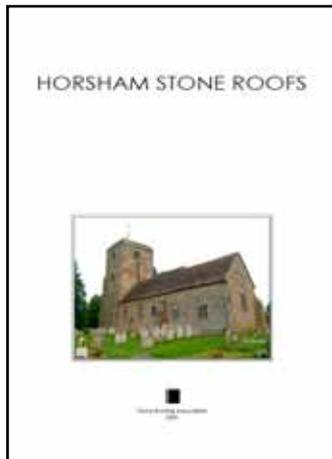
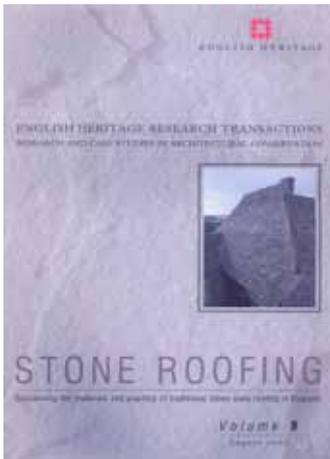
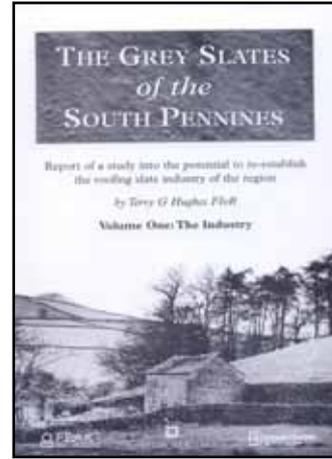
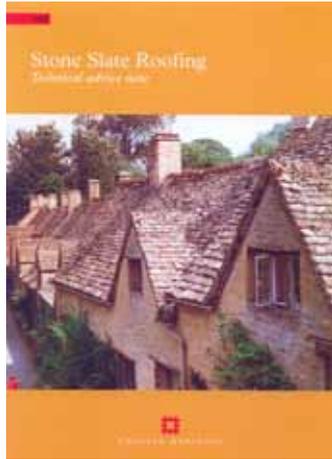
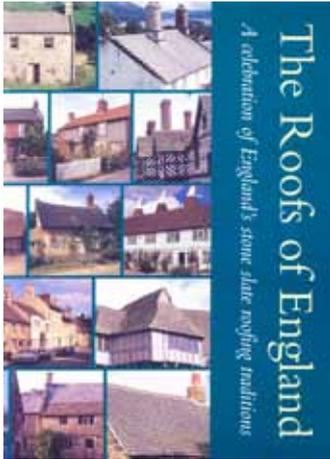
a wide slate used with a backer

Wrestlers

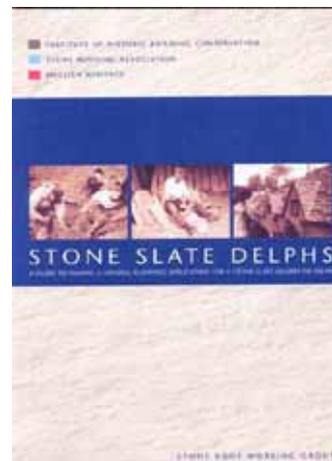
notched and interlocking stone slates used to form a ridge.



Valley Stone slate valleys are regional and distinctive. Welsh, Pennine chevron, Collyweston laced, Cotswold swept.



ENGLISH HERITAGE
 The Roofs of England
 Stone Slate Roofing Technical Advice Note
 Grey Slates of the South Pennines
 Research Transactions 9: Stone Roofing
INSTITUTE OF HISTORIC BUILDING CONSERVATION
 Stone Slate Delphs
STONE ROOFING ASSOCIATION
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