



Call 03708 702595 or visit www.redland.co.uk/cambrian for further information on installation

Thank you for choosing Redland Cambrian Slate, the roofing choice that combines both looks and performance.

Redland's systems, fittings and accessories, combined with market-leading technical support services, enable us to deliver total pitched roofing solutions you can rely on.

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KEY BENEFITS:
AWARD-WINNING PRODUCT
Made in Wales using over 60% recycled Festinog slate
OUTSTANDING AESTHETICS
Weathers naturally like natural slate
PROVEN HIGH PERFORMANCE
Lightweight and durable. Can be laid at pitches as low as 15°
FOUR CLASSIC COLOURS
State Grey, Heather and Langdale Green, in addition to Slate Grey (Pre-Weathered)
GUARANTEE
Cambrian Slates are covered by a 60 year guarantee and BBA Certificate No. 871/907.

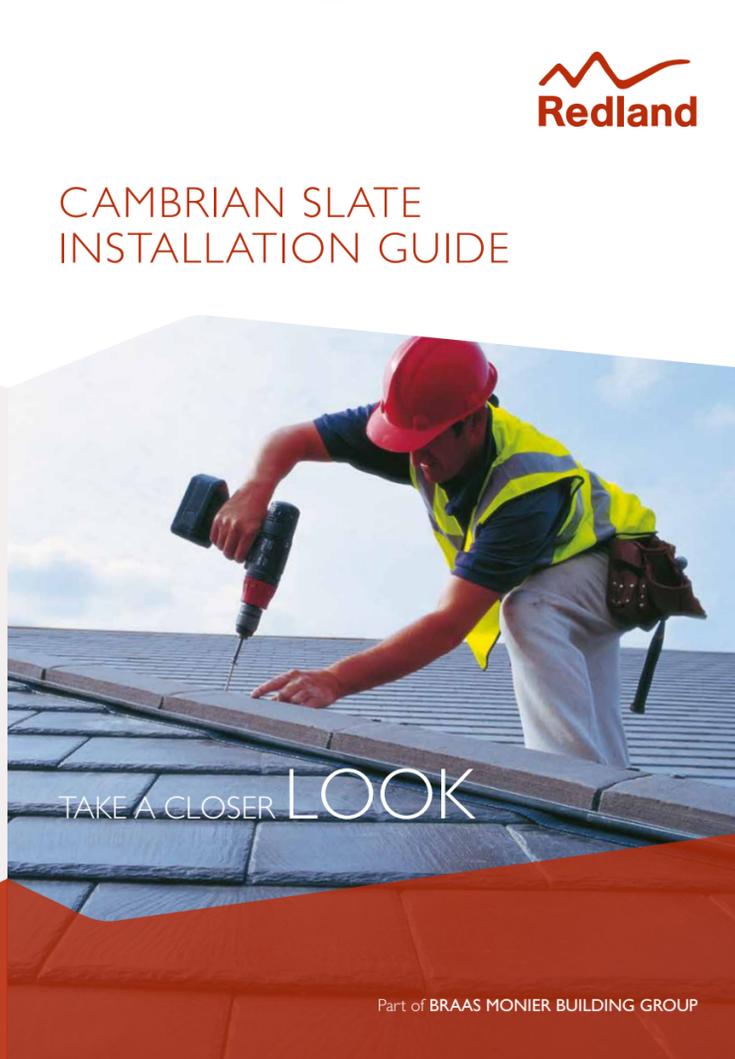
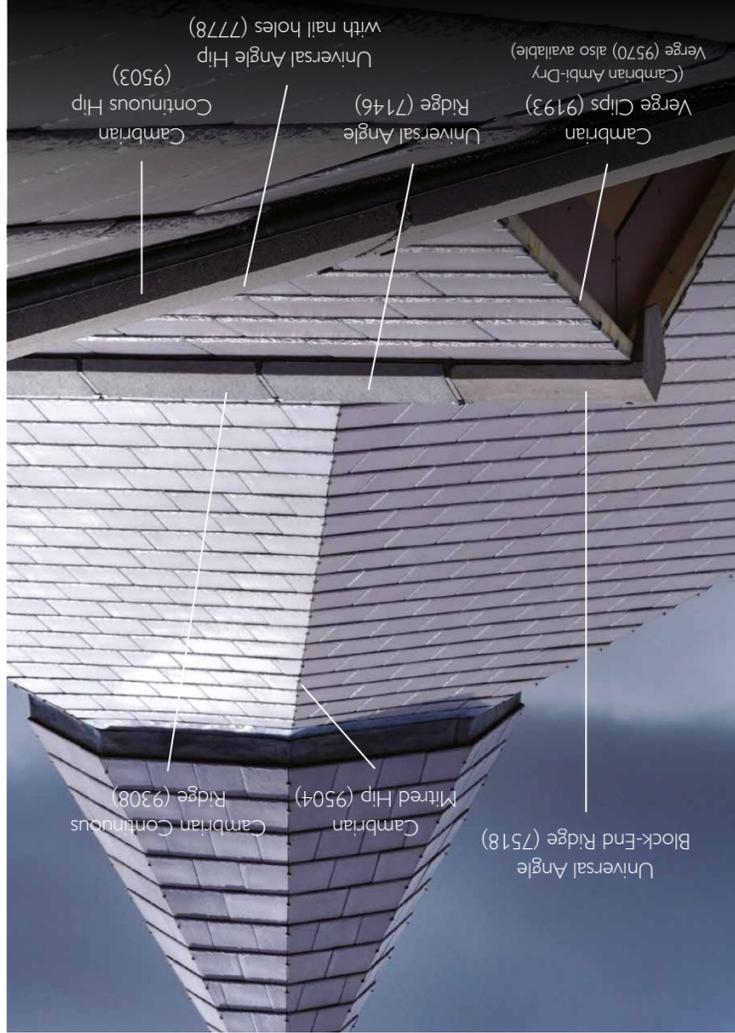
REDLAND CAMBRIAN SLATE THE TOTAL PITCHED ROOFING SOLUTION YOU CAN RELY ON



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f t y p i

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TAKE A CLOSER LOOK

CAMBRIAN CODES AND DESCRIPTIONS

CAMBRIAN FIXING PACK:

Description	Product Code	Contents (Quantity per Pack)
Slate Clip	9196	100 clips with 210 ring shanked nails (30mm x 2.65mm dia.)
Eaves Clip	9192	50 clips with 50 ring shanked nails (55mm x 2.65mm dia.)
Verge Clip	9193	20 clips with 40 ring shanked nails (30mm x 2.65mm dia.)



CAMBRIAN AMBI-DRY VERGE PACK:

Product Code	Contents (in all bags)
9570	10 x Ambi-Dry Verge Units 10 x Ambi-Dry Verge Clips 10 x S/S Nails (65 x 3.35mm) 20 x S/S Nails (20 x 2.65mm)



CAMBRIAN MITRED HIP PACK:

Product Code	Contents	Coverage
9504	10 Weathering Units 10 Tail Clips and screws	Contains sufficient components in each pack for 10 courses of slates



CAMBRIAN GRP VALLEY PACK:

Product Code	Length	Roof Pitch	Lap
9553	3m	17.5° - 22°	350mm
		22.5° - 29.5°	300mm
		30° - 39.5°	200mm
		40° - 45°	150mm



NOTES

- Where the roof plan area discharging into the valley is greater than 25m², minimum rafter pitch is 30°.
 - A Wakaflex Rapid Flashing saddle will be required at the head of all valleys.
 - Not to be used where the pitch difference between adjacent slopes is more than 5°.
- This table details the amount of overlap required between valley sections.

CAMBRIAN EAVES/RIDGE PACKS:

Product Code	Contents (in all bags)
9491	1 x Eaves Closure Unit 1 x Ambi-Dry Eaves Clip 1 x Ridge Comb Unit 2 x S/S Annular Ring Shanked Nails (55 x 2.65mm)



CAMBRIAN FIXING SYSTEM

For the best visual effect on the finished roof, it is important to select slates from a minimum of three different pallets, mixing them up as they are laid. When fixing Cambrian Slates ensure that nails are fully driven home and clips fit tightly. Cambrian Slates do not contain asbestos fibre and are easily cut using a disc cutter.



1 EAVES COURSE

The slate should overhang the fascia by 50mm to the centre of the eaves gutter.

- Nail head of slate through both nail holes using 30mm ring shanked nails supplied.
- Fit the Eaves Clip and nail through the slot into the fascia board using the 55mm ring shanked nails provided. Eaves Clips are provided with 55mm nails to ensure adequate fixing when used in conjunction with the RedVent Eaves Vent System.
- At a bedded verge, Verge Clips should be nailed into the fascia board and pinched to secure the verge slates at the eaves.

However, if the RedVent 25 Over-Fascia Vent is used, a clip batten will be required above the Over-Fascia Vent to accept the eaves clip nail fixing.

2 GENERAL ROOF AREA

Slates are to be laid in broken half bond from right to left. Use the locating arrow on the head of the slate to assist with the positioning of the slate above. This will also help maintain the correct bond.

- Nail head of slate through both nail holes using 30mm ring shanked nails.
- Fit Slate Clip as shown and gently tap or press into place.

3 BEDDED VERGES

Battens should finish approximately 50mm short of the outside edge of the brickwork or barge board.

An undercloak strip should be fixed in the normal manner. Ensure half bond is maintained by using Slate/Slate-and-a-half (product codes 4701/4702) for the right-hand verge, and Left-hand Verge Slate/Left-hand Verge Slate-and-a-half (product codes 4703/4704) for the left-hand verge.



(i) Position the Verge Clip to ensure overhang of 38-50mm.

- Twice nail Verge Clip into face of batten using the 30mm ring shanked nails.
- Every verge slate must be twice nailed. It may be necessary on-site to drill an additional hole of 3-3.5mm to achieve this requirement.

Important: Both left-hand and right-hand verges must be clipped using Verge Clips.

4 SIDE ABUTMENTS

Construct a 50mm wide x 25mm deep lead secret gutter or fit a GRP Secret Gutter (product code 9596). Cut slates closely to fit abutment. Dress a Code 4 lead or Wakaflex Rapid Flashing step and cover flashing down from the abutment and over the slates by not less than 150mm. In all situations, the free edge of the lead cover flashing should be clipped in accordance with the Lead Sheet Association recommendations. (Tingles should not be used through the sidelock to secure the edge of a lead flashing).

5 CAMBRIAN GRP VALLEY AND DRY VALLEY

Slates should be neatly cut into the valley using Slate and-a-halves (product code 4702) for pitches above 25° or Double Slates (product code 4705) for pitches 25° and below on every course, both sides of the valley, in order to avoid fixing small pieces. All slates should be secured with at least two head fixings – where necessary, drill an additional 3-3.5mm hole on-site. Use Verge Clips on each course both sides of the valley at the slate overlap, to prevent the cut edge from lifting. Install clips at right angles to the rake of the valley and twice nail into the clipping batten using the 30mm nails.



6 BEDDED HIPS AND RIDGES

Hips should be laid using Slate-and-a-half (product code 4702) or Double Slate (product code 4705) (depending upon roof pitch) on every course, both sides of the hip to avoid fixing small pieces. All slates should be secured with at least two head fixings – where necessary, drill an additional 3-3.5mm hole on-site. All mortar bedded hip and ridge tiles must be mechanically fixed using the Redland Mortar Bedded Fixing Kit (product code 9314). Bed hip and ridge tiles continuously along edges and solidly at butt joints with a BS 5534-compliant cement/sand mortar. Fix 6mm galvanised hip irons to the foot of each hip rafter.

7 TOP COURSE

Fix final batten to ensure ridge tiles will cover the top course of slates by min. 75mm.

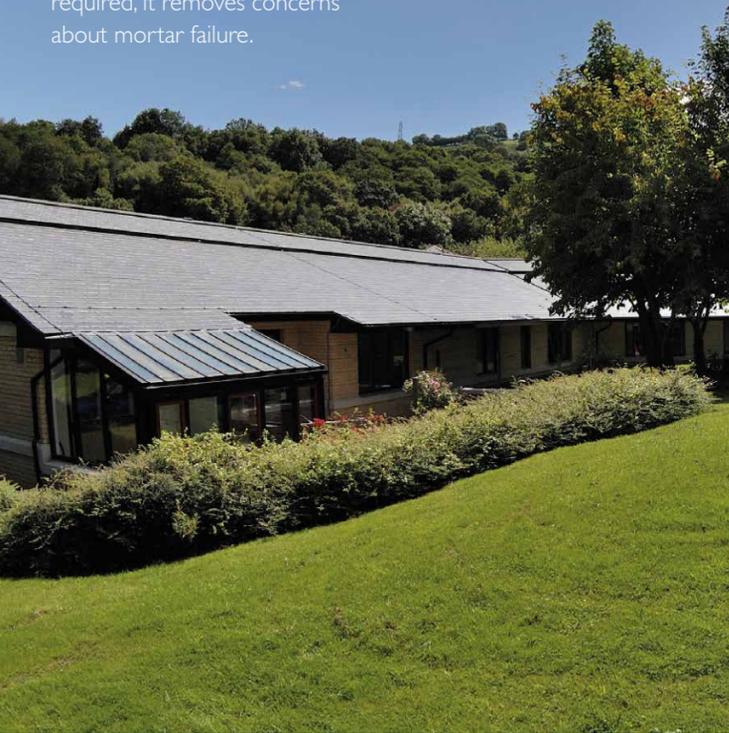
8 ROOF WINDOWS AND OTHER PENETRATIONS

All slates abutting a roof window or penetration should be twice nailed and clipped with Verge Clips. Double Slates and Slate-and-a-Halves in alternate courses must be used either side of the roof window, starting with double slates at the bottom corners of the roof window. Small cuts should be avoided wherever possible. Additional fixing instructions for use with roof windows are available on request from Redland Technical Solutions (Tel: 03708 702595).

Designed by TGV/ www.tgvdesign.co.uk LTT21 0417

CAMBRIAN AMBI-DRY VERGE SYSTEM

The Ambi-Dry Verge System provides a neat, maintenance-free verge. With very high resistance to storm damage and with no wet trades required, it removes concerns about mortar failure.



1
The tiling battens should end in a perpendicular line and extend 50mm beyond the outer edge of the masonry or bargeboard. Set out the rest of the roof in the normal manner.

2
Snap off the bottom upstand return portion of the Ambi-Dry Verge Unit to form either left or right-hand units. The portion to snap is indicated on the inside of the Verge Unit.



3
Position the Eaves Closure Unit inside a Verge Unit as shown, with the face printed 'TOP' towards the downstand which has not been snapped off. Ensure the slot of the Eaves Closure Unit engages into the downstand of the Verge Unit, and slide forward until it clicks into position.

4
Position the Verge/Eaves Unit in place ensuring the tiling battens fit in the box section of the Verge Unit. Push an Ambi-Dry Verge Clip through the upper slot on the side of the Verge Unit and fix to the tiling batten using a 25mm galvanised clout nail.



5
Position the Eaves Clip into the slot in the Eaves Stop End and nail to the fascia using 25mm galvanised clout nails, ensuring the unit is tight against the verge. (If using Redland RedVent EavesVent, nails should be a minimum of 50mm long.) The unit should be held securely against the clip when the eaves tile is laid.

6
Offer up subsequent units, ensuring the downstand of the Verge Unit is below the clip. Then slide the Verge Unit over the unit below. It is important to ensure the lugs engage top and bottom and the box section fits over the batten. Secure the unit with an Ambi-Dry Verge Clip. Complete the rest of the verge in a similar manner.



7
Do not fix Ambi-Dry Verge Clips on the top course. The verge at the apex should be completed for opposite roof slopes at the same time. Interlock two Ridge Comb Units and slide until fully closed. Offer up to the Verge Unit on the top courses and slide back over the Verge Unit. Secure the Ridge Comb Units onto the Verge Units in the top course with the ridge clip facing downwards.

8
Finish the Verge with a Universal Angle or Half Round Block-End Ridge or a Ridge End Cap (shown).

CAMBRIAN GRP VALLEY

Designed as a cost-effective alternative to lead, the Cambrian GRP Valleys are easy to fix, durable and lightweight. They are ideal for most types of roof design which have a junction between two roof slopes.



1
Fix noggings (38/50 x 25mm timber battens) to either side of the rafters adjacent to the valley, approx 300mm in length and set down 19mm, to support 19mm timber board. Cut the board to finish flush with the top of the rafters and approx 300mm wide on each side, then nail fix to the noggings.

2
Cut out a section of the fascia board at the valley, down to the top of the rafter, to allow for the width of the GRP Valley (400mm) to pass through. Fix 50 x 25mm timber valley battens down either side of the valley, to support edges of GRP Valley by a min 25mm, and nail fix into the rafters using 65mm batten nails, one per rafter.

Note: An alternative to notching fascia board is to construct a lead or Wakaflex Rapid Flashing saddle supported on a tilting fillet.

3
Lay underlay on roof, turn up around the valley battens and secure with clout nails. Alternatively, if using a non-bituminous underlay, first lay a single strip of underlay, full width of the valley boards, up the centre of the valley before fixing the valley support battens. Batten out the roof, cutting the ends of the tiling battens approx 10mm away from the valley batten, and nail-fix into the ends of the rafters and/or support boards.

4
Cut the first section of GRP Valley to correspond with the line of the fascia

boards. The foot of the GRP Valley should be trimmed to overhang the fascia by approx. 50mm to allow discharge into the eaves gutter.

Once cut, lay the GRP Valley on and between the valley battens, ensuring the first length overhangs the fascia boards by approx 50mm.

5
Nail-fix the GRP Valley to the 25mm thick valley support battens with clout nails. At the head of the valley, cut the top section to correspond with the adjacent ridge line, and fix into position. Finish top of valleys and where valleys discharge onto other roof slopes with a lead or Wakaflex Rapid Flashing saddle.

6
Cut the Cambrian Slates to the line of the valley leaving a clear 125mm wide open drainage channel down the centre.

7
Slates should be neatly cut into the valley using Slate and-a-halves (product code 4702) for pitches above 25° or Double Slates (product code 4705) for pitches 25° and below on every course, both sides of the valley, in order to avoid fixing small pieces. All slates should be secured with at least two head fixings – where necessary, drill an additional 3-3.5mm hole on-site. Use Verge Clips on each course both sides of the valley at the slate overlap, to prevent the cut edge from lifting. Install clips at right angles to the rake of the valley and twice nail into the clipping batten using the 30mm nails.

CAMBRIAN MITRED HIP SYSTEM

Specifically designed for use with Cambrian Slates to achieve a neat mitred hip detail, whilst ensuring very high resistance to storm damage over a wide range of rafter pitches and plan angles.

1
Install underlay and batten the roof in the normal manner.

The tiling battens should be carried onto the hip rafter and must meet at the same height and be mitre cut to form a close junction. Where the hip rafter projects above the level of the rafters the cut ends of the battens should be supported on noggings of timber positioned between the rafters and fixed to the hip rafter.

2
If two mitred hips meet at an apex it is useful to finish the final (top) course with a single double slate. This will assist ease of laying and provide the best visual effect. To achieve this on a roof with an even number of courses from eaves to ridge, the eaves course of slates should be laid out so that the centre of a double slate on the top course is directly below the apex. For a roof with an odd number of courses in the top course a slate bond should be positioned directly below the apex.



3
The first Weathering Unit should be positioned on the eaves course of battens using the batten locating lugs on the underside of the unit to ensure it is in the correct position. If the battens are supported on noggings and do not meet, ensure the top of the batten and the bottom of the locating lugs are in line. Fix the Weathering Unit in place with one of the aluminium nails supplied, positioning the nail at the top end of the slot.



4
Lay the eaves course of slates, nailing and clipping as normal. At the hip, cut a slate-and-a-half or double slate to size as appropriate (see table), ensuring the gap between the cut slates is in the range of 3-5mm.

	Rafter pitch
Slate-and-a-half	45° and above
Double Slate	<45°

5
Using the tail of the slate as a guide, cut the Weathering Unit to length with a sharp knife.



6
The raking cut slates should be fixed at the head with standard Cambrian Slate nails. Where the raking cut leaves only one nail hole, a second nail hole (3-3.5mm diameter) should be drilled on-site. All cut slates should be secured with at least two head fixings. At times this may involve nailing through the upper section of the Weathering Unit – this does not affect the weathertightness of the system.



7
The tail of the cut slates is secured using the blackened Tail Clip and woodscrew fixing supplied. Position the fixing as close to the tail of the slates as the head of the slates below will allow and secure using a screwdriver. The clip will flatten to accommodate varying pitches; however care should be taken to avoid over-tightening which may cause 'cocking' of the cut slate.

8
Position and nail the Weathering Unit in the second course and mitre slates as before. Trim the Unit, again using the tail of the slates as a guide. **Caution:** Do not fix slates in position at this point.



9
To prevent the cut slates riding up, pull the unit upwards towards the ridge until the cut slates just drop down onto the slates below.

10
Fully fix the slates as before. Repeat the operation for all courses. Depending on the detail a lead or Wakaflex Rapid Flashing saddle may be required to weather-proof the junction at the upper point of the hip. Where the Cambrian Mitred Hip System is used in combination with the Redland DryVent Ridge, Continuous Ridge System or Uni-Vent Rapid Ridge/Hip System, a Block-End Ridge is available to complete the ridge line. A small piece of DryVent Ridge filler should be positioned beneath the Block-End Ridge to ensure weathertightness.