

# *EASY ROOF SYSTEMS*<sup>™</sup>

PROFESSIONAL PITCHED ROOFING ANCILLARIES



## LOW PITCH SLATE SYSTEM

### FITTING INSTRUCTIONS



Easy Slate uses our patented rubber seals against the back of the slate. The Best performance is therefore achieved using smooth manmade slates. Consideration should be given to rustic, uneven or riven slates where the performance is reduced.

Easy Roof System is a Permavent product and its performance can only be guaranteed when used as a complete system using the components that are shown below.

Easy Roof System is designed to improve the performance of your slate roof by over 200%.

Easy Roof System is also ideally suited to Scottish practice of nailing slates directly to the sarking board.

Your roof should be installed in the normal way using all of the Easy Roof System components required for each type of roof.

Ensure all health and safety requirements are observed, especially when working at height.

Ensure the ventilation requirements of the roof have been met.

**At 12 deg the roof will rise 213mm for every 1mtr across**

See additional requirements for using Permavent Max breather membrane

Permavent MAX is manufactured using the very latest technology from the medical industry to encapsulate the highest grade Hydrophobic film and produce the best overall performing Breather Membrane in Britain.

The performance of many membranes is reduced when the layers are stuck together but the special 3-to-1 thermal bond of Permavent MAX creates a durable membrane that cannot delaminate.

High-grade materials combined with the worlds most advanced production shows that the lighter weight, strength and elasticity of Permavent MAX means that it can be used in any application to improve the performance of an existing membrane.

	Permavent <b>MAX</b>	Tyvek <b>Supro</b>	Proctor <b>Roofsheid</b>	Klobber <b>Permoforte</b>
Base weight	140	145	175	175
Tensile strength	254.5	275.5	230	324
Elongation	93%	21%	37.5%	15.5%
Nail tear	180	125	143	156
Breathability	1343	935	2409	1034
Water tightness	>600	237	114	>200
Vapour resistance	0.15	0.22	0.09	0.20



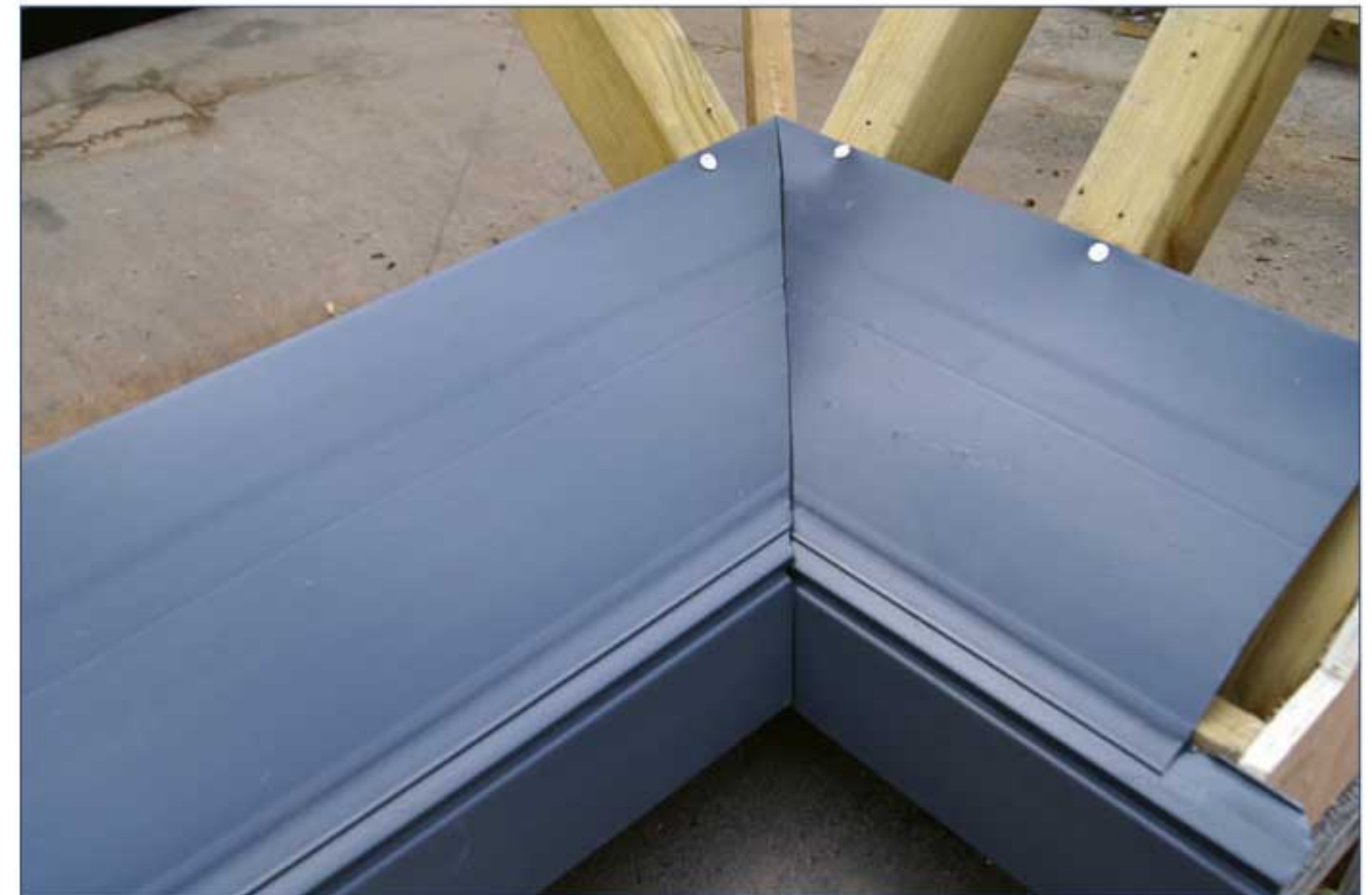
As with all membranes avoid undue pressure on the laid breather felt. Moving the felt under the battens can stretch the membrane around the nail. Although this does not affect the purpose or performance of the membrane this can cause a leak around the nails if it rains heavily before the slates are installed and the roof is not fully covered in. In order to avoid this rare occurrence we recommend that a counter batten is taped and nailed up each rafter.

As the condensation forms on the Breather membrane it will then run down the roof using the sag in the felt to run between the rafters and under the battens. Eaves Trays stop this water from 'ponding' behind the fascia and will allow it to run into the gutter. Normal 1.5mtr eaves trays that are not supported will sag at the join between the rafters and can leak. The butt joining of Easy Tray cannot leak because most water will exit between the rafters but any other water will run down the vertical join in the same way that thatch works.

## Instruction

1. Install Easy Tray at the eaves allowing enough overhang to clear the gutter brackets (on a steeper pitch you can use the rear step and the front step on lower pitches). Easy Tray is 1200mm long and is designed to be fully supported by butt joining on a rafter.
2. Easy Tray can be easily trimmed and cut to fit using good quality Tin snips.

3. Easy Tray can be installed over the fascia or over ventilators and is easily fixed at the top using a clout nail. Do not nail through the lower section of Easy Tray.
4. Permavent double sided tape should be applied over the line of the fascia.





5. Permavent Max should then be adhered to Easy Tray along this line, Permavent Max should not fall all the way into the guttering.

6. Permavent Max should be first laid up the valley section if required.

7. Permavent Max should then be unrolled in the usual way following the fascia line and overlapping the valley, It should first be pulled tight and then released to allow approximately 5mm of sag between the rafters.



8. Permavent double-sided tape should be applied along the lap line before moving up to the next course. The tape can be pressed onto each rafter and it will naturally stick between the rafters. Taping the laps will also eliminate the rare occasions when wind driven rain can be forced under the laps if the roof is not covered in.



9. Install the next course with at least 150mm lap below a 25 degree pitch. Remove the covering layer from the tape and allow the top lap to stick to the tape.





10. Install 4 longitude valley batten (2 either side) with a gap of 25mm between. Then install the horizontal batten in the usual way. The verge batten can be left long.



11. Permavent Max should be laid at least 75mm up any abutment such as a wall or chimney. (Dormer cheeks should then be over laid vertically with the membrane). The battens should then be installed with approximately 5mm gap from the abutment. (There should not be more than 20mm gap between the wall and the end rafter. With a large gap the membrane can gradually fall down this gap and should therefore be supported or fixed to the abutment using the double sided tape).



12. Gauge the verge overhang to coincide with the lateral gauge of the slates, we recommend that the slates overhang Easy Verge by 3-5mm although flush fitting or up to 10mm is also acceptable, allow 3mm when cutting the battens for the thickness of Easy Verge.

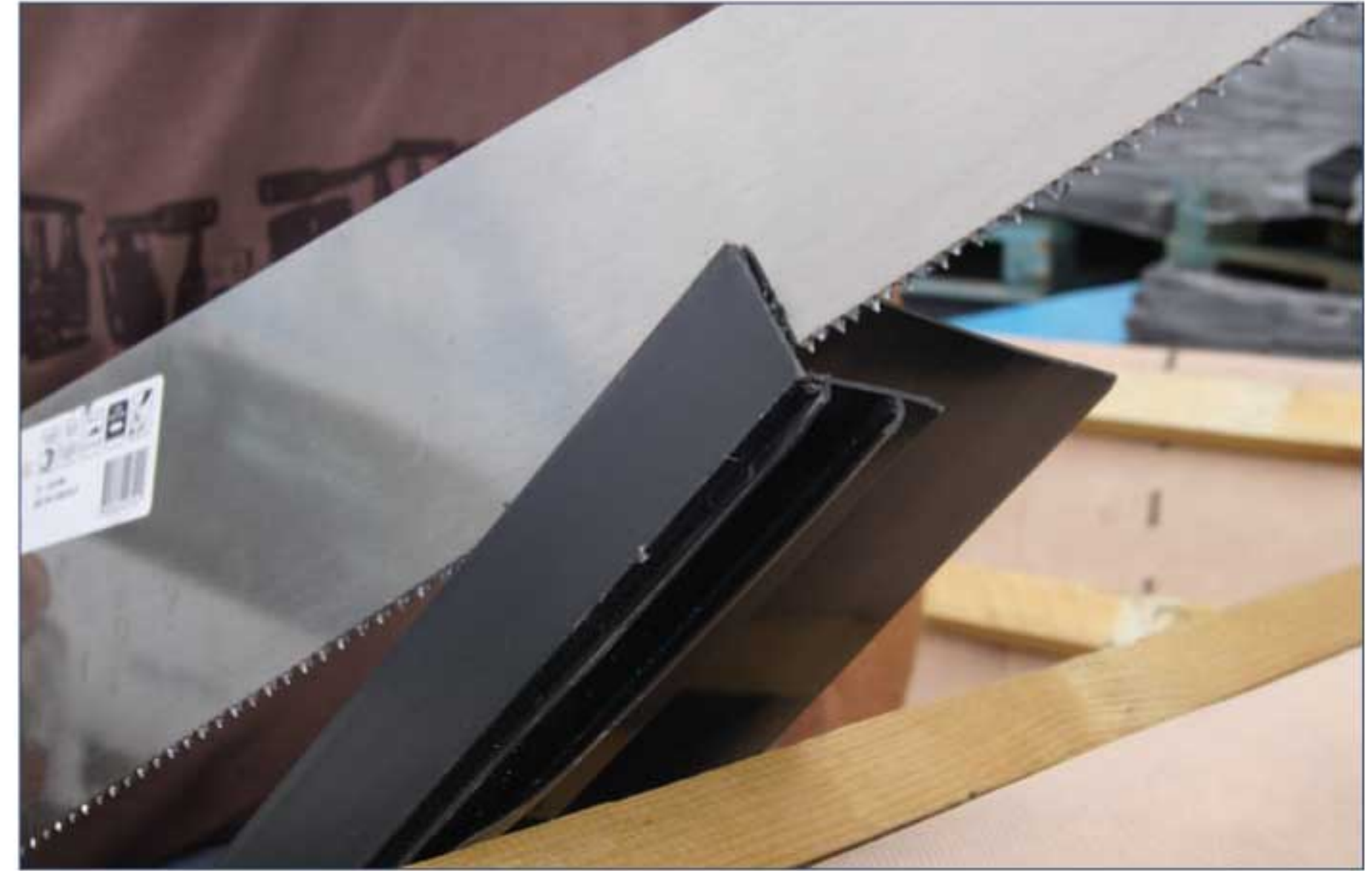


13. Cut the battens to the required length to create a perfectly straight verge.





14. Make a small cut along the lower length of Easy Verge just behind the drip. This cut will allow the undercloak part to be bent up and close off the eaves detail.



15. Depending on the angle of the roof the lower section of easy verge should be removed to allow for the eaves tray. Easy Verge can be fixed to the top of the fascia board



16. Slide Easy Verge over the end of the battens whilst keeping the membrane underneath Easy Verge, ensure a straight line and fix with a few clout nails. There is no need to fully secure Easy Verge at this point because every slate will be fixed through it and thus a fully secured verge is formed.

17. To extend Easy Verge simply butt join it as it extends up the verge. If the join does not fall on a batten end then simply insert a batten off cut to support the butt joint.



18. Do not use cut slates less than 150mm wide for the verge or abutments.

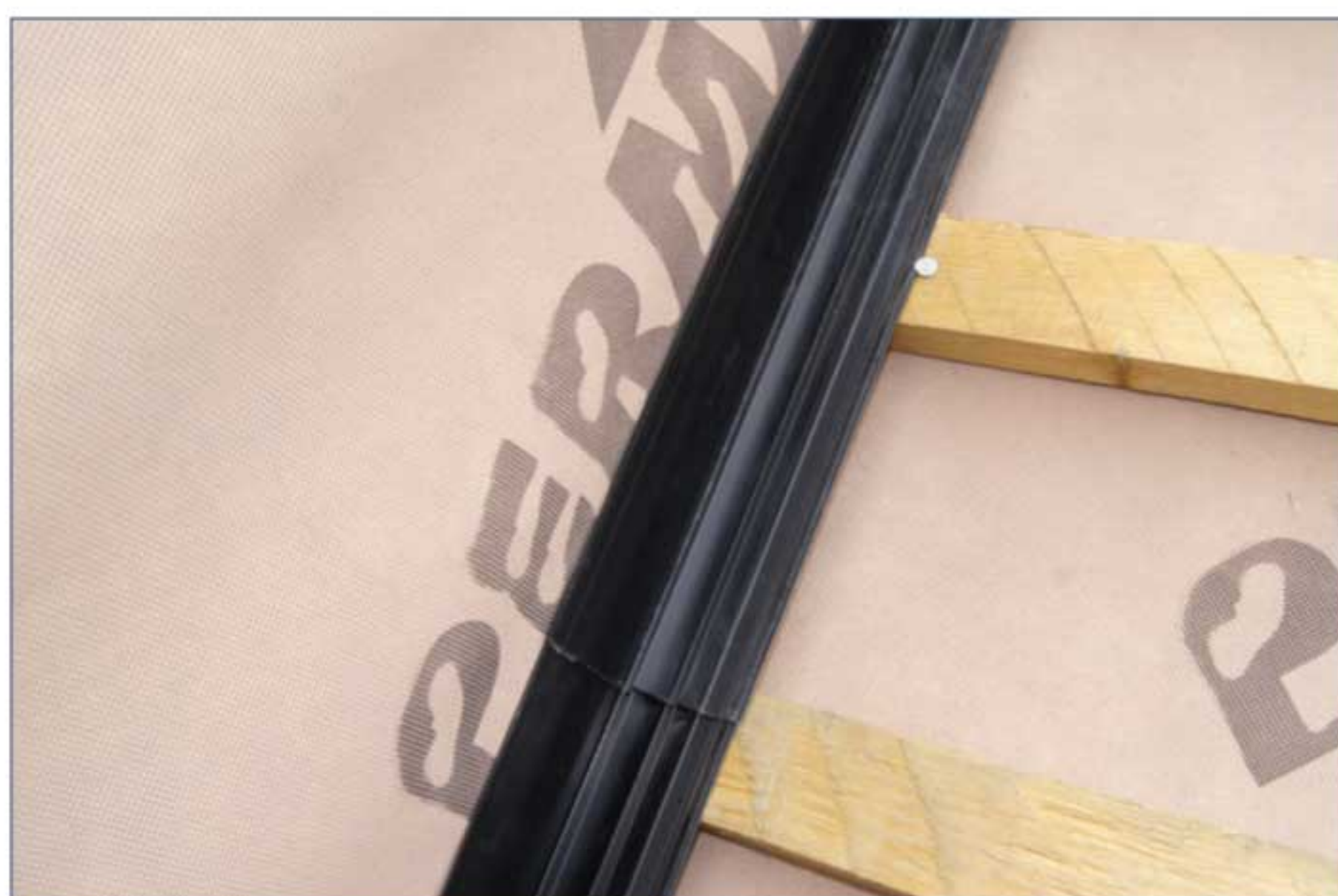
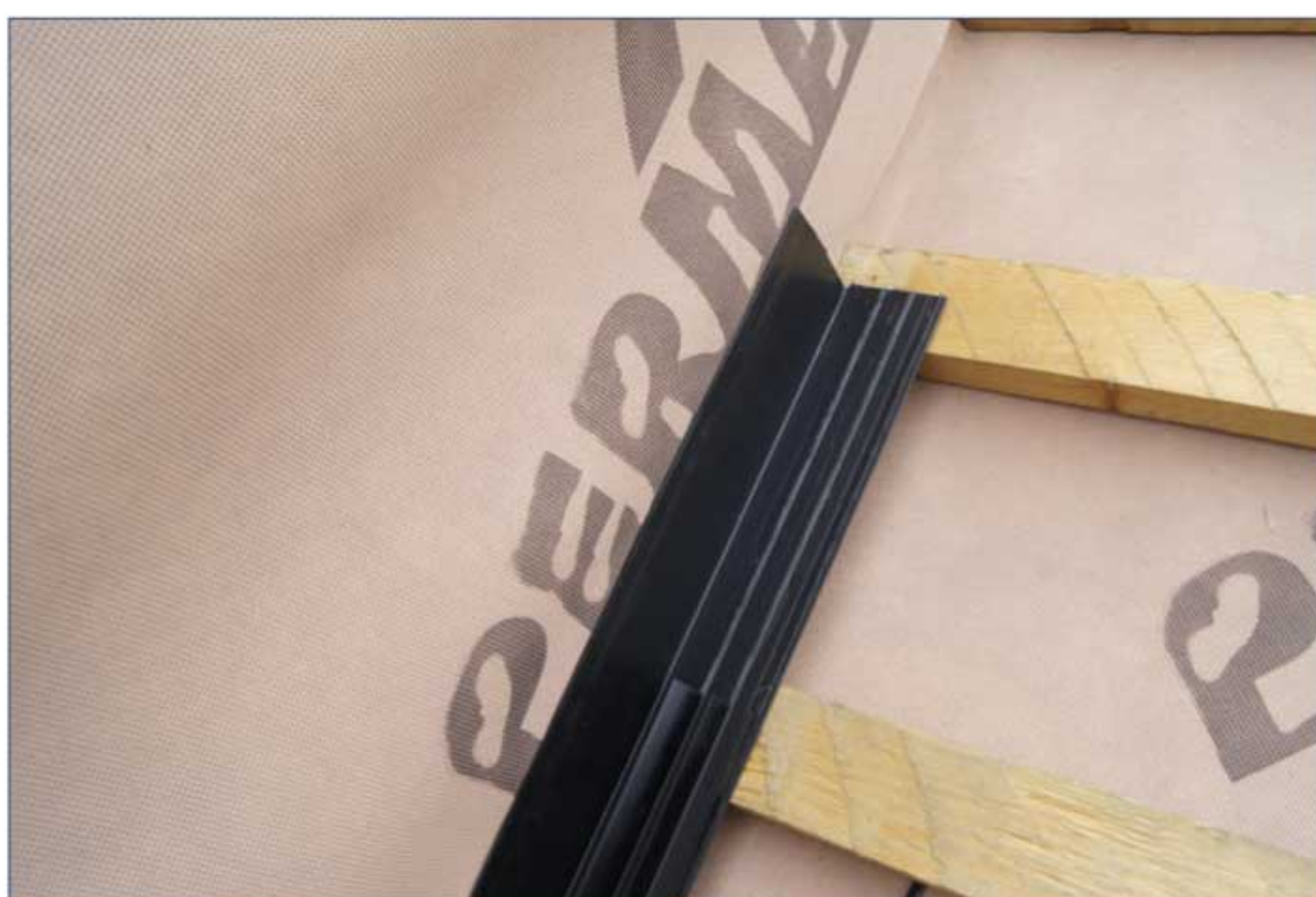




19. Easy Valley should be 'v' cut and positioned to allow the rainwater to flow into the guttering.

20. Position the valley centrally up the valley and on top of the battens, secure the edge with a few clout nails. To extend Easy Valley it should be lapped by at least 150mm the lap being double sealed with Easy Seal or similar high quality silicone based sealant.

21. Apply Easy Soaker on top of the battens against the abutment. To instantly position Easy soaker apply Permavent double-sided tape to the upstand of easy soaker and stick it to the abutment. To avoid the first slate being 'kicked up' the flexible seals can be trimmed at the lower section just above the fascia. Easy Soaker should remain flat and not allowed to 'Kink'. The top min 150mm of Easy Soaker should have the rubber seals removed to allow the lap of the next Soaker. Part of this lap should always be over at least 1 batten.





22. Install the slate eaves/starter course in the usual way, Easy Slate should be installed underneath the first full length slate. Easy Slate must always be the full length of each slate and one must be used for every full slate on the whole roof. Always ensure that the flexible seals are leaning towards the side edge of each slate.

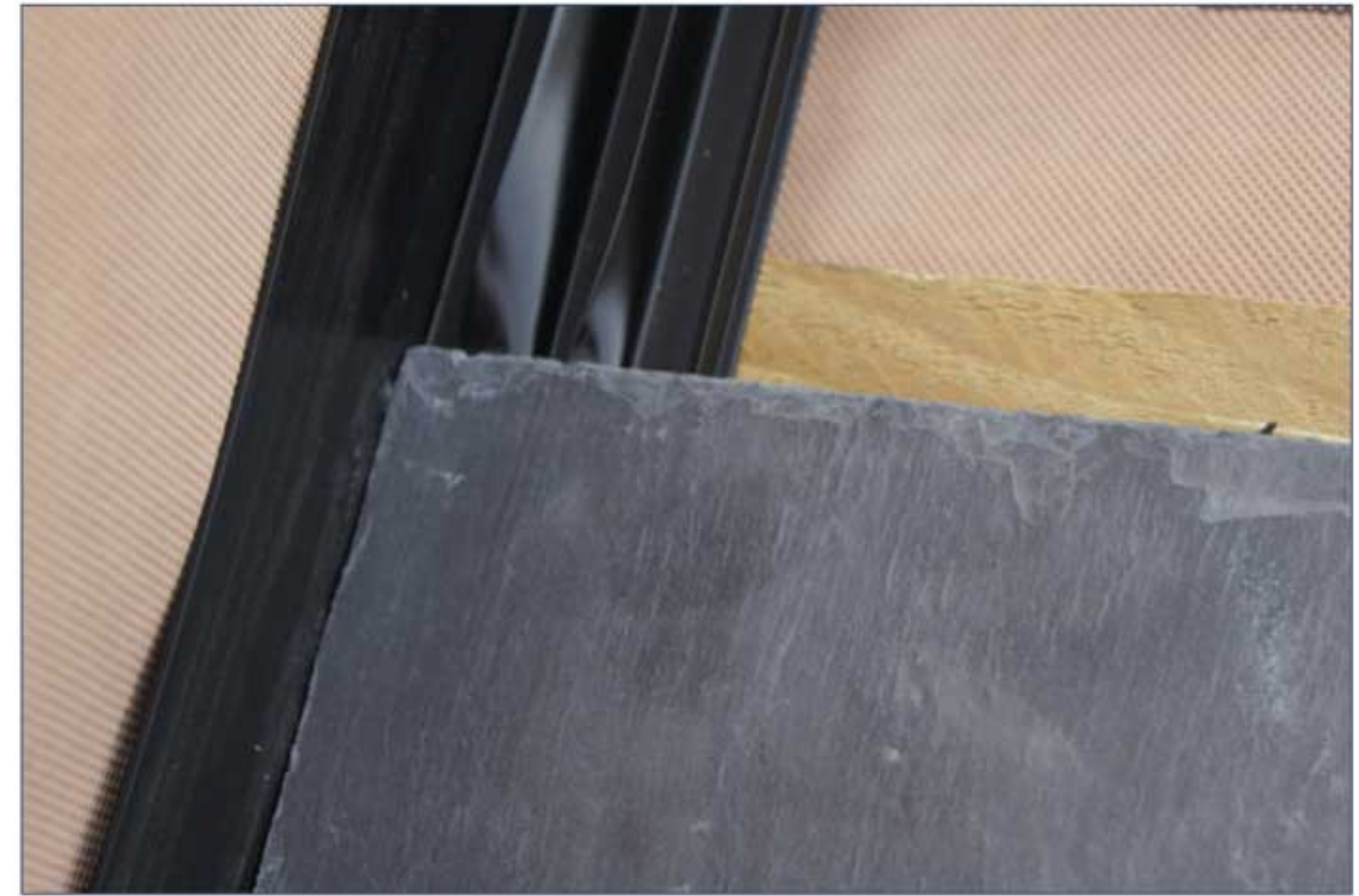


23. The Flexible super seals will prevent water running back under the slate.

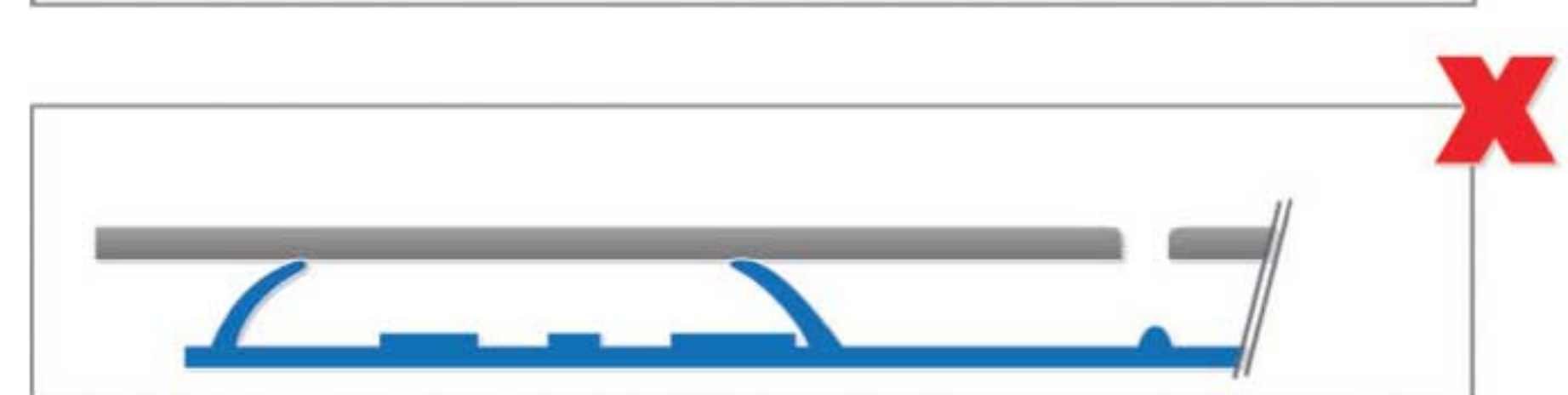
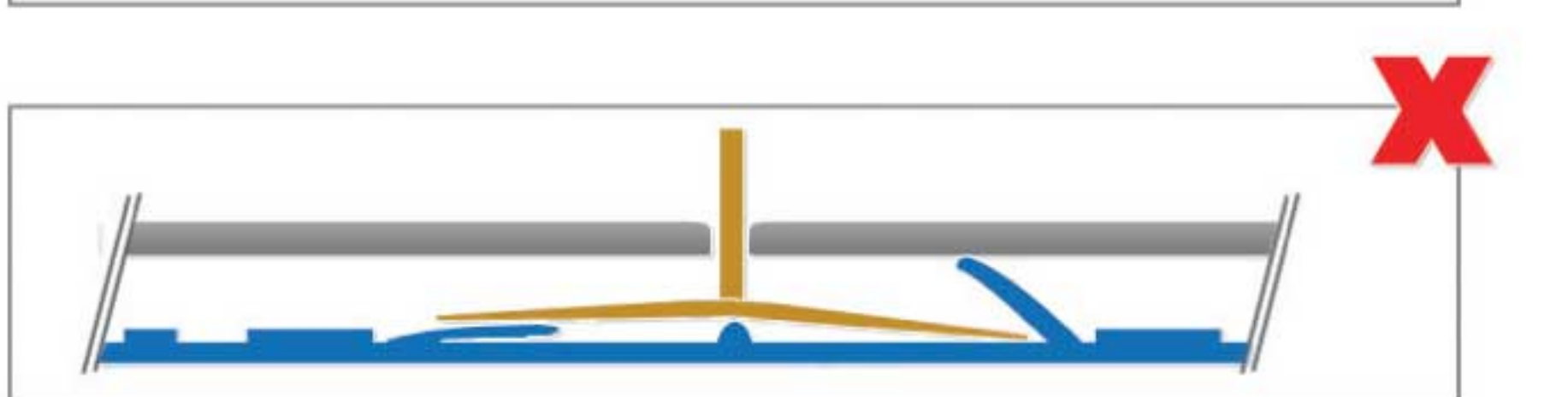
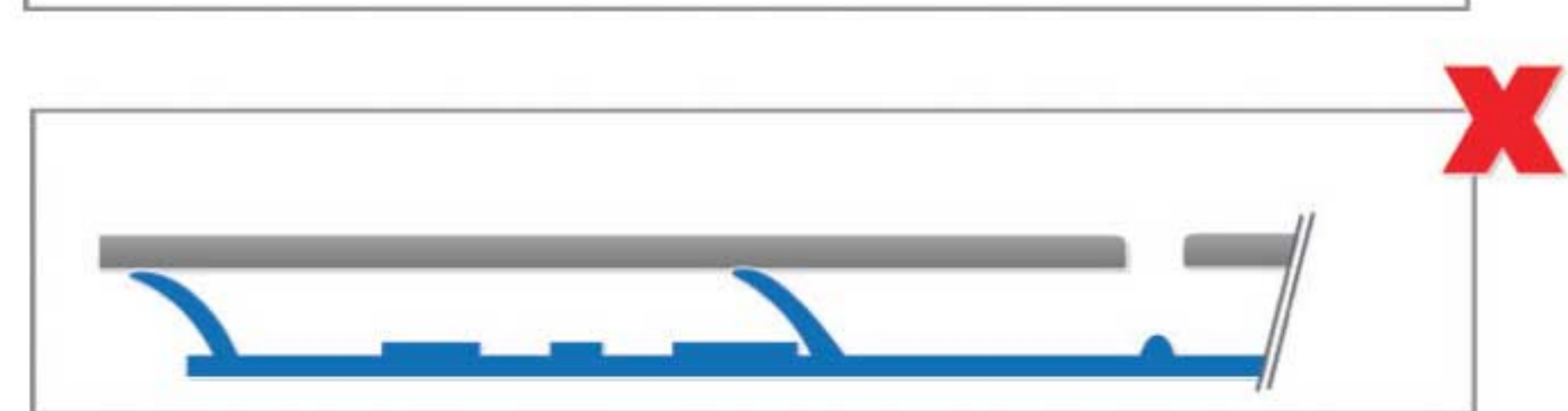
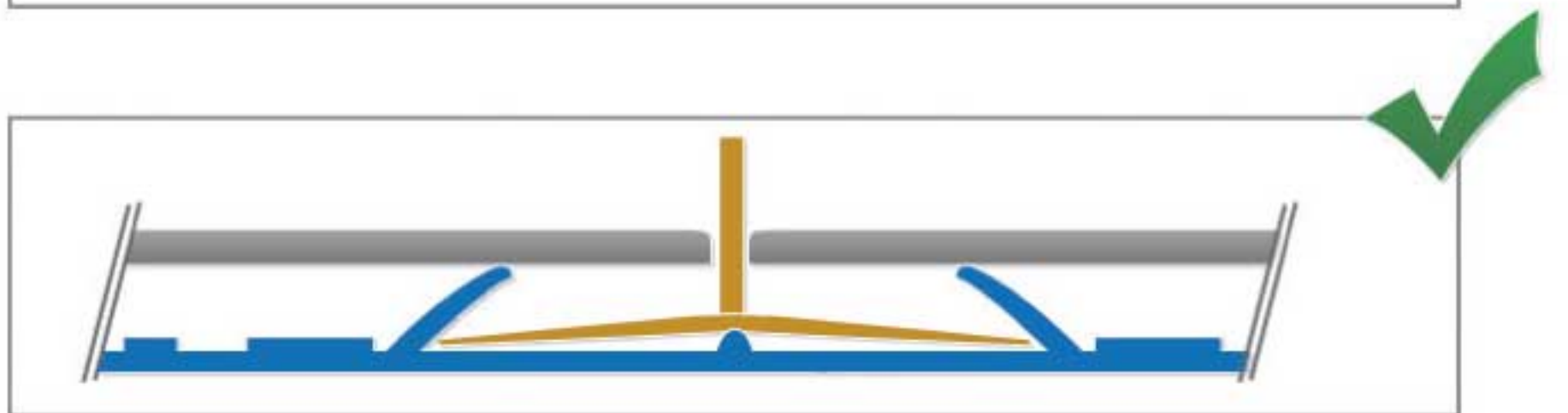
24. Easy Slate can be mitre cut at the valley section. Easy Valley should be installed fully down to centre upstands of the valley.



25. Do not install easy slate over the top of Easy Verge, Soaker and Valley. Copper rivets and slate hooks must be centrally located.



**The seals must always lean to the edge of the slate.**



**\*Copper rivets must locate between the centre seals.**



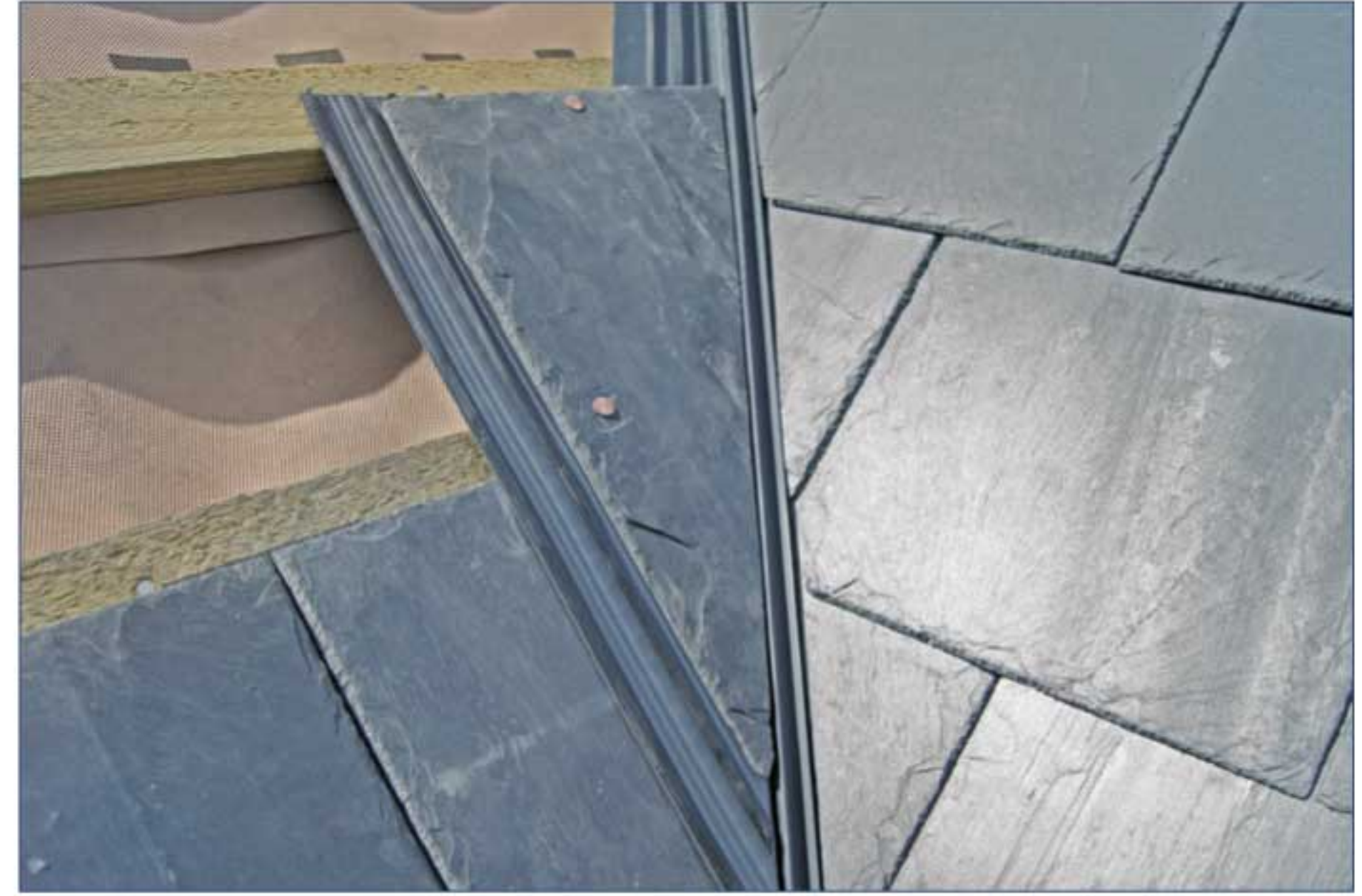
26. Cut the valley slates in the usual way. Fix these slates by nailing through Easy Valley on the outside edge around the smallest rubber seal only. Do not make any holes in the central region between the four largest central seals.

27. Continue to slate up the valley in the usual way.

28. When sections of the valley have been completed then the valley cap can be pressed into position.

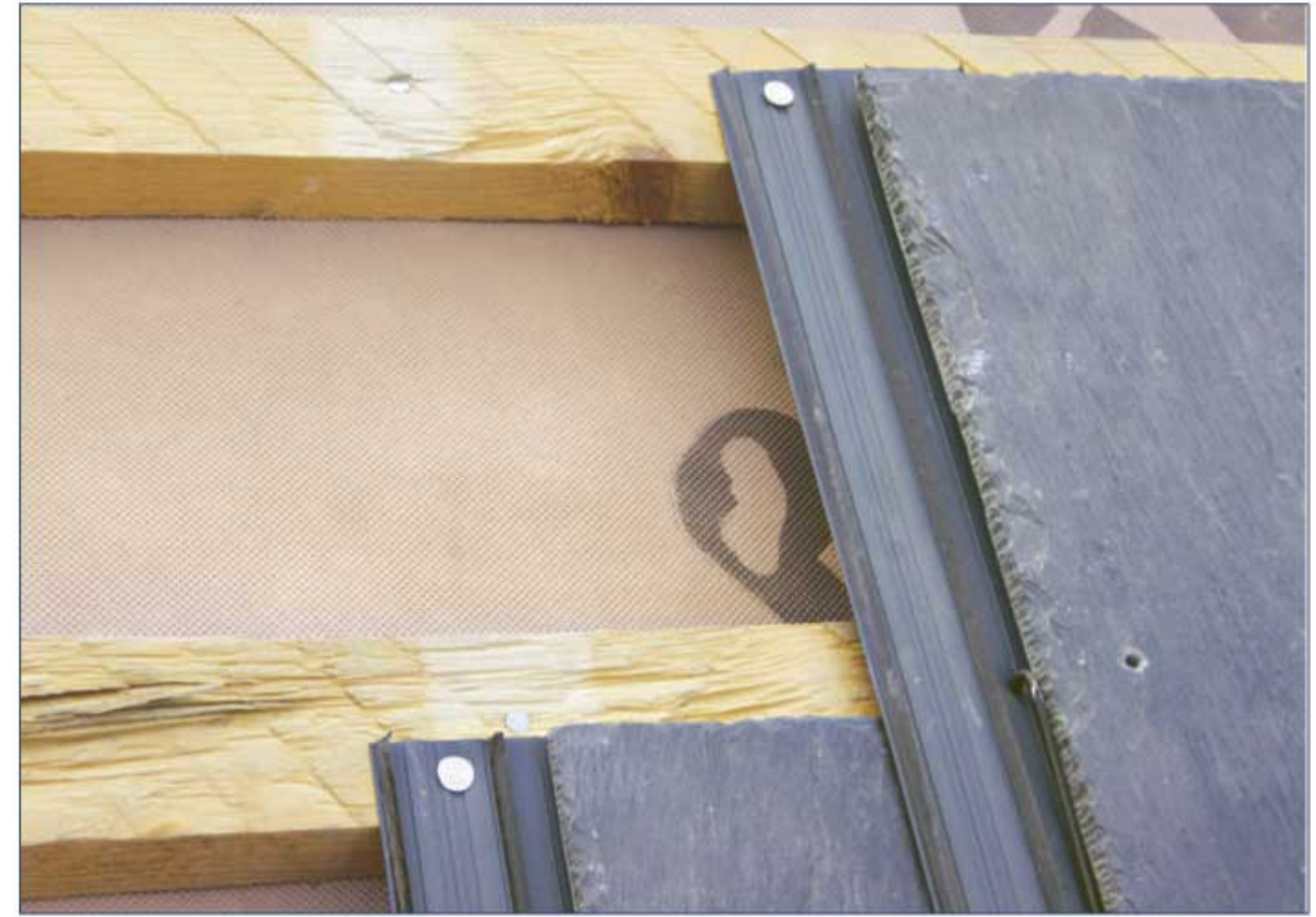
29. Ensure the centre channel is free from debris, locate the hooks at the top of the channel and press down until the top seals of the cap are neatly located on top of the slates. Screw the top screw fully down and this will lock the cap into position.

30. The valley cap has a rebate at the lower end and this should overlap the previously installed cap and cover the screw head. Ensure that there is a gap between each length of the cap. The rebate will allow for the expansion of the cap and should never be pushed fully down (especially in cold weather).





31. Easy Slate can be used with nailed slates or spiked slate hooks. When using Easy Slate with spiked slate hooks the top of Easy Slate should be fixed to the batten using a clout nail and this will prevent Easy Slate from spinning out of the central alignment.



32. Continue to slate in the usual way using one Easy Slate for each slate used. Easy Slate 600 can be used on slates shorter than 600mm, it can either be cut or just left long.

33. Dry ridge and hip systems must be used at lower pitches. The ridge roll should be fully stuck to the hip/ridge slate using the tape that is applied to underside of the ridge roll. Cover flashings at wall and abutments should be fixed in place using our double sided butyl tape. Top flashing should extend at least 200mm down the top slate on low pitches. The side lap of the top flashing should also be sealed on a low pitch.



### Coverage slates per m<sup>2</sup>

Lap, mm	Size (nominal)								
	600x300	500x300	500x250	460x225	400x250	400x200	350x250	350x200	300x200
50	11.6	14.6	17.4	16.4	22.4	27.9	26.1	32.5	39.0
65	12.3	15.1	18.0	17.0	23.4	29.1	27.5	34.2	41.5
75	12.5	15.4	18.5	17.5	24.1	30.0	28.5	35.5	43.4
80	12.6	15.6	18.7	17.7	24.5	30.5	29.0	36.1	44.3
85	12.7	15.8	18.9	18.0	24.9	31.0	29.6	36.8	45.4
90	12.9	16.0	19.1	18.2	25.3	31.5	30.2	37.5	46.5
95	13.0	16.2	19.4	18.5	25.7	32.0	30.8	38.0	47.6
100	13.1	16.4	19.6	18.7	26.1	32.5	31.4	39.0	48.8
105	13.2	16.6	19.9	19.0	26.6	33.1	32.0	39.8	-
110	13.4	16.8	20.1	19.3	27.0	33.6	32.7	40.7	-
115	13.5	17.0	20.4	19.6	27.5	34.2	33.4	41.5	-
120	13.7	17.3	20.6	19.9	28.0	34.8	35.5	36.1	-
125	13.8	17.5	20.9	20.2	28.5	29.0	-	-	-
130	14.0	17.7	21.2	20.5	29.0	36.1	-	-	-
135	14.1	18.0	21.5	20.8	-	-	-	-	-
140	14.3	18.2	21.8	21.2	-	-	-	-	-
145	14.4	18.5	21.5	21.5	-	-	-	-	-
150	14.6	18.7	22.4	21.9	-	-	-	-	-
155	14.7	19.0	22.7	-	-	-	-	-	-



## Normal slating without Easy Slate

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wind driven rain test

Test report number 273-259

### UK annual driving rain index, exposure grading



The charts show the minimum pitch and head lap for slates that can currently be installed in the UK (Bs5534). Easy Slate will improve the overall performance of roofing slates by over 200%. By using the Easy Roof system it is now possible to install natural and Fibre cement slates on any of the roofs shown blank where it was not previously possible. Easy Slate will also improve the breathability of the roofspace when used with a breather membrane as well as eliminating wind slate rattle.

- MODERATE EXPOSURE** less than 56.5 l/m<sup>2</sup> per spell
- SEVERE EXPOSURE** 56.5 l/m<sup>2</sup> or greater per spell

### Minimum recommended head laps for slate

#### MODERATE EXPOSURE

Size (Nominal) mm	Minimum Rafter Pitch									
	12.5°	20°	22.5°	25°	27.5°	30°	35°	40°	45°	85°
600 x 300	-	-	-	95	85	80	70	60	55	-
500 x 300	-	115	105	95	85	80	70	60	55	-
500 x 250	-	-	-	95	85	80	70	60	55	50
460 x 225	-	-	-	-	-	80	70	60	55	50
400 x 250	-	-	-	-	-	80	70	60	55	50
400 x 200	-	-	-	-	-	80	70	60	55	50
350 x 250	-	-	-	-	-	80	70	60	55	50
350 x 200	-	-	-	-	-	80	70	60	55	50
300 x 200	-	-	-	-	-	80	70	60	55	50

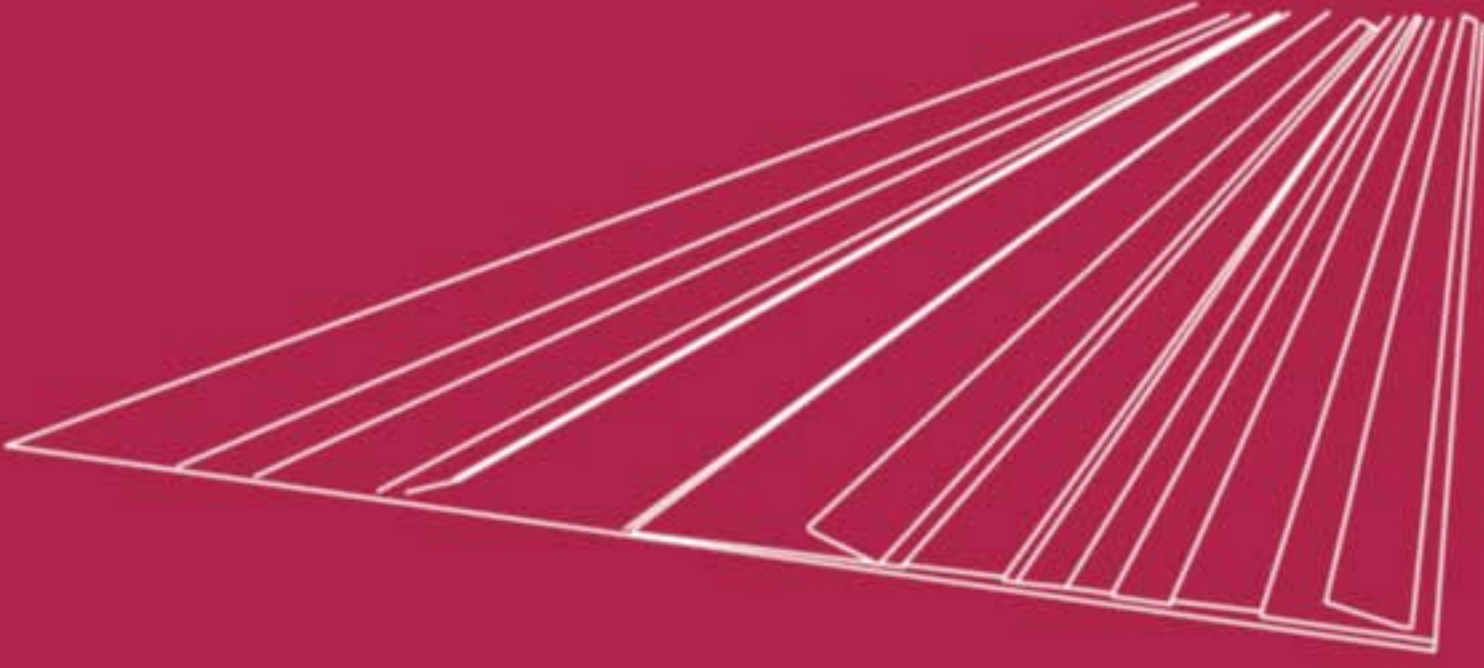
#### SEVERE EXPOSURE

Size (Nominal) mm	Minimum Rafter Pitch									
	12.5°	20°	22.5°	25°	27.5°	30°	35°	40°	45°	85°
600 x 300	-	-	-	-	-	100	90	80	70	-
500 x 300	-	-	130	120	110	100	90	80	70	-
500 x 250	-	-	-	-	110	100	90	80	70	65
460 x 225	-	-	-	-	-	100	90	80	70	65
400 x 250	-	-	-	-	-	100	90	80	70	65
400 x 200	-	-	-	-	-	100	90	80	70	65
350 x 250	-	-	-	-	-	100	90	80	70	65
350 x 200	-	-	-	-	-	100	90	80	70	65
300 x 200	-	-	-	-	-	100	90	80	70	65

(Based on BS5534: 2003 - All headlaps have been rounded up to the nearest 5mm)



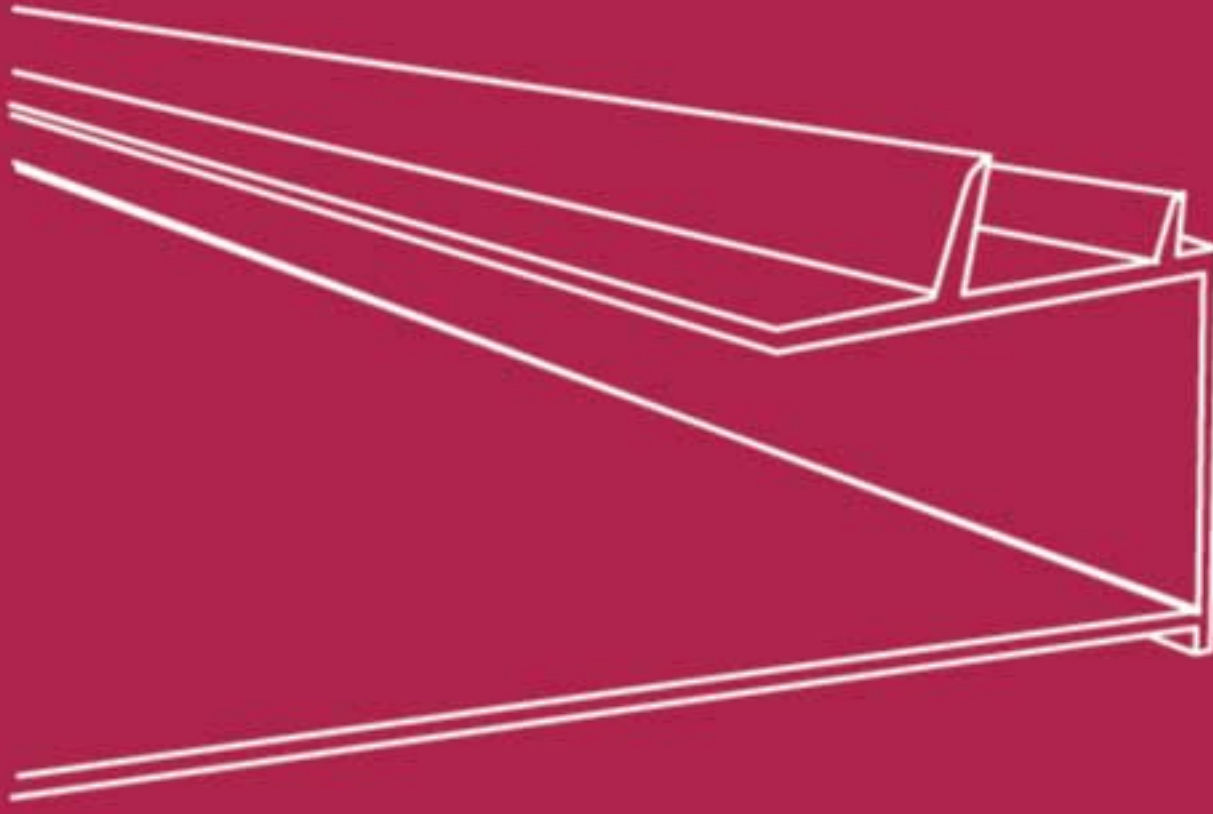
Suitable for all type of roof, not only low pitch



### Easy Slate

Eliminates the angle of creep and allows slates to be laid on a pitch as low as 12 degrees. Improves the ventilation of the roof though the slates when used with breather membrane. Cushions the slates and reduces breakage. Improves wind up lift and eliminates slate wind rattle.

600mm long & 100 per box.



### Easy Verge

Will remain permanently watertight and eliminate the verge batten rot that causes the loss of slates, using our unique flexible super seals.

The best looking slate verge available that even allows for a cambered edge. No need for undercloak. Works at low pitch. Fast efficient & maintenance free.

3mtr long & 10 lengths per pack.



### Easy Soaker

Made from the highest grade high impact plastic and incorporating our unique super seals that completely weather proof the roof on a pitch as low as 12 degrees.

Installation over the battens is a fast and cost effective soaker system that will work on dormer cheeks without a saddle and will not stain the roof like lead.

3mtr long & 10 lengths per pack.



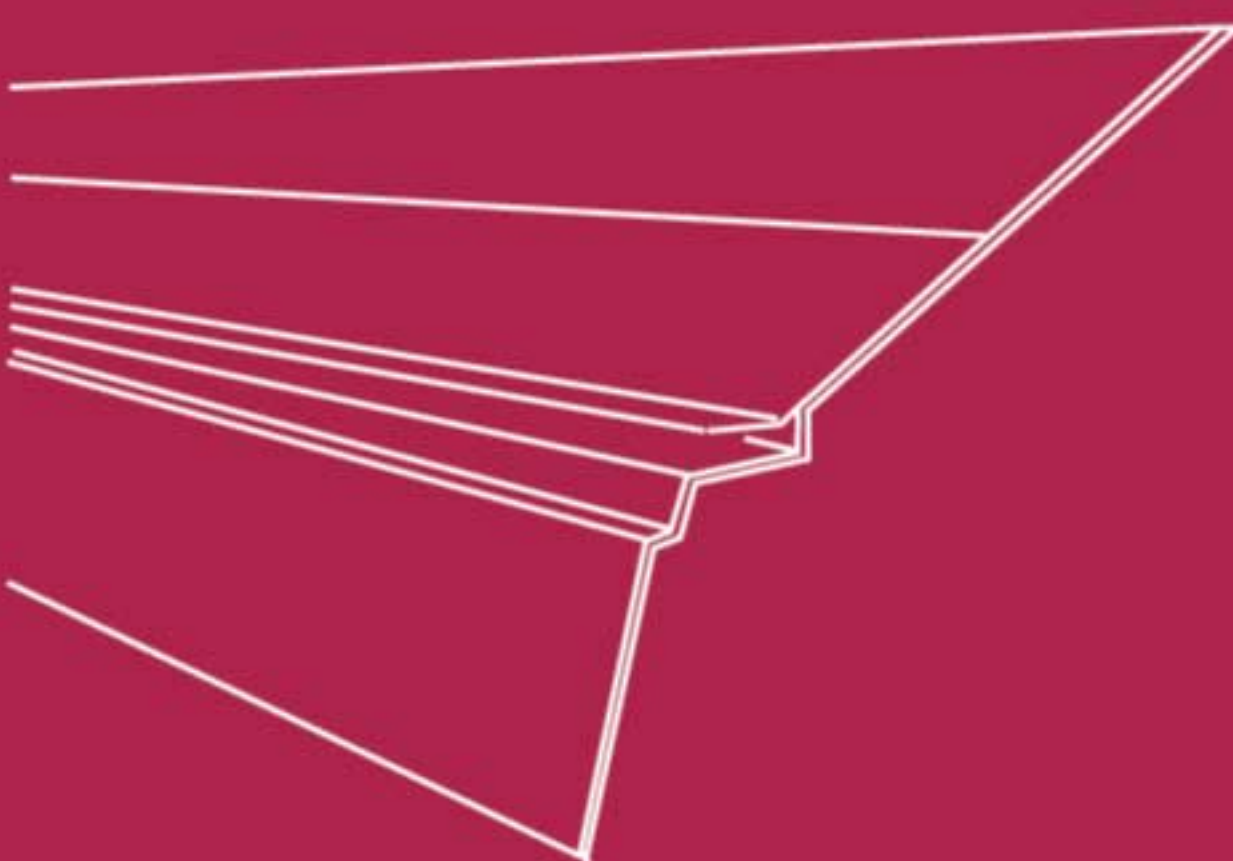
### Easy Valley

Made from the highest grade high impact plastic and incorporating our unique super seals that will perform at a low pitch. Easy valley is low maintenance as the slates cannot slip. Installation over the battens saves time and even allows for dormer valleys.

3mtr long & 10 lengths per pack.

**Easy Valley cap.** Every valley looks perfect with the easy valley cap. The unique cover system will improve the performance of the valley by increasing the flow of water, eliminating slate slippage as well as ensuring that even badly cut valleys always look perfect.

1mtr long & 10 lengths per pack.



### Easy Tray

Suitable for all types of slate, all profiled tiles and metal & corrugated sheeting.

1.2mtr long & 10 lengths per pack. 600 per pallet.

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