GENERAL VALLEY INSTALLATION
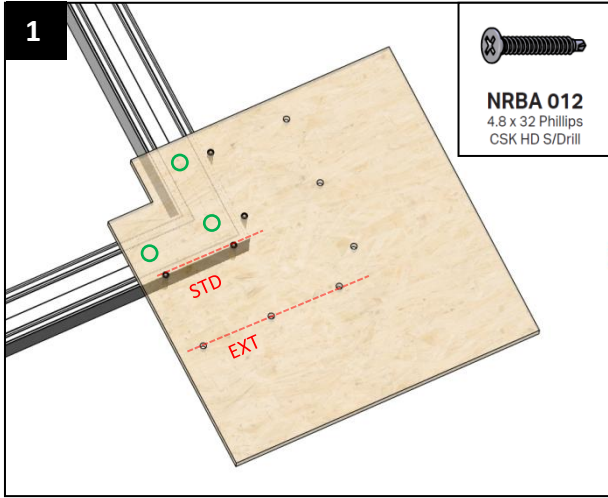## To be used in conjunction with the standard U380 installation guide

1

NRBA 012
4.8 x 32 Phillips
CSK HD S/Drill

STD

EXT

Apply low modulus neutral clear silicone to head of frames as per main guide. Position valley beam support shelf in desired soffit position and secure through frames using NRBA012 counter sunk self drill screws.

2

5

4

2

1

3

(IF GEO OR VIC)
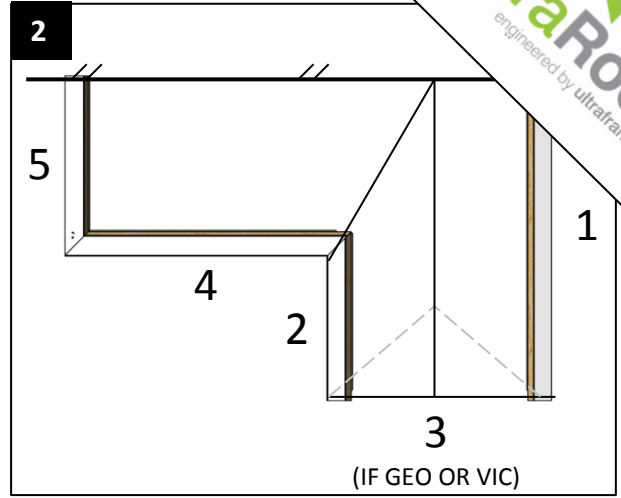
Assemble beams in sequence shown. Note: Example shows gable front; if Georgian or Victorian fronted, assemble front facet beams at stage 3.

3

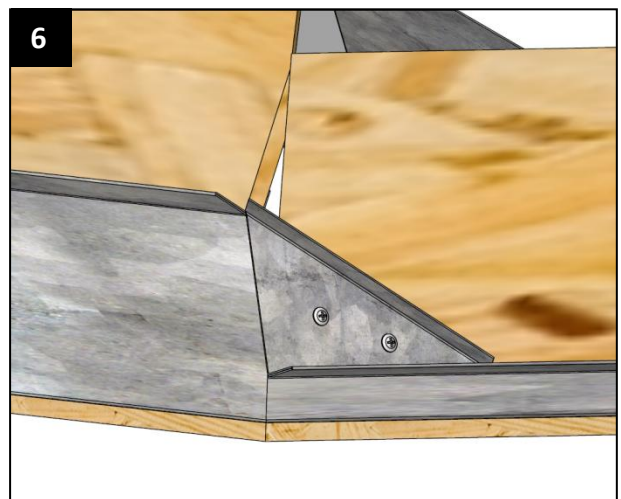
NRTS 100
4.2 x 25 wafer head
self drilling screws
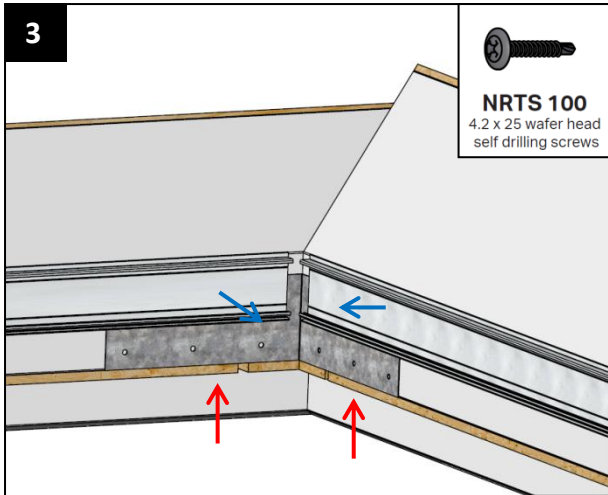
Fit corner cleat external to beam at valley eaves – ease out gutter support channel, removing any screws if necessary, and slide cleat behind. Line up lower edge of cleat with lower edge of steel and fix using NRTS100, 12 per cleat.

4
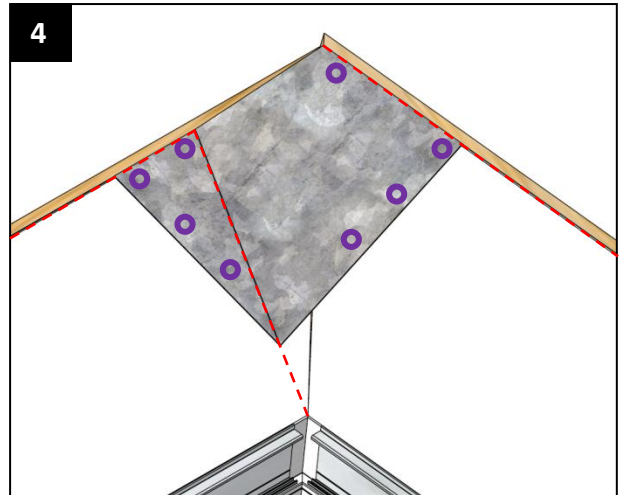
Position box beam valley cleat across the beams and secure using NRTS100 screws in positions shown. This should align with the OSB and the fold should point towards the outside corner of the beams as shown.

5
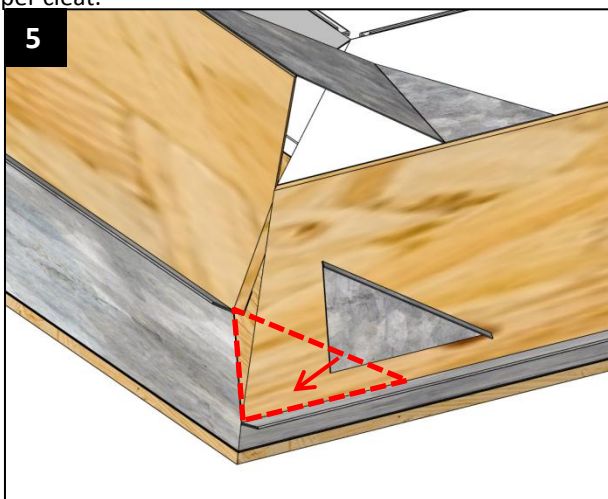
Position valley support bracket on beam. Line the bracket up with top of the panel shelf and end of the opposing beam as shown.

6

Fix valley support bracket to beam using NRTS100 screws.

1

7
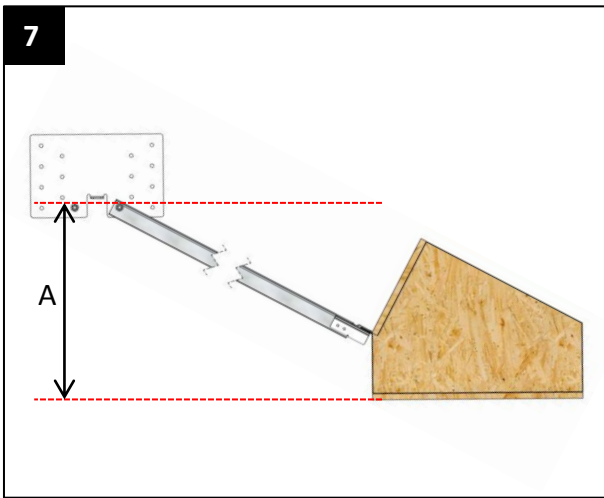
Assemble ridge hanger as per main guide. Note: This assembly in the case of a valley will only include 1 x "L" profile extrusion. Use the Critical Dimensions sheet to check the ridge height.

8

50mm
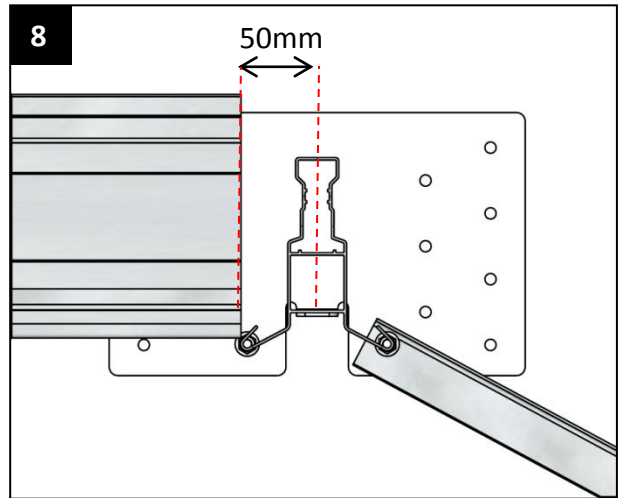
Next, install the half ridge body – this will overlap the ridge hanger plate as shown. Check the Critical Dimensions sheet for the correct height.

9

A
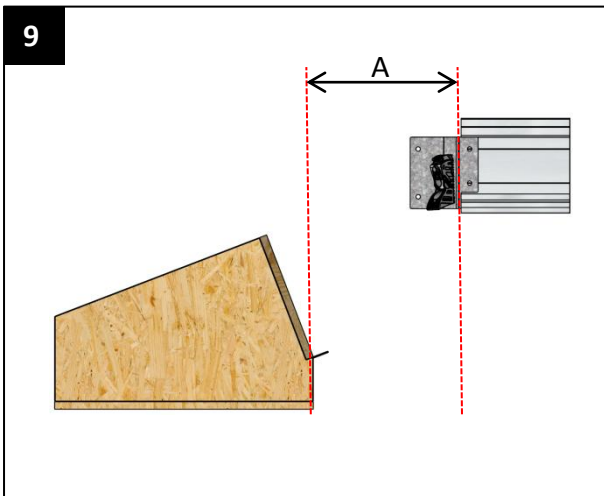
An additional dimension "A" will be supplied if the return features a hip (Shown above) in the case of a gable the half ridge should be aligned with the internal frame line, or 10mm offset if terminating at a host wall.

10
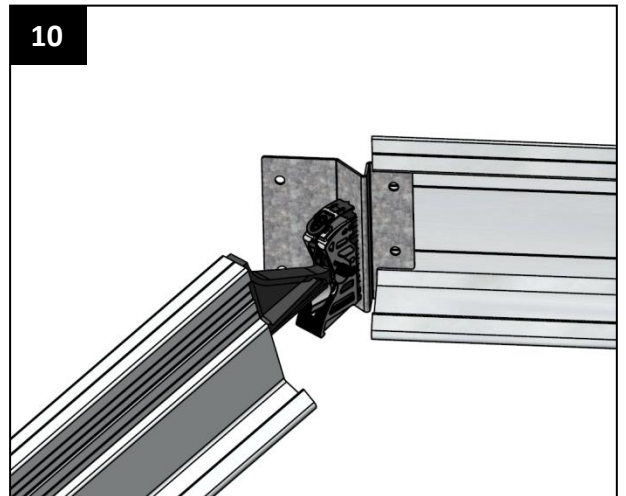
If the design features a hip on the half ridge then this should be fitted now. The hip bracket is pre-fitted to the half ridge but also requires fastening back to the wall using fixings suitable for the substrate.
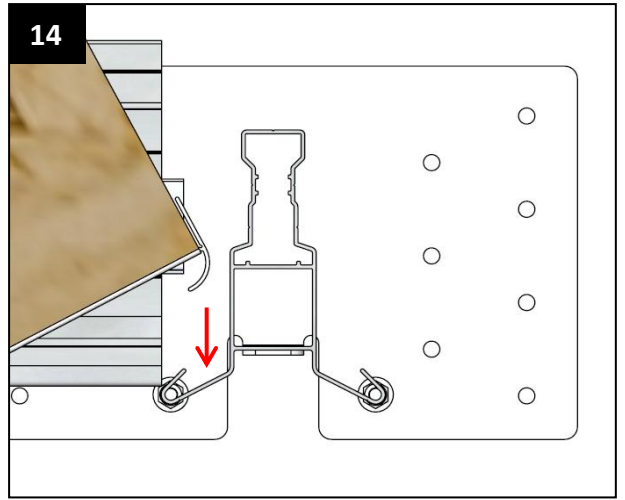
11
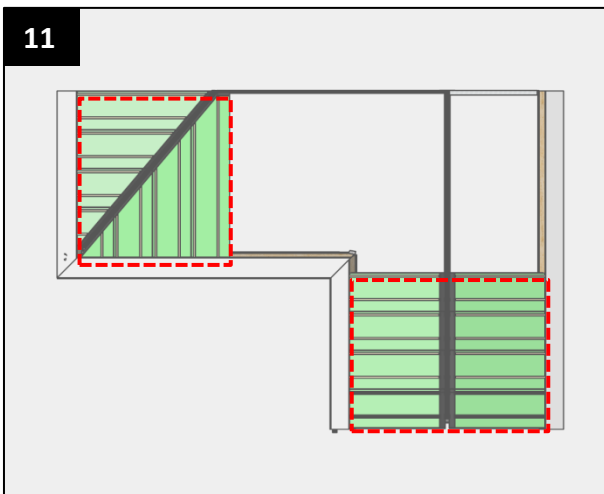
First, nsert panels in positions shown to support and align the duo pitch and any hips.
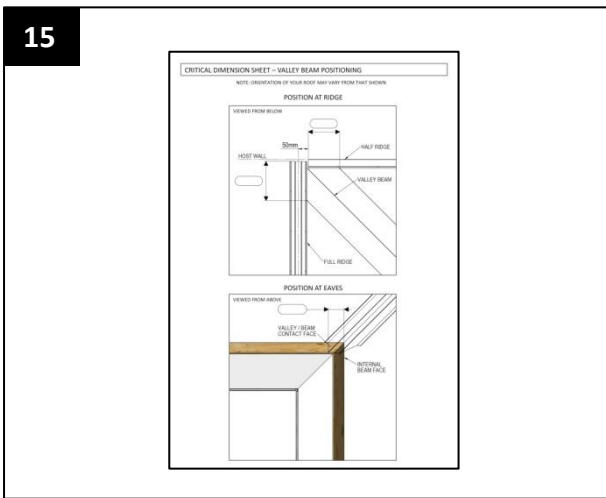
12
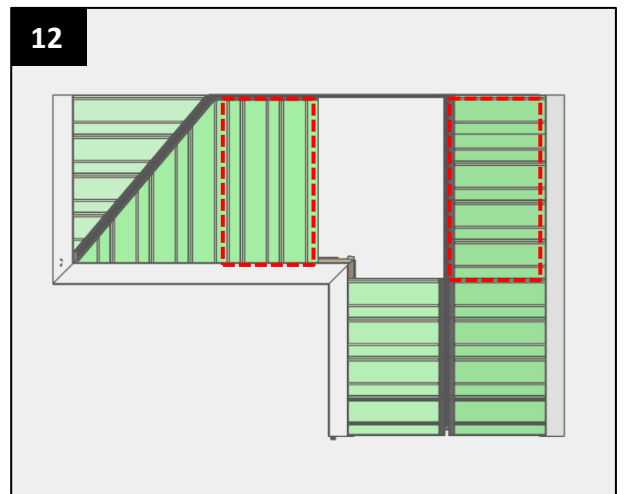
Now insert all other panels except for those that will interact with the valley.

13
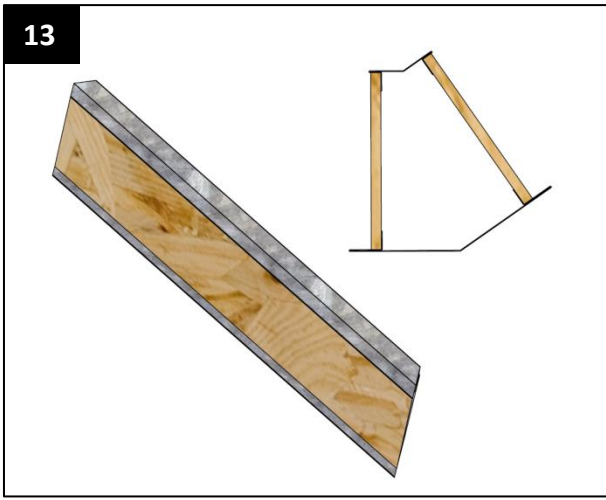
The valley beam is pre-cut to fit into its position between the eaves and the converging ridges.

14

The valley beam features hooks at the top which interact with the ridges in the same way as those on the panels.

15

The documents supplied with the roof include a Setout Report . This should be used to mark out the ridges and eaves to aid in correct positioning of the valley beam.

16
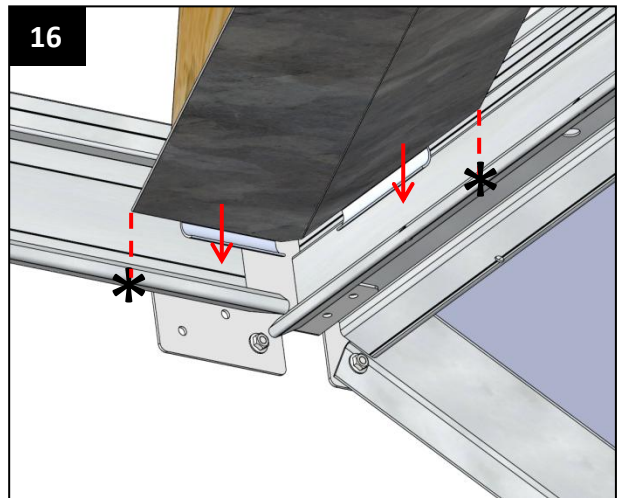
Hook the top end of the valley beam over the corresponding hooks on the converging ridges to ensure a correct and secure fit. Align edges with setout dimensions as shown in Setout Report.

17
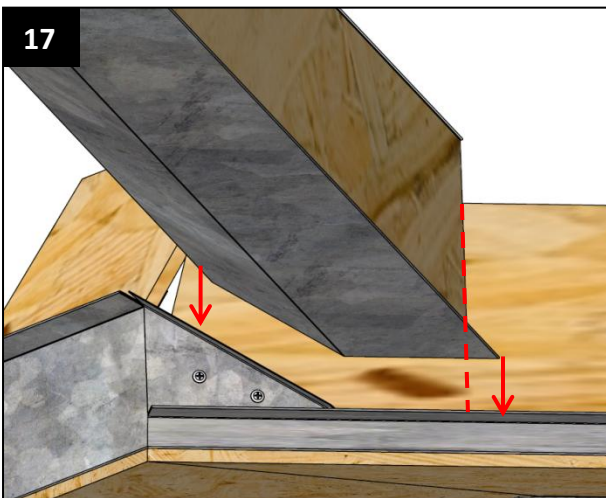
Lower the bottom end of the valley beam into position; resting on the panel shelf and valley support bracket as shown. Again, use Setout Report to check setout dimensions and secure using RRR025 hex head screws.

18
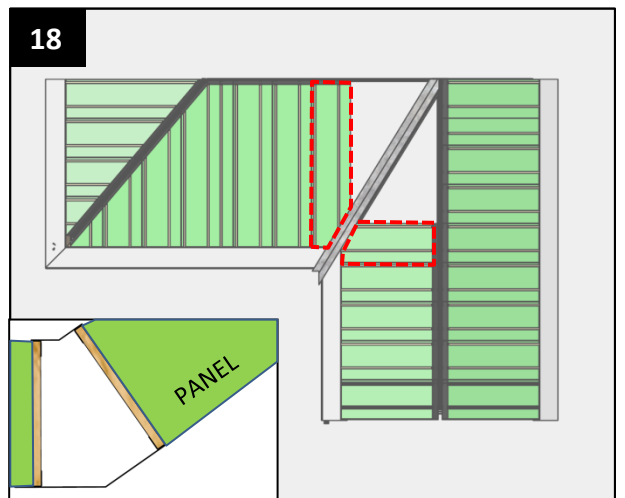
Insert panels in positions shown first. Panels on the valley rest on the lower steel shelf on the valley beam as shown.

3

19
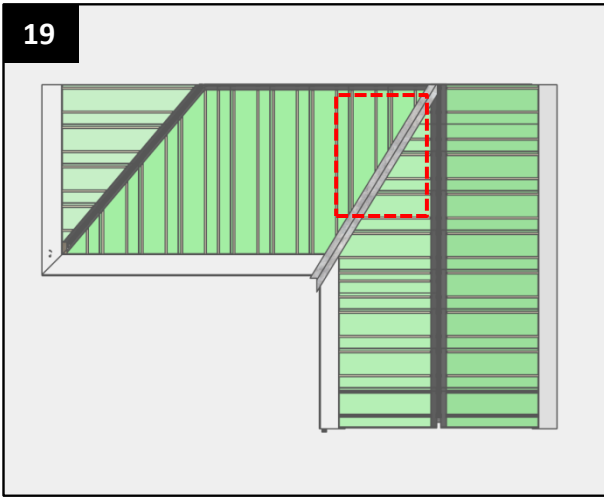
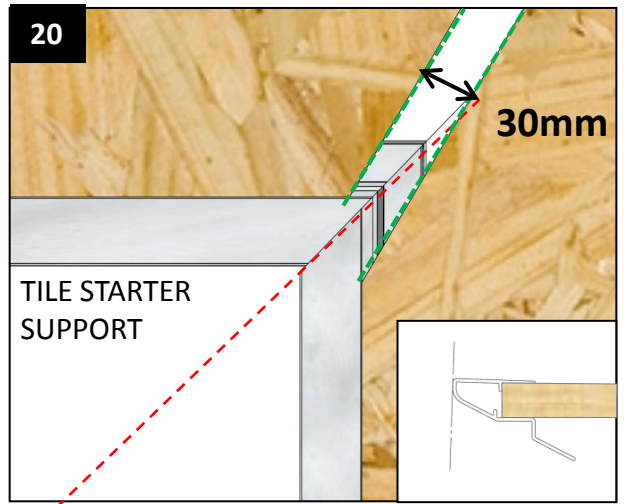Insert the remainder of the roof panels and install ridge couplers. The panels can be then secured to the ridge, hips and eaves (see main guide). Next, fit OSB panels as per standard installation guide.

20

TILE STARTER SUPPORT

30mm

Tile starter supports are mitred, and care must be taken to ensure that they contact at the centreline as shown. (This is important for the next step)

21

A

B
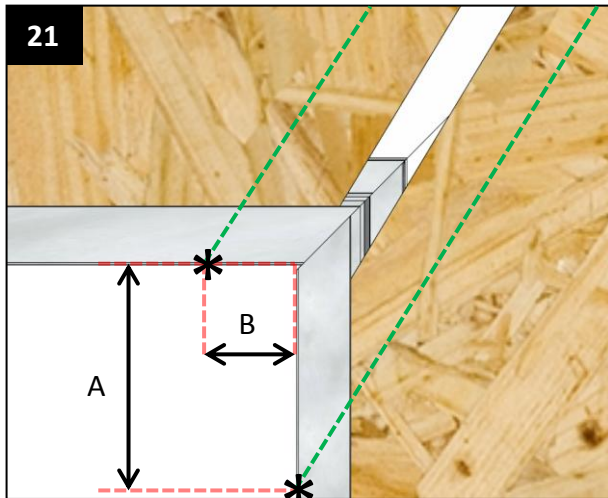
To ensure the steel valley plate is correctly positioned, dimensions "A" and "B" (plus similar at the ridge) are provided on the Critical Dimensions Sheet. These indicate where the edges of the plate should intersect the tile starter support.

22

Position steel valley plate, with birds-mouth prep at eaves, and check position in relation to dimensions marked out in previous step. Accuracy at this stage is vital to aid with tile installation later on.

23
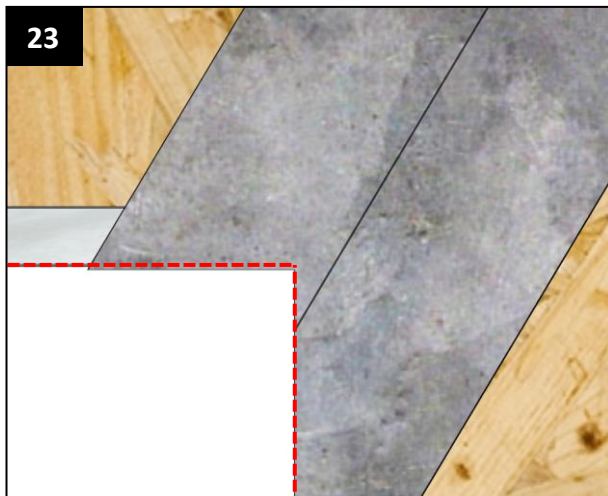
Birds-mouth prep at the eaves should align with outer edge of tile starter supports as shown.

24
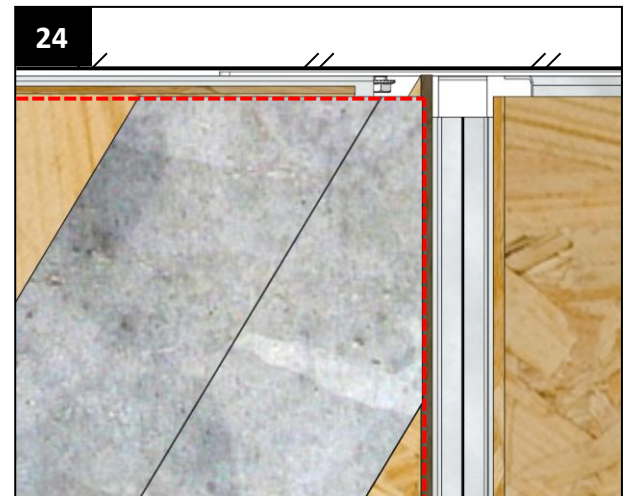
The upper (ridge end) prep should align with the OSB as shown. Dimensions are also provided in the Critical Dimensions Sheet to check proper alignment. Secure valley plate using NRTS100 screws at 300mm centres through predrilled holes.

WEATHERING MEMBRANE

In addition to the standard installation of the breathable membrane (see standard guide); the valley should be lined with a full width strip of membrane as shown before continuing with the installation.

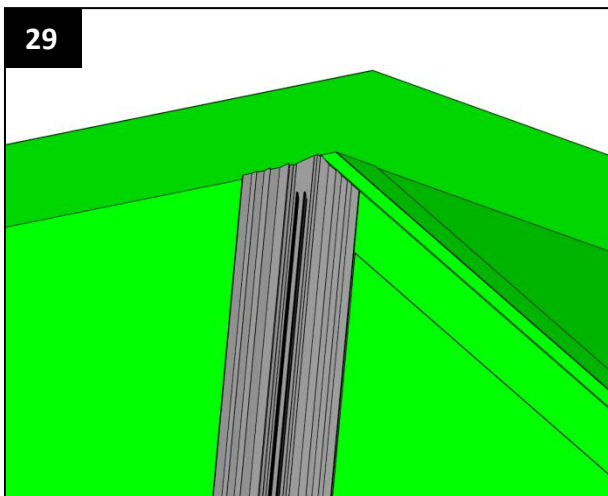Trim the membrane in line with the outer edge of the tile starter support.

Continue applying membrane, lapping across the valley to ensure an effective installation.
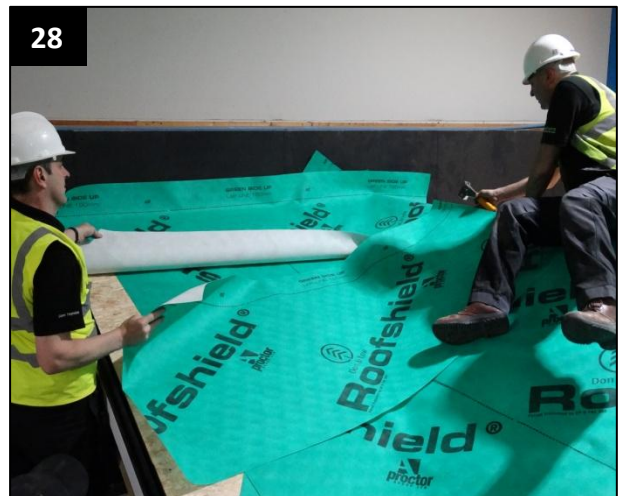
In practice, we have found it easiest and safest to install the membrane from top to bottom, under-lapping subsequent layers as you move down the roof.
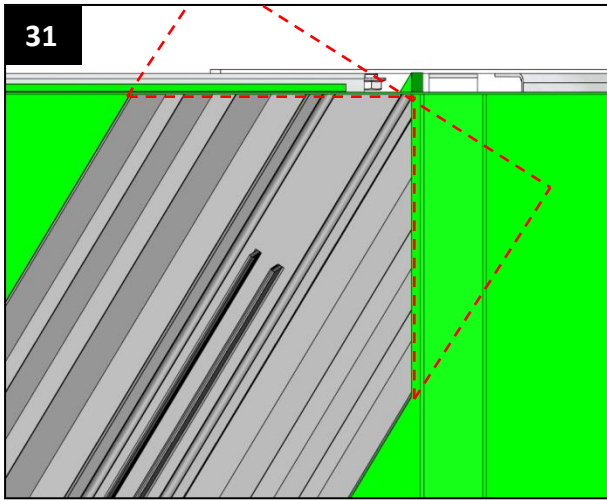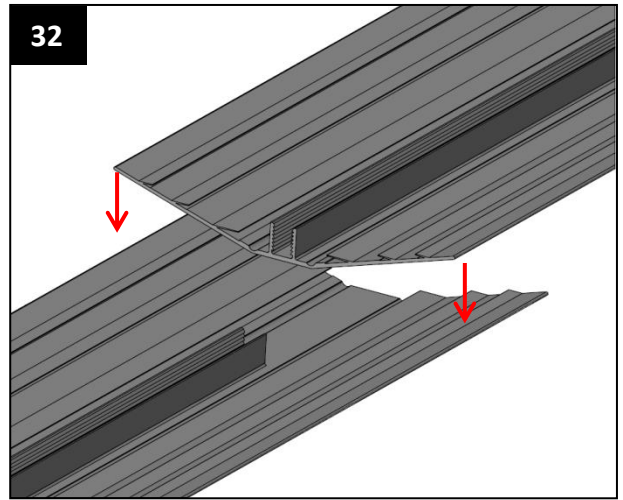
VALLEY TROUGH

The Valley trough is supplied in 3 metre lengths. This should be installed over the breather membrane in the position shown before tiling .
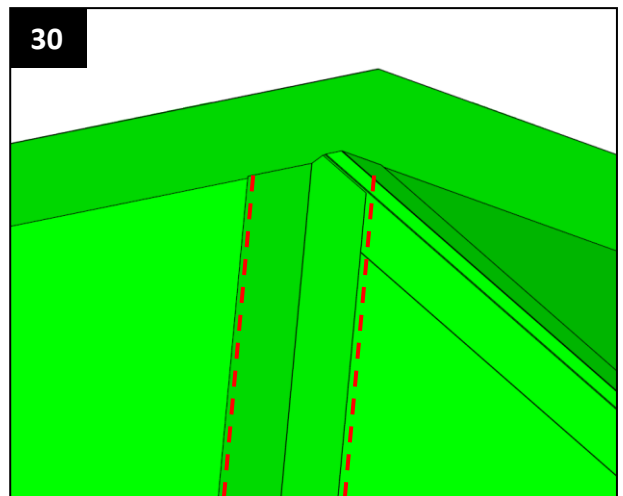

The Valley trough is the same width as the steel valley plate, this can be used as a setout aid. Feel for the edge of this plate through the membrane and mark a line to ensure correct positioning.

One end of the valley trough is pre-notched for overlapping/extending – start at the top of the valley with the notch towards the wall as shown and trim as indicated. The notch will help when fitting ridge components later on.


If the valley is longer than 3 metres, underlap subsequent sections as shown to allow any water to flow freely from top to bottom.
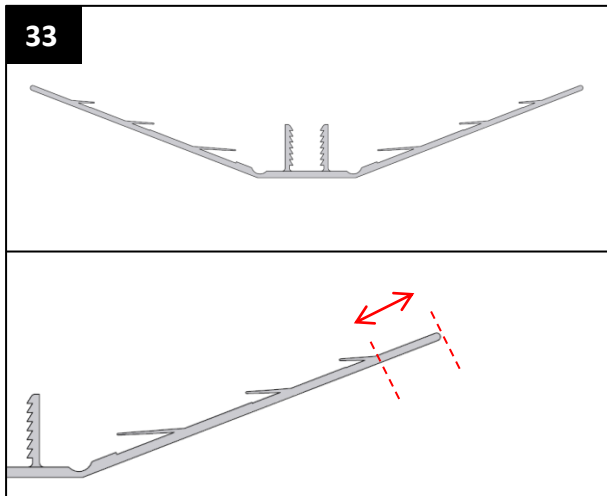

The valley trough should be secured using NRTS100 screws at 500mm centres along each side. It is important that any screws used only go through the valley trough in the region shown (outside of the smallest rubber seal)
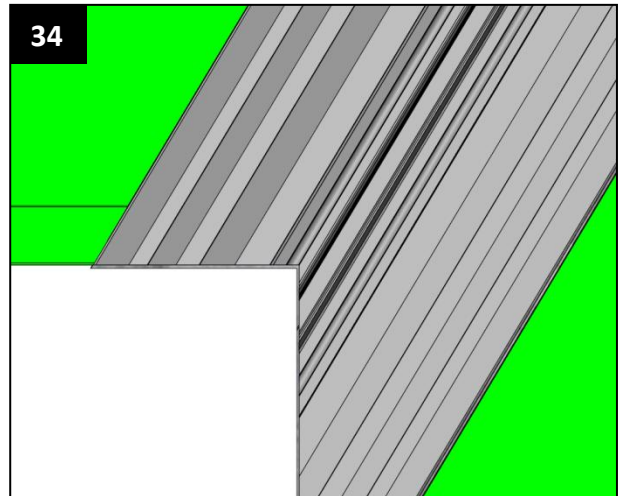
Trim valley trough at the eaves in line with the outer edge of the tile starter support.
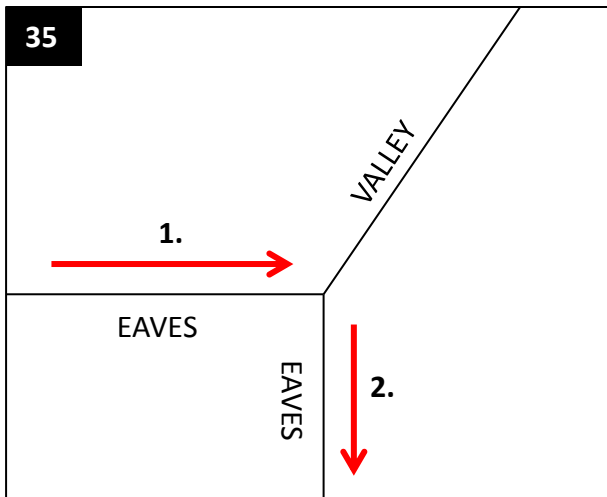
Tile roof as per main installation guide. Work anti-clockwise towards the valley from left to right (1.) then away from the valley from left to right (2.)
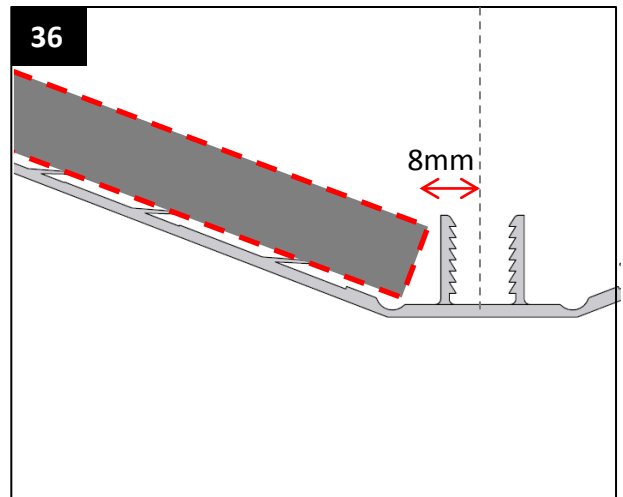

If cut and installed correctly, the tiles should finish at approximately 8mm from the centreline of the valley trough as shown.

37

Once tiling on both sides of the valley is complete, install the valley caps to finish. These clip into the central slot of the valley trough.

38
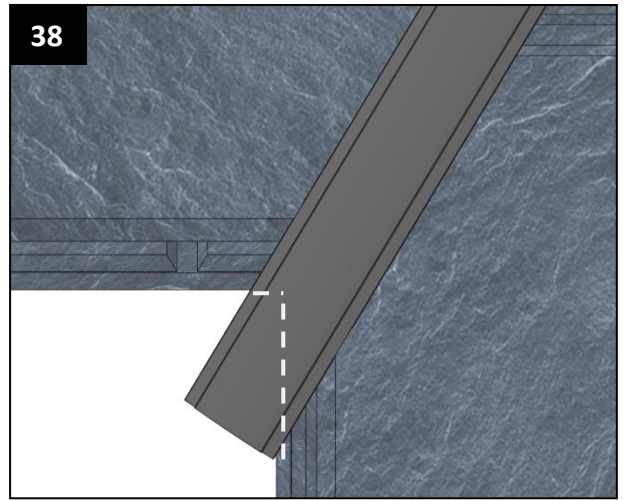
Position the first cap at the eaves and extend beyond the tiles to allow for trimming as shown.

39
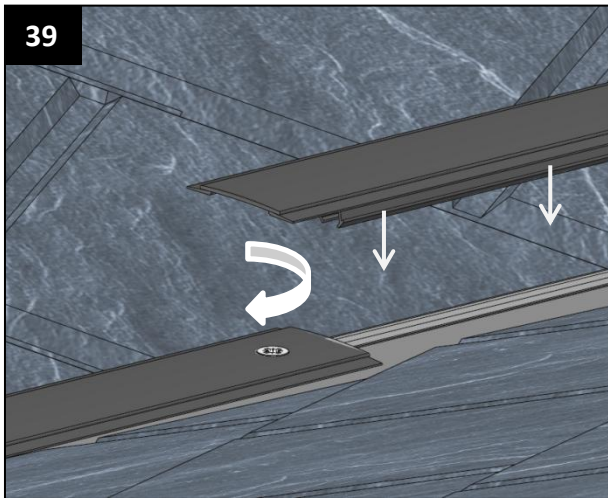
The supplied valley caps feature an integral screw at one end and a notch at the other. Work up the valley from eaves to ridge positioning the integral fixing screw towards the top. Tighten the screw to secure and cover the screw heads with each subsequent cap.

40

NRRS 005BL
5.5 x 90 Hex washer head tek screw
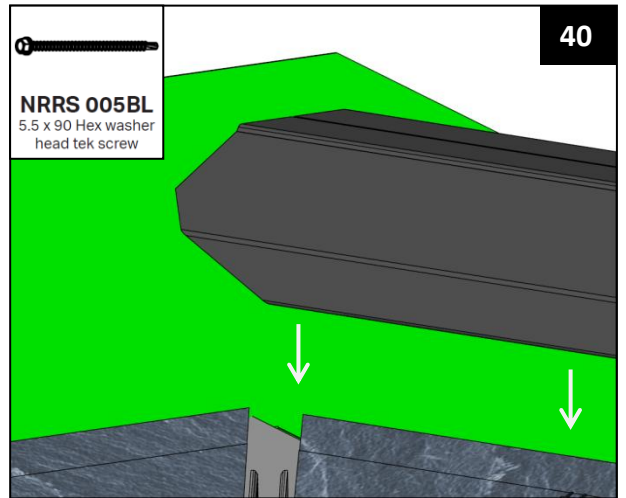
Fit ridge cap before fitting the last valley trough top cap. Centralise ridge cap over apex and position 10mm away from the host wall. Fix using 5.5mm x 90mm screws (NRRS005) at max. 750mm centres. NOTE: It may be necessary to trim back the valley trough clip legs to allow the ridge cap to sit properly.

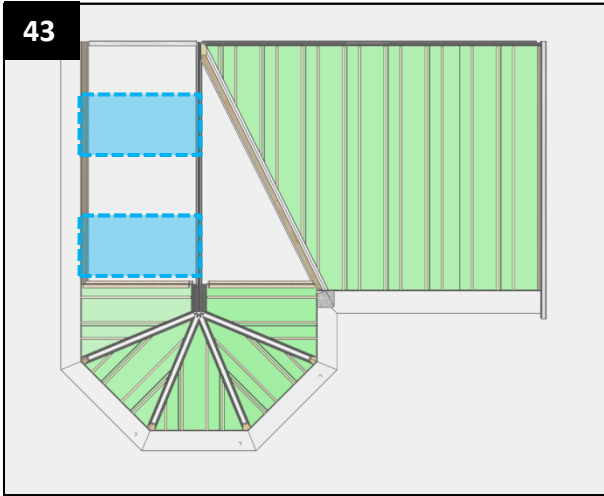**41**
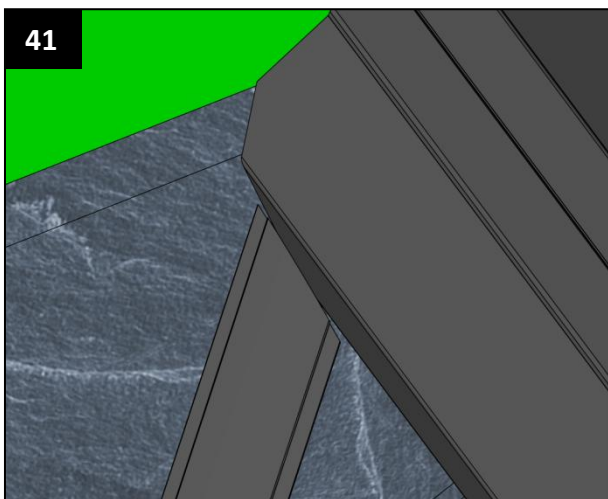
Install the last valley cap and scribe in line with the side of the ridge cap as illustrated.
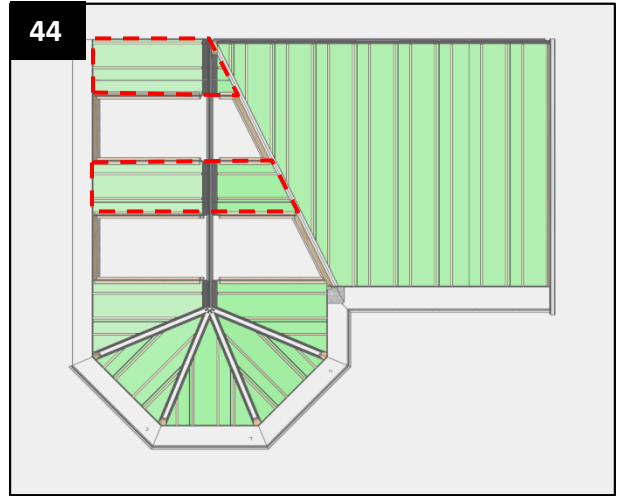
42
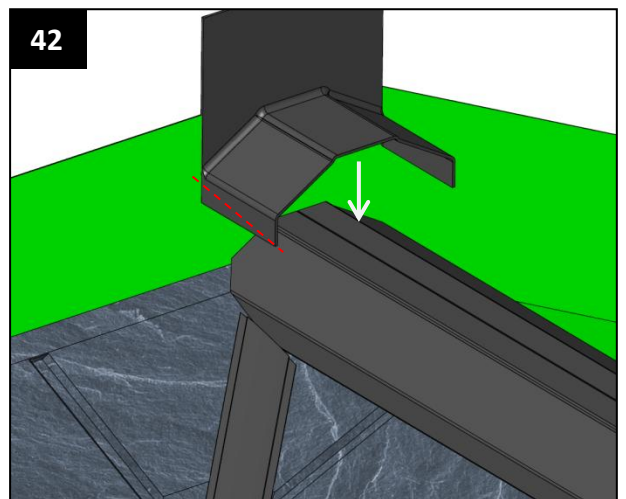
Fit and seal external ridge flashing cap using a low modulus silicone. Trim where necessary to sit properly on tiles.
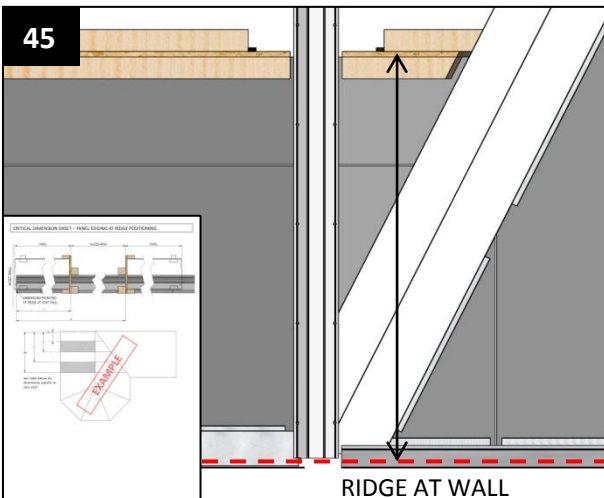
GLAZING OPPOSITE VALLEY

The example roof shown features glazing in the regions indicated in blue – directly across the ridge from the valley.


Position panels with glazing bar supporting panel edging attached first, on both sides of the ridge.

RIDGE AT WALL

The supplied Setout Report details the dimensions from the ridge body at the wall to each individual panel edging OSB face. Mark these on the ridge to help with correct positioning of the panels.

90 °
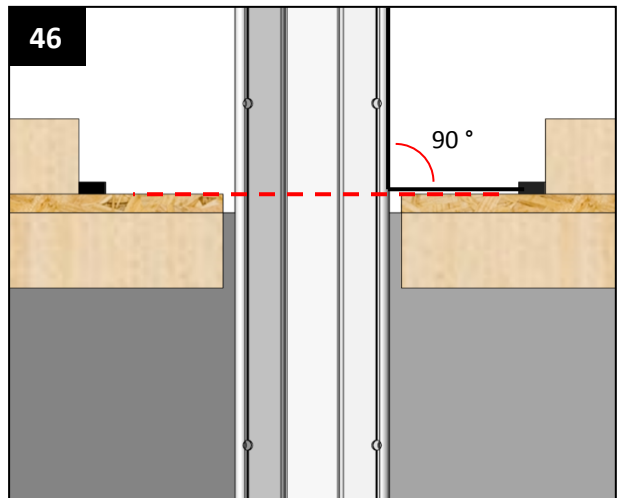
Align the panel edging OSB faces according to the dimensions shown in the previous step. Square the panels off the ridge and check panels each side of glazing are parallel. Once positioned, secure these panels at eaves and ridge using RRR025 screws.
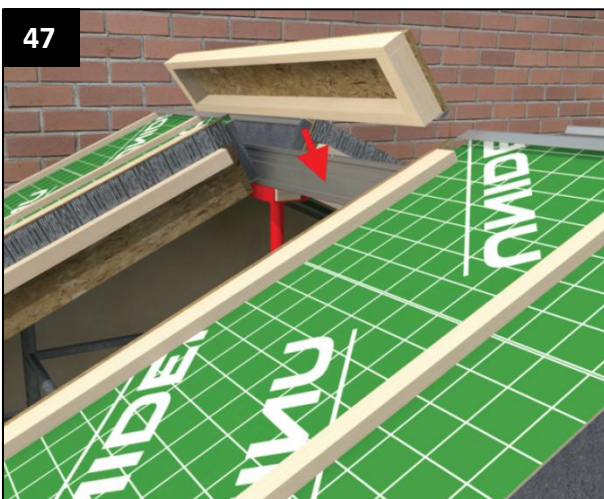
Lower into position the pre-manufactured purlin cassette and hook into the ridge in the same way as a panel.
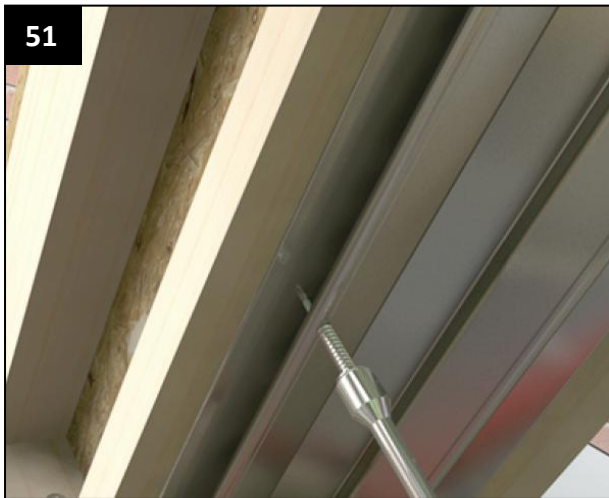

Fix the adjustable glazing ridge bracket to the aluminium glazing bar side of the "A" frame on the ground using 4 x NRTS100 screws.

49

Lower the glazing bar into position along the top of the timber panel edging and locate in the eaves beam support shoe (see standard glazing guide)

50

The glazing bar should rest on top of the purlin as shown. Pull the purlin towards you to fully engage with ridge hook feature. Screw sideways into the panel edging as shown (BPS025 screw) …

51

…and up through the ridge at 300mm centres (RRR025 screw) from below to secure.

52
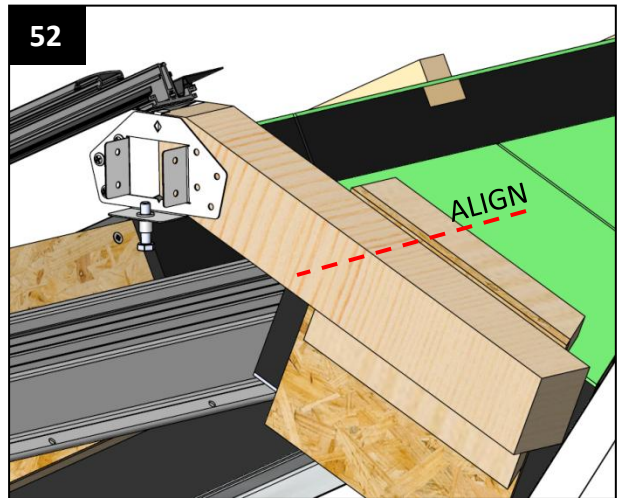
ALIGN

Offer up the corresponding timber half of the glazing bar "A" frame and attach to the adjustable bracket using 4 x NRTS100 screws. The top of the timber should be aligned with the battens on top of the panels as shown.

53

PACK HERE

Pack if necessary between the timber "A" frame and the panel edging to ensure proper alignment with the exterior panel battens. And centre "A" frame to ridge. Screw up through timber edging as shown inset (see main guide)
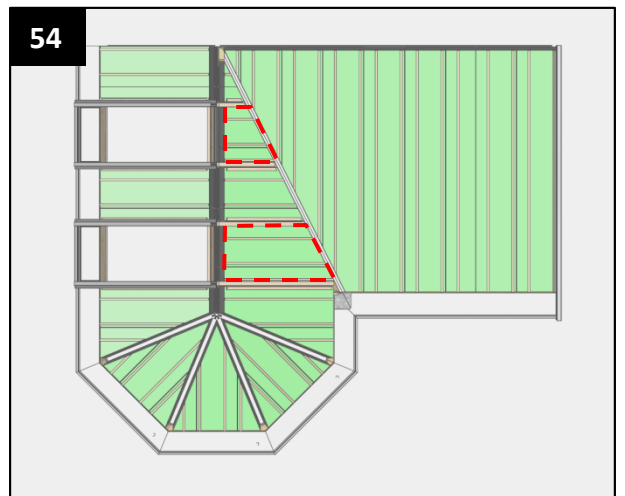
54

When all glazing bar "A" frames are secure, install remaining panels between panel edging adjacent to the valley. Install OSB and tiles as per main guide (see pages 6 & 7 this guide for tiling into valley)

GLAZING AT HOST WALL OPPOSITE VALLEY

55

LEVEL   MARK

56

10mm BELOW

57
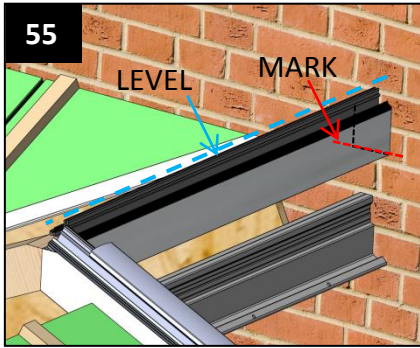
If your roof design features glass at the host wall opposite to a valley –

Fully install and fix first full "A" frame along the ridge. Insert glazing ridge into adjustable bracket and level gaskets (see main guide). Level glazing ridge and mark its position on the host wall.
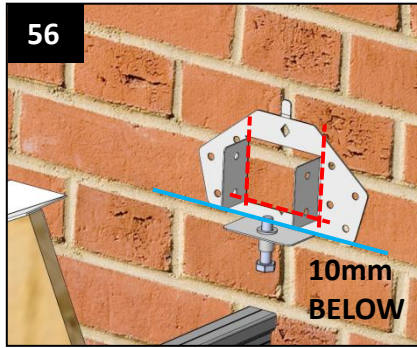
Align the adjustment screw shelf on the Adjustable bracket 10mm below the previously marked underside of the glazing ridge. Fix the bracket to the wall with fixings appropriate to the substrate and not exceeding 5mm in head depth. Install glazing ridge and level using the adjustment screw – fix using NRTS100 screws supplied.

Lower the starter glazing bar assembly into position, seat into box beam shoe and against glazing ridge as shown. Level intersecting gaskets before securing starter bar to wall with appropriate fixings.

TILE STOP CONDITIONS WHEN GLAZED

58

VAC FORMED FLASHING
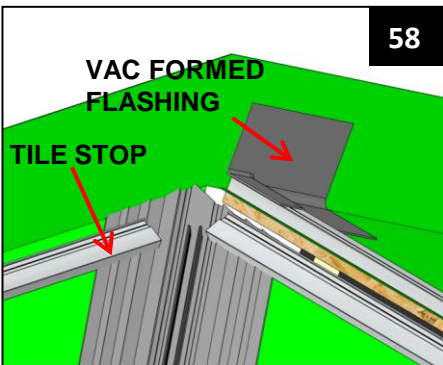
TILE STOP

GLAZING ON DUO-PITCH AND LEAN-TO

If glazing is present on both the lean-to and the duo-pitch portions of the roof - tile stops will overlap the valley trough on both sides as shown. Position the tile stops using the Critical Dimension Sheet, and offset by 10mm from the centreline of the neighbouring glazing bar.

A vacuum formed flashing cover will also be supplied (see standard guide)

59
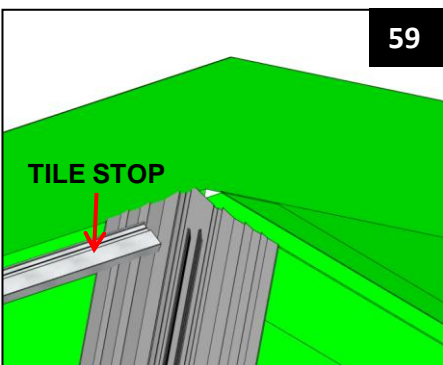
TILE STOP

GLAZING ON LEAN-TO ONLY

If glazing is present on the lean-to portions of the roof only - a tile stop will overlap the valley trough on the lean-to side as shown. Position the tile stops using the Critical Dimension Sheet, and offset by 10mm from the centreline of the neighbouring glazing bar.
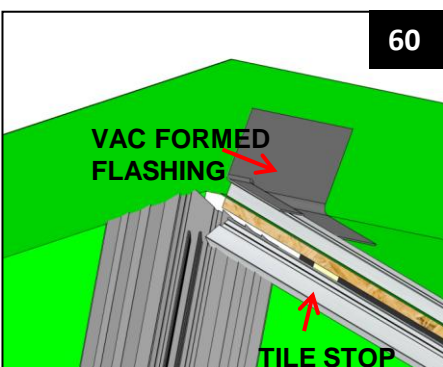
(No vacuum formed flashing cover is required.

60

VAC FORMED FLASHING

TILE STOP

GLAZING ON DUO-PITCH ONLY

If glazing is present on the duo-pitch portion of the roof only - a tile stop will overlap the valley trough on the duo-pitch side as shown. Position the tile stops using the Critical Dimension Sheet, and offset by 10mm from the centreline of the neighbouring glazing bar.

A vacuum formed flashing cover will also be supplied (see standard guide)

RIDGE TO HOST WALL FLASHING WHEN GLAZED
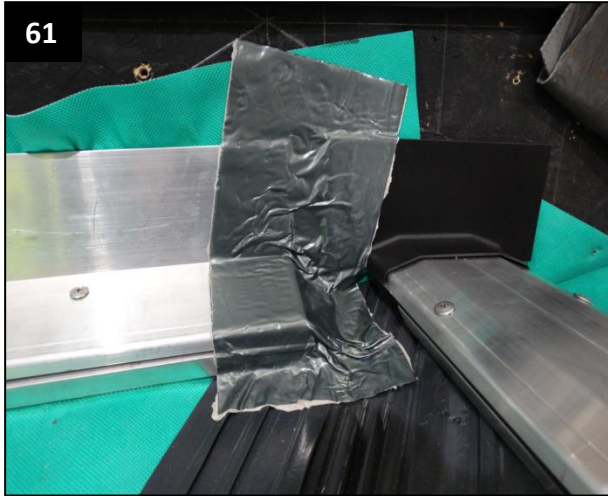
61

A 250mm square of Butyl tape is supplied to flash where glazed ridge caps (half ridge or duo pitch) finish at the top of the valley. Cut the square in half and install as shown, ensuring the adhesive side is firmly and consistently applied to all surfaces.
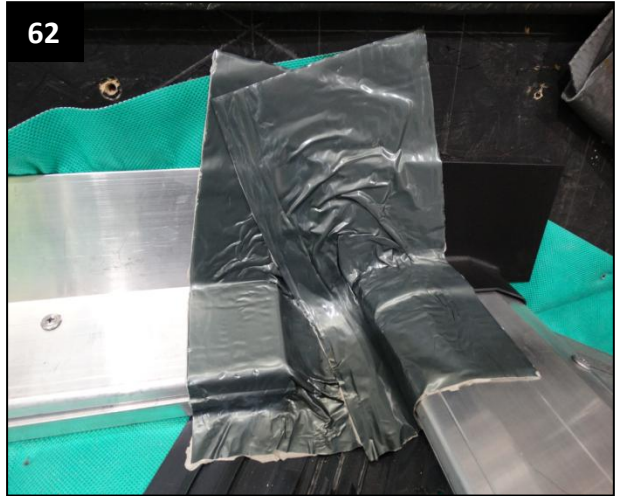
62

Image shows example where 2 butyl patches are applied where glazing is present on both lean-to and dup-pitch segments of the roof.
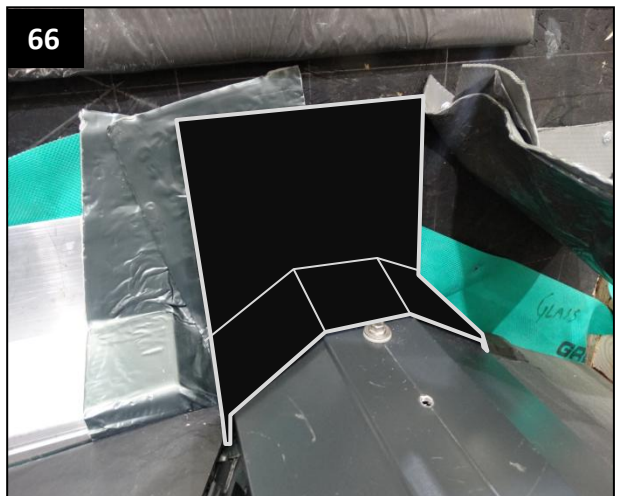
63

Image shows examples where 1 Butyl patch is applied – Glazing on duo-pitch segment (main image) and glazing on lean-to segment (inset image)
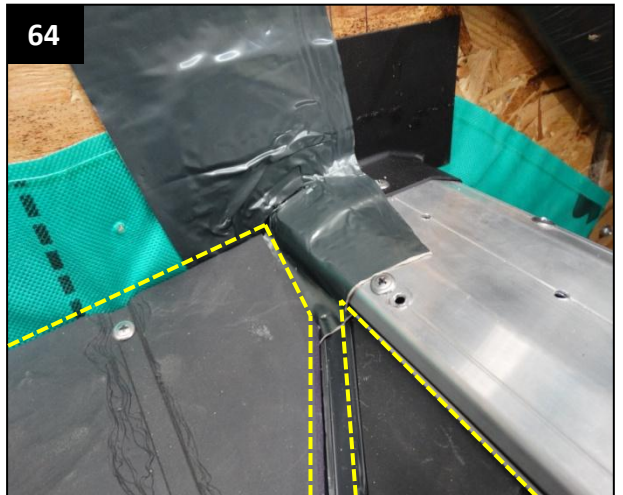
64

Tiles should butt up to side of valley trough as shown and may require trimming alongside ridge flashing cap.

65
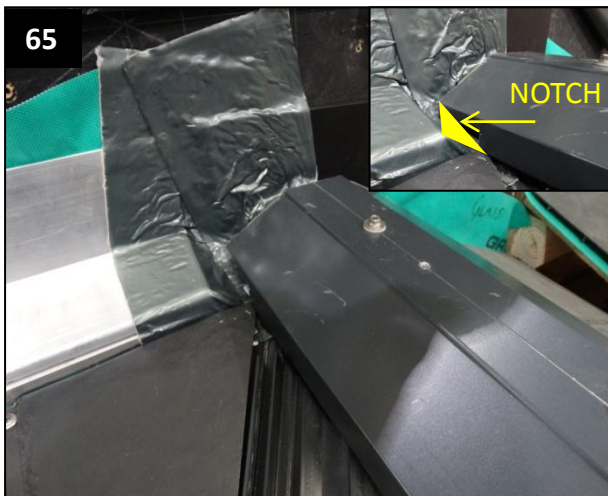
NOTCH

Fit aluminium ridge cap, which is pre-notched to avoid any interference approaching the valley.

66

Fit the supplied host wall flashing cap using a low modulus silicone.