

# METROTILE ON OSB INSTALLATION GUIDE

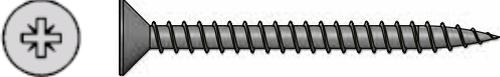
LEAN TO  
**GLAZED** ROOF | **METROTILE CAPS**

V7 | March 2026

# FIXING SUMMARY

**PLEASE USE THE SUPPLIED FIXINGS WHEN INSTALLING THE ULTRAROOF TO ENSURE A SECURE AND CORRECT INSTALLATION.**

**FIXINGS SUPPLIED** Below shows the various fixings supplied for an installation of an Ultrarroof.

|   |  |                                      |
|---|--|--------------------------------------|
| <b>NRPS050</b><br>4.0 x 25 Deck - tite pozi CSNK screw      |     | <b>POZI SCREWDRIVER BIT PZ-2</b>     |
| <b>NRTS050</b><br>4.2 x 25 wafer head Self drilling screws  |     | <b>PHILLIPS SCREWDRIVER BIT PH-2</b> |
| <b>RRX025</b><br>5.0 x 50 CSNK pozi heco fix wood screw     |     | <b>POZI SCREWDRIVER BIT PZ-2</b>     |
| <b>GPHS050</b><br>4.2 x 38 wafer head CSNK self drill       |     | <b>SQUARE SCREWDRIVER BIT R-2</b>    |
| <b>FSW-55-70</b><br>5.5 x 70 TX head winged CSNK self drill |    | <b>TORQUE WRENCH T-25</b>            |
| <b>MTSN010</b><br>25mm Shingle nails                        |   | <b>HAMMER</b>                        |
| <b>RRR025</b><br>5.5 x 32 hex head drill screw              |   | <b>M8 HEX SCREWDRIVER BIT H</b>      |
| <b>NRSF012</b><br>4.8 x 38 pan head self drill              |   | <b>PHILLIPS SCREWDRIVER BIT PH-2</b> |
| <b>MTWF001</b><br>5.5 x 109 TX head winged CSNK self drill  |  | <b>TORQUE WRENCH T-30</b>            |
| <b>NRES004</b><br>4.8 x 32 pan head self drill              |   | <b>PHILLIPS SCREWDRIVER BIT PH-2</b> |

# FIXING LOCATION SUMMARY



**Fixing gable frame stiffeners**

6 fixings per bracket



**Fixing through head of window frame into beam**  
200mm from corner, 450mm CTRS

**FIXINGS NOT SUPPLIED**

# FIXING LOCATION SUMMARY



### Fixing through head of window frame into beam

200mm from corner, 450mm CTRS

**FIXINGS NOT SUPPLIED**



### Fixing beam to corner

6 fixings per corner

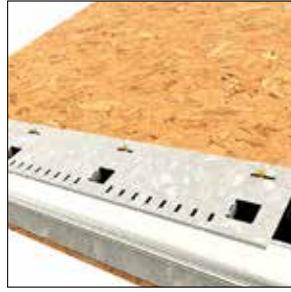
**RRX025**  
5.0 x 50 C'SNK pozi heco fix wood screw



### Fixing support props to beam

2 fixings per prop

**FIXINGS NOT SUPPLIED**



### Fixing tile starter to OSB

4 fixings per strip

**NRPS050**  
4.0 x 25 Deck - tite pozi CSNK screw

Fix a prop into the steel section of the beam as shown above. Props should be at max 2000mm centres within 250mm from each corner (prop fixings NOT SUPPLIED) 75x50mm (timber props NOT SUPPLIED).



### Fixing external clips

10 fixings per full clip  
5 fixing per half clip

**GPHS050**  
4.2 x 38 wafer head countersunk self drill



### Fixing set out staff

2 per cleat

**GPHS050**  
4.2 x 38 wafer head countersunk self drill



### Fixing internal clips

4 fixings per full clip  
2 fixing per half clip

**GPHS050**  
4.2 x 38 wafer head countersunk self drill

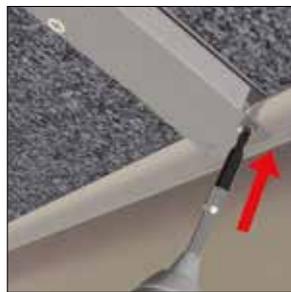
With set out staff flush with underside of beam, fix to face of beam using 2 x **GPHS050** provided. Staff set-out cleat fixed to internal face of box beam. Once fixed the staffs will ensure beams remain parallel to each other.



### Fixing wall brackets to the beam

6 fixings per bracket

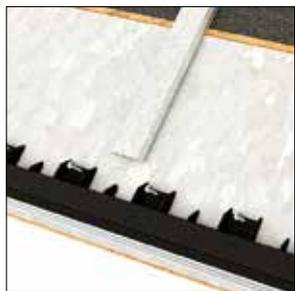
**RRX025**  
5.0 x 50 C'SNK pozi heco fix wood screw



### Fixing internal clip to box beam shelf

2 fixings per full clip

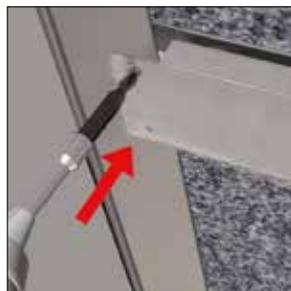
**GPHS050**  
4.2 x 38 wafer head countersunk self drill



### Fixing vent strip to beam

3 fixings per strip

**NRTS050**  
4.2 x 25 wafer head self drilling screws

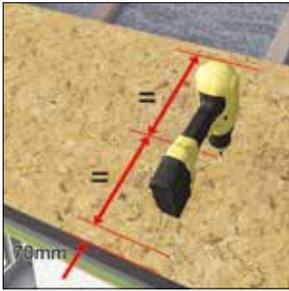


### Fixing internal clip to ridge shelf

2 fixings per full clip

**GPHS050**  
4.2 x 38 wafer head countersunk self drill

# FIXING LOCATION SUMMARY



### Fixing OSB to external panel clips

24 fixings per full panel



### Fixing Metrotile panel

4 per full tile



### Fixing gable support



# FIXING LOCATION SUMMARY - HIP ONLY



### Fixing hanger bracket to wall

4 fixings per bracket



We recommend HILTI chemical anchors where specified and expanding anchors in other locations (to resist pull out forces). Using HILTI product codes/descriptions, use a HIT-V 80mm x M8 threaded anchor (stud\*) fastened into a 10mm clean drill hole with gun injected mortar or adhesive capsules (with a minimum 80mm embedded) - always rigorously follow manufacturers guidance [www.hilti.com](http://www.hilti.com)

In addition we recommend the following alternatives; Fischer M8/M10 masonry injection anchor FIS V Rawl Fixings M8/M10 CFS RM50 or CFS RP30

\* Design load for each stud 2.5k



### Internal 90° box beam cleat

18 fixing per cleat



### External box beam cleat top

12 fixing per cleat



### External box beam corner cleats

12 per cleat, 6 through pre drilled holes, 6 through gutter support channel



### Hip to beam fixing

4 fixing per hip



# FIXING LOCATION SUMMARY - HIP ONLY



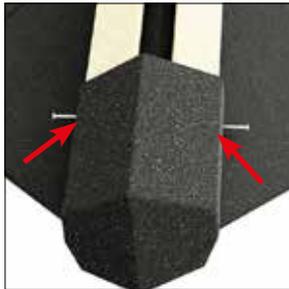
**Fixing beam support shelf to existing frames**  
6 fixings per corner



**Fixing internal lower hip brace plate**  
4 fixings per plate



**Fixing internal upper hip brace plate**  
4 fixings per plate



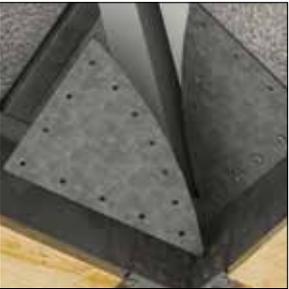
**Fixing metrotile hip end cap on to battens**  
1 x per side per end cap



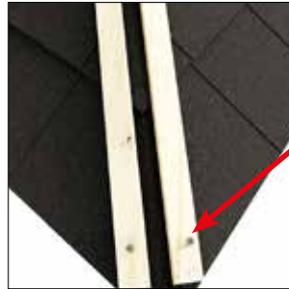
**Fixing internal jack rafter connection plate**  
4 fixings per plate



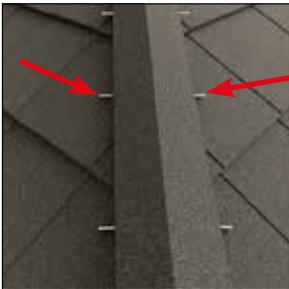
**Fixing steel hip plates**  
300mm centres (pre drilled holes)



**Fixing internal hip retaining plates**  
9 fixings per plate



**Fixing hip battens and battens on metrotile**  
500mm ctrs per side



**Fixing metrotile hip and ridge on to battens**  
500mm ctrs per hip cap



# FIXING SUMMARY - GLAZING



**Fixing glazing bar shoes at box beam**

Pre drilled holes



**Fixing glazing bar at box beam shoe**

Pre drilled holes



**Fixing glazing bar shoes to ridge section**

Pre drilled holes



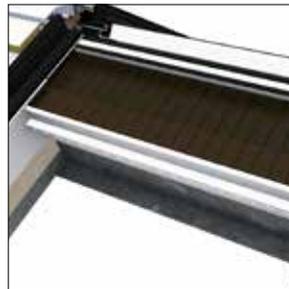
**Fixing glazing bar to ridge**

Pre drilled holes



**Fixing glazing bar to box beam external face**

2 fixings either side



**Fitting upper plasterboard trim**

2 fixings



**Refitting upper channel '1' number 1**

500mm Ctrs



**Top of bar plate fixing**

300mm CTRS



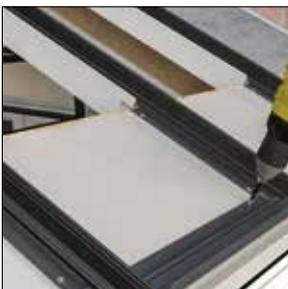
**Refitting lower channel '2' number 2**

500mm Ctrs



**Fixing glazing bar end caps**

Pre drilled holes



**Fixing lower glazing support section**

200mm CTRS



**Fixing ridge battens on metrotile**



# FIXING SUMMARY SUMMARY - GLAZING



**Fitting of the upper ridge glazing support trim**



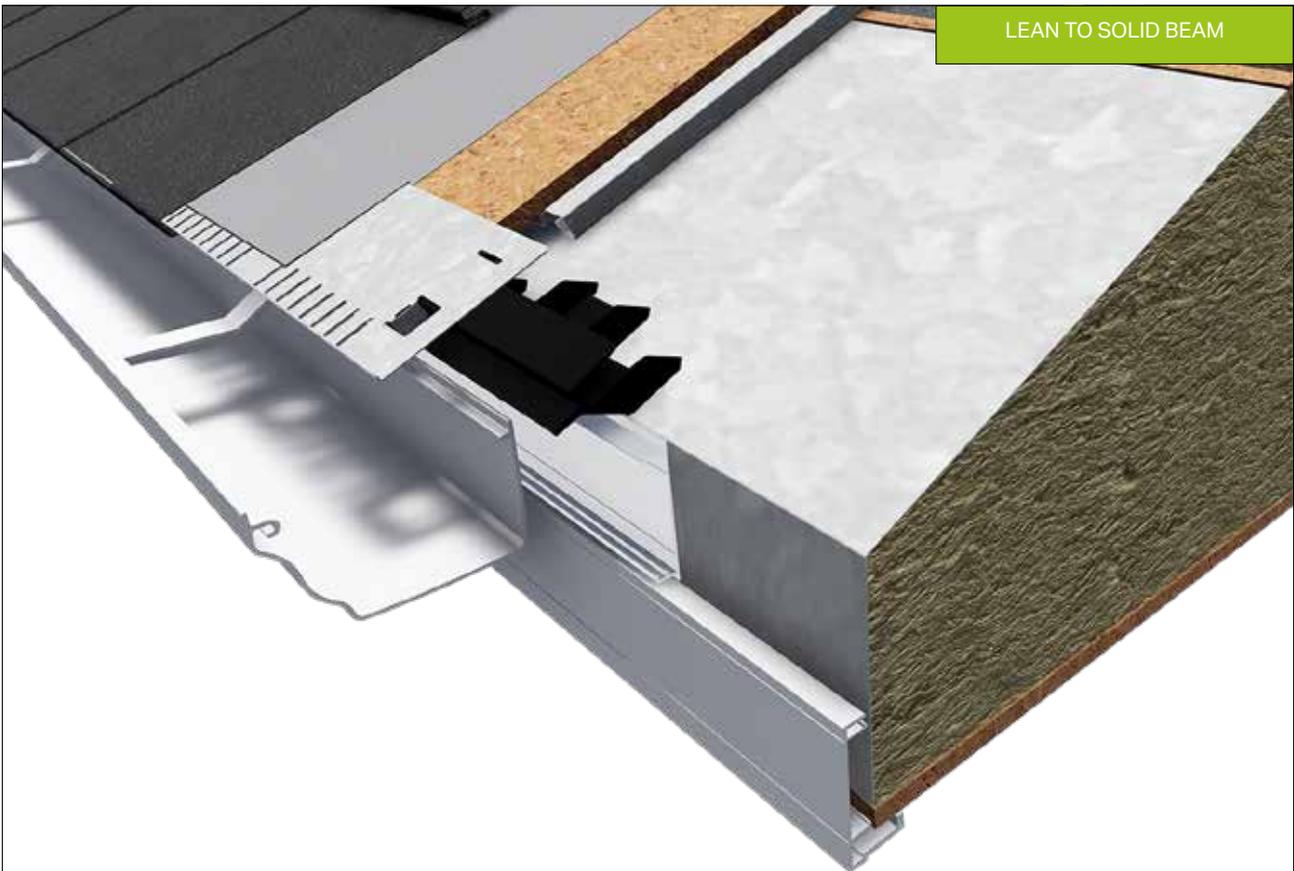
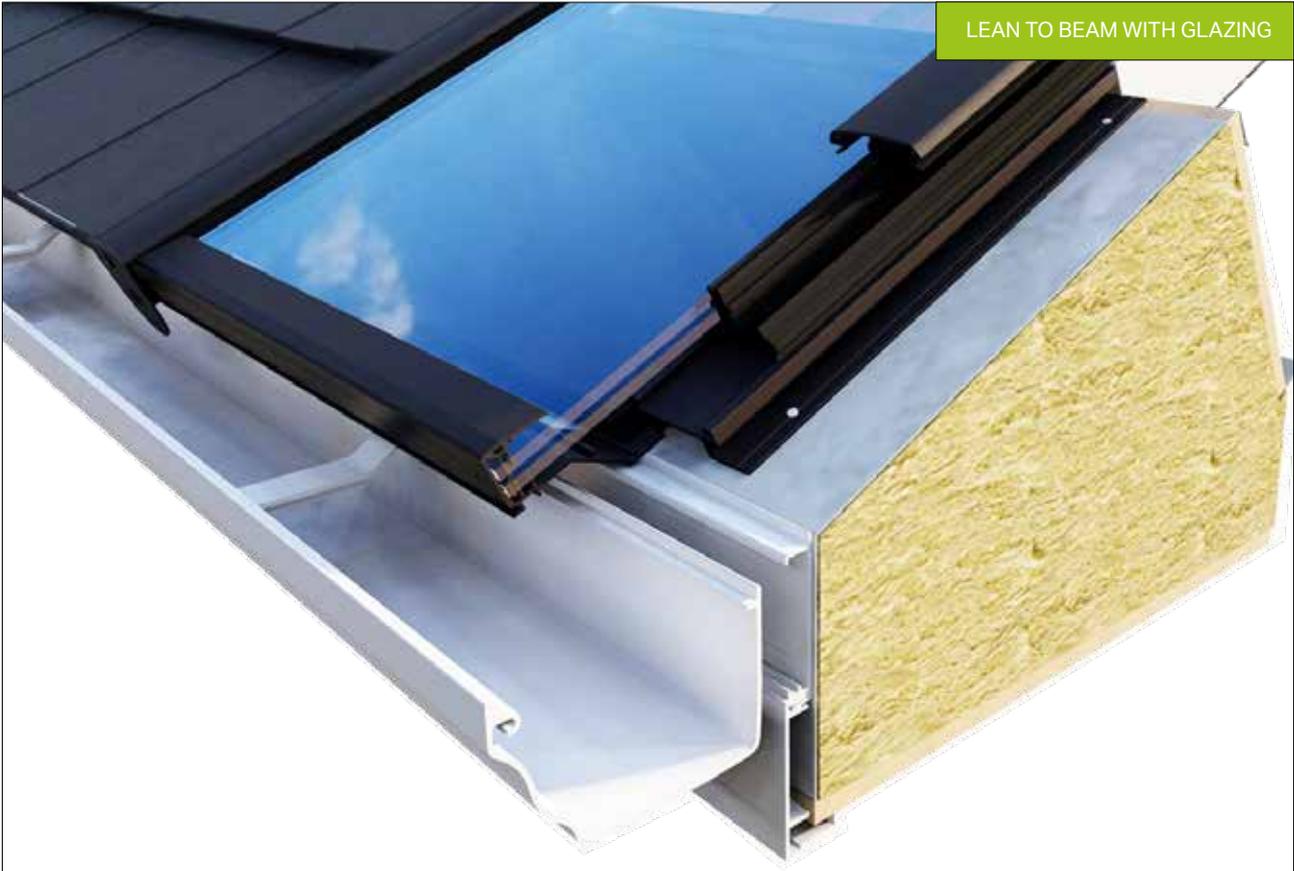
**Fitting of the timber ridge battens**  
2 fixings per batten

**FIXINGS NOT APPLIED**

## BEAM BRACKETRY

**ULTRAROOF EAVES BEAM HAS BEEN UPDATED TO INCLUDE ADDITIONAL BRACKETS ON THE INTERNAL CORNERS TO SUPPORT THE MITRED JOINT. IF RECEIVED WITH YOUR ORDER FIT AS SHOWN BELOW.**

| 15° TO 19° ROOF PITCH                                      | 20° TO 29° ROOF PITCH                                       |   | 30° TO 40° ROOF PITCH                                      |  |
|--|---|---|--|--|
| <br><b>WPBBF090</b><br>INTERNAL CLEAT STRAP<br>1 PER MITRE | <br><b>WPBBF090</b><br>INTERNAL CLEAT STRAP<br>1 PER MITRE  | <br><b>WPBCM090</b><br>INTERNAL CLEAT MEDIUM<br>1 PER MITRE | <br><b>WPBBF090</b><br>INTERNAL CLEAT STRAP<br>1 PER MITRE | <br><b>WPBCL090</b><br>INTERNAL CLEAT LARGE<br>1 PER MITRE |
| <br><b>WPBCS135</b><br>INTERNAL CLEAT SMALL<br>1 PER MITRE | <br><b>WPBCM135</b><br>INTERNAL CLEAT MEDIUM<br>1 PER MITRE | <br><b>WPBCM150</b><br>INTERNAL CLEAT MEDIUM<br>1 PER MITRE | <br><b>WPBCL135</b><br>INTERNAL CLEAT LARGE<br>1 PER MITRE | <br><b>WPBCL150</b><br>INTERNAL CLEAT LARGE<br>1 PER MITRE |
| <br><b>WPBCS150</b><br>INTERNAL CLEAT SMALL<br>1 PER MITRE |   |   |  |  |



# PRODUCT ASSEMBLIES

LEAN TO - GLAZED ROOF



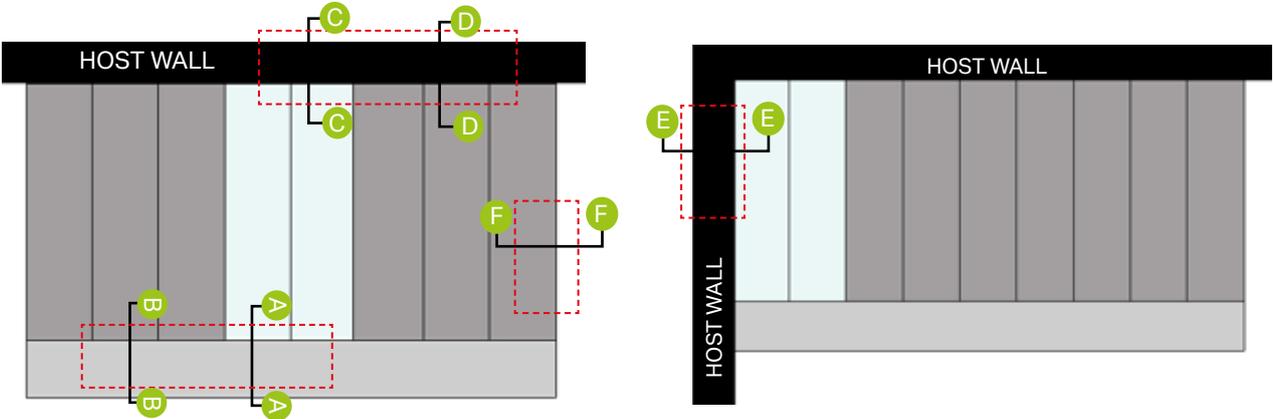
**NOTE: LEAD FLASHING NOT SHOWN AND NOT SUPPLIED**



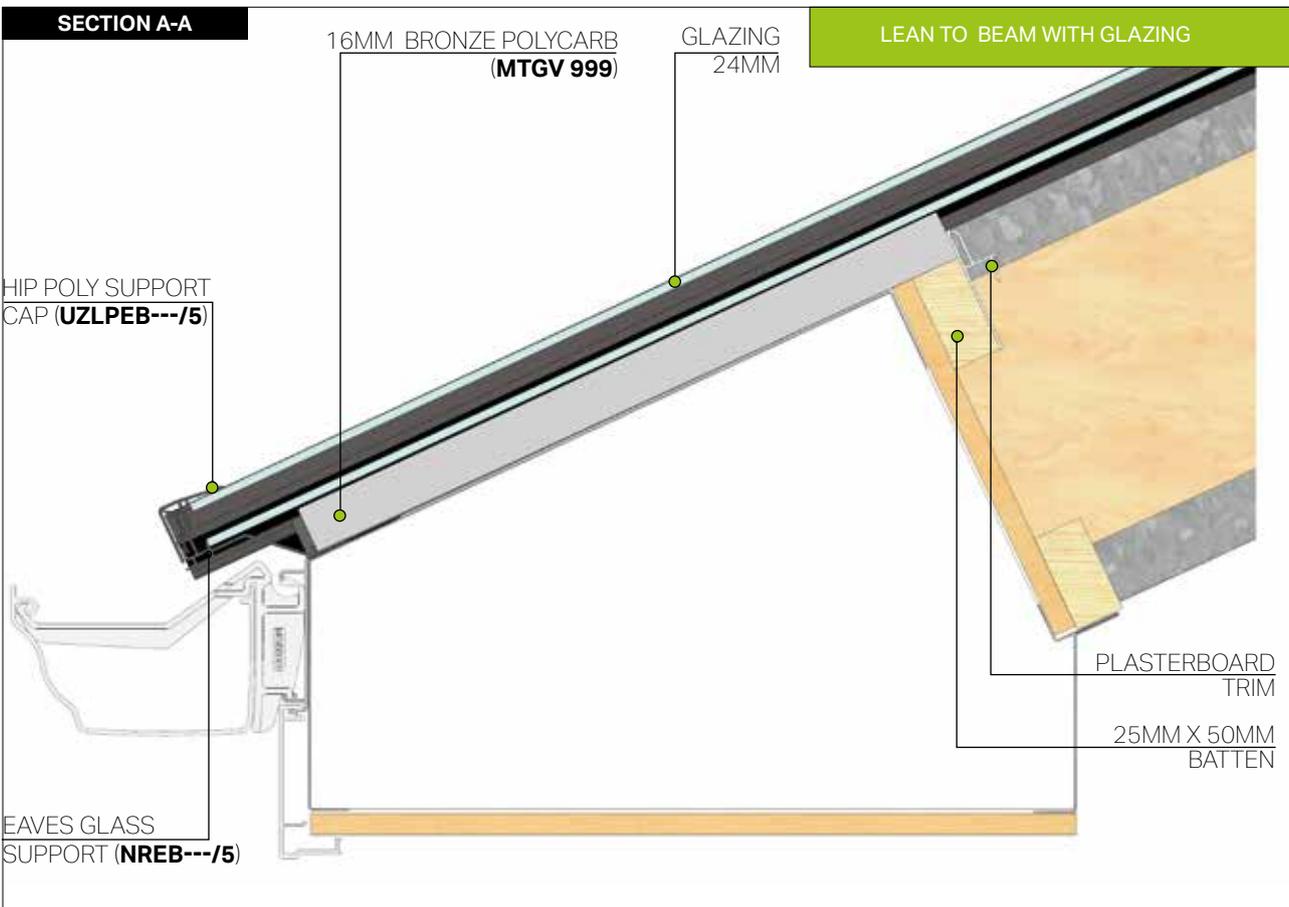
**NOTE: LEAD FLASHING NOT SHOWN AND NOT SUPPLIED**

# LEAN TO - GLAZED ROOF CROSS SECTIONS

**IMPORTANT:**  
USE BELOW DIAGRAMS IN REFERENCE TO PAGES 134-137, WHERE YOU WILL FIND RELEVANT CROSS - SECTIONS.

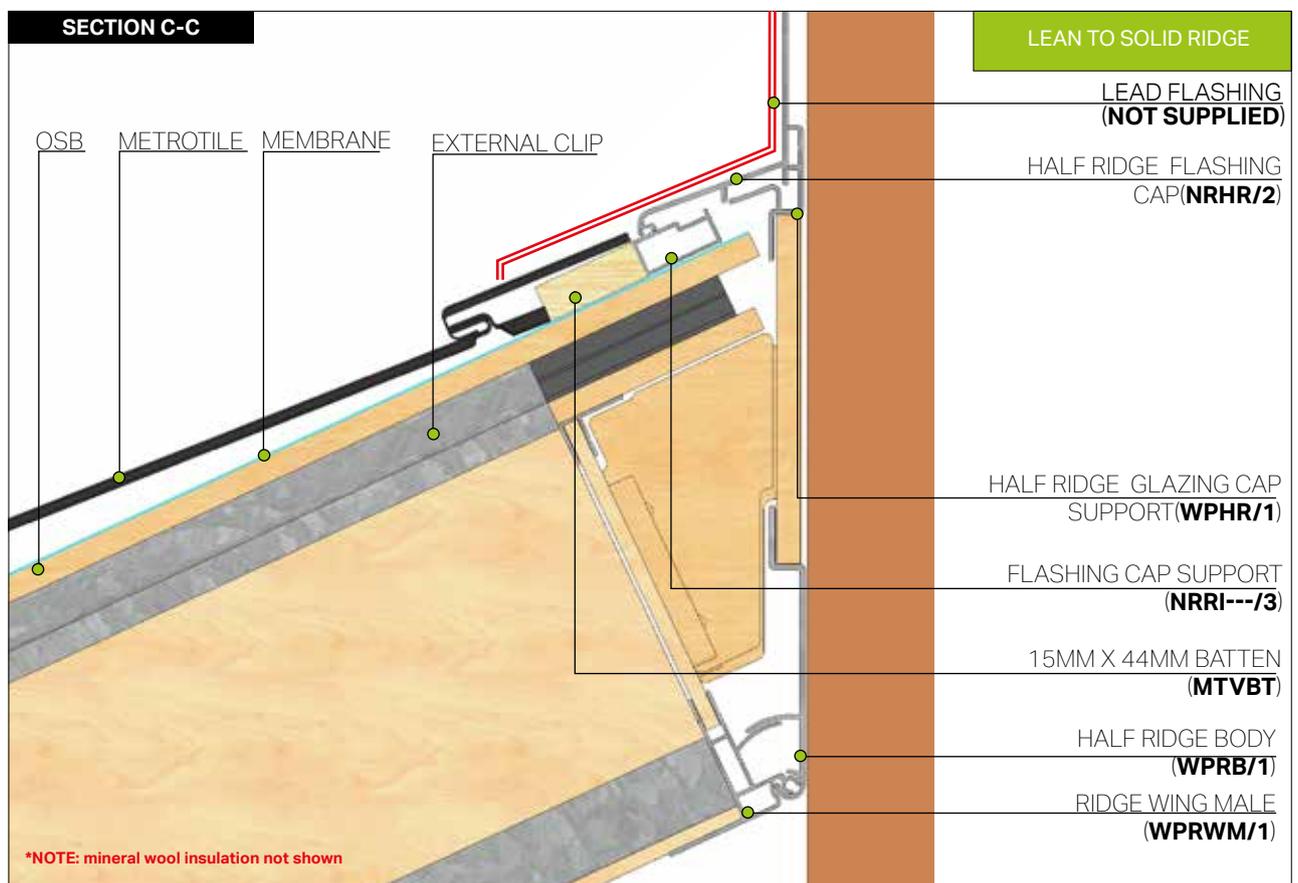
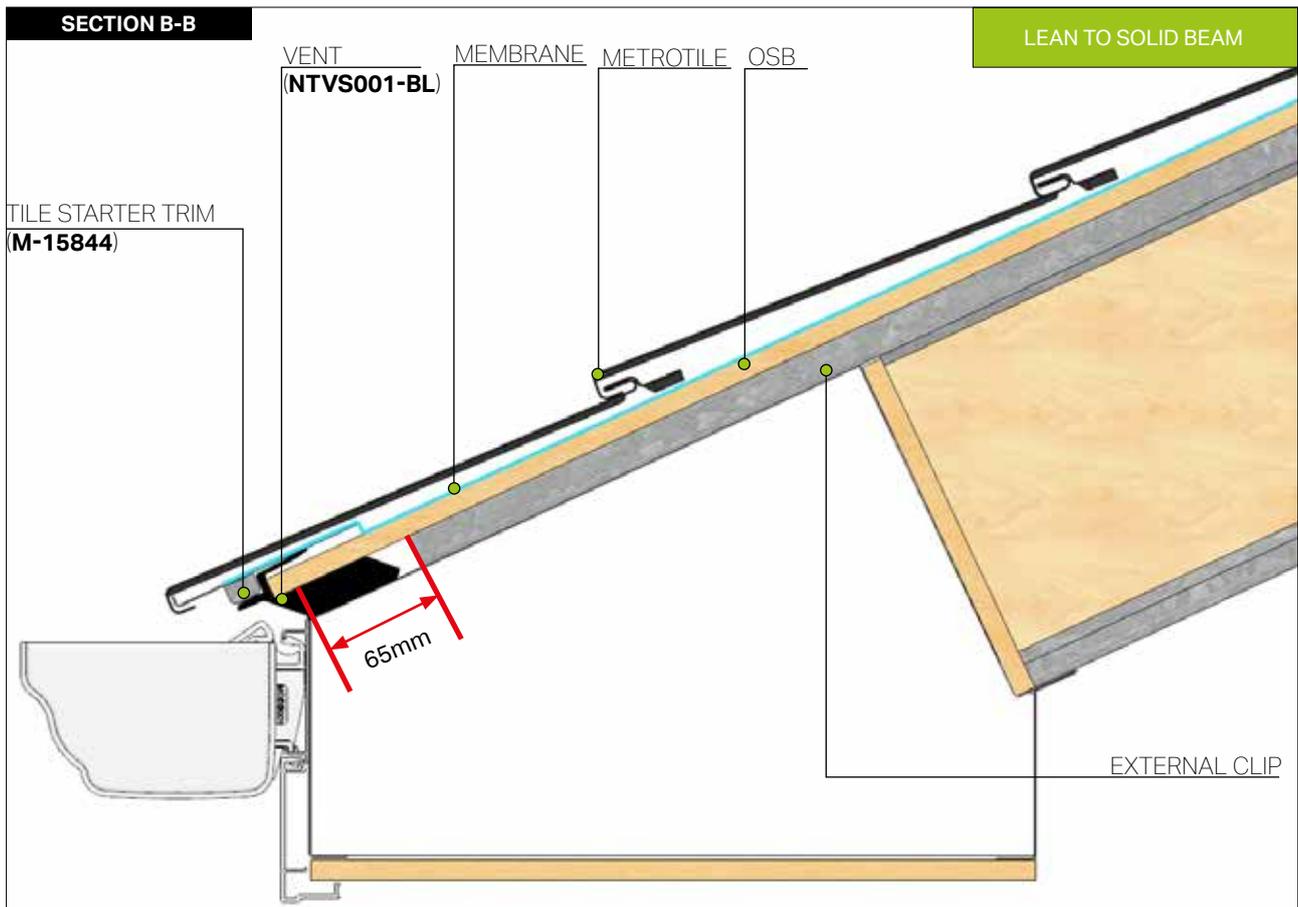


- SECTION A-A:** BEAM WITH GLAZING ( ref. to page 134 )
- SECTION B-B:** BEAM SOLID ( ref. to page 135 )
- SECTION C-C:** RIDGE SOLID ( ref. to page 135 )
- SECTION D-D:** RIDGE WITH GLAZING ( ref. to page 136 )
- SECTION E-E:** GLAZING AGAINST HOST WALL ( ref. to page 136 )
- SECTION F-F:** GABLE END ( ref. to page 137 )



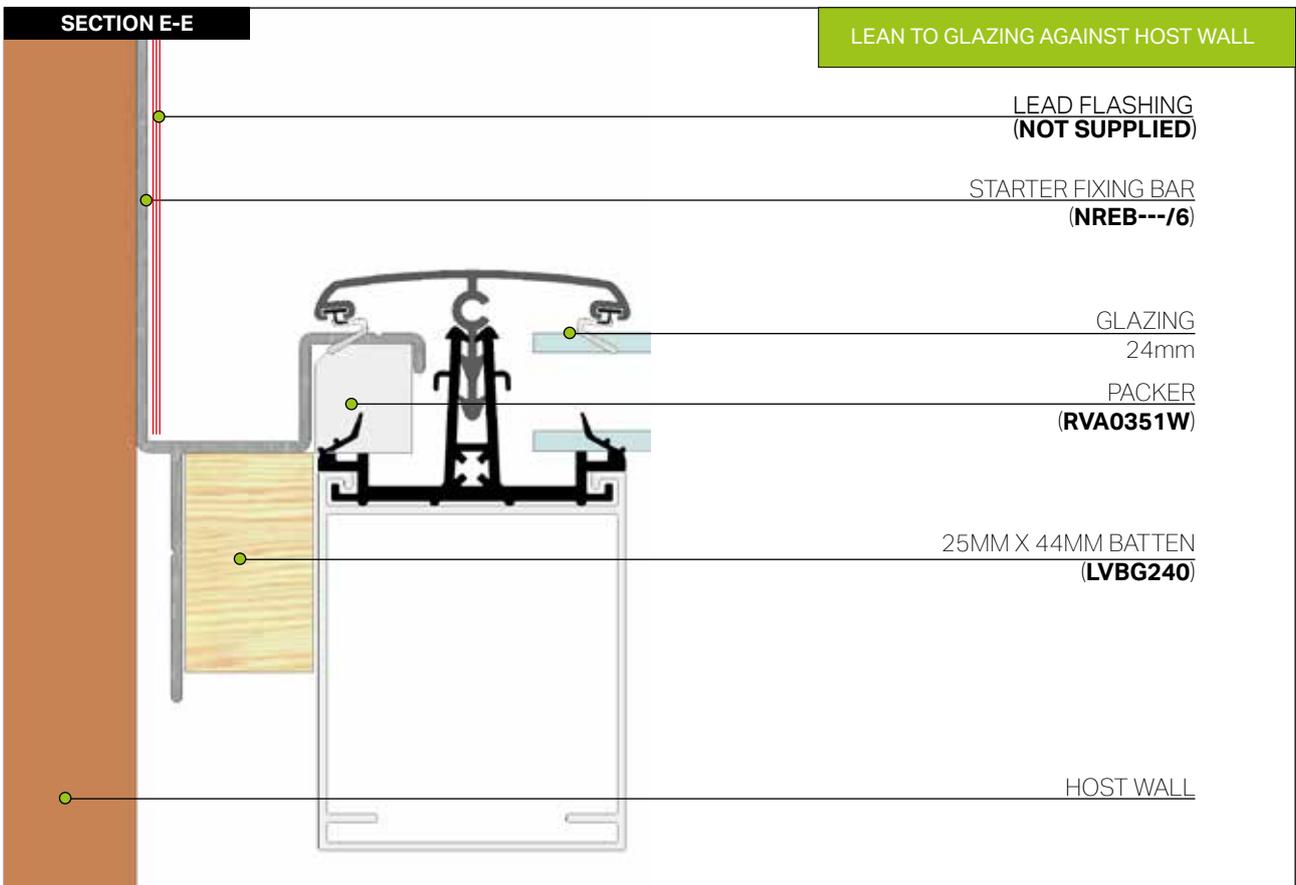
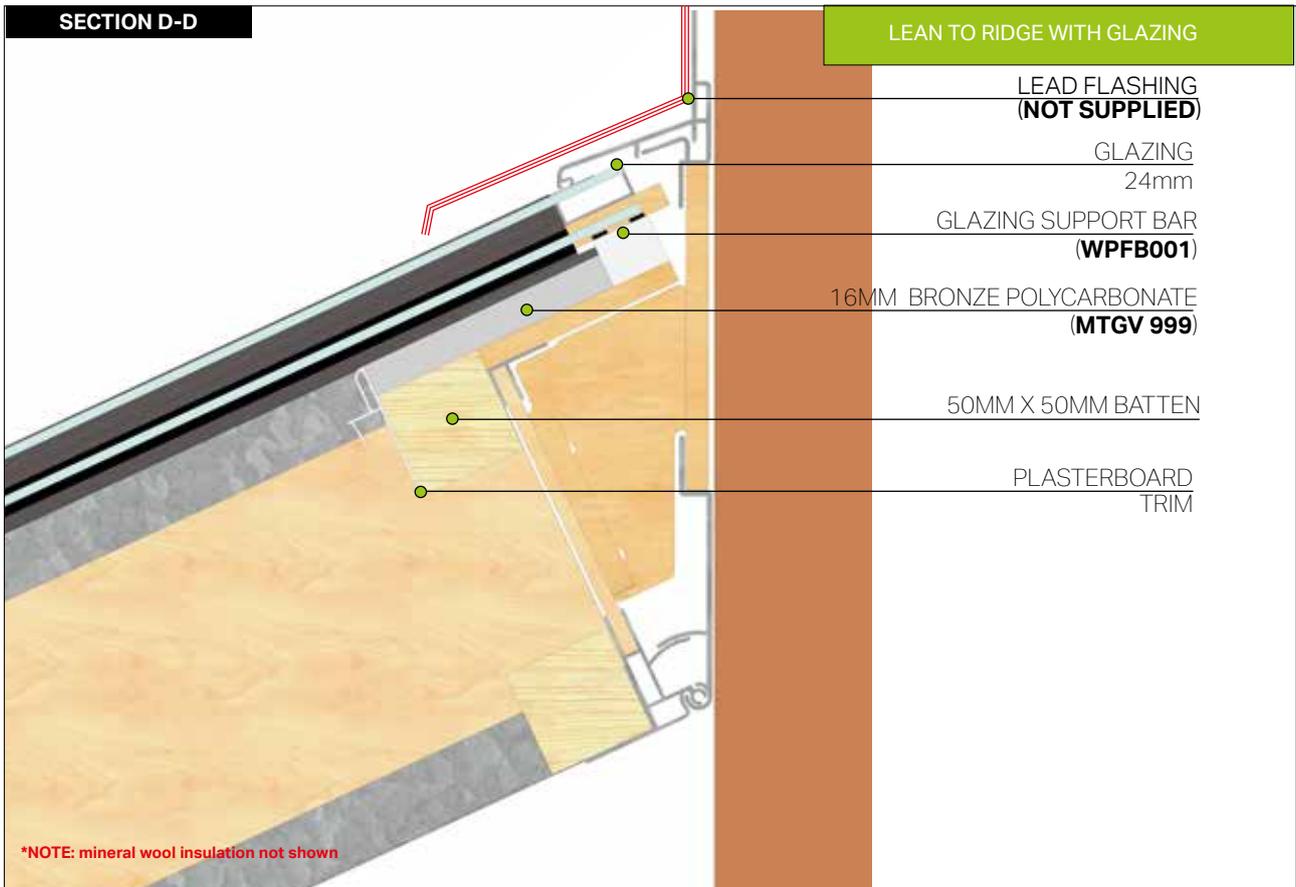
# LEAN TO - ROOF WITH GLAZING SECTION ASSEMBLY

LEAN TO - GLAZED ROOF



# LEAN TO - ROOF WITH **GLAZING** SECTION ASSEMBLY

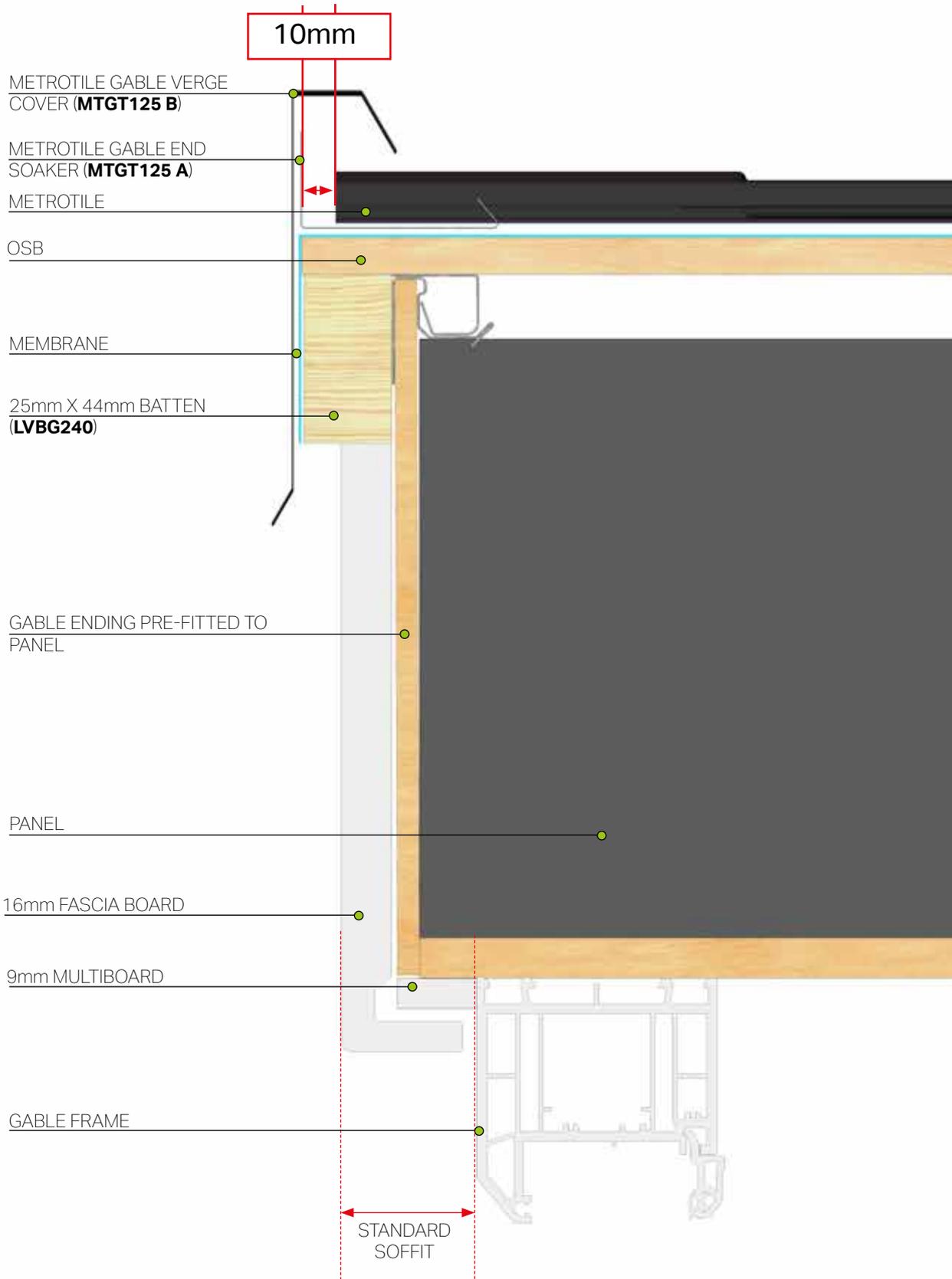
LEAN TO - GLAZED ROOF



# GABLE END - ROOF CROSS SECTION ASSEMBLY

SECTION F-F

GABLE END STANDARD SOFFIT

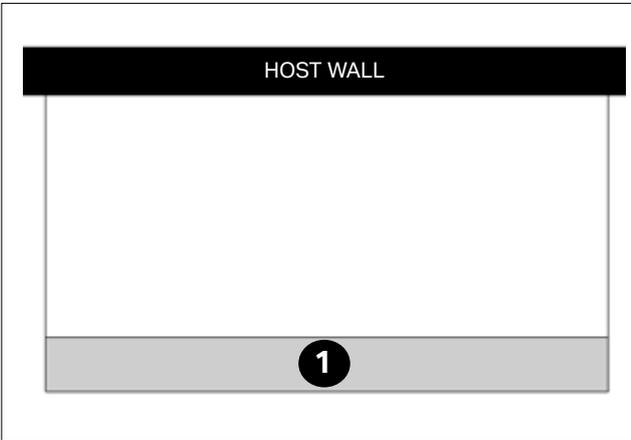


# BOX BEAM INSTALLATION SEQUENCE

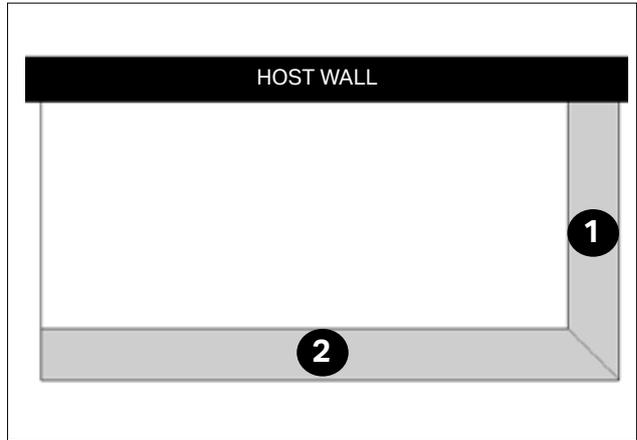
**IMPORTANT: FOLLOW THE FITTING ASSEMBLY SEQUENCE**



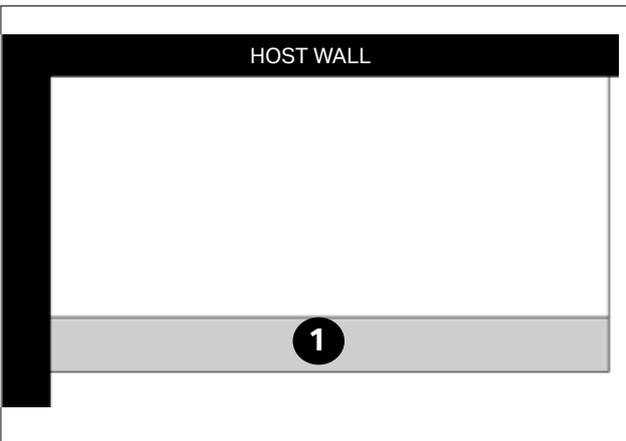
**A. STANDARD LEAN TO**



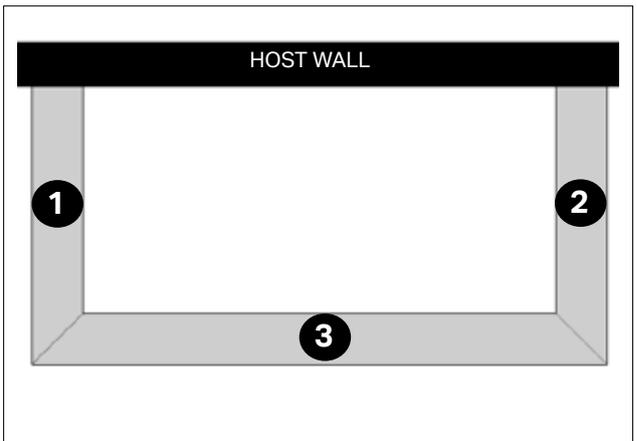
**B. LEAN TO WITH HIP**



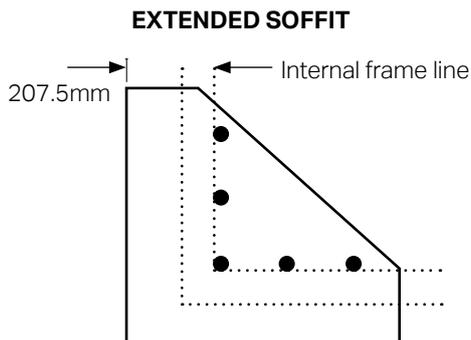
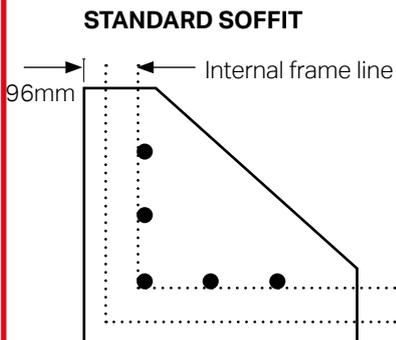
**C. CORNER LEAN TO**



**D. LEAN TO DOUBLE HIP**



## BOX BEAM SUPPORT SHELF LEAN TO WITH HIP ONLY



# PANEL INSTALLATION SEQUENCE

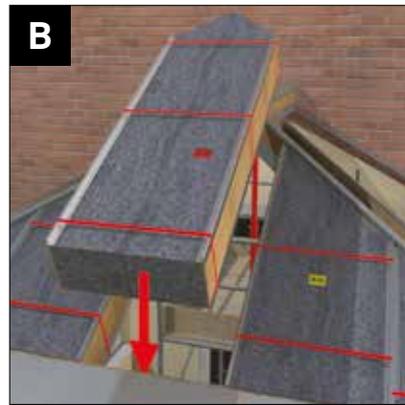
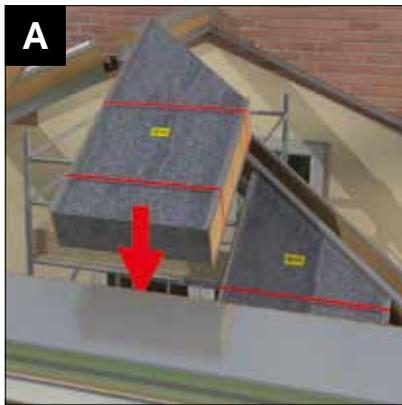
**IMPORTANT: FOLLOW THE FITTING ASSEMBLY SEQUENCE  
ALWAYS INSTALL GLAZING BARS FIRST.**

**IMPORTANT:**

STARTER GLAZING BARS ARE ALWAYS TO BE INSTALLED FIRST, FOLLOWED BY TRANSOM BARS.

**ALWAYS START INSTALLING PANELS WITH YELLOW LABELS (as shown below image A) BEFORE TOLERANCE PANELS ( as shown below image B).**

TOLERANCE PANELS (PANELS WITH RED LABEL) ARE TO BE INSTALLED LAST. TOLERANCE PANELS, WILL EXPAND SIDEWAYS TO TAKE UP ANY REMAINING GAP.

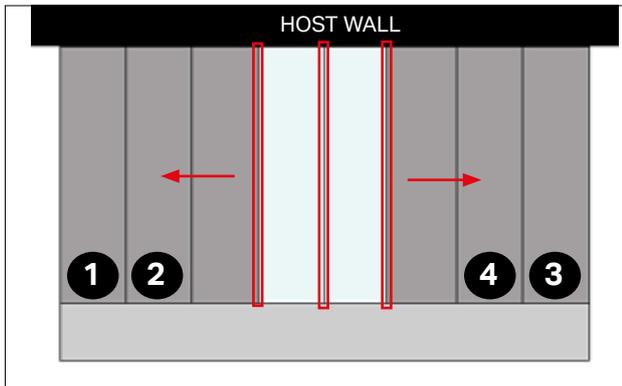


NOTE: ABOVE IMAGES ARE FOR ILLUSTRATION PURPOSES ONLY. DUO PITCHED ROOF SHOWN, SHAPES OF PANELS FOR LEAN TO WILL DIFFER.

**DO NOT CUT THE BINDING CORDS.**

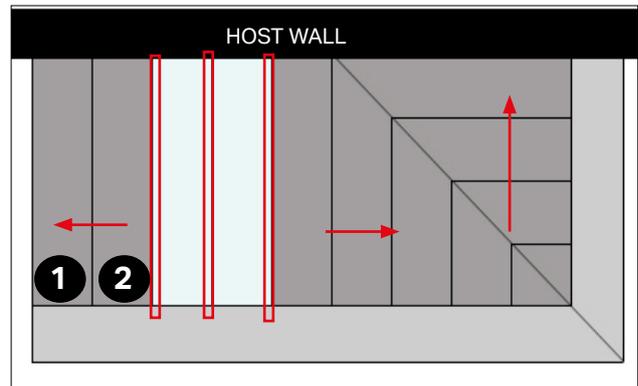


**A. STANDARD LEAN TO**



Start from installing glazing bars first, install first two panels on each gable end next (1-2 and 3-4 as shown above), work your way from glazing outwards each way. **Do not forget - tolerance panels are to be installed last.**

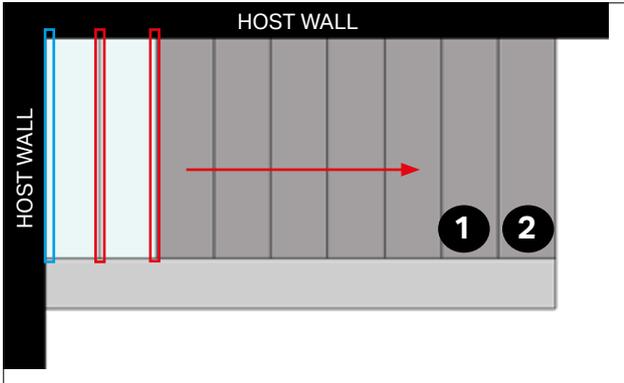
**B. LEAN TO WITH HIP**



Start from installing glazing bars first, install first two panels on gable end without the beam (1-2 as shown above) next, work your way from LEFT to RIGHT with the rest of the panels. **Do not forget - tolerance panels are to be installed last.**

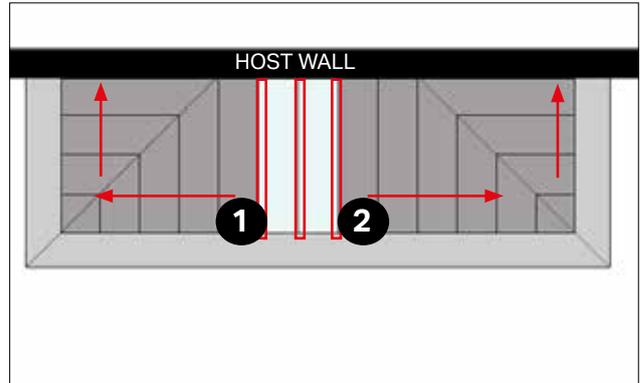
# LEAN TO - INSTALLATION SEQUENCE

## C. CORNER LEAN TO

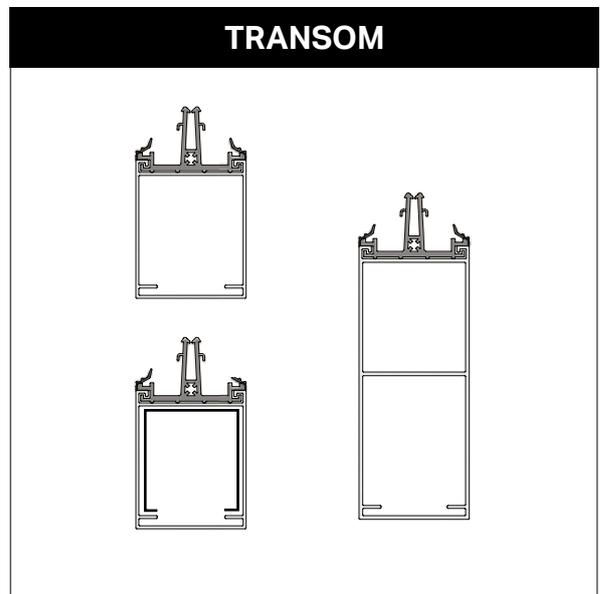
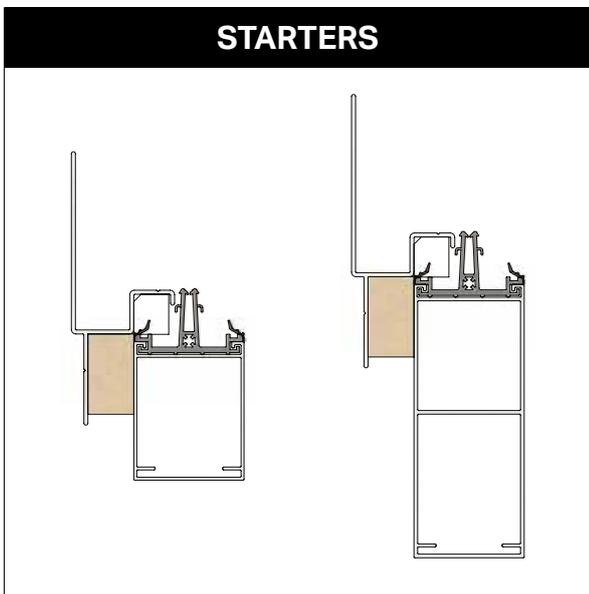


Start from installing glazing bars first, install two panels on gable end next (1-2 as above), work your way from glazing outwards. **Do not forget - tolerance panels are to be installed last.**

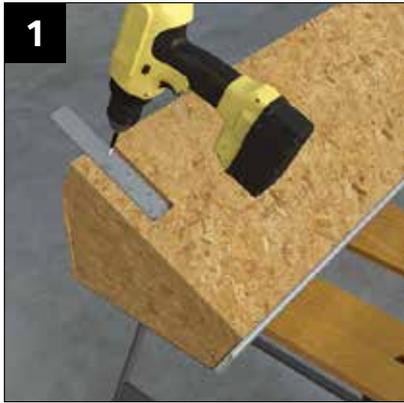
## D. LEAN TO DOUBLE HIP



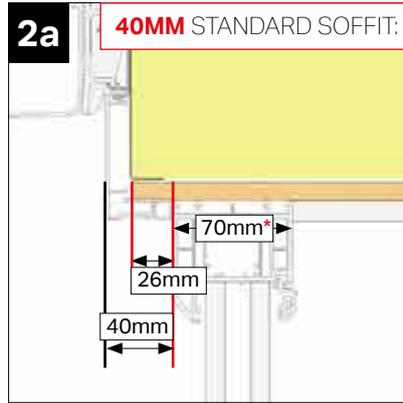
Install two panels on gable end first (1-2 as above), work your way out to the LEFT and to the RIGHT. **Do not forget - tolerance panels are to be installed last.**



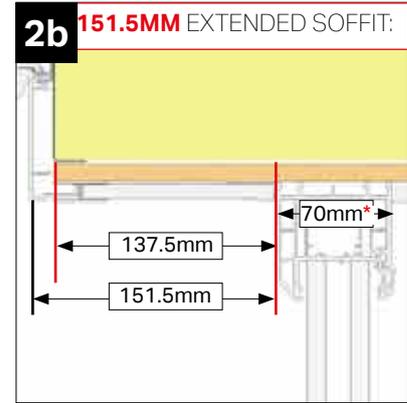
# INSTALLATION SEQUENCE



**1**  
ONLY IF GABLE FRAME STIFFENERS SPECIFIED: Fix the aluminium gable beam fixing plate to the underside of the box beam using 6 x RRX025 screws (PROVIDED). **NOTE: ALIGN PLATE 'V' NOTCH GROOVES WITH EDGE OF BEAM.**



**2a** **40MM STANDARD SOFFIT:**  
Lean-to set out projection as shown above (standard soffit). Box beam set 26mm from outer face of 70mm\* frame

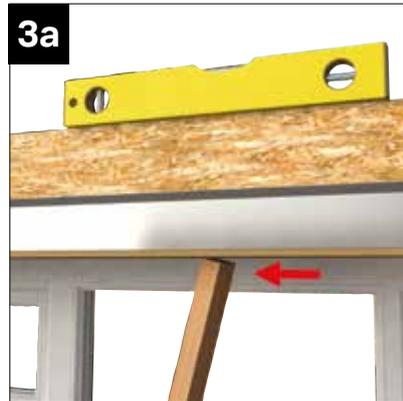


**2b** **151.5MM EXTENDED SOFFIT:**  
Lean-to set out projection as shown above (extended soffit). Box beam set 137.5mm from outer face of 70mm\* frame

**\*NOTE: WINDOW FRAME THICKNESS MAY VARY.**



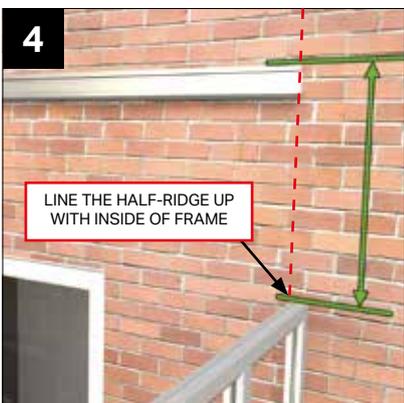
**3**  
Apply low modulus silicone to the head of frames local to beam area before lifting the box beam into position. Temporarily fix the box beam in position.



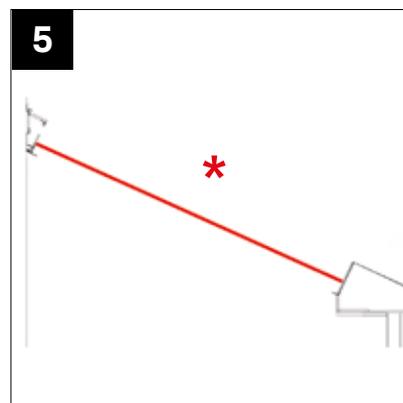
**3a**  
Check the beam is level. Pack off top of frames if necessary. Insert a support prop under the beam. Adjust the height of the prop to ensure the beam is level **side to side as well as in length.**



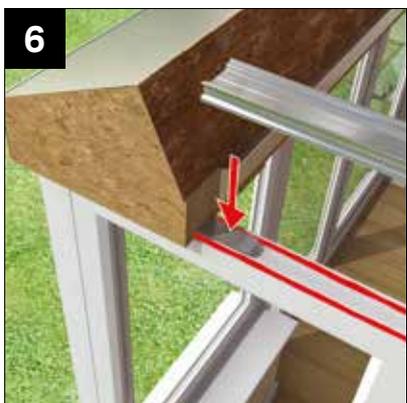
**3b**  
Fix a prop into the steel section of the beam face as shown above. Props should be at max 2000mm centres within 250mm from each corner (prop fixings **NOT SUPPLIED**) 75x50 timbers props (**NOT SUPPLIED**).



**4**  
Fix the half-ridge (cut to internal frame) at the height given in the critical dimensions sheet, ensuring the ridge is level. Ensure to line the half-ridge up with inside of frame. Adjust the half ridge height if necessary. **NOTE: DIMENSION IS FROM UNDERSIDE OF BOX BEAM TO TOP EDGE OF HALF RIDGE.**



**5**  
\* Check this dimension from the **critical dimensions sheet** supplied. Fitters tip: cutting a length of timber to this length will enable you to set the panels correctly. **NOTE:** pack the half ridge off the host wall if not flat.



**6**  
**ONLY IF GABLE FRAME STIFFENERS SPECIFIED:** Silicone the head of the frames. Place the aluminium gable frame stiffener with V-groove uppermost.

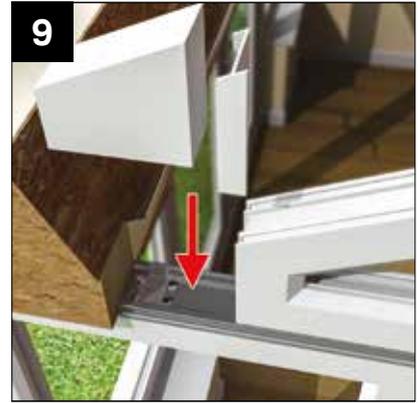
# INSTALLATION SEQUENCE



The 4 fixing positions.



Fix the gable frame stiffener to the aluminium beam fixing plate using 4 x **RRR025 (PROVIDED)**. Secure along the length of the stiffener at 500mm centres into frames (**NOT PROVIDED**).



Apply silicone to the gable frame stiffener and fix the gable frame. Trial fit the infill wedge and coupler prior to final fixing.



Checking the correct overhang, secure the gable panels by screwing up through the head of the frames. Fixings need to be within 200mm of each corner (dependant on access) and at 450mm centres using for example, 4.8mm x 80mm screws (**NOT PROVIDED**).



When installing 24mm double glazed units, the box beam OSB face will be marked with the vertical lines which indicate glazing bar centres. On the marked lines, locate to the top edge of the box beam the appropriate box beam shoes (**NRBE001** or **NRBE002**) (**PROVIDED**). Fix to the beam using 8 x 4.2mm x 25mm wafer head self drill screws (**NRTS050**) (**PROVIDED**).



Place the glazing bar into the box beam shoe ensure the glazing bar is at 90° to the box beam and half ridge.



With the glazing bar at 90° to the box beam. Mark the rear wallplate as shown.



Remove the glazing bar. Offer to the marked vertical line the wall plate glazing bar shoe. Position and secure using 6 x **NRTS050** 4.2 X 25mm screws (**PROVIDED**).



Lower into position all glazing bars. Check diagonals of the glazing apertures are equal before proceeding further.

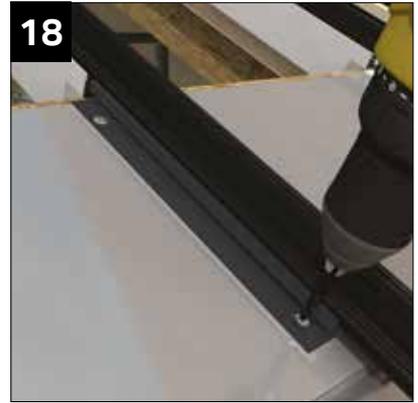
# INSTALLATION SEQUENCE



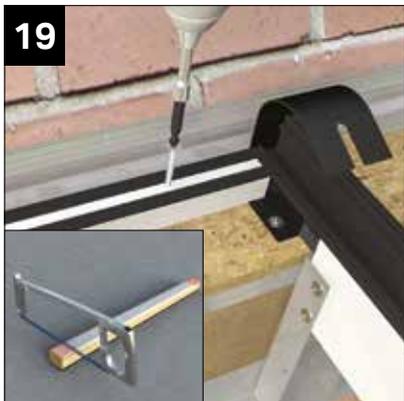
**16** Secure at the wall plate using 4 x **NRTS050** 4.2 X 25mm screws (**PROVIDED**).



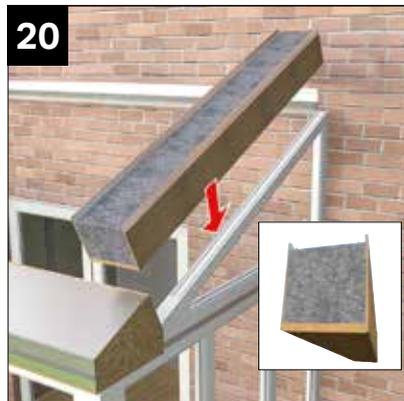
**17** Secure at the box beam using **NRTS050** 4.2 X 25mm screws (**PROVIDED**).



**18** Secure glazing bar to wallplate and box beam, again using 2 at top and 4 into box beam using **NRTS050** 4.2 X 25mm screws (**PROVIDED**).



**19** Turn the upper wall plate glazing support trim upside down and cut small notch into each end to allow support trim to sit flat onto the OSB board and tight into the bars. Secure the upper wall plate glazing support trim using 2 x **GPHS050** screws (**PROVIDED**).

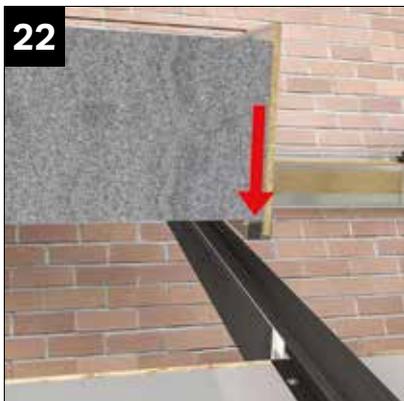


**20** Locate end panel onto the rear wall plate shelf and box beam shelf. Ensure OSB boarding on end of gable panels are flush with the end of the beam. All gable end panels are supplied with OSB (timber panels) to the inside face. **DO NOT SNIP RETAINING STRAPS.**



**21** Having installed each gable end panel ensuring each side of the panel is flush with the end of the box beam, continue to install standard (yellow labelled) panels before fitting expandable (red labelled) panels.

**DO NOT CUT THE BINDING CORDS.**



**22** Note: each panel that abuts a glazing bar will be fitted with a half-clip. Remember to fit the external full and half clips as you install each panel. This will negate the need to stand on the roof.



**23** The external half clip being installed (see solid roof section for fitting of external and internal panel clips).



**24** To secure the glazing bar offer the upper '□' channel section. Screw up through into the bar within 200mm of the wall plate and box beam. Then at 500 centres. Using **NRTS050** 4.2 X 25mm screws (**PROVIDED**). Then fix horizontally into OSB at similar centres.

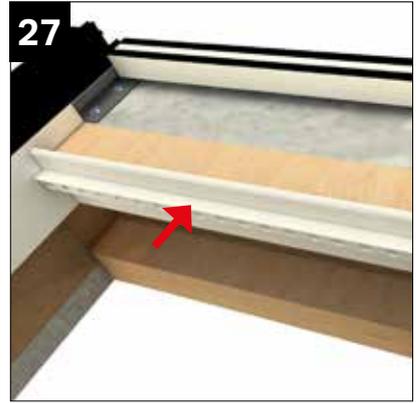
# INSTALLATION SEQUENCE



Then fix the lower 'U' channel.



At the wall plate fix the upper and lower plaster board timber battens (45 x 45mm) with screws (**NOT PROVIDED**) one fixing either end. The upper timber finishes flush with OSB board.



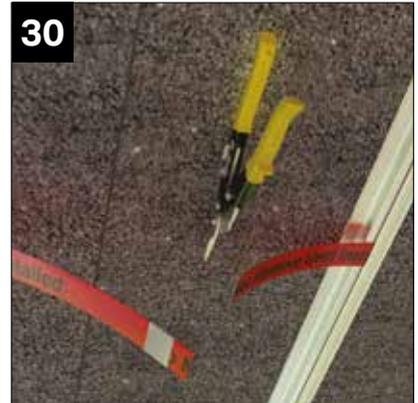
Fix upper and lower plasterboard trims, fixings (**NOT SUPPLIED**).



At the box beam end of the glazing panel, locate eaves glass support **NREB---/5** between glazing bars. See inset at step 29 for location point.

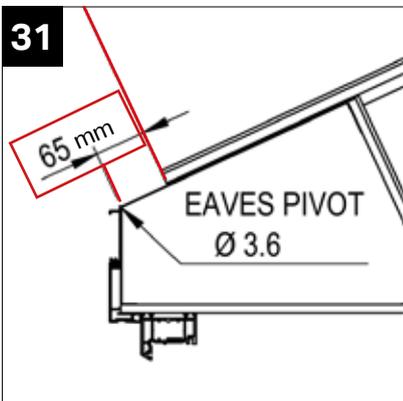


Secure eaves glass support section at 200mm ctrs using **NRTS050** 4.2 X 25mm screws (**PROVIDED**).



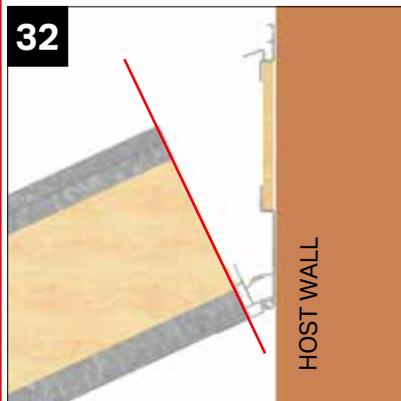
With the expandable panel in position, snip all the retaining straps.

**PANEL CLIPS SET 65mm BACK FROM THE BEAM EDGE.**

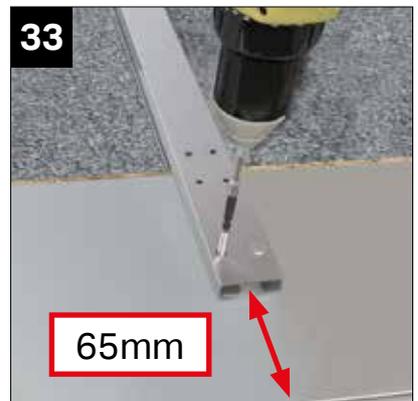


Ensure panel clip is offset from the eaves pivot by 65mm prior to knocking down. **This is important to ensure correct positioning of tile starter support.**

**PANEL CLIPS FINISH FLUSH WITH THE PANEL AT HALF RIDGE END.**

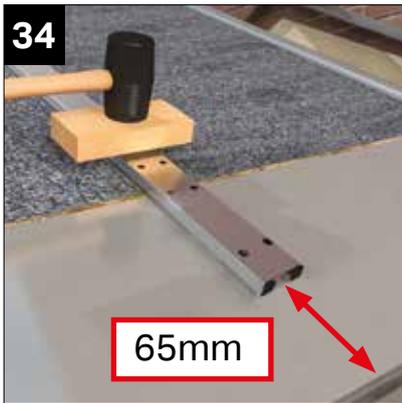


Ensure panel clips are aligned with the panels prior to knocking it down.



Finally secure the external clips using **GPHS050** 4.8mm x 38mm self drilling screws (**PROVIDED**). **NOTE: do not stand on the panels to secure the external clips.** Tip: on greater projections secure the clip to the beam.

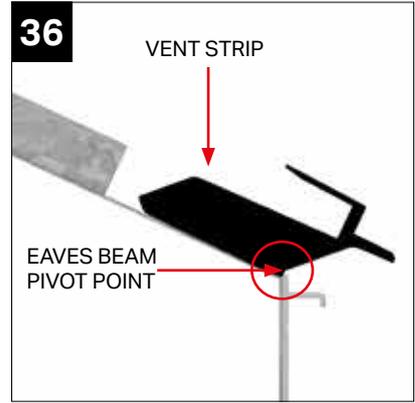
# INSTALLATION SEQUENCE



When aligned use a robust mallet to knock down the external panel locking clips (use a short length of timber to protect the clip from indentations).



Place vent strip **NTVS001-BL** on eaves beam pivot point. Fix with **NRTS050** screws (**PROVIDED**). For clarity refer to **step 36** for vent positioning.

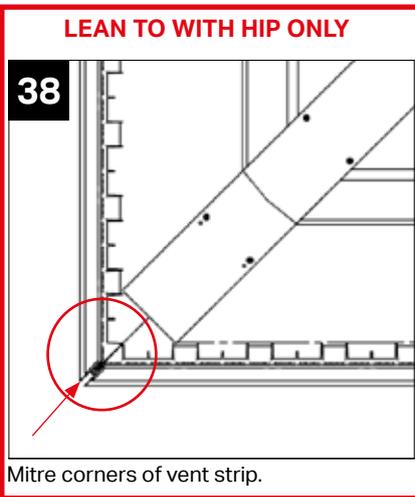


Follow further steps for starting points and corners.

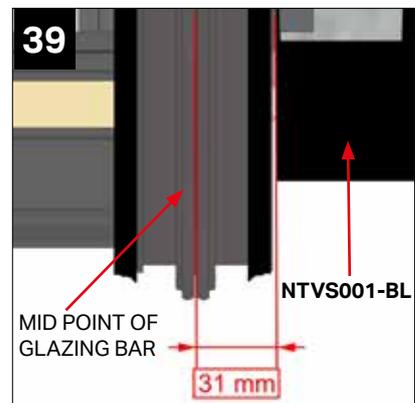


Vent strip continues along the roof and ends flush with the beam. If necessary cut down to allow for two separate fixings and butt up two strips to each other. Allow vent strip to go right against the host wall, when installing corner lean to.

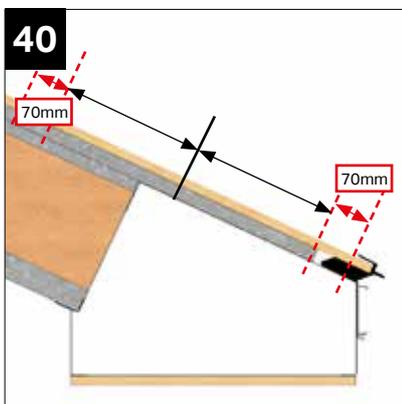
**NOTE: ABOVE IMAGE SHOWS CORNER LEAN TO AND IS AN ILLUSTRATION ONLY.**



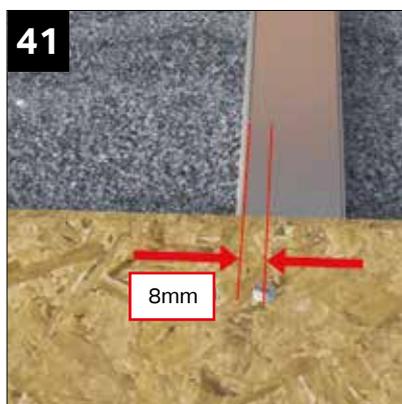
Mitre corners of vent strip.



Vent strip **NTVS001-BL** to finish 31mm offset from the mid point of glazing bar.



With OSB in position fix board 70mm up from tile starter support and 70mm down from upper edge followed by 1 x central fixing. Use **GPHS050** 4.2mm x 38mm screws (**PROVIDED**).



All boards to be secured 8mm in from either edge of clip. 3 fixings per clip position using **GPHS050** 4.2mm x 38mm screws (**PROVIDED**).

**LEAN TO WITH HIP ONLY**

ON THE MITRED CORNERS OF THE BOX BEAM HIP THERE WILL BE A 30MM GAP BETWEEN THE SHEETS OF OSB. TIP: USE A 30MM TIMBER BLOCK TO CHECK THE CORRECT SPACING OF THE OSB BOARD.

SUPPORT ANY FLOATING OSB BOARDING WHEN DISTANCE EXCEEDS 600MM TO EXTERNAL HIP USING TIMBER BATTENS PROVIDED.

# INSTALLATION SEQUENCE

LEAN TO - GLAZED ROOF

**42** **LEAN TO WITH HIP ONLY**

Support any floating OSB boarding when distance exceeds 600mm to external hip using timber battens provided.

**43**

Where required support OSB board at butt joints using timber battens supplied. Battens are 65 x 19 x 700mm long (**NRPB010**). Required to all joints using the screws provide Use **GPHS050** 4.2mm x 38mm screws (**PROVIDED**).

**44**

All OSB board edges are tongue and grooved to allow positive location. Continue to board from bottom to top (box beam to wall plate).

**45**

At the host wall allow OSB to align with box beam. Fill any gaps with expanding foam (**NOT SUPPLIED**).

**46**

**NOTE: before fitting last row of OSB at the half ridge, ensure to fully insulate with supplied mineral wool between top of panels and host wall.**

**47**

When placing the last row of OSB ensure 15mm offset from the host wall.

**48**

OSB to finish 31mm offset from the mid point of glazing bar.

**49**

Where there is no host wall at gable ends, OSB should overhang the beam by 25mm as shown above.

**50**

At each gable end where there is no host wall fix 25mm x 4mm **LVBG240** batten.

# INSTALLATION SEQUENCE

**LEAN TO WITH HIP ONLY**

**51**

**NO FIXINGS IN THIS AREA**

35mm

Fit steel hip plates inline with upper edge of the tile starter support strip. Use **NRPS050** fixings (**PROVIDED**) at 300 centres through predrilled holes.

**NOTE: THESE COULD BE SUPPLIED IN TWO LENGTHS. IF OVER 3.2M TO ALLOW FOR ADJUSTMENT OVERLAP IF REQUIRED.**

**52**

**TILE STARTER TRIM (M-15844)**

LOCATION TAB

**Fold down minimum two location tabs before fitting M-15844 tile starter trim.** These tabs set out the position of the tile starter support.

**53**

TILE STARTER

Fix tile starter (**M-15844**) into position as above, screw to OSB using **NRPS050** screws (**PROVIDED**).

**54**

50 mm

Starter trim continues along the roof, ends 50mm away from the edge of the beam at gable end and overlaps by 64mm, cut down where needed. Allow 50 mm in between host wall and tile starter and same for valley. Mitre corners on site. **NOTE: ABOVE IMAGE SHOWS CORNER AND HIP LEAN TO AND IS AN ILLUSTRATION ONLY.**

**55**

MID POINT OF GLAZING BAR

31 mm

M-15844

Tile starter to finish 31mm offset from the mid point of glazing bar.

**56**

When all external panel clips are installed, fix (at 1 metre centres) using the supplied gable tie-plates **WPPC002** using 4 x **GPHS050** screws (**PROVIDED**).

**57**

Secure the gable end panel (s) only by screwing up through the box beam shelf and the upper half ridge shelf using 1 x **GPHS050** screws (**PROVIDED**).

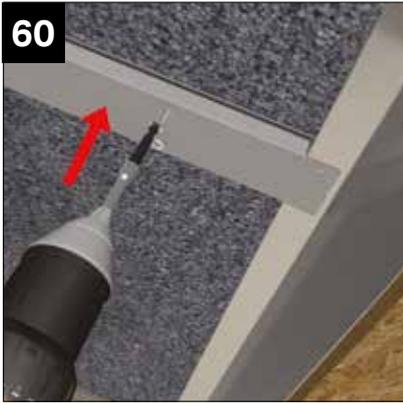
**58**

Now offer into position the pre-drilled internal panel clips. Again, use timber packer to prevent indentations to the internal clip.

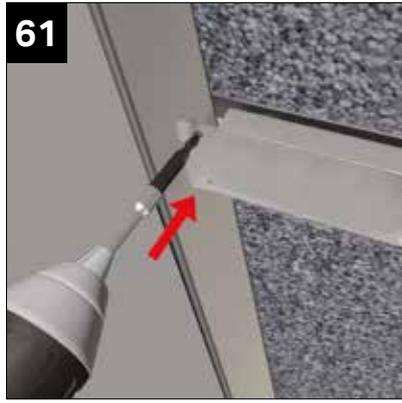
**59**

Firstly secure into the panel (at the ridge end) using dry wall fixing screws **GPHS050** (**PROVIDED**).

# INSTALLATION SEQUENCE



**60**  
Secure into the panel (at box beam end) as previous image.

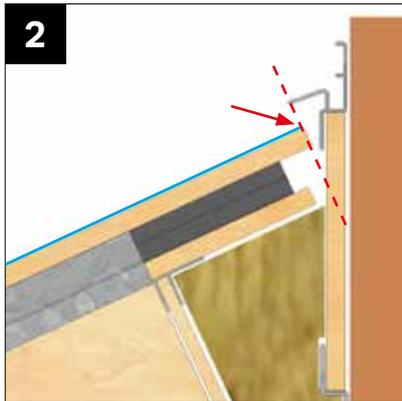


**61**  
Secure to the half ridge body, the upper attachment plate using 2 x **GPHS050** fixings (**PROVIDED**).

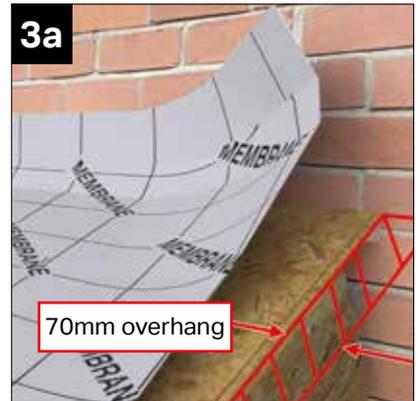
# MEMBRANE INSTALLATION SEQUENCE



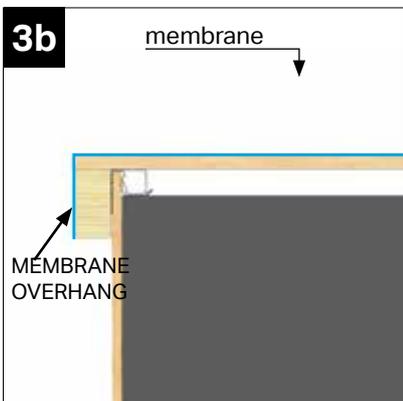
**1**  
Start at eaves and position membrane. Align membrane to the top over vent slots of tile starter. Work up the roof, overlapping the previous layer by 150mm at pitches of 14° or and 100mm at 15° and above.



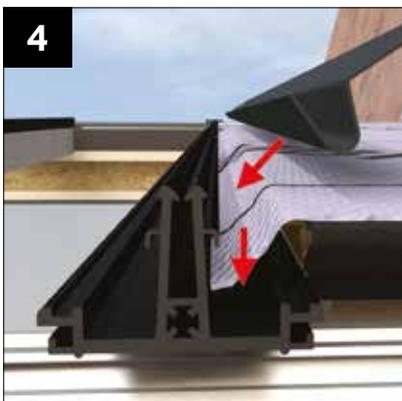
**2**  
Ensure membrane ends flush with the edge of OSB at half ridge end.



**3a**  
Cut the breathable membrane underlayer to the width of the roof deck plus 70mm overhanging the OSB at each end. **For clarity ref. to image 3b.**



**3b**  
Ensure minimum 70mm membrane overhang, to go over the batten on each gable end.



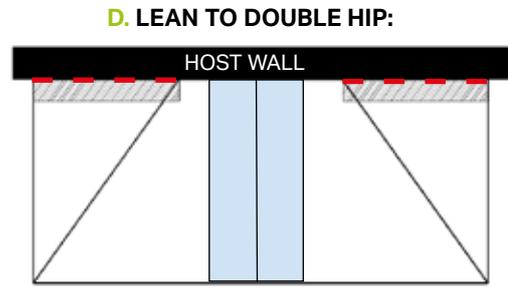
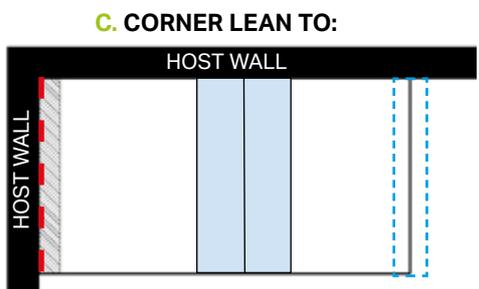
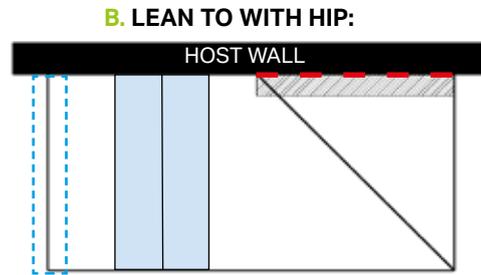
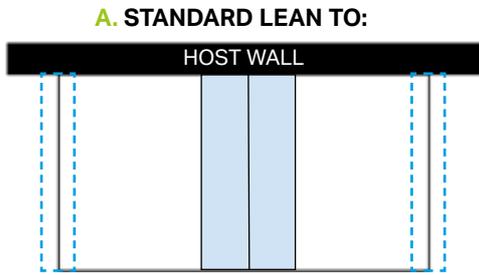
**4**  
Where glazing is present, allow the membrane to overlap into the glazing bar as shown. The drainage channel can then be installed to clamp the membrane in place.



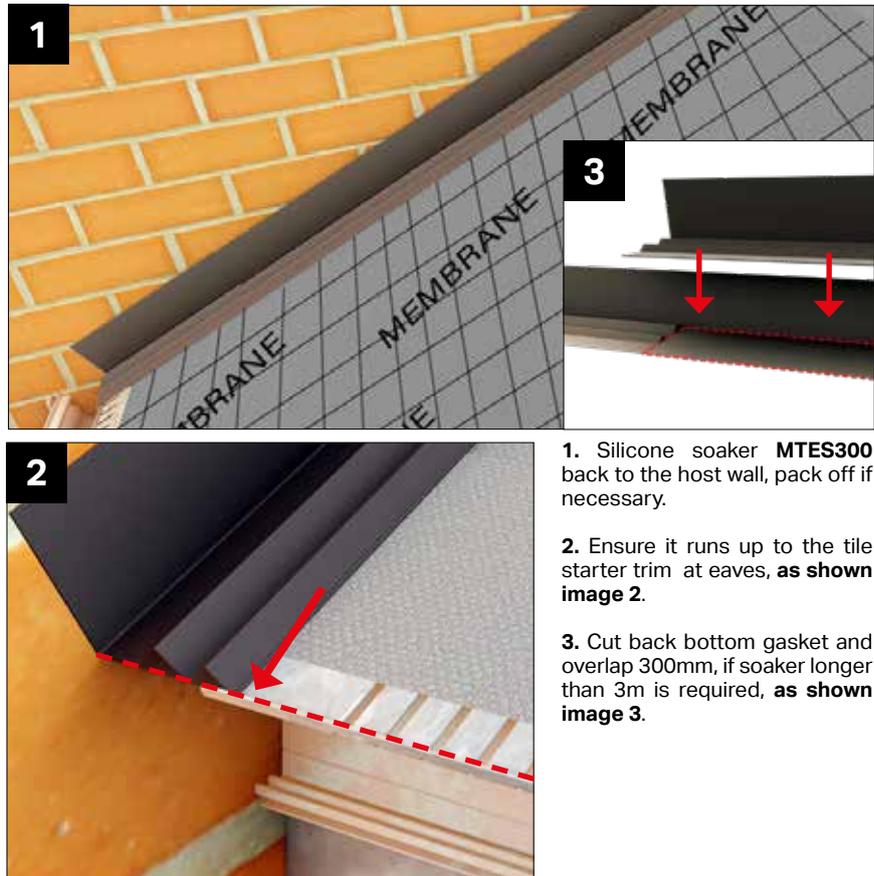
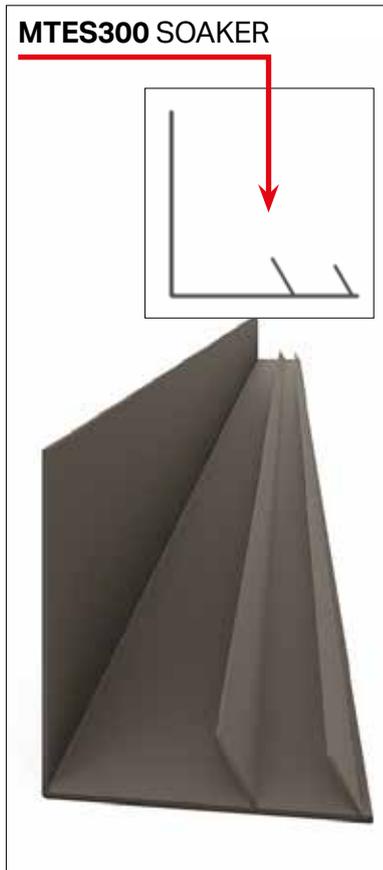
**5**  
Tape the joint between the membrane and drainage channel as shown using weathering tape (**PROVIDED**).

# SOAKER DETAIL

**NOTE: ONCE ROOF IS FULLY COVERED WITH MEMBRANE, USE BELOW DIAGRAMS TO IDENTIFY SOAKERS NEEDED FOR YOUR PROJECT.**

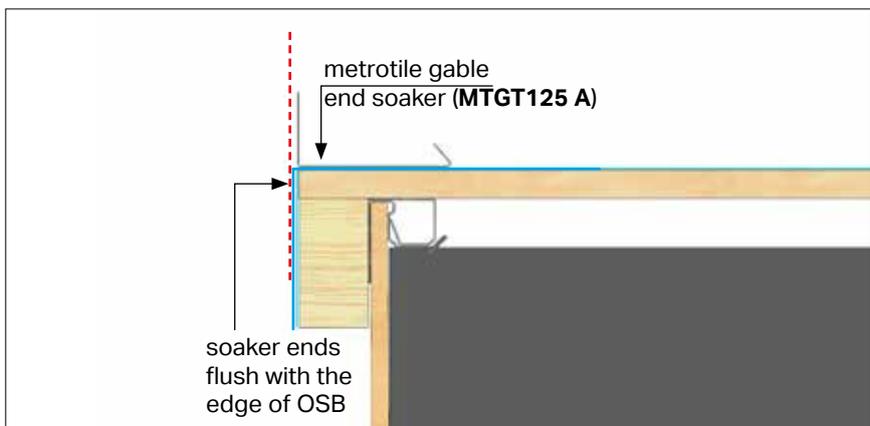
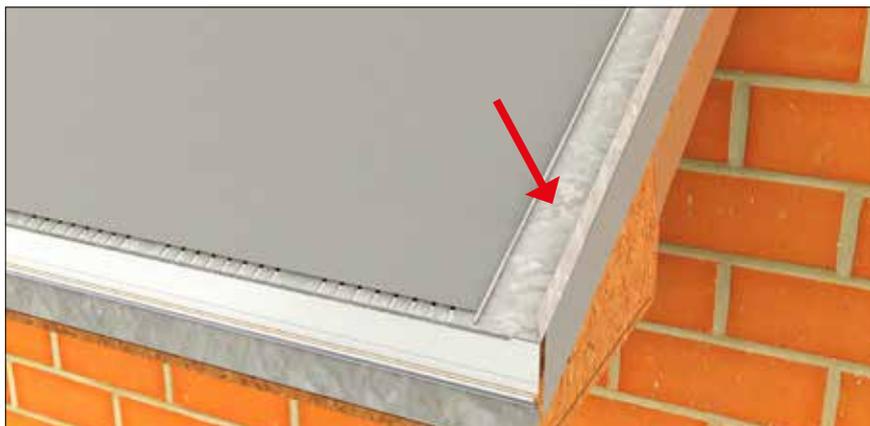
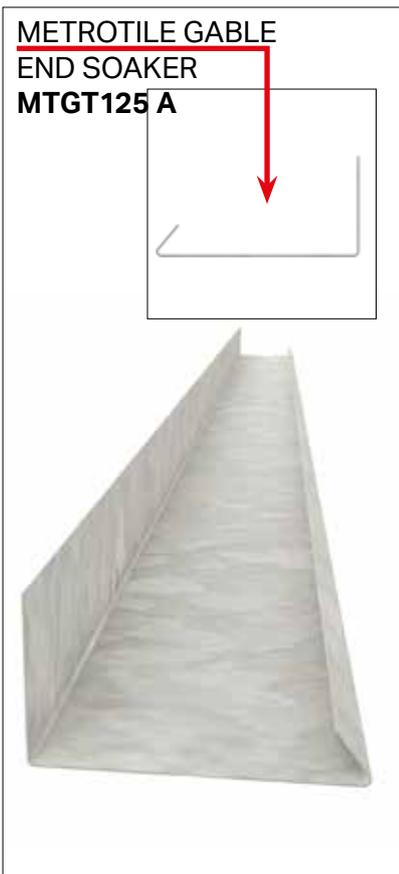


|   |                                   |
|---|-----------------------------------|
|  | SOAKER <b>MTES300</b>             |
|  | GABLE END SOAKER <b>MTGT125 A</b> |

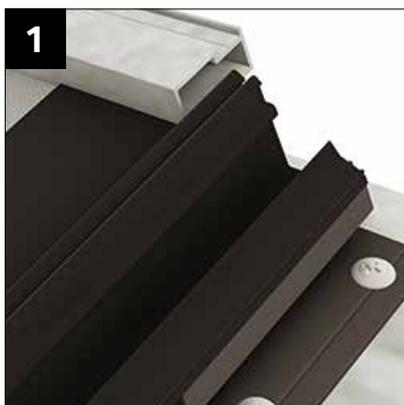


# SOAKER DETAIL

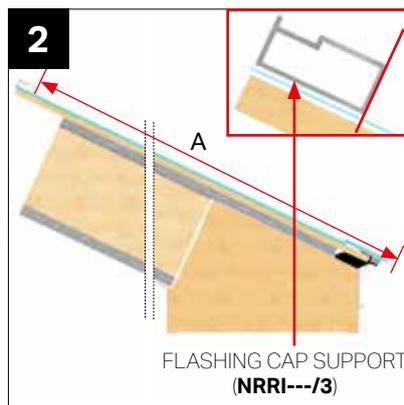
LEAN TO - GLAZED ROOF



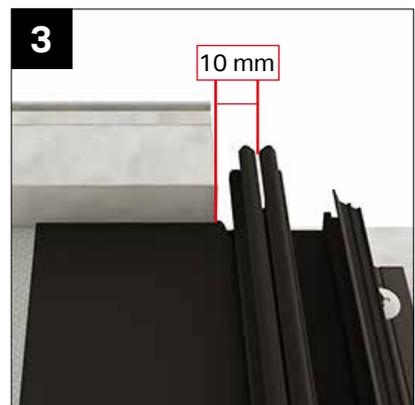
# GLAZING INSTALLATION SEQUENCE



**1** At each side of the glazing area, flashing cap support NRRI---/3. The lower edge of flashing cap support is positioned a set distance from the edge of tile starter. See critical dimension sheet for dimension (ref. to step 2 for clarity).



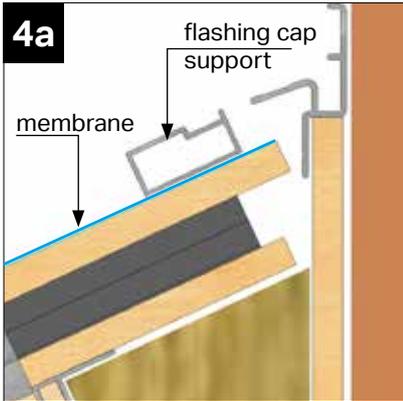
**2** Dimension A given on critical dimension sheet. This gives distance from face of flashing cap support to outer edge of tile starter.



**3** Ensure 10 mm offset from mid point of the glazing bar to the edge of flashing cap support. The tile stop is bedded down with clear low modulus silicone, then screwed at 300mm ctrs using (GPHS050) 4.8 x 38 screws (SUPPLIED). Finally seal lower edge of the tile stop to underlayer again using clear low modulus silicone.

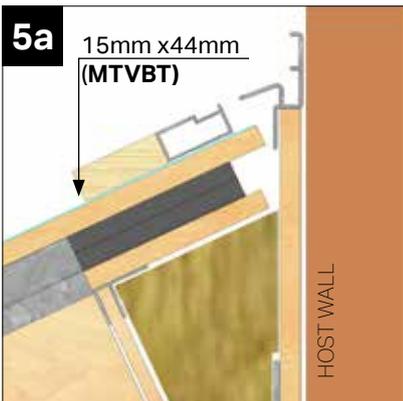
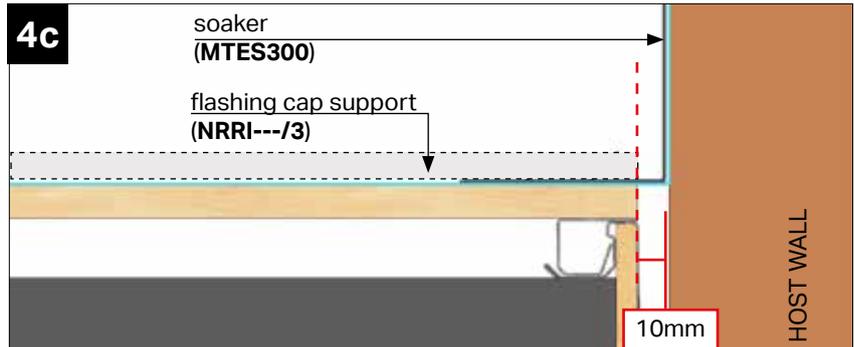
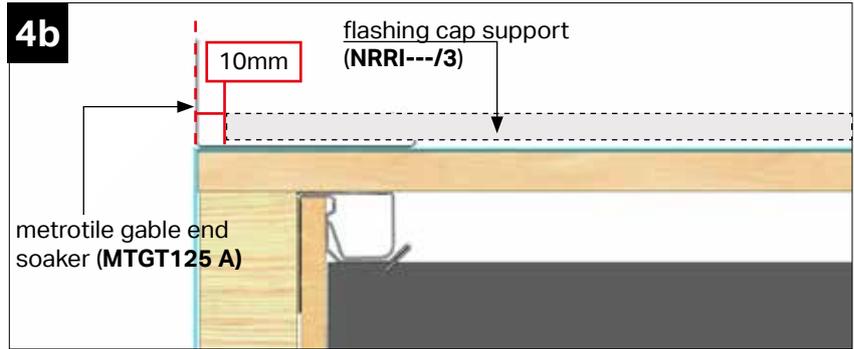
# GLAZING INSTALLATION SEQUENCE

LEAN TO - GLAZED ROOF



When placing flashing cap support against the **MTGT125 A metrotile gable end soaker** ensure 10mm gap inbetween the soaker and the aluminium upper tile stop (as shown image 4b).

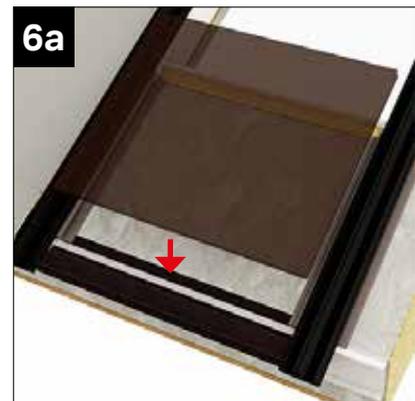
When placing flashing cap support against **MTE300 soaker**, ensure 10mm gap inbetween the soaker and the aluminium upper tile stop (as shown image 4c).



Place 15mm x 44mm **MTVBT** batten, right against the aluminium upper tile stop (as shown above), use **GPHS050** 4.2mm x 38mm at 500 ctrs screws (**PROVIDED**) to fix.



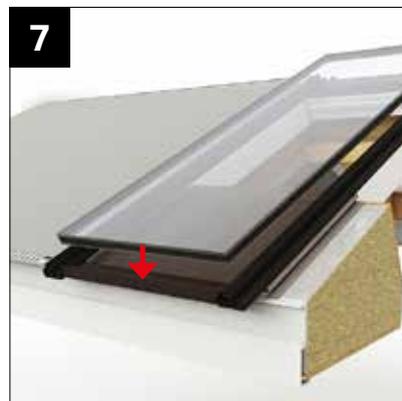
Where against the glazing, ensure batten **MTVBT** is aligned with flashing cap support. When placing the batten against the **metrotile gable end soaker MTGT125 A** or against the **MTE300 soaker**, ensure 10mm gap inbetween the soaker and the batten (same as flashing cap support **NRRI---/3**).



Position the polycarbonate screen at box beam, ensure not to cover ventilation mesh and secure with single 4.2 x 25mm screw top centre **NRTS050** (**PROVIDED**).



Position the polycarbonate screen at ridge. Secure with single 4.2 x 25mm screw top centre (**NRTS050**) (**PROVIDED**).



Lay carefully into position the 24mm thick double glazed unit tight to the upstand on the lower glazing support section.



Prior to fitting the hip poly support cap **UZLPEB---/5**, run a bead of silicone, low modulus (for non coated glass) or MS polymer (self cleaning glass) immediately behind, the co-extruded gasket before tapping down into position. Then seal each end to protect the seal.

# GLAZING INSTALLATION SEQUENCE

LEAN TO - GLAZED ROOF



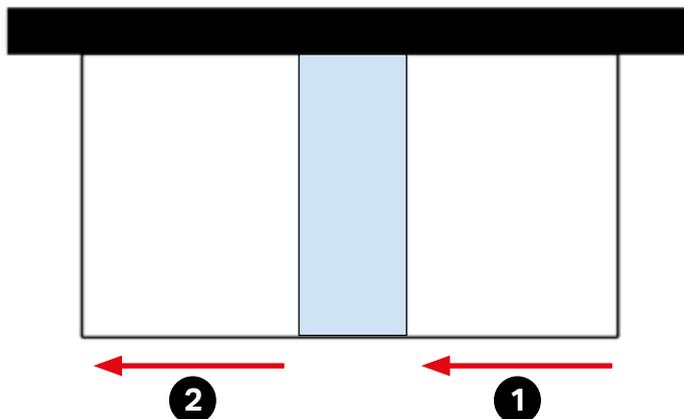
Fit the pre-notched glazing end profile.

## TILE OVERVIEW



## TILING DIRECTION

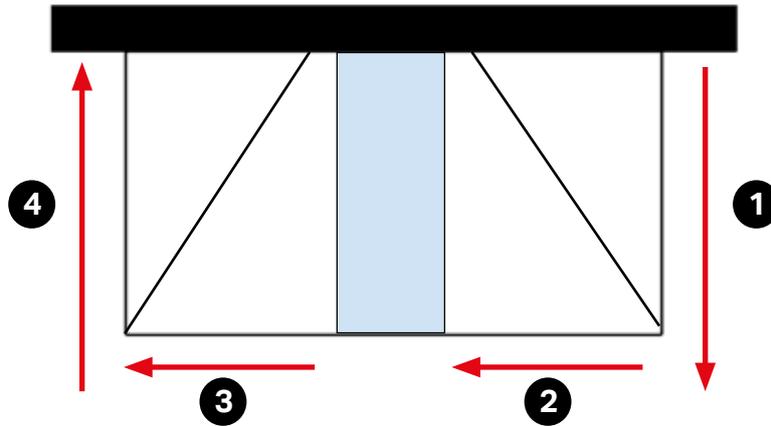
### A. STANDARD and CORNER LEAN TO



**ALWAYS INSTALL TILES IN THE DIRECTION AS SHOWN ABOVE**

# TILING DIRECTION

## B. LEAN TO HIP AND DOUBLE HIP

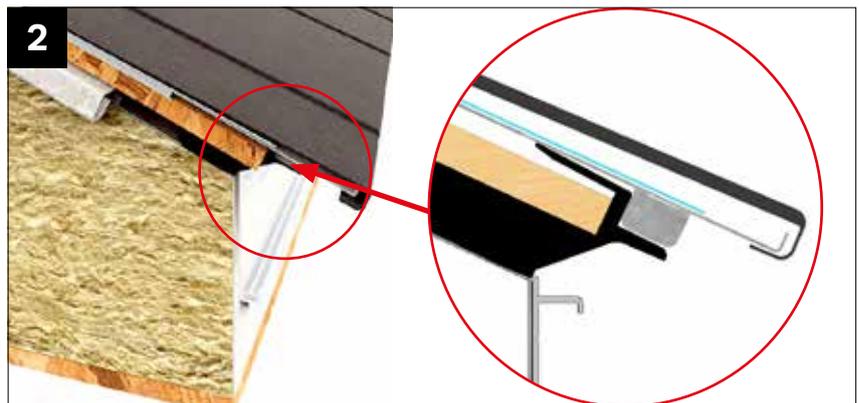


**ALWAYS INSTALL TILES IN THE DIRECTION AS SHOWN ABOVE**

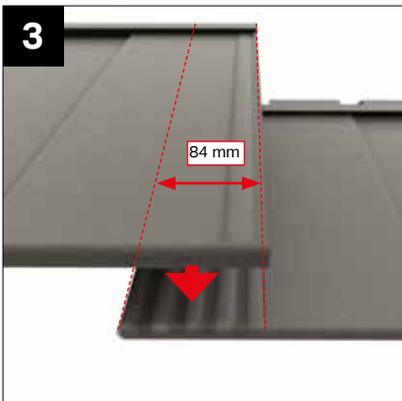
## TILES INSTALLATION SEQUENCE



Place the first tile at the right hand side of the extension, ensure to line tile up with the end of the beam. When corner lean to ensure, 10 mm away from the host wall.



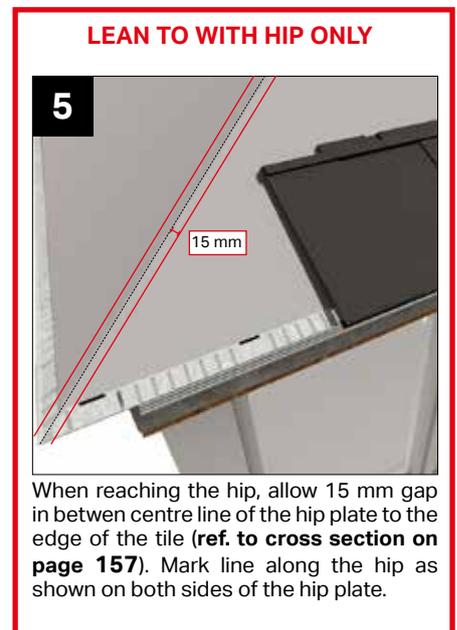
Ensure tiles hook over the tile starter, each full tile is secured using 4 x NROS050 4mm x 25mm screws (PROVIDED).



Each tile overlaps by 84 mm.



Where tiling against glazing ensure tiles are offset 10mm from the mid point of the glazing bar.



When reaching the hip, allow 15 mm gap in between centre line of the hip plate to the edge of the tile (ref. to cross section on page 157). Mark line along the hip as shown on both sides of the hip plate.

# TILES INSTALLATION SEQUENCE

**LEAN TO WITH HIP ONLY**

**6**

At the bottom of roof measure from the edge of the last tile to the marked out previously line, add 84 mm to overall dimension (as above dim B). Use angle finder to determine the angle. **Refer to step 7** for clarity.

**7**

**LEAN TO WITH HIP ONLY**

**8**

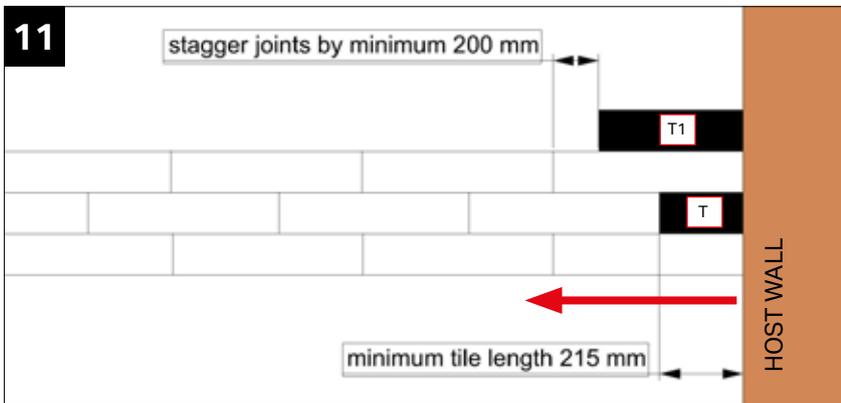
Scribe the angle onto the face of the tile.

**9**

Clamp the tile securely, then cut using snips or similar.



Ensure to engage each lower lip by tapping into position. For best optimization of tile cutting and joints staggering refer to step 11.



Ensure cut tiles are utilised along next row and must always be the first tile of that row. Minimum length of tile to be used should be 215mm. Ensure minimum 200 mm overlap in tiles joints relative to the following row.

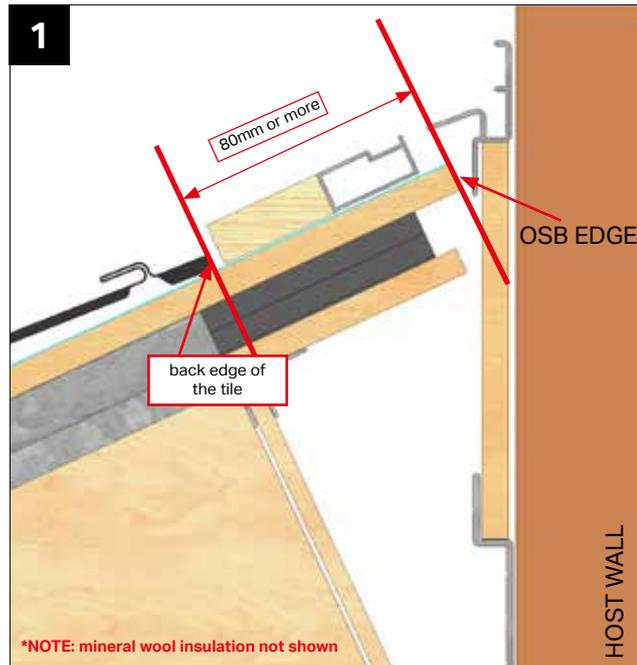
# RIDGE BATTENS AND LAST TILE SETTING OUT

## WITHOUT TILE CATCHER

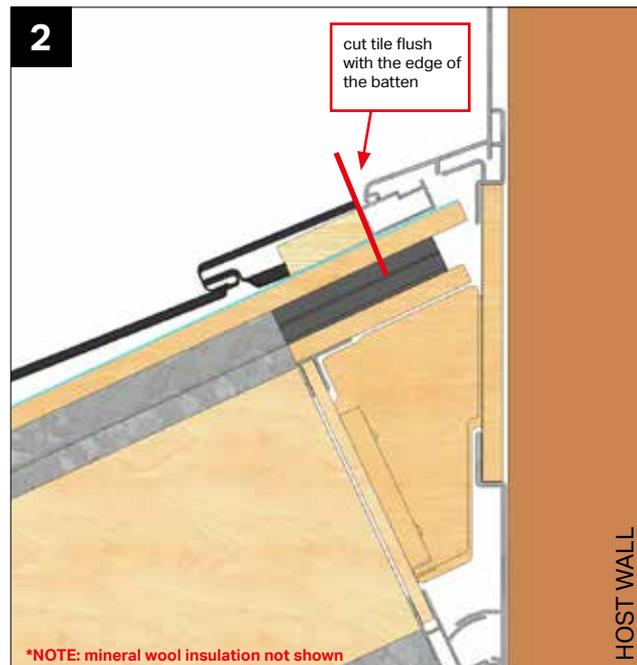
### IMPORTANT:

ONLY FOLLOW THESE STEPS IF **TILE CATCHER IS NOT SUPPLIED**. IF DISTANCE FROM THE OSB EDGE TO THE BACK EDGE OF THE SECOND TO LAST ROW OF TILE IS **EQUAL OR GRATER THAN 80 mm** TILE CATCHER IS NOT SUPPLIED.

IF TILE CATCHER HAS BEEN SPECIFIED MOVE TO THE NEXT SECTION (RIDGE BATTENS AND LAST TILE SETTING OUT WITH TILE CATCHER PAGE 156).



Before fitting last row of tiles ensure **MTVBT** battens are fitted. Ensure distance from the edge of OSB the back of last tile is greater or equals 80mm.



Place last row of tile over the batten ensure tiles end flush with the end of batten, cut tile to size as necessary. Secure tiles using **NROS050** 4mm x 25mm screws (**PROVIDED**).

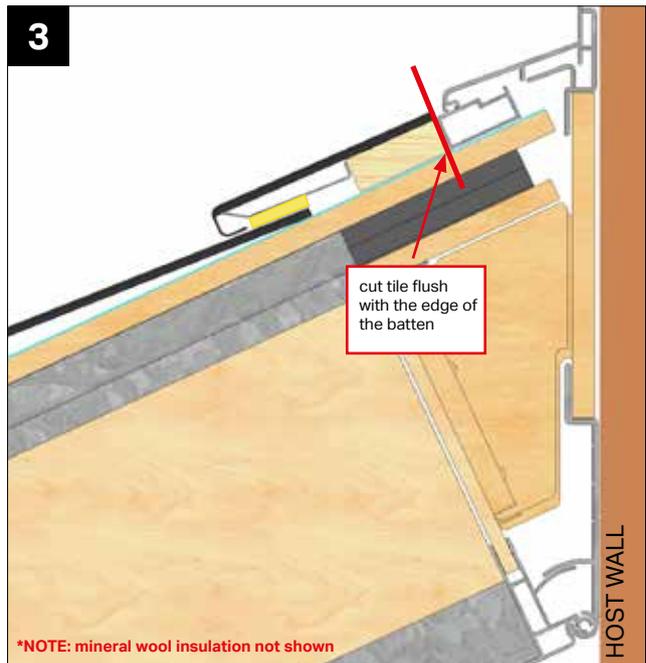
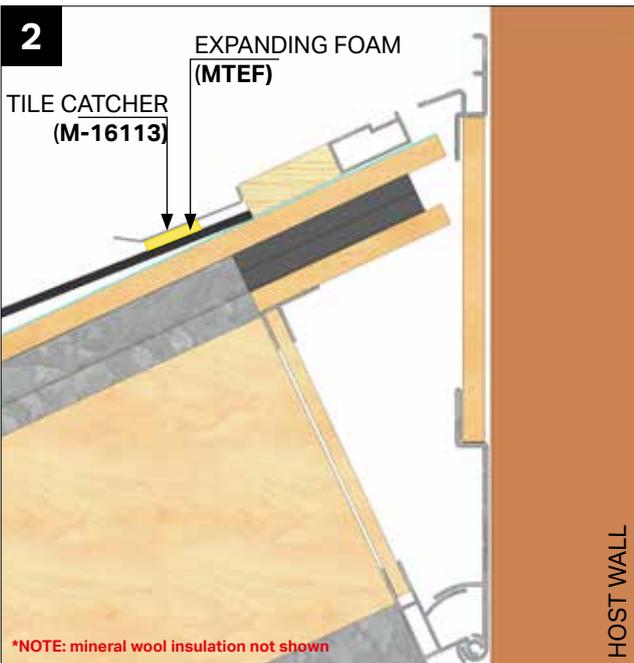
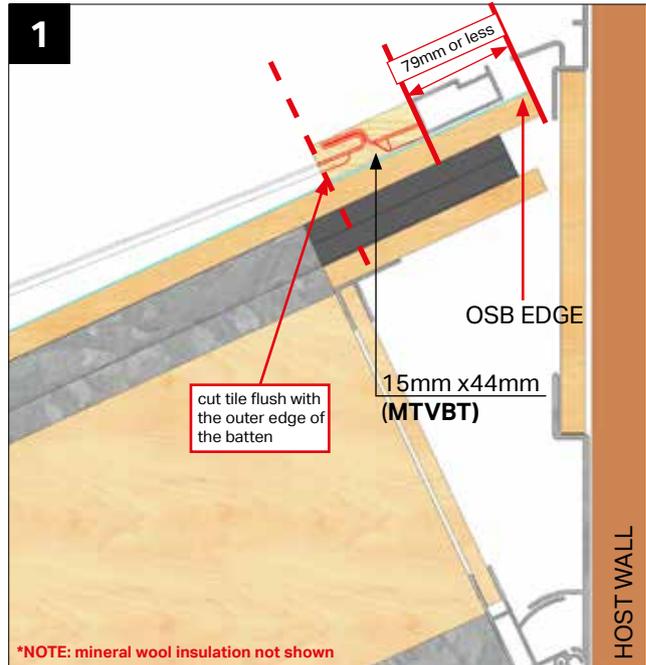
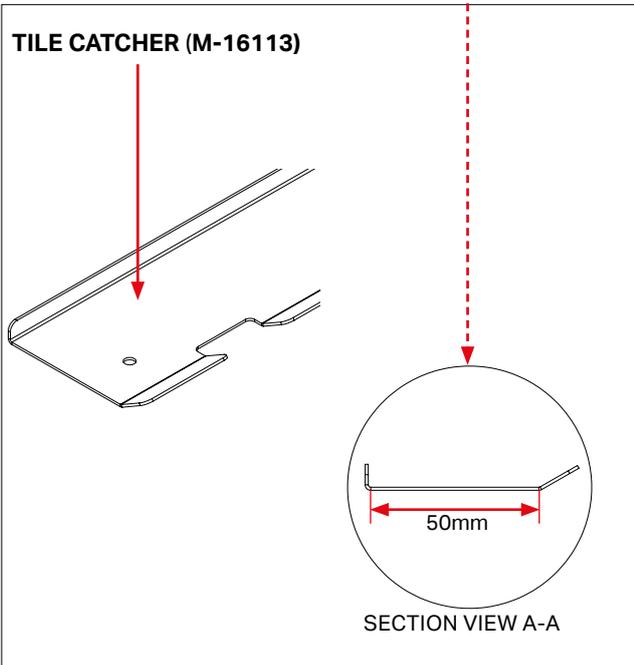
# RIDGE BATTENS AND LAST TILE SETTING OUT

## WITH TILE CATCHER

### IMPORTANT:

ONLY FOLLOW THESE STEPS IF **TILE CATCHER SUPPLIED**.

TILE CATCHER IS SPECIFIED IF DISTANCE IN BETWEEN SECOND TO LAST ROW OF TILES AND THE EDGE OF OSB IS GREATER THAN 8mm OR LESS THAN 79MM. THE REAR SECTION OF THE SECOND TO LAST ROW OF TILE IS TO BE REMOVED AND M-16113 TILE CATCHER IS SPECIFIED.

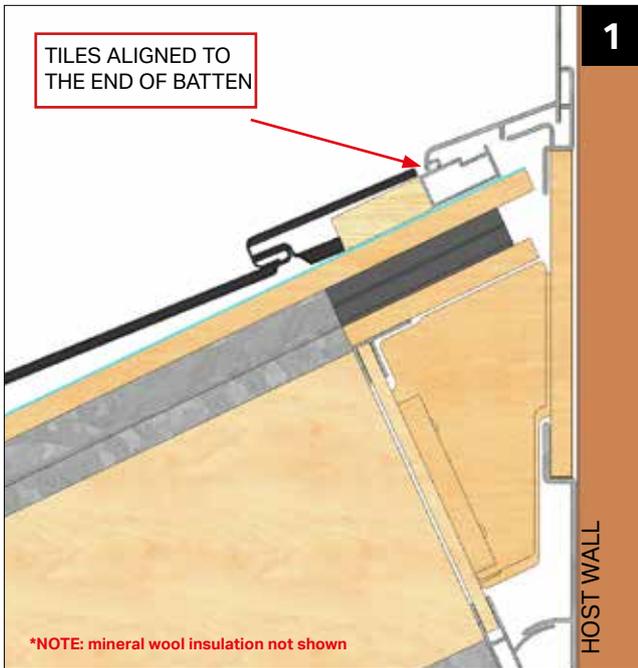


Place tile catcher **M-16113** against the batten, cut second to last row of tiles to allow for minimum 25mm overlap under the tile catcher (this is essential to ensure seal in between tile catcher and tiles). Fix tiles down, place expanding foam **MTEF** under tile catcher and fix it down using **NRPS050** screws (**PROVIDED**) 4.0 mm x 25 mm.

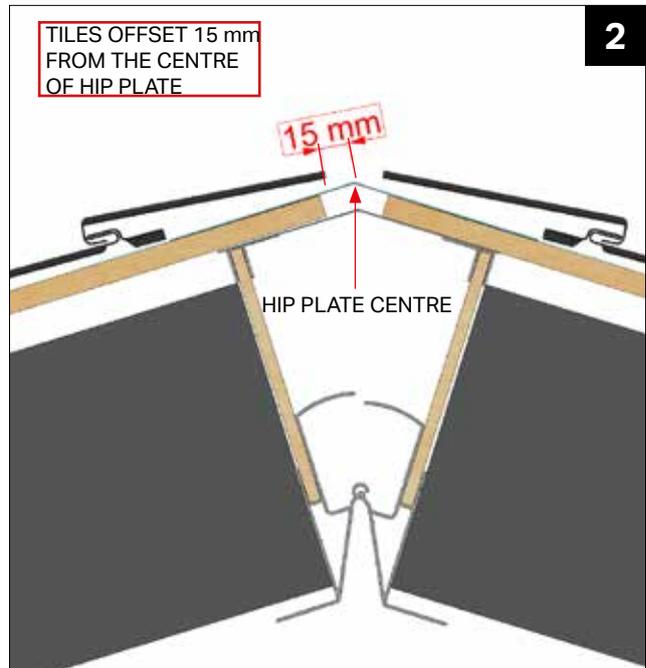
Place last row of tile over the batten ensure tiles end flush with the end of batten, cut tile to size as necessary. Secure tiles using **NROS050** 4mm x 25mm screws (**PROVIDED**).

# TILES FINISHING - CROSS SECTIONS

## Tiles finishing at half ridge

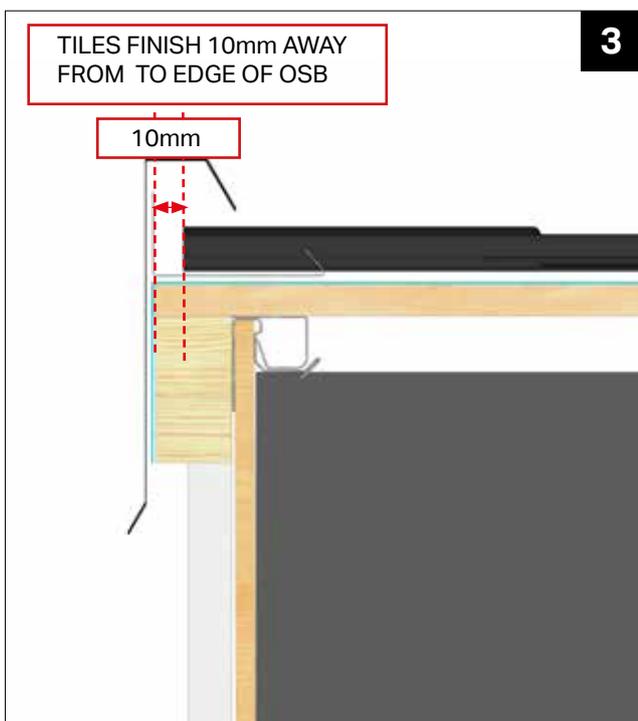


## Tiles finishing at hip

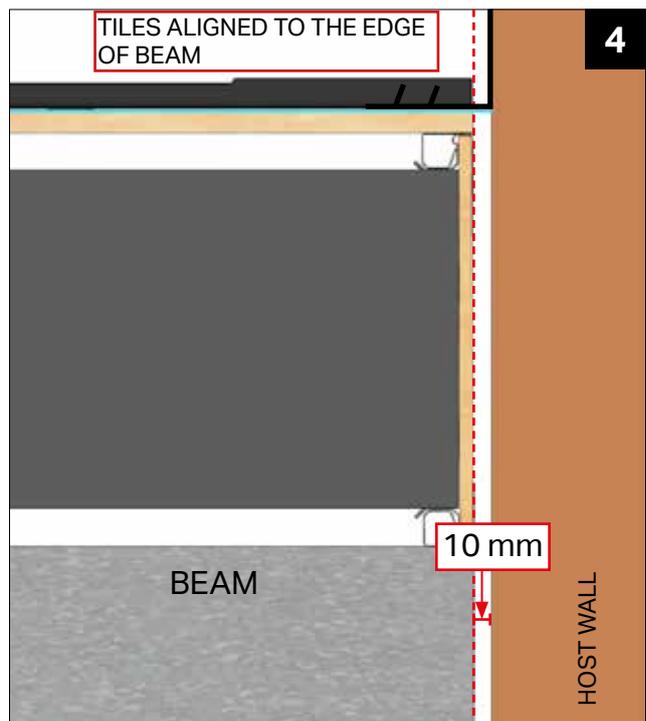


Ensure tiles offset 15mm each side from the centre of hip plate.

## Tiles finishing at gable end



## Tiles finishing at host wall

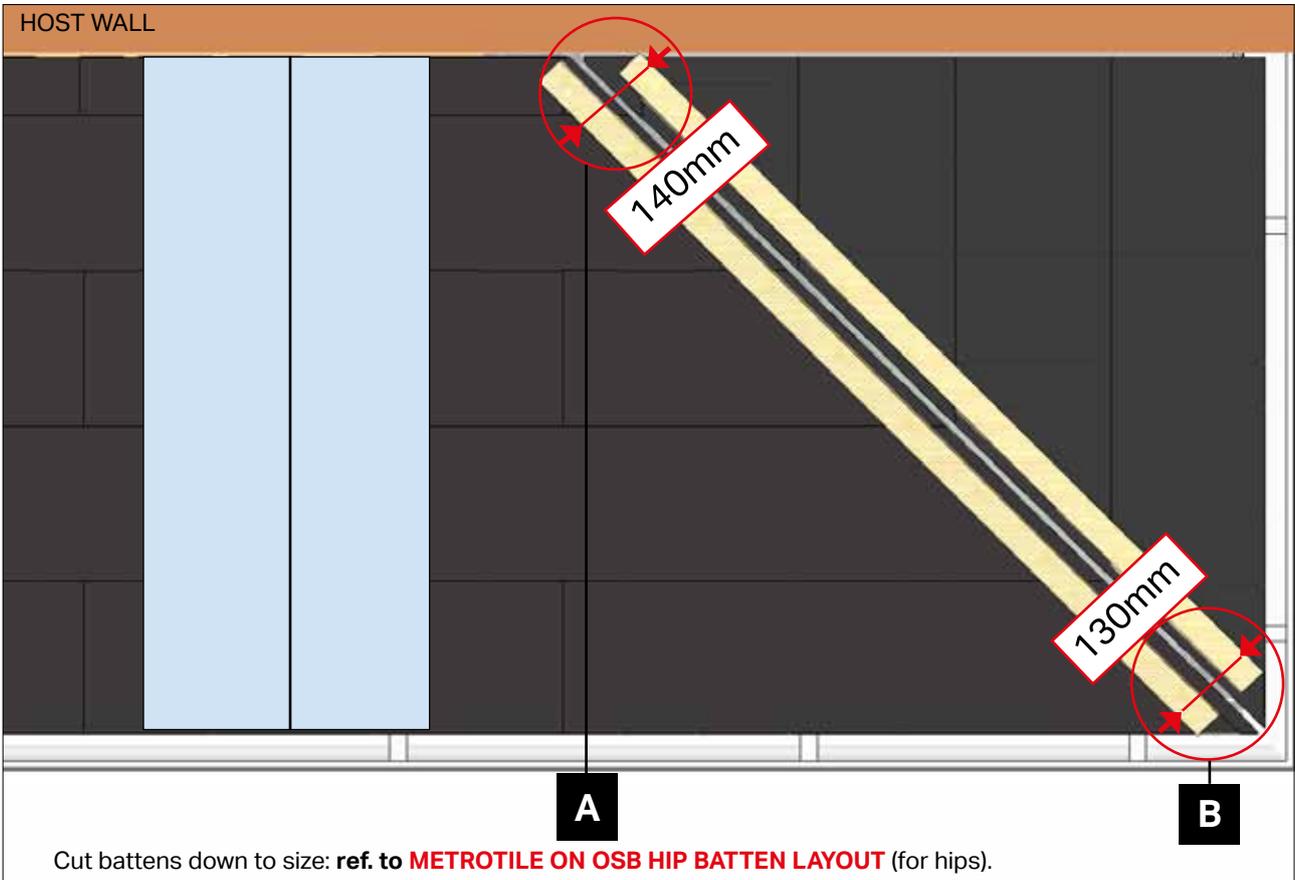


Ensure tiles are aligned to the edge of beam.

# BATTENS ON HIP SETTING OUT

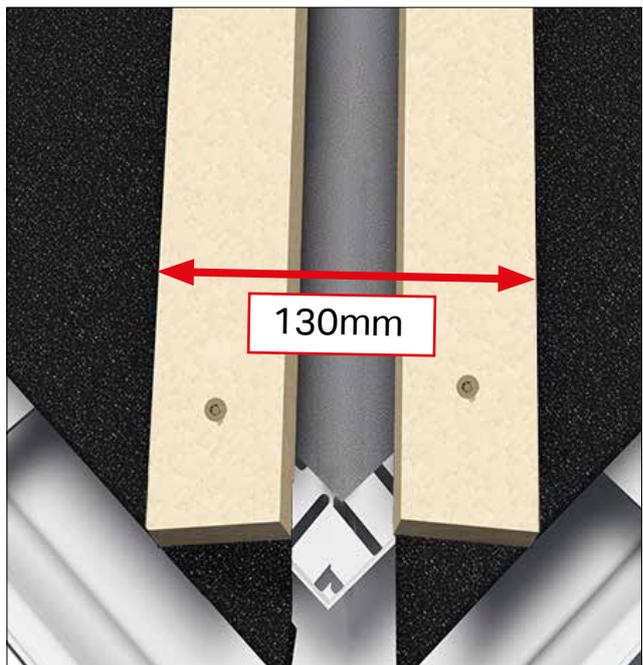
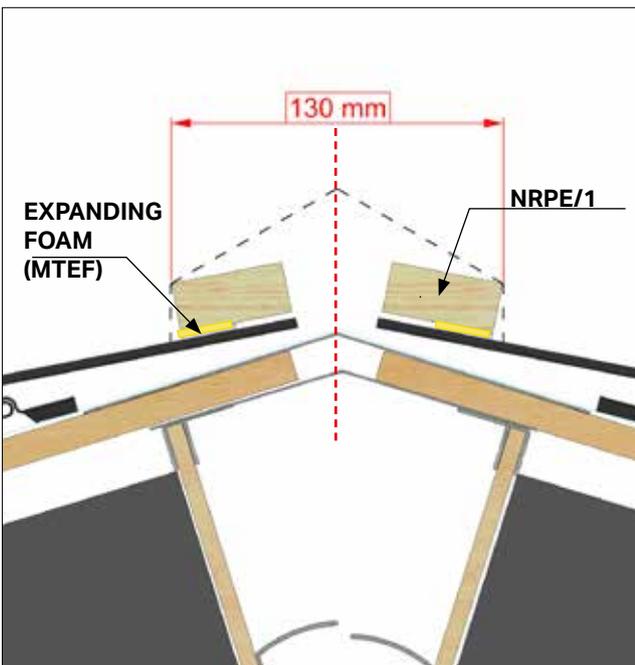
LEAN TO WITH HIP ONLY

## IMPORTANT NOTE: SPLAYED HIP BATTENS



### SECTION VIEWS:

#### A. Battens at the bottom of hip

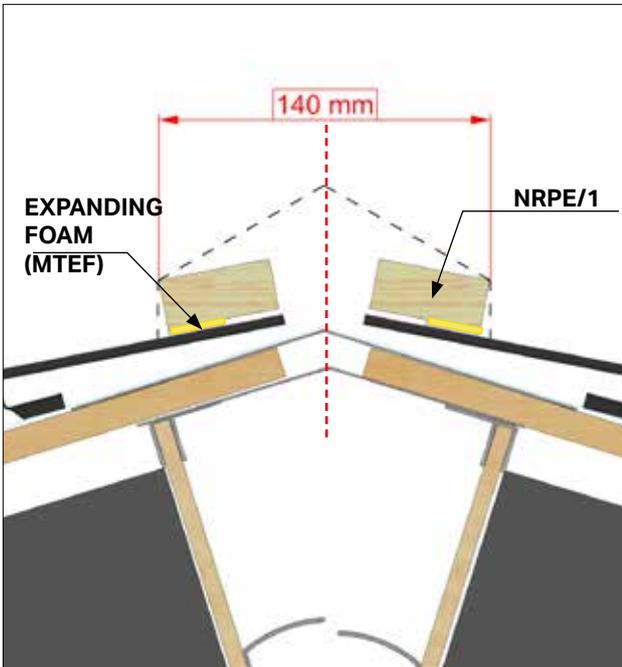


**NOTE:** Put expanding foam (MTEF) under the battens before fixing battens. Ensure, expanding foam strip (MTEF) lines up with outer edge of batten (as shown above).

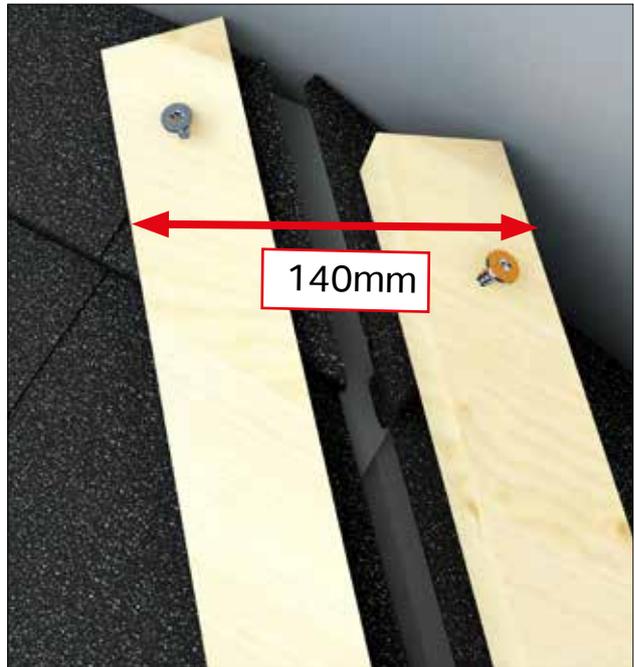
Fix hip battens on metrotile using **FSW5570** 5.5mm x 70mm screws (**PROVIDED**) at 500 ctrs, each side, each batten.

# BATTENS ON HIP SETTING OUT

## B. Battens at the top of hip



**NOTE:** Put expanding foam (MTEF) under the battens before fixing battens. Ensure, expanding foam strip (MTEF) lines up with outer edge of batten (as shown above).



Fix hip battens on metrotile using **FSW5570** 5.5mm x 70mm screws (**PROVIDED**) at 500 ctrs, each side, each batten.

## TOP CAPPINGS - HIP ONLY



METROTILE VERANDA HIP END CAP (MTVH135),(MTVH090),(MTVH180)\*

Ensure metrotile veranda hip end caps (MTVH1365, MTVH090, MTVH180\*) are installed. Use **MTSN010** 25mm shingle nails (**PROVIDED**), use one fixing per side per end cap

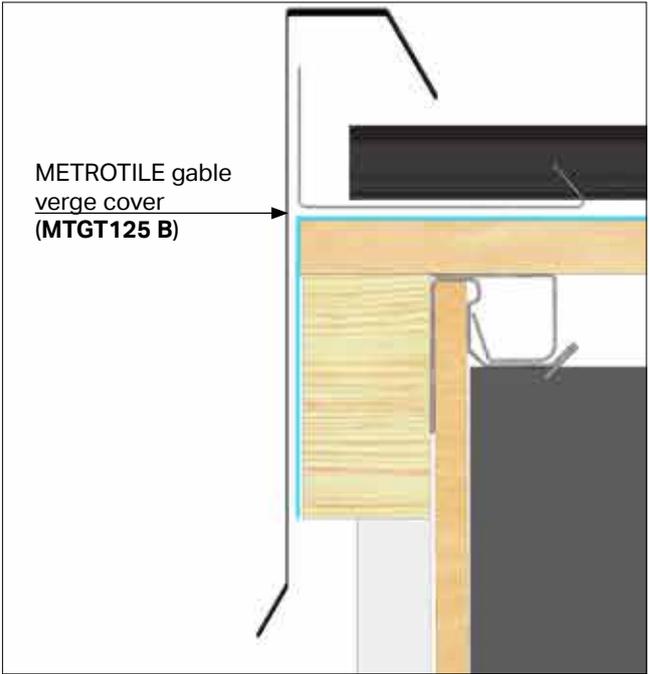
**\*NOTE: MAY VARY DUE TO ROOF SHAPE AND ITS PITCH.**



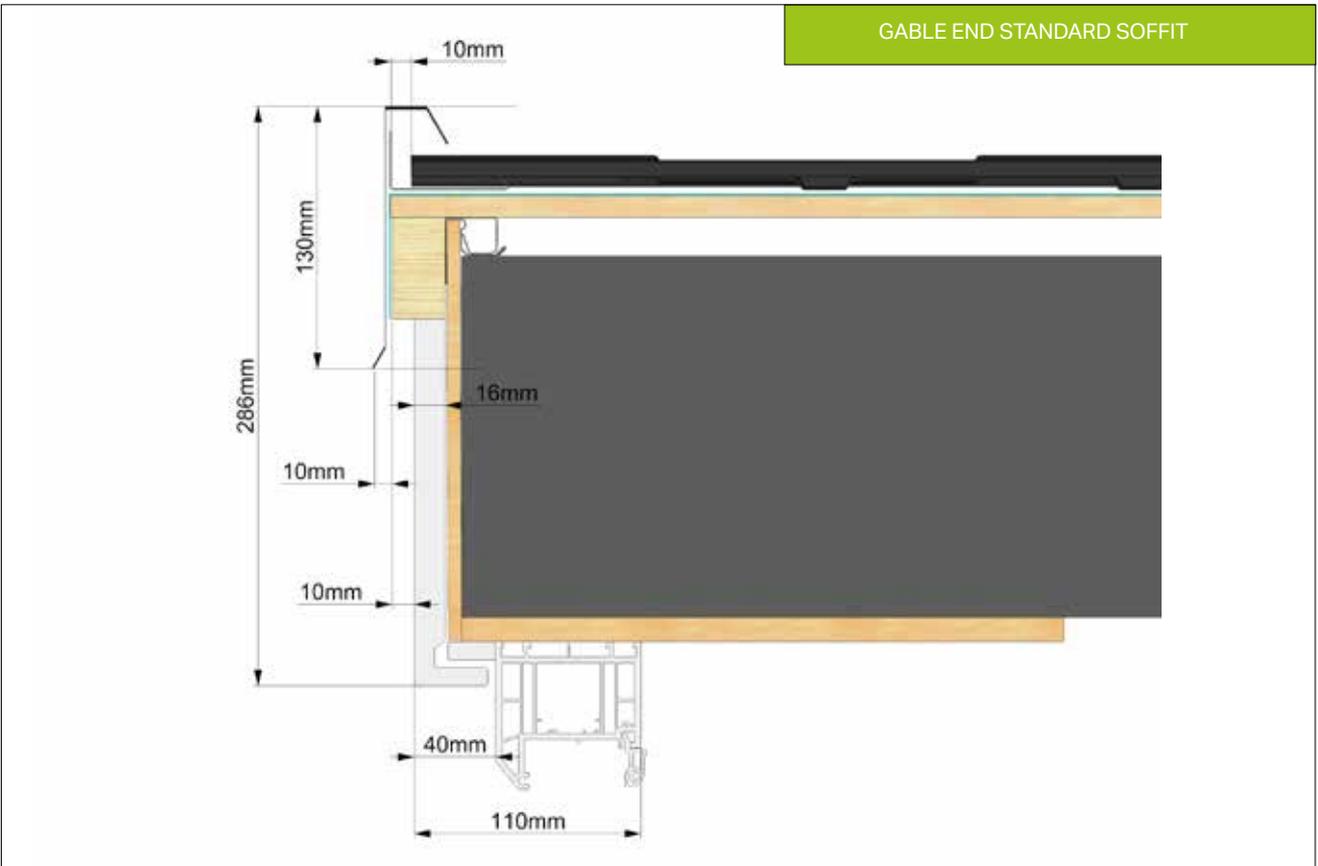
Ensure metrotile veranda delta hip cover (MTVT1365) is installed. Use **MTSN010** 25mm shingle nails (**PROVIDED**), fix 500ctr per hip cap per side.

# GABLE VERGE COVER ASSEMBLY

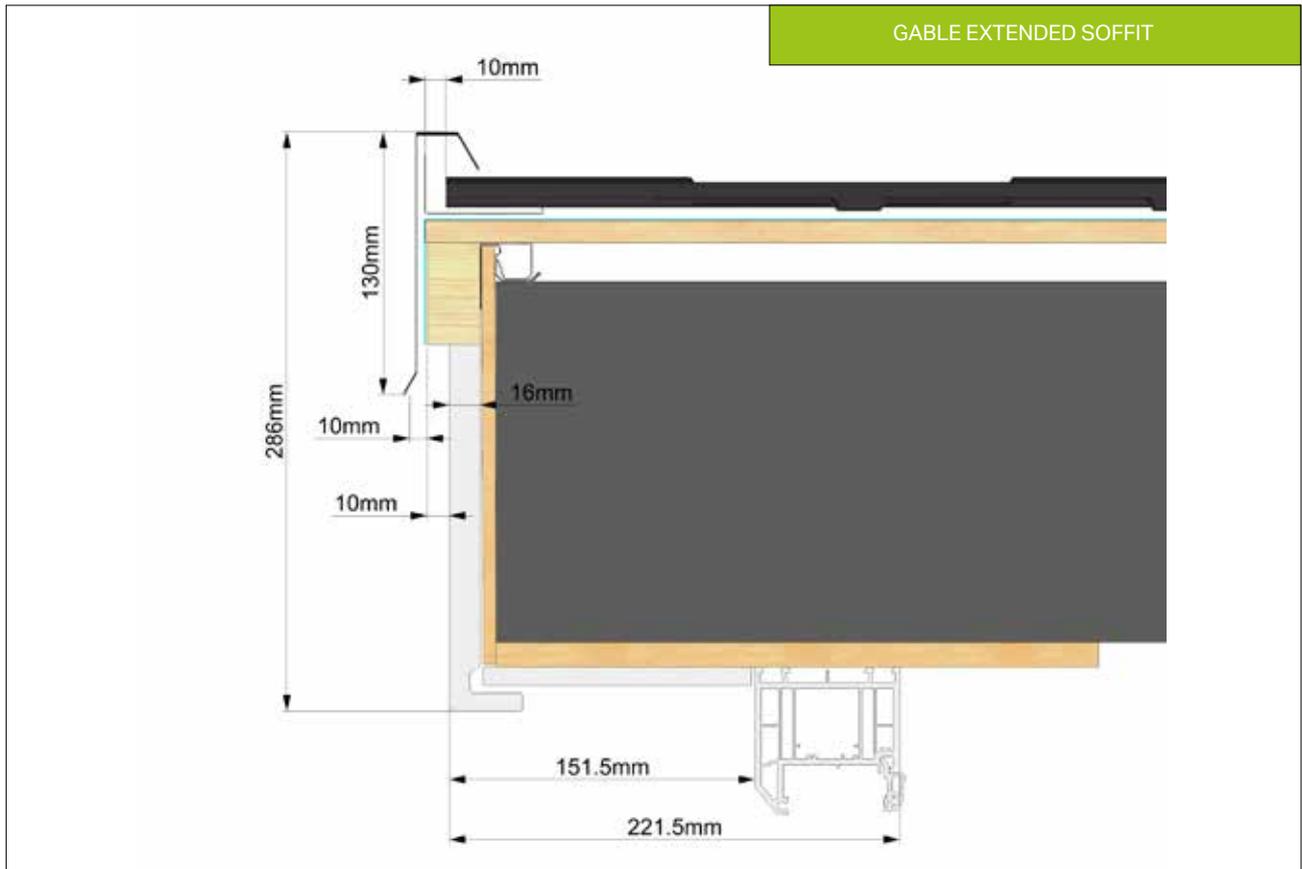
LEAN TO - GLAZED ROOF



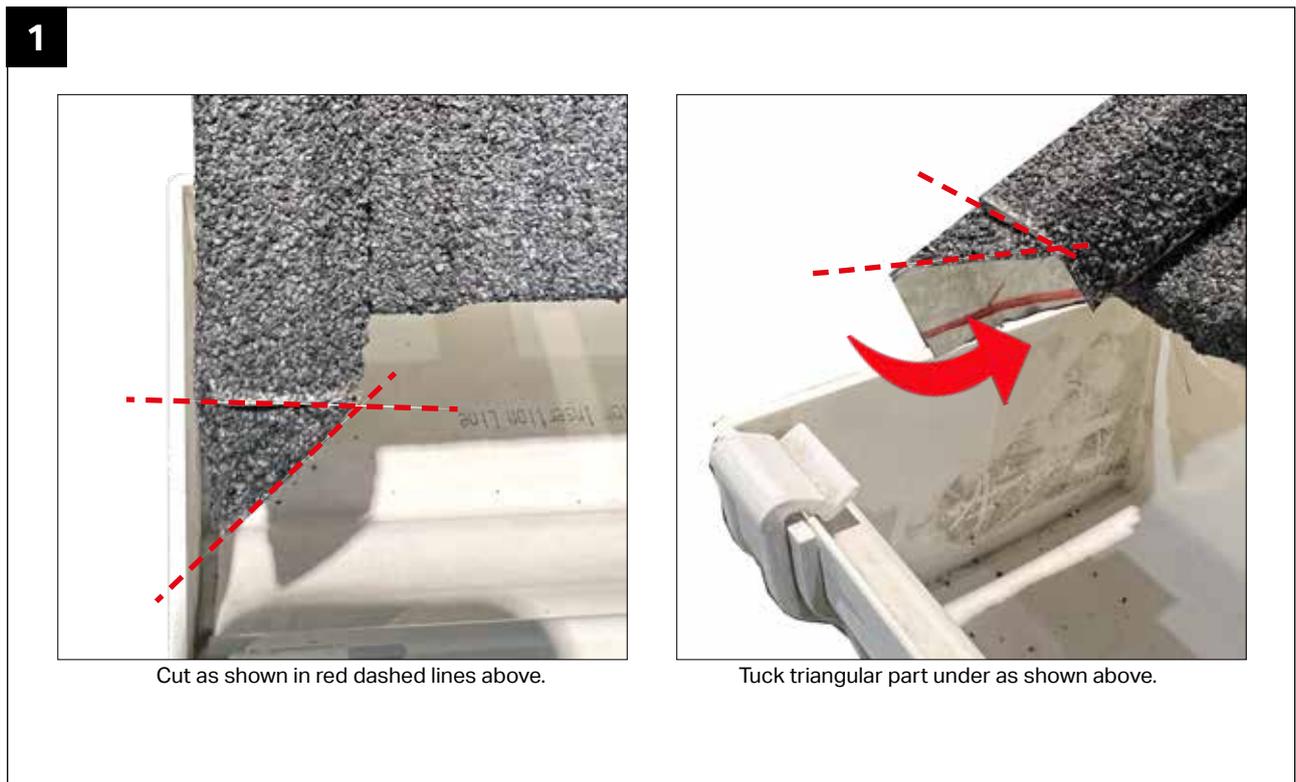
Once gable fascia and gutter are fitted, place and fix metrotile gable ends. Refer to page 161-162 for instructions on how to cut and shape gable end cap at the gutter end.



# GABLE VERGE COVER ASSEMBLY



## GABLE END CAP AT THE GUTTER SETTING OUT

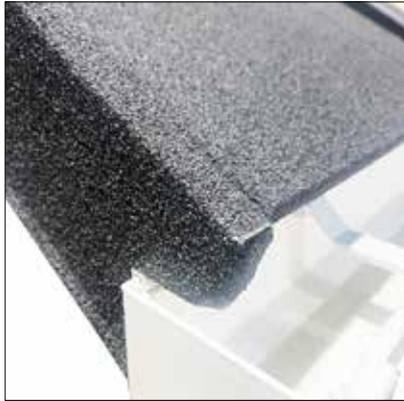


## GABLE END CAP AT THE GUTTER SETTING OUT

2



Fold to produce end cap.



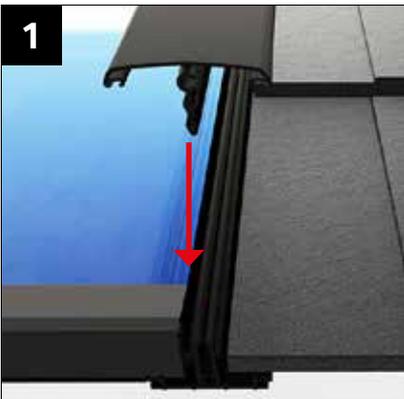
| PART  | IMAGE  | SPECIFIC CRITERIA      |
|---|--|------------------------|
| MTRP001/L or R<br>LEAN-TO RIDGE<br>PLATE<br> |   | 1 PER LEAN-TO<br>GABLE |
| MTRP002<br>LEAN-TO RIDGE<br>PLATE GASKET  |  | 1 PER LEAN-TO<br>GABLE |



Now the dry verge is in place, please install foam backing and end cap over the dry verge as shown.

## GLAZING TOP CAPPINGS

1



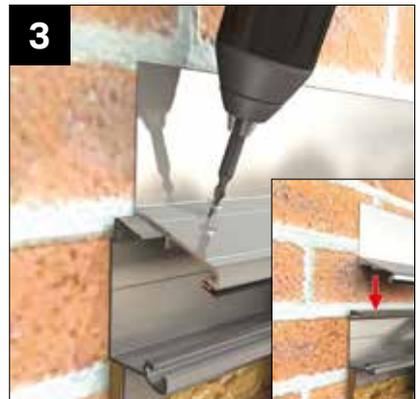
When fitting the glazing top cappings **ensure you have the brush seal gasket covering the tiles and the QLon gasket on the glass**, prior to knocking the capping down.

2



Attach the aluminium transom end cap plates to the end of each glazing bar using 2 x 4.8 x 32mm pan head self drill screw (**NRES004**) provided. Each screw comes with a 2 part coloured screw cap cover.

3



Centralise and fit the half ridge flashing cap (**NRHR/2**). Secure using 4.0 x 13 CHAA06 screws provided at 500mm ctrs. **Beware: longer screws may penetrate glass.**

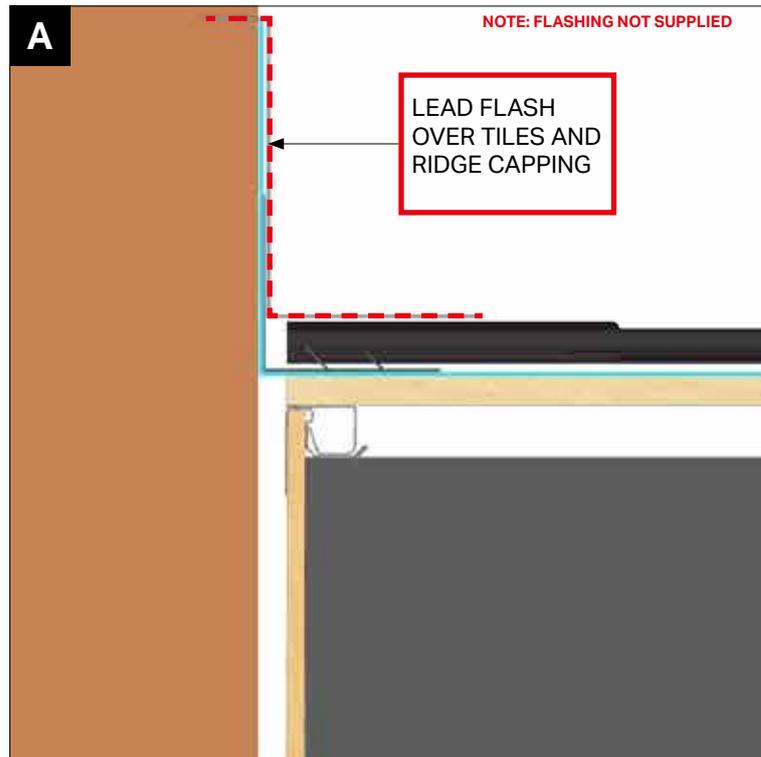


**NRES004** 4.8mm x 32mm pan head self drill screw (2 per cap)

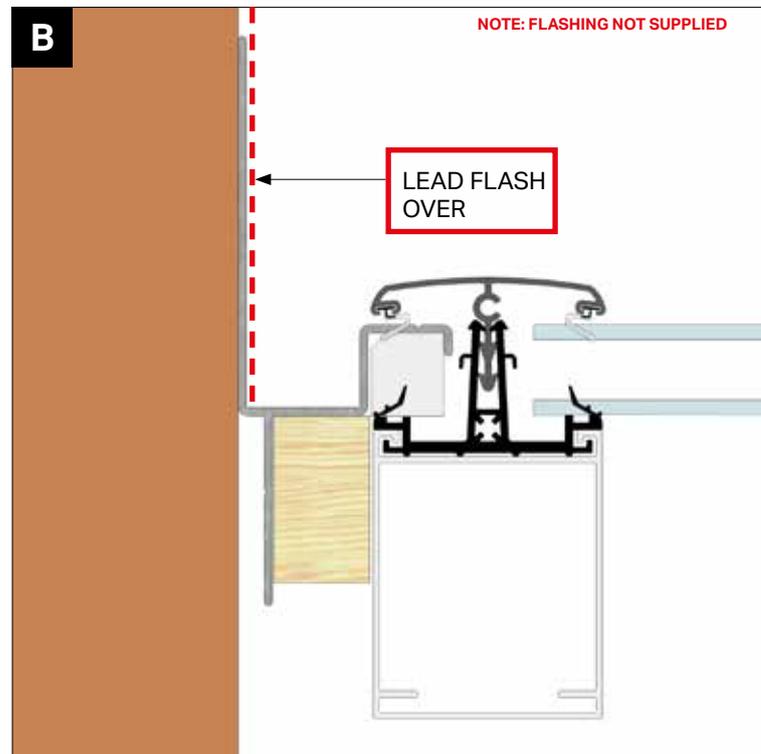
**NREC001**  
aluminium  
transom  
end plate



# LEAD FLASHING (NOT SUPPLIED)



If there is **no glazing against the host wall**: once roof is fully covered with tiles ensure to lead flash over the tiles (including ridge capping) and host wall.



If there is **glazing against the host wall**: once roof is fully covered with tiles, ensure to lead flash over as shown above.