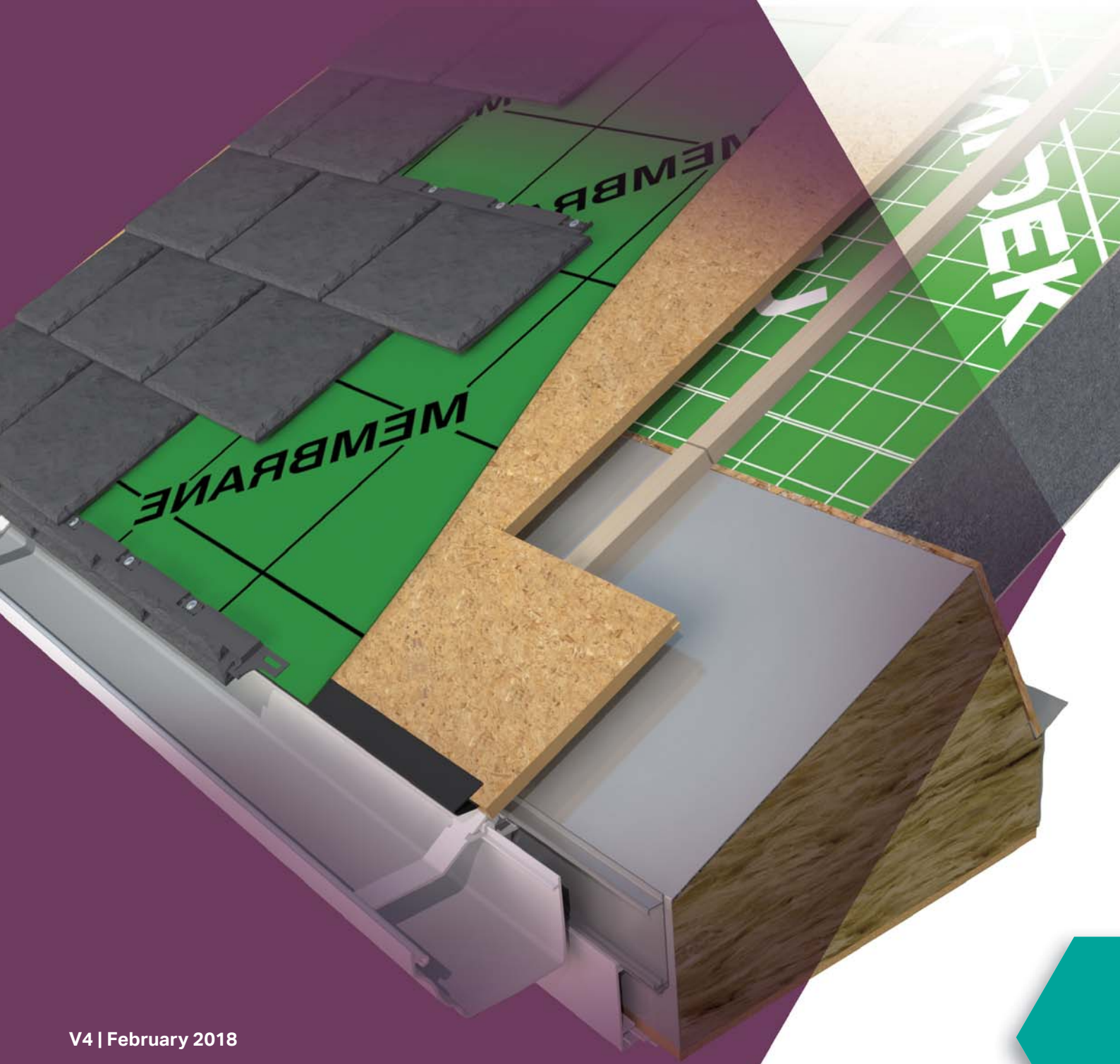
Ultraroof™
By Ultraframe



V4 | February 2018

ULTRAROOF
INSTALLATION GUIDE

Dear Customer,

Thank you for choosing the Ultraframe Ultraroof380 product.
This guide is designed to make fitting as straightforward as possible.

Before you commence installation of the roof, please take a moment to read the guide.

This guide is written on the basis that a qualified surveyor has undertaken correct checks for the capability / structural performance of any existing framework / walls / foundations to verify they are fit for purpose. Any feedback - positive or negative - is welcomed so we can make our systems even better.

Please contact the Tech Support Team on **01200 452 918**
or email **techsupport@ultraframe.co.uk**

FITTERS:
Look out for this registration form and pass to the homeowner please

CONTENTS

TOOLS REQUIRED

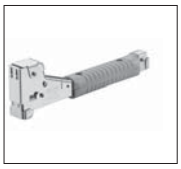

Clamps


2.5m straight edge


8mm Hex head socket


10 and 17mm spanner


Tape measure


Staple gun


6mm drillbit

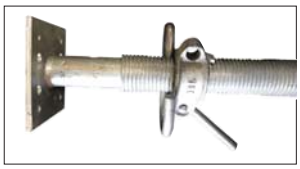

Drill/imapct screwdriver


Plumb bob and string line


Small scaffold tower & Youngman boards


Long (1,500mm) and short spirit levels


Heat gun


Acro prop

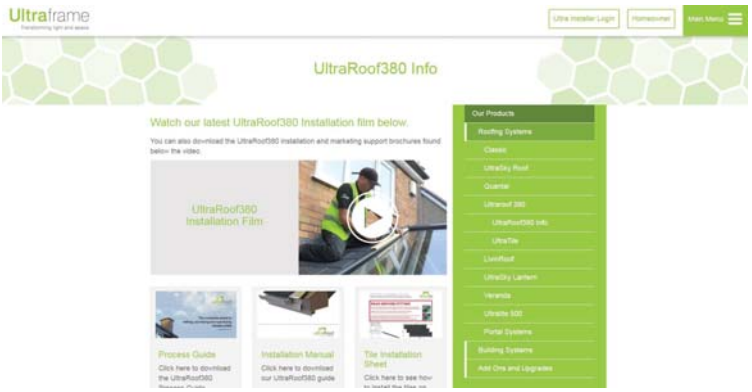
NOT SUPPLIED:

Several items are not supplied by Ultraframe as they are easier and cheaper to source locally
These are:-

- Velux roof windows and EDL flashing kits (the roof arrives prepared for Velux)
- Anchor or Masonry fixng bolts to host wall
- 12.5 foiled backed plaster board and skimming beads
- LED (fire resistant) lighting
- Internal 20mm x 50mm and 25mm x 50mm timber plastering battens
- Timber support props (75mm x 50mm) beam support
- Structural support (available from Ultraframe)
- Frame to boxbeam fixings

For everything you need to know about Ultraroof380 including guides and installation videos visit

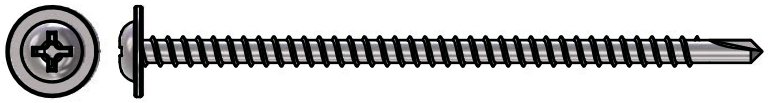
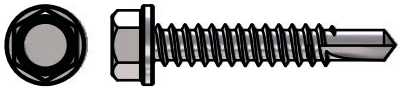
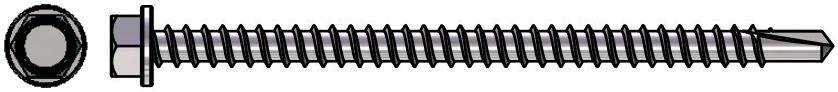
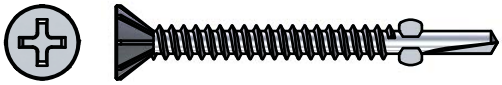
www.ur380info.co.uk



ULTRAROOF380 FIXING SUMMARY

PLEASE USE THE SUPPLIED FIXINGS WHEN INSTALLING THE ULTRAROOF380 TO ENSURE A SECURE AND CORRECT INSTALLATION.

FIXINGS SUPPLIED Below shows the various fixings supplied for an installation of an Ultraroof380. These should be found in the box containing this document.

NRBA 012 4.8 x 32 Phillips CSK HD S/Drill		**PHILLIPS SCREWDRIVER BIT**
BPS 010 4.8 x 80 baypole screw, self drill Phillips wafer head		**PHILLIPS SCREWDRIVER BIT**
NRTS 050 4.2 x 25 wafer head Self drilling screws		**PHILLIPS SCREWDRIVER BIT**
RRX 025 5.0 x 50 C'SNK pozi heco fix wood screw		**POZI SCREWDRIVER BIT**
RRR 025 5.5 x 32 Hex head self drill screw		**M8 HEX SCREWDRIVER BIT**
NRRSA 005BL 5.5 x 90 Hex washer head tek screw		**M8 HEX SCREWDRIVER BIT**
NRBF 050 4.0 x 40 Deck-tite pozi countersink screw		**POZI SCREWDRIVER BIT**
NRES 004 4.8 x 32 pan head self drill		**PHILLIPS SCREWDRIVER BIT**
NRSF 012 4.8 x 38 pan head self drill		**PHILLIPS SCREWDRIVER BIT**
NRAF 025 5.5 x 50 self drilling C'SNK, winged screw		**PHILLIPS SCREWDRIVER BIT**
CHA006 4.0 x 13 self drill wafer head		**PHILLIPS SCREWDRIVER BIT**
NRTT001 Tile screw fixing tool		
NRTT001 4.2 x 25 Wafer head piercing point screw		**PHILLIPS SCREWDRIVER BIT**

FIXING LOCATION SUMMARY

Fixing support shelf to existing frames

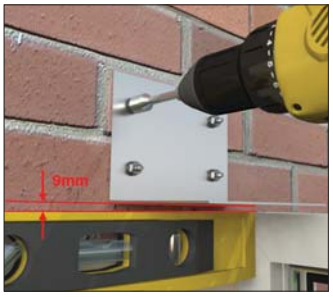
6 fixings per corner

NRBA 012
4.8 x 32 Phillips CSK HD S/Drill

Fixing beam to corner

6 fixings per corner

RRX 025
5.0 x 50 C'SNK pozi heco fix wood screw



Fixing hanger bracket to wall

4 fixings per bracket

NOT SUPPLIED

Ultraframe recommends 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
In addition Ultraframe recommends 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

Fixing wall brackets to the beam

6 fixings per bracket

RRX 025
5.0 x 50 C'SNK pozi heco fix wood screw

Fixing hip bar support brackets

4 fixings per bracket

NRTS 050
4.2 x 25 wafer head self drilling screws

Fixing through head of window frame into beam

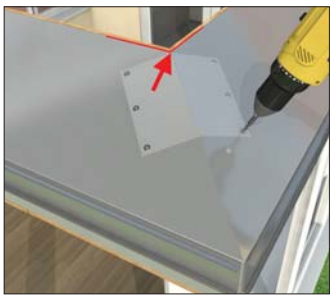
200mm from corner, 450mm CTRS

NOT SUPPLIED

Securing corner cleats

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

NRTS 050
4.2 x 25 wafer head self drilling screws



Securing upper box beam cleats

6 per cleat

NRTS 050
4.2 x 25 wafer head self drilling screws

Fixing ridge hanger to the wall

Minimum 2 fixings

NOT SUPPLIED

Ultraframe recommends 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
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Rawl Fixings M8/M10 CFS RM50 or CFS RP30
* Design load for each stud 2.5k

Fixing ridge to ridge hanger

2 fixings

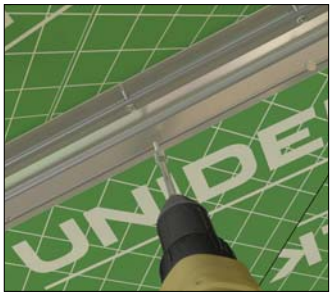
RRR 025
5.5 x 32 Hex head self drill screw

FIXING LOCATION SUMMARY

Fixing panel to beam

300mm CTRS

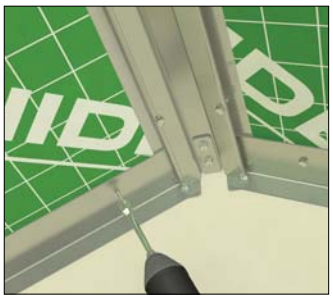
RRR 025
5.5 x 32 Hex head self drill screw



Fixing panel to hip and ridge

300mm CTRS (Pre drilled holes)

RRR 025
5.5 x 32 Hex head self drill screw



Fixing panel to starter

300mm CTRS

RRR 025
5.5 x 32 Hex head self drill screw

Fixing starter to house wall

Within 200mm from ridge/eaves, another equidistant

NOT SUPPLIED

Ultraframe recommends 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
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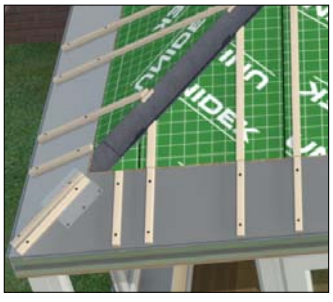
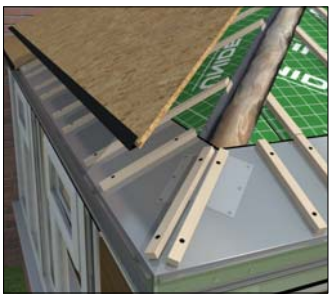


Fixing extention batterns to beam

2 fixings per batten

NRAF 025
5.5 x 50 self drilling C'SNK, winged screw



Fixing OSB to panel and beam

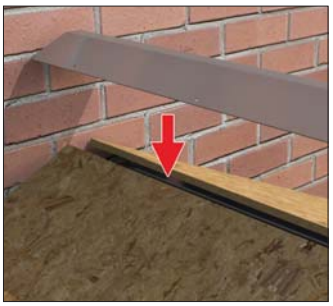
24 per panel

NRBF 050
4.0 x 40 Deck-tite pozi countersink screw

Fixing steel hip plates

300mm CTRS (Pre drilled holes)

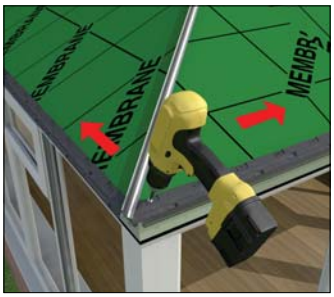
NRTS 050
4.2 x 25 wafer head self drilling screws



Fixing aluminium ridge plate

Pre drilled holes

NRTS 050
4.2 x 25 wafer head self drilling screws



Fixing UltraTile starter tile strip

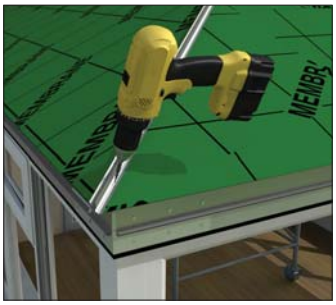
fix through all available holes

NRTS 050
4.2 x 25 wafer head self drilling screws

Fixing Ultratile panel

11 per full tile

NRTS 050
4.2 x 25 wafer head piercing point screw

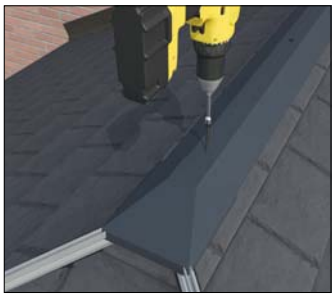


Fixing hip spines

500mm CTRS per side

NRTS 050
4.2 x 25 wafer head self drilling screws

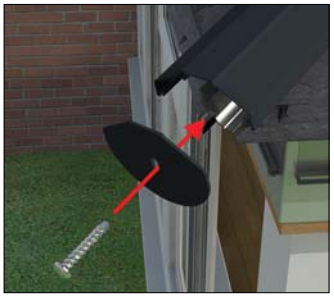
FIXING LOCATION SUMMARY



Fixing ridge top cap

Pre drill MAX 750mm CTRS

NRRSA 005BL
5.5 x 90 Hex washer head tek screw



Fixing end caps

Screw port

NRES 004
4.8 x 32
pan head self drill

Fixing glazing bar at box beam shoe

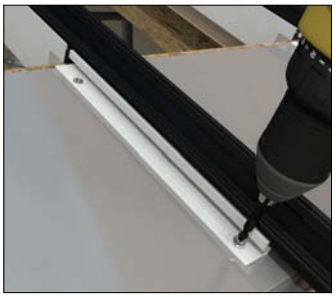
Pre drilled holes

NRTS 050
4.2 x 25 wafer head self drilling screws

Fixing glazing ridge to glazing bars

Pre drilled holes

NRTS 050
4.2 x 25 wafer head self drilling screws



Fixing glazing bar to box beam external face

2 fixings either side

NRTS 050
4.2 x 25 wafer head self drilling screws

FIXING LOCATIONS FOR GLAZED ROOFS

The following shows an overview of where the supplied fixings are used based on a roof contaning glazing.

Fixing glazing bar shoes at box beam

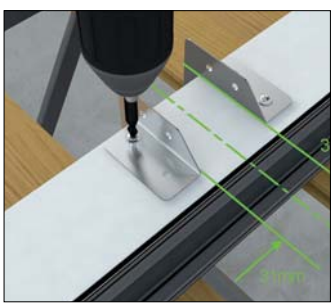
Pre drilled holes

NRTS 050
4.2 x 25 wafer head self drilling screws

Fixing glazing bar adjustable connection bracket

Pre drilled holes

NRTS 050
4.2 x 25 wafer head self drilling screws



Fixing intermediate glazing bar bracket

Pre drilled holes

NRTS 050
4.2 x 25 wafer head self drilling screws

Securing glazing bar against panel timber

500mm CTRS

BPS 025
4.8 x 80 baypole screw, self drill Phillips wafer head

Fixing glazing support section

200mm CTRS

NRTS 050
4.2 x 25 wafer head self drilling screws

Fixing through ridge into purlin

300mm CTRS

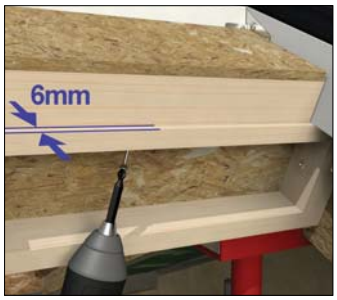
RRR 025
5.5 x 32 Hex head self drill screw

FIXING LOCATION SUMMARY

Fixing through purlin into cassette

Single fixing

BPS 010
4.8 x 80 baypole screw, self drill Phillips wafer head



Fixing screen framework at ridge

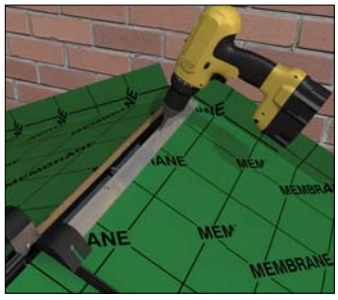
300mm CTRS

NRBF 050
4.0 x 40 Deck-tite pozi countersink screw

Re-fitting panel timbers

origional fixing holes

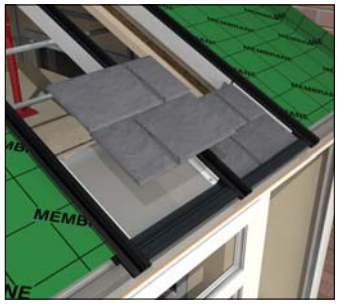
RRX 025
5.0 x 50 C'SNK pozi heco fix wood screw



Fixing tile stop aluminium

300mm CTRS

NRSF 012
4.8 x 38 pan head self drill



Fixing tile screen

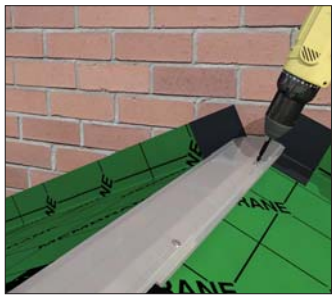
Single fixing

NRBF 050
4.0 x 40 Deck-tite pozi countersink screw

Fixing black architrave

300mm CTRS

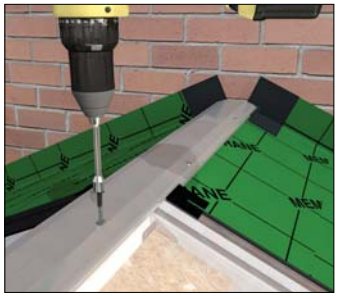
NRBF 050
4.0 x 40 Deck-tite pozi countersink screw



Fixing ridge under capping into tile stop

500mm CTRS

NRTS 050
4.2 x 25 wafer head self drilling screws



Fixing ridge under capping central

500mm CTRS

NRRSA 005BL
5.5 x 90 Hex washer head tek screw

Fixing glazing bar end caps

Pre drilled holes

NRES 004
4.8 x 32 pan head self drill

Half ridge intermediate bar shoe

CHA006
4.0 x 13 wafer head self drilling screws

ULTRAROOF380 FITTERS TIPS

If this if the first time you're fitting an Ultraroof380 we suggest you familiarise yourself with the Installation guide before you start.

Ensure that you have all the key documents outlined on page 10 and all the correct tools on site, these are outlined on page 3. If you don't have any of the key documents, please call **Technical Support at Ultraframe on 01200 452 918 - have your order number handy.**

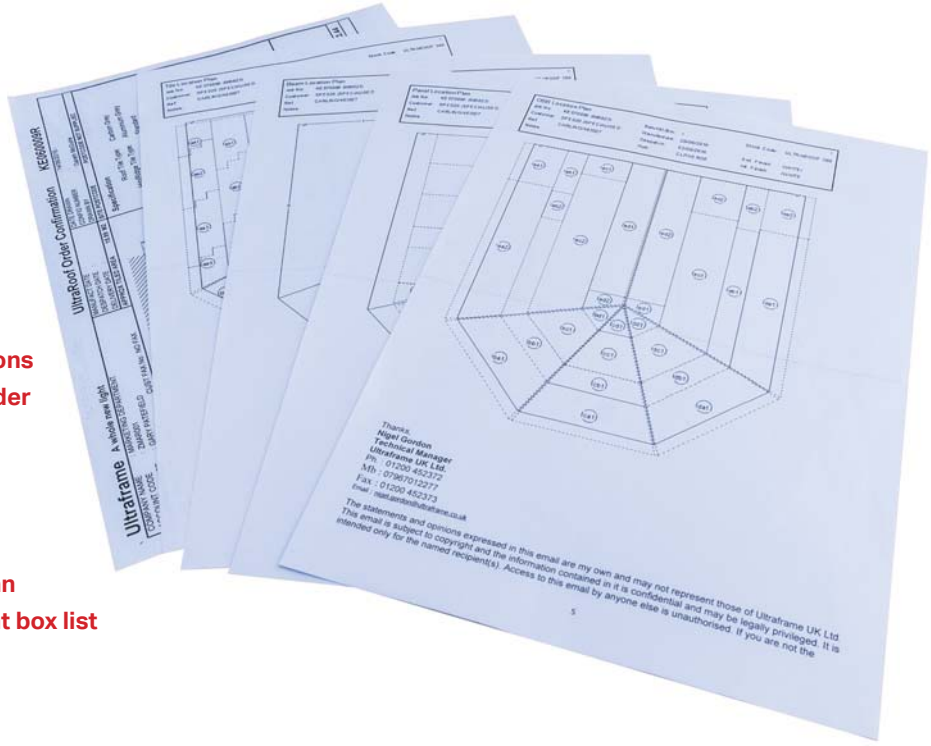
For everything you need to know about Ultraroof380 including guides and installation videos visit

www.ur380info.co.uk

Here are some top tips from Ultraframe to help your installation run smoothly.

1. Ensure the beams are laid on top of the frames in the correct order. The correct 'fitting sequence' is shown on page 14 of the installation guide.
2. When positioning the beams check the dimensions vs the critical dimensions sheet supplied with the roof. Start by ensuring the beams that attach to the house wall are parallel and the correct distance apart. Ultraroof380 will accommodate slightly out of square bases and frames. Please call Paul Saltis on 07740 067070 for advice if this is the case.
3. In order to ensure the stability of the beam it needs to be sufficiently supported. Details are shown on the flyer included with the beams and on page 19 of this guide.
4. Always use the fixings, sealants and adhesives specified within the installation guide in order to ensure the strength and water tightness of the roof.
5. Don't forget to prop the ridge as shown on page 23.
6. When fitting the batten extensions to the box beam, ensure that the lower end of the batten extension rests against the edge of the aluminium extrusion on the front of the box beam. This will ensure the OSB is in the correct position. See detail on page 26.
7. Start by placing the OSB boards next to the box beam first. Work your way around the box beam with the OSB before working your way up to the ridge. Only remove the props once the OSB boards and steel hip plates are fixed in place.
8. The waterproof membrane can be fitted when damp, but always remove surface water before fitting if it's been raining. 100mm overlap is sufficient on the roof surface with 150mm lapping up the wall.
9. Always use tile fixing tool provided. This will prevent over tightening.
10. **The tiles are designed for expansion and contraction**. DO NOT BE TEMPTED TO FORCE THE TILES TOO CLOSE TOGETHER. **Always work to the insertion lines** ensuring the spaces between the tiles are even across the roof. Use the **starter tile strip** to guide you and refer to the tile leaflet included for further information (ref p29).
11. Look out for the handy guides supplied with products for extra tips on fitting.

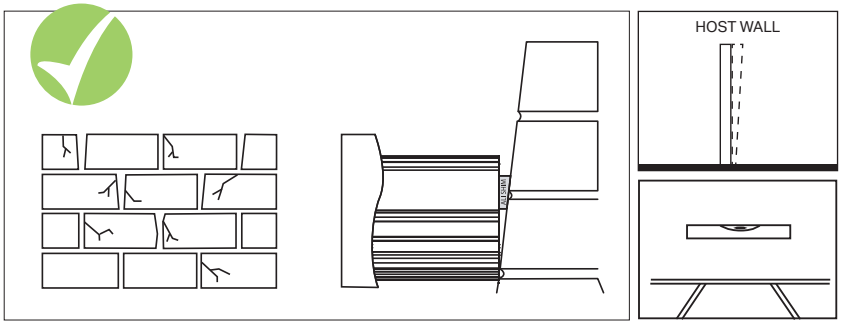
DOCUMENTATION CHECKLIST - SENT WITH EACH ROOF



Check you have:

1. Critical set out dimensions
2. Confirmation of roof order
3. OSB layout
4. Tile layout
5. Panel layout
6. Modesty panel layout
7. Component location plan
8. Ultraroof380 component box list

PRE-INSTALLATION CHECKS



Check the condition of the host wall as this may affect the quality of the final installation. Check the host wall is plumb - any running in/or out should have been accounted for by the surveyor. If not, the ridge and starter bars may require packing out with aluminium shims. Correct alignment in this area is critical to a successful installation - Plumb frames/level ridge. Only use the specified fixings - never be tempted to substitute alternative sizes/gauges.

General points
Choose a suitable area for unpacking the components and always check them before fitting. Any claims for missing or damaged parts are only accepted in line with our standard terms and conditions of sale.

Health & safety
Site safety is paramount. The Construction (Design & Management) Regulations 2015 apply to the whole construction process, on all construction projects from concept through to completion. Compliance is required to ensure construction projects are carried out in a way that secures health and safety. The installation company shall be responsible for the safety of all of the fitting team, the customer and members of the public.

The Surveyor should have carried out a risk assessment to reduce risk on site and this should have been discussed with you prior to starting.

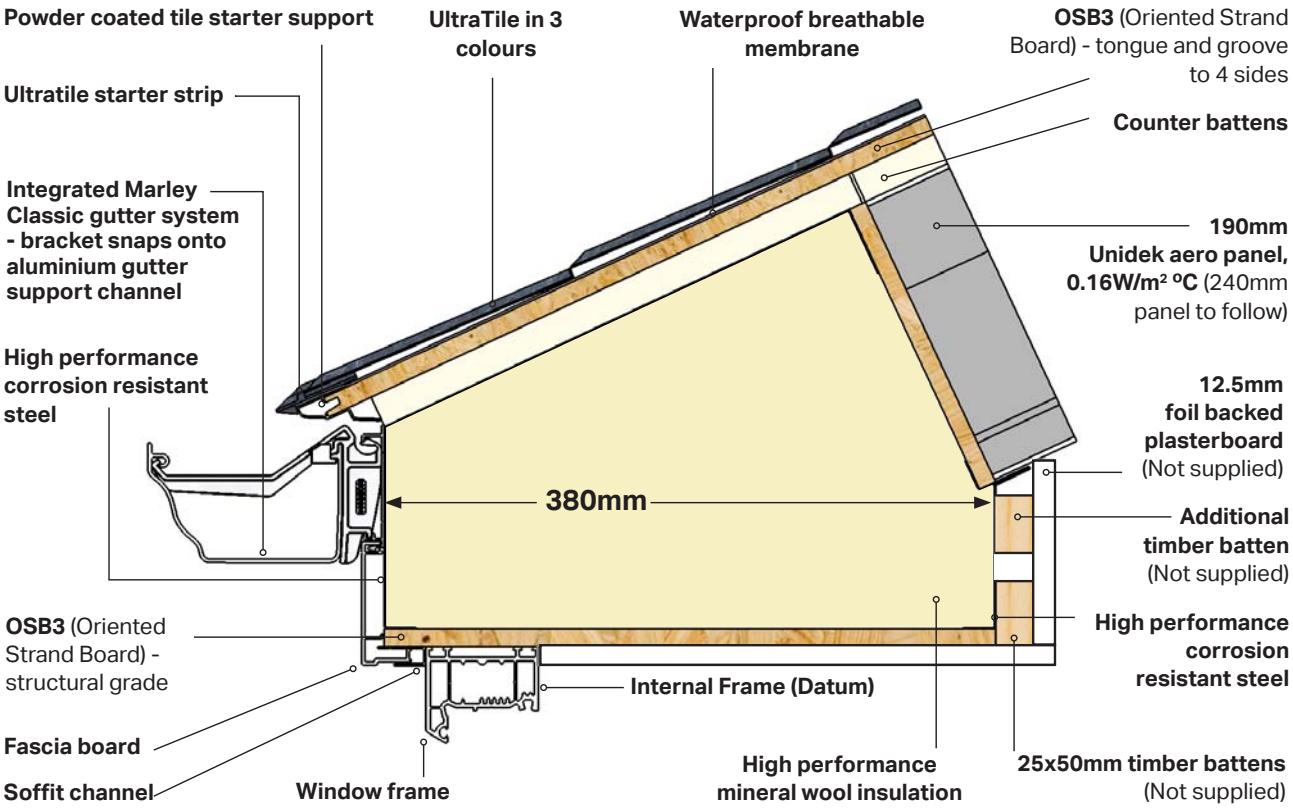
Please use safe working platforms and ladders that comply with BS EN 131. Always use equipment in line with manufacturers recommendations. Personal Protective Equipment – such as goggles, mask and ear defenders – should be used when, for example, grinding out for the flashing.

Careful consideration should be given to the safe disposal of all packaging – Ultraframe packaging is predominantly made from recycled materials and can be readily recycled.

Product
The Ultraroof380 kit is supplied with a location plan and, of course, this installation guide. The location plan is used to match individual components to their respective position on the roof.

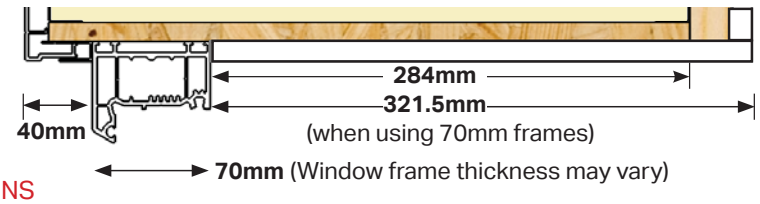
The Superstructure
Check the side frames are level all round. Before starting to install the Ultraroof380, please check the condition of the host wall and whether it's plumb – depending upon what you find, these conditions can seriously affect the final integrity of the roof.

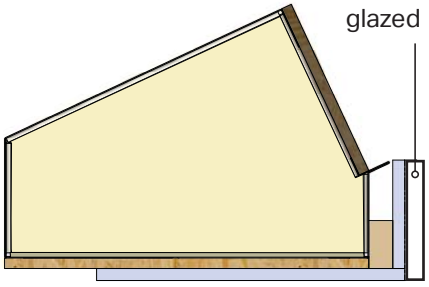
BOX BEAM CROSS SECTION ASSEMBLY



Standard Soffit

NOT SUITABLE FOR SUPER-INSULATED COLUMNS

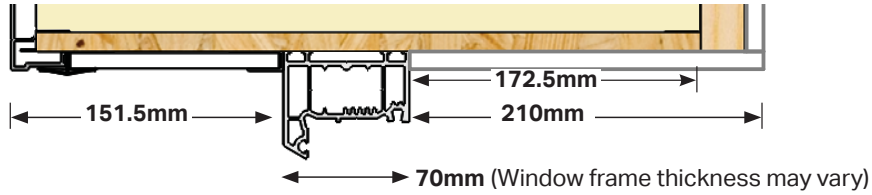




Extended Soffit

MUST BE USED ABOVE SUPER-INSULATED COLUMNS

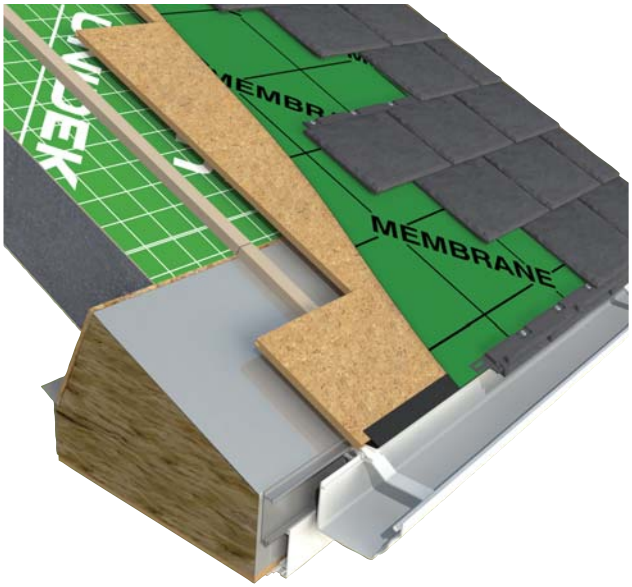
Alternative (only option if sat on super-insulated columns) - see Appendix 1.



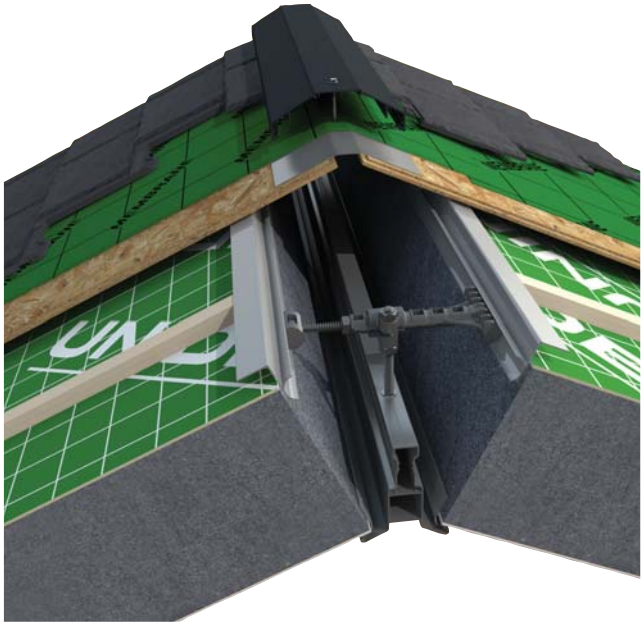
PRODUCT ASSEMBLIES

Beam glass

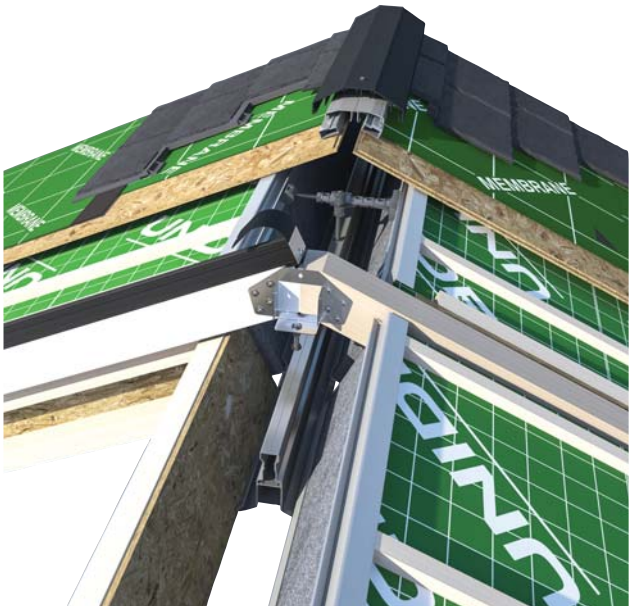
Beam solid



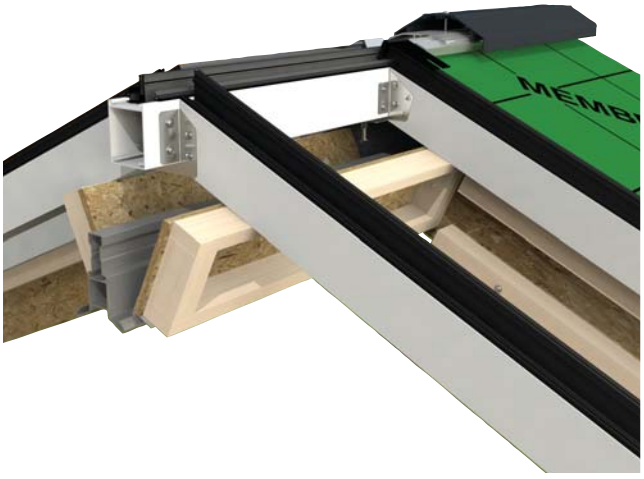
Ridge solid solid



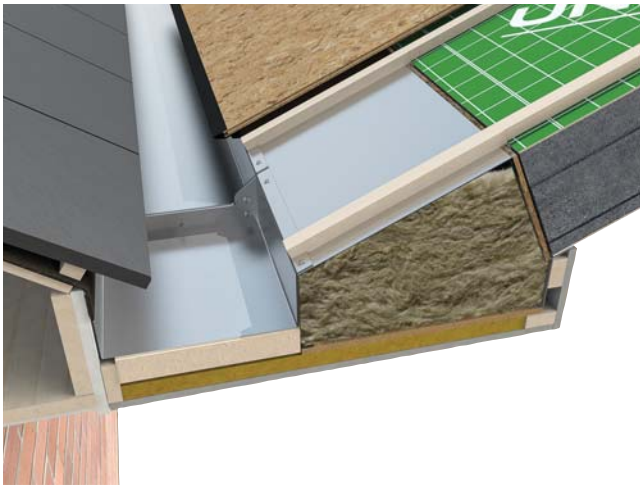
Ridge solid glass



Ridge glass glass

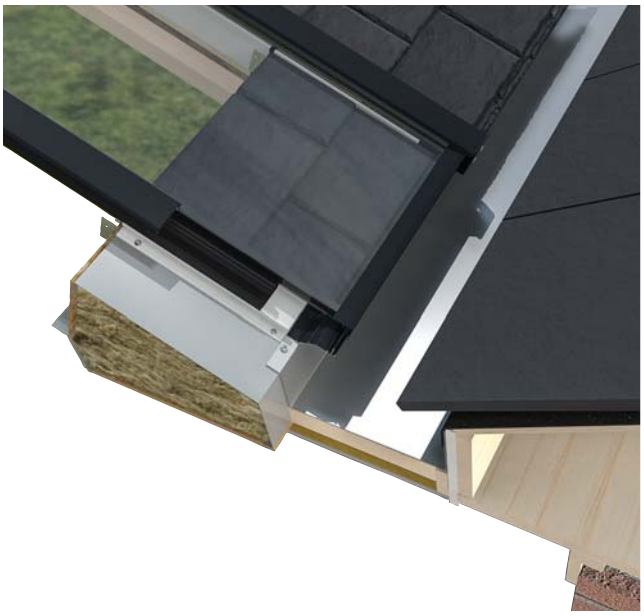


265 boxgutter



PRODUCT ASSEMBLIES

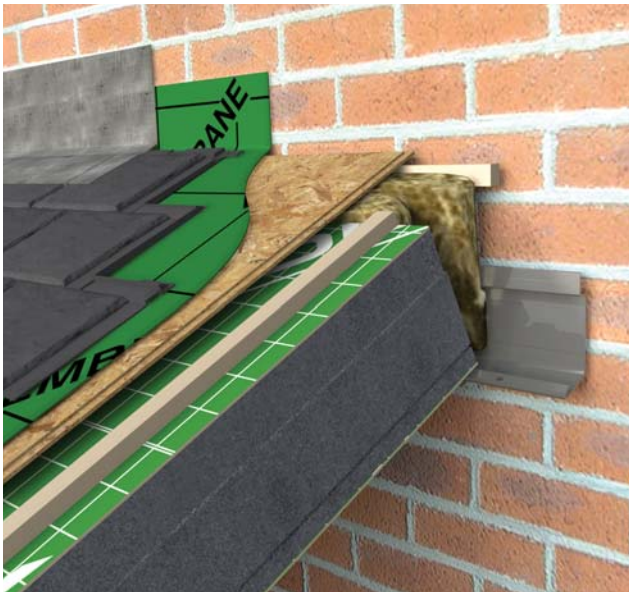
Boxgutter glass



Tapered boxgutter

Wallplate glass

Wallplate solid



Bars

Lean to roof gable end frame stiffener is **NOT** supplied as standard. Must be requested if required (for example above door openings). Please refer to Ultraframe if fitting bi-folds to gable ended or gable ends on lean-to roofs.

Lean to only

Gable extended

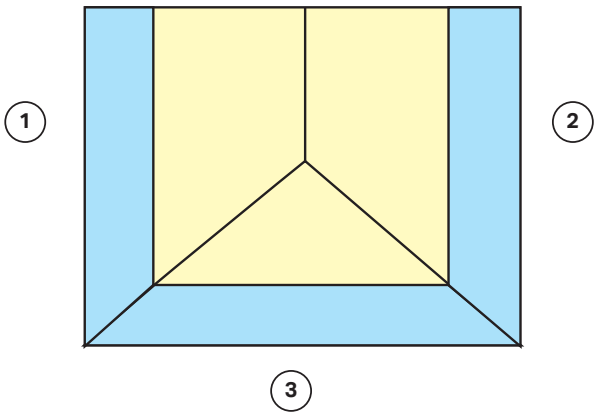
Lean to gable stiffener

FITTING SEQUENCE - BOX BEAMS / OSB

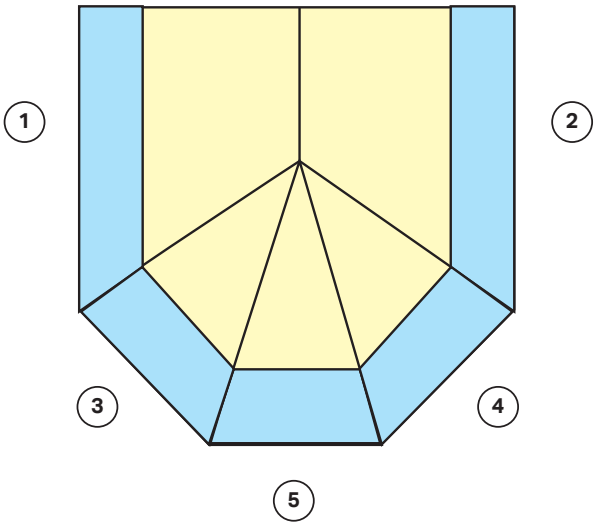
IMPORTANT: FOLLOW THE FITTING ASSEMBLY SEQUENCE

KEY: OSB BOX BEAM

GEORGAN

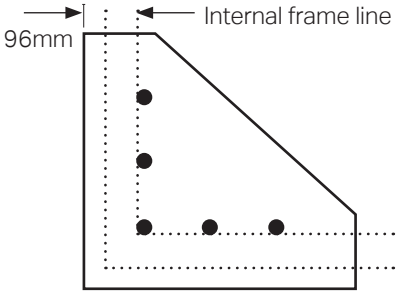


VICTORIAN

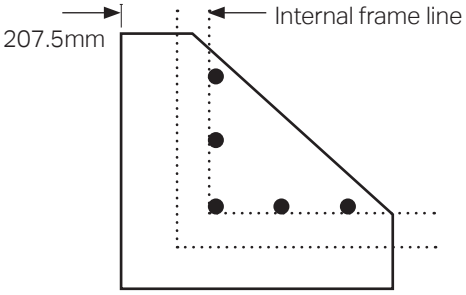


BOX BEAM SUPPORT SHELF

GEORGIAN STANDARD SOFFIT

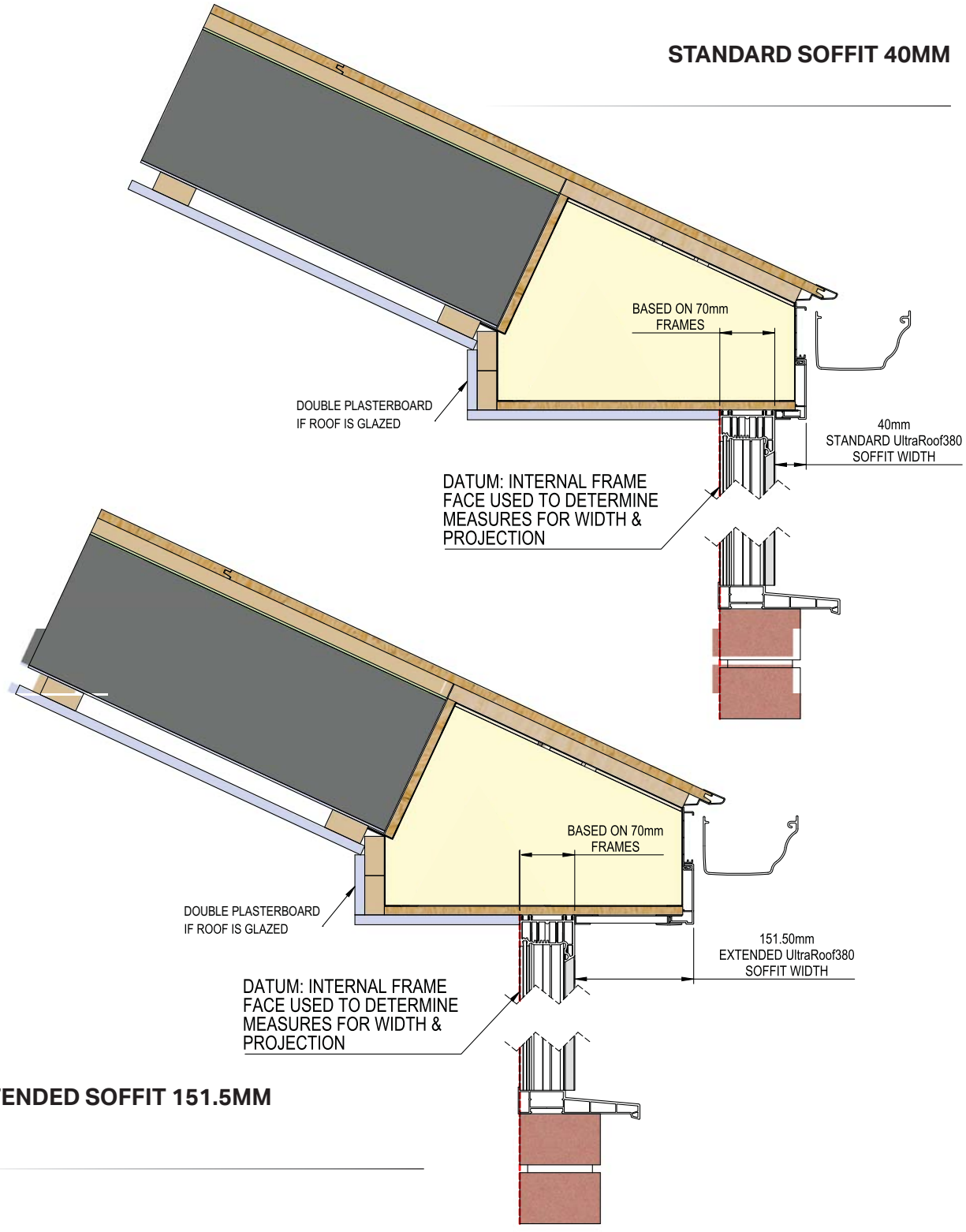


GEORGIAN EXTENDED SOFFIT



BOX BEAM ON WINDOW FRAME

The most common kind of situation for installing an Ultraroof380 will be existing conservatries roof replacement. This means that the roof will fix to the top of the window frames of the original conservatory. The details for fixing a box beam to the top of window frames as shown below.



BOX BEAM ON BRICK WORK

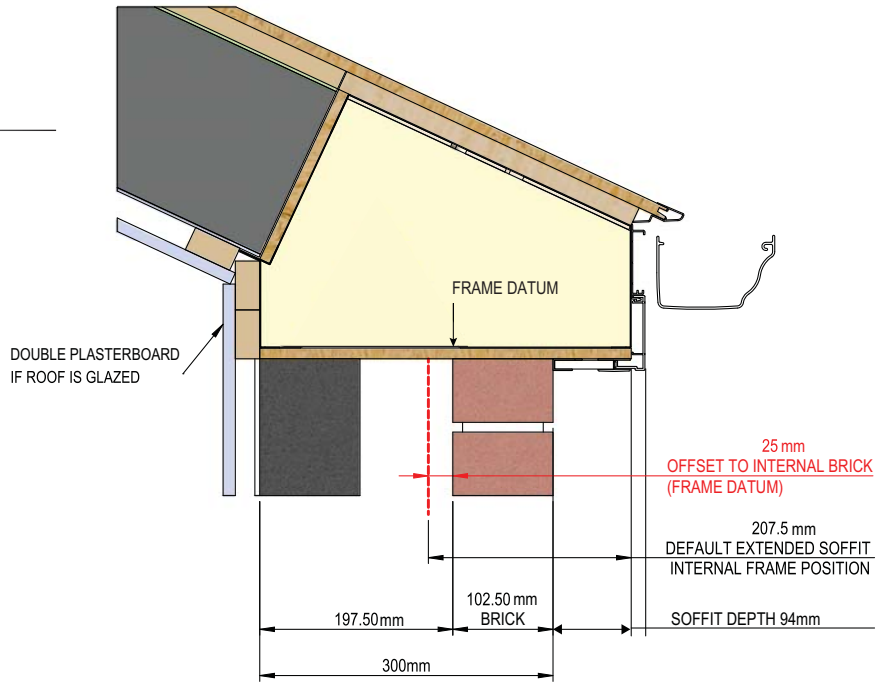
A common instance with Ultraroof380 will be that it is sat on brick work for support. If this is the case there are different details of how the roof sits on the brickwork and depending on which of these is required give different results. Below contains the details for fixing a box beam to the top of solid brick work.

STANDARD SOFFIT WITH BRICK

ALIGNING BOX BEAM WITH INTERNAL BLOCK FACE

FOR THIS BRICKWORK OPTION - SPECIFY ROOF AS 'EXTENDED SOFFIT' AND DECREASE SIZE OF ROOF BY 25mm (PER SIDE)

NOTE: DO NOT ALTER PROJECTION AT GABLE.

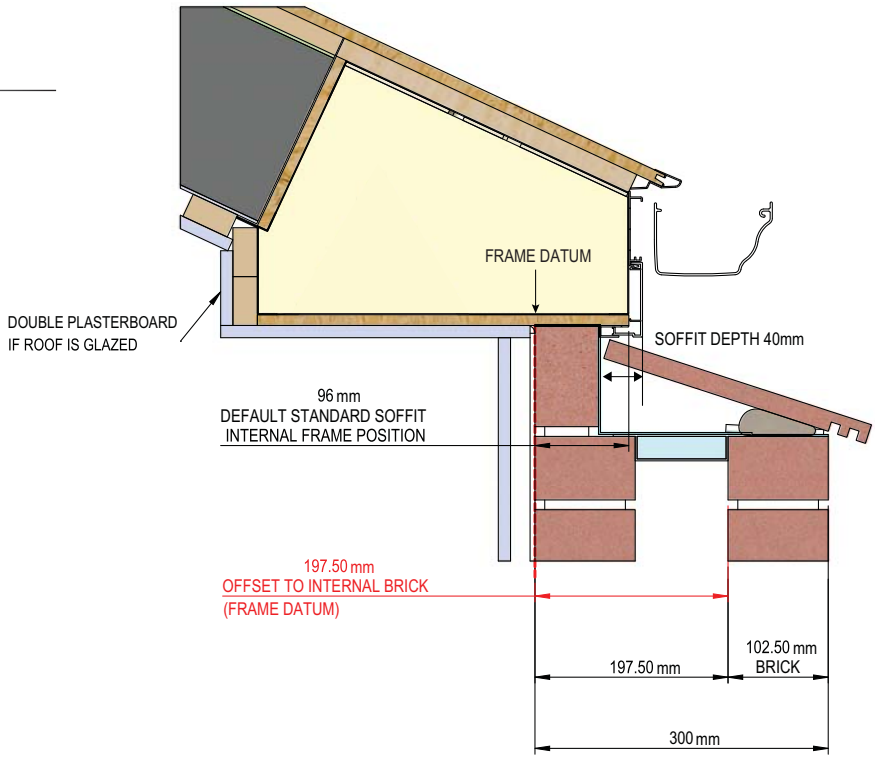


EXTENDED SOFFIT WITH BRICK

MAINTAINING INTERNAL SOFFIT WIDTH WHEN SITTING ON BRICK WALL

FOR THIS BRICKWORK OPTION - SPECIFY ROOF AS 'STANDARD SOFFIT' AND DECREASE SIZE OF ROOF BY 197.5mm (PER SIDE)

NOTE: DECREASE GABLE PROJECTION OF ROOF (WHERE APPLICABLE) BY 200mm.



BOX BEAM ON BRICK AND WINDOW FRAME

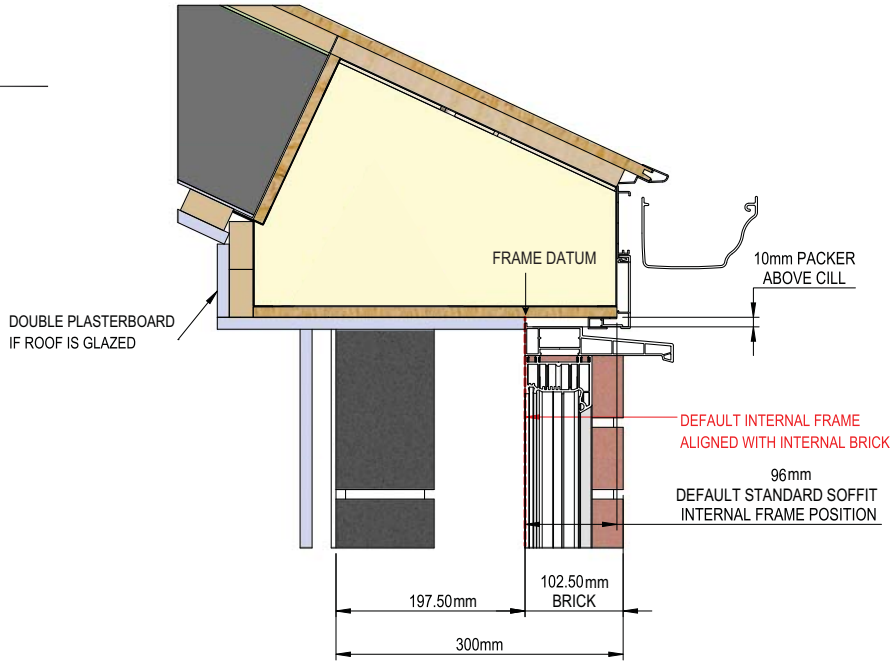
Some situations will have a mix of window frames and brickwork that will support the length of the box beam. Below contains the details for fixing a box beam to the top of window frames with brick work.

BOX BEAM ALIGNING WITH BRICK FACE

IF MAINTAINING THE STANDARD SETOUT SITTING ON A BRICK WALL A CILL MUST BE INCLUDED

FOR THIS BRICKWORK OPTION - SPECIFY ROOF AS 'STANDARD SOFFIT' - NO NEED TO MODIFY SIZE.

NOTE: DO NOT ALTER PROJECTION AT GABLE.

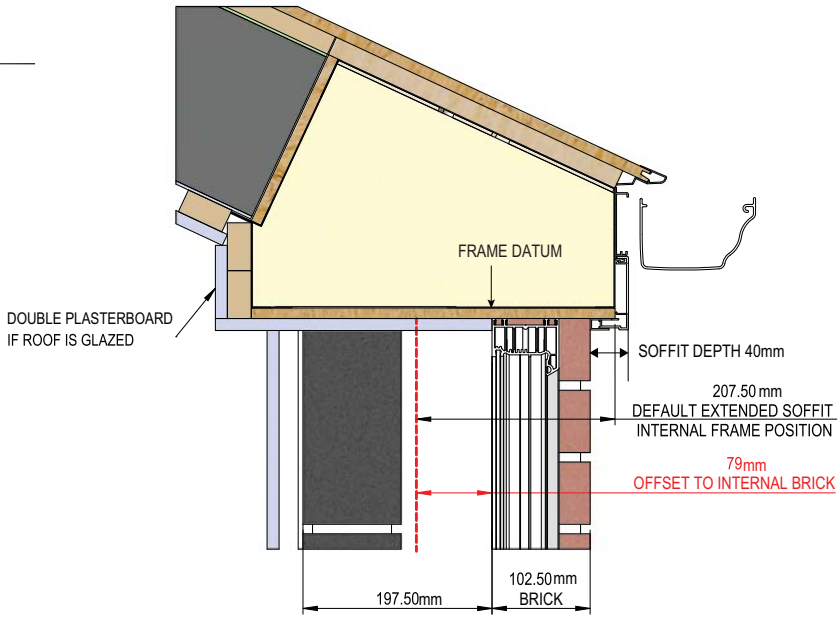


BRICK WORK ALIGNING WITH INTERNAL FRAME DATUM

ALIGNING 40mm SOFFIT WITH EXTERNAL BRICK FACE

FOR THIS BRICKWORK OPTION - SPECIFY ROOF AS 'EXTENDED SOFFIT' AND DECREASE SIZE OF ROOF BY 79mm (PER SIDE)

NOTE: DO NOT ALTER PROJECTION AT GABLE.



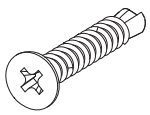
GEORGIAN INSTALLATION - SOLID ROOF - BOX EAVES BEAM

If replacing an existng roof fold back the flashings, safely remove the existing roof and recycle it. If plastered, certain areas will need removing. Fixed light sealed units will need to be removed to allow fixing of box eaves beam. Remove old silicone from head of all frames. NOTE: If fitting onto super-insulated columns refer to page 62.

Using low modulous neutral clear silicone, apply generous beads to head of frames and corner post. Locate the OSB beam support shelf's (NRSS 090) to the front corners.

Secure support shelves to frames with 6 x fixings (3 each side) 4.8 x 32mm Phillips counter sunk self drill screw (NRBA 012).

Timber positioning spacers attached to underside of support shelves. Ensure these abut internal frame (also shown below).

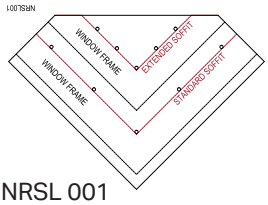


NRBA 012
4.8 x 32 Phillips CSK HD S/Drill. 6 fixings per shelf.

NRSS 090
Beam support shelf for 90° corner

NRSS 135
Beam support shelf for 135° corner

NRSS 150
Beam support shelf for 150° corner



NRSL 001
Beam support shelf sticker

Now fit the NRWB001 box beam wall brackets - one to each side - Bracket sits 8mm inside internal frame line and is set 9mm above window frames (measured to underside of bracket). Remove any interfering plaster work. Bracket must go back to host wall. Not required if sat on masonry, galvanised straps to be used (not supplied).

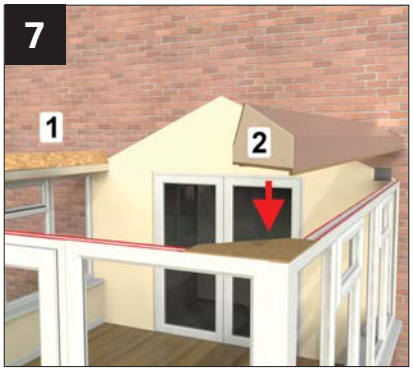
Mark positions for resin anchors (not supplied) appropriate to substrate. Try to fix into solid masonry - 4 fixings.

Apply beads of low modulus neutral clear silicone to remainder of all frame heads. Seal along inner legs.

READ BEFORE FITTING

BEAMS AND RIDGE MUST BE PROPPED/SUPPORTED THROUGHOUT THE INSTALLATION
SEE GUIDE BELOW FOR DETAILS OF PROPS/SUPPORT.
DO NOT REMOVE ANY PROPS UNTIL THE OSB AND STEEL HIP PLATES ARE FULLY FIXED INTO PLACE.
PROPS/ SUPPORTS MUST BE POSITIONED 250mm FROM CORNERS AND MAX 2000mm CENTRES AT THE PROP LOCATION MARKS, PROPS NOT REQUIRED AT HOST WALL (REAR L BRACKET POSITION)

7



Check page 14 for box beam assembly sequence. Lift side beam 1 into position (2 man lift). Set the beam 10mm away from host wall. Position side beam 2.

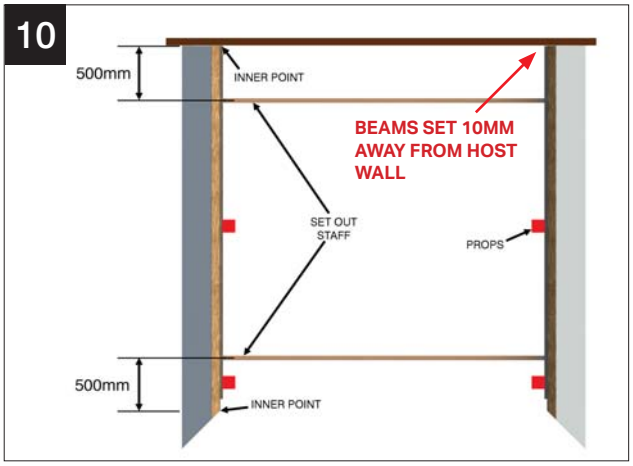
8

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.

9

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) 75x50 timber props NOT SUPPLIED.

10



EXAMPLE
Above is a typical 4m x 4m layout, this shows positions of 75mm x 50mm support props and set out staff.

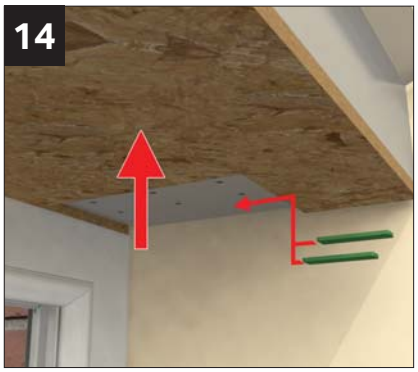
11

With set out staff flush with underside of beam, fix to face of beam using 2 x (NRTS050) provided. Staff set-out cleat fixed to internal face of box beam. Once fixed the staffs will ensure beams remain parallel to each other.

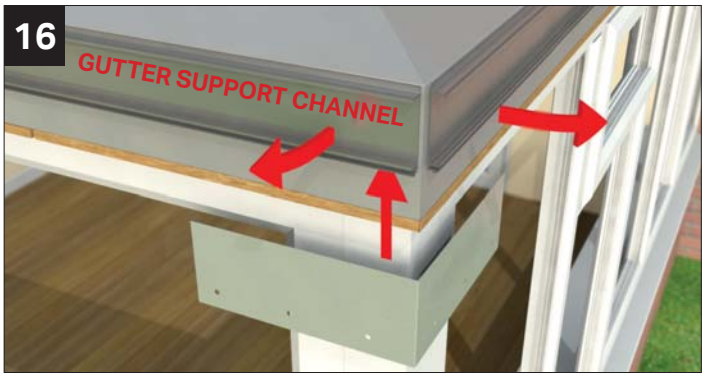
GEORGIAN INSTALLATION - SOLID ROOF - BOX EAVES BEAM

Width of set out staff matches size given on critical dimension sheet. Pushing or pulling a beam will move adjacent beam the same distance. Equalise soffit overhang. Finally check diagonals are equal.

Having installed side beams lift the front beam into position, beam 3.



Once the beams have been propped and are level, check the rear L brackets and pack if required.



Gutter support channel extrusion is factory fitted but ease out both sections and slide external cleat behind.

NRTS 050
4.2 x 25mm
wafer head
self drilling
screws

Line up bottom of the cleat with the bottom edge of the steel using (NRTS 050) fixings, fit 12 per cleat, 6 in predrilled holes, 6 through gutter support channel extrusion (screws provided).

NRBE 090
Box beam external
cleat required for each 90° mitre

NRBE 135
Box beam external
cleat required for each 135° mitre

NRBE 150
Box beam external
cleat required for each 150° mitre

Use expanding foam where two beams join to seal any gaps between them.

NRTS 050
4.2 x 25mm wafer
head self drilling
screws.
[6 per cleat
predrilled holes]

Then attach top box beam cleat (one to each corner) - these cleats are specific to the roof pitch. Lay over the mitred joint and position so that the top edge abuts the angle. Then fix using 6 x 4.2 x 25mm wafer head self drilling screws (NRTS 050) provided.

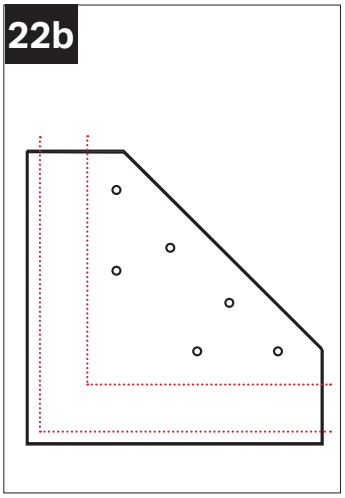
GEORGIAN INSTALLATION - SOLID ROOF - BOX EAVES BEAM

Check all is level - pack off top of frames if necessary. **CHECK THE UNDERSIDE OF THE BOXBEAM IS LEVEL PRIOR TO FINAL FIXING. PROP IF NECESSARY.**

BPS 010
M4.8 x 80 baypole screw, self drill Philips wafer head [fixings 200 from corner, 450 CTRS]

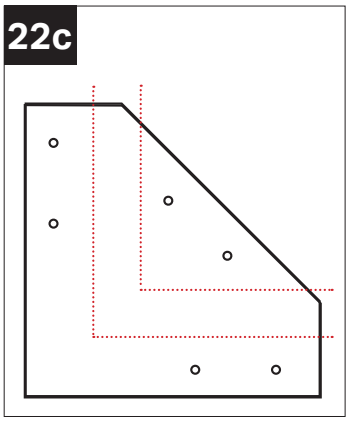
If packers used, recheck for being square, also check diagonals (corner to corner measurement). When these checks are complete finally secure by screwing up though head of frames into box beam. Fixings need to be within 200mm of each corner and at 450mm centres using, for example 4.8 x 80mm baypole screw not provided.

RRX 025
5.0 x 50
C'SNK pozi heco fix wood screw.
[6 fixings each]



Remove timber positioning dowels (see step 3b). Fix up through the front 90° beam support shelves into the box beam using 6x5.0 x 50mm countersunk wood screw (RRX 025) provided. See fixing points at 22b (standard soffit) and 22c (extended soffit).

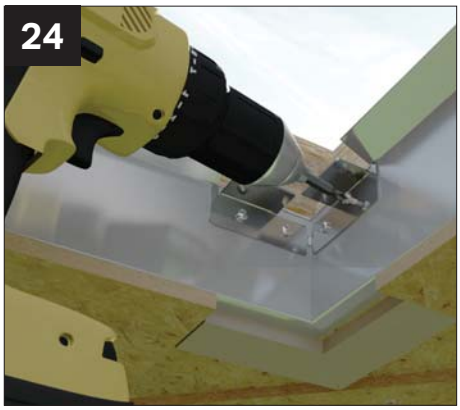
Fixing positions for standard soffit.

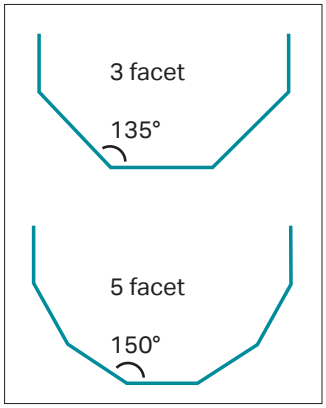


Fixing positions for extended soffit.

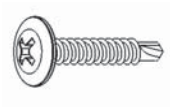
Fix up through the rear box beam wall brackets into the box beam using 6 x 50 x 50mm countersunk wood screws (RRX 025) provided. Finally ensure all box beam joints are fully sealed inside and out.

GEORGIAN INSTALLATION - SOLID ROOF - BOX EAVES BEAM

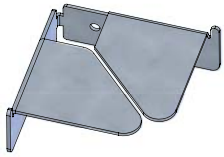




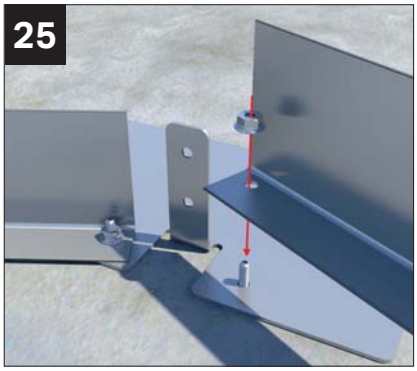
NRTS 050
4.2 x 25mm wafer head self drilling screws.
[4 fixings each]



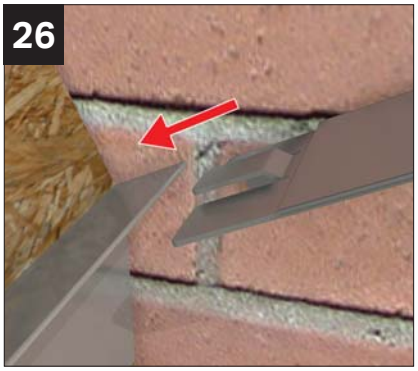
NRSB 001
Box beam hip bracket required for each hip



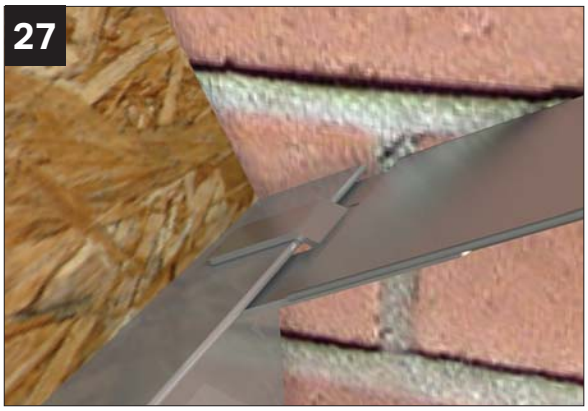
Fit the hip bar support brackets (NRHB 001) to the internal front corners of the box beams. One to each corner. The bracket is positioned tight up to the panel support ledge and secured with 4 x 4.2 x 25mm wafer self drilling screws (NRTS 100) provided. Hip bracket supplied for 90°. If super-insulated corner columns used please refer to page 82. For 3 and 5 facet victorians the box beam hip bracket is bent by hand to suit. 135° for 3 facet or 150° for 5 facet.



With the box beam secured assemble the 3 part ridge hanger. This consists of 1 x ridge hanger plate (NRRI 006) and 2 x aluminium starter bar extrusions (NRPA__/6) .



Once assembled lift and position against the host wall. Slot onto beam support ledge.



Final position of aluminium starter bar extrusions next to host wall.

From critical dimension sheet, check that the **UPPER FACE** of the ridge hanger 'tongue' is set at the correct height. i.e. frame height 2070 + 861 (roof) = 2931mm. Ensure the plate is level. Pack off the host wall with suitable aluminium shims if required. Fix the ridge hanger (NRRI 006) back to the host wall with anchors suitable for the substrate (not supplied).

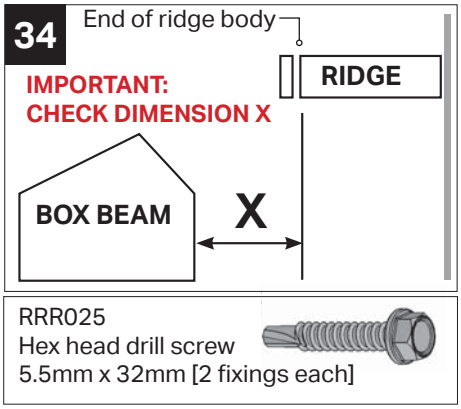
GEORGIAN INSTALLATION - SOLID ROOF - STRUCTURAL FRAMEWORK

Offer ridge onto ridge hanger plate, set the rear end of the ridge body **20mm** away from the host wall and temporarily secure with 1 x 5.5 x 32mm hex head drill screw (RRR 025). NOTE: This may be adjusted later. **IMPORTANT: Support the ridge with adjustable support props. The props must stop in place until the roof is fully built.**

Offer up into position the hip bars. Using the tenon on the glazing bar end offer the 'ball' into the matching speedlock housing attached to the ridge.

Using your thumb push down the upper dead lock until flush. DO NOT push up the lower wedge lock at this stage.

Sit the lower end of the hip bar on the already installed hip bar support brackets.



Check critical dimension sheet for dimension x and then finally fix the ridge to the ridge hanger bracket with 2 x 5.5 x 32mm hex head drill screws (RRR 025) provided.

IF THE ROOF HAS GLAZED UNITS GO TO P40
IF THE ROOF HAS VELUX ROOF SEE VELUX INSTALLATION GUIDE

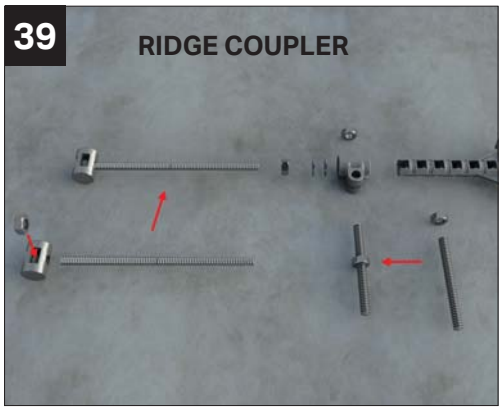
Next install Unideck SIP panels (one each side) adjacent to host wall.

The upper end hooks onto ridge body.

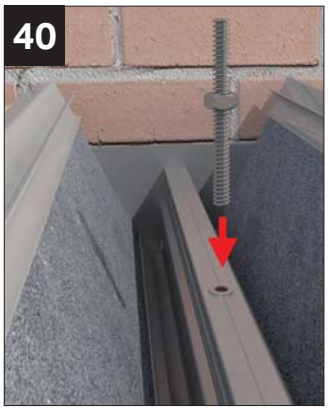
The lower end locates on the box beam support ledge. **IF THERE IS GLAZING AGAINST HOST WALL POSITION THE PANELS EITHER SIDE OF THE FINIAL POINT INSTEAD.**

GEORGIAN INSTALLATION - SOLID ROOF - STRUCTURAL FRAMEWORK

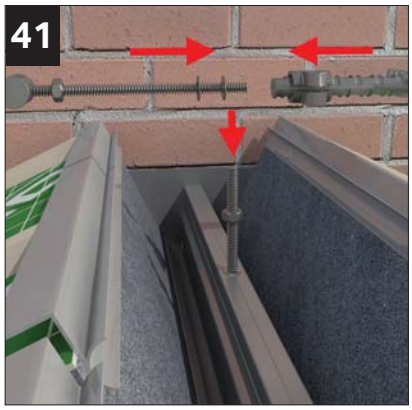
Fit front central panel in-line with ridge.



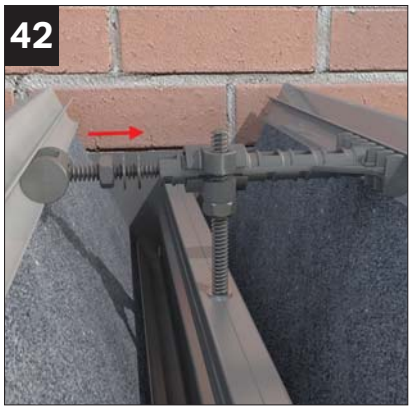
This pack comes complete with further detailed assembly instructions. For each matching pair of panels along the ridge, a coupler needs to be fitted to brace the panels across the ridge.



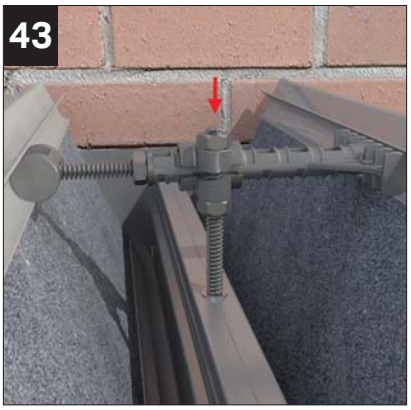
Assemble nut and threaded bar. Screw down into ridge body. See note below.



Now complete next step of ridge coupler assembly.



Ensure coupler assembly is finger tight into panel extrusions.



Finally, finger tighten the locking nut.

Ridge Coupler Assembly

Change - No longer specified for first panel pair at host wall
Reason - Not required in this position due to fixings already present under panel at host wall.

GEORGIAN INSTALLATION - SOLID ROOF - PANEL ASSEMBLY AND FIXING

44

From the location plan supplied continue to install all remaining SIP panels (working from the host wall, in pairs, remembering to fit the ridge coupler assemblies as you go. **FINGER TIGHT ONLY AT THIS STAGE.**

45

Screw up into panels through the panel support ledge. DO NOT OVER TIGHTEN TO PREVENT CRUSHING THE PROFILE. Screw at 300 centres using hex head drill screw 5.5 x 32 (RRR 025) provided.

46

Using (RRR 025) screws, screw up through the hip bars (predrilled holes). DO NOT OVER TIGHTEN TO PREVENT CRUSHING THE PROFILE.

47

Screw through aluminium starter bar extrusions into panels at 300mm centres. Finally screw through ridge section (predrilled holes) again using (RRR 025) provided.

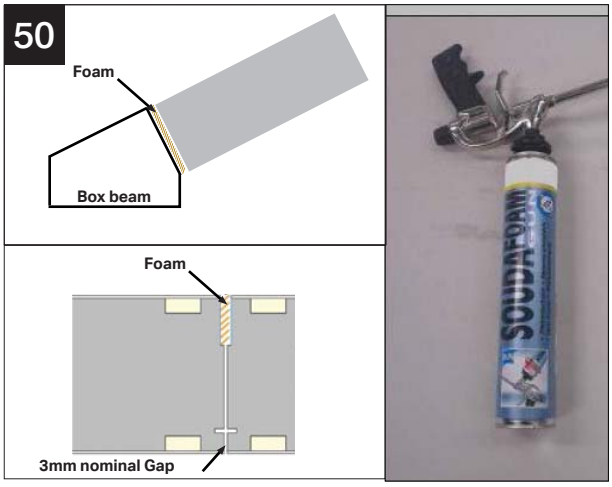
48

Fix aluminium starter bar extrusions to host wall within 200mm of ridge / eaves plus at least one more equidistant between the two. Use resin anchors suitable for substrate. (Not provided).

49

Lightly tighten roof coupler(s), using a 17mm spanner. Remove hip bar support brackets (p22, step 24). Push lower wedge locks into position on underside of speedlocks to lock out roof (see p23, step 32)

50



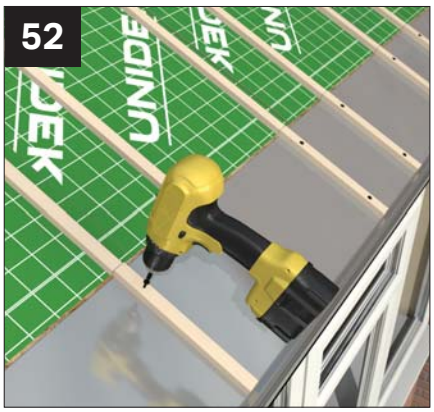
Use expanding foam to fill gaps between panels, panel and box beam and between panels and host wall. (Foam not supplied)

51

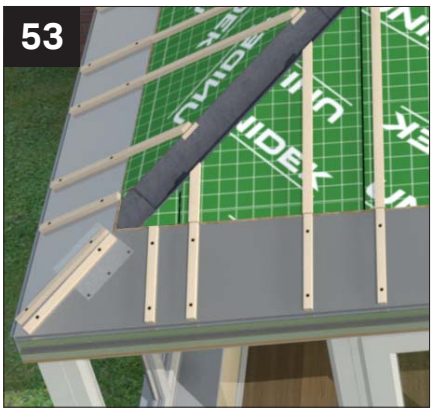
INSULATION IS SUPPLIED IN ROLLS. Cut and install into all hip and ridge sections.

GEORGIAN INSTALLATION - SOLID ROOF - OSB BOARDING

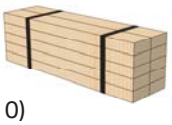
52



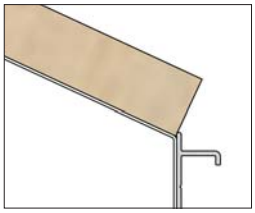
53



NREB010
20 x 44 x 330mm
Tanalised
softwood timber
battens (pack of 10)



NRAF025
5.5 x 50m self drilling
countersunk winged screw.
(2 fixings per batton).



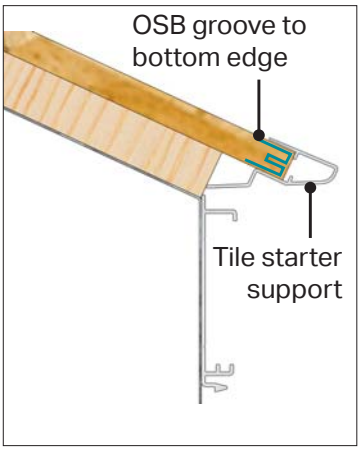
Fit batten extensions onto box beam. Bottom of batten sits against gutter channel and line up with battens on panels. At every corner place a batten either side of the mitred joint on top of cleat.

ENSURE BATTENS SIT TIGHT TO GUTTER CHANNEL THIS SETS THE ROOF TILES.

NOTE: PRINTED SIDE OF OSB BOARD FITTED FACE DOWN (ROUGH FACE)

54a

Fit tile starter support,
silicone + push fit.



54b

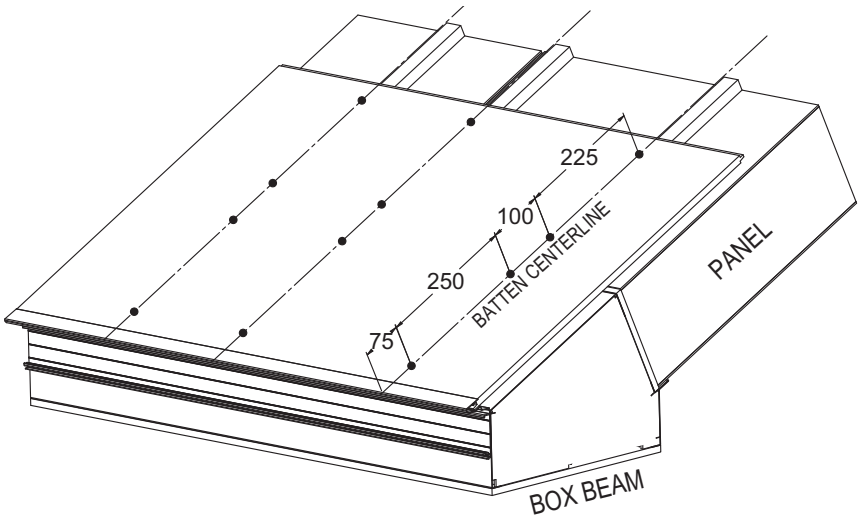
Using location plan, lift OSB board panel A into approximate position. Having fixed tile starter support onto end of OSB, place against ends of batten extensions to locate OSB. Locate first row of OSB panels around the roof using tile starter support to position. Work in the same order that the beams were put on (sides toward front).

TIP: USE A 30MM BLOCK TO CHECK OFFSET AT HIPS. Where required support OSB at joints with Batten extensions.

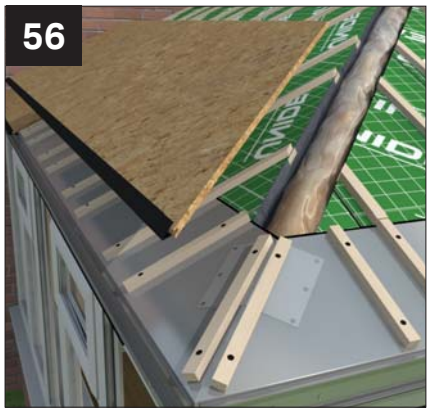
55

NRBF050
4.0 X 40mm
DECK-TITE
COUNTERSINK
SCREW

IMPORTANT
The first row of OSB boards around the perimeter of the roof lock together the box beam and the structural insulated panel. It is important to use the fixings shown and follow the screw pattern across along every batten centerline.



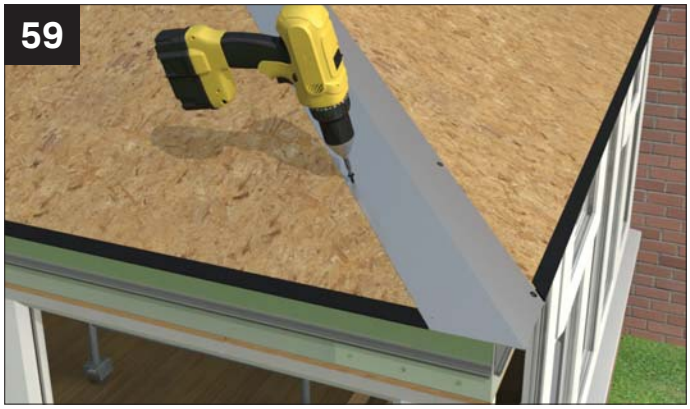
GEORGIAN INSTALLATION - SOLID ROOF - OSB BOARDING



NRBF050 4.0 x 40mm Deck-tite pozi countersink screw (24 per panel)

Where required support OSB board at joints with support battens supplied. Battens are 65 x 19 x 700mm long (NRPB 010).

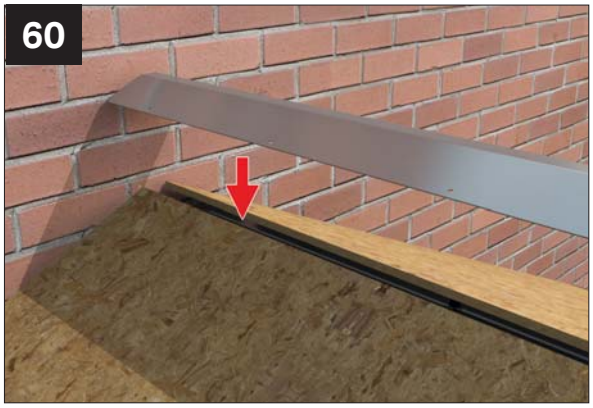
Fit remaining OSB panels working one side at a time left to right, eaves to ridge. NOTE: ALL OSB PANELS HAVE TONGUE AND GROOVE EDGES FOR IMPROVED FIT, SECURE ALL BOARDS WITH 3 FIXINGS (TOP, MIDDLE AND BOTTOM) USING 4MM X 40MM DECK-TITE POZI COUNTERSUNK SCREW (NRBF 050) PROVIDED.



Fit steel hip plates aligning bottom with tile starter support strip. [fixings 300 centres through predrilled holes using NRTS050].

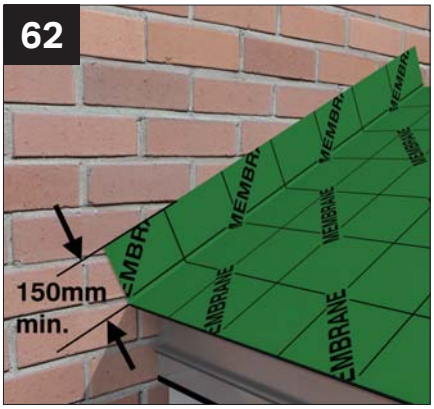
NOTE: THESE ARE SUPPLIED IN TWO HALVES IF OVER 3.2M IN LENGTH TO ALLOW FOR ADJUSTMENT / OVERLAP IF REQUIRED.

NRTS050 4.2 x 25mm wafer head self drilling screws.

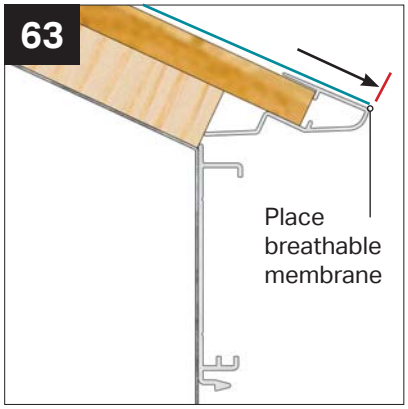


Place aluminium ridge cover plate 10mm away from host wall. Fix through the predrilled holes using 4.2 x 25 wafer head drilling screws (NRTS 050) provided.

Image shows roof covered with breathable membrane. Follow the sequence.
Membrane part no: RRMA050

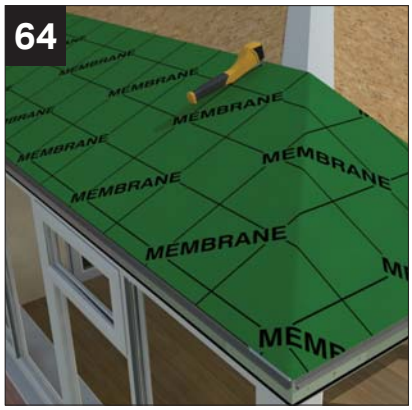


Start at eaves and position 150mm up the host wall. Place membrane (as step 63). Overlap each hip (as step 64).

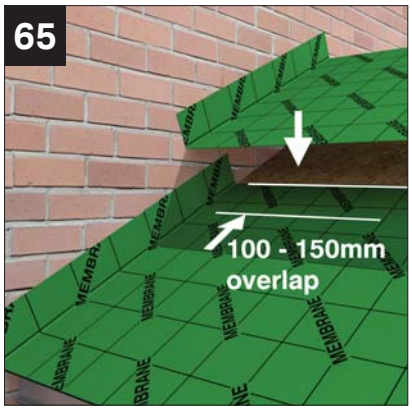


The breathable membrane is aligned to the front edge of the tile starter support

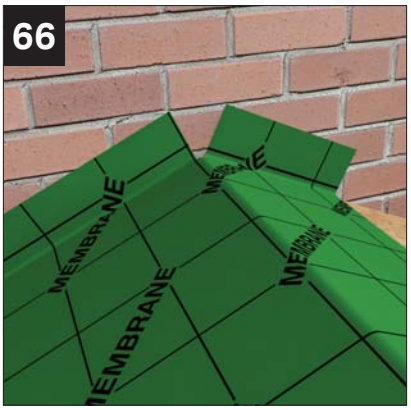
GEORGIAN INSTALLATION - SOLID ROOF - WATER PROOF UNDER LAYER



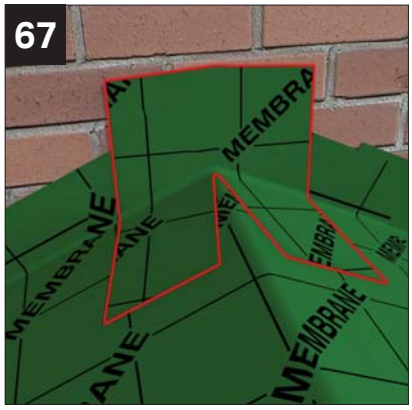
Minimum 200mm overlap over hips. Fix using staple hammer with maximum 12mm stainless steel staples. Take care not to cut through lower layers whilst trimming.



Work up the roof, overlapping the previous layer by 150mm at pitches of 14° or below and 100mm at 15° and above.

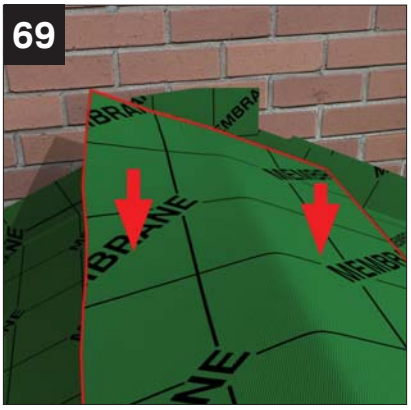


On solid roof, the membrane layer straddles the ridge. Slit as shown to allow transition to the opposite side. If the membrane falls short of the ridge plate, install an additional canopy, centrally over the ridge.



Install additional patch of membrane to protect the apex at the host wall. Secure with tape supplied.

Patch fully taped.



Finally cover the previously installed patch with a third layer to ensure positive seal. Staple into position.

Use tape to seal the layer at ridge end.

READ BEFORE FITTING

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN TEMPORARY DISTORTION WHICH MAY MEAN TILES WILL NEED TO BE RE-LAID. Following these instructions allows tiles to correctly 'float' for expansion and contraction.

1. ENSURE TILES ARE FITTED TO THE CORRECT INSERTION LINE – **DO NOT PUSH TILES TOGETHER.** Insertion lines vary according to temperature when installed
2. **DO NOT OVERTIGHTEN SCREWS**

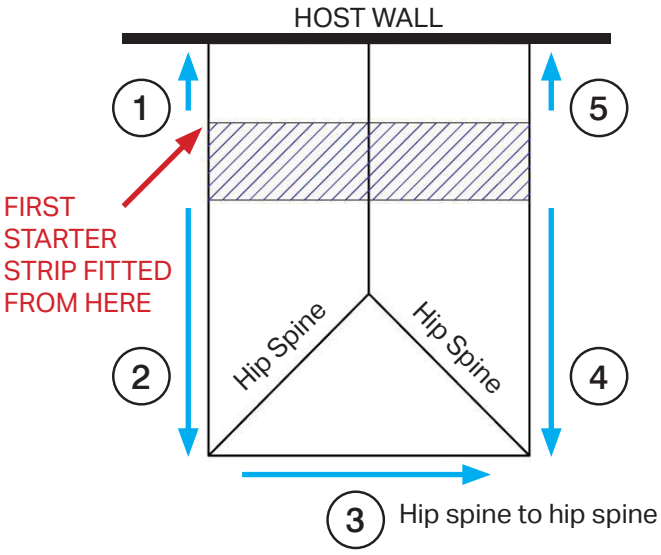
The NRTT001 Tile Screw Fixing Tool can be found with the NRTF050 screws inside the fixings component box.

Hold the tool in place as shown whilst installing each screw and remove to ensure a fit which is close but not too tight – This is to allow for the expansion and contraction of the tiles.

Tile starter strips are lettered in correspondence with its location shown in the tile location plan. **TILE STARTER STRIPS ARE NOT FITTED IN ALPHABETICAL ORDER, PLEASE FOLLOW INSTALLATION SEQUENCE ON THIS PAGE FOR CORRECT FIT.**

GLAZED ROOF

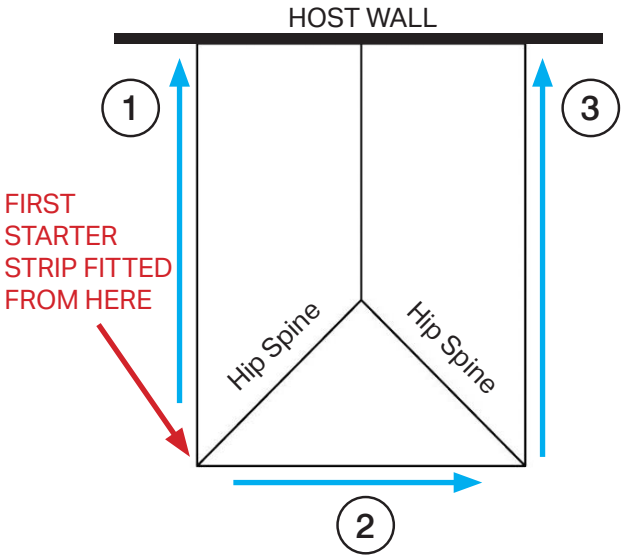
Details shown also apply to Victorian shapes.



If a roof contains rectangular glazing panels, starter strips must be set out from the glazing bar centre.

KEY
Fitting order is labelled 1 to 5
Direction of starter strip fitting →

SOLID ROOF

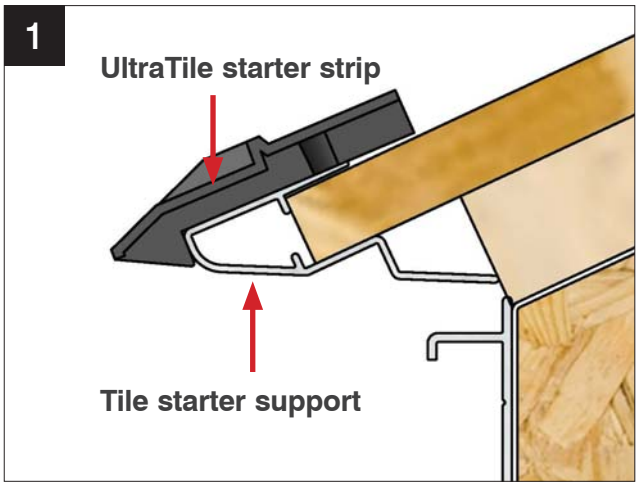


If a roof contains no rectangular glass panels and is classed as 'solid' then starter strips must be set out from the hip spine.

KEY
Fitting order is labelled 1 to 3
Direction of starter strip fitting →

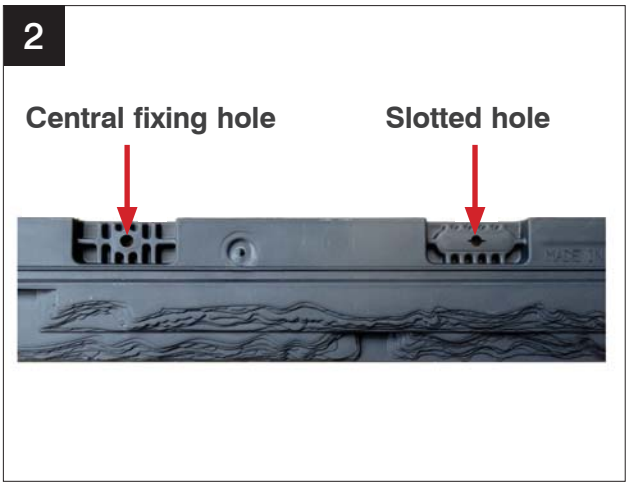
GEORGIAN INSTALLATION - SOLID ROOF - HIP SPINES / ULTRATILE

1



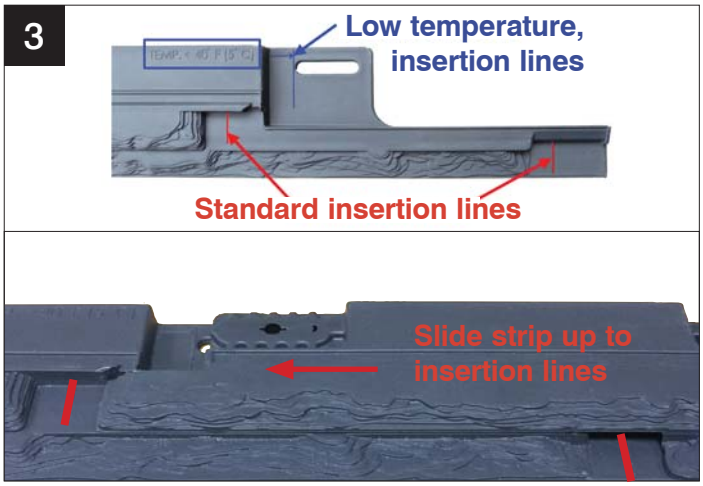
Place starter tile strip on starter tile support, make sure strip is a tight fit up against support.

2



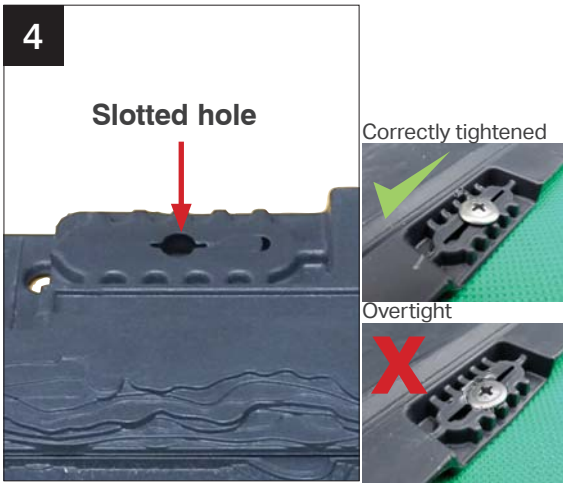
Fix through the central fixing hole for temporary fitting. **(DO NOT FIX THROUGH SLOTTED HOLES UNTIL ALL STARTER STRIPS ARE IN PLACE)**

3



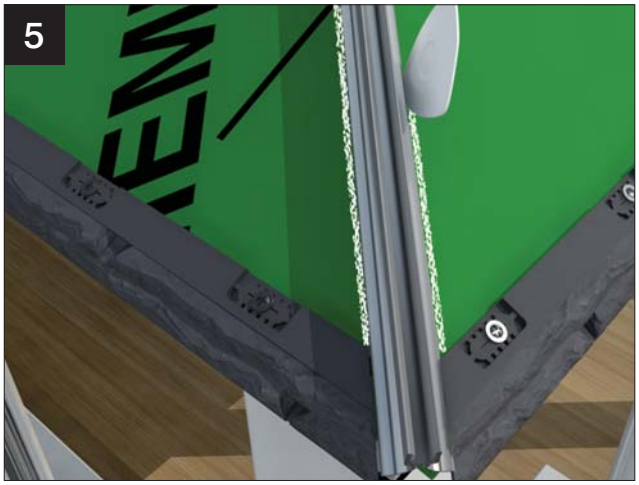
Following the direction stated in the fitting guide (see p29). Align next starter tile strip with the standard insertion lines.
NOTE: IF AIR TEMPERATURE IS BELOW 5°C, ALIGN WITH THE LOW TEMPERATURE LOCATION MARK (TOP RIGHT OF STRIP)

4



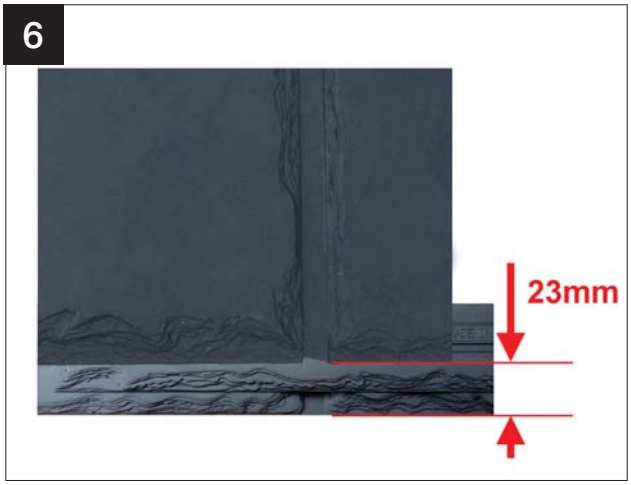
Repeat steps 3&4 following the fitting order guide until all starter strips are in place and are correctly fitted. Once correct, fully fix through slotted holes along the starter strips for permanent fix.

5



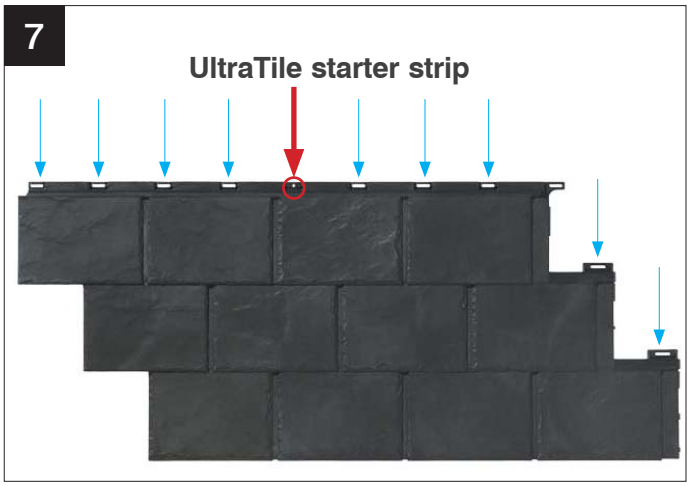
Mark position of hip spines and remove from roof, this helps with fitting of the tile panels.

6

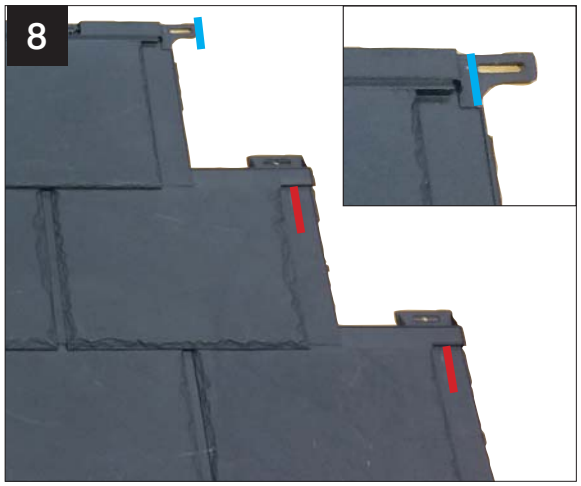


Using the tile location plan provided, locate position of first tile panel (labelled aa1), slide down onto the starter strip leaving 23mm from the starter strip edge. This allows expansion of the tiles in warm temperatures.

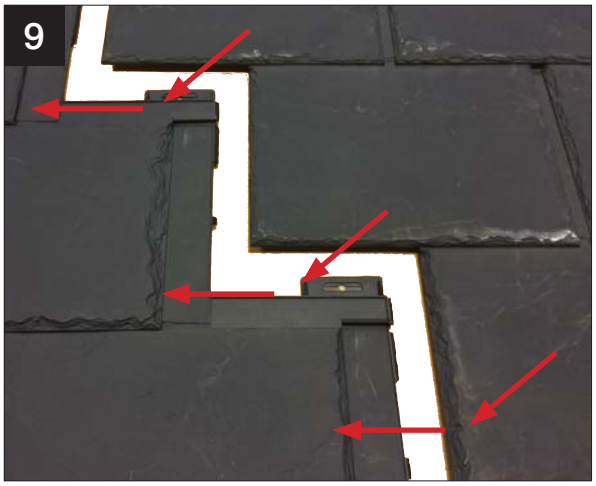
GEORGIAN INSTALLATION - SOLID ROOF - HIP SPINES / ULTRATILE



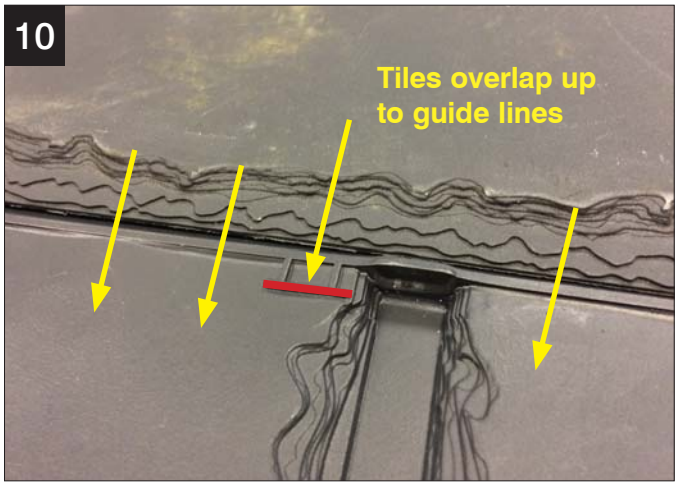
STEP 1 – fix through central non adjustable fixing hole
STEP 2 – fix through remaining slotted holes (10 holes)



At normal temperatures, of around 15°C, use the insertion lines indicated red in the image. For low temperature installations, below 5°C, use the single insertion line indicated blue, at the top right of the tile.

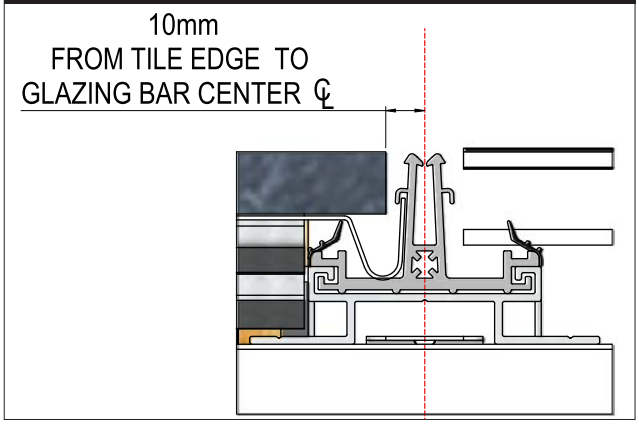


To slot the tiles together, a down and left action is used in one movement. Make sure all tabs have interlocked. Tiles are fitted to the roof from left to right bottom to top. Repeat steps 7,8 and 9 for entire layer.



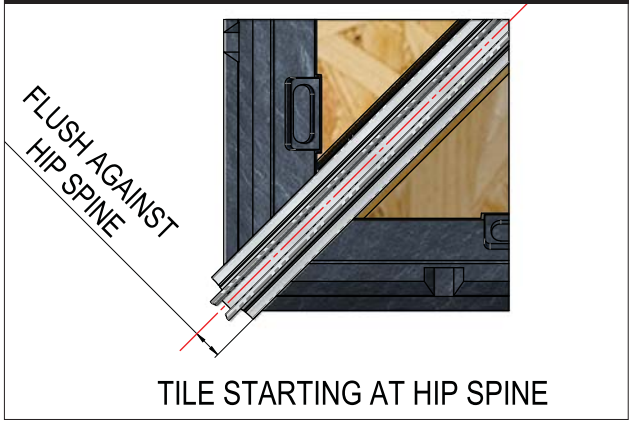
When inserting next layer, overlay tiles in line with insertion lines (marked in red above) on the tile. Repeat steps 8, 9 and 10 until the roof is fully tiled. See tile finishing references on back for accurate fit and best results.

FIGURE 1



If the roof contains full rectangular glass panels, the starter strips MUST be fitted from the glazing bar.

FIGURE 2



If the roof contains no rectangular glass panels, then the starter strips MUST be fitted at the hip spines first.

INSTALLATION - TILE FINISHING REFERENCES

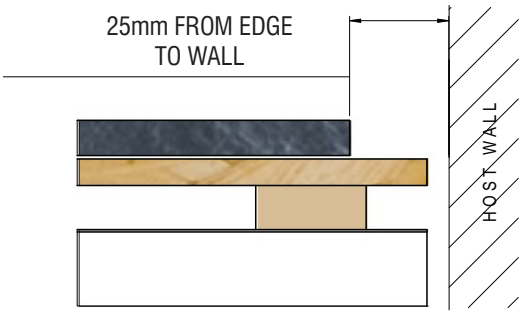
Distance from bottom tile edge to tile overlap insertion lines.

This is the amount of tile that should be visible on each layer of the roof. This is a good check to see if the tiles are in the correct position with correct spacing allowances for heat expansion.

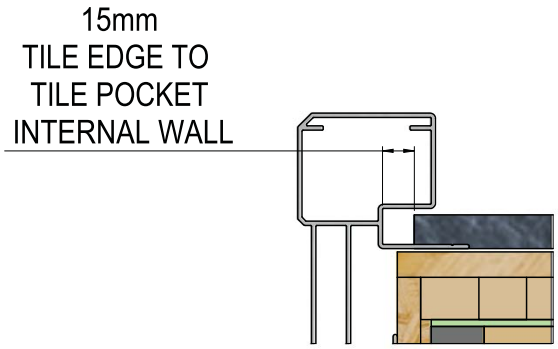
REFERENCE DIMENSIONS ONLY - NOT SET OUT DIMENSIONS

- site conditions may cause these dimensions to vary.

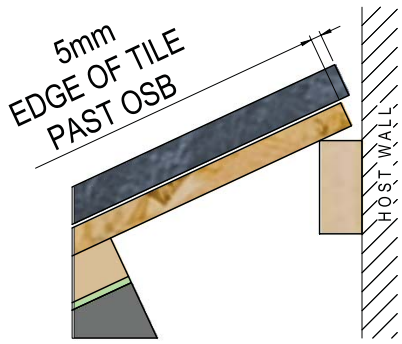
Tiles finishing at host wall



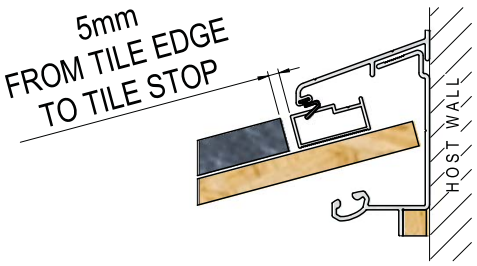
Tiles finishing at gable end



Tiles finishing at lean-to ridge

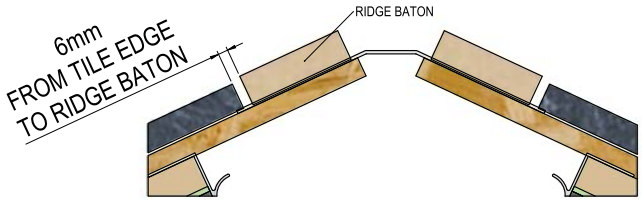


TILE FINISHING AT HALF RIDGE - SOLID NO GLASS

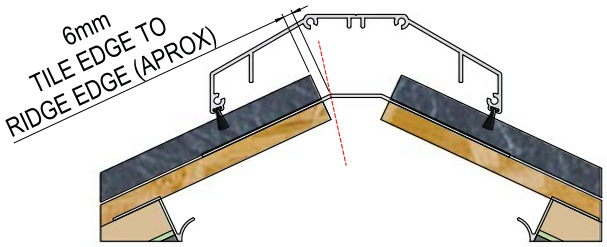


TILE FINISHING AT HALF RIDGE - ALUMINIUM CAPPING WITH GLAZING

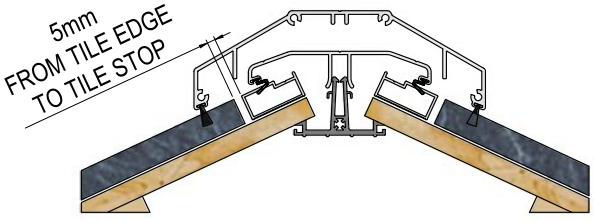
Tiles finishing at ridge



TILE FINISHING AT RIDGE - FULL RIDGE ARMADILO TILE

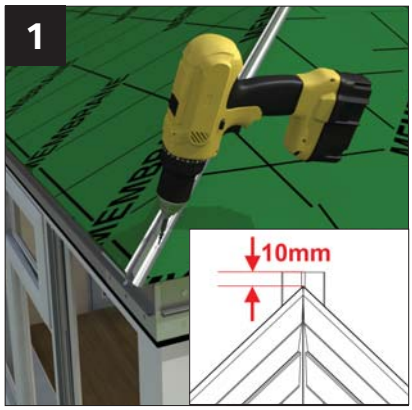


TILE FINISHING AT RIDGE - FULL RIDGE ALUMINIUM CAPPING



TILE FINISHING AT RIDGE - FULL RIDGE ALUMINIUM CAPPING WITH GLAZING

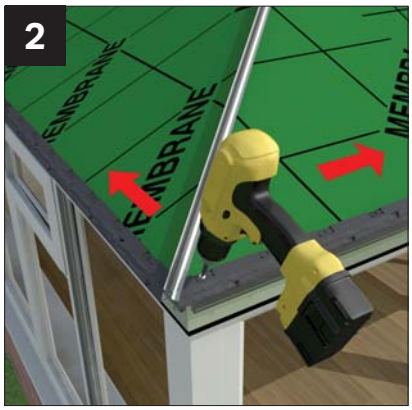
INSTALLATION - TILE FINISHING REFERENCES



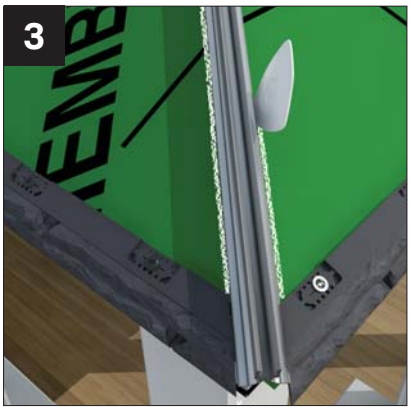
Working anti-clockwise, temporarily fix all hip spines top and bottom. Spine set 10mm out beyond lower hip point.

NRTS 050
4.2 x 25 wafer head self drilling screws (2 each).

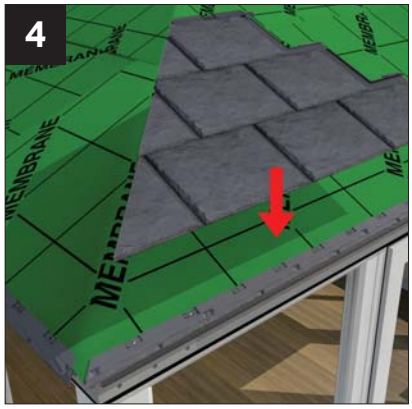
TIP: USE STRAIGHT EDGE TO LINE UP SPINES TO HIDDEN FINIAL POINT.



Lay first length of the Ultratile starter strip into position (15mm from hip spine centre line) hard against the base of hip spine. IF THERE IS A GLAZING SECTION IN THE ROOF WORK FROM THERE. Temporarily fix using (NRTS 050).

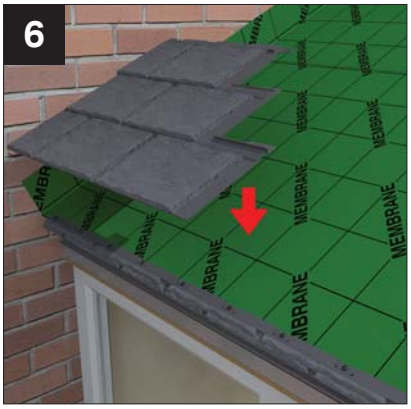


Mark position of hip spines and remove from roof, this helps with fitting of the tile panels. Using 4.2 x 25mm wafer head self drilling screws (NRTS 050) provided.



Starting with front central facet, continue to lay front row of tiles working from left to right, bottom to top, following the tile location plan.

Complete the front facet.



Using the tile location plan provided, locate position of first tile panel (labelled aa1), slide down onto the starter strip leaving 23mm from starter strip edge (page 30 step 6). This allows expansion of the tiles in warm temperatures.

Continue tiling the roof as above, working anti-clockwise around the roof. Each set of tiles are pushed down, then slid to the left to engage.

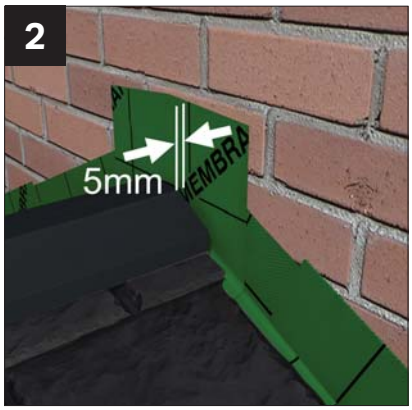
NRTF 050
4.2 x 25 wafer head self drilling screws (11 per tile).

Fully tiled roof. Ensure the 30mm spacing is maintained between tiles on adjacent facets to accommodate the hip spine. Fit the hip spine on completion of the tiling.

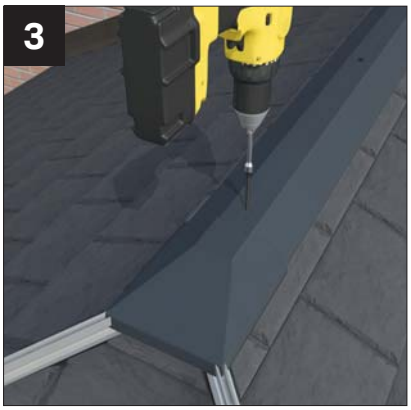
GEORGIAN INSTALLATION - SOLID ROOF - CAPPINGS

NRRSA 005BL 5.5 x 90mm hex washer head self drilling tek screw (with G16 stainless steel sealing washer)

Pre-drill ridge cap at max 750 centres, 6mm holes.

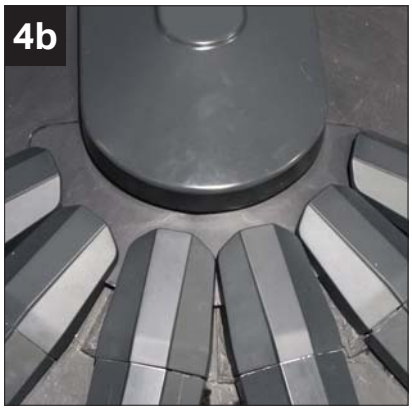


Centralise ridge to cap over apex. Position 5mm away from host wall. Foam fill void, prior to dress leading.

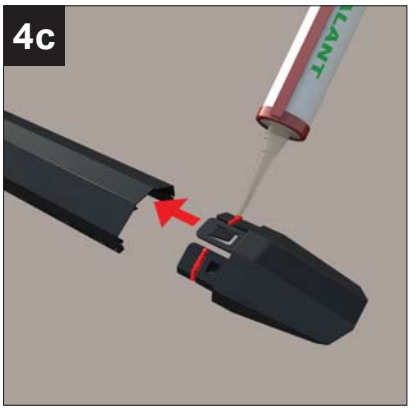


Fix ridge top capping using 5.5mm x 90mm (NRRSA 005BL) provided. Ensure hip spines are aligned with corners of ridge top capping.

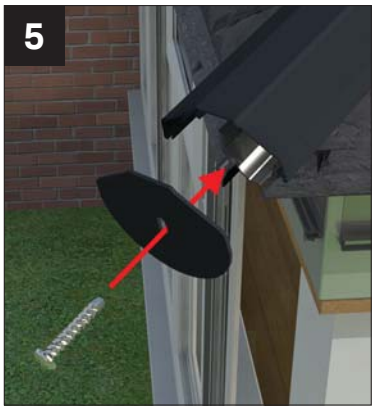
Clip fit hip capping, ensure fixing clips are set at 500 centres (pre - fitted clips). In Georgian / Edwardian situation the hip bar cappings are pre - mitred to abut ridge top capping. NOTE: 3 AND 5 FACET VICTORIANS. THE HIP BAR CAPPINGS AT THE RADIUS END REQUIRE (LMEC 004) FITTING, THESE SIMPLY SILICONE AND PUSH-FIT ONTO THE END OF EACH BAR.



On 3 and 5 facet victorians after tiling, fit the preformed external tile flashing trim (NRVT001). Secure into position using 2 x screws (NRTS 050) provided.



The hip bar top cappings at the radius end require (LMEC004) fitting, these require a bead of silicone applying prior to push fitting onto the end of each bar.



NRES 004 4.8 x 32 pan head self drill screw (2 per cap)

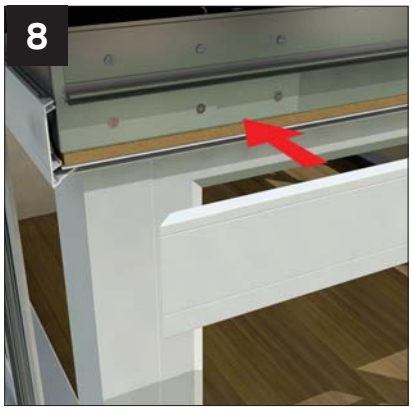
NRHB002 Aluminium hip spine end plate

Fit hip spine end caps. NOTE: (NRES 004) end cap fixing screw comes complete with 2 part coloured screw cap cover.

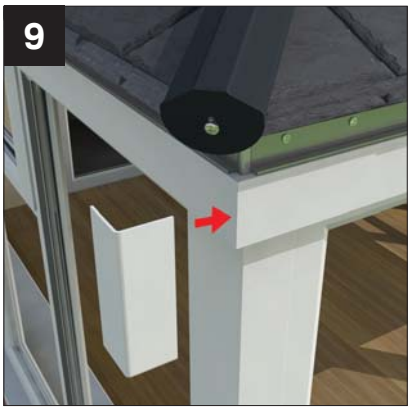
If using existing flashing, dress down over the roof and ridge area then finish as normal. Flashing may need trimming to fit neatly. Apply patination oil to lead for peace of mind (Avoids unsightly lead sulphate run off). Alternatively install new code 4 lead.

GEORGIAN INSTALLATION - SOLID ROOF - FASCIA SOFFIT AND GUTTERING

Screw fix PVCu soffit channel into head of window frame or base of OSB board (screws not provided).



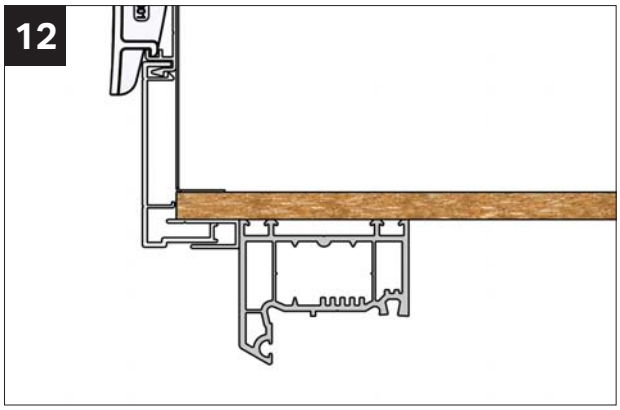
Clip fit PVCu fascia board locating upper leg to lower leg of aluminium gutter channel (see cross section detail on page 11).



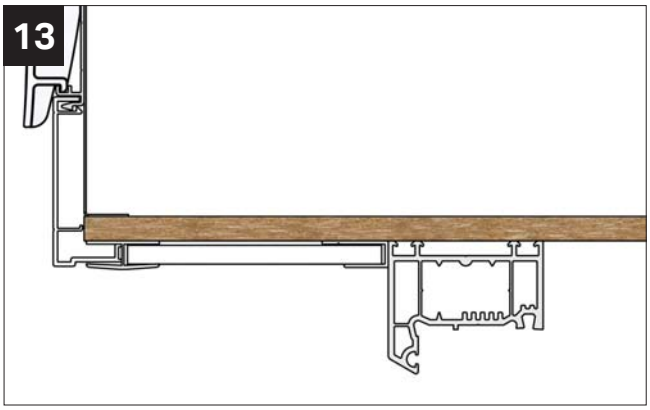
Fit PVCu fascia corners with silicone.

Fit gutter bracket by placing lower leg onto aluminium gutter channel then 'snap back' upper leg. Space at maximum 750mm centres and within 200mm of corner.

Fit Marley Classic guttering. Ensure when fitting the gutter you fit to the insertion marked lines within the unions / gutter corners.



Standard soffit in detail. Silicone seal 'U' channel to retain lower edge of fascia.

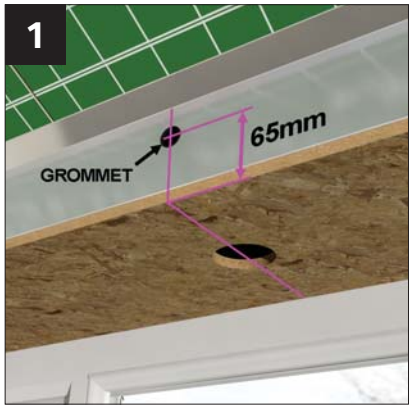


Extended soffit in detail (must be used above super-insulated columns). Silcone seal to retain fascia into 'H' section and soffit innto 'U' channel.

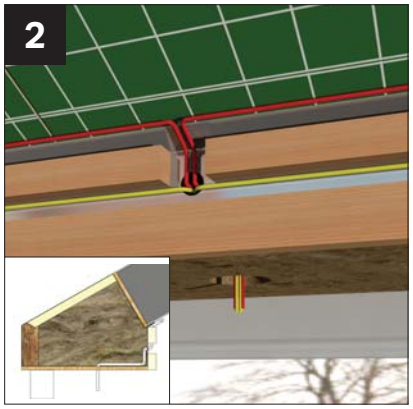
DOWN LIGHT INSTALLATION

THE ULTRAROOF380 BEAM IS NOW INSULATED WITH MINERAL WOOL

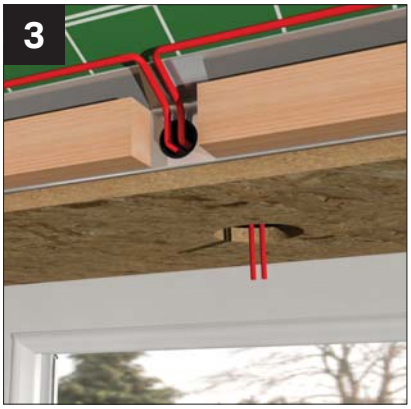
This guide shows our recommendations when installing internal down lights in the Ultraroof380 beam. All electrical work must be carried out by a qualified electrician and tested in accordance with current BS7671 IEE wiring.



Cut a hole in the base of the pelmet for your light fitting. Cut a corresponding 20mm dia. hole in the vertical face and fit a rubber grommet.

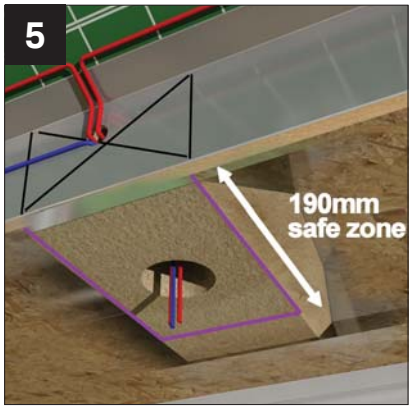


The cables can be passed through the grommet and chased above or between the internal battens as shown. Internally, the wiring should be passed beneath the mineral wool insulation (see inset diagram).

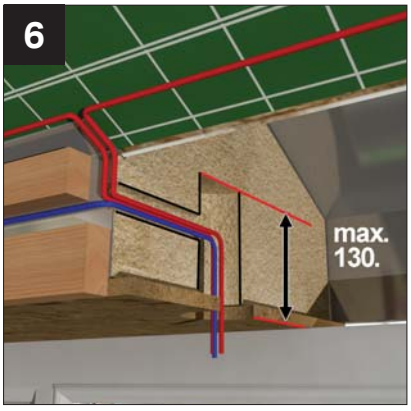


At lower pitches, when only one batten is fitted, the hole (and grommet) are positioned lower on the vertical face and the batten split to allow cable access.

At pitches lower than 17 degrees there is insufficient space on the vertical face to fit the 20mm grommet. Drill 2 holes either side of the light fixing to allow installation of the wires as shown. A 'channel' can be created using 2 narrow strips of plasterboard covered with a top panel.



If the light is coincident with one of the internal foam fillets (defined by the marking on the vertical face) it must be positioned in the190mm safe zone.

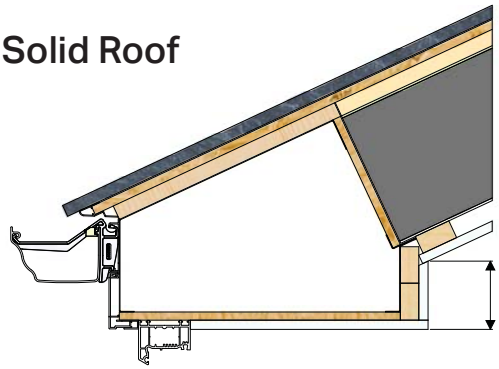


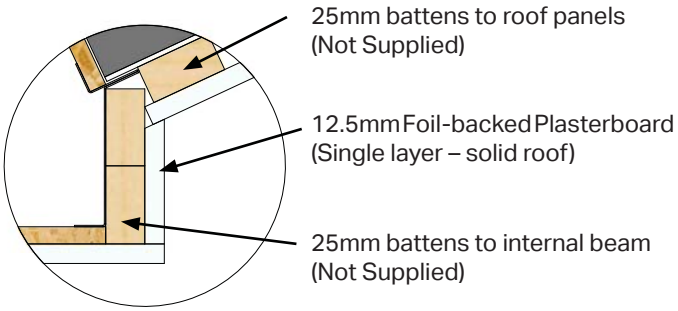
Drill through the OSB and vertical face creating the wiring access. The size of the fitting may require additional space.
NOTE: The cavity should not exceed 130mm from the underside of the beam face

THE ULTRAROOF380 BEAM IS NOW INSULATED WITH MINERAL WOOL

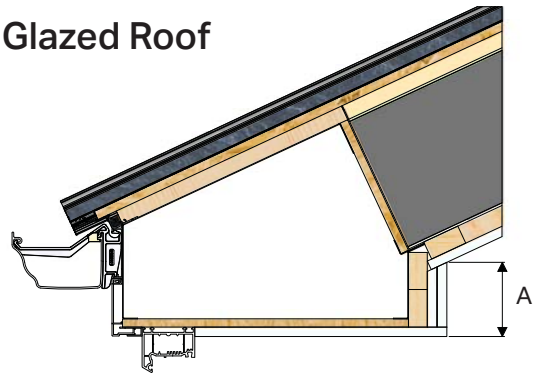
PLASTERBOARD GUIDELINES

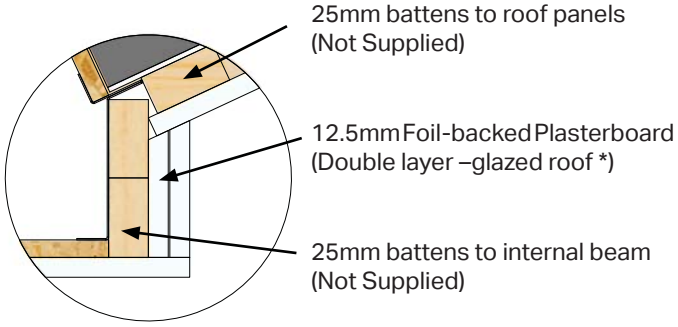
Solid Roof





Glazed Roof

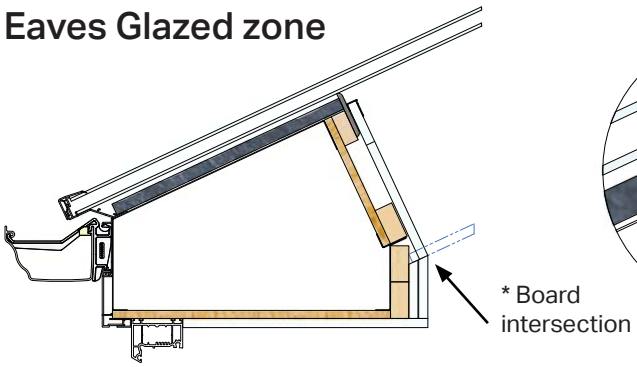


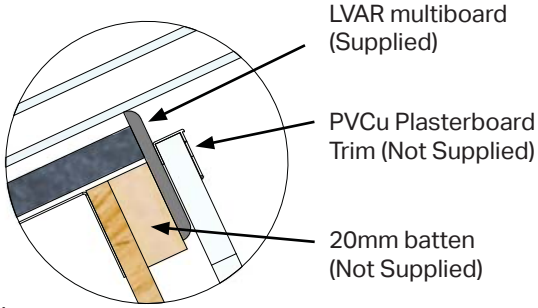


Internal Pelmet Height Calculator

Pitch	15	20	25	30	35	40
'A' Solid Roof	25	59	92	127	163	202
'A' Glazed Roof	29	63	98	134	172	212

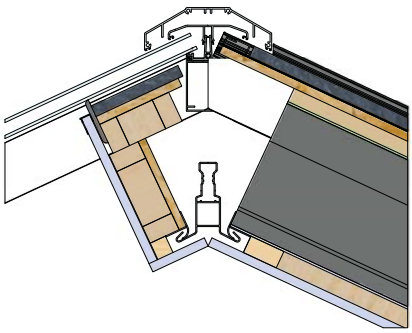
Eaves Glazed zone

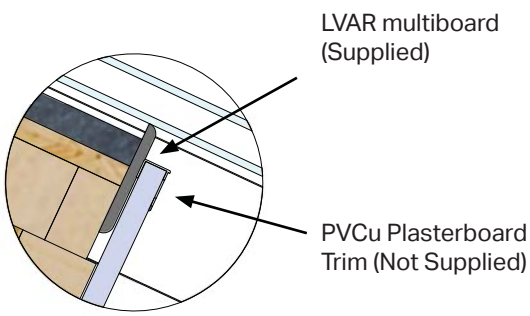




* Note: Double layer of plasterboard on internal beam upright ensures a single plasterboard seam where ceiling, beam and glazed area boards intersect.

Ridge Glazed Zone

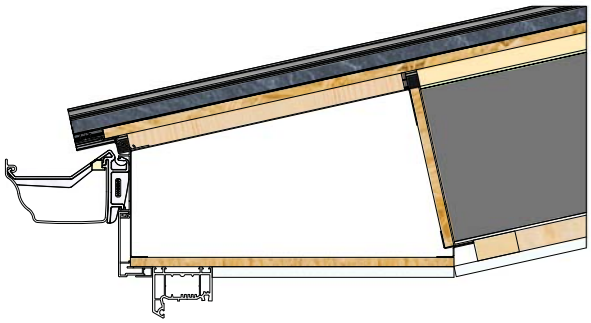


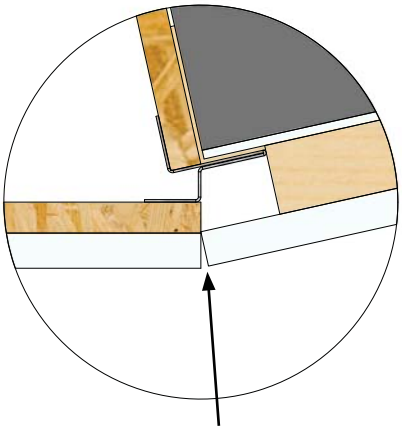


PLASTERBOARD GUIDELINES

Lean-to at 12.5 Degrees

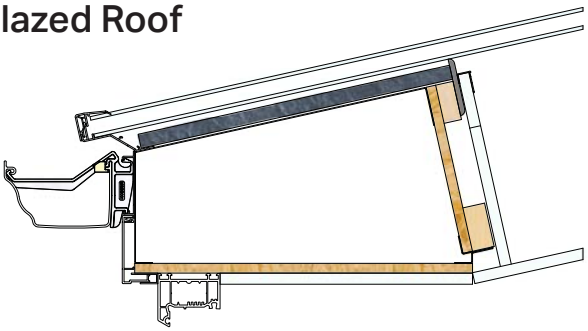
Solid Roof





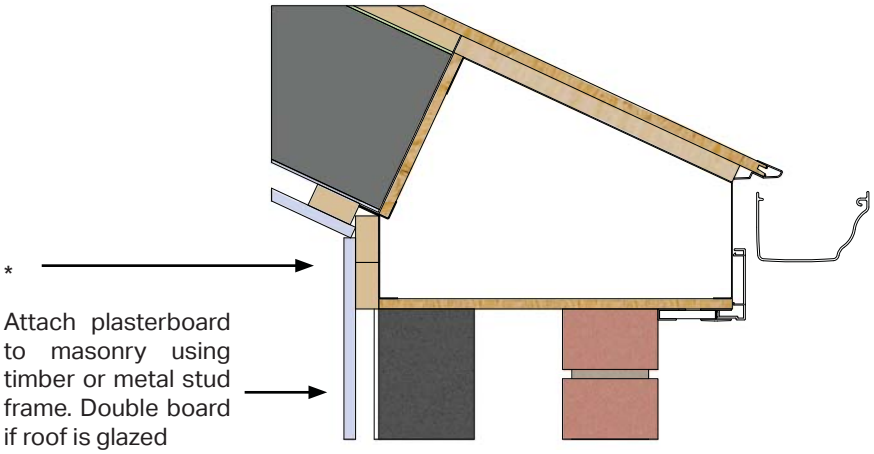
Align boards to form a single seam
At internal corner of beam

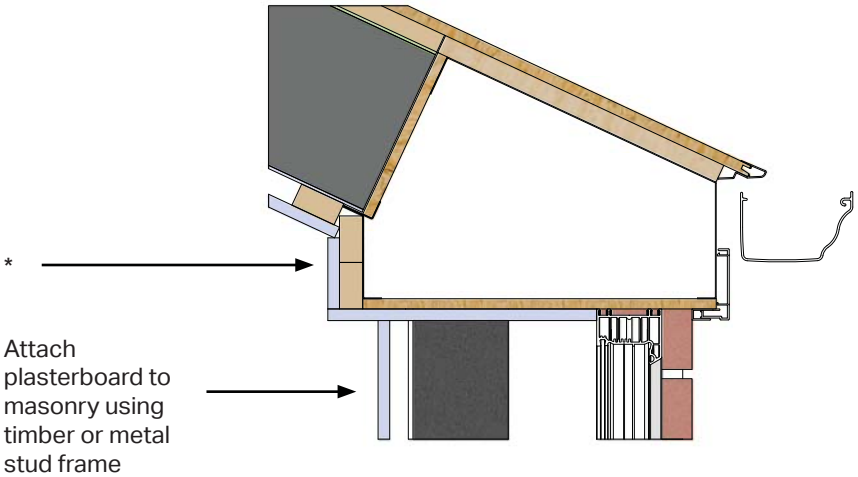
Glazed Roof



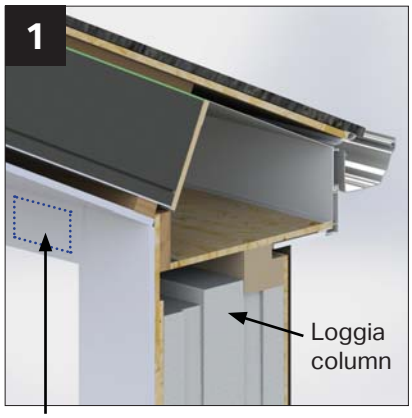
Variations on Brickwork

* Note: Double board if roof features glazing

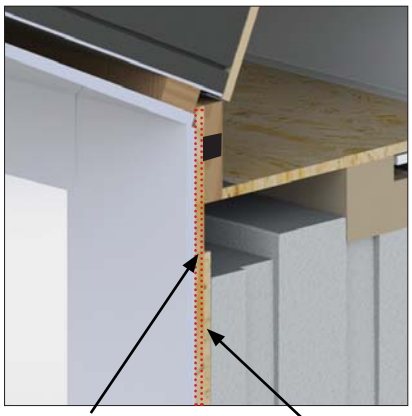




PLASTERBOARD GUIDELINES (SUPER-INSULATED COLUMNS)

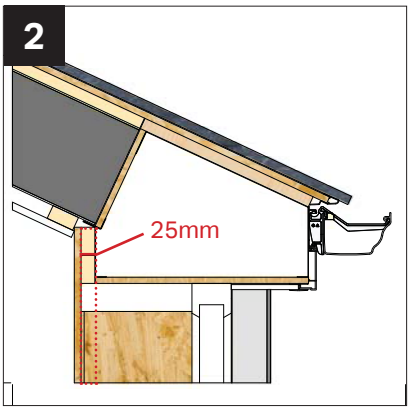


Double board adjacent to OSB cladding

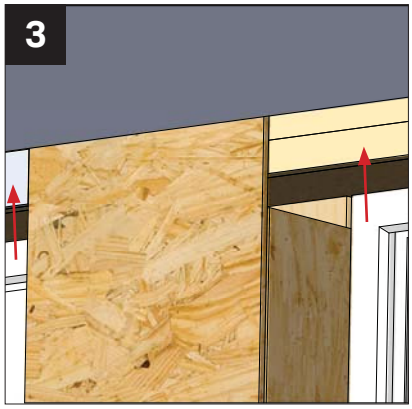


Additional 12mm OSB cladding on internal Loggia face (supplied)

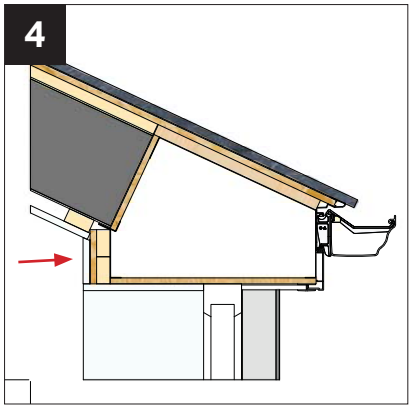
Existing external loggia OSB cladding



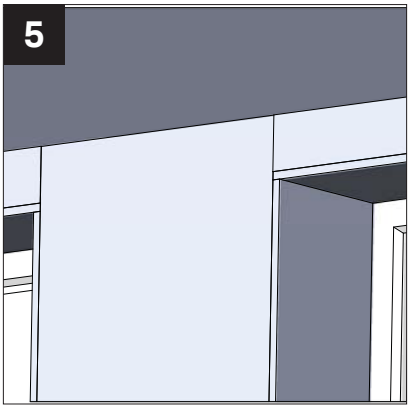
Additional 12mm OSB cladding installed on internal face of super-insulated column. Note: Column aligned 25mm inset from internal beam.



Plasterboard infill to battens adjacent to 12mm OSB cladding.



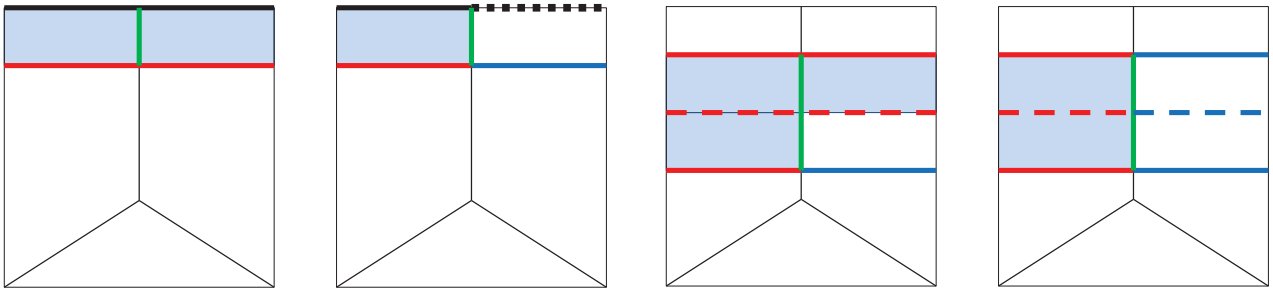
Finished plasterboard view with board fixed to 12mm OSB cladding.



Finished plasterboard, internal view.

INSTALLATION - FITTING ROOF GLAZING

FOLLOW MAIN GUIDE UP TO PAGE 11, STEP 28 THEN FOLLOW THIS SECTION



KEY

GLAZING

PANEL

STARTER 'A' FRAME BAR (GLASS)

STARTER 'A' FRAME BAR (SOLID)

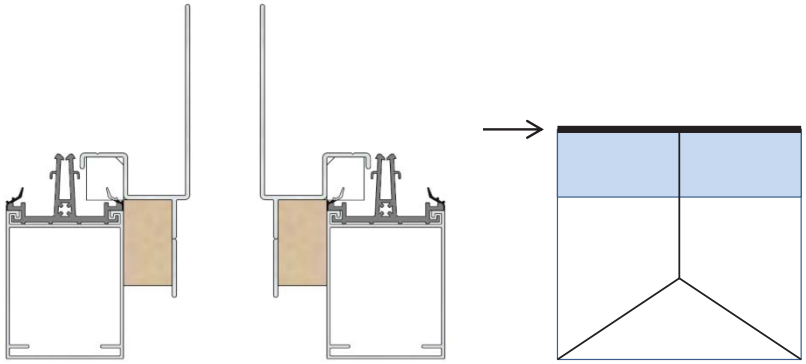
TRANSOM 'A' FRAME BAR (GLASS)

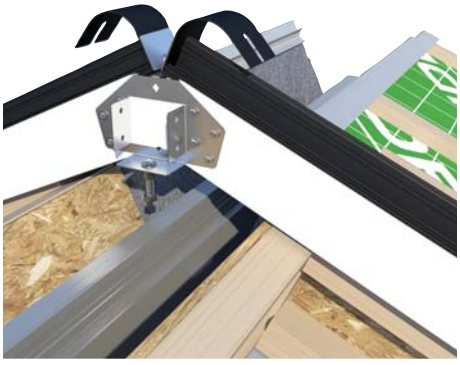
TRANSOM INTERMEDIATE BAR (GLASS)

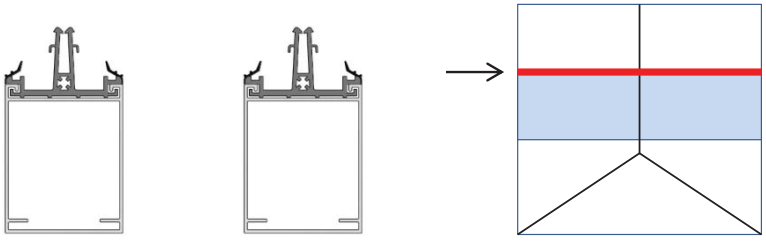
TIMBER TRANSOM 'A' FRAME BAR (SOLID)

TIMBER TRANSOM INTERMEDIATE BAR (SOLID)

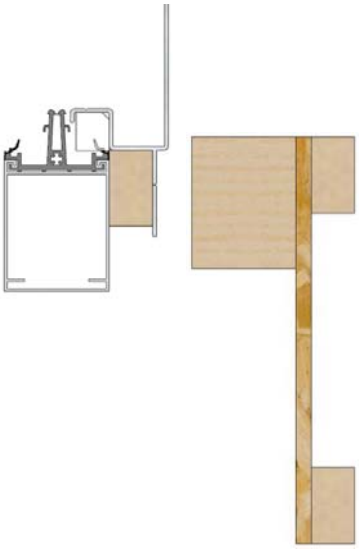
RIDGE BEAM

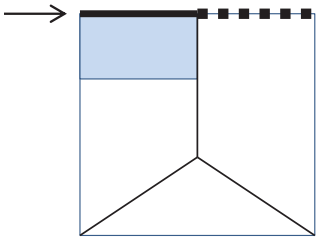


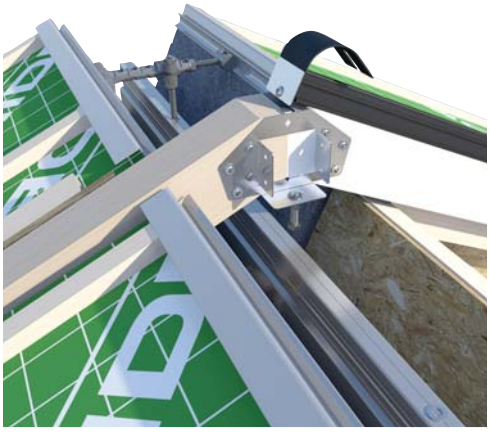


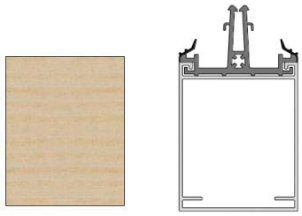


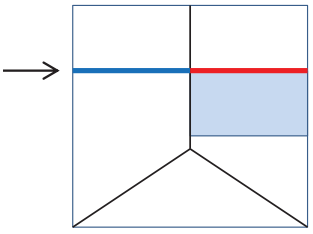
INSTALLATION - FITTING ROOF GLAZING

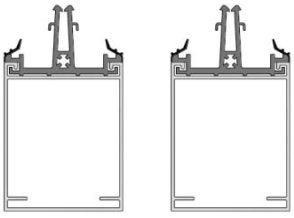


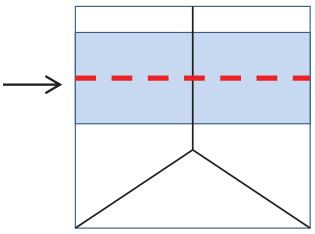


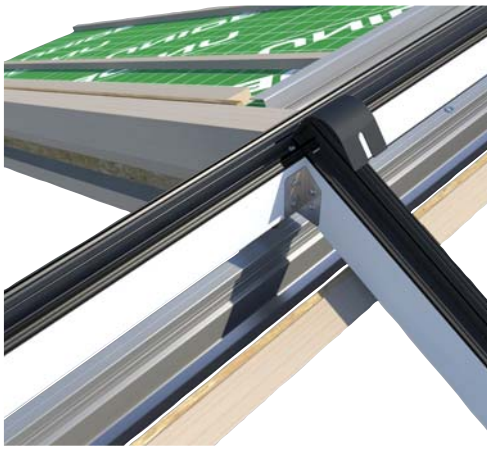


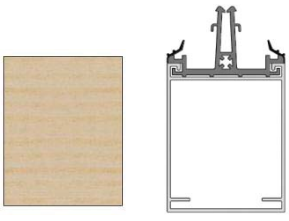


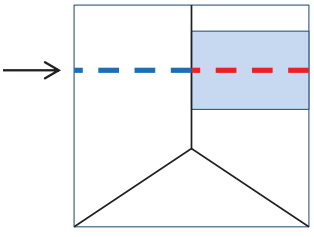






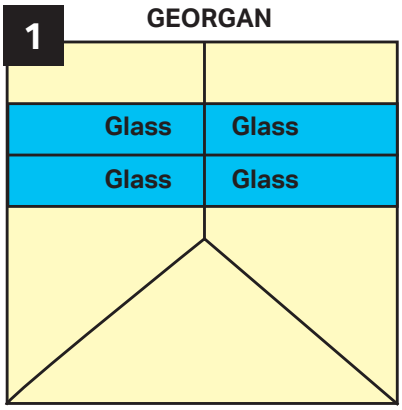






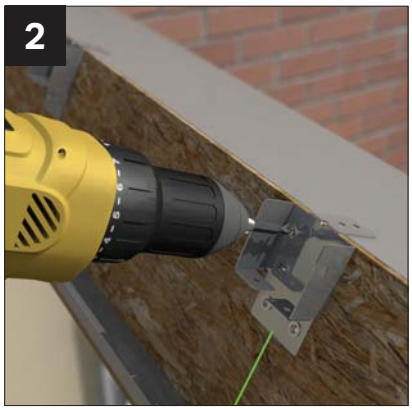
INSTALLATION - FITTING ROOF GLAZING

1



THE MAIN GLAZING GUIDE IS BASED ON THIS DESIGN

2

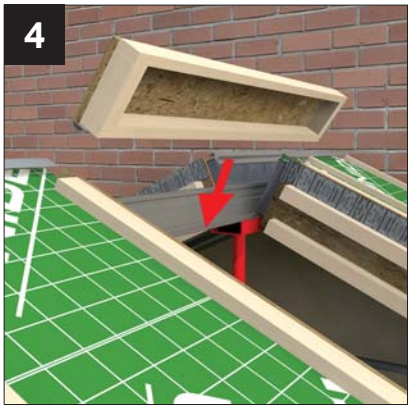


When installing 24mm double glazed units, the box beam OSB face will be marked with the vertical lines which indicate glazing bar centres. On the marked lines, locate to the top edge of the box beam the appropriate box beam shoes (NRBE 001 or NRBE 002) supplied. Fix to the beam using 8 x 4.2mm x 25mm wafer head self drill screws (NRTS 050) provided.

3

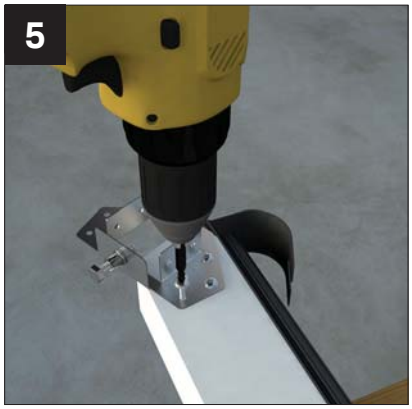
Drop into position the wall abutment panels, one either side of the ridge (see steps 35-37, page 23). Then the front centre panel (step 38, page 24). From location plan, continue to install all remaining sip panels in pairs, remembering to fit the ridge couplers as you go.

4



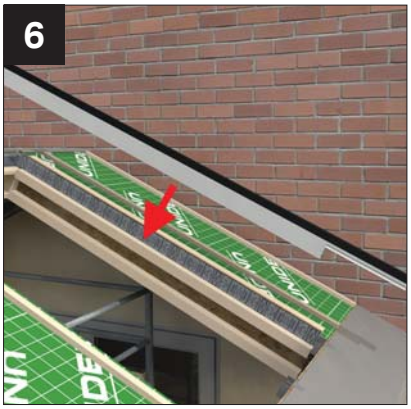
When glazing either side of ridge, lower into position. The pre-manufactured ridge purlin cassettes (OSB boarded side nearest the ridge) the bottom edge hooks to the ridge side (like a solid panel).

5



Each glazed area as 2 x 'A' frame glazing bar assemblies. These comprise 2 x glazing bars and 1 x adjustable connection bracket (NRAB 001). Attach the bracket to the pre drilled glazing bar using 4 x 4.2mm x 25mm wafer head self drill screw (NTRS 050) provided.

6



Lower the glazing bar (with bracket attached) into place along the top of the timber batten and into the already fitted box beam shoe.

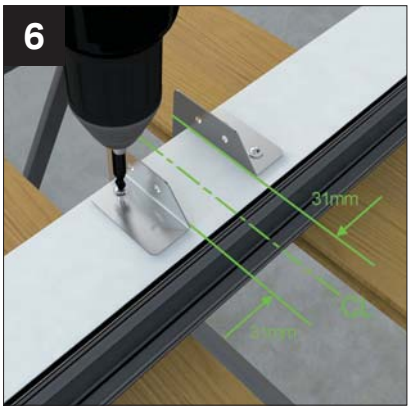
4

Glazing bar in position.

5

Lift the opposite glazing bar into position (to create 'A' frame). When aligned, secure the bracket again using 4 screws (NRTS 050) provided. The 'A' frame is not to be fixed further at this stage. Assemble and position opposite facing 'A' frame as above.

6



If two glass panels sit side by side, intermediate bar must be installed. Mark a centreline on the glazing ridge spacer beam (see location plan). Mark a line 31mm to left and right of centreline then attach 2 x 'U' shaped brackets (NRRA001) using 4 x 4.2mm x 25 screws (NRTS 050) provided, for each bracket.

INSTALLATION - FITTING ROOF GLAZING

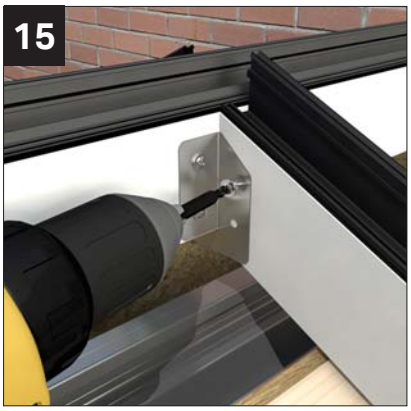
Locate the glazing ridge/spacer beam into the adjustable bracket shoes. Check 'A' frames are parallel to each other.

Adjust glazing ridge beam height using thumb screws to ensure glazing gaskets are in aligned.

'A' frame being fastened into box beam shoe.

Locate the intermediate glazing bar into the installed 'W' brackets.

Ensure glazing section is square, checking diagonals are equal. Secure adjustable connection bracket into ridge spacer beam using 4 x 4.2mm x 25mm (NRTS 050) provided. Repeat on opposite side of 'A' frame.



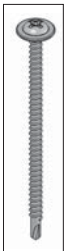
Again, check intermediate bar for squareness, then secure with 4 x 4.2mm x 25mm (NRTS 050) provided. Repeat on opposite side

Fix all glazing bars into box beam shoes, again, using 4 x (NRTS 050) for shoe (NRBE001) or 6 x (NRTS 050) for shoe (NRBE002) provided.

NRTS050 4.2 x 25mm wafer head self drilling screws

Secure glazing bar to external face of box beam. Two screws each side using (NRTS 050) provided.

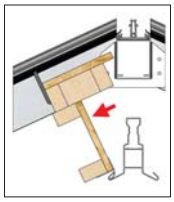
Temporarily remove lower timber batten to allow fixing through upper batten. Secure all glazing bars by fixing through the upper panel batten at 500mm ctrs. using 4.8mm x 80mm baypole screw self drill Philips wafer head (BPS010) provided. **IMPORTANT: ANY GAP BETWEEN GLAZING BAR AND UPPER PANEL BATTEN NEEDS PACKING TO ENSURE NO FLEXING OF GLAZING BAR.**



INSTALLATION - FITTING ROOF GLAZING

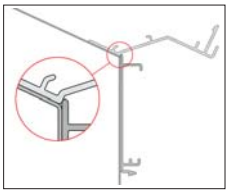
19

Ensure ridge purlin cassette sits square to underside of glazing bar, check bottom hook is located onto ridge and in-line with hooks on adjacent panels by pulling forward. Fix into place using 1 x fixing 4.8 x 80mm (BPS010) provided.



20

Next, locate aluminium glazing support trims between glazing bars. See inset for location point.



21

Secure the glazing support section at 200mm ctrs. using 4.2mm x 25mm wafer head self drill screws (NRTS050) provided.

22

Screw up through ridge section into purlin cassette at 300mm ctrs. using 5.5mm x 32mm hex head drill screw (RRR025) provided.

23

Fix through each side of the purlin cassette into the panel edge using (BPS010) provided.

24

Now fit the tile screen framework (OSB board uppermost) position this 6mm back from purlin cassette front edge (TIP: use 6mm architrave supplied to set position). Fix at 300mm ctrs using fixing 4.0mm x 40mm (NRBF050) supplied.

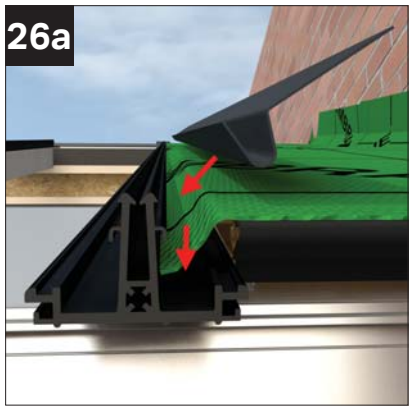
NRBF050

25

Now refit the lower panel batten (which was removed at step 18). Fix using 5.0mm x 50mm c'sunk pozi head fix wood screws (RRX025) provided.

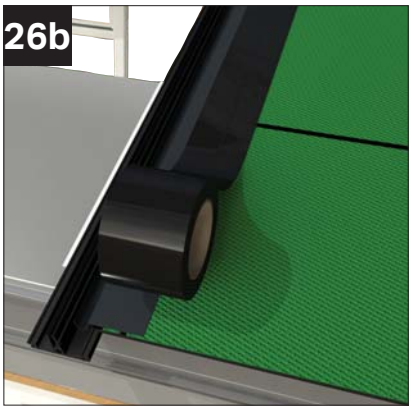
RRX025

26a



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.

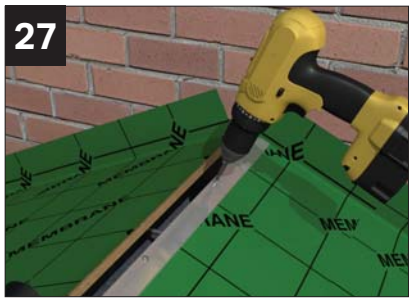
26b



Tape the joint between the breather membrane and drainage channel as shown using weathering tape (supplied).

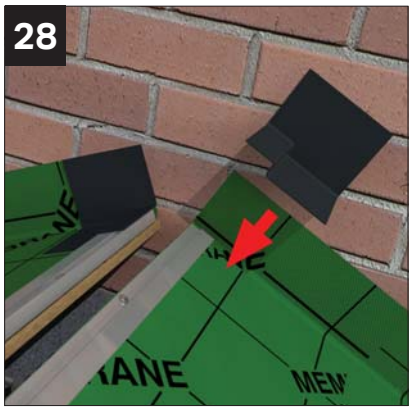
INSTALLATION - FITTING ROOF GLAZING

27



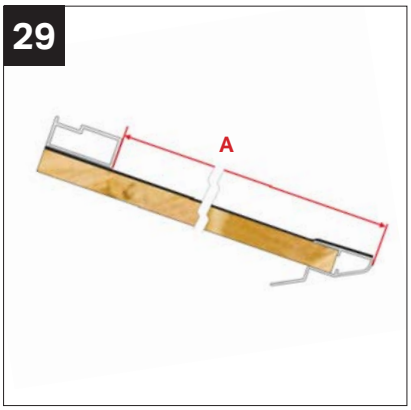
At each side of the glazing area, an aluminium upper tile stop is fitted. The lower edge of the tile stop is positioned a set distance from the edge of the bottom tile starter support. See critical dimension sheet for dimension A, see step 29. The tile stop is bedded down with clear low modulus silicone, then screwed at 300mm ctrs using (NRSF012) 4.8 x 38 pan head screws provided. Finally seal lower edge of the tile stop to underlayer again using clear low modulus silicone.

28

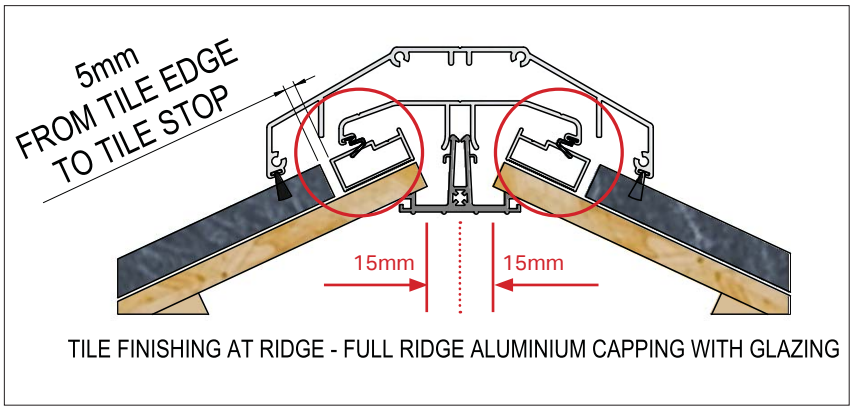


Fit the glazed ridge panel flashing trim to left and right side of ridge, (NRRI 011R right shown). These are bedded down using clear low modulus silicone provided.

29



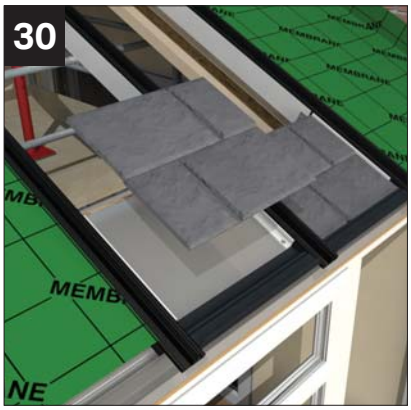
Dimension A given on critical dimension sheet. This gives distance from face of tile stop to outer edge of tile starter support.



TILE FINISHING AT RIDGE - FULL RIDGE ALUMINIUM CAPPING WITH GLAZING

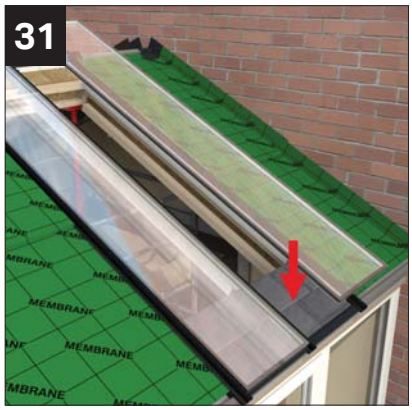
NOTE: CHECK FOR 30MM SPACE BETWEEN OSB BOARDS. THIS WILL ENSURE INNER TOP CAP SEALS ARE POSITIONED CORRECTLY ON THE TILES STOPS.

30



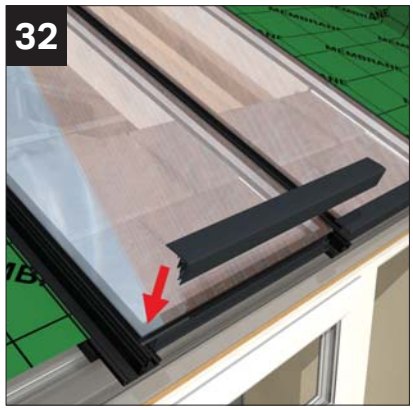
Position the box beam tile screens. Place in-line with adjacent tiling (not covering ventilation mesh) and secure with a single 4 x 40mm screw top centre (NRBF 050) provided.

31



Lay carefully into position the 24mm thick double glazed unit tight to the upstand on the lower glazing support section. See seperate detail if fitting roof vent.

32



Prior to fitting the pre-notched glazing end profile, run a bead of silicone, low modulus (for none coated glass) or MS Polymer (self clean glass) immediately behind the co-extruded gasket before tapping down into position. Then seal each end to protect the seal.

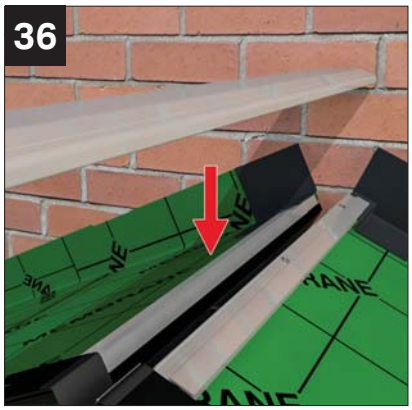
33

Fold the rubber sealing tabs over the top of each glazing bar.

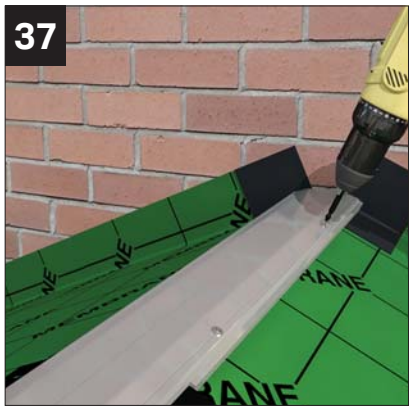
INSTALLATION - FITTING ROOF GLAZING

Slide the ridge tile upper screen into position. No fixing required.

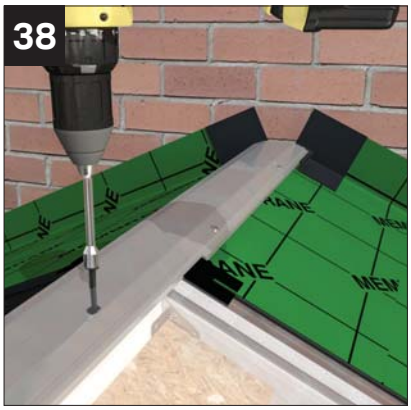
The upper ridge tile screen is trapped by fitting 6mm thick black architrave (provided). This will finish flush with the purlin cassette but tight up to the glass unit. Fix at 300mm centres using 4 x 40mm screws (NRBF 050) provided.



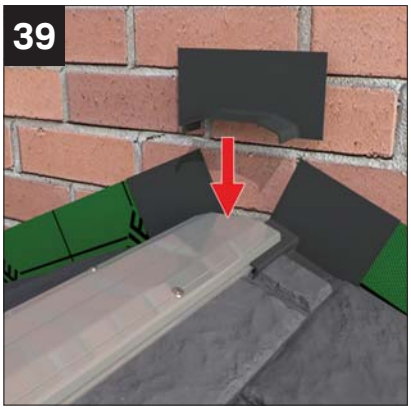
Lay aluminium ridge flashing cap. It is positioned 10mm away from the host wall. Then predrill the capping to suit steps 37 and 38.



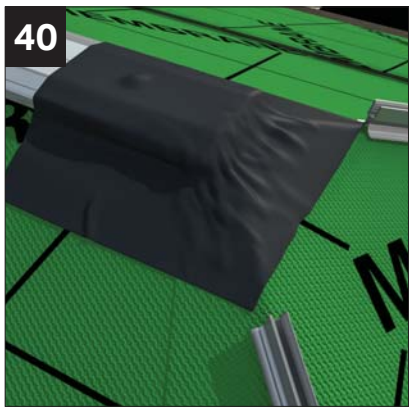
Over solid panel area screw down either side of the capping at 500mm ctrs into the upper tile stop using (NRTS 050) screws provided.



Over glazed area, also at 500mm centres, screw down through the ridge capping centre line using the longer 5.5mm x 90mm (NRRSA 005BL) screws fitted with G16 stainless steel sealing washer. **Run a continuous bead of silicone, low modulus (for non coated glass) or MS polymer (self clean glass) along the head of the unit tight to the Q LON gasket.**



Seal and fit the rear host wall pre-formed flashing saddle (NRRI010). Using clear low modulus silicone.



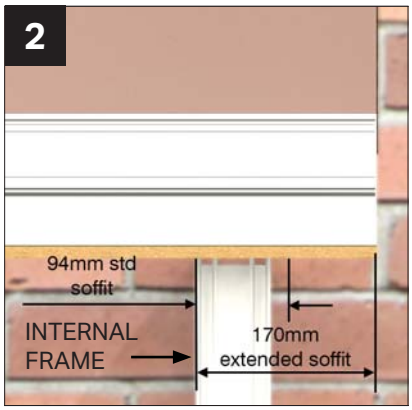
Seal and fit the front radius end flashing kit using 250 x 250 square butyl sealing tape (supplied). Heat the sealing tape with a heat gun and position the tape over the ridge end (100mm from ridge end). Press firmly into place over the capping then make 2 slits (as indicated) before forming the final position.

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.

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 (NRES 004) provided. Each screw comes with a 2 part coloured screw cap cover.

INSTALLATION - LEAN TO - SOLID

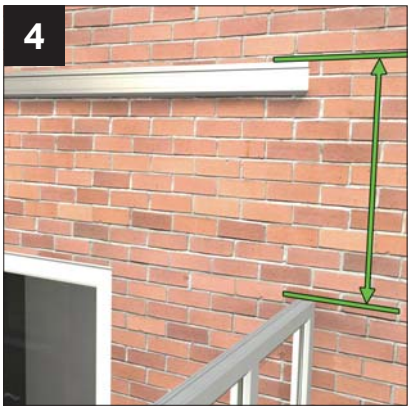
ONLY IF GABLE FRAME STIFFENERS SPECIFIED: Fix the aluminium gable beam fixing plate to the underside of the box beam using 6 x RRX 025 screws. **NOTE: ALIGN PLATE 'V' NOTCH GROOVES WITH EDGE OF BEAM.**



From internal frame the front beam overhangs the frames by 94mm (standard soffit) and by 170mm (extended soffit) equalize soffit overhang.

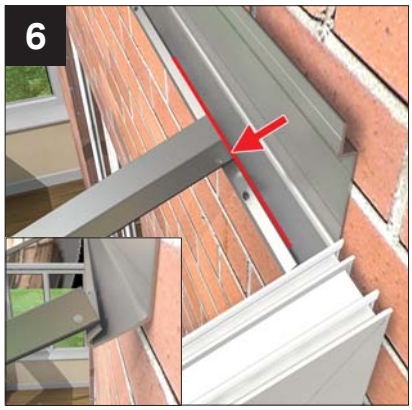
Apply low modulus silicone to the head of frames local to beam area before lifting the box beam into position. Temporarily fix the box beam in position.

For box beam/support and levelling see pages 19 steps 8 to 9.

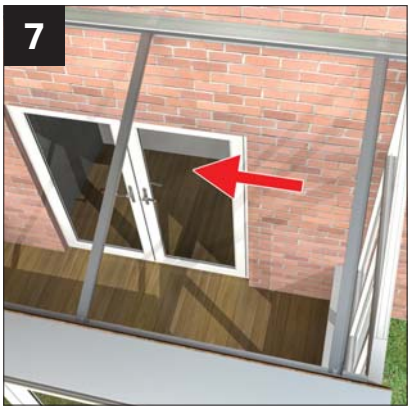


Temporarily fix the half-ridge (cut to internal frame, see image 6) at the height given in the critical dimensions sheet, ensuring the ridge is level. Adjust the half ridge height if necessary. **NOTE: DIMENSION IS FROM UNDERSIDE OF BOX BEAM TO TOP EDGE OF HALF RIDGE (SEE PAGE 50).**

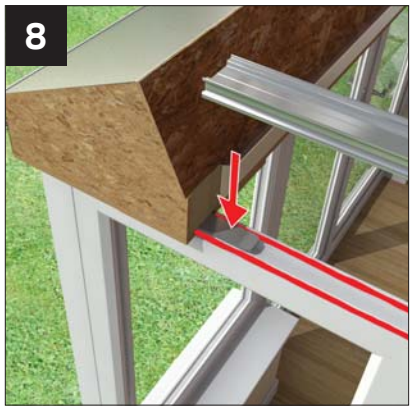
Using the measuring staff supplied with the roof, engage the bottom of the guage into the support shelf on the box beam.



With measuring staff inserted into the box beam shelf check that the upper end of the staff is aligned with the edge of the hook section on the half-ridge. Pack the half-ridge off the wall if necessary to align in the correct position to box beam. Offer up a panel to double check distance and pitch.

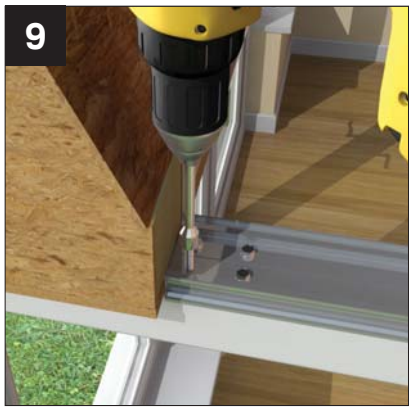


Using staff, check in various positions to ensure half ridge is running parallel to box beam. Fully secure half ridge to host wall at 500mm centres using fixings appropriate to substrate. Finally secure box beam (see image 21 page 21)

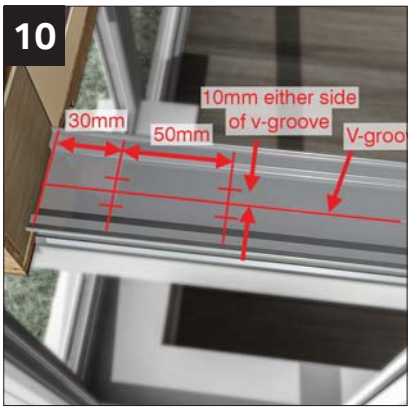


ONLY IF GABLE FRAME STIFFENERS SPECIFIED: Silicone the head of the frames. Place the aluminium gable frame stiffener with V-groove uppermost.

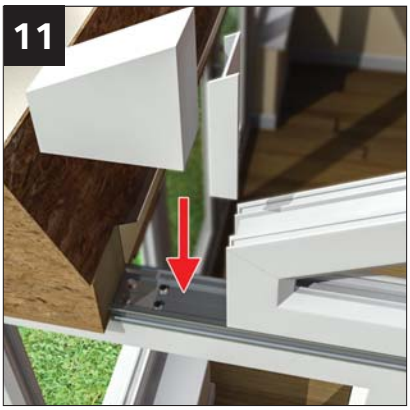
INSTALLATION - LEAN TO - SOLID



Fix the gable frame stiffener to the aluminium beam fixing plate using 4 x RRR025. Secure along the length of the stiffener at 500mm centres into frames (fixings not supplied). Set out image 10.



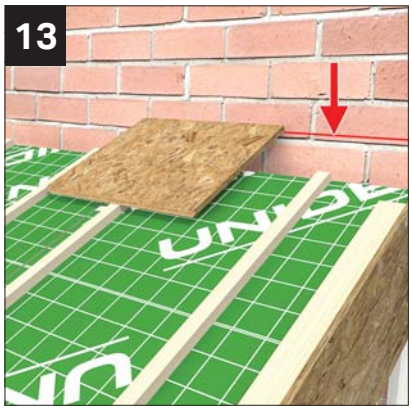
The 4 fixing positions.



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

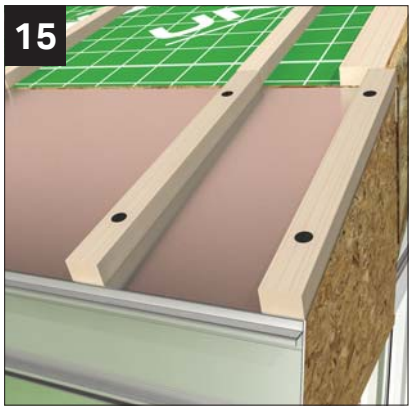
Hook the top of roof panels into the half ridge and rest the lower end on the box beam support shelf. Fit all roof panels as shown in the roof panel layout sheet. Ensure barge boards are flush with the end of the beam. See page 23 step 36 and 37 of main guide. **NOTE: IF THERE IS GLAZING AGAINST A RETURN WALL SEE PAGE 61.**

Screw up into panels through the panel support ledge at 300mm centres through pre-drilled holes in half ridge to secure the panels using RRR025 hex head screw 5.5 x 32mm provided. If panels attaching to return wall (see steps 47 and 48 on page 25 of the main guide)



Mark a line on the house wall that is aligned with the top of the battens

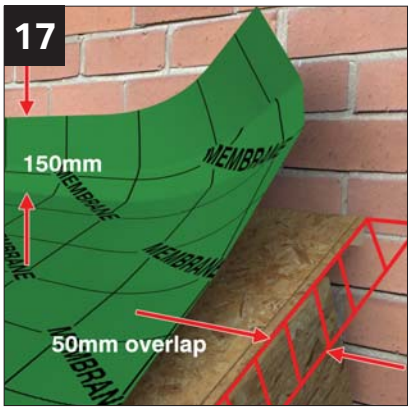
Fix the batten provided to the wall on the line marked in 13. This provides support for the roof deck as it meets the house wall.



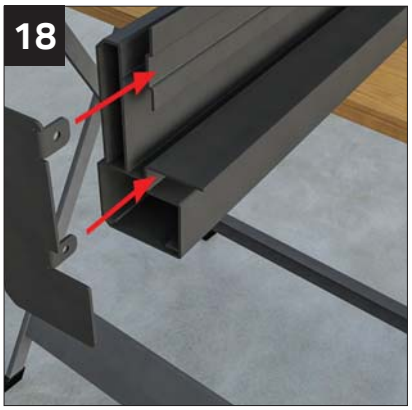
Fit batton extensions and OSB baording as per steps 52 to 58, pages 26 and 27 of main guide.

IMPORTANT: ENSURE BOTTOM ROW OF OSB IS FIXED AS PER IMAGE 55 PAGE 26 OF THE MAIN GUIDE AS THIS LOCKS TOGETHER BOX BEAM TO PANEL.

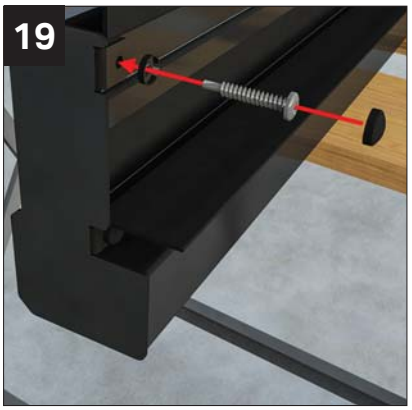
INSTALLATION - LEAN TO - SOLID



Cut the breathable membrane underlayer to the width of the roof deck plus 50mm over hanging the OSB barge-board at each end and 150mm up the host wall. See page 27 steps 62 to 65 for minimum overlaps.

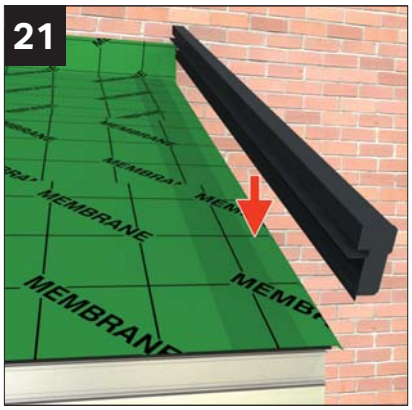


Insert the aluminium dry verge end cap into a square cut end. The end adjacent to the house will be angled to run parallel with the house wall.



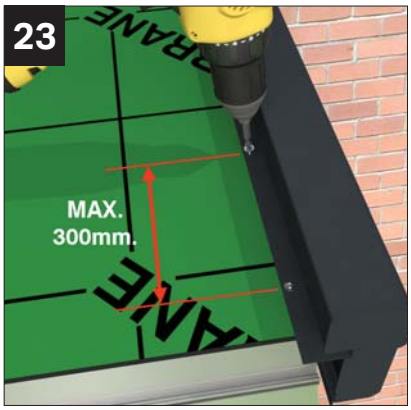
Fix the end cap in place using the NRES 004 4.8 x 32 pan head screw with cover caps.

Apply a bead of clear low modulus silicone to the underside of the dry verge.



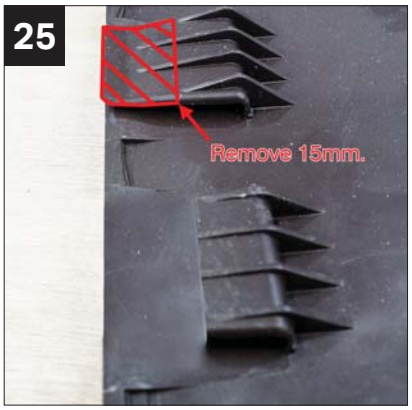
Position the dry verge on the top edge of the bargeboard, with the membrane folded down the face of the barge board.

Fix the dry verge to the OSB using NRTS 050 screws at 300mm centres.



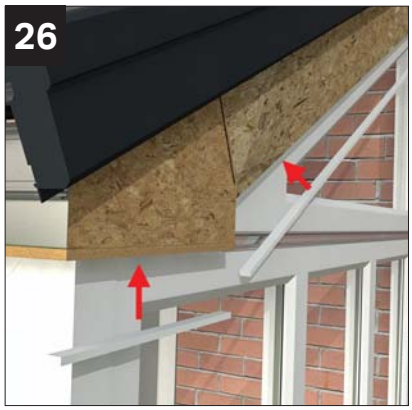
Fix the dry verge to the roof deck with NTRS 050 screws, max 300mm centres

See p29 and the tiling guide in the tile box for details on tiling method.



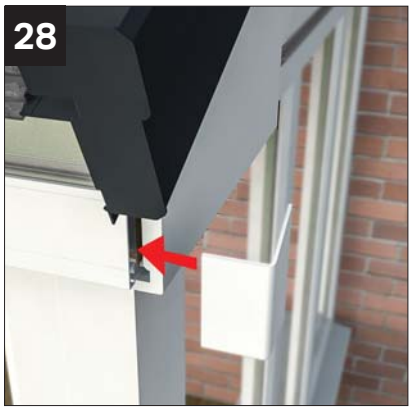
If obstructed on the RHS, remove 15mm from the clips to allow fitting.

INSTALLATION - LEAN TO - SOLID



Fit soffit trims to underside of barge boards.

Fit pvc barge board box ends and barge board



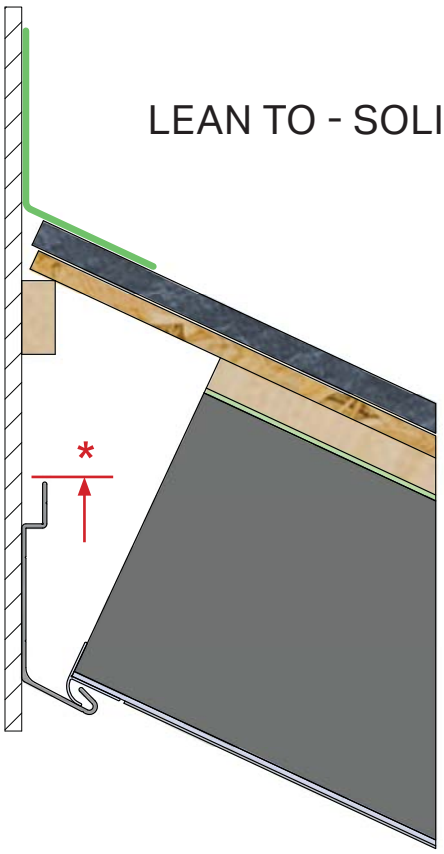
Fit 90° external corner cover trims

Fit internal and external gable stiffener claddings (if ordered)

Lead flash to exiting host wall.

NOTE: HIPPED LEAN TO

1. Box beam will return to host wall.
2. Centralise half ridge (if hipped each end).
3. Attach hip bar to speedlock housing.
4. Remainder as Georgian

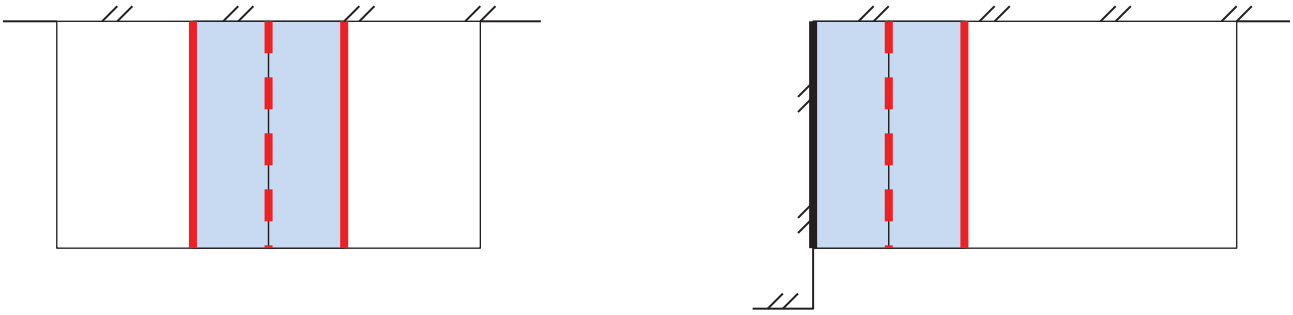


LEAN TO - SOLID ROOF - HALF RIDGE CROSS SECTION

*Set out height given on critical dimension sheet/ INSTALLATION - GABLE END - SOLID

INSTALLATION - LEAN TO - GLAZED

Follow main guide then follow this section.



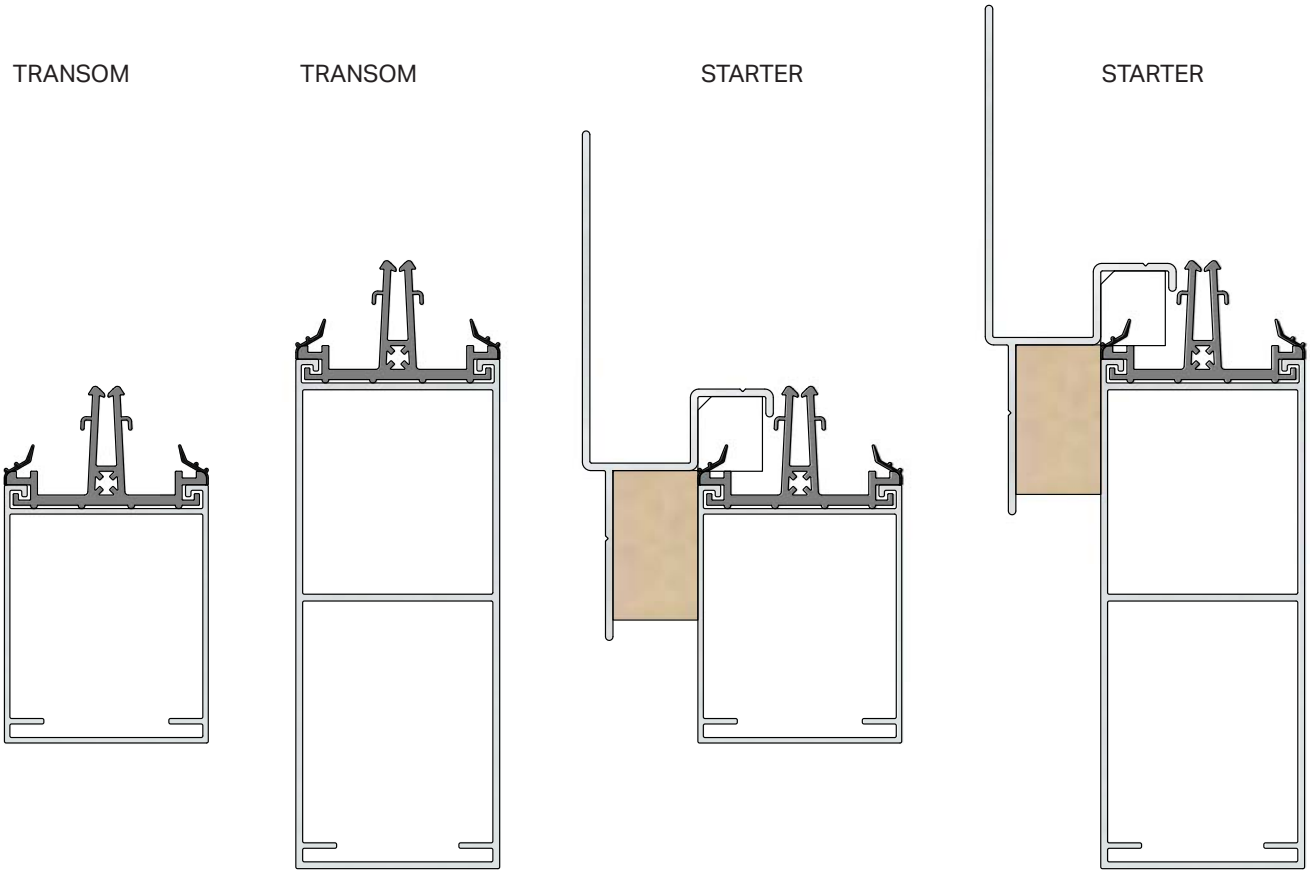
STARTER (GLASS)

TRANSOM

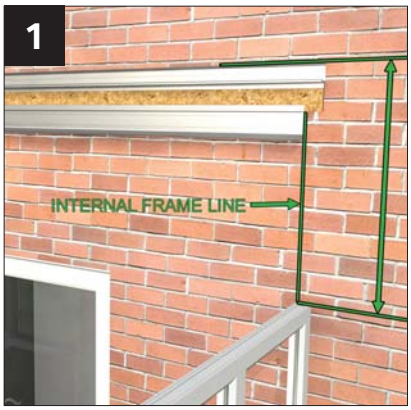
TRANSOM INTERMEDIATE BAR

PANEL

GLAZING

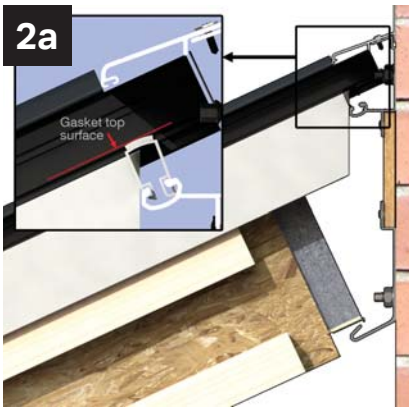


INSTALLATION - LEAN TO - GLAZED

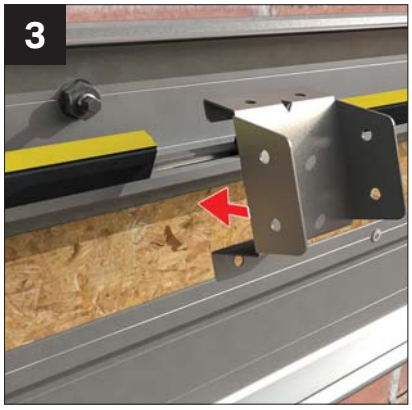


Position front box beams on frames. Ensure equal overhang at each end. Support / prop and level as page 19 steps 8 and 9.

Temporarily fix the half ridge (cut to internal frame, see image 1) at the height given in the critical dimensions sheet, ensuing the ridge is level adjust the half ridge height if necessary. NOTE: DIMENSION IS FROM UNDESIDE OF BOX BEAM TO TOP EDGE OF HALF RIDGE.



Secure transom bars to upper panel battens (see page 43 step 18). Ensure glazing gasket aligns with top of glazing support trim tape (see inset). You may need to pack off upper panel batten to achieve this.

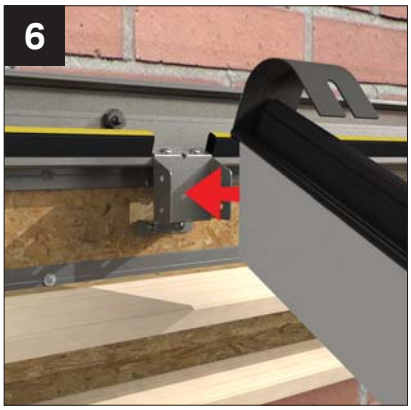


When fitting intermediate transom glazing bar(s), the centre line of each bar is marked on front box beam. Check centres match roof plan then transfer to rear half ridge. Ensure intermediates are set parallel and square to transoms. Then fit pre-cut glazing support trims.

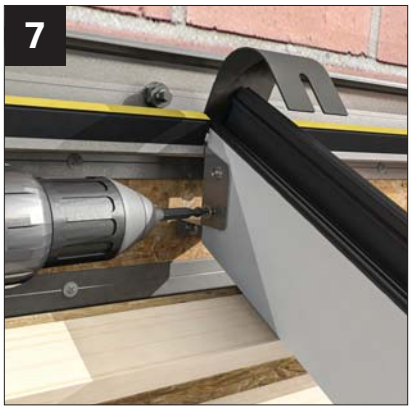
Hook onto rear half ridge and secure upper leg using 2 x NRES 004, 4.2mm x 25mm screw.

Fix intermediate glazing bar shoe secure into OSB using 2 x CHA006.

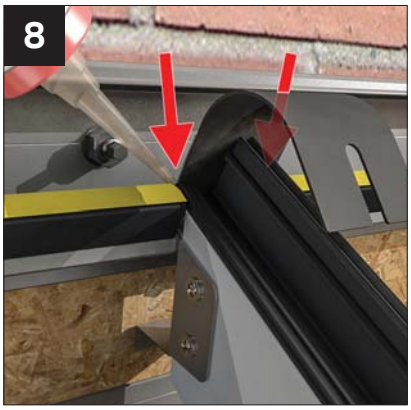
NOTE: INTERMEDIATE TRANSON BAR SHOW AT STEP 3 ONLY USED WHEN 2 GLASS PANELS SIT SIDE BY SIDE.



Locate intermediate bar into shoe on half ridge and shoe on box beam.



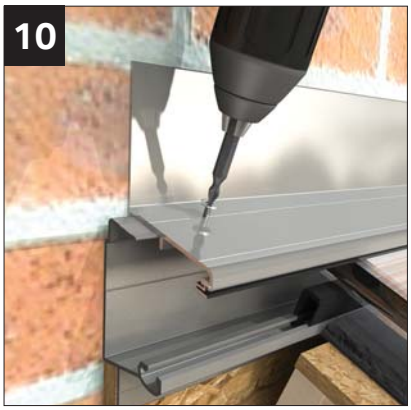
Secure using 4 X (NRTS 050) screws. Ensure glazing bar gaskets align with glazing support trims. (Pack off timber purlin cassette if required.



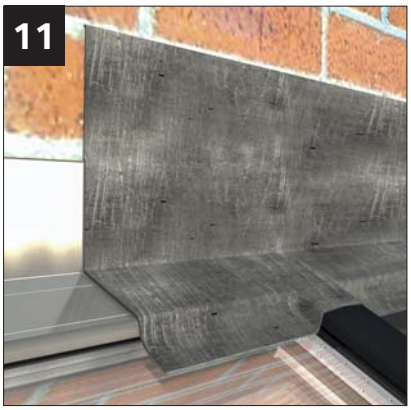
Silicone seal the head of the glazing bar.

INSTALLATION - LEAN TO - GLAZED

Prior to glazing, insert the tile screen framework. (See step 19 page 44). Position box beam tile screen (see step 30 page 45). Insert double glazed unit (then follow steps 32 to 35 page 45).



Centralise and fit half ridge aluminium top capping. Secure using (CHA006) at 500mm centres. Beware: Longer screws will penetrate glass units.



1200mm lengths of CODE4 lead overlapping 150mm and protruding 50mm, beyond nose of top capping to be used. Coat with patination oil to avoid oxidation run off.

INSTALLATION - LEAN TO - GLAZED TO ADJACENT WALL

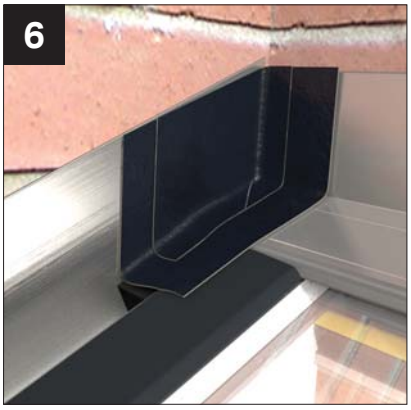
Set the half ridge (wallplate) 5mm away from the host wall. The height (as step 6 page 47). Upper end of starter bar positioned so that glazing gasket aligns with glazing support trim. Secure to host wall within 200mm of half ridge and box beam plus at least one more equidistant between the two. Use resin anchors suitable to substrate - not provided.

Starter bar rides over the front box beam and drops into box beam shoe. Secure the shoe with 2 x (NRTS 050) screws.

Seal top edge of starter bar bung (NRRA002). Place the bung tight into the junction of the host wall and starter bar. Then seal with clear low modulus silicone.

Silicone the edge of the bung against the starter bar.

Secure the half ridge top capping into starter using (CHA006) screws provided.



Using butyl tape supplied, ensure adequate seal between top capping and starter bar upstand.

Finally, manipulate code 4 lead over the glazing bar top capping and half ridge capping with overplaps as step 11 page 53.

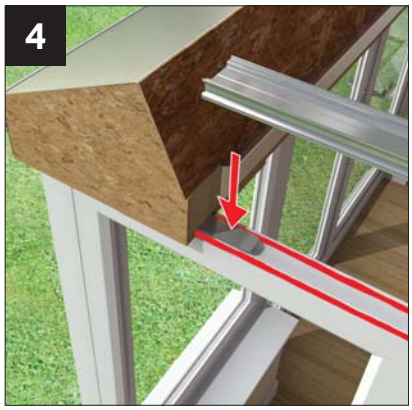
Refer to Lean to solid section of this guide to complete

INSTALLATION - GABLE END - SOLID

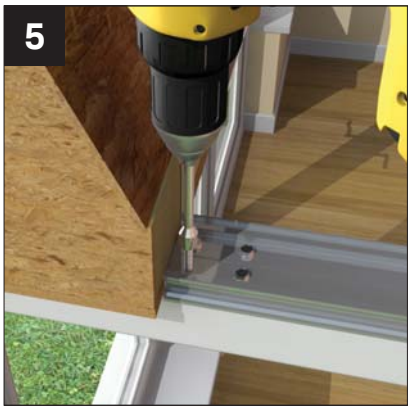
Fix the aluminium gable beam fixing plate to the underside of the box beam using 6 x RRX 025 screws. **NOTE: ALIGN PLATE 'V' NOTCH GROOVES WITH EDGE OF BEAM.**

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.

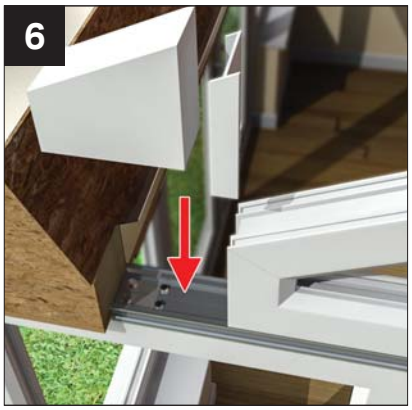
For box beam/support and levelling see pages 19 steps 8 to 9.



Silicone the head of the frames. Place the aluminium gable frame stiffener with V-groove uppermost.



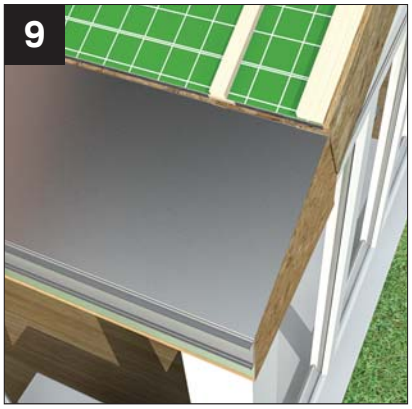
Fix the gable frame stiffener to the aluminium beam fixing plate using 4 x RRR025. Secure along the length of the stiffener at 500mm centres into frames (fixings not supplied). Set out image 10 page 48.



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

After installing the ridge as detailed in pages 22 and 23, images 25 to 30, check that the end of the ridge is in line with the gable end internal frame line.

Referring to the panel layout sheet, fit the first panels at the gable end as shown in images 35 to 37 on page 23.



Check that the panel is in line with the end face of the beam and parallel to the gable frame.

INSTALLATION - GABLE END - SOLID

10

Continue fitting the panels from the host wall, remembering to install the ridge coupler assembly shown on page 24 images 39 to 43

11

Refer to pages 25 to 27 when fixing the panels, insulation osb and membrane.
Note: ensure the membrane extends 50mm beyond the gable end panels.

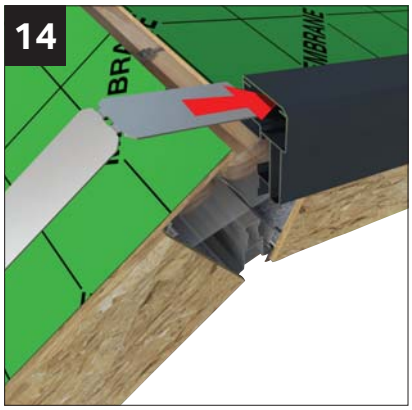
12

When glazing refer to pages 40 to 46, images 1 to 42.

13

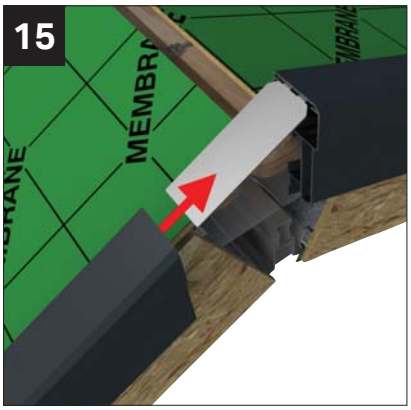
Fit one side of the dry verge as shown in steps 18 to 23 on page 49.

14



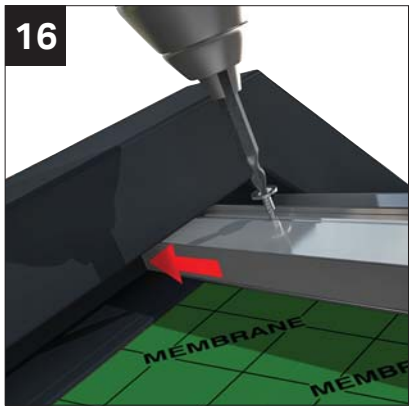
Fit gable cladding alignment strip into the aluminium dry verge.

15



Fit opposite aluminium dry verge and point joints on upper and inner edges.

16

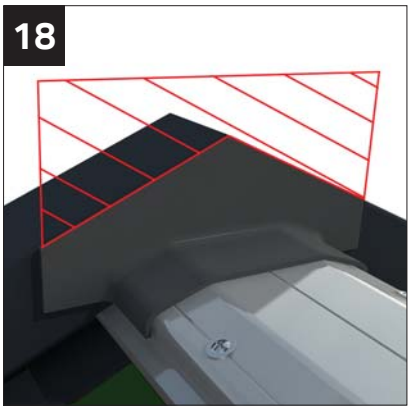


Slide tile stop under dry verge and fixed in place. See page 45 images 27 to 29 for details.

17

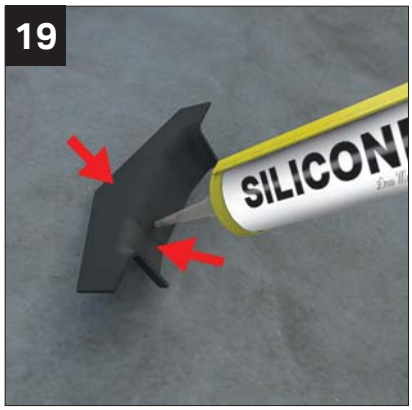
Continue referring to page 46 images 36 to 39.

18

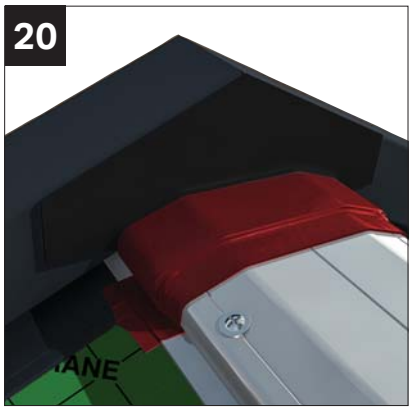


Fit the gable flashing. Mark and trim to fit the dry verge.

INSTALLATION - GABLE END - SOLID



Apply clear low modulus silicone to the faces shown and refit.



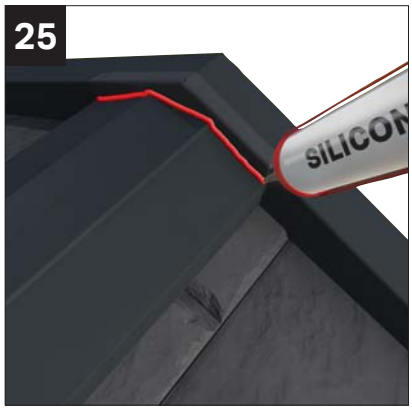
Fit first 200mm Butyl tape strip sealing the gable flashing to the ridge flashing cap.

Fit second 200mm Butyl tape sealing the dry verge to the gable flashing. Cut the tape to allow it to be folded as shown in the following two images

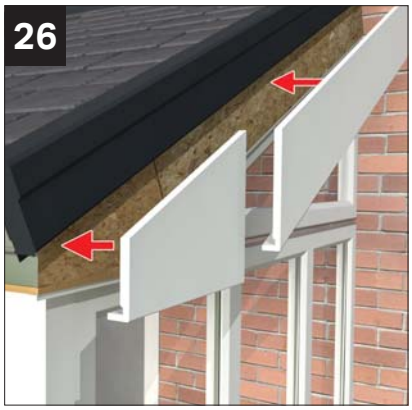
Fold down and press firmly into position.

Finally cover joint with a third layer.

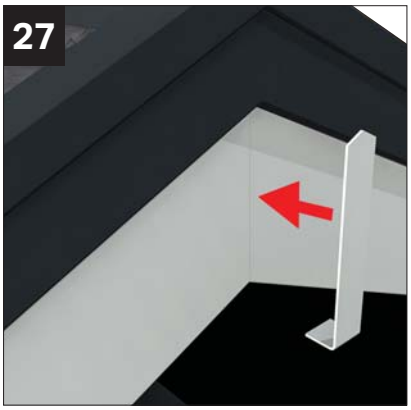
Fit the ridge top capping using the NRRSA 005BL supplied.



Apply clear low modulus silicone to the joint between the ridge top cap and the dry verge.

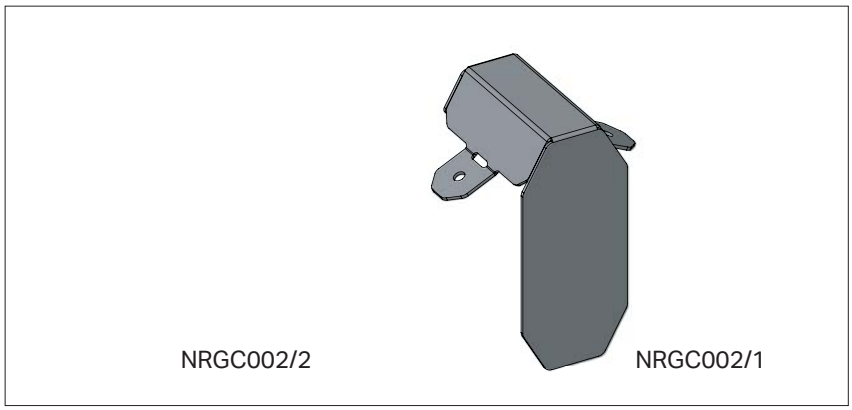


Fit the pre-cut fascia and eaves trims. See page 50, images 26 to 29 for more detail.

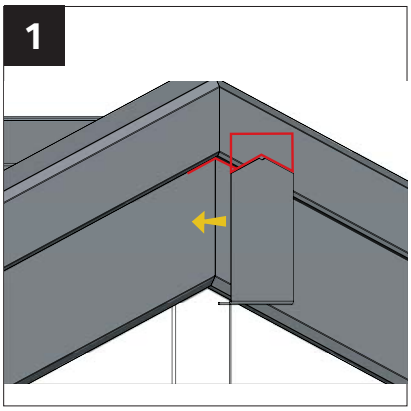


Fit the fascia ridge trim, modifying where necessary ensuring a neat finish.

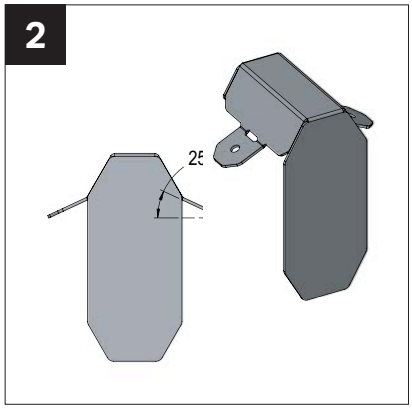
INSTALLATION - GABLE APEX COVER



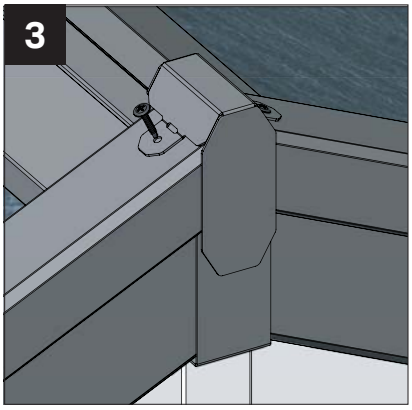
The gable apex cover is a product for an improved finish at the exterior apex of a duo-pitched gable roof. This new 2-part product is used to cloak the joint between two adjoining dry verge claddings.



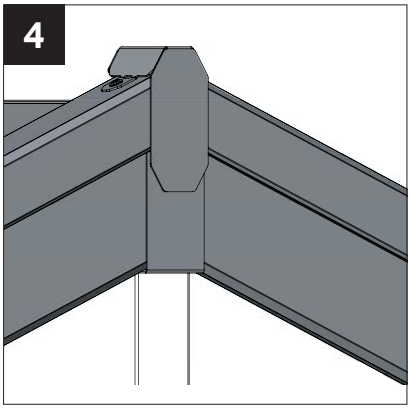
Scribe the lower part to fit beneath the step in the aluminium dry verge cladding as shown. Fix using a suitable silicone adhesive.



Bend the wings of the upper part to match the desired roof pitch – by default they are set to 25 degrees.



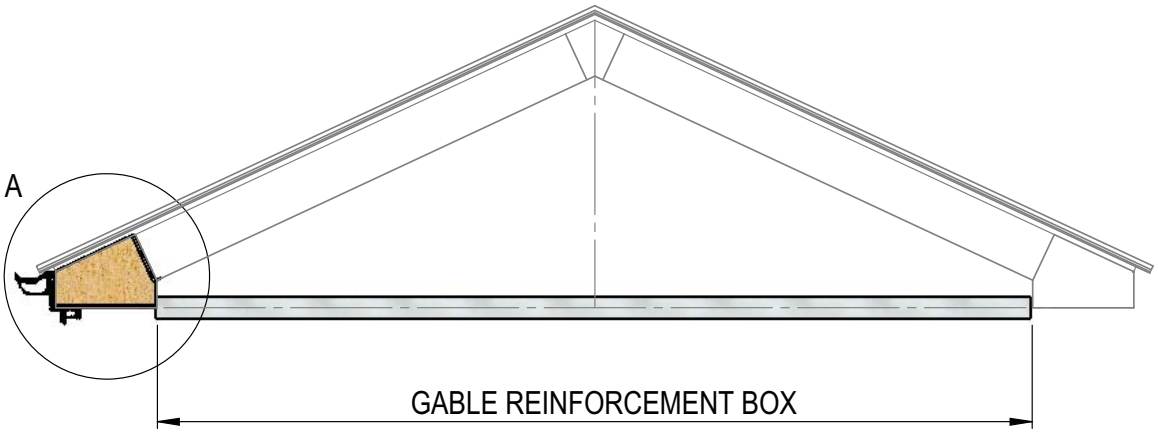
Position as shown and fix using 2 x NRTS 4.2 x 25 self drilling wafer head screws (supplied).



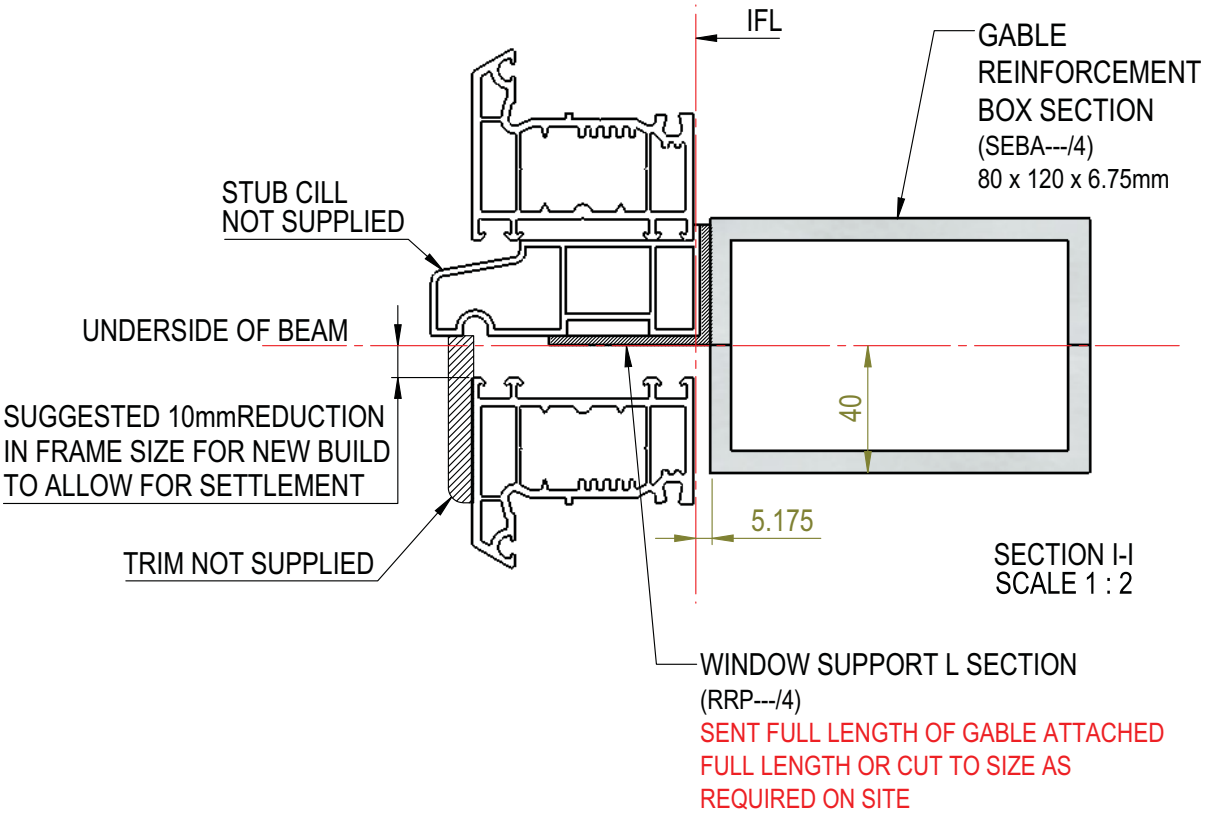
Finished installation shown above.

INSTALLATION - GABLE REINFORCEMENT BOX DETAIL

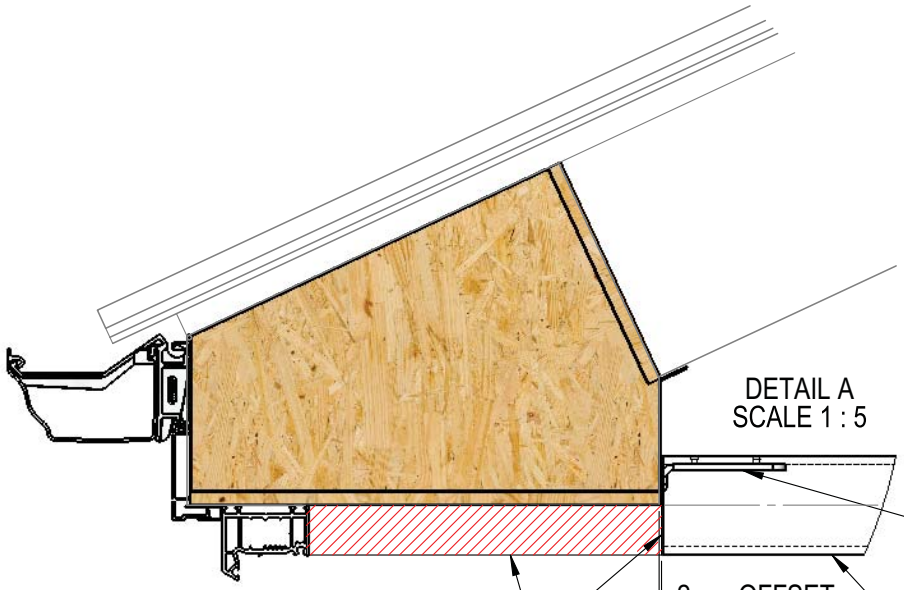
Detail may vary if fitting on brickwork.
Refer to brickwork section.



NOTE: A cill will be required if on super-insulated columns



INSTALLATION - GABLE REINFORCEMENT BOX DETAIL



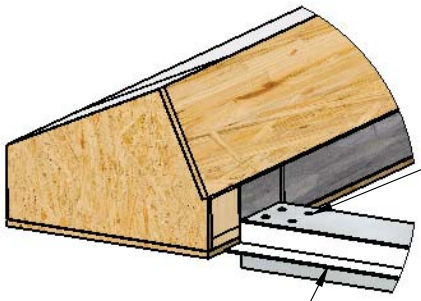
DETAIL A
SCALE 1 : 5

NRRB001
GABLE REINFORCEMENT
BRACKET
FIXED TO BEAM ONSITE

2mm OFFSET

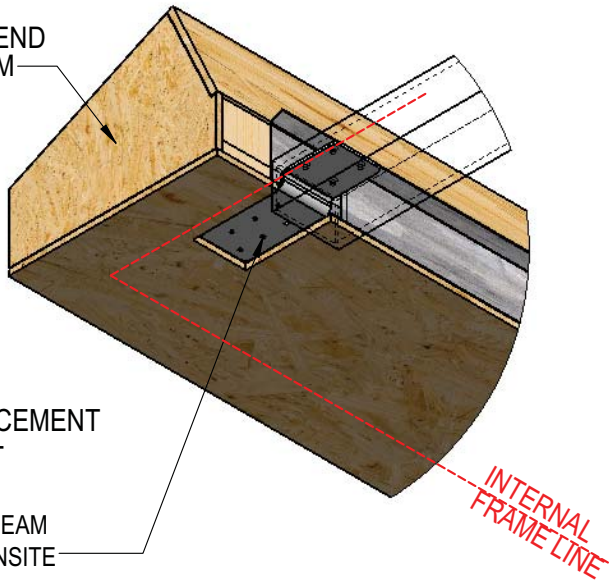
SEBA---/4
GABLE REINFORCEMENT
BOX SECTION
80 x 120 x 6.75mm

REINFORCEMENT CUT SQUARE AT
INTERNAL FACE OF BEAM
PACK OUT AREA UNDER BEAM ONSITE
OR CAP EXPOSED END OF
REINFORCEMENT BOX
[PACKING OR END CAP NOT SUPPLIED]



GABLE REINFORCEMENT BOX
SECTION FIXED TO BRACKET
THROUGH PROVIDED
COUNTERSINK HOLES

WINDOW
SUPPORT L
SECTION

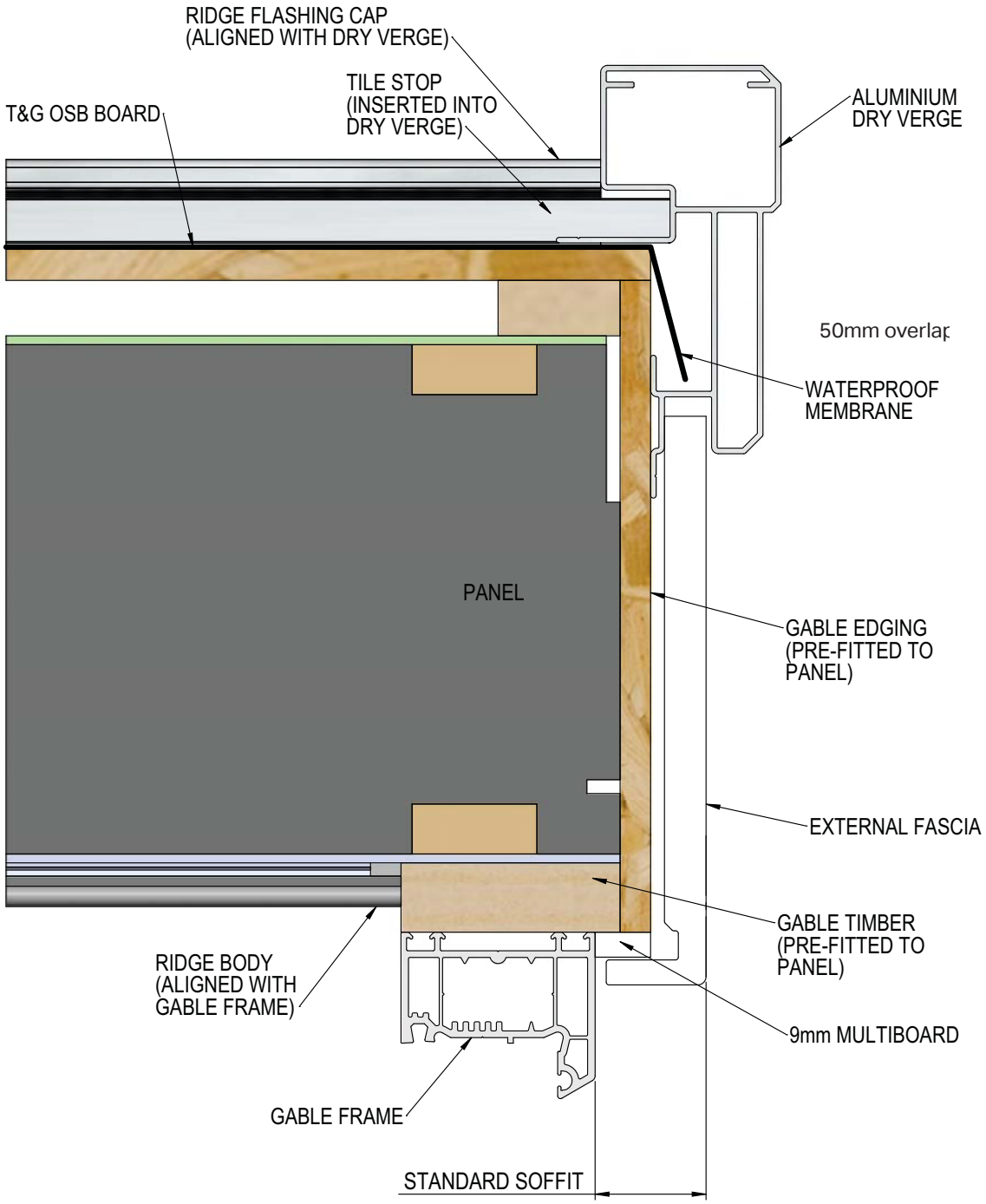


GABLE END
OF BEAM

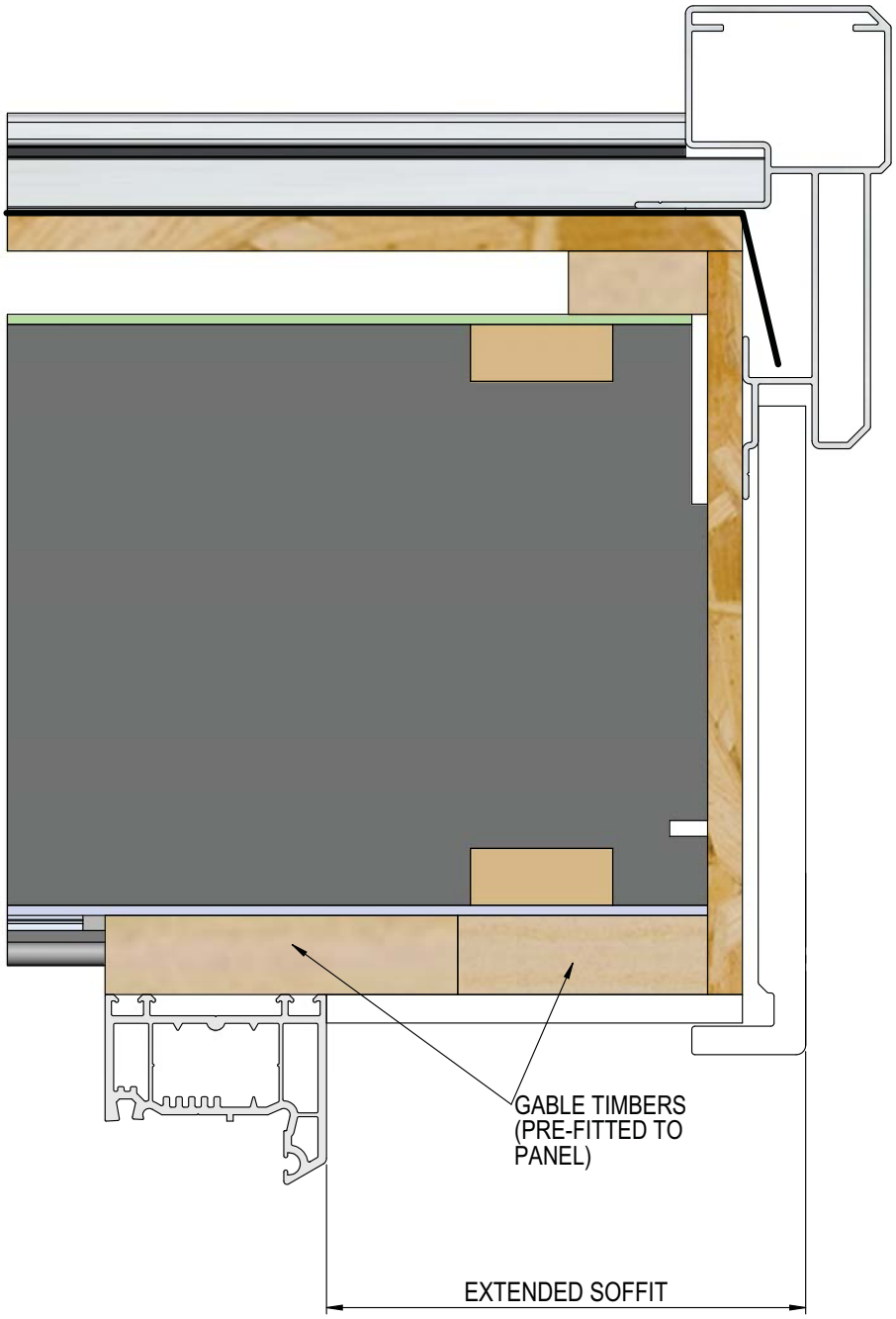
GABLE
REINFORCEMENT
BRACKET
(NRRB001)
FIXED TO BEAM
POCKET ONSITE

INTERNAL
FRAME LINE

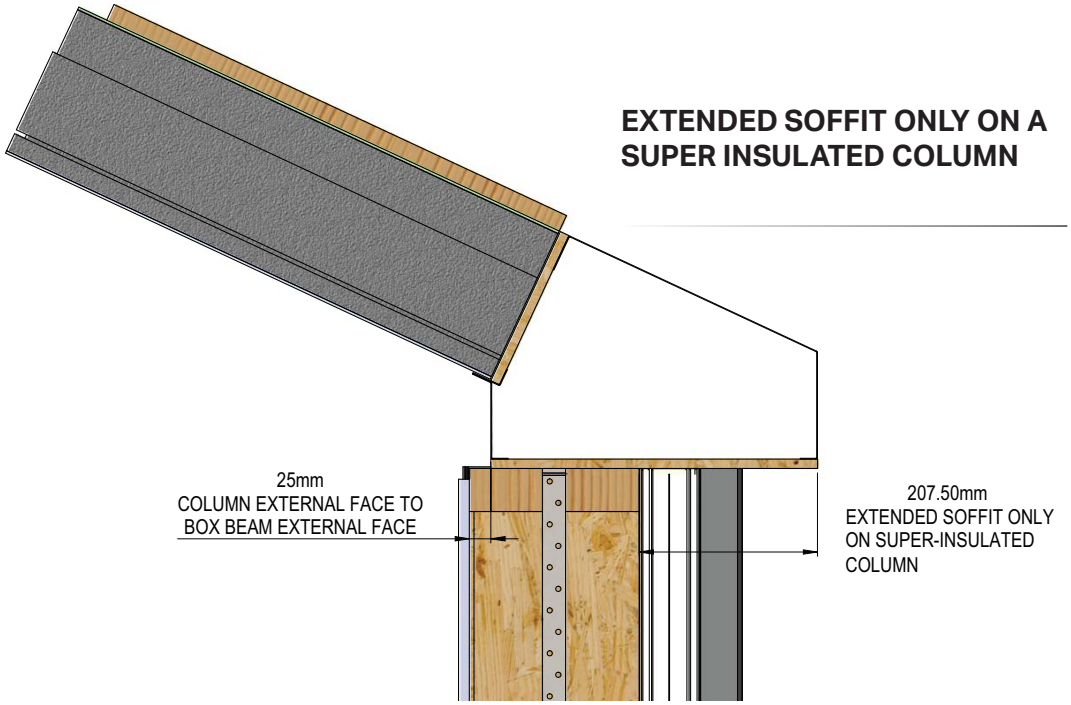
GABLE SYSTEM OVERVIEW
- SECTION THROUGH STANDARD SOFFIT



GABLE SYSTEM OVERVIEW
- SECTION THROUGH EXTENDED SOFFIT



BOX BEAM ON SUPER-INSULATED COLUMN



If your installation contains a super-insulated column, then it is possible to support the box beam on the column providing that the beam is installed with the following details.

INSTALLATION - INTERNAL/EXTERNAL FINISH - TUDOR

NO MATERIALS SUPPLIED FOR THIS FINISH. Attach corner beam support shelf

Batten out to suit plasterboard fixing.

Attach additional battens.

Slide into position additional external OSB board.

Fix into position.

Plasterboard the roof.

Fabricate 70 x 45mm triangular studding framework to suit.

Fix into place.

Attach additional mating timber battens.

INSTALLATION - INTERNAL/EXTERNAL FINISH - TUDOR

Insulate void with mineral wool.

Plasterboard face of gable

Fit external soffit channeling.

Fit external ship lap cladding edge channel.

External ship lap cladding edge channel detail.

Cut and fit ship lap to suit.

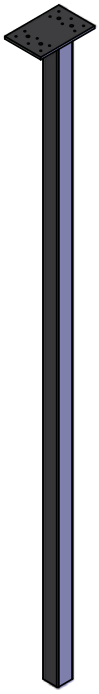
INSTALLATION - BEAM JOINING POST

This document shows how to join two Ultraroof380 Beams that are over 7m+ onto a stanchion post.

PLEASE READ BEFORE FITTING

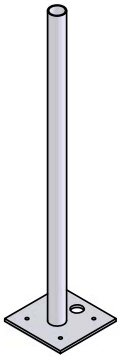
SUPPLIED COMPONENTS

Below shows the various components that should be supplied as a beam joining on post kit.



NRSP001
2500mm Post Sleeve with beam joing plate

X1



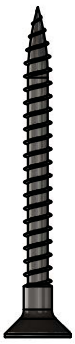
RRF004
Post base plate with spigot

X1

NRSK001 Fixing Kit

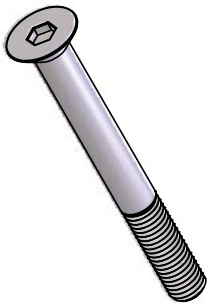
WASHER
X2

NUT
X2



BEAM FIXING SCREW
5.0 x 50 C'SNK pozi heco fix wood screw

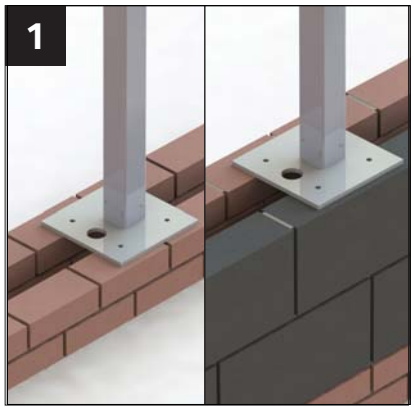
X12



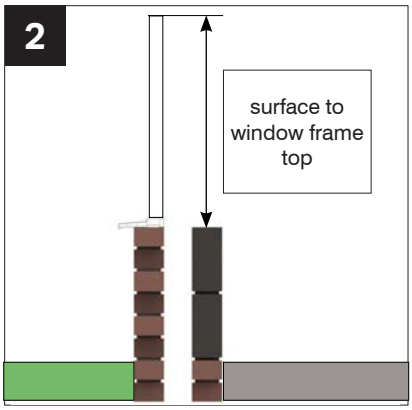
POST COUPLING BOLT
M12 x 110 SOCKET CSK SCREW

X2

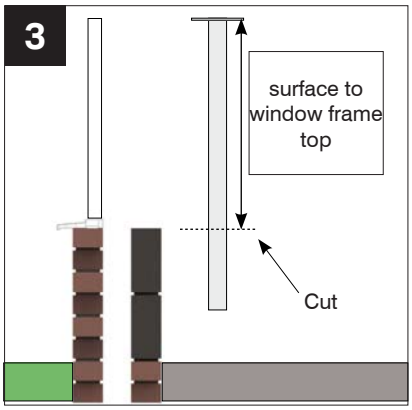
FITTING THE POST



NOTE:
The post can be placed either at floor level or on top of a dwarf wall. Guide will show instruction from dwarf wall level.

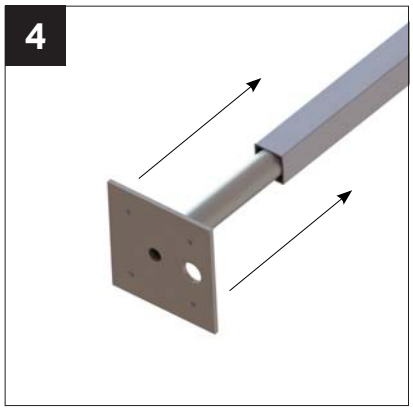


Measure from the surface the post will sit on to the top of the window frames, this will drive the length of the post sleeve (NRSP001)

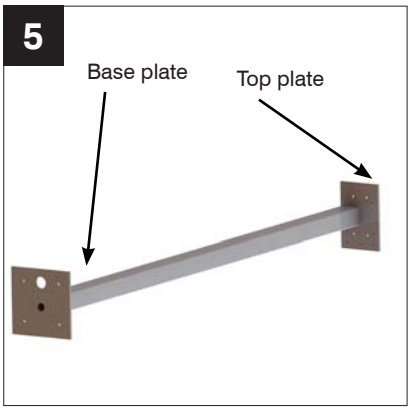


Cut the post sleeve (NRSP001) to the length measured in step 1

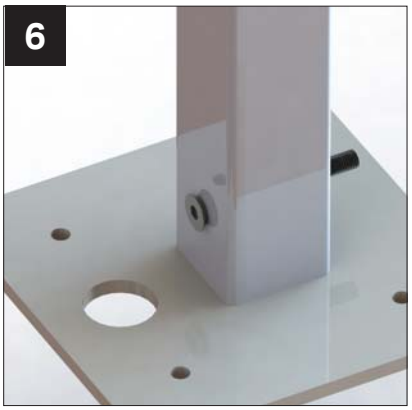
INSTALLATION - BEAM JOINING POST



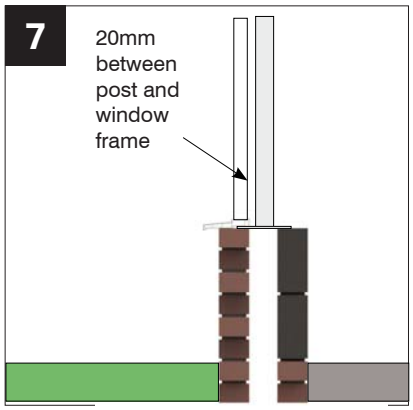
Slide the base plate(RRF004) all the way into the cut post sleeve.



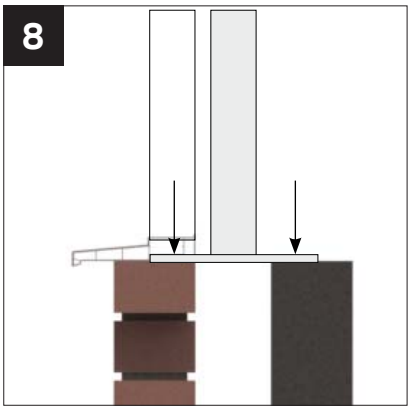
Align the two sections as shown in the image above.



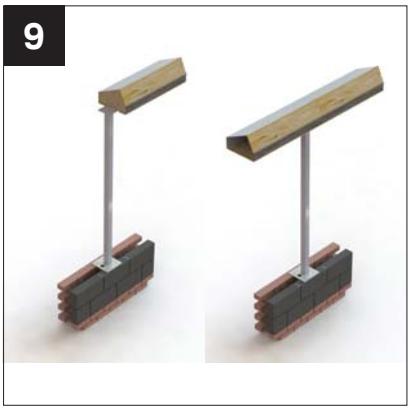
Secure the two sections together using the fixing bolts provided. Drill a 13mm hole through both sections and counter sink, secure with nuts provided.



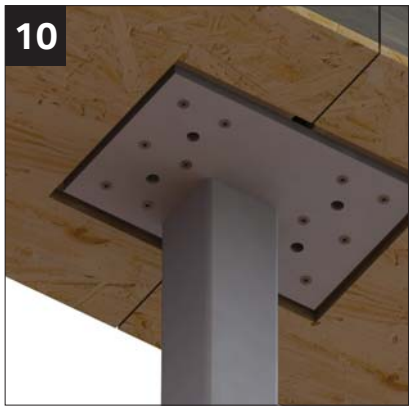
Offer up the post onto the brick work; maintain a 20mm gap between the post and the external brick internal/ window frame. Make sure the post is in the correct orientation. (SEE STEP 1)



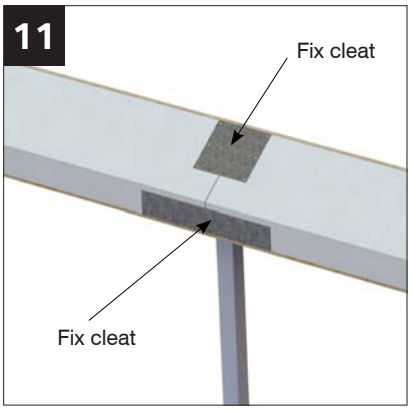
Fix the post into the brick (FIXING NOT SUPPLIED)
NOTE: CILL MAY REQUIRE NOTCHING



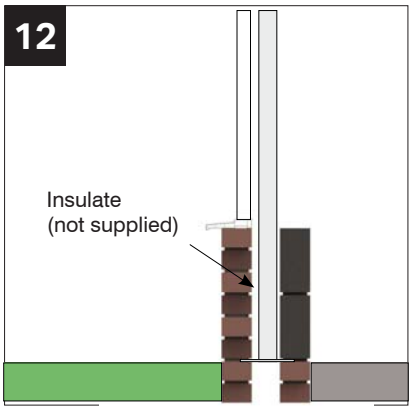
Once secured, place the first box beam onto the post followed by the second beam.



Once both beams are in place, secure the post into the beams. (Fix through the 12 counter sunk holes using the screws provided.)



Use the extra cleats provided to secure through the metal sections of the box beam. (see above image)



Insulate between the post and the external brick when post is set within the cavity wall.

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