

Promat



Compartmentation

Weather Defence™

Bushfire roof installation manual



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etex inspiring ways
of living

Weather Defence™

Weather protective construction board



Storage

Weather Defence™ board is generally supplied on wooden pallets with a plastic wrap. Uninstalled boards should be stored in a flat and dry location protected from onsite contamination. Stacks should not exceed seven pallets high. However, the load limit of the area in which the boards are being stacked should also be considered before the board is stored.

Handling

Normal manual handling precautions should be taken most workplace authorities in Australian states have safe plasterboard handling guides. Standard Board weight is approx. 11kg/m² so multi person lifts will be required on full size sheets. Use of forklift or hydraulic pallet jackets is required for full pallets

Board Specifications

Thickness	13mm
Sheet Size	2400mm x 1200mm
Colour	Purple Facings one face (Weather Exposed Side). White core. White facing other face (Internal Exposed Side)
Weight	31kg per sheet

Fabrication

Cutting: The Weather Defence™ board can be cut using the score and snap method, no power tools required. But can also be cut with standard tools suitable for use with timber and plasterboard. Where mechanical cutting methods are used in an internal environment dust extraction should be considered.

Fixing: Fixings used should be in line with the tested systems and suitable for use in external conditions. Fixings should be a minimum of 13mm from cut edges and 10mm from bound edges. Screw should also be minimum 3mm from edge of steel frame and 6mm from edge of timber frame. Screw length should be minimum 23mm for metal framing or 38mm for timber framing. Where a tested system requires a longer screw, this will override the above. Screw spacings to be in line with tested system requirements which are mentioned later in this manual. Screw heads to be driven into the board until slightly recessed.

Board to be installed with the purple face exposed to the weather.

Personal Protection

Refer to SDS for specific details but normal precautions used for plasterboard will apply.

Installation

Weather Defence™ should be installed in accordance with the requirements shown in the approval documents. Once installed on the frame the board can be left directly exposed to all weather conditions for up to six months.

Summary of AS 3959 2018 - Construction of Buildings in Bushfire Prone Areas

AS 3959-2018 is (at the time of writing) the current edition of this Standard. The objective of this edition is to provide additional and detailed methods of assessing bushfire attack commensurate with the applicable construction requirements at greater increments when compared with the previous edition.

The Bushfire Attack Level (BAL) for any geographic or topographic site comprises six categories, namely:

BAL-Low; BAL-12.5; BAL-19; BAL-29; BAL-40; and BAL-FZ where the numerical part of the category is the heat flux exposure in kW/m² expected and FZ is for buildings in a Flame Zone.

Section 9 of this standard deals with Construction for Bushfire Attack Level - Flame Zone (BAL-FZ) which is required to be a roof system tested to AS1530.8.2. The Bushfire Roof System outlined in this manual has been successfully tested to this standard, and therefore the results can be used to assess against the requirements of AS 3959-2018 Standard and is approved for use in BAL-FZ areas.

It should be noted that in certain jurisdictions there are additional requirements for building in Flame Zone areas. Advice from the local fire service and / or bushfire consultants should be obtained. Some building owners may feel it is prudent to use this construction in lower categories.

Weather Defence™. A unique product that can be left exposed to the weather during the construction phase for up to six months. The board is purple faced for easy identification.

If, after it has been installed on the roof it is subjected to short term exposure to rain, it is good working practice to remove any pooling of water before the installation of insulation and roof decking takes place.

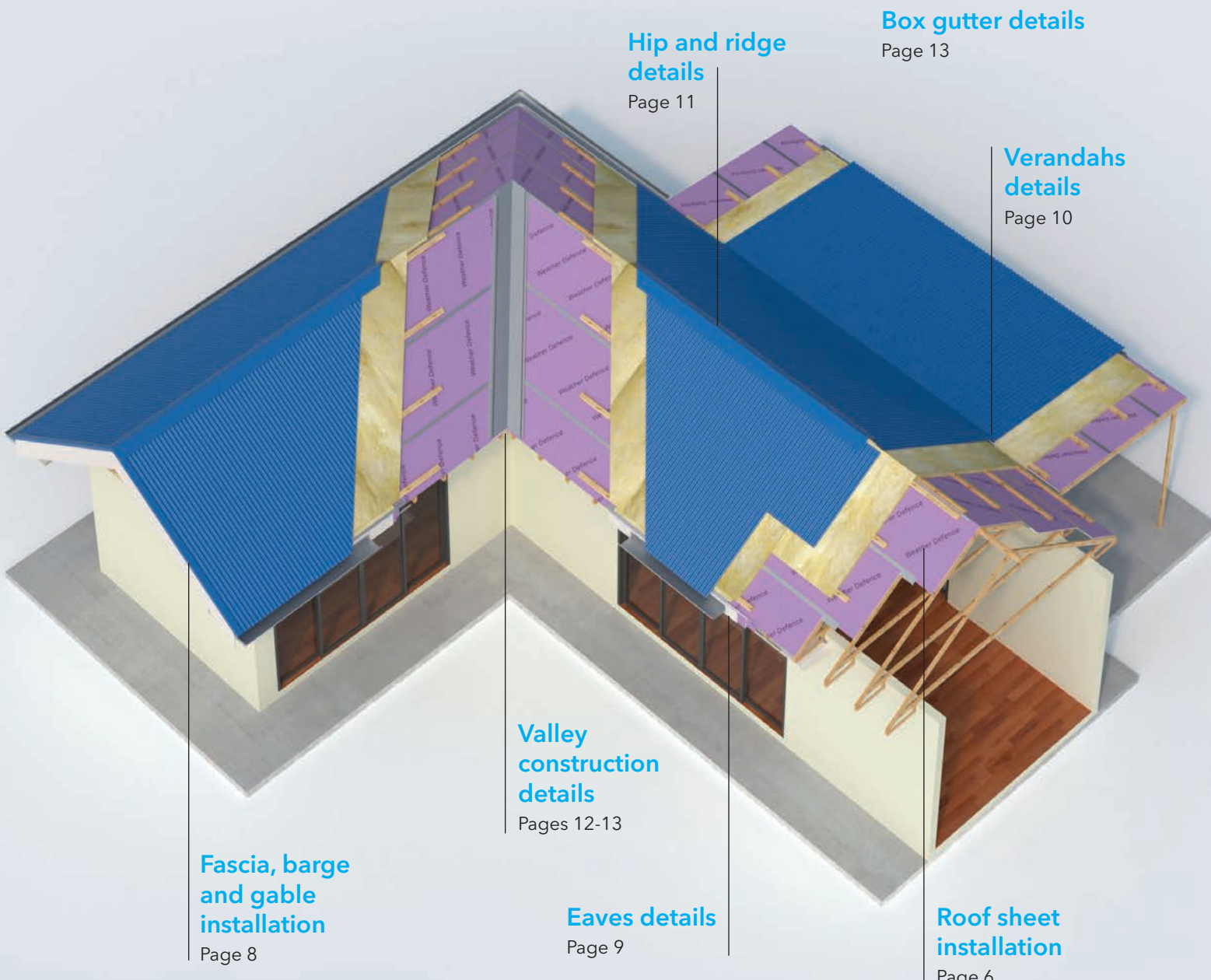


General notes for installation

It is prudent to check out the building site to see if it is possible to move the boards directly from the back of a truck up to the roof. This can save hours of unnecessary labour.

Consider installing the sheets from the ridge downwards to the fascia and then working back up to the ridge with the roof battens. This should avoid any chance of the board being walked on.

There may also be some merit in starting at the centre (at the ridge) of the roof but this will depend on the truss layout and the length of the boards being used.



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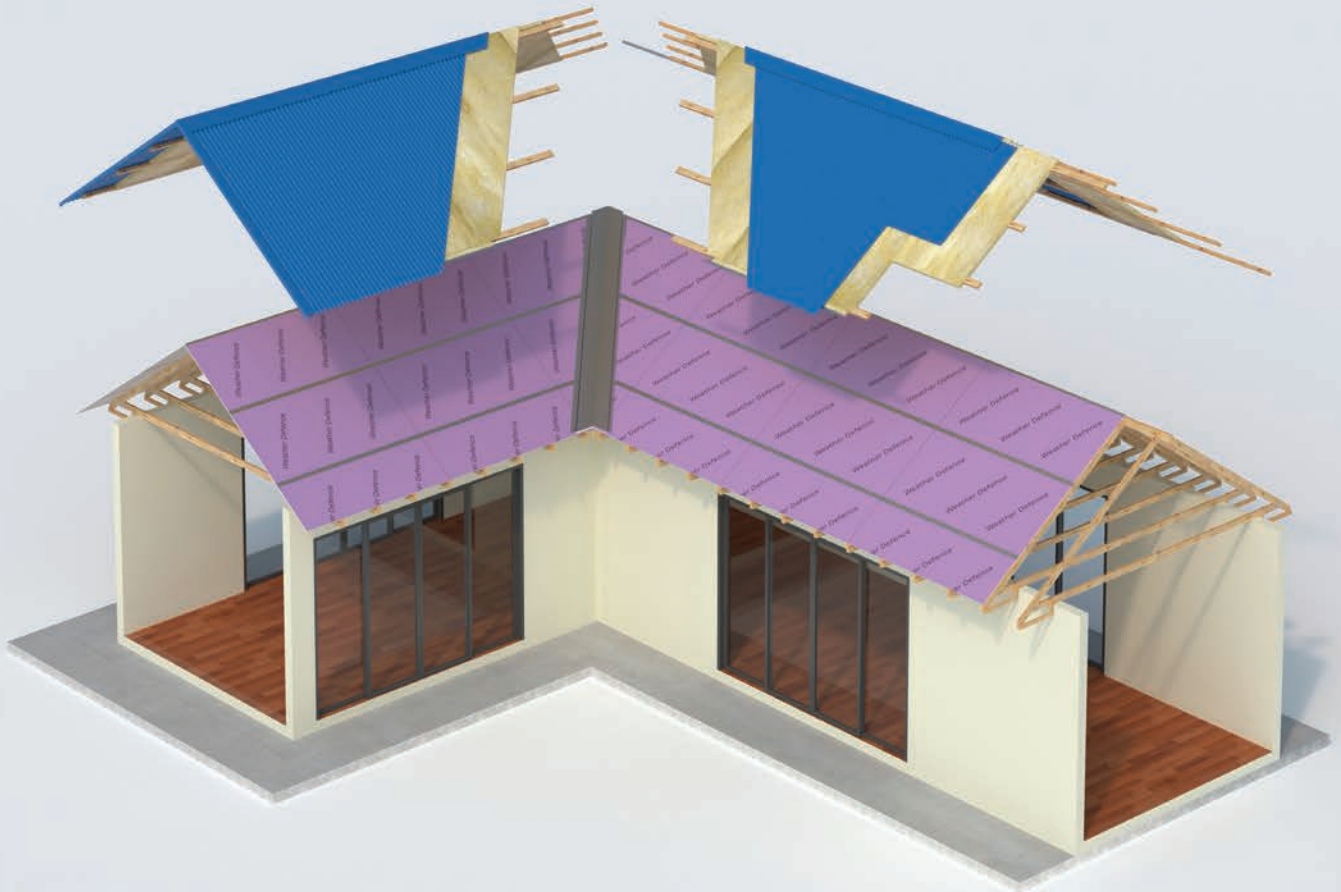
Fascia, barge and gable installation

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NOTE: Weather Defence™ is non trafficable and must not be walked on.

Description of drawings page 7 - 13

1. Corrugated Roof Cladding; Minimum 0.42mm thick steel cladding to AS 1445. Fixed on every second corrugation in the field of the sheet and at every corrugation at edges with self drilling Hex-head with EPDM seal and shank guard. 
2. Minimum 13mm thick Weather Defence™ board lining fixed to roof framing 50mm in from each corner if the end of the sheet falls on the framing and then nominal 600mm centres or as required to meet local wind requirements. Care should be taken to ensure fixings are no closer than 12mm to the edge of the boards otherwise cracking may occur. 
3. Roof Insulation, Bradford's non combustible Anticon 55 Glass Wool Roof Blanket with foil fixed to one side (foil face downwards). Refer insulation manufacturer (Bradford's) for fixing details. 
4. Either 90mm x 45mm seasoned pine battens (fixed with appropriate nails or screws) or steel top hat batten 40mm high x 32mm head and 14mm flanges fixed to roof framing to meet structural requirements. Note: place 500 µm polyethylene strip (damp course) between the steel top hat and Promat Bushfire Board (strip to be nominal 10mm wider than steel top hat). 
5. 35mm x 35mm x 0.55mm minimum galvanised flashing at ridge and hips if the joint in the boards is not tight. 
6. 40mm x 40mm x 40mm x 0.55mm (minimum) galvanised steel zed closure flashing fixed to roof lining board with 8g min self drill screws at nominal 600mm centres. Sealant (item 11) to be applied in any gaps between the flashing and fascia (this flashing restrains item 7). 
7. 75mm thick x 90mm wide Bradford Fibretex 650 Rockwool Cavity Closure Insulation. 
8. Timbers or steel roof framing, maximum 1200mm spacing. 
9. Fascia lining. Weather Defence™ deep enough to be covered by the fascia. 
10. Fascia. 19mm timber fascia board deep enough to cover the fascia lining or Steel Fascia profile fixed over clips which are fixed through the end of each rafter. 
11. Selley's Fireblock XT™ (which can be used in exposed and unexposed applications) or PROMASEAL®-A Acrylic Sealant. (which should be used in unexposed applications) max gap 10mm, fill to full depth of boards. 
12. Ridge capping. Typically 0.42mm - 0.6mm. Nominal 330mm wide , 85mm high with nominal 35mm domed peak. Fixed to roof sheet or batten in accordance with trade practice. 
13. Eaves lining. 2 x 12.5mm Weather Defence™. Butt joints between layers to be staggered by at least 300mm. The perimeter of the boards shall be fixed at 150mm centres and to the support framing (at 600mm centres) with fixings at 200mm centres in the field. First layer fixing shall be twice the thickness of the board and subsequent layers can be either 10g x 40mm coated as previously specified 'grabber' (stitching) screws or screws long enough to penetrate in to the timber framing by at least 20mm. 
14. Framing angle to support eaves lining. 35mm x 35mm x 0.7mm (min) or continuous timber batten (min 35mm x 35mm) fixed to the wall and trusses as per standard trade practice. 
15. Wall tested or assessed to achieve performance equal to BAL-FZ. 
16. Roof lining jointer. 60mm x 13mm x 60mm steel galvanised or zinc annealed zed section of flat steel sheet or timber batten. 
17. Barge Board capping. 150mm x 75mm x 0.42mm - 0.6mm steel. Fixed by one screw to every third corrugation to roof sheeting of batten. 
18. Valley and Box Gutter. 
19. Valley gutter and Box gutter linings. Two layers 12.5mm Weather Defence™. Cut to fit under the gutter. Weather Defence™ nominally fixed to roof to hold in position. Offset any butt joints between layers by minimum 300mm OR fill with Selley's Fireblock XT™ or Promat approved sealant if the gap is greater than 3mm and less than 10mm wide. 
20. Concrete and terracotta roof tiles, shall be of various profiles in accordance with AS2049. The tile may vary in mass from 46kg/m² to 54kg/m². The tile profile shall vary from curved to flat provided the gap requirements of AS2049 Clause 5.3 are met when tested to AS 4046.1. 
21. Roof tile batten, light gauge steel nominally 25mm wide x 20mm high. 
22. Optional metal gutter 



Roof sheet installation

The boards should be laid across the trusses with the purple face on the exposed side and screwed or nailed down at each truss, approximately 50mm in from the corner of the boards and then at 600mm centres along the truss. Screws should be minimum 38mm x 6g external grade fixings suitable for external use. Care should be taken to ensure fixings are no closer than 13mm to the edge of the boards otherwise cracking may occur.

If there is any chance of the boards being exposed to wind uplift during installation or before the roof battens are placed, fixings should be at minimum 150mm centres or as required to meet local wind requirements during construction.

It is recommended that the board joint is on a truss.

Wherever the boards are butt jointed and the joints do not land on a truss, then these joints should be supported. This can be done by fixing through from the underside through to the roof battens or to the underside into some additional noggins. Noggins this should be at each corner and minimum 600mm centres.

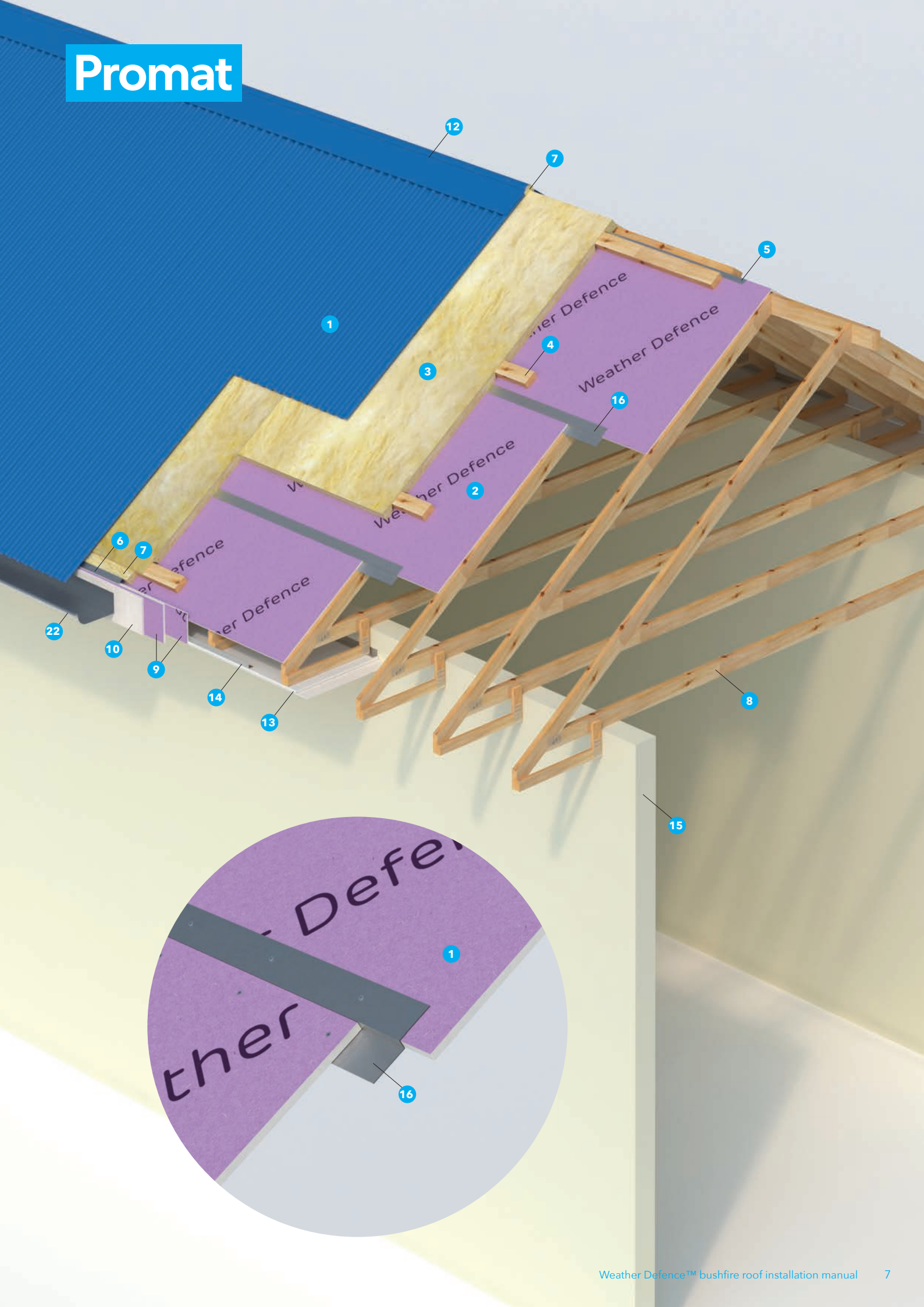
Another method of support would be to use 60mm x 9mm x 60mm x 0.55mm (minimum) galvanised steel zed section. This section should have one leg under the board and one leg over the adjoining board. It is also permissible to use a 200mm wide x 0.55mm thick galvanised steel sheet or timber noggins on the underside of the joints if this is convenient. These board joints must be tight fitting and if they are open or irregular or not fully backed, then the joints must be filled with Selleys Fireblock XT™ or PROMASEAL®-A Acrylic Sealant.

The sides of the boards that run across the trusses should be tightly butted together. Any open joints not backed with timber or a metal zed section, steel sheet or timber must be sealed to the full depth of the sheet with Selleys Fireblock XT™ or PROMASEAL®-A Acrylic Sealant. These gaps should be no greater than 3mm wide. If the gap is greater than 3mm it must be backed with steel sheet or timber battens as previously described.

If the pitch of the roof changes at a verandah / roof junction, hip or valley cut the boards neatly and apply a bead of Selleys Fireblock XT™ to the full depth along this joint if the gap is greater than 3mm and less than 10mm wide (see further notes and attached drawings for detailed information of fixing at ridges, hips, valleys, box gutters and change in roof pitch at verandahs).

If, after installation the boards are subjected to short term exposure to rain, it is good working practice to remove any pooling of water before the installation of insulation and roof decking takes place. For long term exposure to rain or in the likelihood of heavy rain it is advisable to cover the boards greater than 6 months.

Follow normal building practice for the installation of the roof battens, then install the Bradford Anticon Glass Wool Insulating blanket (foil face downwards) and roof sheeting or roof tiles. Ensure the ridge and hip details are closely adhered to ([see page 11](#)) and the correct insulation products are used as seals as detailed.





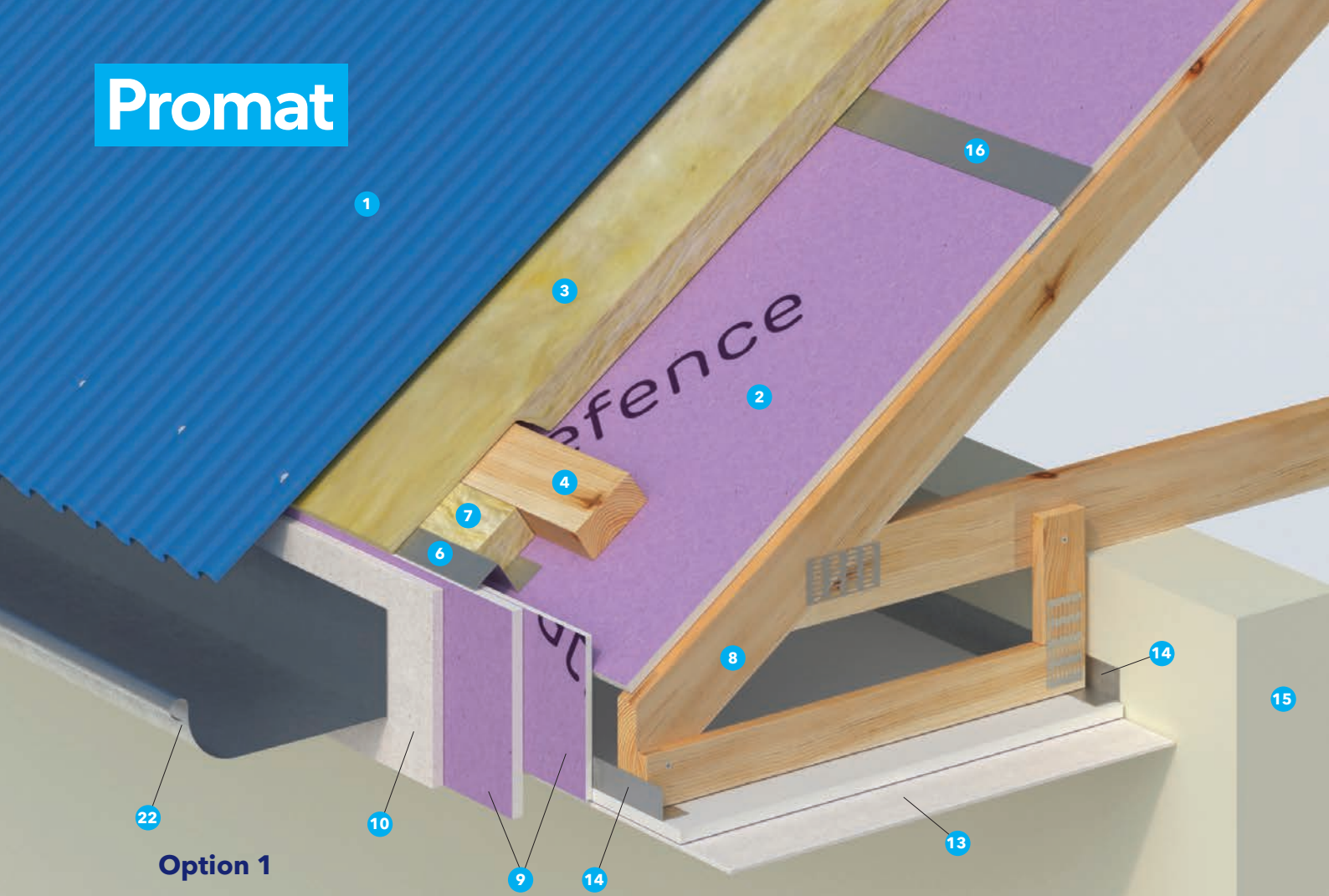
Fascia, barge and gable installation

The fascia can be made from either minimum 19mm thick timber fascia board or standard steel fascia profile.

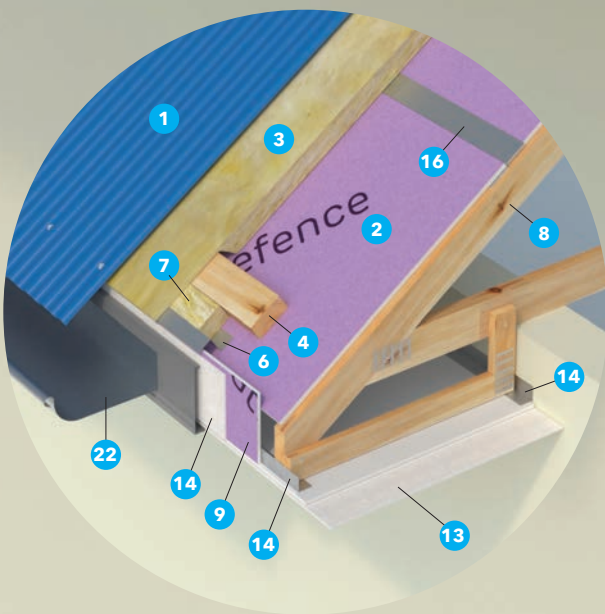
Barges and gables are made from minimum 19mm timber.

The fascia, barge and gable lining can be made up of 13mm Weather Defence™ board.

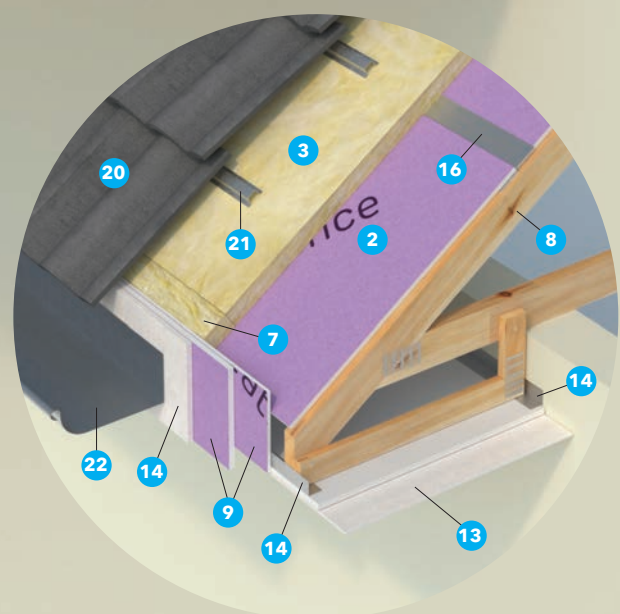
The board is fixed to the rafters with 38mm x 6g fixings suitable for external use (two fixings per rafter). All joints to fall on framing members or backed with noggings.



Option 1



Option 2



Option 3

Eaves

The eave linings can be made of 2 x 13mm Weather Defence™ board.

Weather Defence™ board are to be orientated so that butt joints between layers do not coincide (stagger by minimum 300mm). 12.5mm Weather Defence™ board to be fixed with minimum 38mm x 6g coated fixings. 13mm Weather Defence™ board at 150mm centres at the perimeter and rows 600mm centres apart with fixings at 200mm centres in the field for eave lines up to 600mm in width. Care should be taken to ensure fixings are no closer than 13mm to the edge of the boards otherwise cracking may occur.



Verandahs

If the verandah and roof spaces are continuous (open to each other) then the verandah roof must be treated in the same manner as the main roof and the verandah soffit must be treated in the same manner as the eaves.

For verandahs (and eaves) between 600mm and 3000mm in width, the supporting framework requires a minimum purlin size of 102mm web x 76mm flange x 1.6mm thick with folded return to the flange edge spaced at maximum 600mm centres. The edge channels shall be folded steel channels of similar dimensions without the folded edge. The edge channels are fixed to the wall with M12 bolts at 500mm centres.

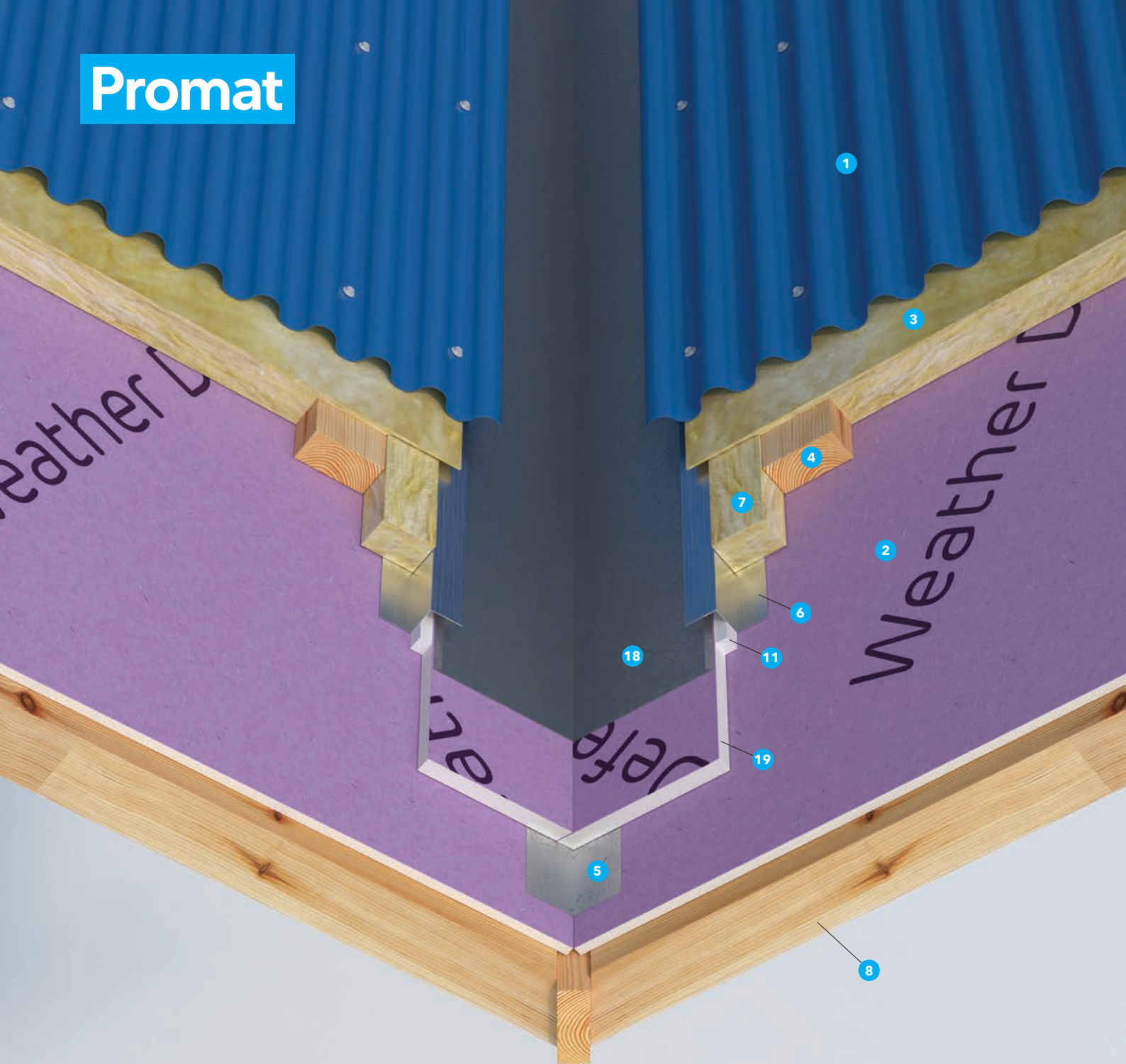
Timber of similar structural capacity may also be used.

Where the external wall separates the main roof space from the verandah (i.e. the roof trusses are not continuous from the main roof to the verandah) or the roof space can be separated from the verandah with an approved barrier, similar to the fascia or barge barrier then the verandah is required to have a non-combustible roof covering and the support structure shall be non-combustible or have timber rafters lined on the under side with minimum thickness 13mm Weather Defence™. Generally, systems complying with AS1530.8.2 may be used.



Hip and ridge details

Hips and Ridges must be installed in accordance with the detail shown above. Ensure all flashings are installed in accordance with normal building practice. The mineral wool cavity closure insulation shall be Bradford Fibretex 650 Rockwool, 75mm thick, 90mm wide and compressed between the roof sheets to 50% of its original thickness.



Valley construction details

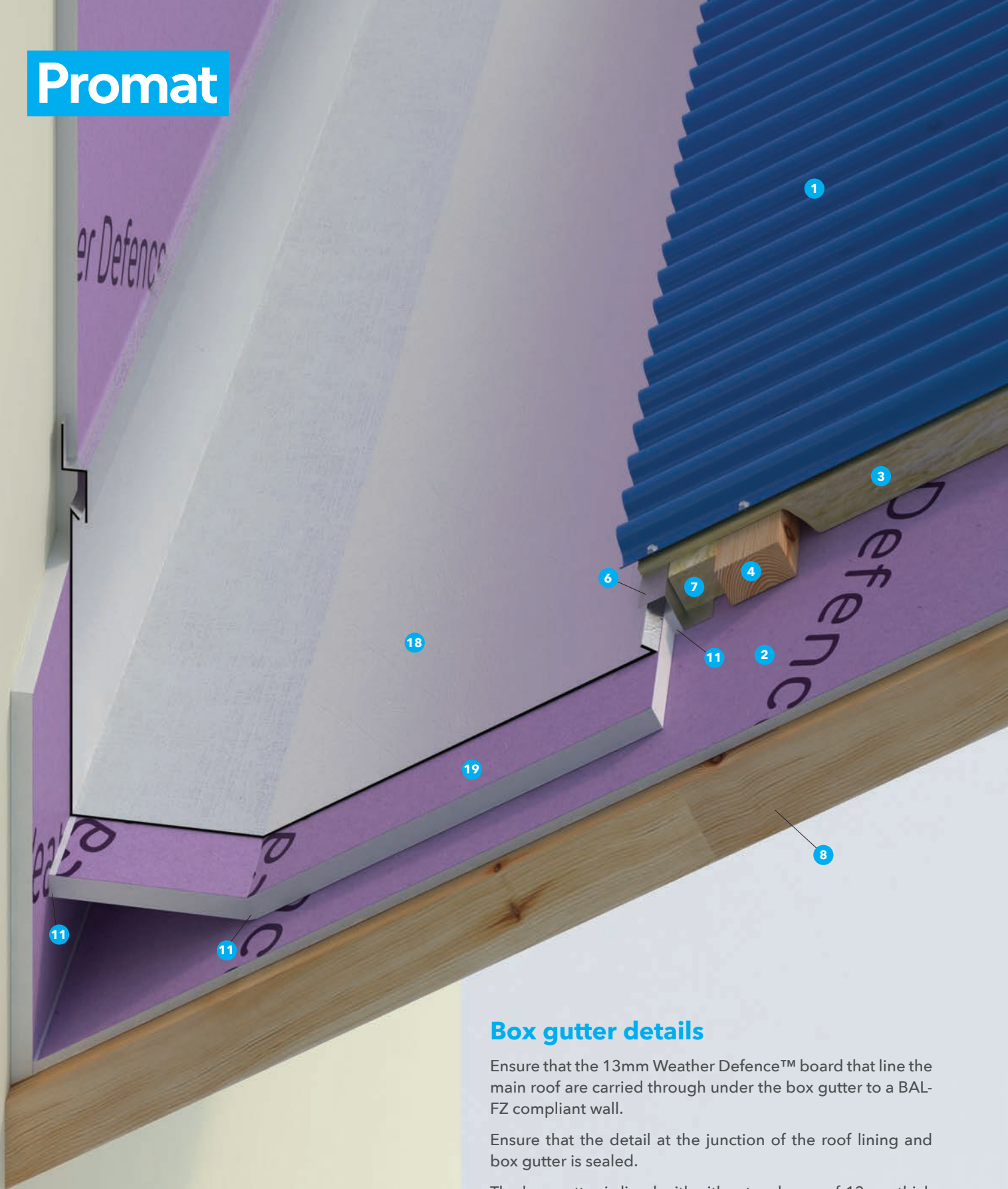
Ensure that the 13mm Weather Defence™ board lining the main roof are carried through under the valley in accordance with figure above. Ensure that the detail at the junction of the roof lining and the valley is sealed.

The mineral wool cavity closure insulation shall be Bradford Fibretex 650 Rockwool. This should be 75mm thick, 90mm wide positioned at the edge (as shown) and compressed with Anticon 55 Glass Wool Roofing Blanket to a nominal thickness of 40mm by the roof sheets.

The valley is lined with 13mm thick Weather Defence™ board nominally fixed to the roof structure to hold in position as normal trade practice.

Install flashing and seal all joints with Selleys Fireblock XT™.

Install the metal valley and flashing in accordance with normal building practice to ensure it remains watertight and is fit for purpose.



Box gutter details

Ensure that the 13mm Weather Defence™ board that line the main roof are carried through under the box gutter to a BAL-FZ compliant wall.

Ensure that the detail at the junction of the roof lining and box gutter is sealed.

The box gutter is lined with either two layers of 13mm thick Weather Defence™ board which is nominally fixed to the gutter support framing to hold in position until the flashing is installed.

Seal all joints with Selleys Fireblock XT™.

Install the metal box gutter and flashing in accordance with normal building practice to ensure it remains watertight and is fit for purpose.

Availability

Product is now available. Contact us for details of your local distributor on Tel 1800 30 20 20 or Email PAPL.Mail@etexgroup.com or at our website: www.promat.com.

Selleys Fireblock XT™ is available in 600ml sausages.

PROMASEAL®-A Acrylic Sealant is available in 300ml cartridges.





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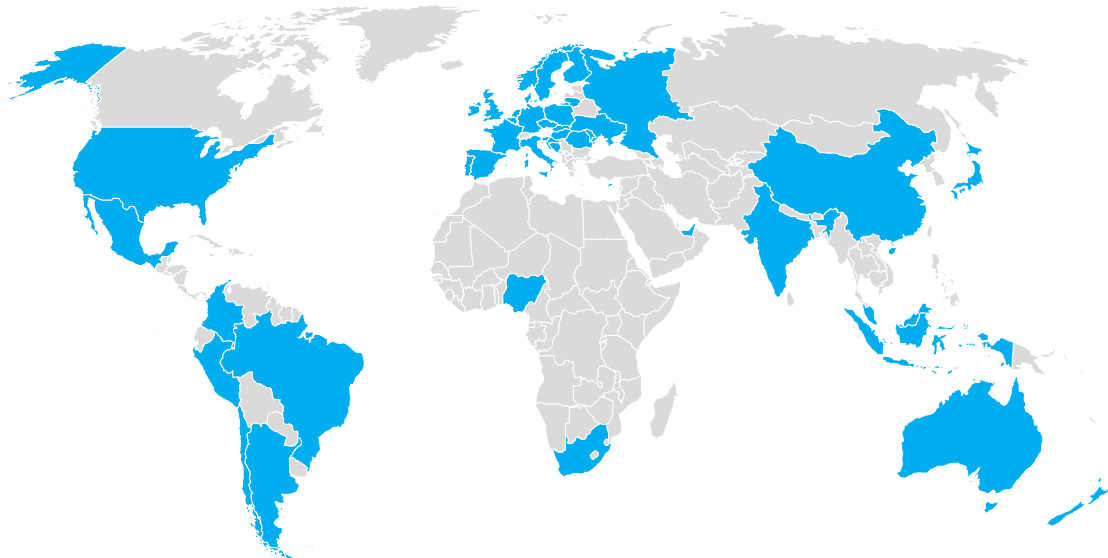
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