

# A guide to Bushfire Compliant Construction using Carter Holt Harvey Wood Products

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Effective from July 2010

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Woodproducts Australia



## Introduction

The tragic events of Black Saturday on the 7 February 2009 have resulted in a number of revisions to building codes in Australia. These have obviously been implemented in an attempt to ensure the tragic loss of life and property experienced that day is never repeated.

At Carter Holt Harvey Woodproducts Australia (CHH) we are endeavouring to make it as simple as possible for you to understand these new standards and the implications of them. We recognise the importance of education in this area and have compiled the following important information to assist you in identifying the accredited products you require to build safer housing in bushfire-prone areas.

A new Australian Standard AS 3959 2009 specifically relating to the construction of buildings in bushfire-prone areas now applies in all parts of Australia. This guide includes amendment 1 to this standard.

NSW and South Australia have additional requirements beyond this standard. NSW additions are included in this guide. Due to the number of additions and changes in the South Australia additional requirements, they are not included. For South Australia additional requirements refer to the Building Code of Australia.



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## Bushfire Attack Levels under the Australian Standard

To ensure new homes, alterations and additions are located and constructed with greater bushfire protection, the new Australian Standard AS 3959–2009 *Construction of buildings in bushfire-prone areas* now applies across Australia.

AS 3959–1999 has 4 levels of risk of bushfire attack, (Low, Medium, High and Extreme) while AS 3959–2009 has 6 levels described as Bushfire Attack Levels (BALs).

There is a need to assess the building site based on the vegetation type and effective slope of the ground under the classified vegetation and distance from the vegetation, to determine the Bushfire Attack Level (BAL).

Despite the changes to the Australian Standard, CHH's broad range of timber, LVL and plywood products are still the preferred choice for your timber wall, floor, decking and roofing solutions for either high-set lightweight homes or brick veneer homes with enclosed subfloor spaces.

The following information is a guide to meeting the different construction requirements with CHH's products. For further technical assistance call Carter Holt Harvey on 1800 808 131 or contact the Timber Development Association (NSW) on 02 8424 3700.

Bushfire Attack Exposure under the Australian Standard 3959–2009 <sup>1</sup>	Description of the predicted Bushfire Attack Levels
<b>BAL–LOW</b>	Insufficient risk to warrant specific construction requirements
<b>BAL–12.5</b>	Ember attack
<b>BAL–19</b>	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 12.5 and 19kW/m <sup>2</sup>
<b>BAL–29</b>	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 19 and 29 kW/m <sup>2</sup>
<b>BAL–40</b>	Increasing levels of ember attack and burning debris ignited by windborne embers together with increasing heat flux between 29 and 40 kW/m <sup>2</sup> and increased exposure to flames
<b>BAL–FZ<sup>2</sup></b>	Direct exposure to flames from the fire front in addition to heat flux over 40 kW/m <sup>2</sup> and ember attack

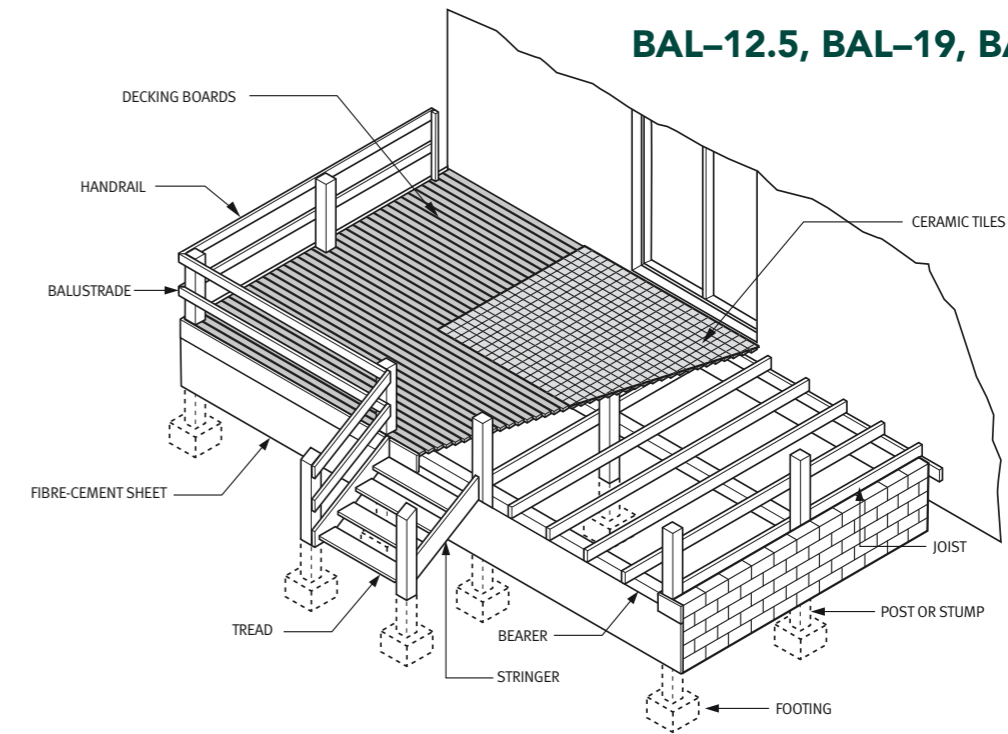
<sup>1</sup>Based on site assessment conducted by an experienced architect, building designer or builder.

<sup>2</sup>NSW requirements do not allow solution from AS3959 to be used.

**BAL–LOW:** There is no limitation on the use of CHH wood products for any building element that is in **BAL–LOW**, except in South Australia. South Australia requirements are not covered in this guide.

For recommended solutions in the other **BALs** (12.5, 19, 29, 40 and FZ) refer to the following guides.

## Decks, ramps and stairs with enclosed subfloor space



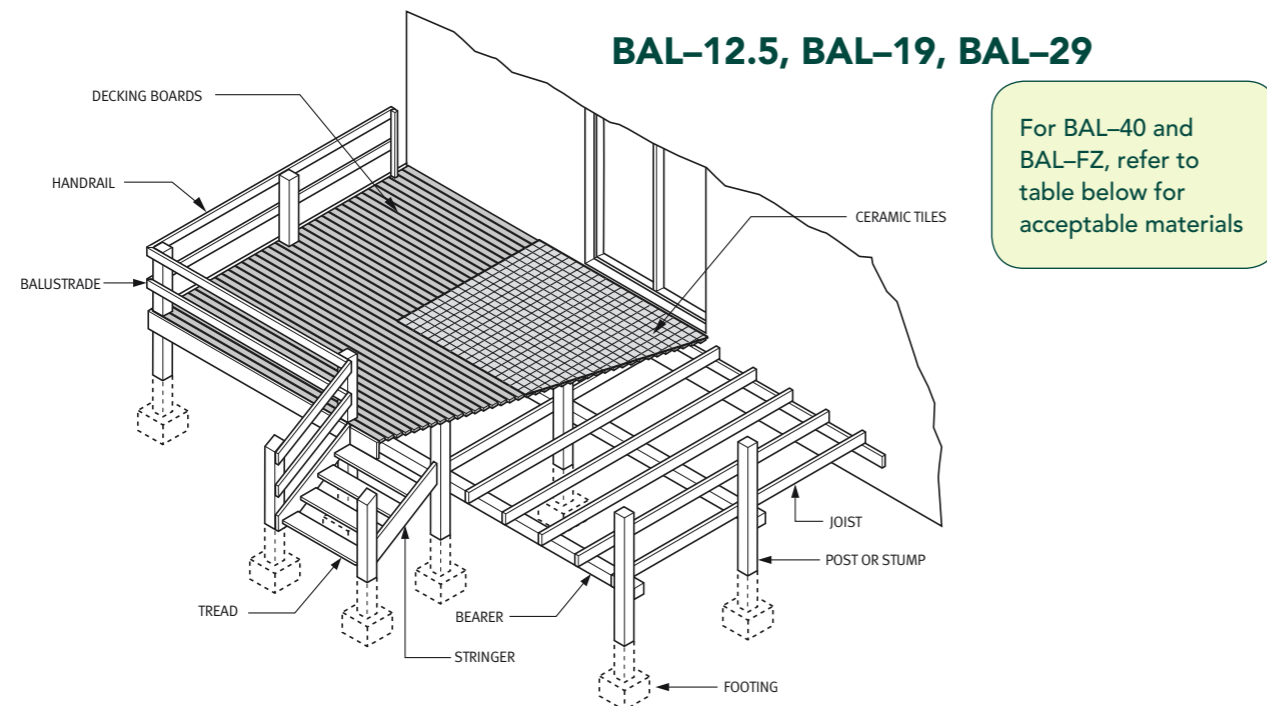
Decks, ramps and stairs with enclosed subfloor space				
Building Element	BAL–12.5 and BAL–19	BAL–29	BAL–40	BAL–FZ <sup>3</sup>
Wall enclosing subfloor space	Less than 400mm from the ground or an external horizontal surface <sup>1</sup> , use ALLseasons/hySPAN (H3) framing clad with non-combustible material such as 6mm fibre-cement sheet. Above 400mm, use SHADOWclad or ECOply.	ALLseasons/hySPAN (H3) framing <b>provided</b> the framing is sarked on the outside and clad with non-combustible material such as 6mm fibre-cement sheet.	ALLseasons/hySPAN (H3) framing <b>provided</b> the framing is sarked on the outside and clad with non-combustible material such as 9mm fibre-cement sheet.	FRL 30/30/30 Refer to page 13 or 90mm brick skin.
Subfloor supports (posts, stumps, columns, stair stringers etc)	ALLseasons (H4) (H3 when not in ground contact)			
Deck/ramp bearers and joists	ALLseasons/hySPAN (H3)			
Decking and Stair treads	ALLseasons (H3) except in those areas of the deck less than 300 mm (measured horizontally at deck level) from glazed elements that are less than 400 mm (measured vertically) from the surface of the deck.	Bushfire – resisting timber such as Blackbutt <sup>2</sup>	Use non-combustible materials such as steel or concrete.	Use non-combustible materials such as steel or concrete.
Balustrades and Handrails	ALLseasons (H3)	ALLseasons (H3) except those parts of the handrails and balustrades less than 125 mm from any glazing or combustible wall.	ALLseasons (H3) except those parts of the handrails and balustrades less than 125 mm from any glazing or combustible wall.	ALLseasons (H3) except those parts of the handrails and balustrades less than 125 mm from any glazing or combustible wall.

<sup>1</sup> An external horizontal surface or a ledge includes decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall or window or door.

<sup>2</sup> Bushfire – resisting timbers include Blackbutt, Merbau and Red Ironbark, River Red Gum, Silver top Ash and Turpentine.

<sup>3</sup> NSW requirements do not recognize BAL-FZ construction solutions from AS3959 2009. A BCA Alternative Solution is required for BAL-FZ construction in NSW.

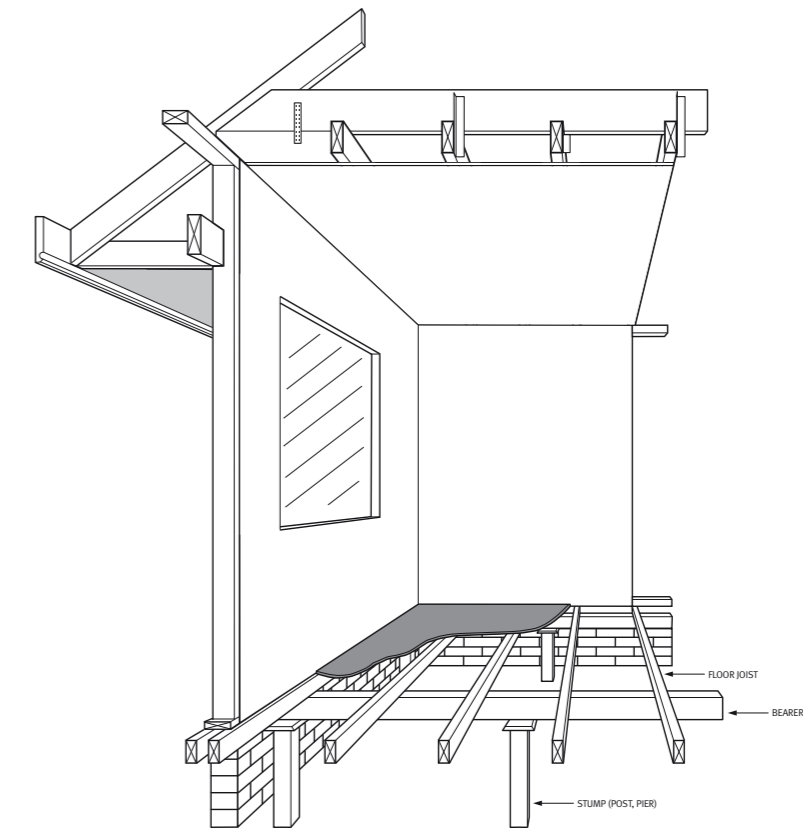
## Decks, ramps and stairs with unenclosed subfloor space



Decks, ramps and stairs with unenclosed subfloor space				
Building Element	BAL-12.5 and BAL-19	BAL-29	BAL-40	BAL-FZ <sup>1</sup>
<b>Wall enclosing subfloor space</b>	N/A Subfloor space is open	N/A Subfloor space is open	N/A Subfloor space is open	N/A Subfloor space is open
<b>Subfloor supports (posts, stumps, columns, stair stringers etc)</b>	ALLseasons (H4) NSW requires Bushfire resisting timbers	Bushfire-resisting timbers	Metal or Brick	Metal or Brick
<b>Deck/ramp bearers and joists</b>	ALLseasons/hySPAN (H3) NSW requires Bushfire resisting timbers	Bushfire-resisting timbers	Metal	Metal
<b>Decking and Stair treads</b>	ALLseasons (H3) except in those areas of the deck less than 300mm (measured horizontally at deck level) from glazed elements that are less than 400mm (measured vertically) from the surface of the deck NSW requires Bushfire resisting timbers	Bushfire-resisting timbers	Tile or concrete decking	Tiled or concrete decks
<b>Balustrades and Handrails</b>	ALLseasons (H3) except in NSW, for those parts of the handrails and balustrades less than 125mm from any glazing or combustible wall use bushfire resisting timbers	ALLseasons (H3) except those parts of the handrails and balustrades less than 125 mm from any glazing or combustible wall	ALLseasons (H3) except those parts of the handrails and balustrades less than 125 mm from any glazing or combustible wall	ALLseasons (H3) except those parts of the handrails and balustrades less than 125 mm from any glazing or combustible wall

<sup>1</sup> NSW requirements do not recognize BAL-FZ construction solutions from AS3959 2009. A BCA Alternative Solution is required for BAL-FZ construction in NSW.

## Elevated floors with enclosed subfloor space



Elevated floors with enclosed subfloor space				
Building Element	BAL-12.5 and BAL-19	BAL-29	BAL-40	BAL-FZ <sup>2</sup>
<b>Wall enclosing subfloor space</b>	Less than 400mm above the ground or an external horizontal surface <sup>1</sup> , use LASERframe/hySPAN (H3) framing clad with non-combustible material such as 6mm fibre-cement sheet Above 400mm, use SHADOWclad or ECOply	LASERframe/hySPAN framing <b>provided</b> the framing is sarked on the outside and clad with non-combustible material such as 6mm fibre-cement sheet	LASERframe/hySPAN framing <b>provided</b> the framing is sarked on the outside and clad with non-combustible material such as 9mm fibre-cement sheet	FRL of 30/30/30 required. Refer to page 13 for information on <b>fire rated</b> walls
<b>Subfloor supports (posts, stumps, columns etc)</b>	ALLseasons (H4)	ALLseasons (H4)	ALLseasons (H4)	ALLseasons (H4)
<b>Bearers and joists</b>	hySPAN hyJOIST LASERframe	hySPAN hyJOIST LASERframe	hySPAN hyJOIST LASERframe	hySPAN hyJOIST LASERframe
<b>Flooring</b>	STRUCTAflor STRUCTAflor Terminator R-Flor PLYflor	STRUCTAflor STRUCTAflor Terminator R-Flor PLYflor	STRUCTAflor STRUCTAflor Terminator R-Flor PLYflor	STRUCTAflor STRUCTAflor Terminator R-Flor PLYflor

<sup>1</sup> An external horizontal surface or a ledge includes decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall or window or door

<sup>2</sup> NSW requirements do not recognize BAL-FZ construction solutions from AS3959 2009. A BCA Alternative Solution is required for BAL-FZ construction in NSW.

## Elevated floors with unenclosed subfloor space

Elevated floors with unenclosed subfloor space				
Building Element	BAL-12.5 and BAL-19	BAL-29	BAL-40	BAL-FZ
<b>Wall enclosing subfloor space</b>	N/A Subfloor space is open	N/A Subfloor space is open	N/A Subfloor space is open	N/A Subfloor space is open
<b>Subfloor supports (posts, stumps, columns etc)</b>	ALLseasons (H4) ALLseasons (H4) NSW requires Bushfire-resisting timbers	Bushfire-resisting timbers	Brick, steel or concrete stumps	Brick, steel or concrete stumps
<b>Bearers and joists</b>	hySPAN hyJOIST LASERframe NSW requires framing less than 400 mm above the ground use Bushfire-resisting timbers or line the underside of the floor framing with fibre cement or sheet metal (roofing)	400 mm and greater: hySPAN hyJOIST hyJOIST LASERframe <sup>1</sup> Less than 400 mm: Bushfire resisting timber or lined the underside the floor frame with fibre cement or sheet metal (roofing)	hySPAN hyJOIST LASERframe <sup>1</sup> Provided the underside of the floor frame is lined with fibre-cement or sheet metal (roofing)	hySPAN hyJOIST LASERframe provided floor system has FRL of 30/30/30 or 30 mins Resistance to Incipient Spread of Fire <sup>1</sup>
<b>Flooring</b>	STRUCTAflor STRUCTAflor Terminator R-Flor PLYfloor NSW requires flooring less than 400 mm from the ground lined with sarking or mineral wool unless already lined (R-Flor has sarking already attached to underside of flooring)	STRUCTAflor STRUCTAflor Terminator PLYfloor (underside lined with sarking) R-Flor	STRUCTAflor <sup>1</sup> STRUCTAflor Terminator <sup>1</sup> R-Flor <sup>1</sup> PLYfloor <sup>1</sup>	STRUCTAflor STRUCTAflor Terminator R-Flor PLYfloor provided floor system has FRL of 30/30/30 or 30 mins Resistance to Incipient Spread of Fire <sup>1</sup>

<sup>1</sup> Refer to lining manufactures for fire rated or Resistance to Incipient Spread of Fire floor/ceiling system information. In general terms, requires the addition of 16 mm fire grade plasterboard to the underside of the floor system.

<sup>2</sup> NSW requirements do not recognize BAL-FZ construction solutions from AS3959 2009. A BCA Alternative Solution is required for BAL-FZ construction in NSW.

## Garages, carports, verandahs and similar roofed structures

Garages, carports, verandahs and similar roofed structures				
Building Element	BAL-12.5 and BAL-19	BAL-29	BAL-40	BAL-FZ <sup>3</sup>
<b>Where attached structure separated from the building by a fire rated FRL 60/60/60 wall that extends to the underside of a non-combustible roof covering<sup>1</sup> (refer to External fire rated wall guide, page 13 of this guide)</b>	hySPAN LASERframe ALLseasons	hySPAN LASERframe ALLseasons	hySPAN LASERframe ALLseasons	hySPAN LASERframe ALLseasons
<b>Where the roof of an attached structure is separated from the roof space of the main building by a masonry veneer wall, 90mm thick</b>	For the complete structure, refer to the individual building elements noting the roof covering must be non-combustible	For the structure supporting the roof and it's framing, refer to the individual building elements  For roof framing hySPAN/ LASERframe lined on the underside with 6mm fibre-cement sheeting noting the roof covering must be non-combustible	For the structure supporting the roof and it's framing, refer to the individual building elements  For roof framing hySPAN/ LASERframe lined on the underside with 6mm fibre-cement sheeting noting the roof covering must be non-combustible	For the structure supporting the roof and it's framing, refer to the individual building elements  For roof framing hySPAN/ LASERframe lined on the underside with 6mm fibre-cement sheeting noting the roof covering must be non-combustible
<b>Where the adjacent building is separated from the main building by at least 6 m<sup>2</sup></b>	hySPAN hyJOIST LASERframe ALLseasons	hySPAN hyJOIST LASERframe ALLseasons	hySPAN hyJOIST LASERframe ALLseasons	hySPAN hyJOIST LASERframe ALLseasons

<sup>1</sup> For all other situations refer to the individual building elements

<sup>2</sup> When not separated from the building by 6m or a fire rated wall, refer to individual guides

<sup>3</sup> NSW requirements do not recognize BAL-FZ construction solutions from AS3959 2009. A BCA Alternative Solution is required for BAL-FZ construction in NSW.

## External Walls – Cladding or plywood

External Walls – Cladding or plywood				
Building Element	BAL-12.5 and BAL-19	BAL-29	BAL-40	BAL-FZ <sup>3</sup>
<b>External wall surface</b>	Less than 400mm above the ground or an external horizontal surface <sup>1</sup> use SHADOWclad/ECOply over a <b>fire rated</b> FRL 30/30/30 wall  Above 400mm, use SHADOWclad or ECOply or plywood	SHADOWclad/ECOply over a <b>fire rated</b> wall with a FRL 30/30/30  Refer to page 13 for information on <b>fire rated</b> walls	SHADOWclad/ECOply over a <b>fire rated</b> wall with a FRL 30/30/30  Refer to page 13 for information on <b>fire rated</b> walls	SHADOWclad/ECOply over a <b>fire rated</b> wall with a FRL 30/30/30  Refer to page 13 for information on <b>fire rated</b> walls

<sup>1</sup> An external horizontal surface or a ledge includes decks, carport roofs, awnings and similar elements or fittings having an angle less than 18 degrees to the horizontal and extending more than 110 mm in width from the wall or window or door

<sup>2</sup> SHADOWclad and ECOply over a FRL 30/30/30 wall is an acceptable solution across all BAL levels as AS3959 allows higher BAL level solutions to be used in lower BAL levels.

<sup>3</sup> NSW requirements do not recognize BAL-FZ construction solutions from AS3959 2009. A BCA Alternative solution is required for BAL-FZ construction in NSW.

## Framing – Internal walls, external walls and roofing

Framing – Internal walls, external walls and roofing				
Building Element	BAL-12.5 and BAL-19	BAL-29	BAL-40	BAL-FZ <sup>3</sup>
<b>Framing for internal walls</b>	LASERframe	LASERframe	LASERframe	LASERframe
<b>Framing for external walls that are masonry veneer minimum 90mm thick</b>	LASERframe	LASERframe	LASERframe	LASERframe
<b>Framing for external walls that are clad with complying materials</b>	LASERframe	LASERframe	LASERframe	LASERframe provided the framing is part of a <b>fire rated</b> FRL 30/30/30 wall. Refer to page 13.
<b>Framing for roofing</b>	LASERframe/hySPAN/hyJOIST <b>provided</b> the framing is protected by complying roofing material, eaves linings, fascia etc <sup>1</sup>	LASERframe/hySPAN/hyJOIST <b>provided</b> the framing is protected by complying roofing material, eaves linings, fascia etc <sup>1</sup>	LASERframe/hySPAN/hyJOIST <b>provided</b> the framing is protected by complying roofing material, eaves linings, fascia etc <sup>1</sup>	LASERframe/hySPAN/hyJOIST <b>provided</b> the framing is part of a complying system: refer to BAL-FZ Roof Systems, page 14 to 18.

<sup>1</sup> Complying roof systems include conventional non combustible roof and materials (tile, metal sheet) ensuring any gaps over 3mm are protected by ember guards. For further detail on sealants, skylights, etc refer to AS 3959.

<sup>2</sup> Complying external wall cladding, refer to AS3959 2009 or page 10 of this guide for SHADOWclad/ECOply solutions.

<sup>3</sup> NSW requirements do not recognize BAL-FZ construction solutions from AS3959 2009. A BCA Alternative solution is required for BAL-FZ construction in NSW.



## Internal exposed timbers

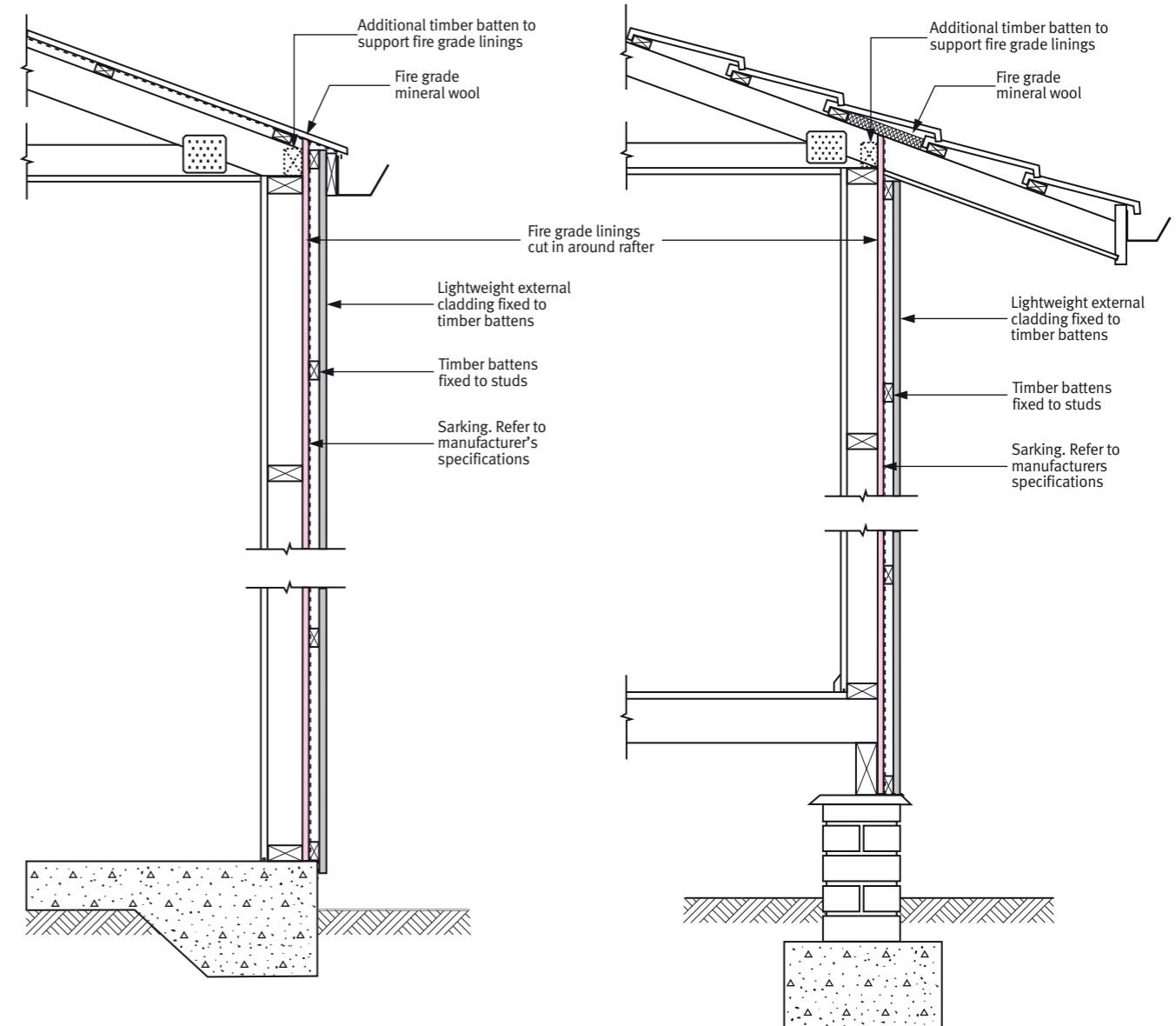
Internal exposed timbers				
Building Element	BAL-12.5 and BAL-19	BAL-29	BAL-40	BAL-FZ
<b>Internal Doors</b> <b>Joinery</b> <b>Wall linings</b> <b>Ceiling linings</b> <b>Staircases</b> <b>Flooring over concrete slab</b> <b>Flooring over joists not exposed to subfloor space</b>	Any CHH wood products	Any CHH wood products	Any CHH wood products	Any CHH wood products

## External Fire Rated Walls – FRL 30/30/30 or 60/60/60

Refer directly to lining manufacturers for specification of plasterboard type, thickness and grade and weather protection to the plasterboard.

Details below are indicative methods only. The external wall is required to continue to the underside of the non-combustible roof sheet or tile. Once again refer directly to the advice of lining manufacturers.

(FRL refers to the Fire Resistance level and is represented by the time in minutes as tested to AS 1530.4. Fire test criteria are expressed as structural adequacy/integrity/insulation. To obtain an FRL, a representative test sample of what is to be built and also installed, is subjected to the fire test and the load bearing, barrier to flame and gasses and insulation properties are measured.)



## BAL-FZ Resistant Roof Systems

A small number of homes that have been assessed to be in Bushfire Attack Level FZ will require the use of a roof and eave that comply with Standard by meeting AS 1530 8.2 *Test on elements of construction for buildings exposed to simulated bushfire attack – large flame source.*

This guide details two roof and one eaves systems that have been tested to meet the requirements of AS 1530 8.2. The roof systems utilise a membrane of 15 mm ECOply over the rafters or trusses with the addition of glass wool insulation.

The eaves and fascia system uses a combination of 15 mm ECOply and 16 mm fire rated moisture resistant plasterboard.

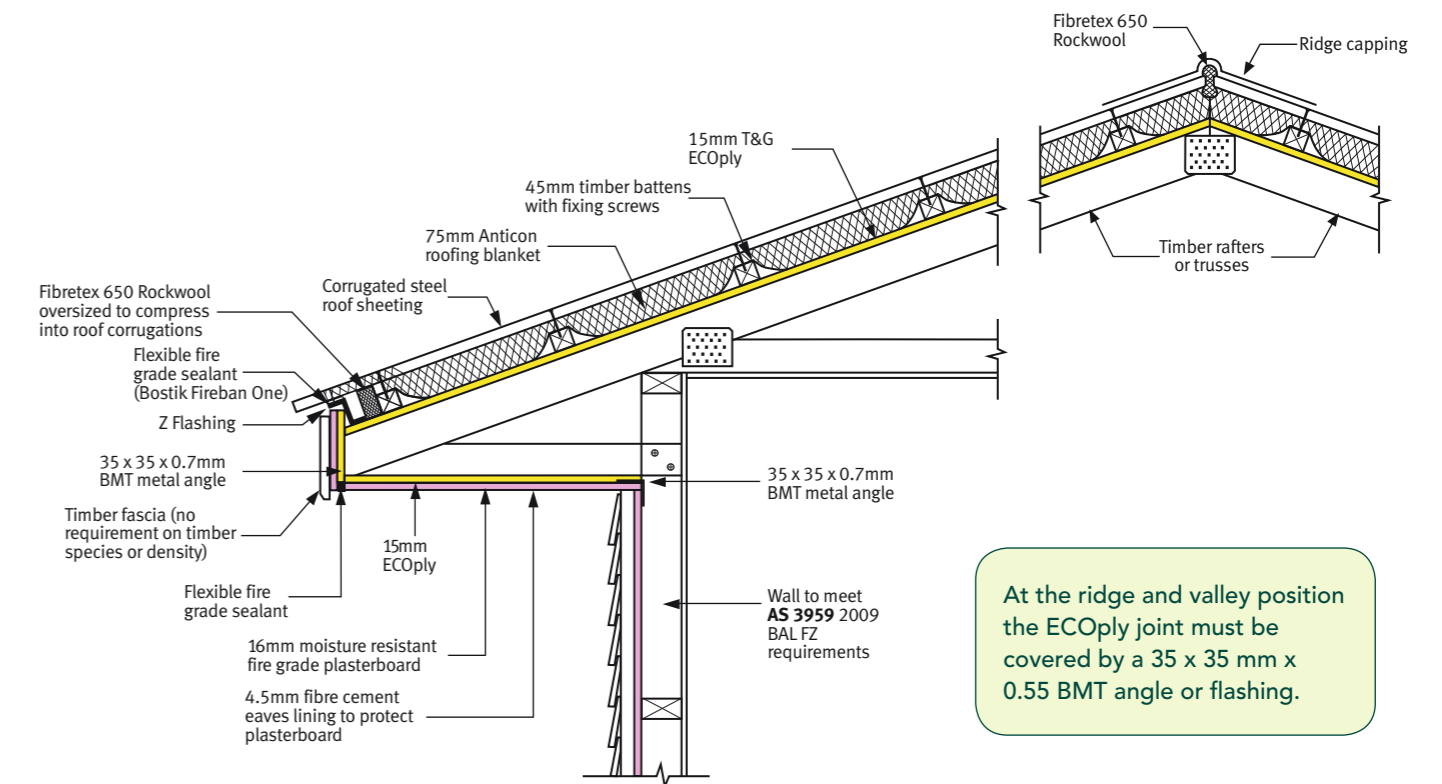
**The test method utilised is quite a severe test and consequently the requirements for BAL-FZ roof systems resemble fire rated construction commonly used for walls or floors. The level of care and supervision used to construct fire rated systems should also be applied to the construction of bushfire resistant roofs.**



## ECOply Corrugated Steel Roof System

15 mm tongue and groove ECOply is placed directly over the rafters or trusses with the face veneer perpendicular to rafter direction.

The butt end joints must be supported. They should be made over the rafter edges or where free ends are unavoidable over a nogging running between the rafters not less than 70 mm x 35 mm set flush to the top of the rafter can be used. Each panel must be continuous over more than one span. Readily available ECOply stress grades are F11 or F14.



Fixing of the ECOply to the rafters is the same as for fixing of ECOply flooring as detailed in AS 1684 *Residential Timber Framed Construction Standards*. The fixing requirements are repeated below.

Nails and screws shall be spaced at 150 mm centres at panel ends and at 300 mm centres at intermediate rafters and noggings. ECOply should not be fixed less than 10 mm from edges.

<b>Hand Driven nails</b>	2.8 mm minimum diameter, flathead or bullet head nail of a minimum length of 40 mm (2.5 times ECOply thickness)
<b>Gun driven nails</b>	2.5 mm minimum diameter gun nail of a minimum length of 40 mm (2.5 times ECOply thickness)
<b>Screws to timber rafters</b>	No. 8 x 30 self drilled countersunk wood screw



## ECOply Corrugated Steel Roof System – continued

### Insulation

The void between the ECOply deck and the underside of the metal sheet is to be filled with 75 mm Anticon glass wool blanket.

At the interface of the metal roof sheet and the fascia, an oversized Fibretex 650 Rockwool strip is to be used to seal between the ECOply and the roof sheet. The Rockwool is to be a minimum of 75 mm wide by 90 mm long and placed on edge. The Anticon glass wool should also be compressed with the Rockwool.

At the ridge and hips a 90 mm wide strip of Fibretex 650 Rockwool is to be compressed to 50% of its size under the ridge cap.

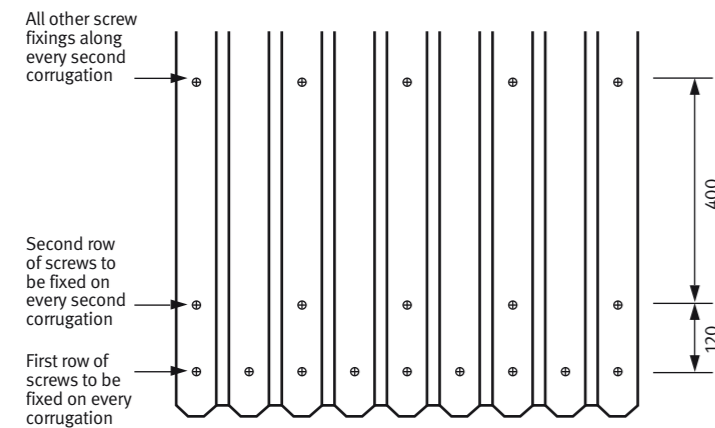
### Roof Sheet

A 0.42 mm corrugated roof sheet that complies with AS 1445 can be used. The roof sheet is to be fixed in accordance to normal practices except that double fixings are to be applied along the leading edge of the roof into the Z flashing.

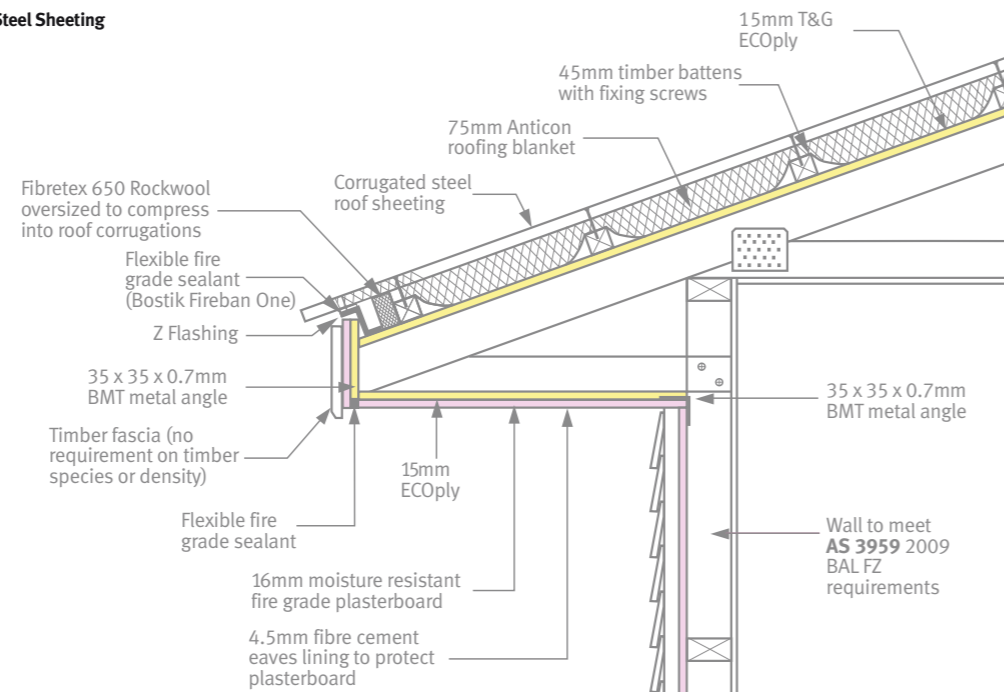
### Battens

Either timber or metal battens can be used. Batten depth should not be less than 40 mm and the batten fixed with consideration of the relevant tie-down required for the location.

Further information can be found in *Building with tile roofs in bushfire prone areas – A guide for builders and roof tilers*, Roof Tile Association of Australia – [www.rooftile.com.au](http://www.rooftile.com.au)



Plan View of Corrugated Steel Sheeting



## ECOply Tile Roof System

Suitable for concrete and terracotta roof tiles of mass 46kg/m<sup>2</sup> to 54kg/m<sup>2</sup> in a curved to flat profile.

15mm tongue and grooved ECOply is placed directly over the rafters or trusses with the face veneer perpendicular to the rafter direction. The butt end joints must be supported. They should be over the rafter edges or where free ends are unavoidable, over a nogging running between the rafters at not less than 70mm x 35mm set flush to the top of the rafter can be used. Each panel must be continuous over more than one span.

Fixing of the ECOply to the rafters is as for fixing of ECOply flooring as detailed in AS 1684 *Residential Timber Framed Construction Standards*. The fixing requirements are repeated below.

Nails and screws shall be spaced at 150 mm centres at panel ends and at 300 mm centres at intermediate rafters and noggings. ECOply should not be fixed less than 10 mm from edges.

### Roof Tile

Concrete roof tiles shall be of various profiles in accordance with AS 2049 and vary in mass from 46kg/m<sup>2</sup> to 54kg/m<sup>2</sup>. The tile profile can vary from curved to flat profile provided the gap requirements of AS 2049 are met. Sarking is applied over the entire roof system under the tile battens.

### Insulation

At the interface between the anti-ponding 16mm fire grade plasterboard which has been attached to battens, a cavity closure insulation of Fibretex 650 Rockwool positioned at the roof/fascia interface. The Rockwool is to be a minimum of 100mm wide by and 115mm thick and installed between 120mm and 300mm from the fascia.

A flexible fire grade sealant such as Bostik, Fireban One at the junction of the fascia and anti-ponding board and also eaves/facia wall junction of the plasterboard.

<b>Hand Driven nails</b>	2.8 mm minimum diameter, flathead or bullet head nail of a minimum length of 40 mm (2.5 times ECOply thickness)
<b>Gun driven nails</b>	2.5 mm minimum diameter gun nail of a minimum length of 40 mm (2.5 times ECOply thickness)
<b>Screws to timber joists</b>	No. 8 x 30 self drilled countersunk wood screw

## ECOply Tile Roof System – continued

The following requirements need to be allowed for when building homes in BAL-FZ.

### Fascia Construction

15mm ECOply fixed with 50mm screws

Boral Firestop® or CSR Frychek® 16mm plasterboard fixed with 6g x 30mm plasterboard screws

Fascia board 190mm x 19mm radiata pine fixed with 75mm nails

### Eaves Construction

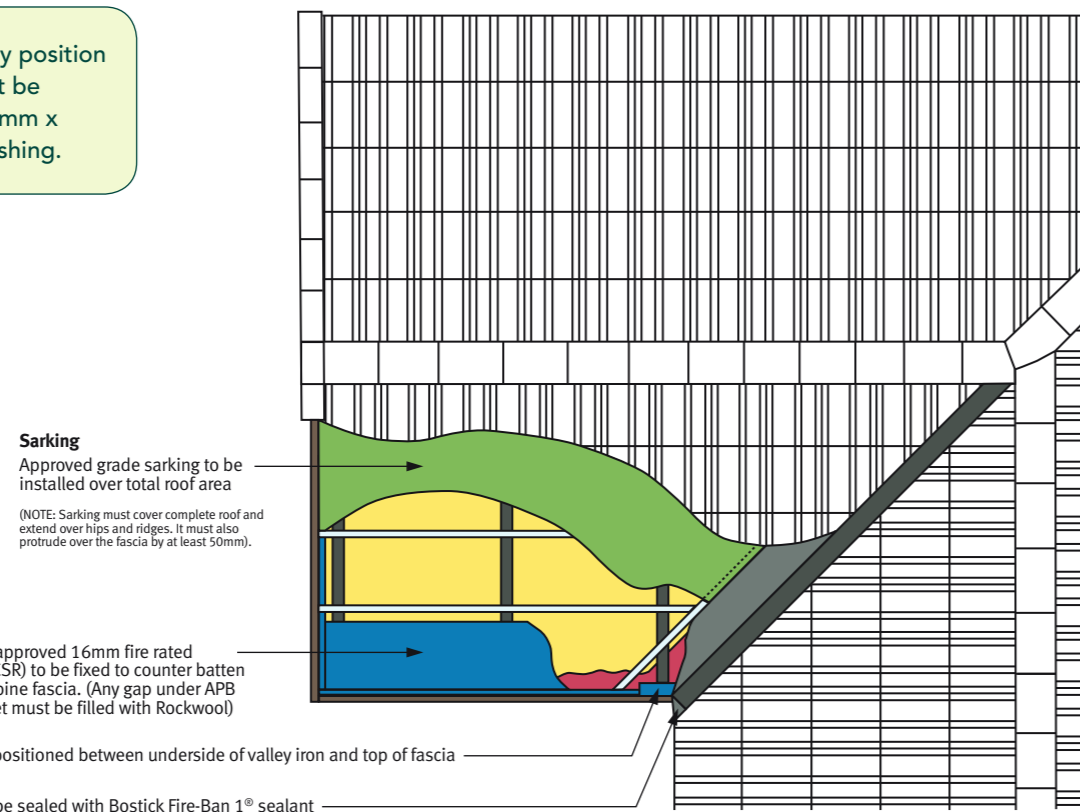
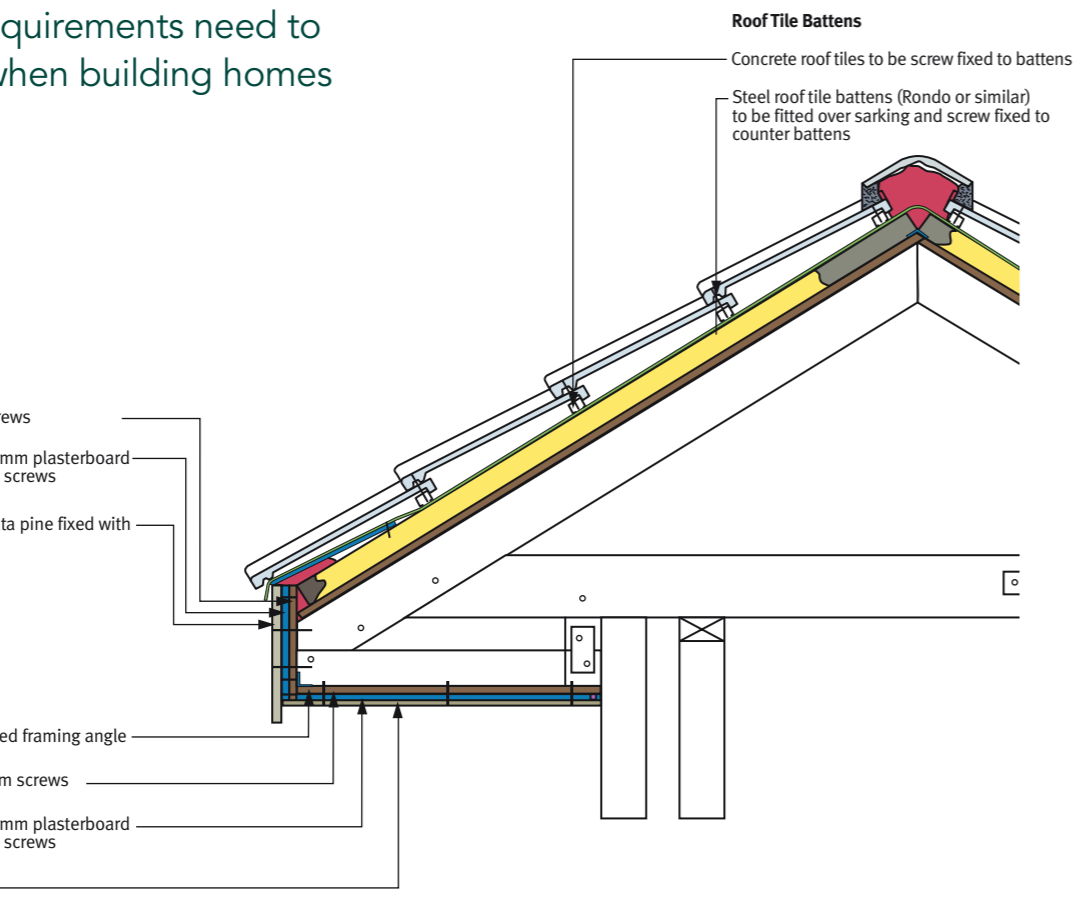
35mm x 35mm x 0.50mm galvanised framing angle

15mm pine ECOply fixed with 50mm screws

Boral Firestop® or CSR Frychek® 16mm plasterboard fixed with 6g x 30mm plasterboard screws

4.5mm fibre cement sheet

At the ridge and valley position the ECOply joint must be covered by a 35 x 35 mm x 0.55 BMT angle or flashing.



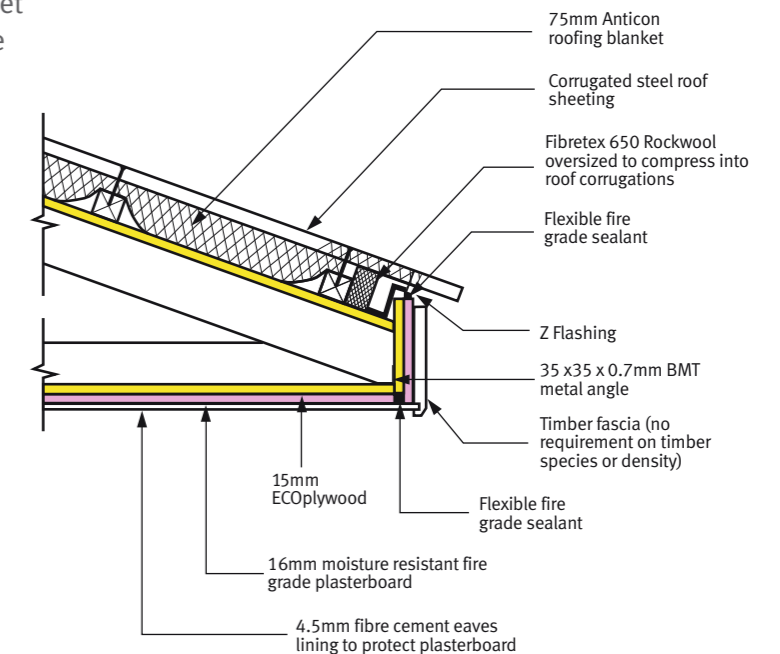
## Eaves, fascia and bargeboards

An integral part of the roof systems described previously is the use of the insulation combined with ECOply or Promatect. Eaves and fascia construction do not benefit from the inclusion of insulation and therefore the system requires an alternative approach.

The solution for fascia and eaves is identical to the ECOply roof systems described above and in essence both the eaves soffit and fascia achieve fire resistance by the combination of a 15 mm ECOply and 16 mm fire grade moisture resistant plasterboard system. The ECOply is the first sheet to be fixed to framing and is fixed in accordance with the methods described for the roof.

Over the ECOply, a 16 mm fire grade moisture resistant plasterboard is fixed to timber framing using either 2.8 mm x 50 mm galvanized clouts or 32 mm screws at 150 mm centres. Joints in the boards, corners or where they abut another element are to be sealed with flexible fire resistant mastic.

The 16 mm fire grade moisture resistant plasterboard is to be covered by a weather protector. For eaves soffit, 4.5 mm fibre cement eaves lining is the minimum requirement and the fascia or barge requires a standard 19 mm timber fascia.



## Compliance information

This guide details construction requirements for building with Carter Holt Harvey's wood products in designated bushfire-prone areas. Unless required by the AS 3959 Standard, this guide does not address other issues such as durability or structural adequacy. Designers and builders should seek information on these matters from other recognized sources or contact CHHs on 1800 808 131 for technical assistance. Other measures for mitigating damage from bushfire include landscaping, maintenance, and site planning.

### Compliance Information

This information guide was developed to comply with requirements in the AS 3959–2009 *Construction of buildings in bushfire-prone areas* standard. This is achieved by the system described above complying with AS 1530.8.2–2007 *test on elements of construction for buildings exposed to simulated bushfire attack – large flame sources*. The two reports are: –

- EWFA 23626A-07 – An assessment of the bushfire attack level (BAL) performance of various sheet metal roof systems if tested in accordance with AS1530.8.2 – 2007, Section 16 (Flame Zone)
- EWFA RIR 23987-03 – An assessment of the bushfire attack level (BAL) performance of various concrete and terracotta tile roof systems if tested in accordance with AS1530.8.2 – 2007, Section 16 (Flame Zone)

Disclaimer: Whilst every effort has been made to ensure that this publication is in accordance with current technology, it is not intended as an exhaustive statement of all relevant data. All comments in this Guide are written with timber framed construction in mind and may exclude other forms of construction. In addition, successful design and construction depends upon numerous factors outside the scope of this publication. The authors and publishers accept no responsibility for errors in, or omissions from this publication, nor for specifications or work done or omitted in reliance on this publication. This document has been produced as a summary of the subject matter covered only and is not intended to be used as a substitute for professional advice. It is recommended that all designers and builders obtain appropriate expert advice specific to their particular circumstances.

## For more information & technical assistance

**For further information on Carter Holt Harvey building solutions call 132 321 or visit [www.chhwoodproducts.com.au](http://www.chhwoodproducts.com.au)**

**For technical assistance call 1800 808 131**



**Notes**

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