



# Party Wall Roof Junction

Design Guide

**CLASS 1 BUILDINGS**



# Bradford™ designSMART TECHNICAL SERVICES

- Expert insulation advice
- Project and value engineering support
- Industry-leading building science research

## A wealth of insulation experience and knowledge to build on

The DesignSmart team has a wealth of construction experience and utilise industry-leading building science research for acoustic, thermal and fire insulation products.

As the experts in building insulation they can assist with project specific support, value engineering challenges, specification documentation, system design detailing, product installation and certification.

The team is complimented by a suite of online digital resources such as project case studies, calculators, design guides, technical downloads, specifications, building science insights and CPD presentations.

Bradford DesignSmart is backed by CSR, which is the name behind some of the market's most trusted and recognised building material brands such as Bradford™, Martini™, Gyprock™, PGH™ and Viridian™ to name a few.

With a passion to provide a solution-based technical service that's second to none, the Bradford DesignSmart team are available to support, add value and provide expert insulation advice.

**Get in contact with the DesignSmart team for your project by calling 1800 354 044 or meet the DesignSmart technical team on [Linked in](#).**

For more information visit [BradfordDesignSmart.com.au](http://BradfordDesignSmart.com.au)





# 1.0 Introduction

Exova Warringtonfire was commissioned to review Bradford Party Wall Sealer applications for wall perimeter and cavity junctions in Class 1 Buildings based on the following requirements:

- Building Code of Australia Volume 2
  - Clause 3.7.1.8 Separating Walls

Exova Warringtonfire is a world-leader in fire safety technology with extensive capabilities including reaction to fire and fire resistance testing, fire engineering, fire consultancy, fire risk assessment, and mandatory fire certification. Bradford Fireseal Party Wall products were tested in Exova Warringtonfire's NATA registered laboratory in Dandenong Victoria.

Representative examples of the applications that have been considered are shown in this guide. The report states:

'The applications of Bradford Fireseal Party Wall products described in this guide provide sufficient information for the authority having jurisdiction to confirm that they meet the relevant Deemed to Satisfy requirements of Clause 3.7.1.8 of Volume 2 of the Building Code of Australia.'

This guide provides general advice on the application of the Building Code of Australia provisions relating to separating walls with respect to specific Bradford Fireseal Party Wall products.

For Party Wall applications not covered in this guide, contact your Bradford representative or call 1800 354 044.

Further information such as sample specifications and installation information may be downloaded from our website:

[www.bradfordinsulation.com.au/designsmart](http://www.bradfordinsulation.com.au/designsmart)

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## 2.0 Reducing fire hazards

There are principally 3 key areas for reducing fire hazards:

- Controlling fire within a compartment
- Controlling the spread of fire between compartments through openings in external walls
- Providing early warning to building occupants

The incorporation of the correct insulation products in the design of passive fire protection systems can save lives and also complement the installation of active fire protection equipment (i.e. sprinkler systems and fire alarms). Passive fire protection is a term which describes materials that are an integral part of the construction of the building that ensure it offers adequate fire performance, and that when assembled into compartments, form fire rated barriers to provide control of fire within the compartments.

## 3.0 Fire resistance levels

The inclusion of fire rated building products such as insulation are covered by the Building Code of Australia (BCA).

The BCA specifies required levels of fire resistance for walls that separate one dwelling from another. These required levels are expressed as the Fire Resistance Level (FRL) of the wall in minutes. The fire rated walls must provide the tenants with sufficient time to escape the building safely by maintaining sufficient structural adequacy, integrity and insulation.

- **Structural** – Failure occurs when the specimen collapses under load.
- **Integrity** – Failure occurs when the specimen develops cracks or openings through which flames or hot gases can pass.
- **Insulation** – Insulation indicates in minutes the period after which failure might occur in the wall systems under test, when either:
  - The average temperature of the unexposed surface of the test specimen increases by more than 140°C above the initial temperature OR
  - The temperature at any point on the unexposed side, increases by more than 180°C above the initial temperature.

## 4.0 Fireseal Party Wall insulation

Bradford Fireseal Party Wall insulation products are all made from biosoluble Rockwool; a molten mixture of natural rock and recycled blast furnace waste products, bonded with thermosetting resin. The products have remarkable resistance to shrinkage at temperatures encountered in fire conditions.

### PARTY WALL BENEFITS

- Highly durable and cost effective fire insulation
- Excellent resistance to shrinkage at high temperatures encountered in fire conditions
- Suitable for all standard party wall applications – easy-to-cut for constricted applications
- Performance is not adversely affected by contact with water
- Non-combustible (when tested to AS1530.1)
- Biosoluble and safe to use

The Fireseal Party Wall Roof products have been assessed by Exova Warrington Fire in accordance with the general principles of AS1530.4. They are suitable for the stated FRL when designed in accordance with the building and structural considerations above, and installed in accordance with the details in this brochure.

#### 4.1 Fireseal Party Wall Sealer – for use above and within walls



Bradford Fireseal Party Wall Sealer is a 300mm or 360mm wide blanket used to provide fire protection in party walls or separating walls between adjoining occupancies. Options are available in 50mm and 75mm thicknesses.

Bradford Party Wall Sealer 300mm wide is suitable for most applications - 360mm wide option is available for applications with wider concrete blockwork or precast wall, such as 140mm wide blockwork.

THICKNESS OF FIRESEAL <sup>1</sup> (mm)	COMPRESSED GAP OPENING (mm)
50	45
100 <sup>2</sup>	90
150 <sup>2</sup>	135

#### 4.2 Fireseal Party Wall Batt – for vertical joints applications only



Bradford Fireseal Party Wall Batt is designed for installation in Party Wall vertical joints applications only, it is not appropriate to be used to seal areas at the top of either a masonry or lightweight wall system. Refer to Figures 6.2.1 and 6.2.3.

Fireseal Party Wall Batts may also be stacked to fill cavities up to 255mm in height. Multiple layers must be stacked neatly and should be installed as one unit.

THICKNESS OF FIRESEAL <sup>1</sup> (mm)	COMPRESSED GAP OPENING (mm)
100	90
200 <sup>2</sup>	180
300 <sup>2</sup>	270

#### 4.3 Fireseal Party Wall Batten Fillers



Bradford Fireseal Party Wall Batten Fillers are designed to fill the profile of 40mm metal battens that extend across the separating wall. Supplied in 100mm lengths this can be easily fitted inside the profile negating the need to shape or profile the material on-site.

THICKNESS OF FIRESEAL (mm)
40

<sup>1</sup> Fireseal Party Wall products' original thickness must be compressed by a min. of 10% and Bradford does not recommend more than 3 layers to be stacked without adequate support.

<sup>2</sup> Multiple pieces used to form height.

# 5.0 Installation details

For all Fireseal Party Wall products:

- The Party Wall products' thickness must be compressed by at least 10% when coming to rest in the cavity opening height to ensure adequate sealing, i.e. 50mm thick for a 45mm tall opening.

For Fireseal Party Wall Sealer:

- The Party Wall Sealer should be cut to fit tightly into the prepared opening.
- There must be no penetrations through the Party Wall Sealer, except those items allowed by the BCA.
- Where Anticon has been installed underneath a metal roof, the blanket must be peeled back so that the Fireseal Party Wall Sealer can be installed over the foil only.
- All roof sealer applications should be installed as a single width of product across the width of the wall.

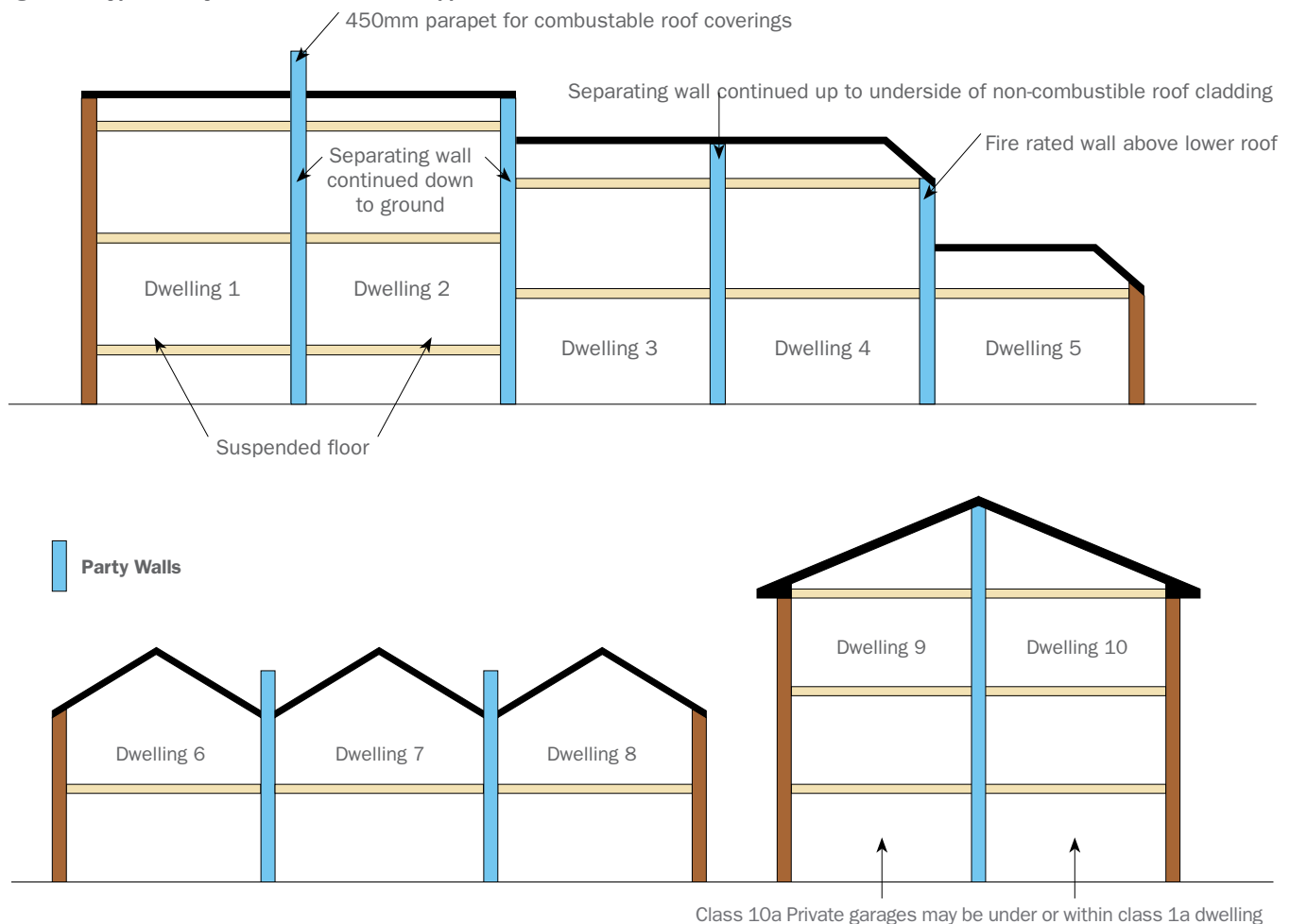
For Fireseal Party Wall Batts:

- Batt lengths are to be cut so to provide a tight fit in the construction gaps opening width. They must be fitted tightly and accurately, following the profile of the gap.
- When a batt is required to be extended in length, a Vee profile cut shall be made to both ends of each batt so to provide a butt joint.
- Any vertical joints in a stacked batt installation should be staggered.

For Fireseal Party Wall Batten Fillers:

- Where metal battens are used, Fireseal Party Wall Batten Fillers are to be used to fit snugly inside the metal batten profile; to suit the width of the wall.

**Figure 5.1: Typical Party Wall and Common Wall applications**



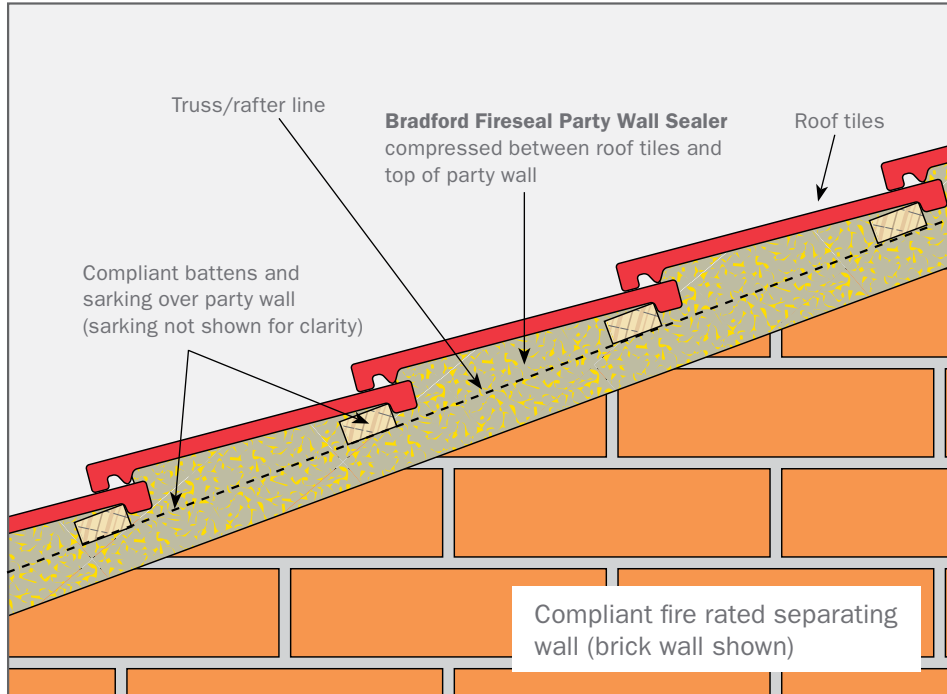
National Construction Code (NCC) 2016 Building Code of Australia (BCA) Volume 2, Clause 3.7.1.8 Separating Walls, defines a Separating wall (also known as a party wall) as a wall that is common to adjoining Class 1 buildings.

Separating or Party walls of Class 1a dwelling located above a Class 10a private garage, which is not belonging to the Class 1a dwelling, would still be defined as a Class 1 Party wall and is covered in this guide.

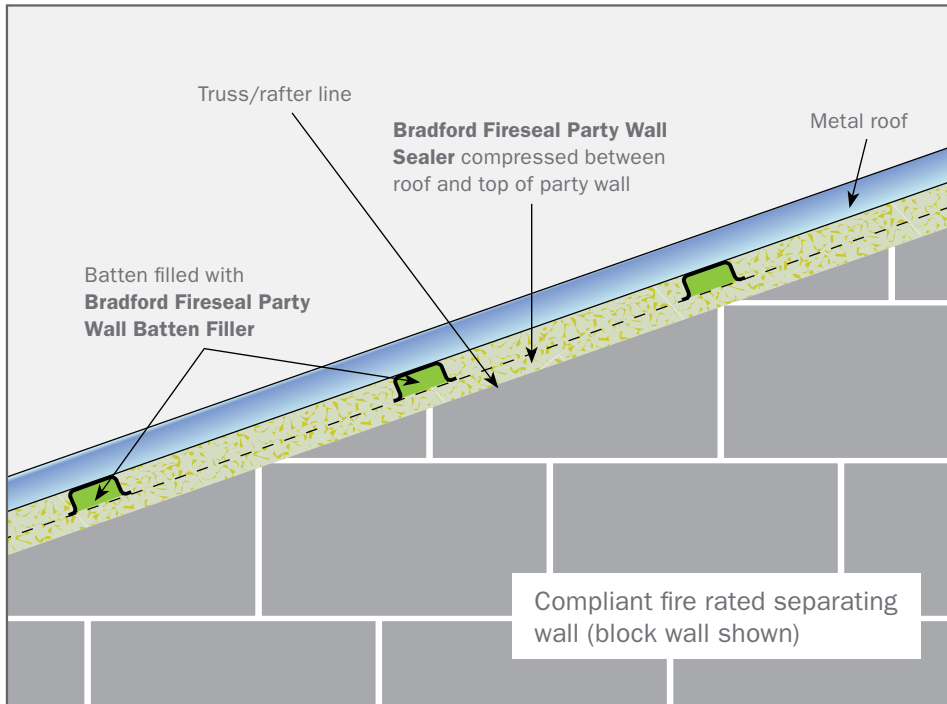
# 6.0 Typical Applications

## 6.1 Typical Party Wall and Roof Applications – Roof Details

**Figure 6.1.1: Party Wall – Tile roof**  
Party Wall elevation – roof junction with tile roof



**Figure 6.1.2: Party Wall – Metal roof**  
Party Wall elevation – roof junction with metal roof



## 6.1 Typical Party Wall and Roof Applications – Roof Details CONTINUED

Figure 6.1.3a: Party Wall/Roof Junction (Tile Roof/Gyprock Party Wall)

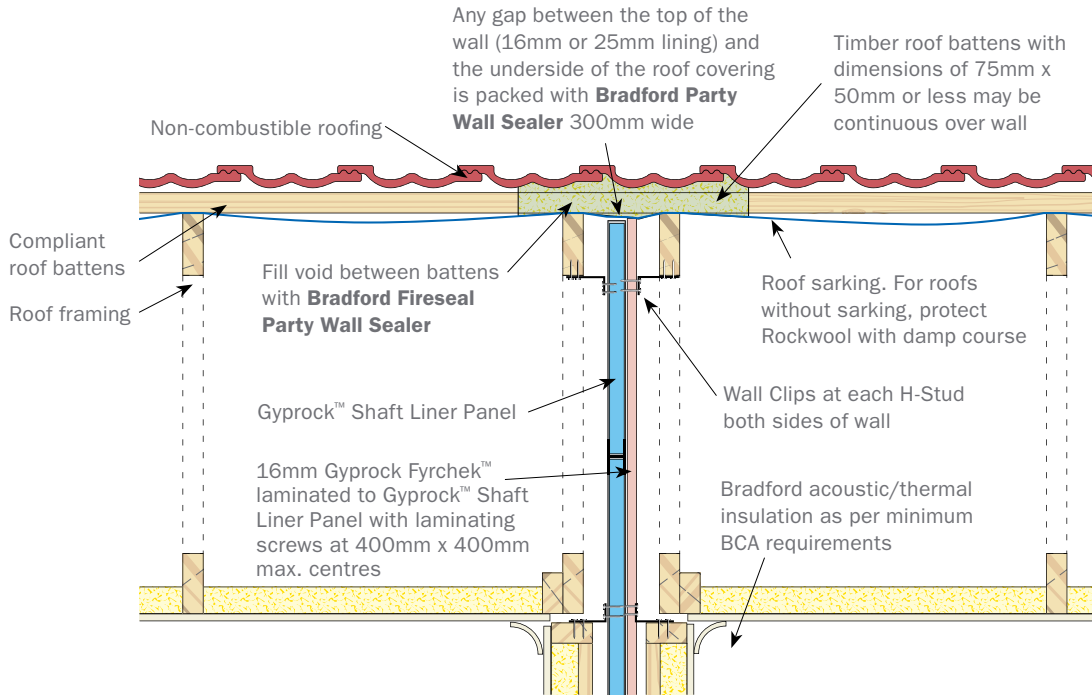
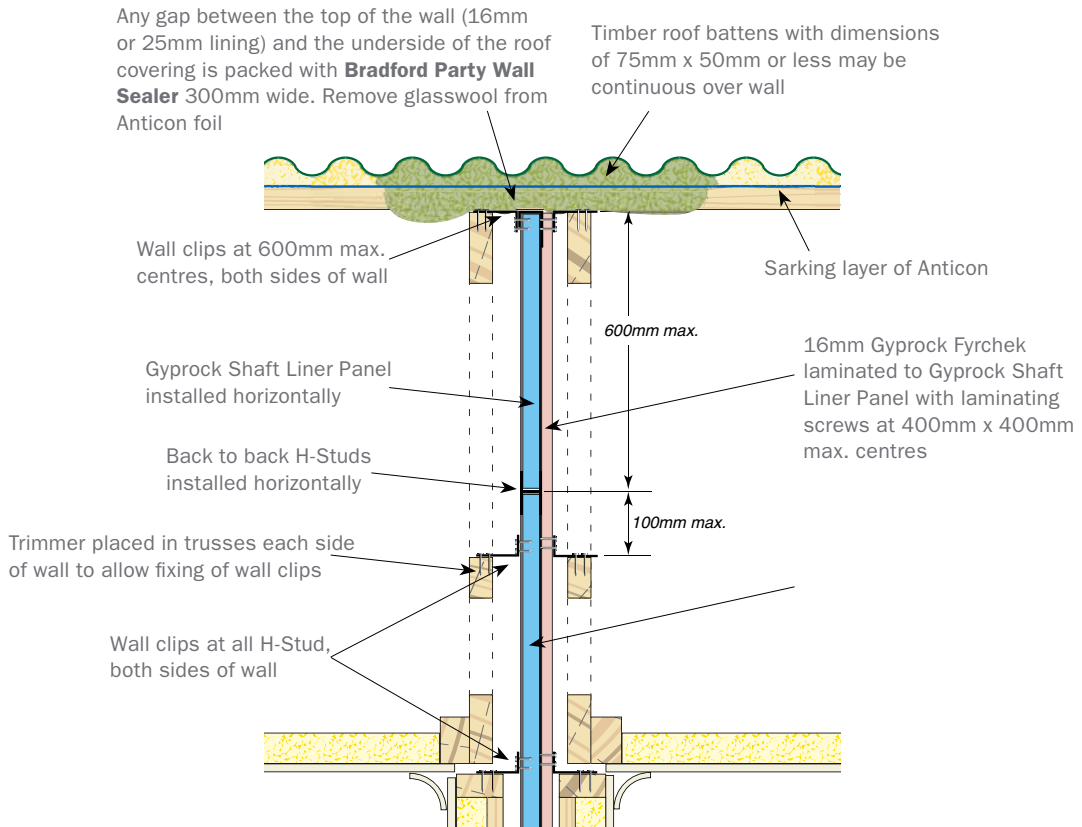
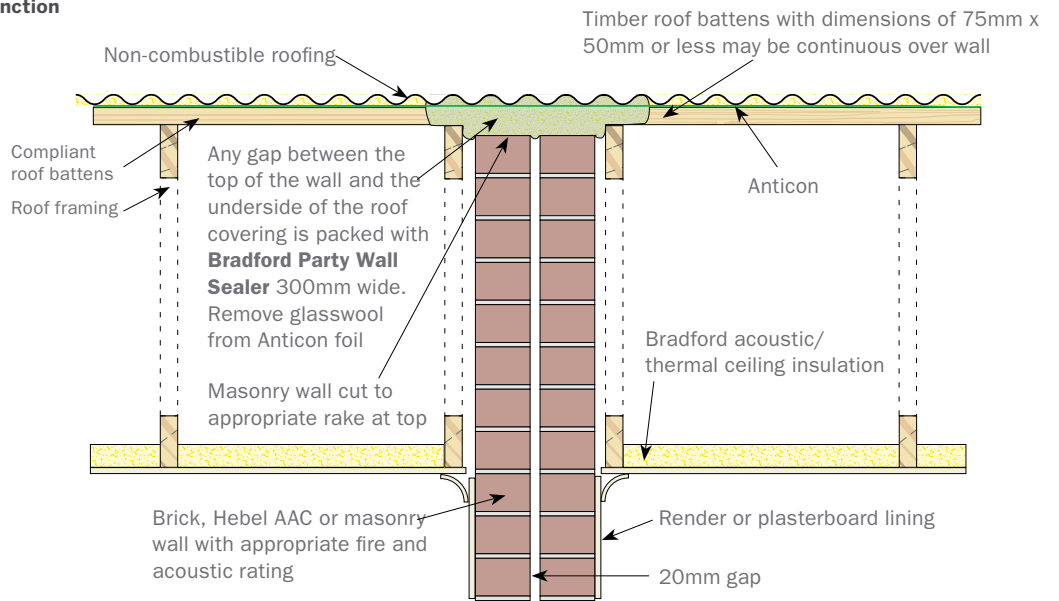


Figure 6.1.3b: Party Wall/Roof Junction (Metal Roof/Gyprock Party Wall)

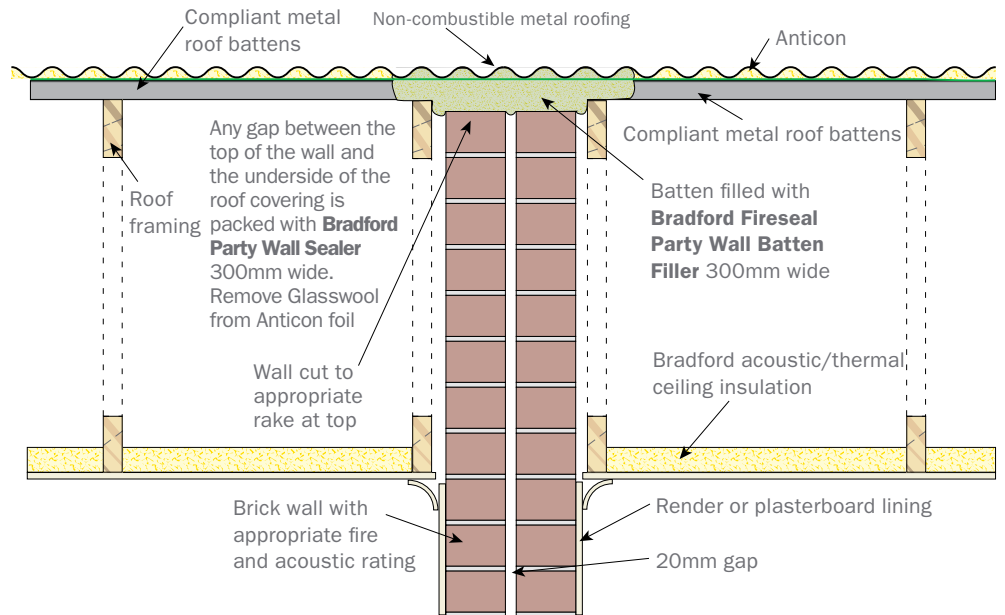




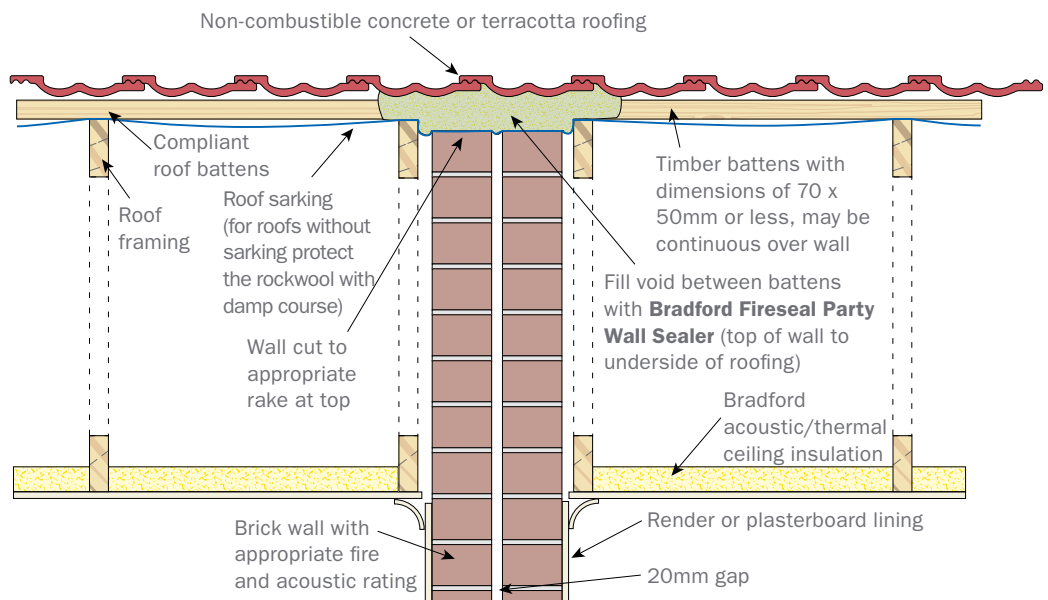
**Figure 6.1.4a: Party Wall/Roof Junction (Metal Roof/Double Brick Wall)**



**Figure 6.1.4b: Party Wall/Roof Junction (Metal Roof/Metal Battens/Double Brick Wall)**

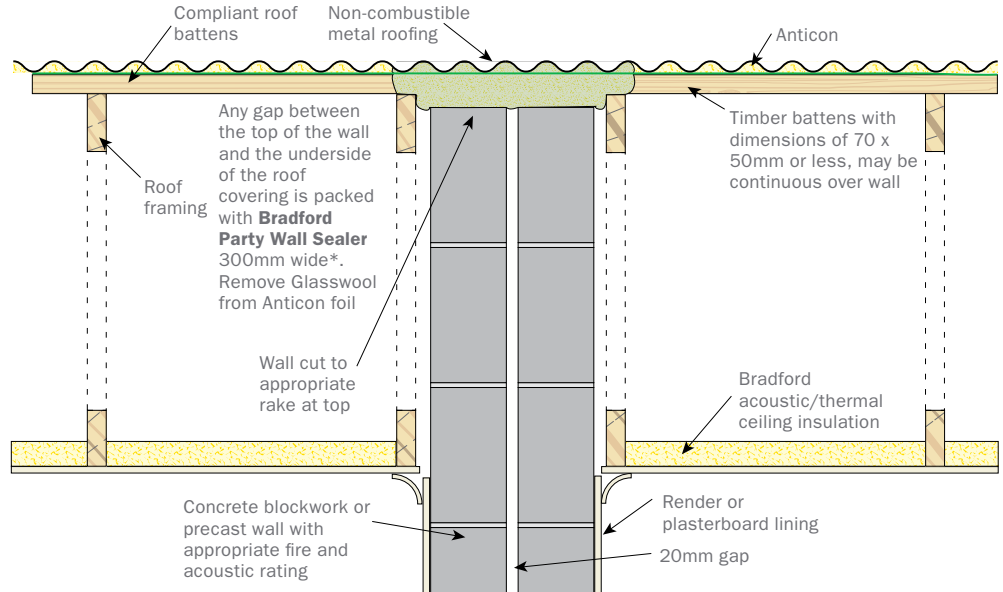


**Figure 6.1.4c: Party Wall/Roof Junction (Tile Roof/Timber Battens/Double Brick Wall)**



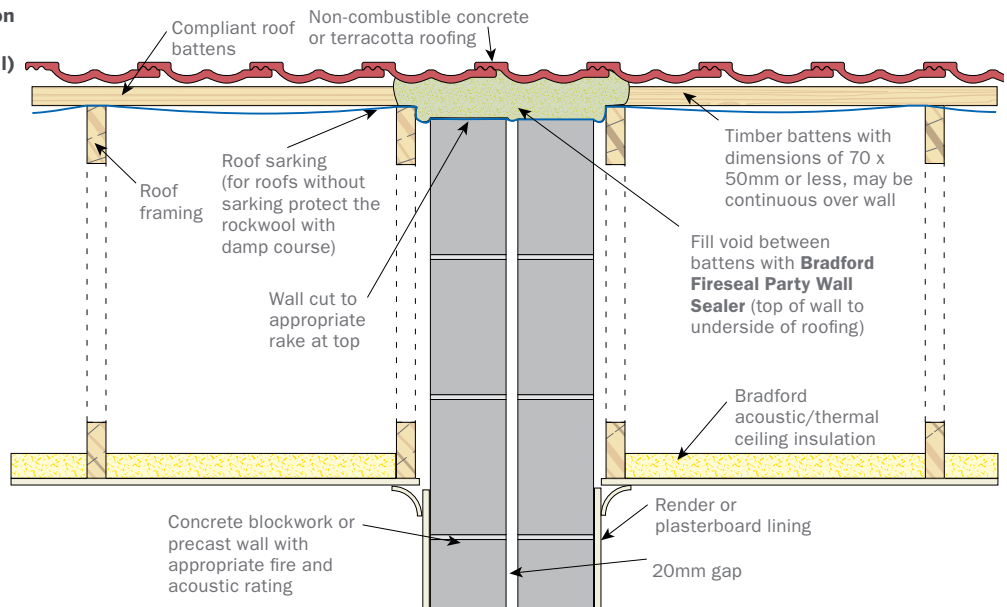
## 6.1 Typical Party Wall and Roof Applications – Roof Details CONTINUED

**Figure 6.1.5a: Party Wall/Roof Junction (Metal Roof/Timber Battens/Double Concrete Block/Precast Concrete Wall)**

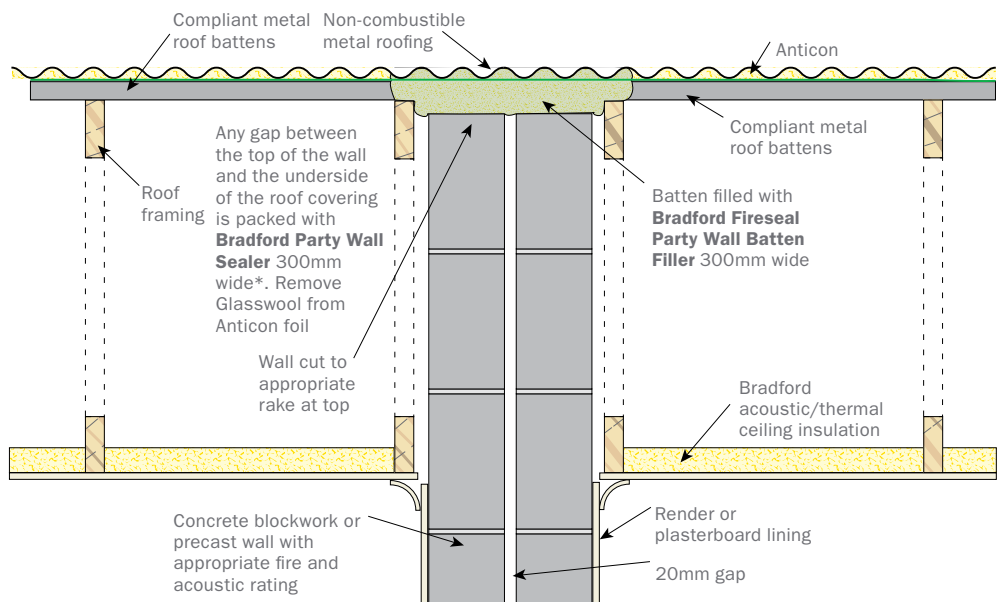


\* For 140mm wide blockwork use 360mm wide Bradford Party Wall Sealer

**Figure 6.1.5b: Party Wall/Roof Junction (Tile Roof/Timber Battens/Double Concrete Block/Precast Concrete Wall)**

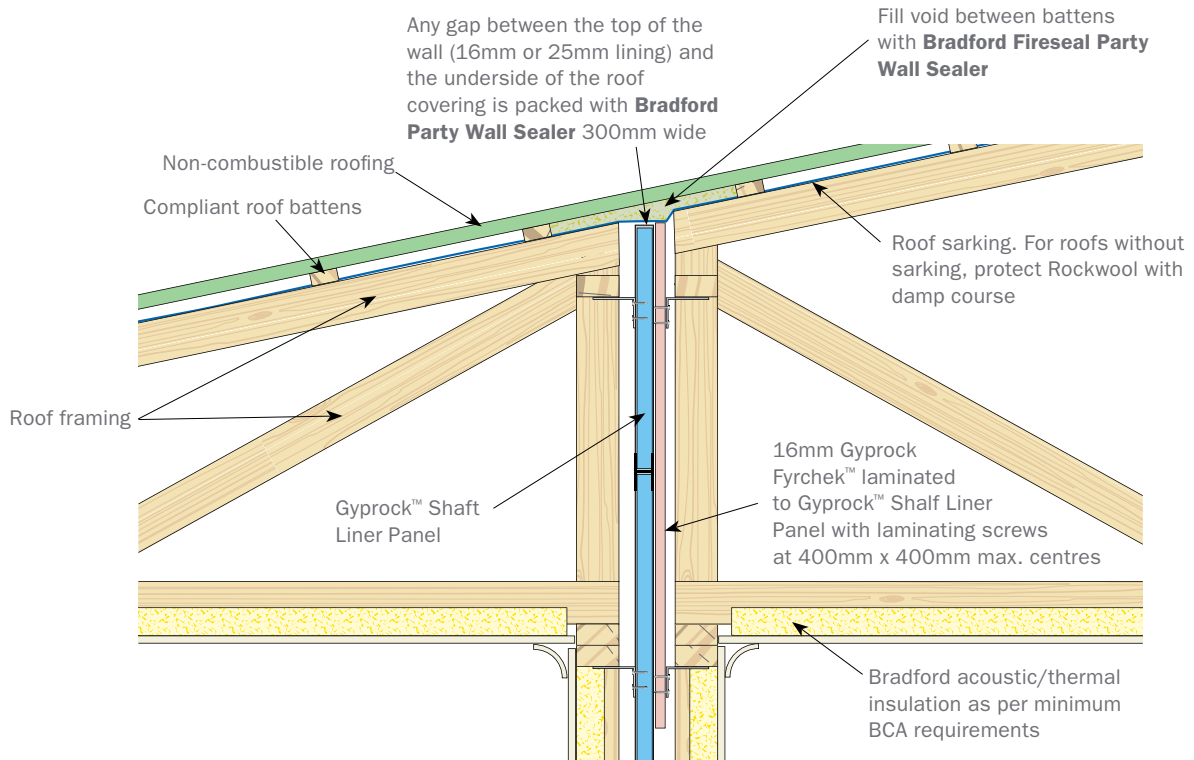


**Figure 6.1.5c: Party Wall/Roof Junction (Metal Roof/Metal Battens/Double Concrete Block/Precast Concrete Wall)**

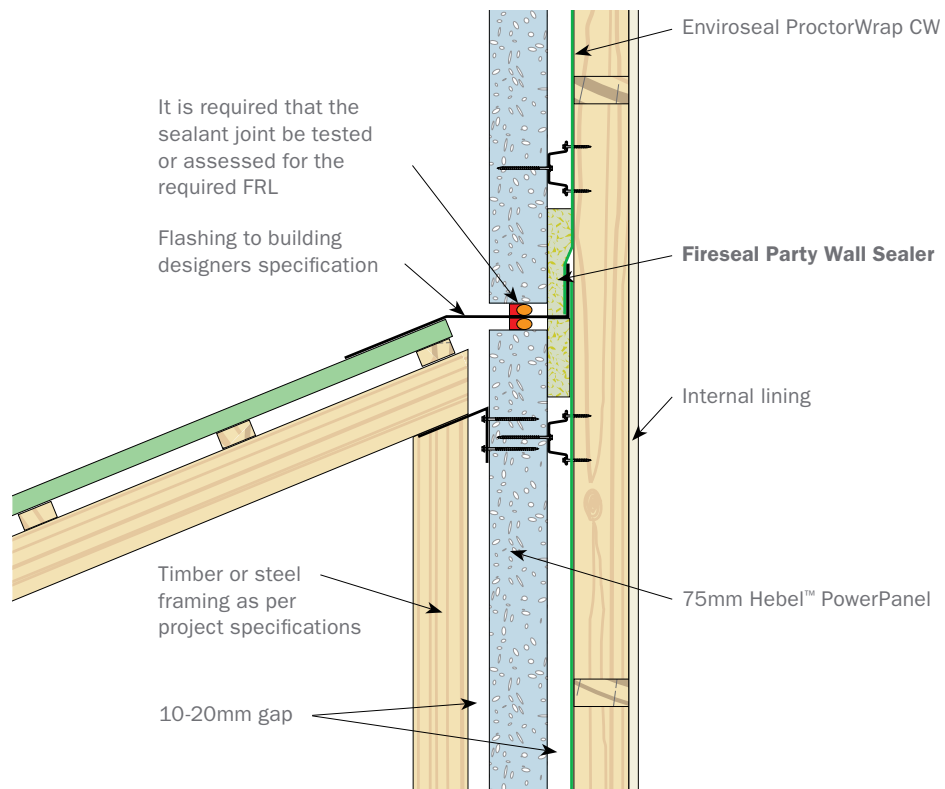


\* For 140mm wide blockwork use 360mm wide Bradford Party Wall Sealer

**Figure 6.1.6: Party Wall/Roof Junction (Metal Roof/Gyprock Party Wall)**



**Figure 6.1.7: Stepped roof detail – Hebel**  
Party Wall elevation – roof junction with tile roof



## 6.1 Typical Party Wall and Roof Applications – Roof Details CONTINUED

Figure 6.1.8: Typical box gutter detail (Gyprock Party Wall)

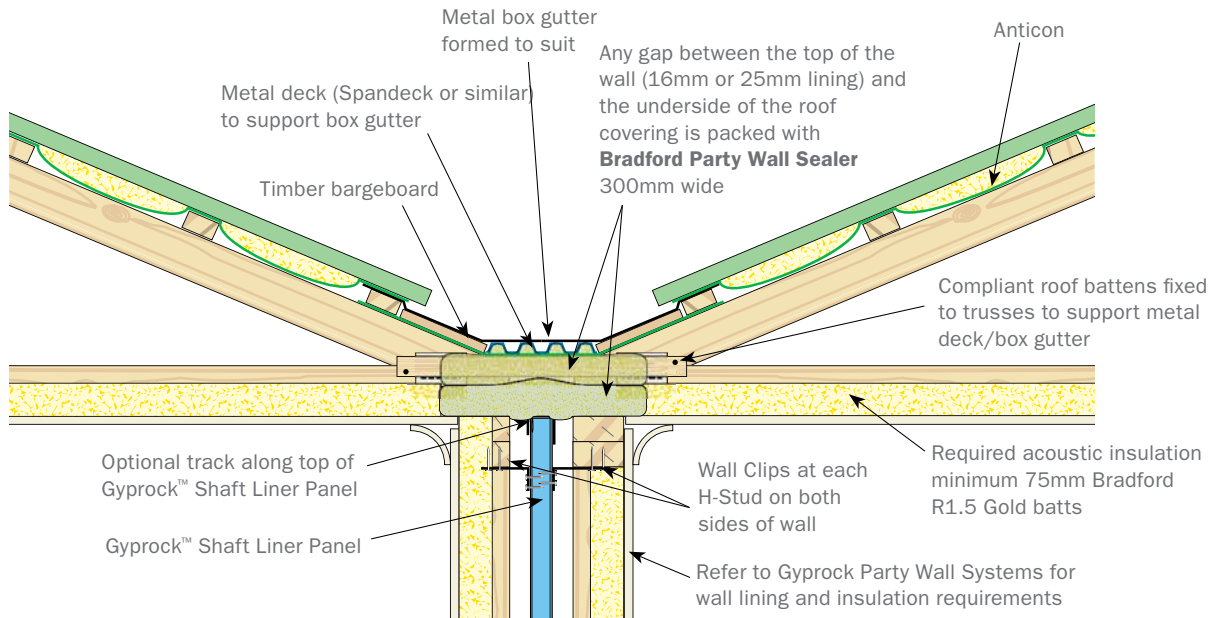


Figure 6.1.9: Typical ceiling/roof parapet (Gyprock Party Wall)

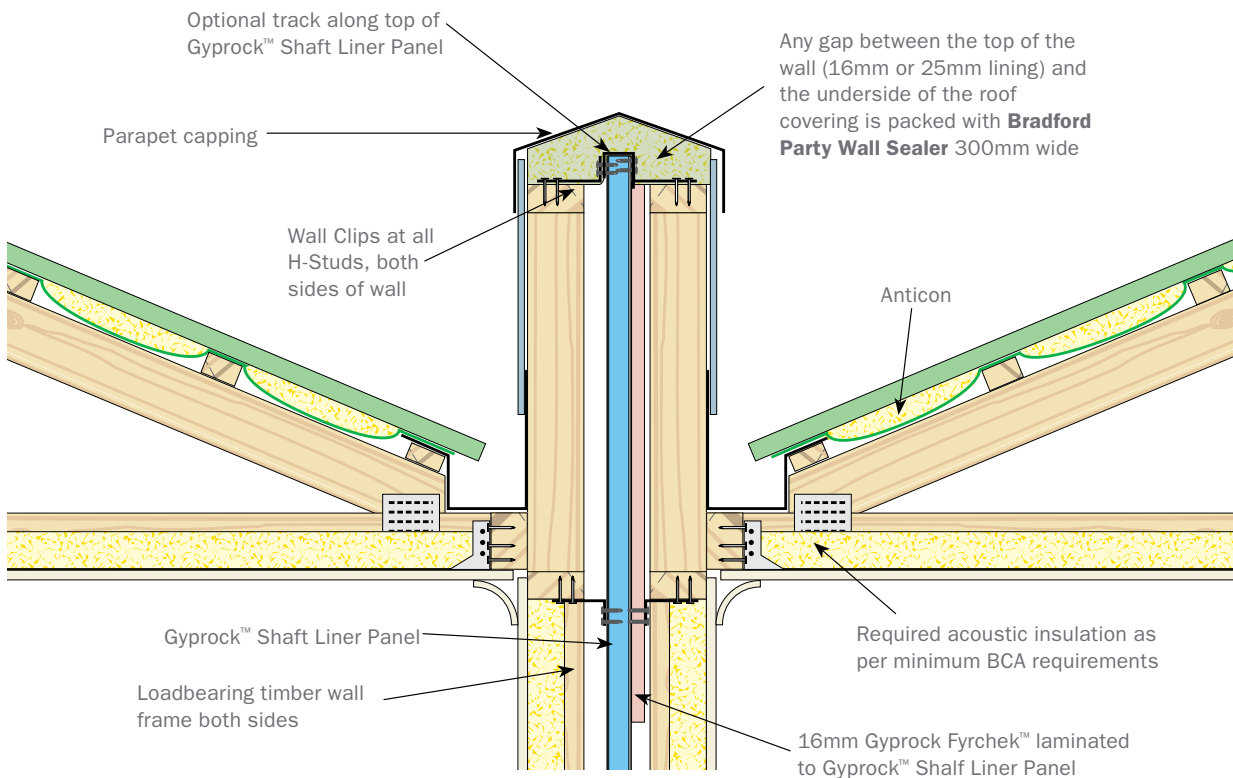




Figure 6.1.10: Typical eaves detail – Section A-A (Gyprock Party Wall)

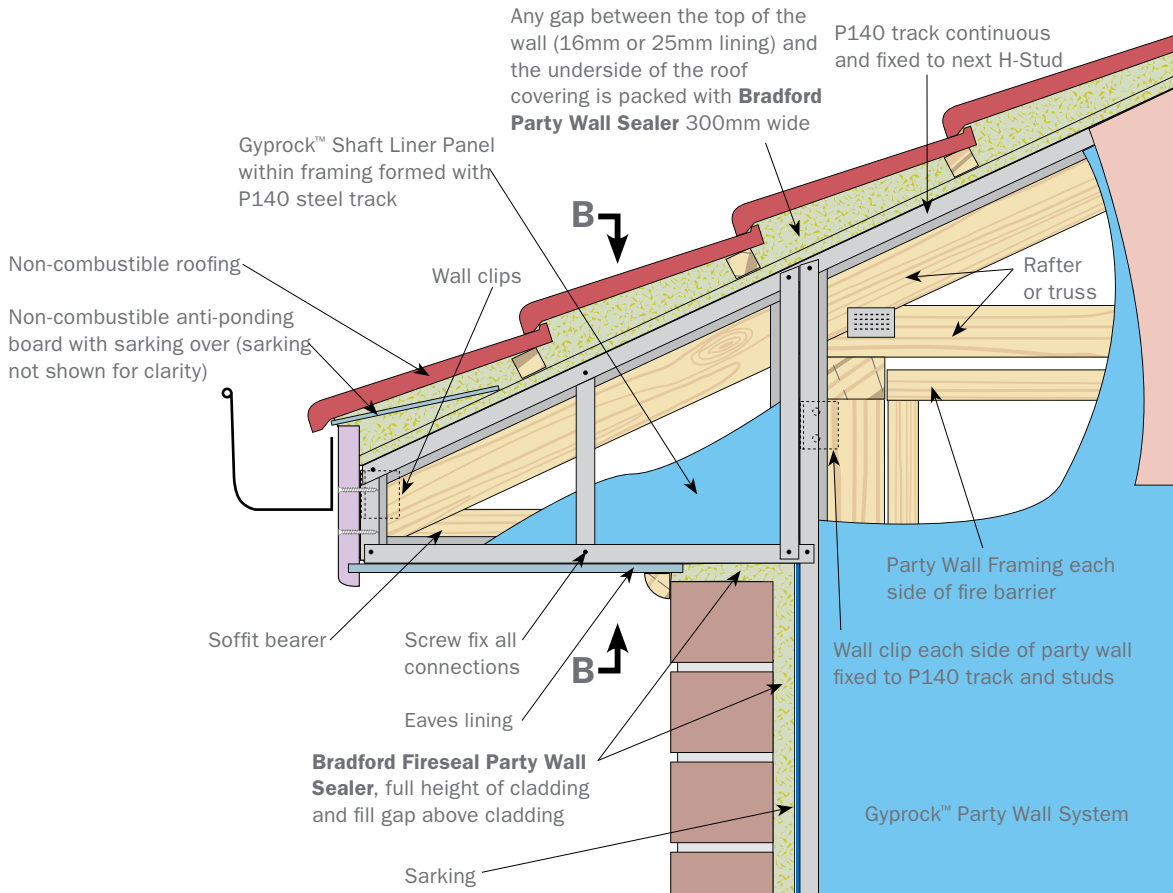
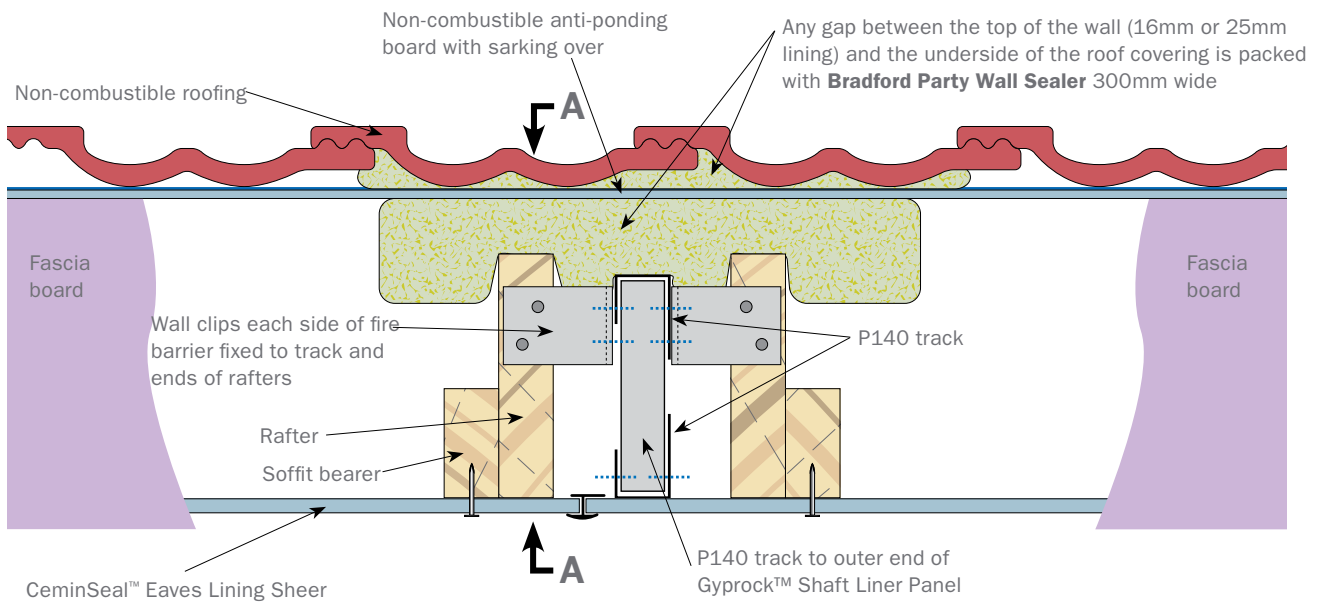


Figure 6.1.11: Typical eaves detail – Section B-B (Gyprock Party Wall)



## 6.2 Typical Party Wall and External Wall/Wall Corner Applications - Vertical Joint Details

Figure 6.2.1: Isometric view of Party Wall – External wall junction

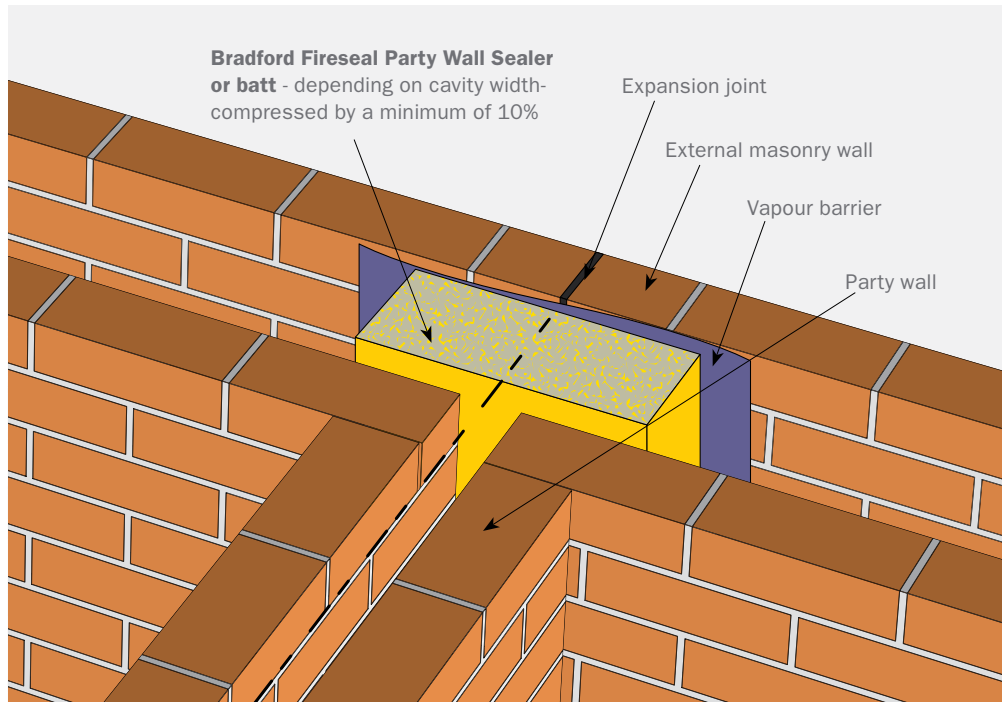


Figure 6.2.2: Detail at wall corner – Hebel

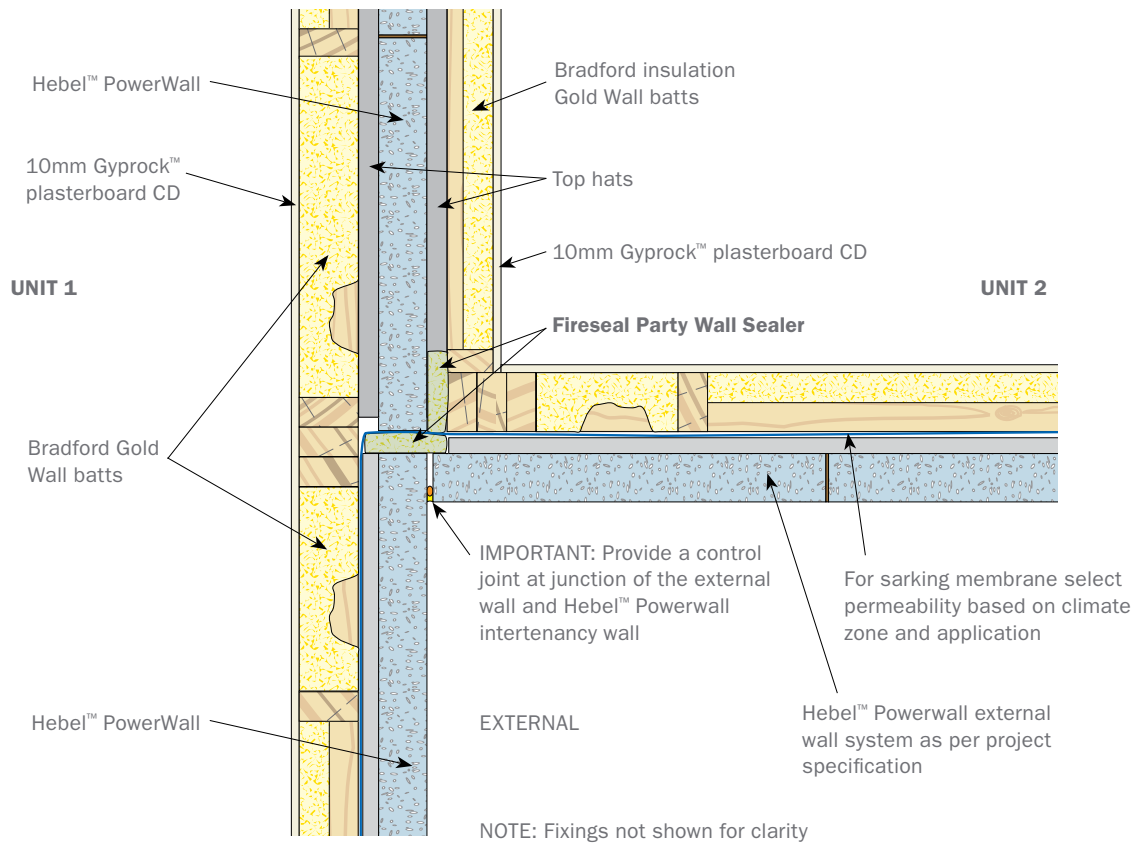
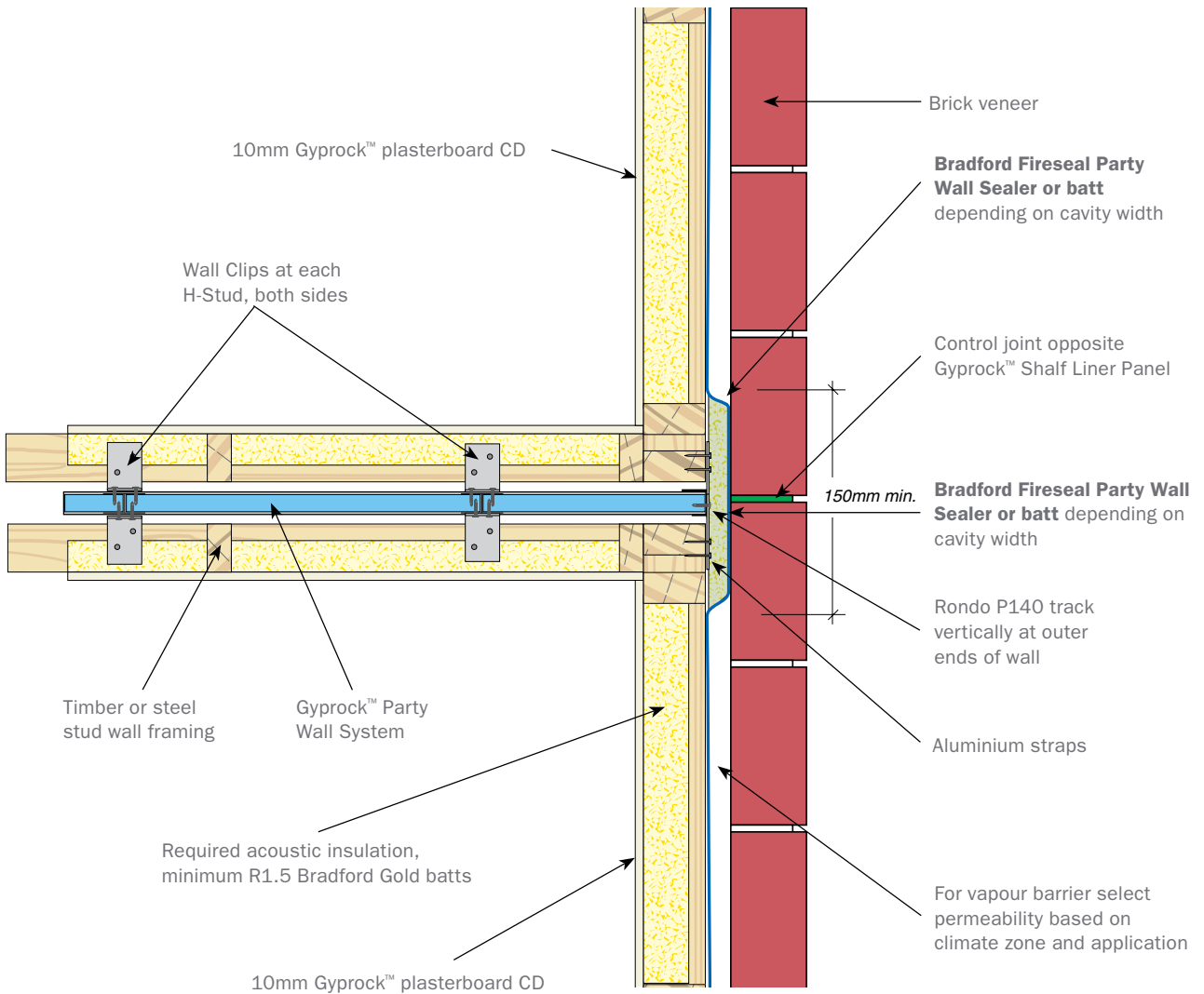


Figure 6.2.3: Detail at external brick veneer wall



## 7.0 Performance you can trust

Bradford Fireseal Party Wall products are manufactured under ISO 9001 Quality systems and are independently tested to comply to with AS1530.4.

In addition, Bradford Fireseal Party Wall products were tested in Exova Warringtonfire's NATA registered laboratory in Dandenong Victoria. Exova Warringtonfire is a world-leader in fire safety technology and was also commissioned to review Bradford Party Wall Sealer applications for wall perimeter and cavity junctions in Class 1 Buildings based on the following requirements:

- Building Code of Australia Volume 2
  - Clause 3.7.1.8 Separating Walls

Established over 80 years ago, CSR Bradford is Australia's most experienced insulation company. This experience is your guarantee of quality and performance, all backed by CSR.

# 8.0 Product details

Bradford Fireseal Party Wall range is designed for installation between the top of a fire resistance level (FRL) party wall and the roofing membrane. Its purpose is to meet the requirements, for fire resistance between adjacent tenancies, as set out in building codes and ordinances.

FIRESEAL PARTY WALL SEALER				
THICKNESS (mm)	STANDARD SIZE (mm x mm)	PIECES PER PACK	LINEAR METRE PER PACK	PRODUCT CODE
50	4000 x 300	2	8	123443
75	4000 x 300	2	8	123444
50	4000 x 360	2	8	132796
75	4000 x 360	2	8	132797

Note: For installation Fireseal Party Wall Sealer must be compressed by 10%.

FIRESEAL PARTY WALL BATTS				
THICKNESS (mm)	STANDARD SIZE (mm x mm)	PIECES PER PACK	LINEAR METRE PER PACK	PRODUCT CODE
100	1200 x 168	5	6	119161

Note: For installation Fireseal Party wall batts must be compressed by 10%. Fireseal Party Wall Batt's are not appropriate to seal areas at the top of a masonry or lightweight wall system.

FIRESEAL PARTY WALL BATTEN FILLERS				
THICKNESS (mm)	LENGTH (mm)	PIECES PER PACK	LINEAR METRE PER PACK	PRODUCT CODE
40	100	35	3.5	125418

For more information call **1300 850 305** or visit **bradfordinsulation.com.au**



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