



Party Wall

Design Guide

CLASS 1 BUILDINGS



CSR

1.0 INTRODUCTION

The stability of a building in a fire depends upon the performance of all the component parts of the structure so that it should withstand a fire for a reasonable time, without collapse. Fire walls are designed to reduce fire hazards by separating one dwelling from another to provide the building occupants with the maximum time to escape safely by maintaining sufficient structural adequacy, integrity and insulation. This guide should be read in conjunction with other manufacturer(s) and building code compliance instructions.

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

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's 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
- Remarkable 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

4.0 FIRESEAL PARTY WALL INSULATION CONTINUED

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 thickness.

THICKNESS OF FIRESEAL* (mm)	COMPRESSED GAP OPENING (mm)
50	45
100**	90
150**	135

4.2 Fireseal Party Wall Batten Fillers



Bradford Fireseal Party Wall Batten Fillers are made 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

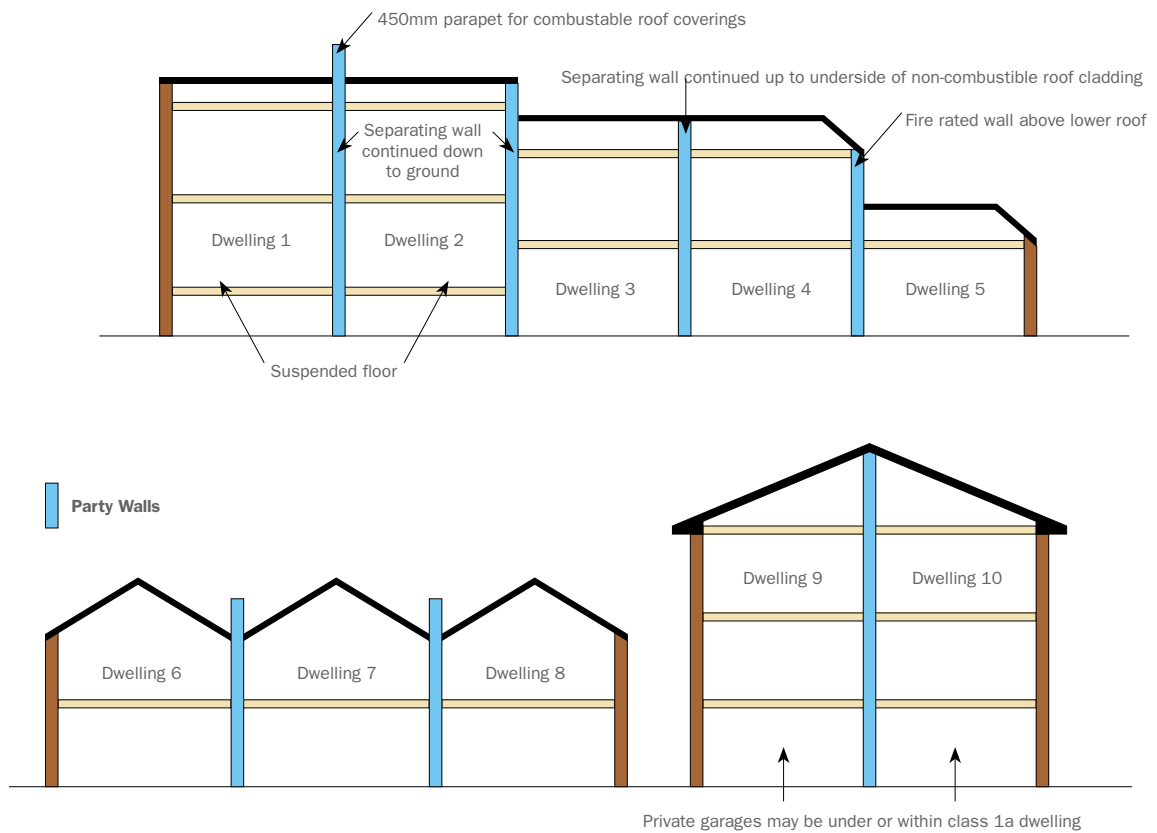
*Fireseal Party Wall products' original thickness must be compressed by a min. of 10% and Bradford does not recommend more than 3 layers to be stacked without adequate support. **Multiple pieces used to form height.

5.0 INSTALLATION DETAILS

- The Party Wall Sealer should be cut to fit tightly into the prepared opening.
- 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.
- There must be no penetrations through the Party Wall Sealer, except those items allowed by the BCA.
- Any vertical joints in a stacked batt installation should be staggered.
- 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.
- 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.
- CSR Bradford also manufacture a Party Wall Batt but this is not appropriate to seal areas at the top of either a masonry or lightweight wall system.

5.0 INSTALLATION DETAILS CONTINUED

Figure 5.1: Typical Party Wall and Common Wall applications



5.2 Typical Applications – Roof Details

Figure 5.2.1: Party Wall – Tile roof

Party Wall elevation – roof junction with tile roof

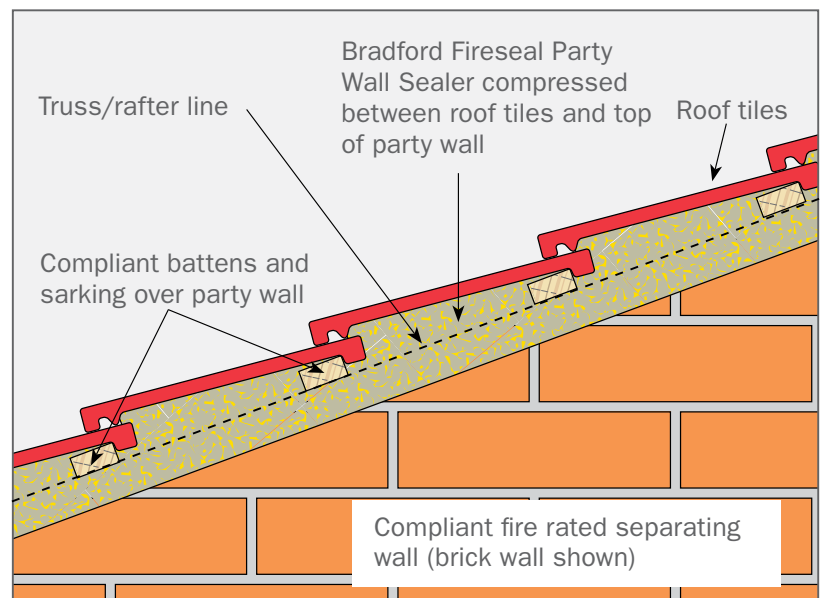


Figure 5.2.2:
Party Wall – Metal roof

Party Wall elevation – roof junction with metal roof

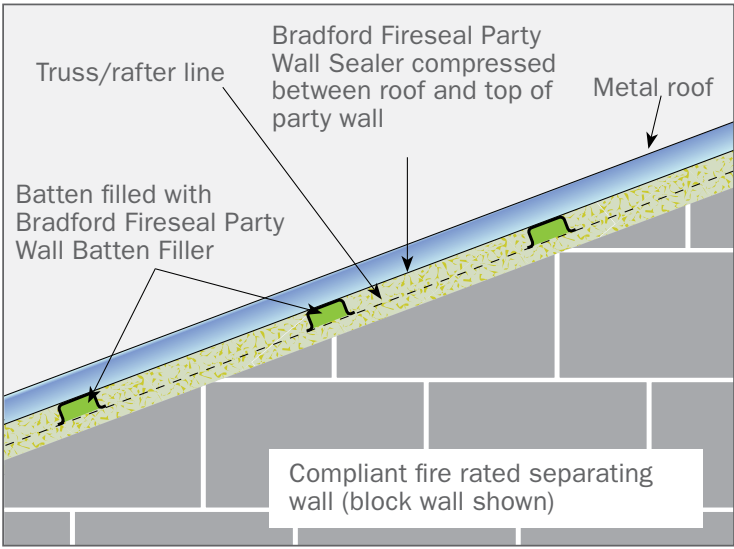


Figure 5.2.3a:
Party Wall/Roof Junction
(Tile Roof/Gyprock Party Wall)

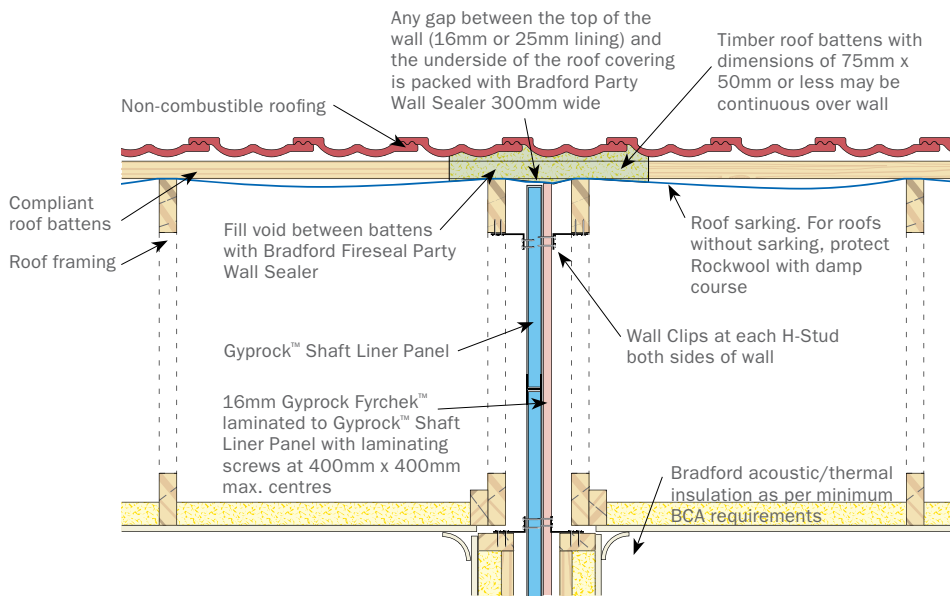


Figure 5.2.3b:
Party Wall/Roof Junction
(Metal Roof/Gyprock Party Wall)

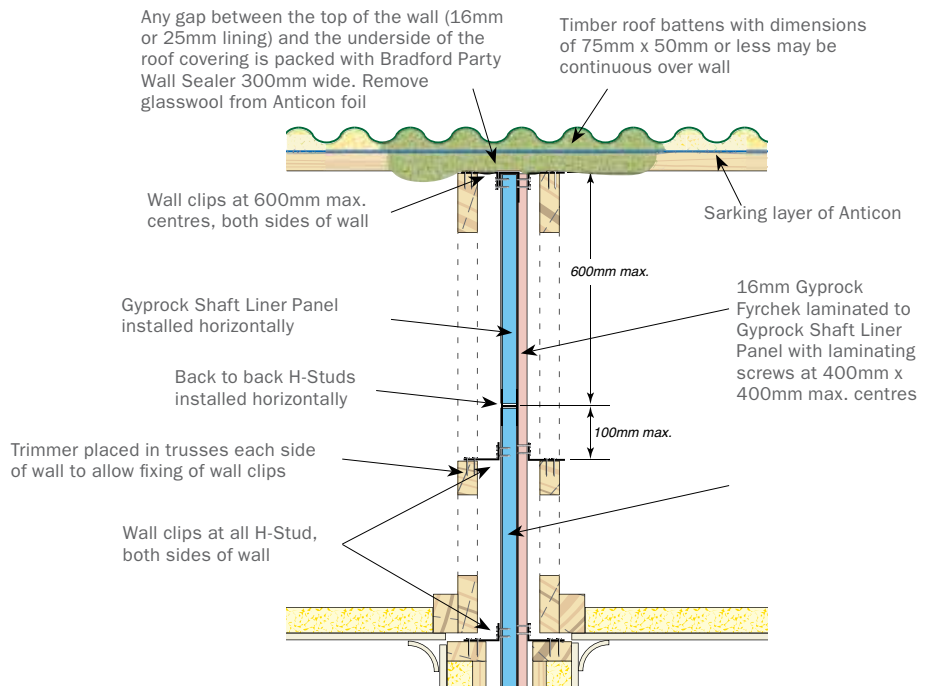


Figure 5.2.4a:
Party Wall/Roof Junction
(Metal Roof/Double
Brick Wall)

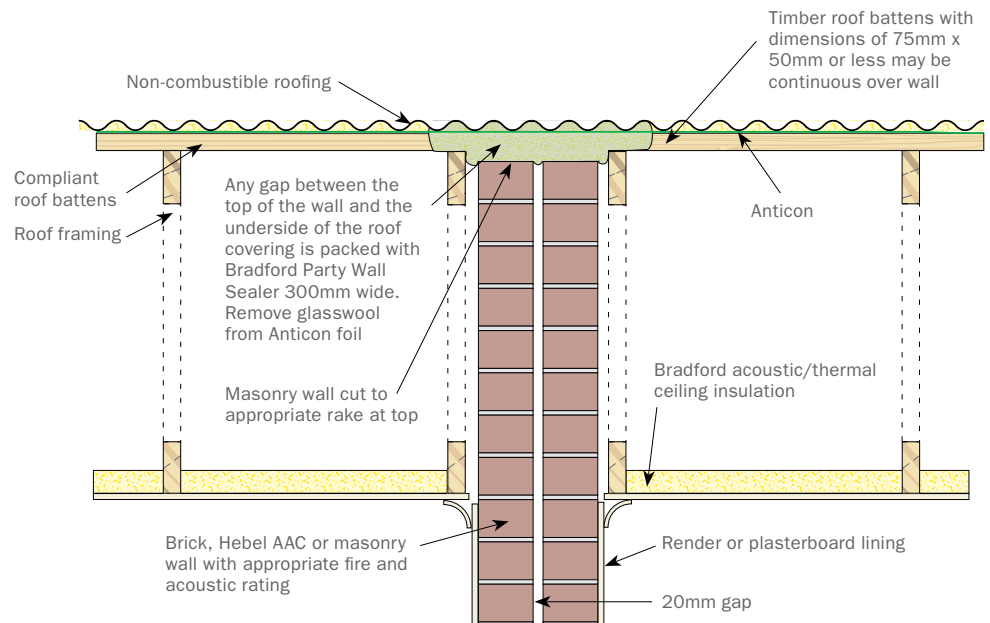


Figure 5.2.4b:
Party Wall/Roof
Junction(Metal Roof/Metal
Battens/Double Brick Wall)

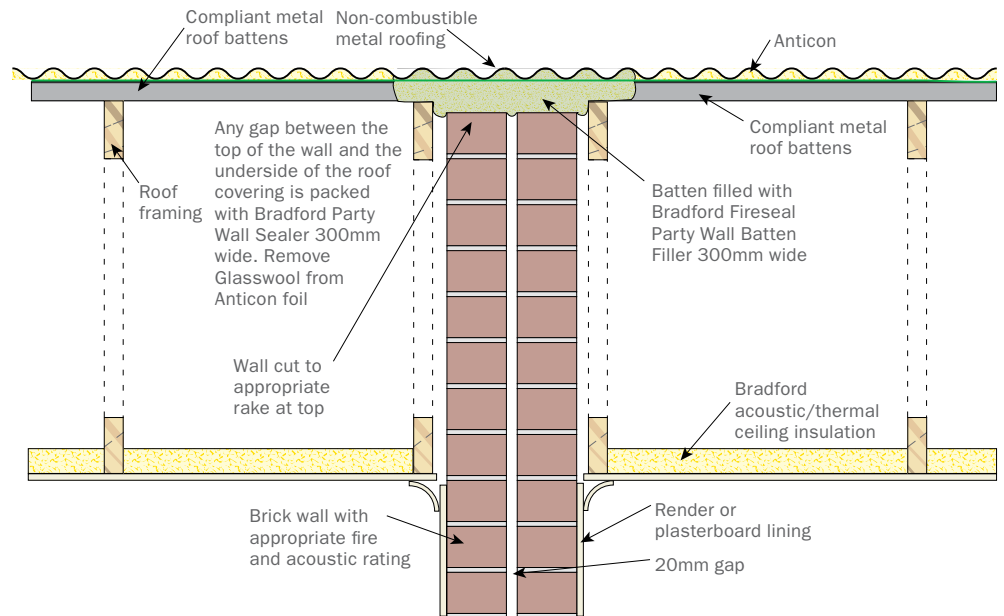


Figure 5.2.4c:
Party Wall/Roof Junction
(Tile Roof/Timber Battens/
Double Brick Wall)

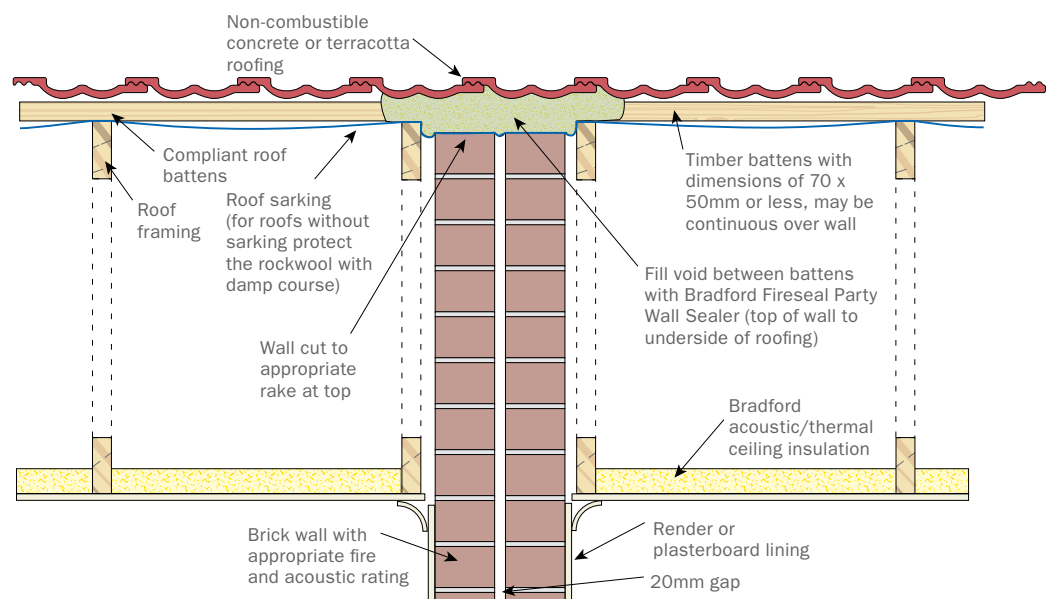
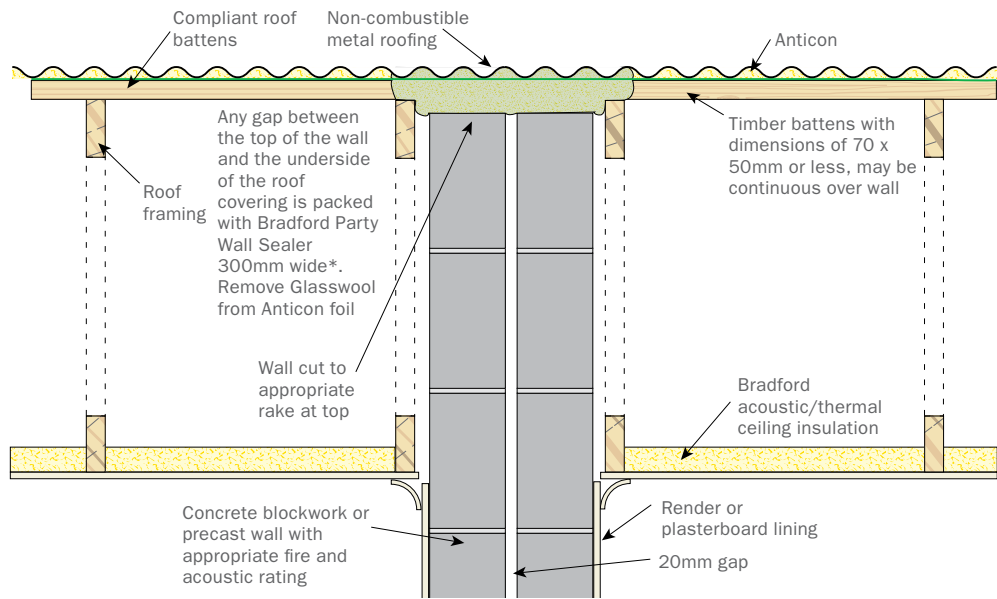


Figure 5.2.5a:
Party Wall/Roof Junction
**(Metal Roof/Timber Battens/
 Double Concrete Block/
 Precast Concrete Wall)**



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

Figure 5.2.5b:
Party Wall/Roof Junction
**(Tile Roof/Timber Battens/
 Double Concrete Block/Precast Concrete Wall)**

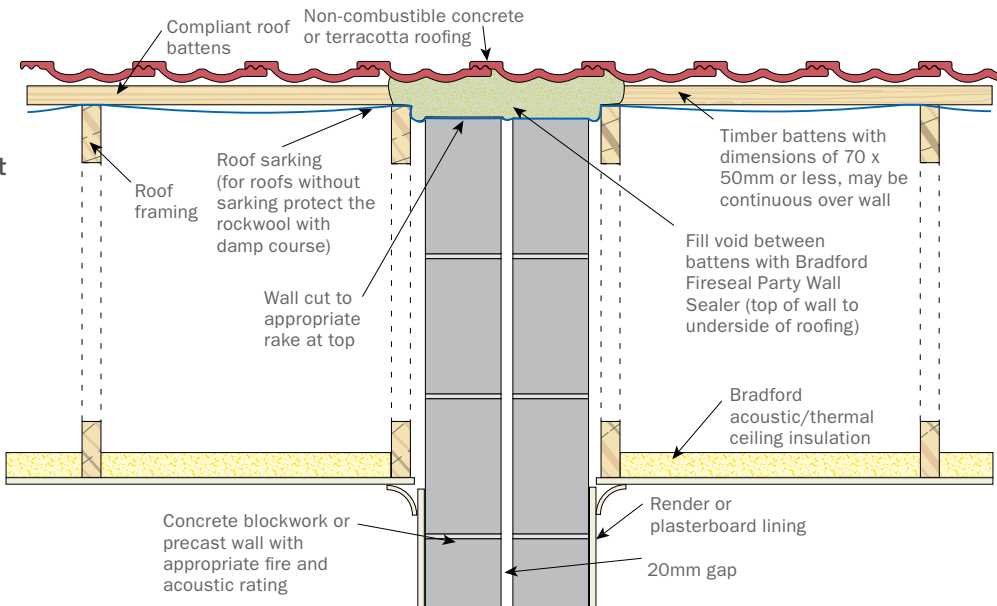
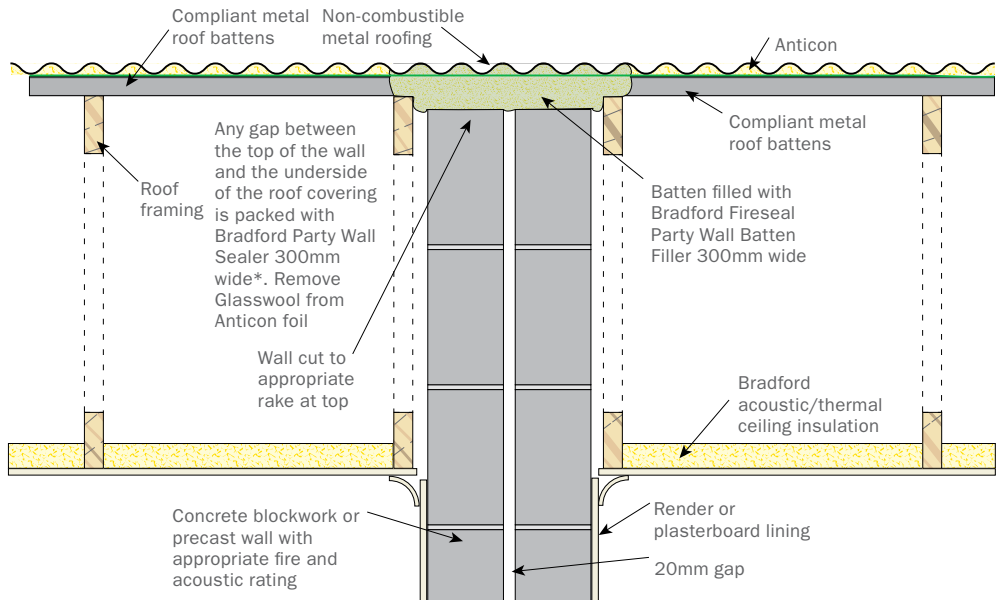


Figure 5.2.5c:
Party Wall/Roof Junction
**(Metal Roof/Metal Battens/
 Double Concrete Block/
 Precast Concrete Wall)**



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

Figure 5.2.6:
Party Wall/Roof Junction
(Metal Roof/Gyprock
Party Wall)

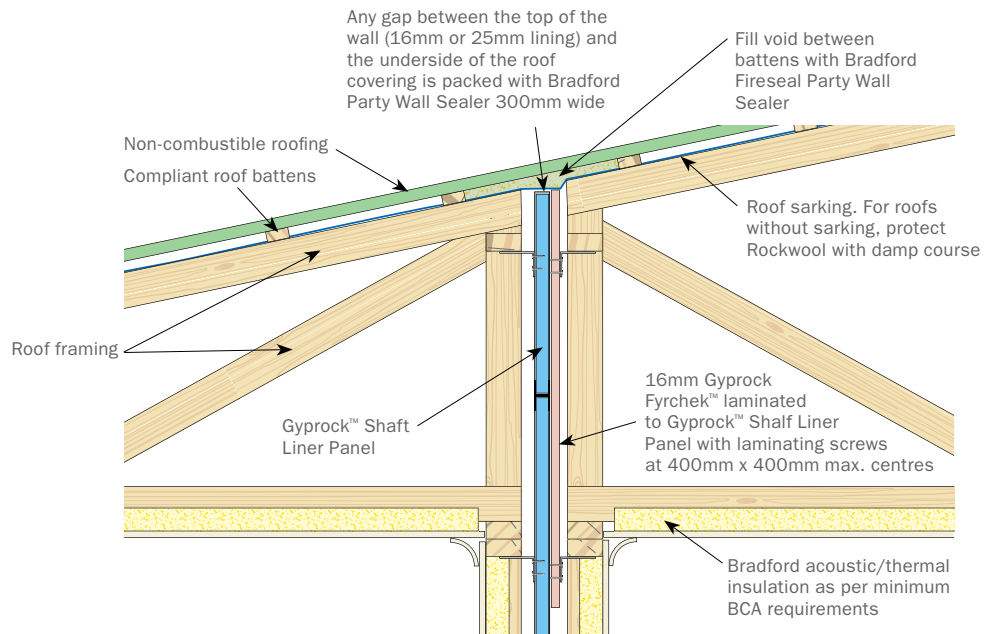


Figure 5.2.7:
Stepped roof detail – Hebel
Party Wall elevation – roof
junction with tile roof

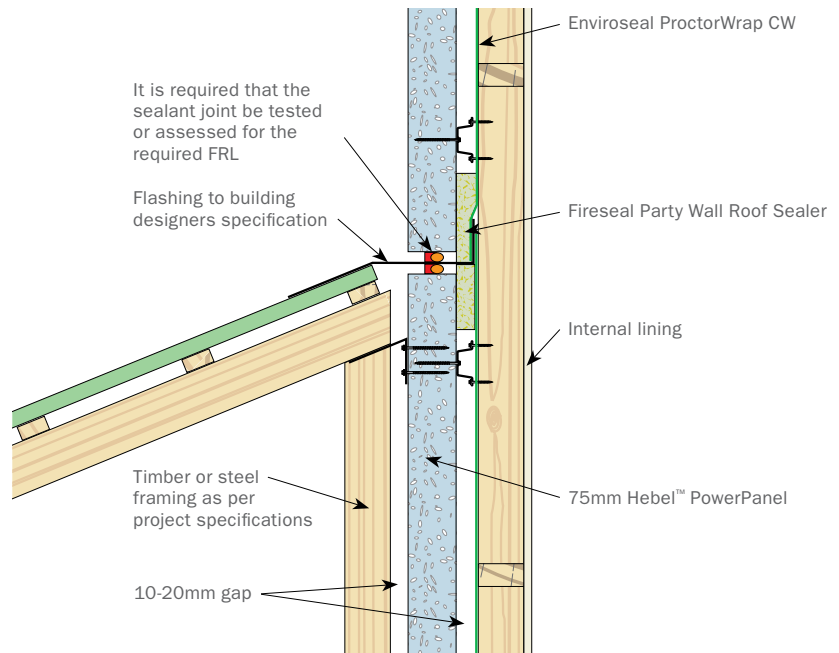


Figure 5.2.8:
Typical box gutter detail
(Gyprock Party Wall)

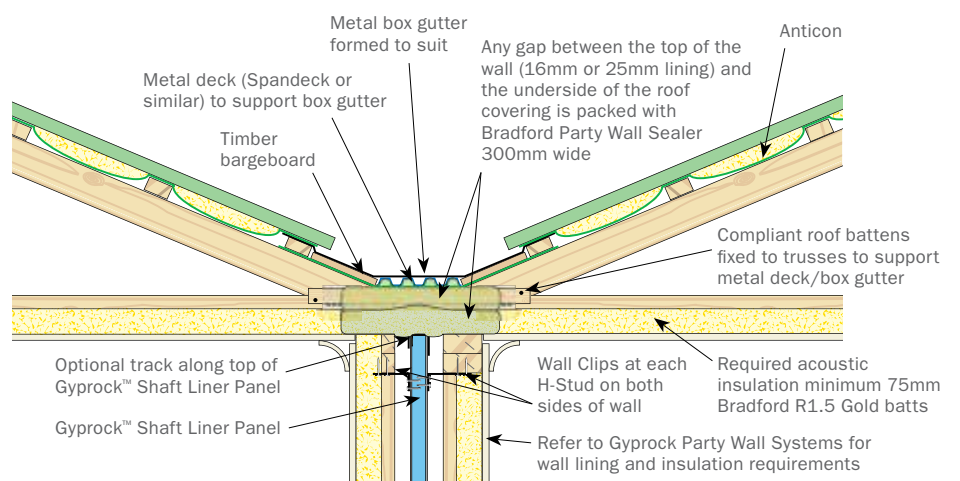


Figure 5.2.9:
Typical ceiling/roof parapet
(Gyprock Party Wall)

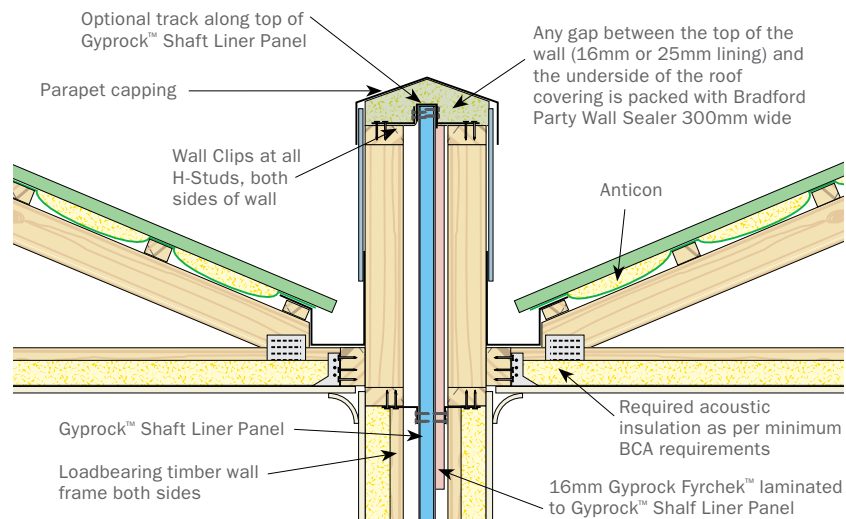


Figure 5.2.10:
Typical eaves detail –
Section A-A
(Gyprock Party Wall)

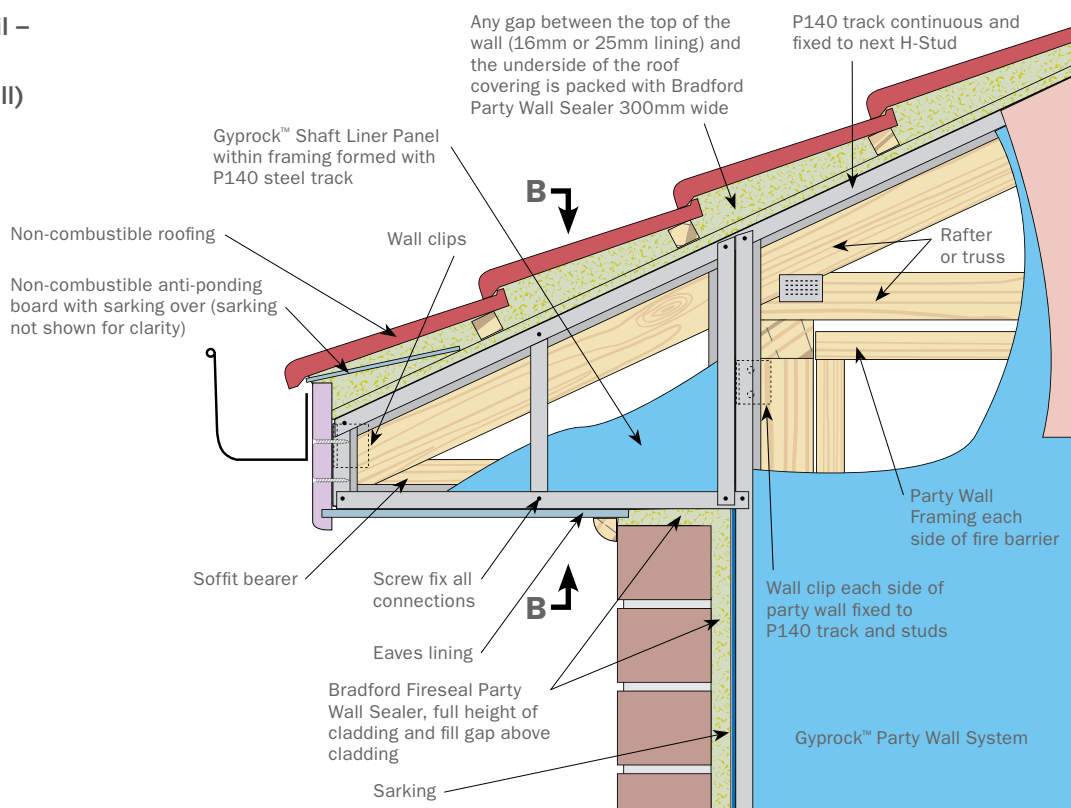
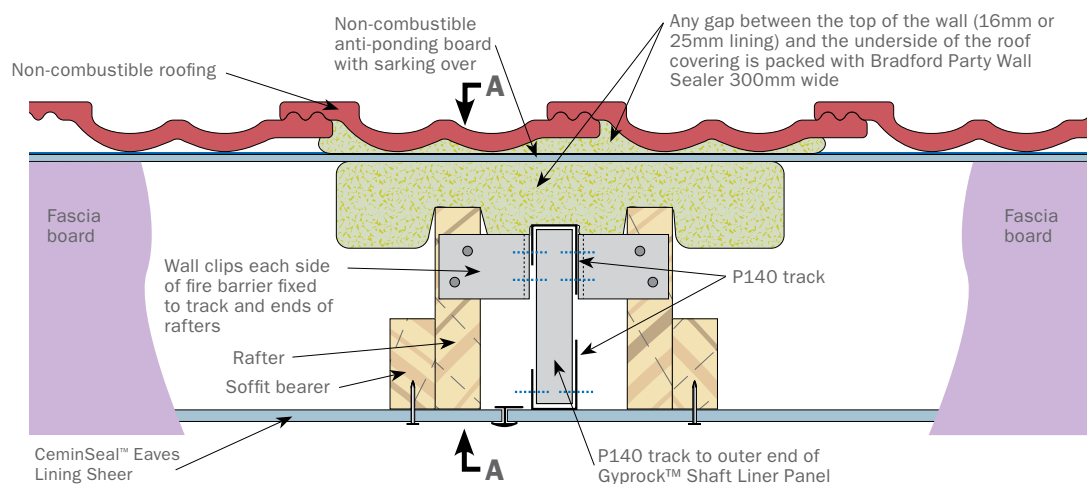


Figure 5.2.11:
Typical eaves detail
– Section B-B
(Gyprock Party Wall)



5.3 Typical Applications – Vertical Joint Details

Figure 5.3.1:
Isometric view of Party Wall
– External wall junction

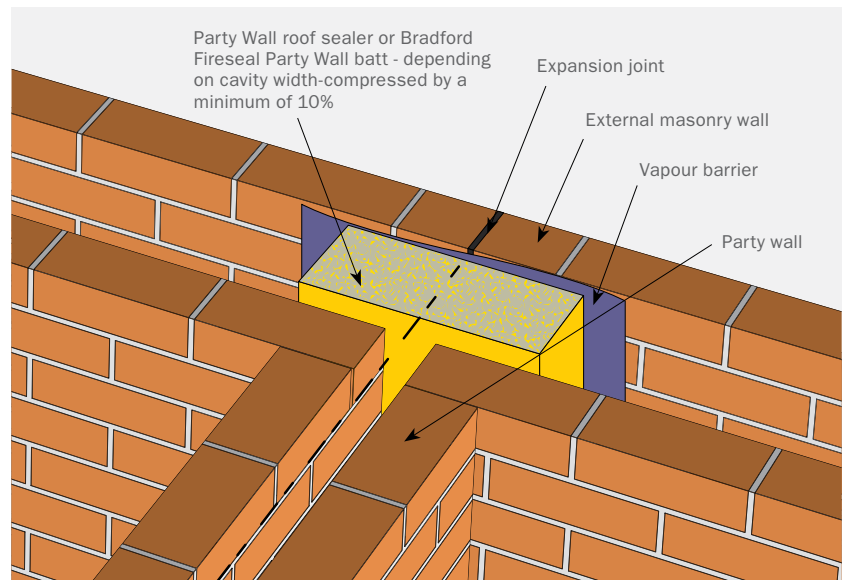


Figure 5.3.2:
Detail at wall corner
– Hebel

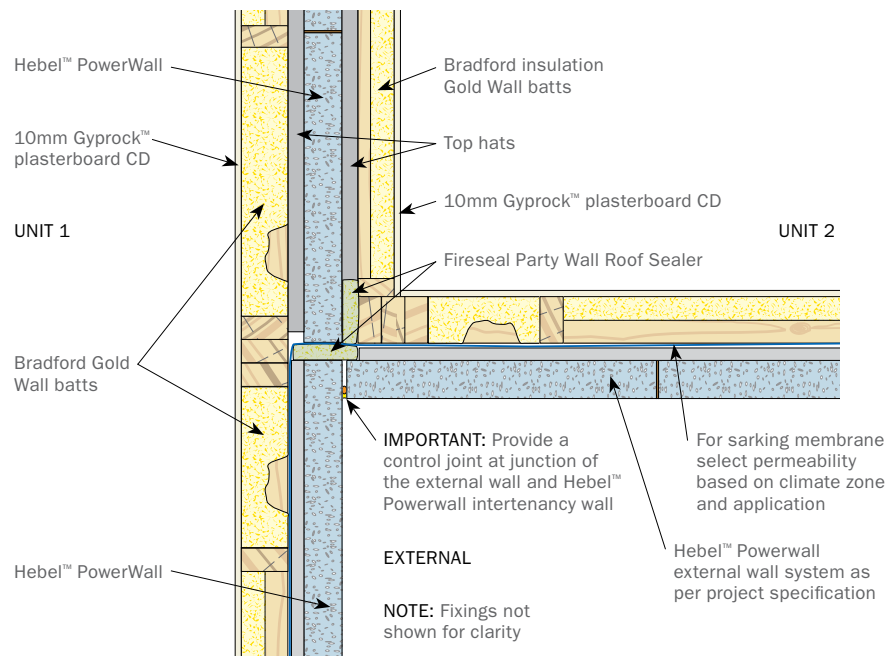
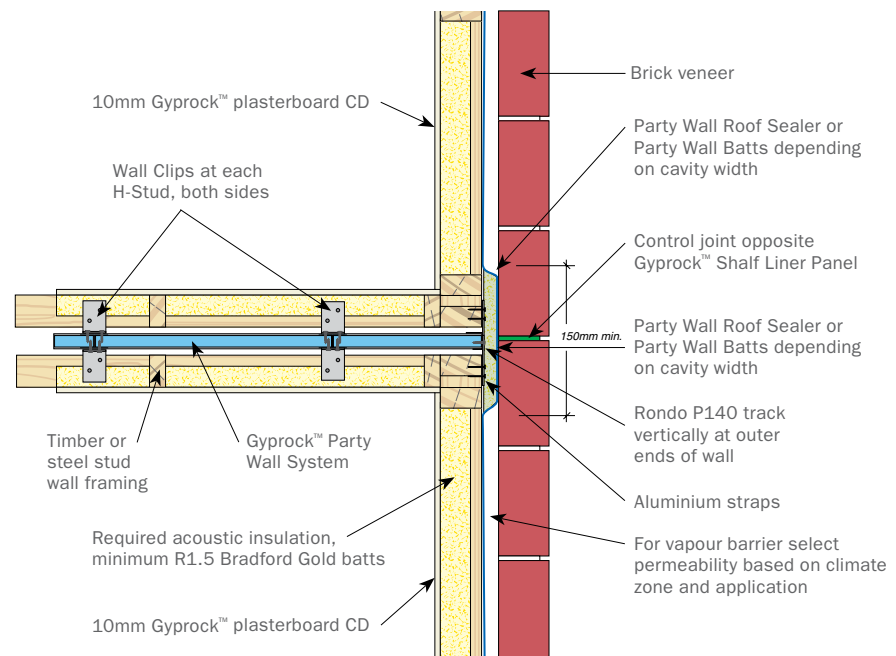


Figure 5.3.3:
Detail at external brick
veneer wall



6.0 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

7.0 PERFORMANCE YOU CAN TRUST

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

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, Australia's leading building materials company.

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

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for smarter environments

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