

# inter**home** FRL 90/90/90 Supplement

Separating Wall System for Low-rise **Multi-Residential Construction** 



# \*siniat

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In Australia, Etex has Siniat manufacturing facilities located in Sydney, Melbourne, Bundaberg and Brisbane. Etex supplies Siniat branded plasterboard, compounds, cornice, steel profiles and associated products and systems to the Australian building industry through its national distribution network.

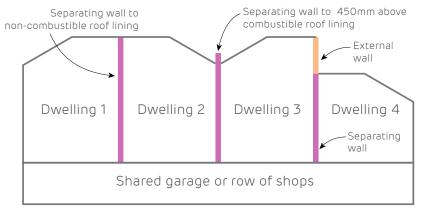
Siniat's comprehensive range of quality wall and ceiling lining products are developed with specific characteristics to enhance performance and provide fire, water, acoustic and decorative solutions to all construction projects.

The Siniat team is committed to providing excellent technical service and sales support to help with innovative solutions for your next project.

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# FIGURE 1 Suitability of FRL 90/90/90 Interhome Wall Section

This **inter**home FRL 90/90/90 Supplement is suitable for load bearing walls with 90 minutes fire protection supporting non-fire rated floors and roofs. The **inter**home wall starts at the ground slab or other fire rated support and finishes at the roof.

**inter**home systems consist of twin timber or steel framed walls with a central fire barrier of 25mm **shaft**liner encased in steel H-studs with a 16mm **fire**shield fixed to the **shaft**liner from ground to roof. An additional 16mm **fire**shield is fixed to the **shaft**liner at suspended floors and in the roof cavity. The layers of 16mm **fire**shield are simply fixed to the **shaft**liner using laminating screws.

The central fire barrier provides the primary fire protection and sound insulation barrier for the system, and thus simplifies installation by allowing non-fire rated installation of internal linings and non-fire rated penetrations of the outer wall linings during construction and also once a dwelling is occupied.

# Application

**inter**home FRL 90/90/90 walls are ideally suited to load bearing walls separating sole occupancy units in Class 2, Type A Construction such as duplexes and townhouses which are built over a shared garage or row of shops.

# Features

- Fire Resistance Level 90/90/90
- Sound insulation performance of separating wall of Rw + Ctr 50 plus discontinuous construction
- Sound insulation performance for soil and waste pipes of Rw + Ctr 25 and Rw + Ctr 40.
- Provision for the installation in wet areas.

\*WARNING: The **inter**home system is <u>not</u> suitable for use in buildings with tenancies separated by timber or steel framed floors that require a Fire Resistance Level such as buildings where sole occupancy units are located above one another.

Refer to the **inter**home high-rise manual for **inter**home wall systems installed between concrete slabs and for ceiling treatment options on the top floor of a Class 2 building with a framed roof.

Refer to the **inter**home manual for load bearing **inter**home wall systems with an FRL of 60/60/60 for Class 1 buildings where the wall starts at the ground slab or other fire rated support and finishes at the roof.



# **Timber Systems**

IHW20	<ul> <li>1 layer of 10mm mas</li> <li>Timber stud framing</li> </ul>			Fire Resistance Level
	<ul> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Timber stud framing with insulation</li> </ul>			<b>90/90/90</b> rated for the wall frame opposite to fire attack
	• 1 layer of 10mm mastashield or watershield			Fire Report FC11661
	Minimum CavityWall WidthSound InsulationOn Both Sides (mm)(mm)Rw (Rw + Ctr)			
	Cavity size = stud size + air-gap 110		2 x Pink <sup>®</sup> Batts Wall R2.0	Acoustic Report Day Design 4738-14
	(eg: 70 stud + 40 gap) 110 (eg: 90 stud + 20 gap)	281	64 ( <b>50</b> )	Note: Impact Sound Resistant - Discontinuous Construction
IHW21	<ul> <li>2 layers of 10mm mastashield or watershield</li> <li>Timber stud framing with insulation</li> </ul>			Fire Resistance Level
	<ul> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Timber stud framing</li> </ul>			<b>90/90/90</b> rated for the wall frame opposite to fire attack
	• 2 layers of 10mm ma			Fire Report FC11661
	Minimum Cavity On Both Sides (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
	Cavity size = stud size + air-gap		2 x Pink <sup>®</sup> Batts Wall R1.5	Acoustic Report Day Design 4738-14
	90 (eg: 70 stud + 20 gap)	261	66 ( <b>52</b> )	Note: Impact
	110 (eg: 90 stud + 20 gap)	301	67 ( <b>52</b> )	Sound Resistant - Discontinuous Construction
IHW22	<ul> <li>1 layer of 10mm soundshield or opal</li> <li>Timber stud framing with insulation</li> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Timber stud framing with insulation</li> <li>1 layer of 10mm soundshield or opal</li> </ul>			Fire Resistance Level 90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661
	Minimum Cavity On Both Sides (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
	Cavity size = stud size + air-gap		2 x Pink <sup>®</sup> Batts Wall R1.5	Acoustic Report Day Design 4738-14
	90 (eg: 70 stud + 20 gap)	241	69 ( <b>55</b> )	Note: Impact Sound Resistant -
	110 (eg: 90 stud + 20 gap)	281	70 ( <b>55</b> )	Discontinuous Construction
IHW23 <ul> <li>1 layer of 13mm soundshield</li> <li>Timber stud framing with insulation</li> <li>Minimum 20mm air-gap</li> </ul>		Fire Resistance Level		
	<ul> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Timber stud framing with insulation</li> </ul>			<b>90/90/90</b> rated for the wall frame opposite to fire attack
	1 layer of 13mm soundshield Minimum Cavity Wall Width Sound Insulation			Fire Report FC11661
	On Both Sides (mm)	(mm)	Rw (Rw + Ctr)	
	Cavity size =		$2  ext{ x Pink}^{ ext{B}}$ Batts Wall R1.5	Acoustic Report
	stud size + air-gap			Day Design 4738-14
	stud size + air-gap 90 (eg: 70 stud + 20 gap) 110	247	70 ( <b>55</b> )	Day Design 4738-14 Note: Impact Sound Resistant -



IHW24	<ul> <li>1 layer of 6mm Villabaord<sup>™</sup></li> <li>Timber stud framing with insulation</li> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Timber stud framing with insulation</li> <li>1 layer of 6mm Villabaord<sup>™</sup></li> </ul>			Fire Resistance Level 90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661
	Minimum Cavity On Both Sides (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
	Cavity size = stud size + air-gap		$2  ext{ x Pink}^{ ext{@}}$ Batts Wall R1.5	Acoustic Report
	90 (eg: 70 stud + 20 gap)	233	69 ( <b>55</b> )	- Day Design 4738-14 Note: Impact
	110 (eg: 90 stud + 20 gap)	273	70 ( <b>55</b> )	Sound Resistant - Discontinuous Construction
<ul> <li>HWV44</li> <li>1 layer of 10mm mastashield or watershield</li> <li>Timber stud framing with insulation</li> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Timber stud framing with insulation</li> <li>1 layer of 6mm Villabaord™</li> </ul>			Fire Resistance Level 90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661	
	Minimum Cavity On Both Sides (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
	Cavity size = stud size + air-gap		2 x Pink <sup>®</sup> Batts Wall R2.0	INSUL v8
	110 (eg: 70 stud + 40 gap) 110 (eg: 90 stud + 20 gap)	277	67 ( <b>53</b> )	Note: Impact Sound Resistant - Discontinuous Construction

# **Steel Systems**

IHW30	<ul> <li>1 layer of 10mm mas</li> <li>Steel stud framing w</li> </ul>			Fire Resistance Level
	<ul> <li>Steel stud framing with insulation</li> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Steel stud framing with insulation</li> <li>1 layer of 10mm mastashield or watershield</li> </ul>			<b>90/90/90</b> rated for the wall frame opposite to fire attack Fire Report FC11661
	Minimum Cavity     Wall Width     Sound Insulation       On Both Sides (mm)     (mm)     Rw (Rw + Ctr)			
	Cavity size = stud size + air-gap		2 x Pink <sup>®</sup> Batts Wall R2.0	Acoustic Report Day Design 4738-14
	110 (eg: 70 stud + 40 gap) 110 (eg: 90 stud + 20 gap)	281	64 ( <b>50</b> )	Note: Impact Sound Resistant - Discontinuous Construction
IHW31	<ul> <li>2 layers of 10mm ma</li> <li>Steel stud framing w</li> </ul>	ith insulation		Fire Resistance Level
	<ul> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Steel stud framing</li> </ul>			<b>90/90/90</b> rated for the wall frame opposite to fire attack
	• 2 layers of 10mm ma			Fire Report FC11661
	Minimum Cavity On Both Sides (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
	Cavity size = stud size + air-gap		$1  ext{ x Pink}^{ ext{@}}$ Batts Wall R1.5	Acoustic Report Day Design 4738-14
	90 (eg: 70 stud + 20 gap)	261	64 ( <b>52</b> )	Note: Impact
	110 (eg: 90 stud + 20 gap)	301	65 ( <b>52</b> )	Sound Resistant - Discontinuous Construction
	<ul> <li>1 layer of 10mm soundshield or opal</li> <li>Steel stud framing with insulation</li> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Steel stud framing with insulation</li> <li>1 layer of 10mm soundshield or opal</li> </ul>			
IHW32	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> </ul>	vith insulation gap <b>ft</b> liner or <b>inte</b> of 16mm <b>fire</b> gap vith insulation	<b>r</b> shield encased in <b>inter</b> home shield	Fire Resistance Level 90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661
IHW32	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> </ul>	vith insulation gap <b>ft</b> liner or <b>inte</b> of 16mm <b>fire</b> gap vith insulation	rshield encased in interhome shield pal Sound Insulation	<b>90/90/90</b> rated for the wall frame
IHW32	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 10mm sou</li> <li>Minimum Cavity</li> <li>On Both Sides (mm)</li> <li>Cavity size = stud size + air-gap</li> </ul>	vith insulation gap ftliner or inter of 16mm fire gap vith insulation indshield or o Wall Width	rshield encased in <b>inter</b> home shield pal	<b>90/90/90</b> rated for the wall frame opposite to fire attack
IHW32	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 10mm sou</li> <li>Minimum Cavity On Both Sides (mm)</li> <li>Cavity size = stud size + air-gap</li> <li>90</li> <li>(eg: 70 stud + 20 gap)</li> </ul>	vith insulation gap ftliner or inter of 16mm fire gap vith insulation indshield or o Wall Width	rshield encased in interhome shield pal Sound Insulation Rw (Rw + Ctr)	90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661 Acoustic Report Day Design 4738-14 Note: Impact
IHW32	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 10mm sou</li> <li>Minimum Cavity On Both Sides (mm)</li> <li>Cavity size = stud size + air-gap</li> <li>90</li> </ul>	vith insulation gap ftliner or inte of 16mm fire gap vith insulation indshield or o Wall Width (mm)	rshield encased in interhome shield pal Sound Insulation Rw (Rw + Ctr) 2 x Pink <sup>®</sup> Batts Wall R1.5	90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661 Acoustic Report Day Design 4738-14
IHW32	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 10mm sou</li> <li>Minimum Cavity On Both Sides (mm)</li> <li>Cavity size = stud size + air-gap</li> <li>90 (eg: 70 stud + 20 gap)</li> <li>110 (eg: 90 stud + 20 gap)</li> <li>1 layer of 13mm sou</li> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> </ul>	vith insulation gap ftliner or inter of 16mm fire gap vith insulation mdshield or o Wall Width (mm) 241 281 rdshield vith insulation gap	rshield encased in interhome shield Sound Insulation Rw (Rw + Ctr) 2 x Pink® Batts Wall R1.5 67 (55) 68 (55)	<b>90/90/90</b> rated for the wall frame opposite to fire attack         Fire Report FC11661         Acoustic Report Day Design 4738-14         Note: Impact Sound Resistant - Discontinuous Construction         Fire Resistance Level
	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 10mm sou</li> <li>Minimum Cavity On Both Sides (mm)</li> <li>Cavity size = stud size + air-gap</li> <li>90</li> <li>(eg: 70 stud + 20 gap)</li> <li>110</li> <li>(eg: 90 stud + 20 gap)</li> <li>1 layer of 13mm sou</li> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> </ul>	vith insulation gap ftliner or inte gap vith insulation indshield or o Wall Width (mm) 241 281 281 indshield vith insulation gap ftliner or inte gap vith insulation	rshield encased in interhome shield Sound Insulation Rw (Rw + Ctr) 2 x Pink® Batts Wall R1.5 67 (55) 68 (55) rshield encased in interhome shield	<b>90/90/90</b> rated for the wall frame opposite to fire attack         Fire Report FC11661         Acoustic Report Day Design 4738-14         Note: Impact Sound Resistant - Discontinuous Construction         Fire Resistance Level <b>90/90/90</b> rated for the wall frame opposite to fire attack
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	<ul> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 10mm sou</li> <li>Minimum Cavity On Both Sides (mm)</li> <li>Cavity size = stud size + air-gap</li> <li>90 (eg: 70 stud + 20 gap)</li> <li>110 (eg: 90 stud + 20 gap)</li> <li>1 layer of 13mm sou</li> <li>Steel stud framing w</li> <li>Minimum 20mm air-</li> <li>1 layer of 25mm sha H-studs plus 1 layer</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 13mm sou</li> <li>Minimum 20mm air-</li> <li>Steel stud framing w</li> <li>1 layer of 13mm sou</li> <li>Cavity size =</li> </ul>	vith insulation gap ftliner or inter of 16mm fire gap vith insulation mdshield or o Wall Width (mm) 241 281 281 rdshield vith insulation gap ftliner or inter gap vith insulation mdshield Wall Width	rshield encased in interhome shield Sound Insulation Rw (Rw + Ctr) 2 x Pink® Batts Wall R1.5 67 (55) 68 (55) rshield encased in interhome shield Sound Insulation Rw (Rw + Ctr)	<b>90/90/90</b> rated for the wall frame opposite to fire attack         Fire Report FC11661         Acoustic Report Day Design 4738-14         Note: Impact Sound Resistant - Discontinuous Construction         Fire Resistance Level         90/90/90         rated for the wall frame opposite to fire attack         Fire Report FC11661



IHW34	<ul> <li>1 layer of 6mm Villabaord<sup>™</sup></li> <li>Steel stud framing with insulation</li> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Steel stud framing with insulation</li> <li>1 layer of 6mm Villabaord<sup>™</sup></li> </ul>			Fire Resistance Level 90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661
	Minimum CavityWall WidthSound InsulationOn Both Sides (mm)(mm)Rw (Rw + Ctr)			
	Cavity size = stud size + air-gap		$2  ext{ x Pink}^{ ext{B}}$ Batts Wall R1.5	Acoustic Report
	90 (eg: 70 stud + 20 gap)	233	68 ( <b>55</b> )	Day Design 4738-14 Note: Impact
	110 (eg: 90 stud + 20 gap)	273	69 ( <b>55</b> )	Sound Resistant - Discontinuous Construction
IHW54	<ul> <li>1 layer of 10mm mastashield or watershield</li> <li>Steel stud framing with insulation</li> <li>Minimum 20mm air-gap</li> <li>1 layer of 25mm shaftliner or intershield encased in interhome H-studs plus 1 layer of 16mm fireshield</li> <li>Minimum 20mm air-gap</li> <li>Steel stud framing with insulation</li> <li>1 layer of 6mm Villabaord™</li> </ul>			Fire Resistance Level 90/90/90 rated for the wall frame opposite to fire attack Fire Report FC11661
	Minimum Cavity On Both Sides (mm)	Wall Width (mm)	Sound Insulation Rw (Rw + Ctr)	
	Cavity size = stud size + air-gap		$2  ext{ x Pink}^{ ext{B}}$ Batts Wall R2.0	INSUL v8
	110 (eg: 70 stud + 40 gap) 110 (eg: 90 stud + 20 gap)	277	67 ( <b>53</b> )	Note: Impact Sound Resistant - Discontinuous Construction



Siniat J-Track

# Components

# **Steel Profiles**

Siniat 25mm **inter**home H-stud

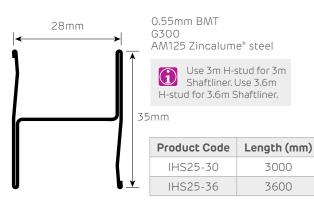


FIGURE 2 interhome H-stud Profile

# Plasterboard

### **Central Fire Barrier**

- Siniat 25mm **shaft**liner
- Siniat 25mm **inter**shield

### Wall Linings

- Siniat mastashield
- Siniat **sound**shield
- > Siniat opal
- Siniat watershield
- Siniat **fire**shield
- Siniat **multi**shield
- > James Hardie Villaboard<sup>™</sup>

# Wall Insulation

- Fletcher Pink Batts<sup>®</sup> Wall Insulation or Fletcher Firmasoft<sup>™</sup> Wall Insulation (glasswool)
- Polyester wall insulation

# Fire Rated Mineral Wool

Fletcher Fire Stop Party Wall Batts

### Sealant

bindex fire and acoustic sealant



### FIGURE 4 interhome aluminium clip Isometric

# Fasteners

Refer to 'Framing' for information on fasteners use in the **inter**home Wall System.



# **General Requirements**

Use a central fire barrier of interhome H-studs and 25mm shaftliner or intershield and 16mm fireshield fixed using laminating screws.

Adequately prop the central fire barrier (shaftliner or intershield and 16mm fireshield) until the dwelling is enclosed for wind loading purposes.

Protect plasterboard in the central fire barrier from water and excessive moisture until the dwelling is enclosed to prevent mould growth and degradation of the plasterboard. Use intershield for improved mould and water resistance.

interhome aluminium clips (CIH-L) are to connect interhome H-studs to the stud frames on either side. Aluminium will melt in a fire so the frame of the dwelling on the fire side can detach from the central fire barrier.

Leave a gap of at least 20mm between the central fire barrier and the studs of both wall frames. A gap of at least 25mm is recommended on the side that has the additional 16mm fireshield laminated to the shaftliner.

Control joints are not required in the central fire barrier.

Prevent contact between services in the wall cavities and the central fire barrier.

Apply bindex fire and acoustic sealant to all gaps in the central fire barrier to maintain fire and acoustic integrity. If sheets or tracks are touch fitting and no gap exists, fire sealant is not required.

Pack any gaps between the top of the central fire barrier and the underside of the roof covering with Fire Stop Party Wall Batts to maintain the 90 minute fire rating.

 $(\mathbf{1})$ 

Refer to the interhome high-rise guide for non-load bearing FRL -/60/60 walls in slab to slab buildings. Refer to the **inter**home Class 1 guide for load bearing walls with an FRL of 60/60/60 for separating Class 1 dwellings from ground to roof.

# **Fire Resistance**

All systems in this section are displayed with an FRL of 90/90/90 to indicate that they support the frame on the opposite side to fire attack. In a fire event, the framing on the fire side of the central fire barrier is considered to collapse before 90 minutes.

All interhome systems have a Fire Resistance Level (FRL) assigned by an Accredited Testing Laboratory in accordance with Section A5.2 of Volume One of the National Construction Code (NCC) and AS 1530.4 Fire resistance tests for elements of construction.

In the event of a fire, the **inter**home aluminium clips on the fire side are designed to melt and allow the frame to collapse, leaving the central fire barrier attached to the unaffected frame on the non-fire side.

The outer wall lining and cavity insulation of any interhome system can be used on one side of a different system without reducing its FRL. The linings may also transition along a wall from one **inter**home system to another.



# Sound Insulation

Services installed in one cavity have an acoustic rating to the other side of the **inter**home wall of at least Rw + Ctr 40 which meets the requirements of the NCC for walls separating soil, waste or water supply pipes from a habitable room.

When the internal lining and cavity insulation of one **inter**home system is used on one side of a different **inter**home system, the acoustic rating is the lower of the two provided that the central fire barrier and stud cavity sizes are the same.

# Framing

J-Tracks:

- Position on the slab or footing 20mm minimum (25mm recommended) from the existing frame of the dwelling
- Fix to the concrete at 600mm maximum centres and 150mm maximum from track ends using concrete anchors
- Fix to both vertical ends of the central fire barrier. Screw fix vertical J-Track to horizontal J-Tracks
- Use back-to-back at the top of each row to form the top track and also the bottom track for the next level. Screw fix the back-to-back J-Tracks at 600mm maximum centres and 150mm from ends

#### interhome H-studs:

- Friction fit into bottom J-Track and push down completely. They are not required to be fastenered to the top or bottom J-Tracks
- Space at 600mm centres. Alternate between shaftliner or intershield panels and H-Studs until the row is complete
- Use 3m H-Studs with 3m shaftliner or intershield panels and 3.6m H-Studs with 3.6m shaftliner or intershield panels.

Leave a gap of 20mm minimum between the central fire barrier and both of the dwelling's frames.

Maximum height is 12m for the central fire barrier

Fix **inter**home aluminium clips to both sides of each H-stud and vertical J-Track:

- > At the floor / ceiling levels on top or bottom plates
- At the top chord of the trusses within 300mm of the top of the central fire barrier
- At maximum 3m intervals for 3m **shaft**liner or **inter**shield panels
- At maximum 3.6m intervals for 3.6m **shaft**liner or **inter**shield panels
- Within 700mm from the top of H-Studs at a horizontal joint in the shaftliner or intershield (back-to-back J-Track) [Refer to Details].

It is critical to correctly fix the **inter**home aluminium clips only in the locations listed above to comply with the discontinuous construction requirements of the NCC.

Substituting interhome aluminium clips will significantly effect system performance

Plumbing and electrical services must not protrude beyond the face of the stud



# Fasteners

Fixing Aluminium Clips	Fastener
interhome aluminium clips to steel (2 screws)	8g x 16mm fine thread screw
<b>inter</b> home aluminium clips to steel H-studs through 16mm <b>fire</b> shield (2 screws)	6g x 30mm fine thread screw
<b>inter</b> home aluminium clips to softwood timber (2 fasteners)	6g x 25mm screw or 2.8 x 30mm galvanised nail
Fixing J-Track	Fastener
Back to back J-tracks	8g x 16mm fine thread screw
Laminating	Fastener
Laminating <b>fire</b> shield to <b>shaft</b> liner or <b>inter</b> shield	10g x 38mm coarse thread laminating screws

Fasteners gauges and lengths are minimums.

Screws must comply with AS3566.1

# **Plasterboard Layout**

#### **Central Fire Barrier**

Build the central fire barrier up to the underside of a non-combustible roof lining or 450mm above a combustible roof.

#### Additional 16mm Fireshield or Multishield

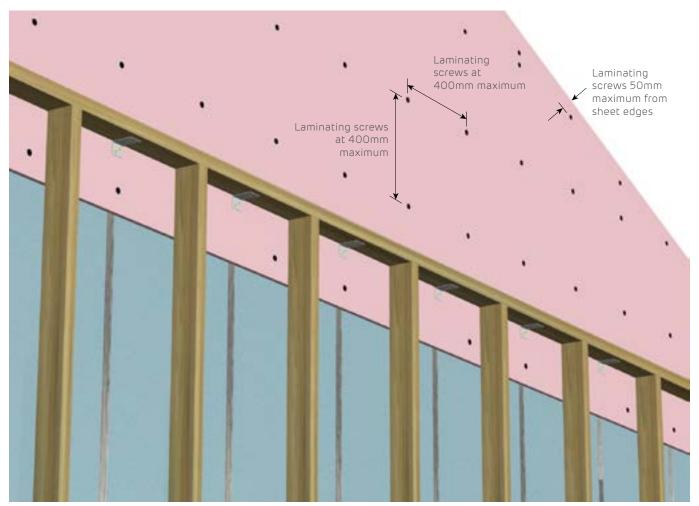
Laminate an additional 16mm fireshield or multishield to the central fire barrier in the following locations:

- > At floor joists to 150mm above floor level
- > 150mm below ceilings
- Roof space
- > Parapets

# **Plasterboard Fixing**

The **shaft**liner or **Inter**shield of the central fire barrier is friction fit into the **inter**home H-Stud and J-Track, no screws are required.

Install internal linings with either the Fastener and Adhesive method or the Fastener Only method. Both methods may be used to achieve the fire rating for the **inter**home system.



#### FIGURE 5 Fire Rated 1 Layer of 16mm Fireshield Laminating Screw Method

Fixing	Laminating screw method using 10g x 38mm laminating screw
Sheet Layout	Horizontal or Vertical
Recessed Edges and Butt Joints	Fix screws 10 - 50mm from sheet edges
Field	Laminate to central fire barrier at 400 x 400mm maximum centres
Fire Sealant	Use <b>bindex</b> fire and acoustic sealant on any gaps to maintain integrity. <b>fire</b> shield that has been touch fitted (no gaps) does not need to have fire sealant applied to joints. [Refer to Details]
Jointing	No plaster jointing required. Use <b>bindex</b> fire and acoustic sealant on any gaps up to 20mm wide.

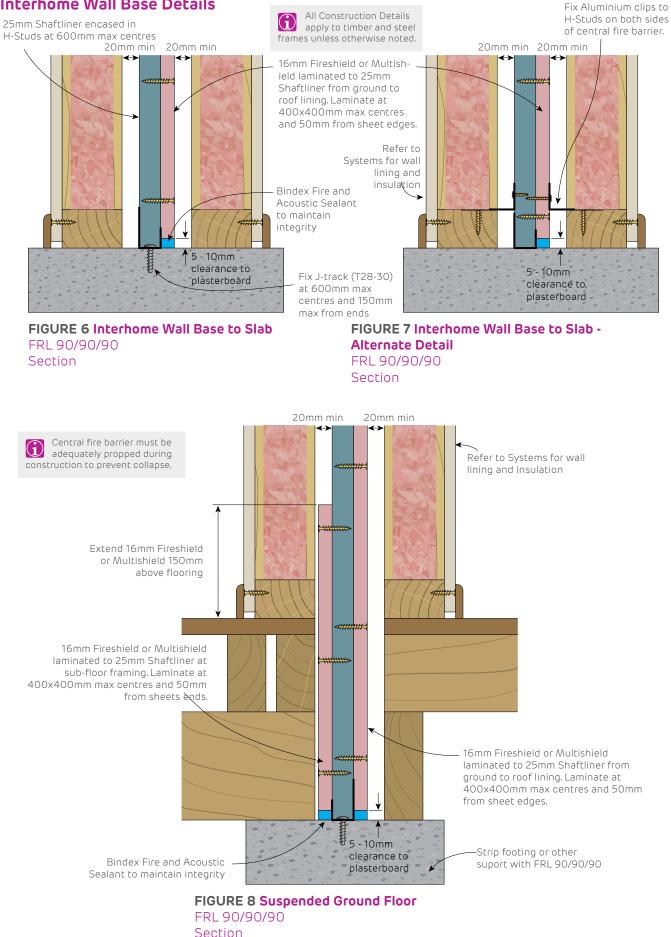
# Intershield

**inter**shield is a plasterboard that has been formulated to resist sound and fire as well as providing enhanced water and mould resistance. It is suitable for use in **inter**home systems where an FRL (Fire Resistance Level) and sound insulation rating are required. Intershield has recycled blue liner paper.

The mould resistance technology used in **inter**shield is enhanced by a water resistant additive. Together these unique features dramatically reduce mould growth under severe conditions.



### Fire Rated Interhome Wall Base Details





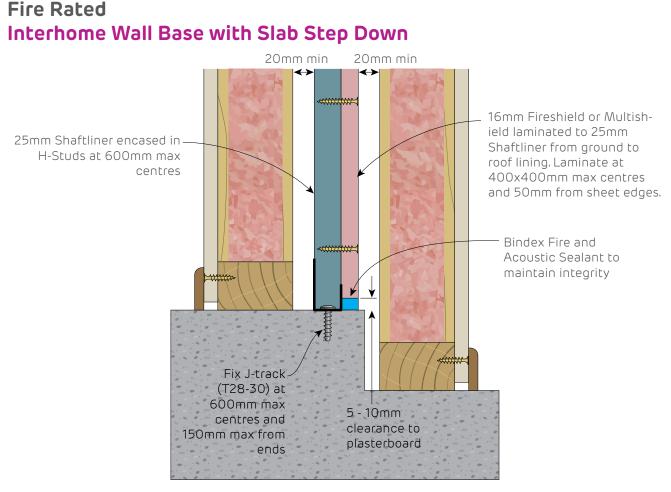
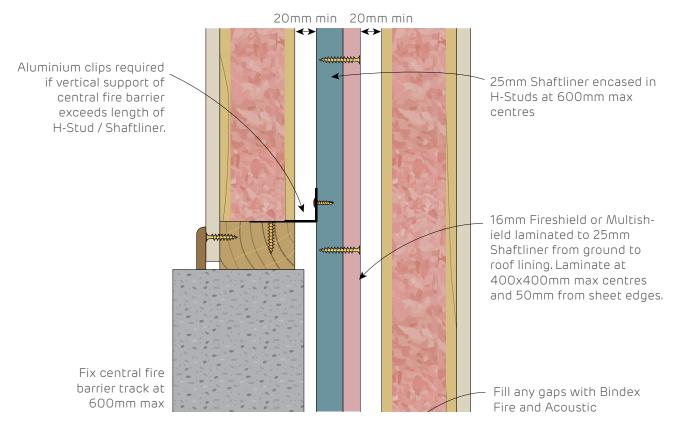
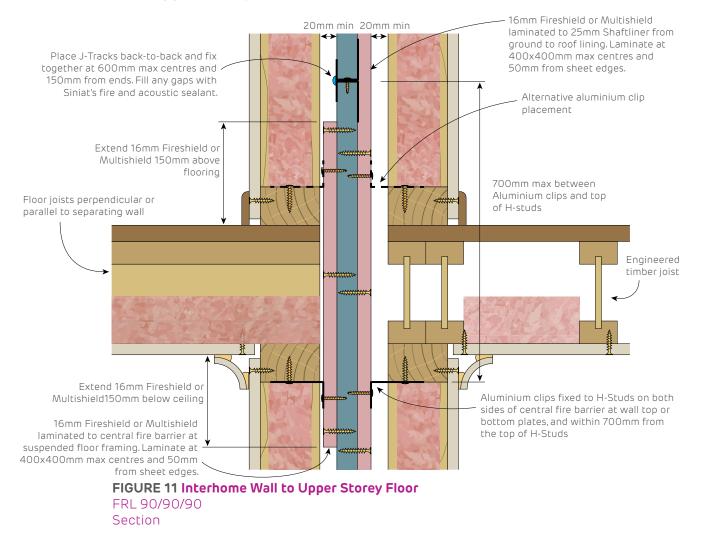


FIGURE 9 Interhome Wall Base to Slab with Step-Down FRL 90/90/90 Section



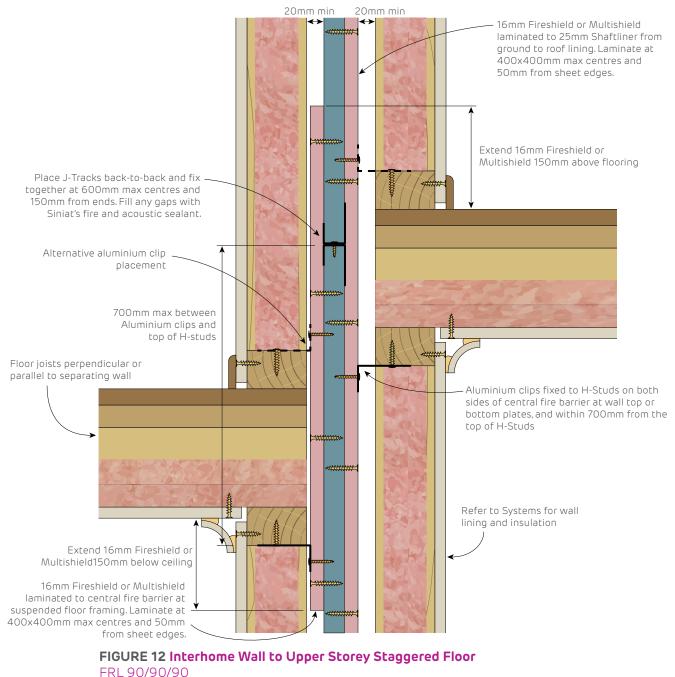


### Fire Rated Interhome Wall to Upper Storey Floor





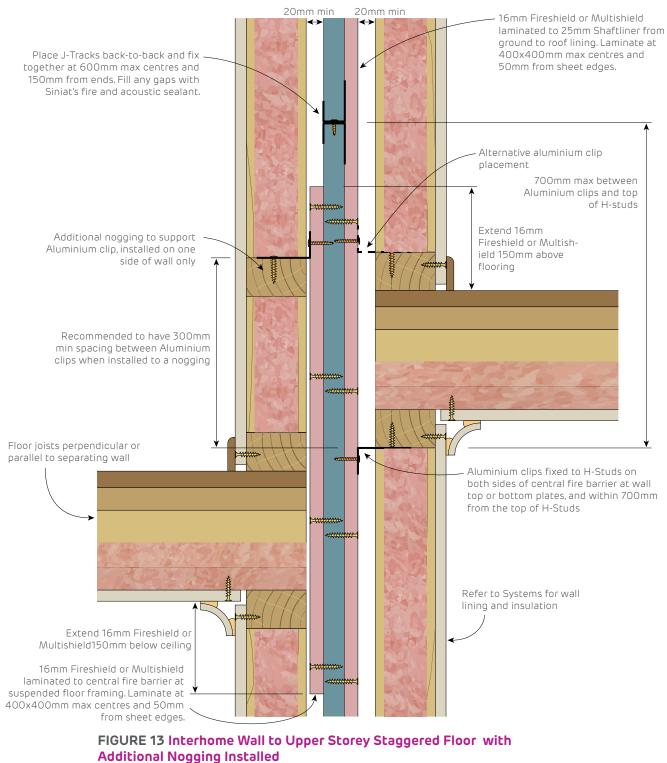
### Fire Rated Interhome Wall to Upper Storey Staggered Floors



Section

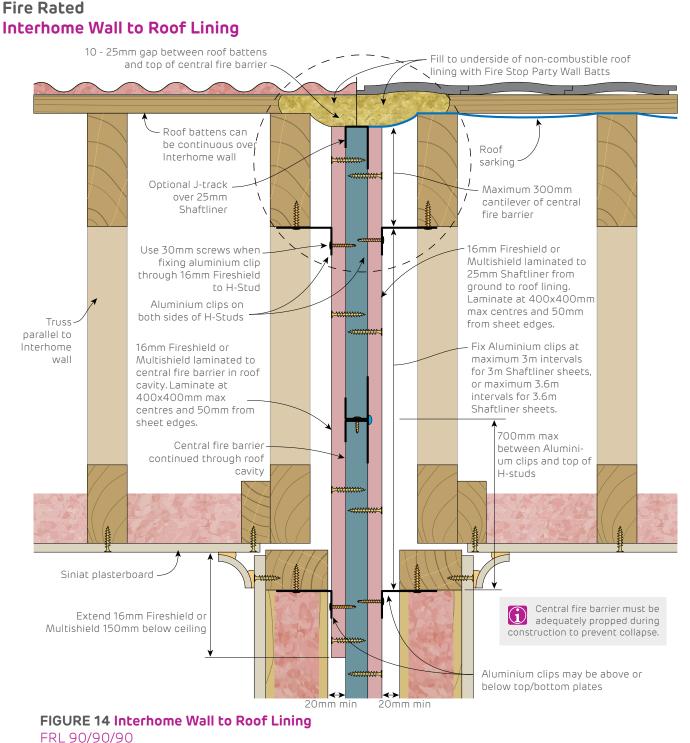


### Fire Rated Interhome Wall to Upper Storey Staggered Floors



FRL 90/90/90 Section

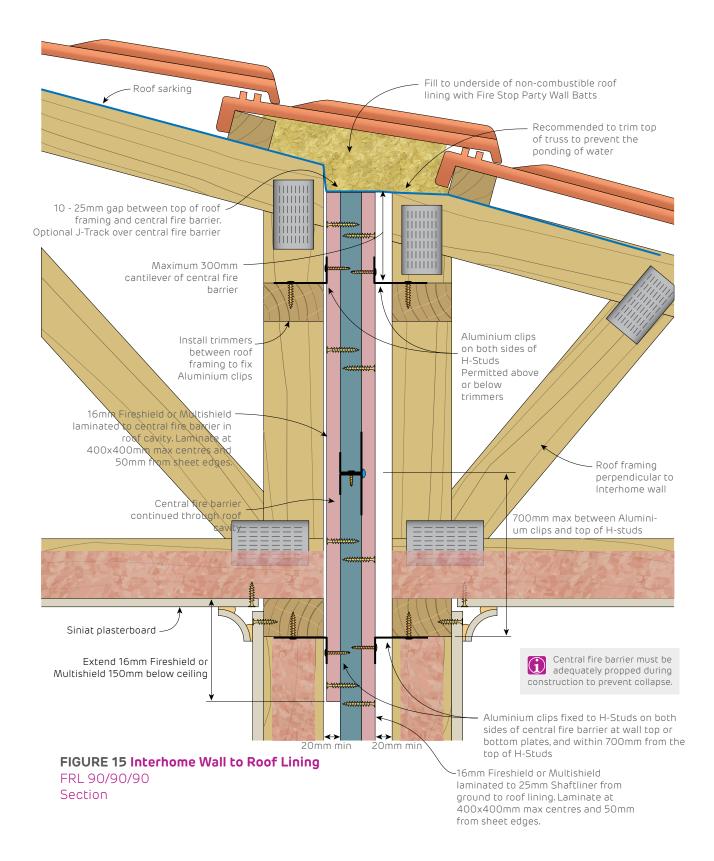




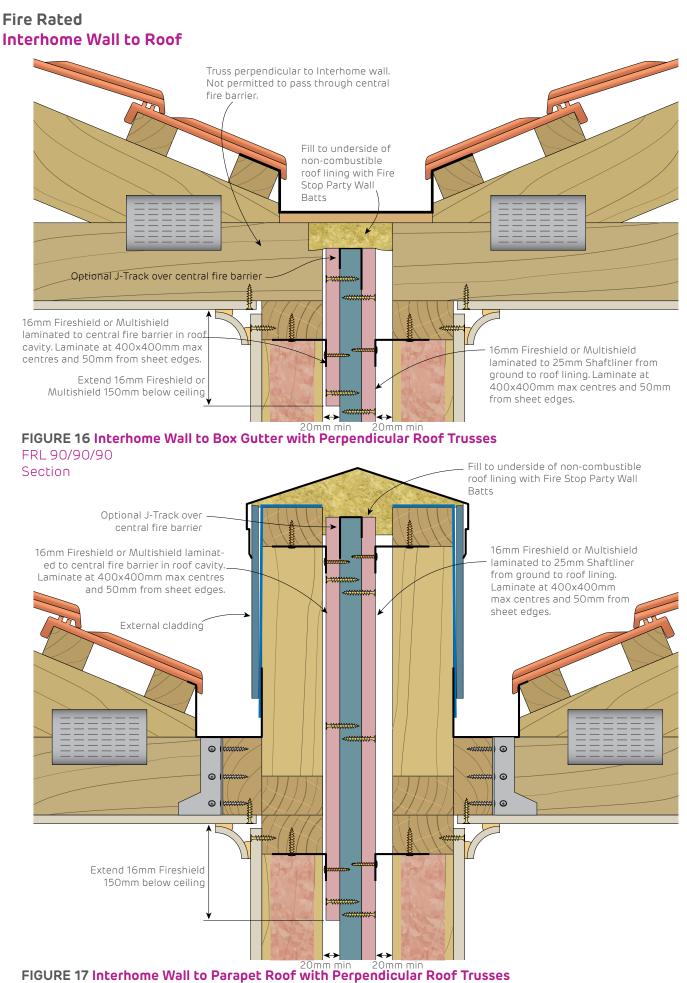
Section



### Fire Rated Interhome Wall to Roof Lining



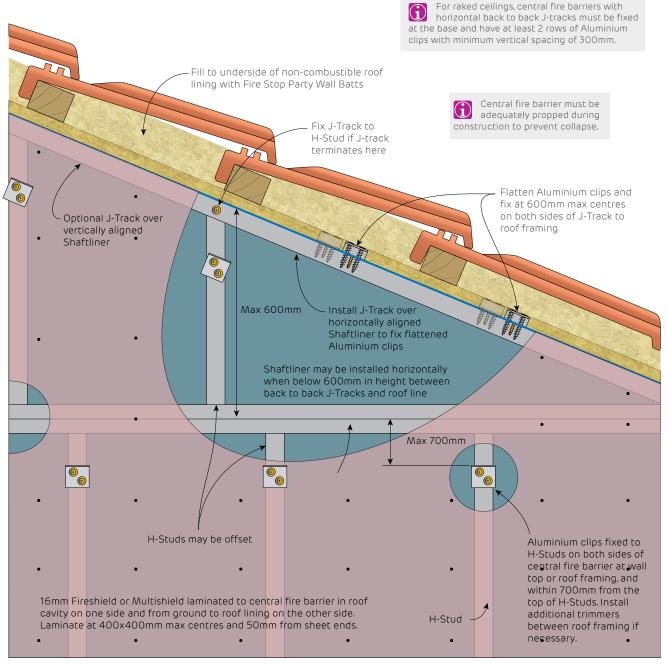




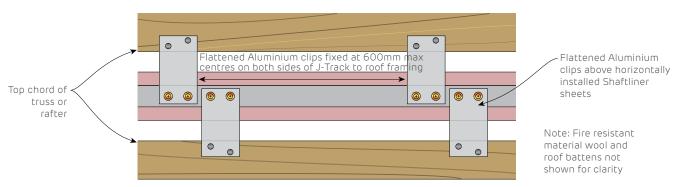
FRL 90/90/90



### Fire Rated Interhome Central Fire Barrier



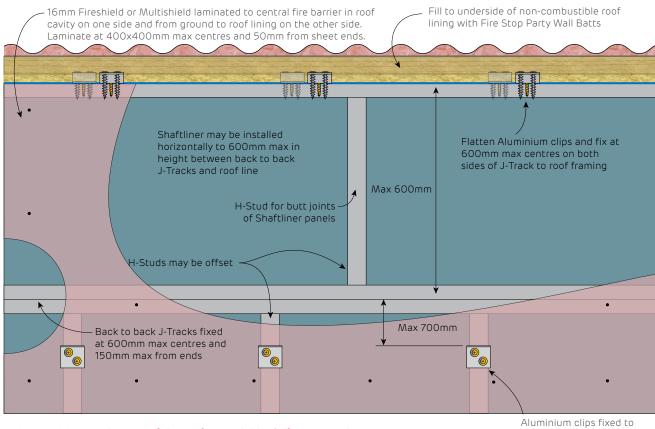
**FIGURE 18 Interhome with Horizontal Shaftliner to Roof Line** FRL 90/90/90 Section



#### FIGURE 19 Interhome with Flattened Aluminium Clips over Horizontally Installed Shaftliner FRL 90/90/90 Section



### Fire Rated Interhome Central Fire Barrier



#### **FIGURE 20 Interhome with Horizontal Shaftliner panels** FRL 90/90/90 Section

Fill any gaps with Bindex fire and

acoustic sealant to maintain integrity

Aluminium clips fixed to H-Studs on both sides of central fire barrier at wall top or roof framing, and within 700mm from the top of H-Studs. Install additional trimmers between roof framing if necessary.

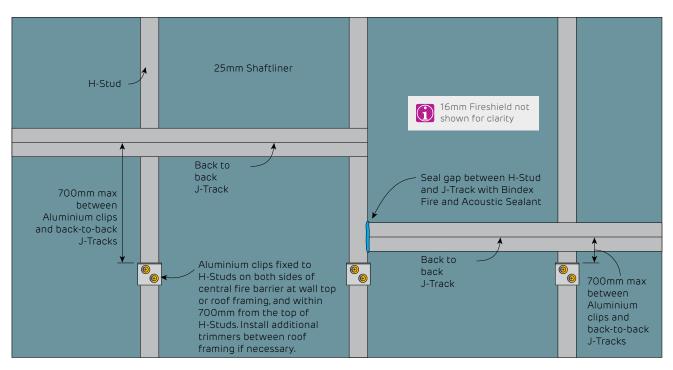


FIGURE 21 Interhome with Step-Down in Slab FRL 90/90/90 Section



### Fire Rated Interhome Wall Over Eaves

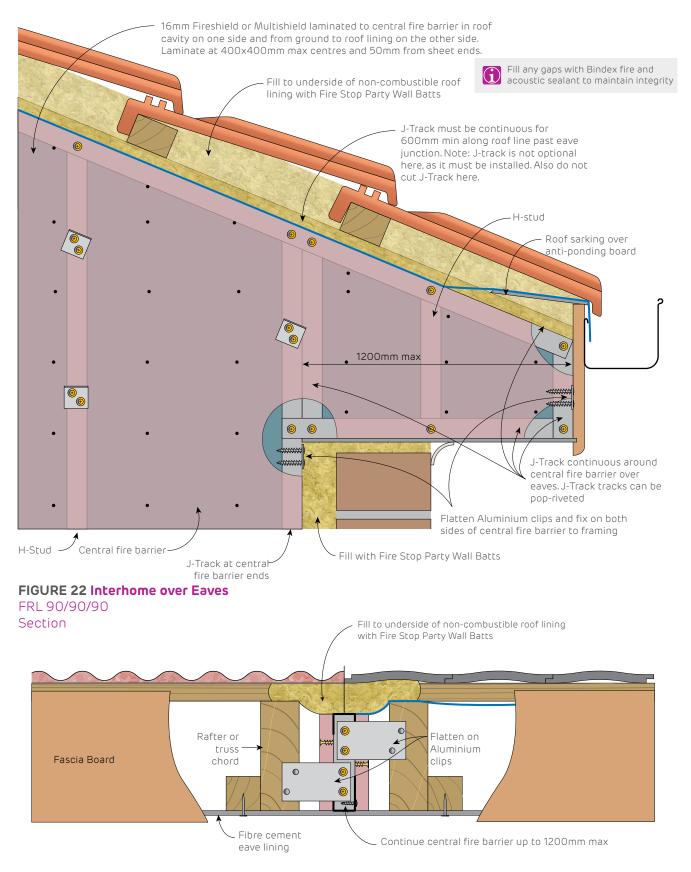
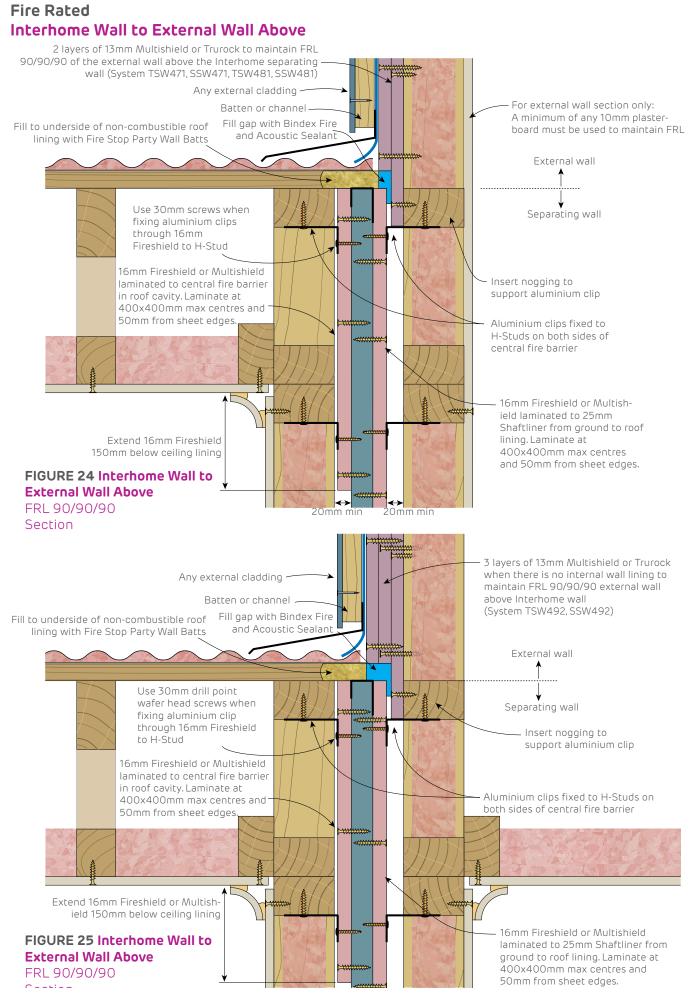


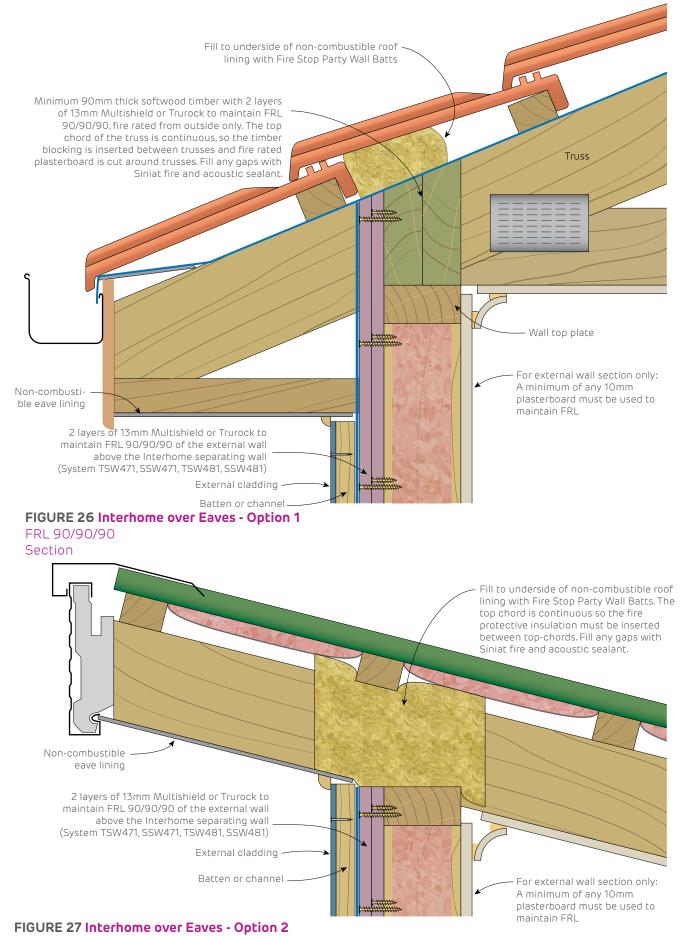
FIGURE 23 Interhome over Eave End Detail for Class 2 Buildings FRL 90/90/90 Elevation





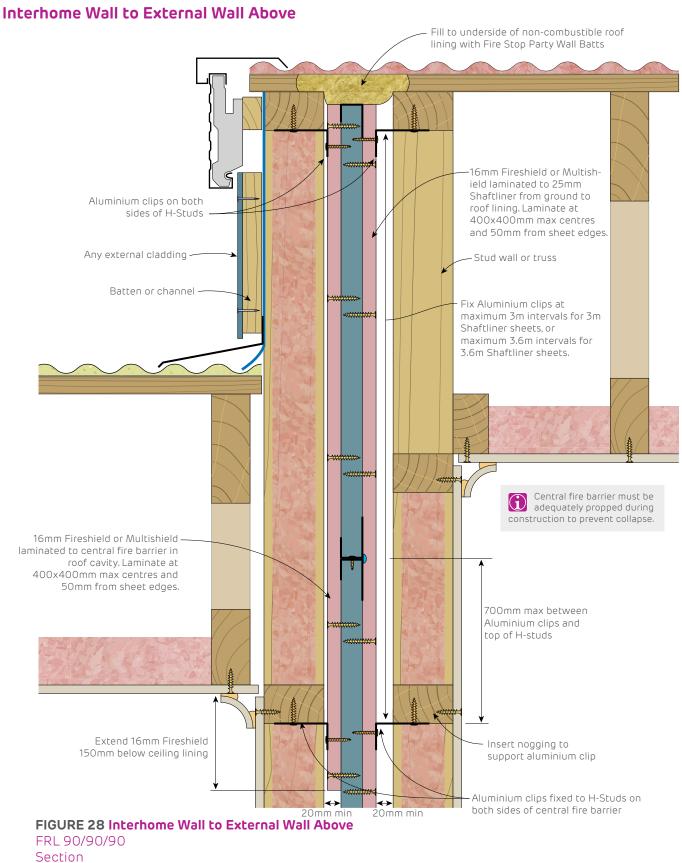


## Fire Rated Interhome Wall to External Wall Above with Eave Overhanging Boundary



FRL 90/90/90 - Section





# Fire Rated



## **Interhome Junctions**

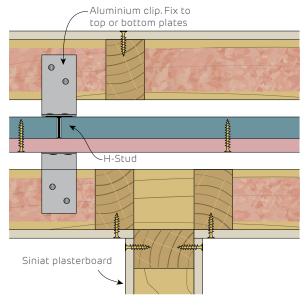
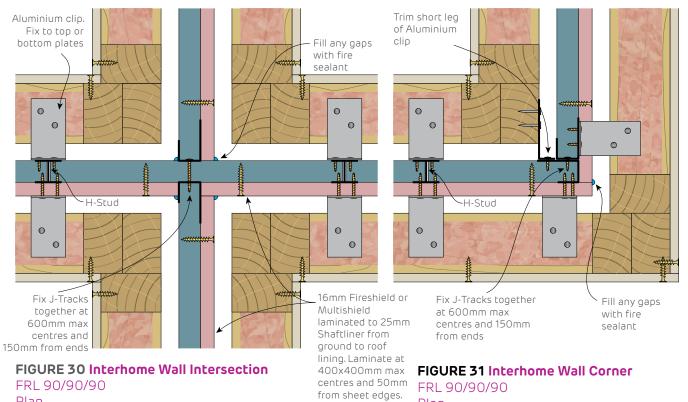


FIGURE 29 Interhome Wall with Non-Fire Rated Intersecting Wall Timber Frame - FRL 90/90/90 Plan



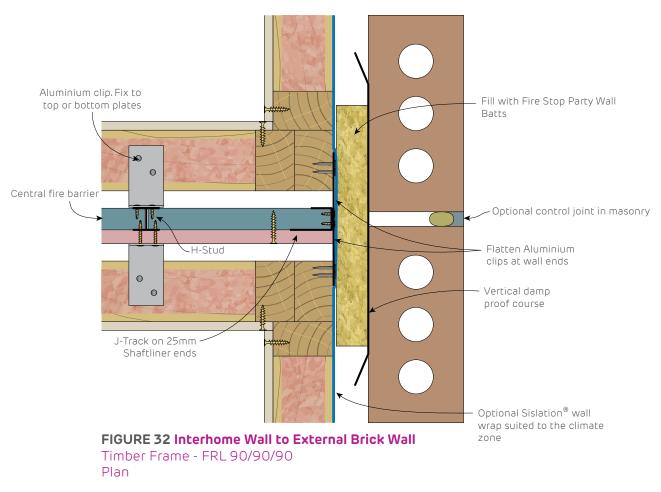
Plan

Plan



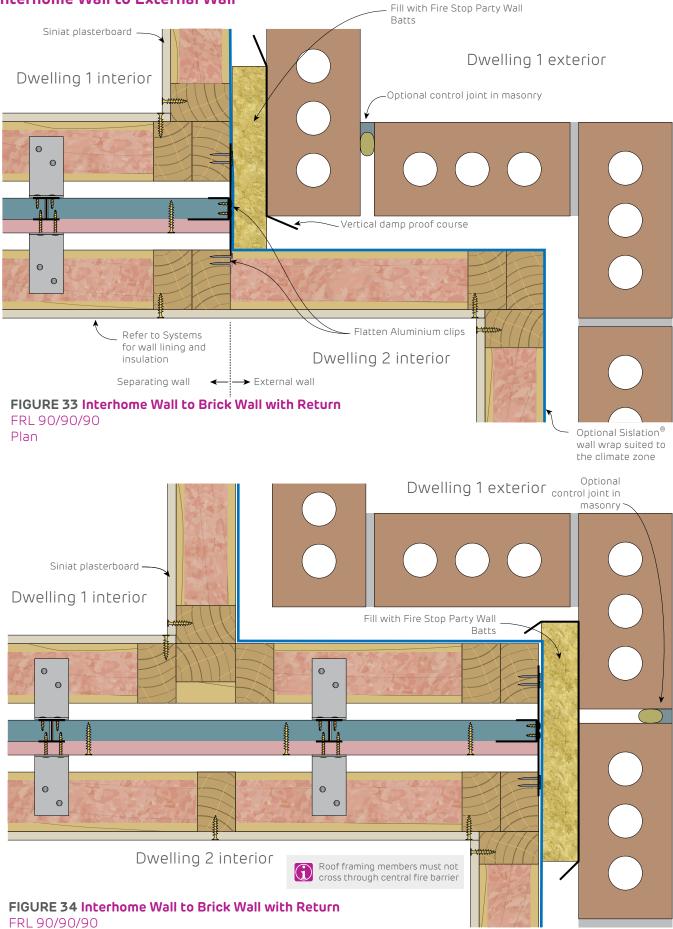


### Fire Rated Interhome Wall to External Wall



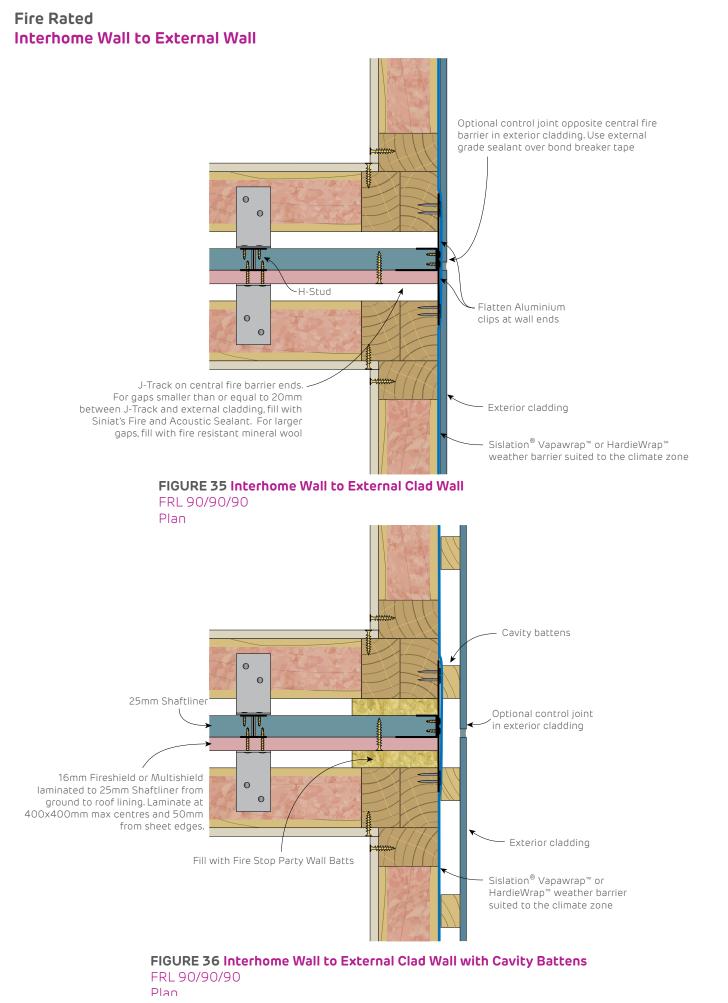






Plan





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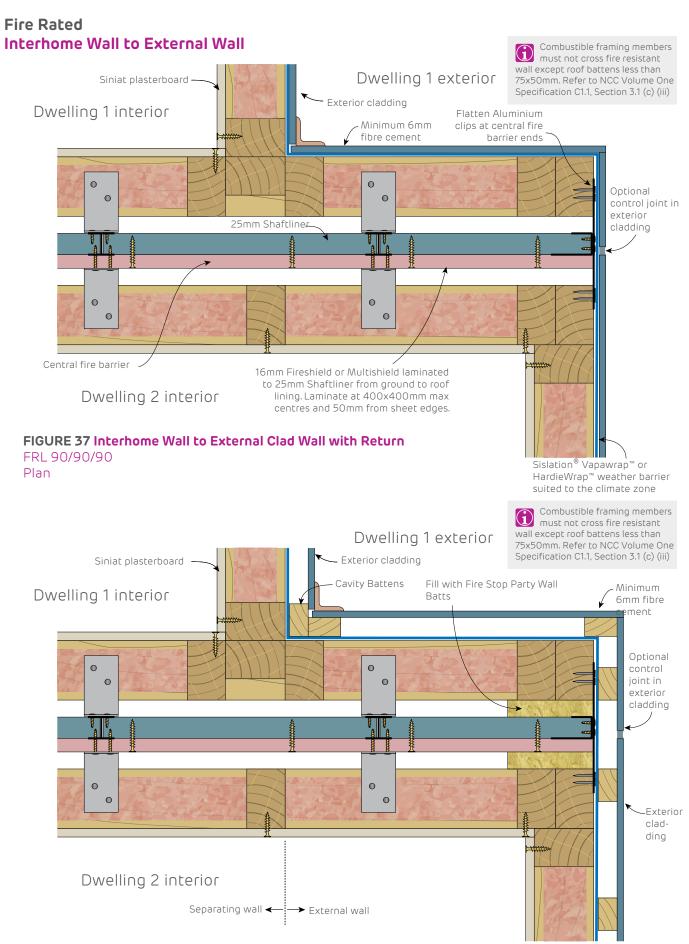
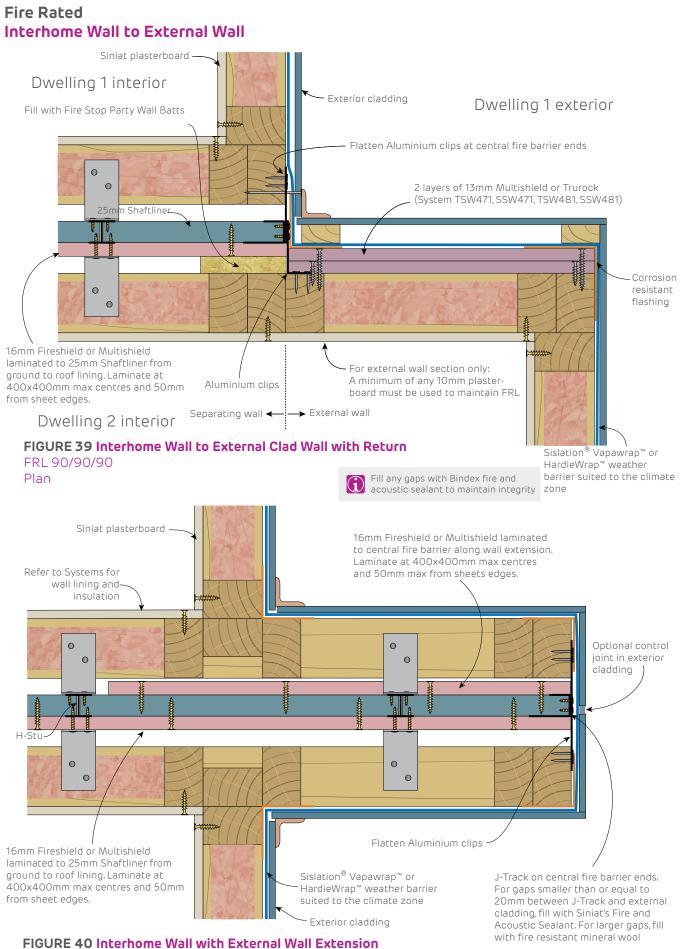


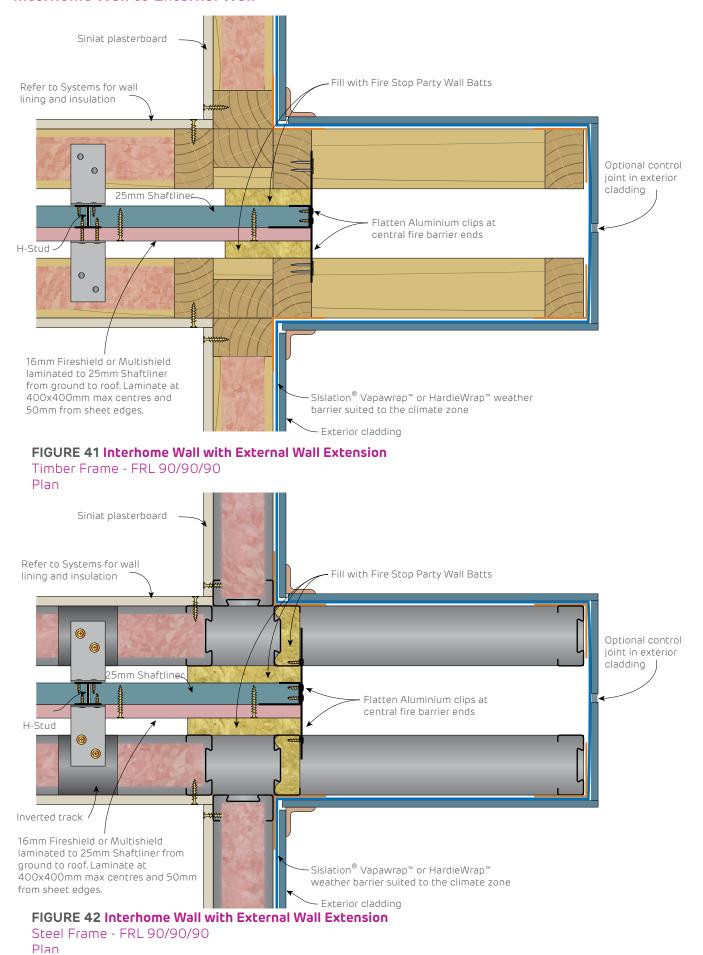
FIGURE 38 Interhome Wall to External Clad Wall with Cavity battens with Return FRL 90/90/90 Plan



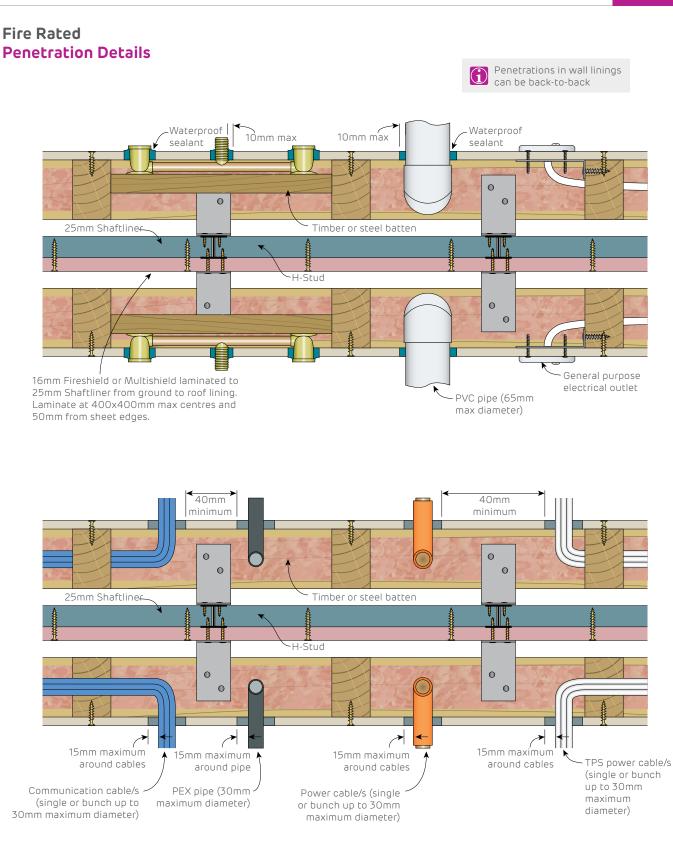
#### FIGURE 40 Interhome Wall with External Wall Extension FRL 90/90/90 Plan



### Fire Rated Interhome Wall to External Wall



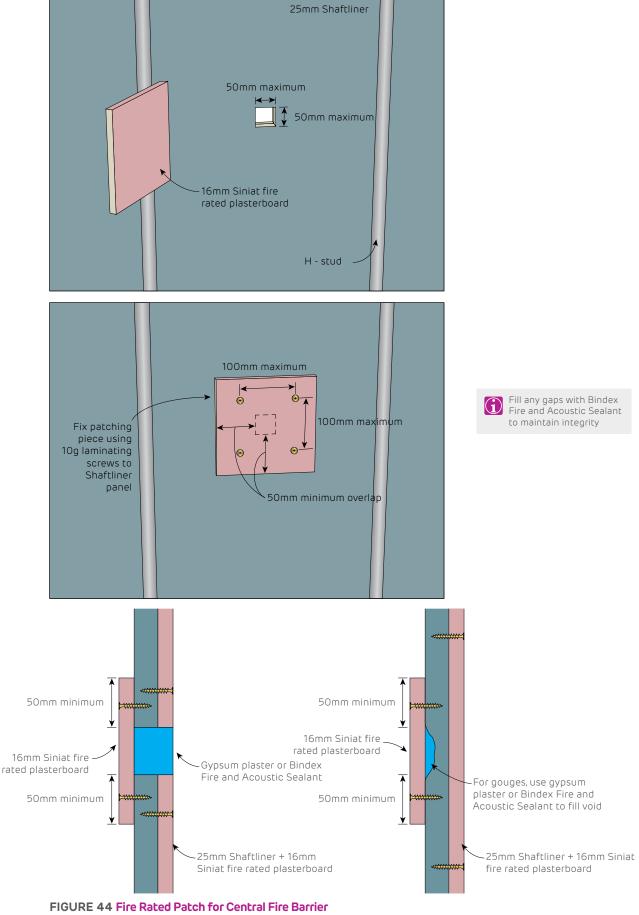




#### **FIGURE 43 Plumbing and Electrical Penetrations in Wall Linings** FRL 90/90/90 Plan

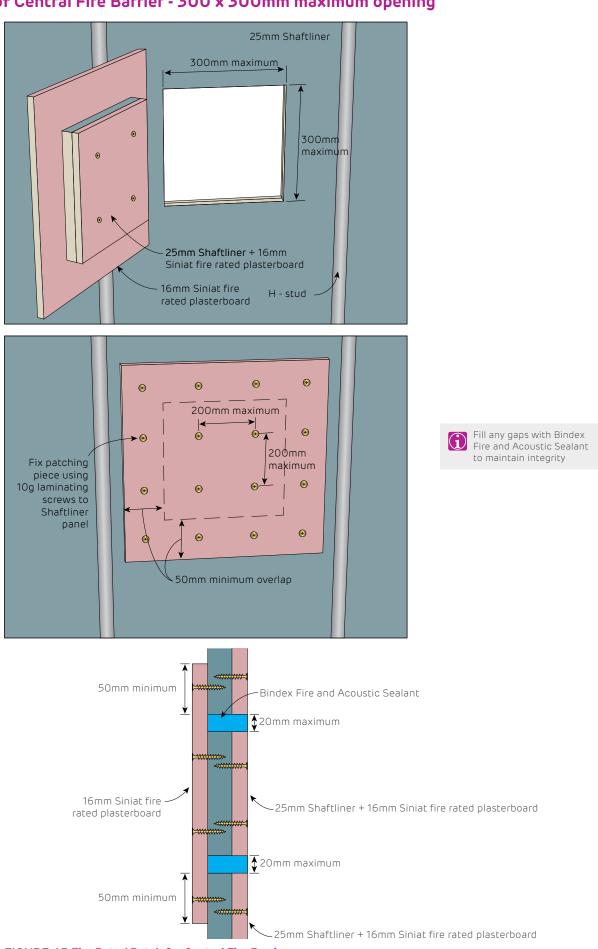


### Fire Rated Patching of Central Fire Barrier - 50 x 50mm maximum opening



Section - FRL 90/90/90





### Fire Rated Patching of Central Fire Barrier - 300 x 300mm maximum opening

FIGURE 45 Fire Rated Patch for Central Fire Barrier



## Fire Rated Patching of Central Fire Barrier - Crack in Shaftliner

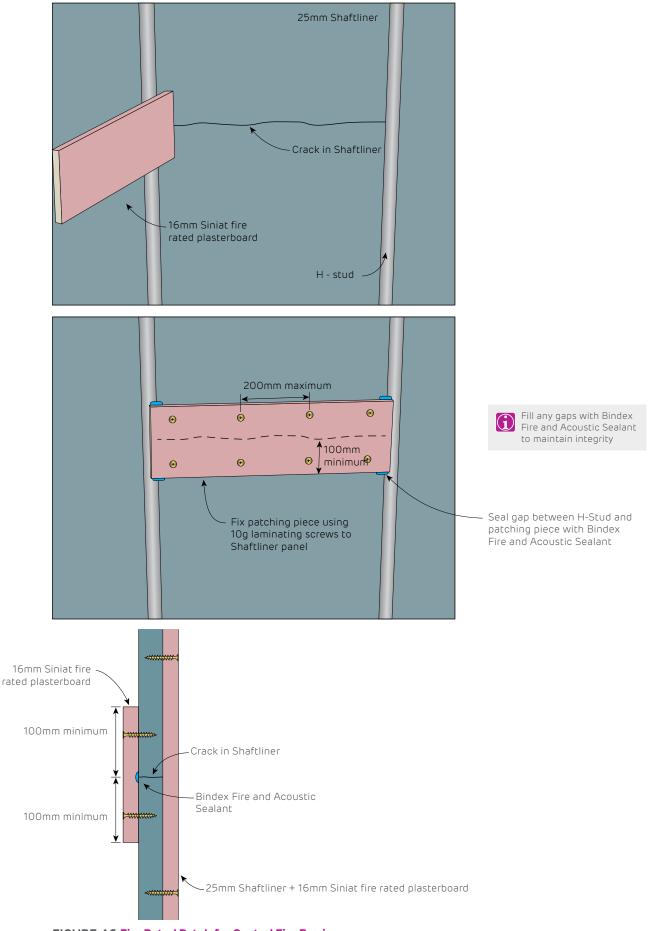


FIGURE 46 Fire Rated Patch for Central Fire Barrier



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