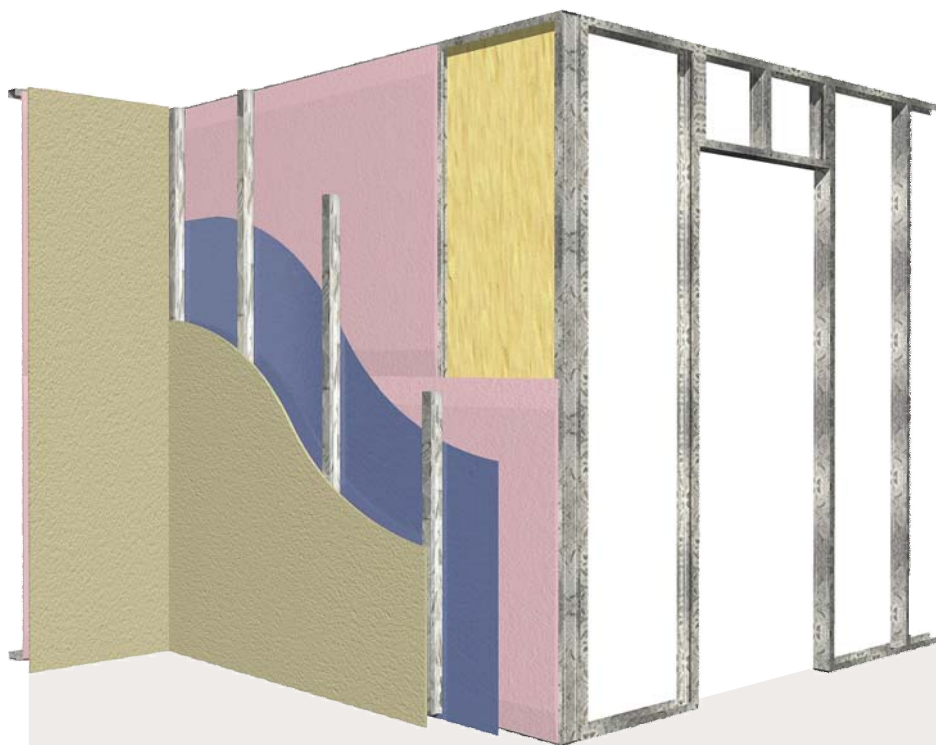


EXTERNAL STEEL WALLS

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External steel framed plasterboard walls protect the inside from weather, noise and, when applicable, fire. They must also comply with local energy efficiency provisions.

Fire rated systems in this section are designed to satisfy BCA fire rating requirements for walls built close to a property boundary. These walls are usually required to be fire rated from the outside only.

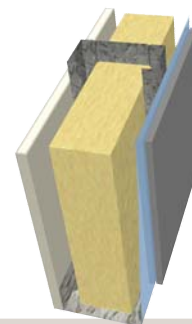
MultiShield forms part of the outer wall and are covered by a moisture barrier and external cladding which provide the weather protection.

This section contains systems, installation instructions and construction details for fire rated and non-fire rated external steel framed walls.

LSEW1

EXTERNAL WALL CLADDING: 1 layer of minimum 6mm fibre cement
 MOISTURE BARRIER: Breathable wall wrap
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

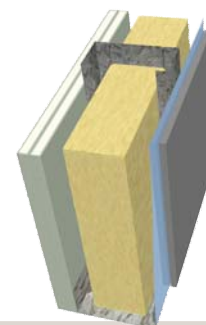
[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]



FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
- / - / -	70	87mm approximate	41 (32)	40 (31)	Day Design 3094-24

LSEW6

EXTERNAL WALL CLADDING: 1 layer of minimum 6mm fibre cement
 MOISTURE BARRIER: Breathable wall wrap
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 2 layers of 10mm **SoundShield** 🗣️

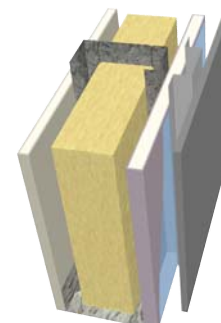


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
- / - / -	70	97mm approximate	48 (37)	47 (37)	Day Design 3094-24

LSEW10


EXTERNAL WALL CLADDING: Any cladding
 EXTERNAL CLADDING FRAME: Timber or steel battens
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 1 layer of 13mm **MultiShield** 🗣️ 🗣️ 🗣️
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

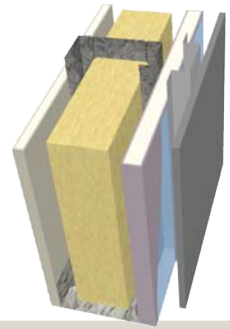


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
30/30/30 rated from the outside only FAR 3371	70	94mm + external cladding	43 (32)	41 (31)	Marshall Day

LSEW11


EXTERNAL WALL CLADDING: Any cladding
 EXTERNAL CLADDING FRAME: Timber or steel battens
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 1 layer of 16mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

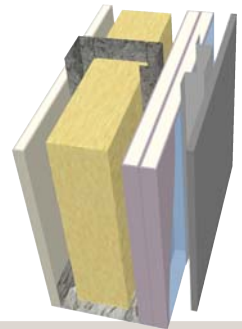


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
60/60/60 rated from the outside only FAR 3371	70	97mm + external cladding	44 (33)	42 (32)	Marshall Day

LSEW12


EXTERNAL WALL CLADDING: Any cladding
 EXTERNAL CLADDING FRAME: Timber or steel battens
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 2 layers of 13mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

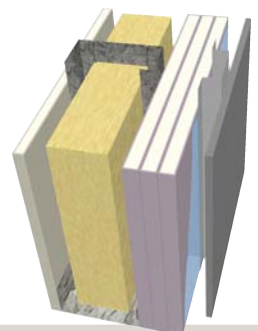


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
90/90/90 rated from the outside only FAR 3371	70	107mm + external cladding	48 (36)	47 (35)	Marshall Day

LSEW14


EXTERNAL WALL CLADDING: Any cladding
 EXTERNAL CLADDING FRAME: Timber or steel battens
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 3 layers of 13mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

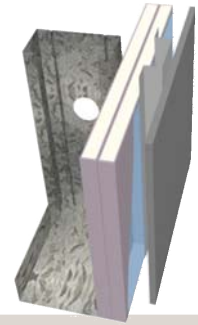
[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]



FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
120/120/120 rated from the outside only FAR 3371	70	120mm + external cladding	51 (39)	50 (38)	Marshall Day


LSEW52

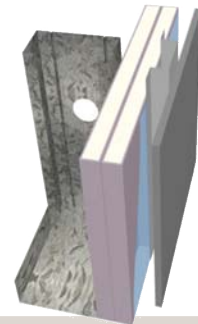
- EXTERNAL WALL CLADDING: Any cladding
- EXTERNAL CLADDING FRAME: Timber or steel battens
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 2 layers of 13mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: Optional
- INTERNAL WALL LINING: Optional



FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)			
	Stud Depth		No Insulation	R1.5 Glasswool	R1.5 Polyester	
30/30/30 rated from the outside only FAR 2827	70	96mm + external cladding	34 (30)	34 (30)	34 (30)	Day Design 3094-33


LSEW53

- EXTERNAL WALL CLADDING: Any cladding
- EXTERNAL CLADDING FRAME: Timber or steel battens
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 2 layers of 16mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: Optional
- INTERNAL WALL LINING: Optional



FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)			
	Stud Depth		No Insulation	R1.5 Glasswool	R1.5 Polyester	
60/60/60 rated from the outside only FAR 2827	70	102mm + external cladding	35 (31)	35 (31)	35 (31)	Day Design 3094-33


LSEW54

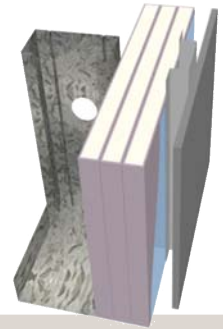
- EXTERNAL WALL CLADDING: Any cladding
- EXTERNAL CLADDING FRAME: Timber or steel battens
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 3 layers of 13mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: Optional
- INTERNAL WALL LINING: Optional



FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)			
	Stud Depth		No Insulation	R1.5 Glasswool	R1.5 Polyester	
90/90/90 rated from the outside only FAR 2827	70	109mm + external cladding	37 (34)	37 (34)	37 (34)	Day Design 3094-33

LSEW55




EXTERNAL WALL CLADDING: Any cladding
 EXTERNAL CLADDING FRAME: Timber or steel battens
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 3 layers of 16mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: Optional
 INTERNAL WALL LINING: Optional

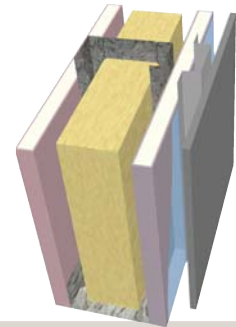


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		No Insulation	R1.5 Glasswool	R1.5 Polyester
120/120/120 rated from the outside only FAR 2827	70	118mm + external cladding	38 (35)	38 (35)	38 (35)

Day Design
3094-33

LSEW30




EXTERNAL WALL CLADDING: Any cladding
 EXTERNAL CLADDING FRAME: Timber or steel battens
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 1 layer of 16mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 16mm **FireShield**  or 16mm **MultiShield** 

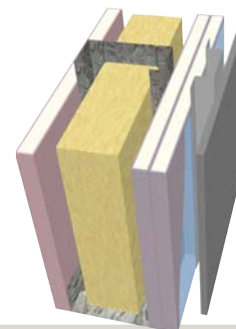


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)	
	Stud Depth		R1.5 Glasswool	R1.5 Polyester
60/60/60 rated from both sides FAR 3371	70	103mm + external cladding	47 (37)	46 (36)

Marshall Day

LSEW31




EXTERNAL WALL CLADDING: Any cladding
 EXTERNAL CLADDING FRAME: Timber or steel battens
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 2 layers of 13mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 16mm **FireShield**  or 16mm **MultiShield** 

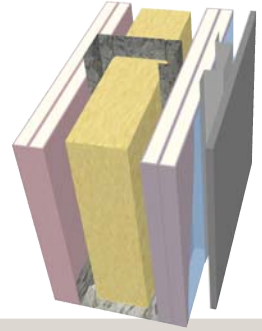


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)	
	Stud Depth		R1.5 Glasswool	R1.5 Polyester
90/90/90 rated from the outside 60/60/60 rated from the inside FAR 3371	70	113mm + external cladding	51 (41)	50 (40)

Marshall Day




LSEW32

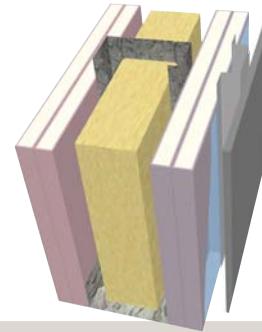
- EXTERNAL WALL CLADDING: Any cladding
- EXTERNAL CLADDING FRAME: Timber or steel battens
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 2 layers of 13mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: As specified in table below
- INTERNAL WALL LINING: 2 layers of 13mm **FireShield**  or 13mm **MultiShield** 



FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
90/90/90 rated from both sides FAR 3371	70	123mm + external cladding	55 (47)	54 (46)	Marshall Day


LSEW33

- EXTERNAL WALL CLADDING: Any cladding
- EXTERNAL CLADDING FRAME: Timber or steel battens
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 2 layers of 16mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: As specified in table below
- INTERNAL WALL LINING: 2 layers of 16mm **FireShield**  or 16mm **MultiShield** 

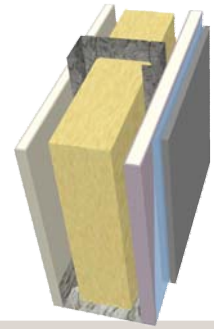


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
120/120/120 rated from both sides FAR 3371	70	135mm + external cladding	56 (50)	55 (49)	Marshall Day

LSEW20


EXTERNAL WALL CLADDING: 1 layer of 7.5mm fibre cement monolithic texture base sheet
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 1 layer of 13mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

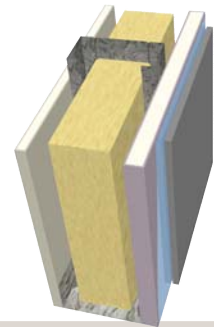


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
30/30/30 rated from the outside only FAR 3371	70	102mm approximate	48 (36)	46 (35)	Marshall Day

LSEW21


EXTERNAL WALL CLADDING: 1 layer of 7.5mm fibre cement monolithic texture base sheet
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 1 layer of 16mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

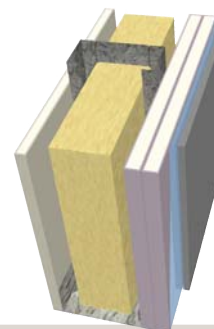


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
60/60/60 rated from the outside only FAR 3371	70	105mm approximate	48 (38)	48 (37)	Day Design 3094-24

LSEW22


EXTERNAL WALL CLADDING: 1 layer of 7.5mm fibre cement monolithic texture base sheet
 MOISTURE BARRIER: Breathable wall wrap
 EXTERNAL WALL LINING: 2 layers of 13mm **MultiShield** 
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

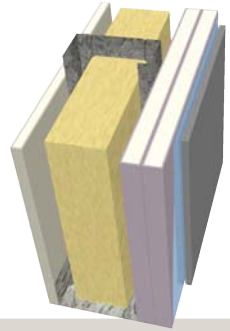


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
90/90/90 rated from the outside only FAR 3371	70	115mm approximate	51 (39)	50 (38)	Marshall Day

LSEW23


- EXTERNAL WALL CLADDING: 1 layer of 7.5mm fibre cement monolithic texture base sheet
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 2 layers of 16mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: As specified in table below
- INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

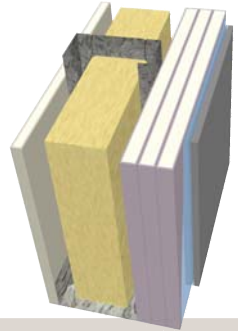


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
90/90/90 rated from the outside only FAR 3371	70	121mm approximate	52 (40)	51 (39)	Marshall Day

LSEW24


- EXTERNAL WALL CLADDING: 1 layer of 7.5mm fibre cement monolithic texture base sheet
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 3 layers of 13mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: As specified in table below
- INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

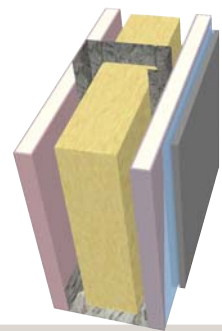


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
120/120/120 rated from the outside only FAR 3371	70	128mm approximate	54 (42)	52 (40)	Marshall Day

LSEW40








- EXTERNAL WALL CLADDING: 1 layer of 7.5mm fibre cement monolithic texture base sheet
- MOISTURE BARRIER: Breathable wall wrap
- EXTERNAL WALL LINING: 1 layer of 16mm **MultiShield** 
- FRAME: Minimum 70mm steel studs at maximum 600mm centres
- WALL INSULATION: As specified in table below
- INTERNAL WALL LINING: 1 layer of 16mm **FireShield**  or 16mm **MultiShield** 

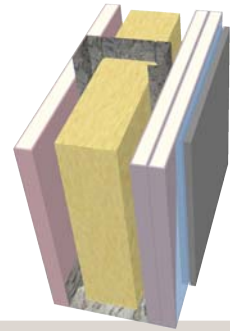
[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]



FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
60/60/60 rated from both sides FAR 3371	70	111mm approximate	51 (41)	49 (40)	Marshall Day








LSEW41

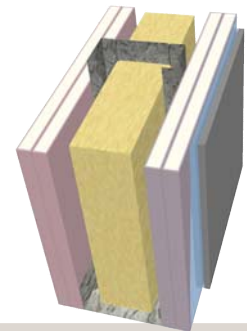
EXTERNAL WALL CLADDING:	1 layer of 7.5mm fibre cement monolithic texture base sheet
MOISTURE BARRIER:	Breathable wall wrap
EXTERNAL WALL LINING:	2 layers of 13mm MultiShield   
FRAME:	Minimum 70mm steel studs at maximum 600mm centres
WALL INSULATION:	As specified in table below
INTERNAL WALL LINING:	1 layer of 16mm FireShield   or 16mm MultiShield  



FRL 90/90/90 rated from the outside 60/60/60 rated from the inside FAR 3371	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		Marshall Day
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
	70	121mm approximate	54 (45)	53 (44)	


LSEW42

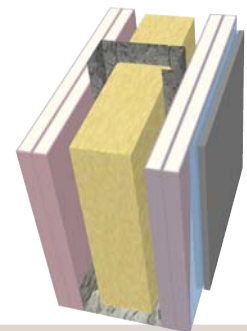
EXTERNAL WALL CLADDING:	1 layer of 7.5mm fibre cement monolithic texture base sheet
MOISTURE BARRIER:	Breathable wall wrap
EXTERNAL WALL LINING:	2 layers of 13mm MultiShield   
FRAME:	Minimum 70mm steel studs at maximum 600mm centres
WALL INSULATION:	As specified in table below
INTERNAL WALL LINING:	2 layers of 13mm FireShield   or 13mm MultiShield  



FRL 90/90/90 rated from both sides FAR 3371	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		Marshall Day
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
	70	131mm approximate	58 (51)	57 (49)	

LSEW43

EXTERNAL WALL CLADDING:	1 layer of 7.5mm fibre cement monolithic texture base sheet
MOISTURE BARRIER:	Breathable wall wrap
EXTERNAL WALL LINING:	2 layers of 16mm MultiShield   
FRAME:	Minimum 70mm steel studs at maximum 600mm centres
WALL INSULATION:	As specified in table below
INTERNAL WALL LINING:	2 layers of 16mm FireShield   or 16mm MultiShield  

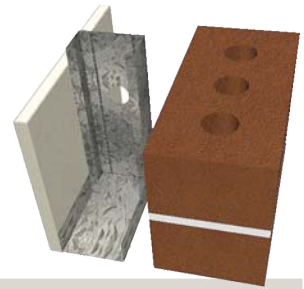


FRL 120/120/120 rated from both sides FAR 3371	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		Marshall Day
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
	70	143mm approximate	59 (52)	58 (51)	

LSVW1


EXTERNAL MASONRY: Minimum 90mm masonry with FRL 60/60/60 (Minimum laid weight 130 kg/m²)
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 10mm **MastaShield**

[10mm **MastaShield** can be substituted with 10mm **WaterShield**, 10mm **SoundShield** or 10mm **SafeShield**]

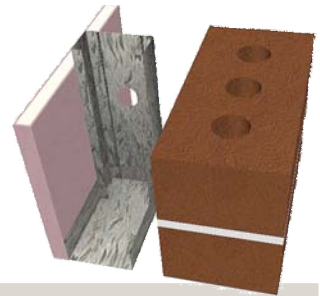


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
60/60/60 rated from the outside only FAR 3586	70	190 mm approximate	53 (49)	53 (49)	Marshall Day

LSVW13


EXTERNAL MASONRY: Minimum 90mm masonry with FRL 60/60/60 (Minimum laid weight 130 kg/m²)
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 1 layer of 16mm **FireShield** 

[16mm **FireShield** can be substituted with 16mm **MultiShield**]

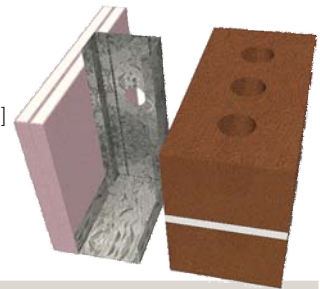


FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
60/60/60 rated from both sides FAR 3586	70	196 mm approximate	54 (49)	54 (49)	Marshall Day

LSVW11


EXTERNAL MASONRY: Minimum 90mm masonry with FRL 90/90/90 (Minimum laid weight 130 kg/m²)
 FRAME: Minimum 70mm steel studs at maximum 600mm centres
 WALL INSULATION: As specified in table below
 INTERNAL WALL LINING: 2 layers of 13mm **FireShield** 

[13mm **FireShield** can be substituted with 13mm **MultiShield** or 13mm **ImpactShield** or 13mm **QuadShield**]




FRL	STUD SIZE (mm)	WIDTH (mm)	ACOUSTICS Rw (Rw + Ctr)		
	Stud Depth		R1.5 Glasswool	R1.5 Polyester	
90/90/90 rated from both sides FAR 3586	70	206 mm approximate	54 (51)	54 (51)	Marshall Day

GENERAL REQUIREMENTS

	NON-FIRE RATED	FIRE RATED 
Install control joints in plasterboard walls: <ul style="list-style-type: none"> › At 12m maximum intervals › At all control joints in the structure › At any change in the substrate material 	✓	✓
Jointing of the MultiShield is not required due to the overlying breathable wall wrap and cladding.		✓
Use approved fire rated penetration details. Fire penetrations may require fire collars or other devices to maintain fire performance.		✓
Use approved fire rated penetration details for systems that use the internal non-fire rated plasterboard wall lining to maintain the FRL.		✓
Pack any gaps between the top of the wall and the underside of the roof covering with mineral fibre or other suitable fire resisting material. This maintains the fire rating of the system. [REFER TO MINERAL FIBRE MANUFACTURERS SPECIFICATIONS FOR MINIMUM WIDTHS REQUIRED].		✓
Protect plasterboard from water pooling at ground level.	✓	✓
Use fire sealant on all gaps and around perimeter, vermiculite plaster is not permitted.		✓

i For acceptable modifications or variations to fire rated systems [REFER TO SECTION 3.3 FIRE RESISTANCE].

FRAMING

	NON-FIRE RATED	FIRE RATED 
Framing members must be spaced at 600mm maximum centres	✓	✓
Face studs in the same direction if possible, to allow easier fastening of plasterboard. However, installation of some services may require the studs to be positioned in opposite directions [REFER TO CONSTRUCTION DETAILS].	✓	✓


i Noggings are permitted to assist the fixing of services. Copper Chromium Arsenate (CCA) treated timber must not be used.

For non-fire rated walls, noggings are not required behind recessed joints when sheeting plasterboard horizontally.

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


Gas services are not permitted in fire rated systems.

PLASTERBOARD LAYOUT

	NON-FIRE RATED	FIRE RATED 
Alternate from one side of the wall to the other when fixing the plasterboard sheets.	✓	✓
Vertical joints must be 200mm minimum from the edge of any opening such as windows and doorways to minimise cracking at the joints.	✓	✓
HORIZONTAL LAYOUT		
Stagger butt joints by 600mm minimum on adjoining sheets, between layers and on opposite sides of the wall.	✓	✓
First layer butt joints must be backed by a stud or back-blocked.	✓	
First layer butt joints must be backed by a stud.		✓
Stagger recessed edges by 300mm minimum between layers.	✓	✓
Stagger recessed edges by 300mm minimum on opposite sides of the wall or alternatively, back by a nogging.		✓
VERTICAL LAYOUT		
Stagger butt joints by 600mm minimum on adjoining sheets, between layers and on opposite sides of the wall.	✓	✓
First layer butt joints must be backed by a nogging or back-blocked.	✓	
First layer butt joints must be backed by a nogging.		✓
Stagger recessed edges by 300mm minimum between layers and on opposite sides of the wall.	✓	✓

i Install plasterboard sheets horizontally when practical to minimise stud twisting and reduce the effect of glancing light.
 Minimise butt joints by using long sheets.

PLASTERBOARD FIXING

	NON-FIRE RATED	FIRE RATED 
Drive screws to just below the sheet surface, taking care not to break the paper linerboard.	✓	✓
Do not fix plasterboard to steel more than 2mm BMT.	✓	✓
Laminating screws can be used to fix butt joints in the second and third layer.	✓	✓
SCREW AND ADHESIVE METHOD		
Apply MastaGrip Stud Adhesive after the frame is clean, dry, and free from grease, dust and other contaminants.		
Apply MastaGrip daubs 200mm minimum from screws and plasterboard edges.	✓	
SCREW ONLY METHOD		
Use the Screw Only Method in tiled or fire rated areas. Stud adhesive is not permitted.	✓	✓

i The Screw and Adhesive Method is recommended for non-fire rated applications. **MastaGrip** will:


- Minimise screw popping
- Reduce the number of screw heads that may show in glancing light
- Assist in compensating for frame irregularities.

SCREW TYPE AND MINIMUM SIZE FOR THE INSTALLATION OF PLASTERBOARD TO STEEL

PLASTERBOARD THICKNESS	1ST LAYER	2ND LAYER	3RD LAYER
10mm	25mm – 6g S screw	40mm – 6g S screw *	-
13mm	25mm – 6g S screw	40mm – 6g S screw *	60mm – 6g S screw *
16mm	30mm – 6g S screw	45mm – 6g S screw *	65mm – 6g S screw *

For steel up to 0.8mm BMT use Type 'S' fine thread needle point screws.
 For steel 0.8mm to 2.0mm BMT use Type 'S' fine thread drill point screws.
 * 40mm - 10g Laminating screws may be used as detailed in installation diagrams.

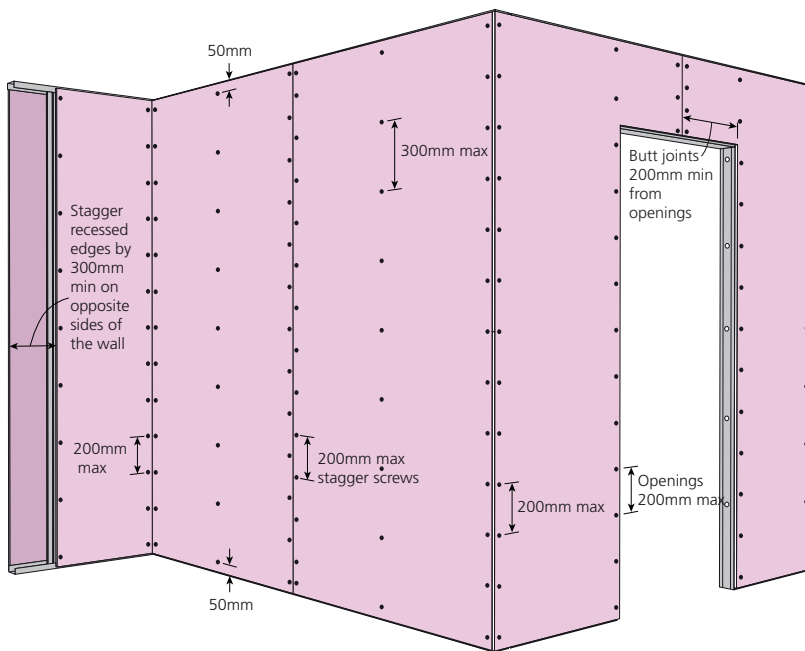
EXTERIOR CLADDING

	NON-FIRE RATED	FIRE RATED 
Fix cladding or cladding battens to the steel frame through the MultiShield	✓	✓
Extend the external fire rated wall up to the non-combustible roof covering or non-combustible eaves lining [REFER TO CONSTRUCTION DETAILS].	✓	✓

i Exterior cladding and moisture barrier must provide protection from the weather. Use construction techniques that direct condensation and rain away from plasterboard. When using external cladding other than 7.5mm fibre cement texture base sheet, Lafarge recommends systems that include a drained cavity between the external cladding and the Multishield. Battens between external cladding and external plasterboard may be used without degrading the fire and acoustic performance.

FIGURE 1

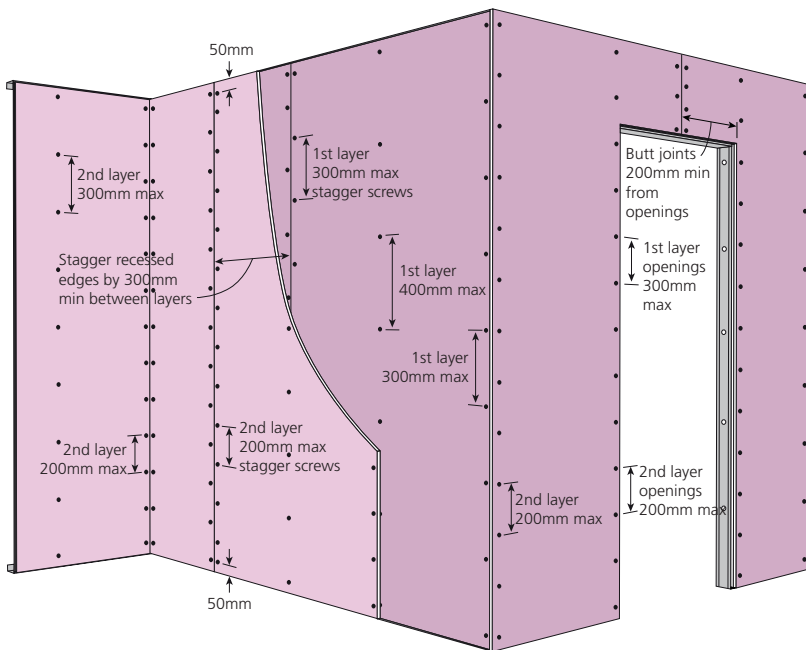
 **Fire rated 1 layer - Vertical Screw Only Method**



Fixing	SCREW ONLY METHOD
Sheet Layout	Vertical
Perimeter	Perimeter screws 10-15mm from sheet edges except at top and bottom tracks. Plasterboard must not be fixed to top and bottom tracks.
Field	Fix at 300mm max centres.
Recessed Edges	Fix at 200mm max centres and stagger screws. Stagger recessed edges by 300mm min on opposite sides of the wall. Recessed edges must be backed by a stud.
Butt Joints	Fix at 200mm max centres and stagger screws. Stagger butt joints by 600mm min on adjoining sheets and on opposite sides of the wall. 1st layer butt joints must be backed by a nogging.
Internal and External Corners	Fix at 200mm max centres.
Openings	Fix at 200mm max centres.
Fire Sealant	Use fire sealant on all gaps and around perimeter to maintain fire and acoustic integrity. [REFER TO CONSTRUCTION DETAILS]
Jointing Face Layer	Jointing of the face layer is not required if a moisture barrier is used over the plasterboard.

FIGURE 2

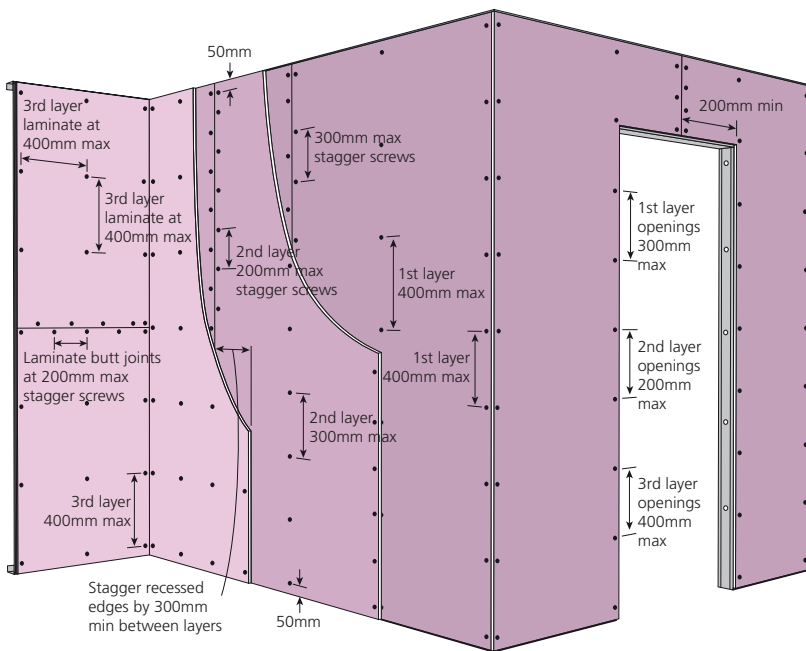
Fire rated 2 layers - Vertical + Vertical
Screw Only Method



Fixing	SCREW ONLY METHOD
Sheet Layout	1st layer: Vertical 2nd layer: Vertical
Perimeter	Perimeter screws 10-15mm from sheet edges except at top and bottom tracks. Plasterboard must not be fixed to top and bottom tracks.
Field	1st layer: Fix at 400mm max centres. 2nd layer: Fix at 300mm max centres.
Recessed Edges	1st layer: Fix at 300mm max centres and stagger screws. Stagger recessed edges by 300mm min on opposite sides of the wall. Recessed edges must be backed by a stud. 2nd layer: Fix at 200mm max centres and stagger screws. Recessed edges must be backed by a stud.
Butt Joints	1st layer: Fix at 200mm max centres and stagger screws. Stagger butt joints by 600mm min on adjoining sheets, between layers and on opposite sides of the wall. 1st layer butt joint must be backed by a nogging. 2nd layer: Fix at 200mm max centres and stagger screws. Alternatively, laminate to 1st layer using laminating screws at 200mm max centres and stagger screws.
Internal and External Corners	1st layer: Fix at 300mm max centres. 2nd layer: Fix at 200mm max centres.
Openings	1st layer: Fix at 300mm max centres. 2nd layer: Fix at 200mm max centres.
Fire Sealant	Use fire sealant on all gaps and around perimeter to maintain fire and acoustic integrity. [REFER TO CONSTRUCTION DETAILS]
Jointing Face Layer	Jointing of the face layer is not required if a moisture barrier is used over the plasterboard.

FIGURE 3

Fire rated 3 layers - All Vertical
Screw Only Method



Fixing	SCREW ONLY METHOD
Sheet Layout	1st, 2nd and 3rd layers: Vertical
Perimeter	Perimeter screws 10-15mm from sheet edges except at top and bottom tracks. Plasterboard must not be fixed to top and bottom tracks.
Field	1st layer: Fix at 400mm max centres. 2nd layer: Fix at 300mm max centres. 3rd layer: Fix at 400mm max centres or alternatively, laminate to 2nd layer at 400x400mm max centres.
Recessed Edges	1st layer: Fix at 300mm max centres and stagger screws. Stagger recessed edges by 300mm min on opposite sides of the wall. Recessed edges must be backed by a stud. 2nd layer: Fix at 200mm max centres and stagger screws. Recessed edges must be backed by a stud. 3rd layer: Fix at 400mm max centres and stagger screws.
Butt Joints	1st layer: Fix at 200mm max centres and stagger screws. Stagger butt joints by 600mm min on adjoining sheets, between layers and on opposite sides of the wall. 1st layer butt joint must be backed by a nogging. 2nd and 3rd layers: Fix at 200mm max centres and stagger screws. Alternatively, laminate to previous layer using laminating screws at 200mm max centres and stagger screws.
Internal and External Corners	1st layer: Fix at 300mm max centres. 2nd layer: Fix at 200mm max centres. 3rd layer: Fix at 400mm max centres.
Openings	1st layer: Fix at 300mm max centres. 2nd layer: Fix at 200mm max centres. 3rd layer: Fix at 400mm max centres.
Fire Sealant	Use fire sealant on all gaps and around perimeter to maintain fire and acoustic integrity. [REFER TO CONSTRUCTION DETAILS]
Jointing Face Layer	Jointing of the face layer is not required if a moisture barrier is used over the plasterboard.



FIRE RATED

EXTERNAL WALL HEAD AND BASE - ELEVATION

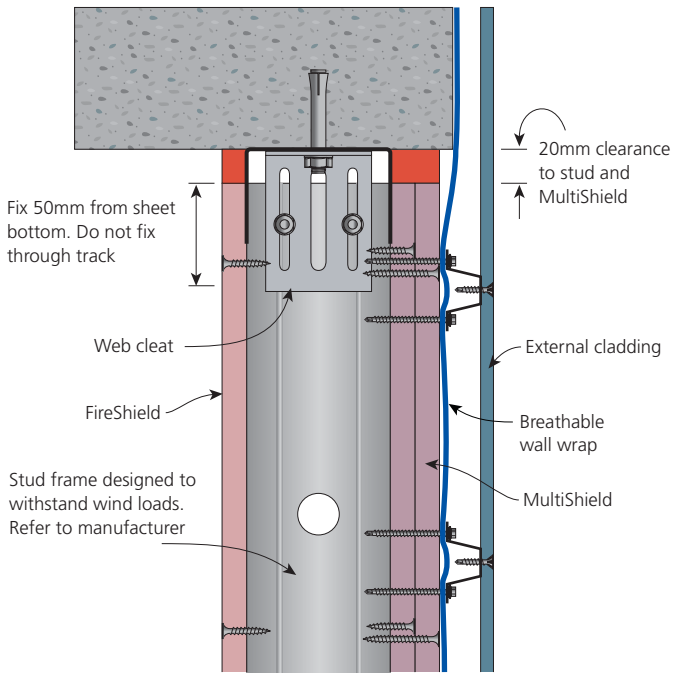


FIGURE 4
Fire rated external wall

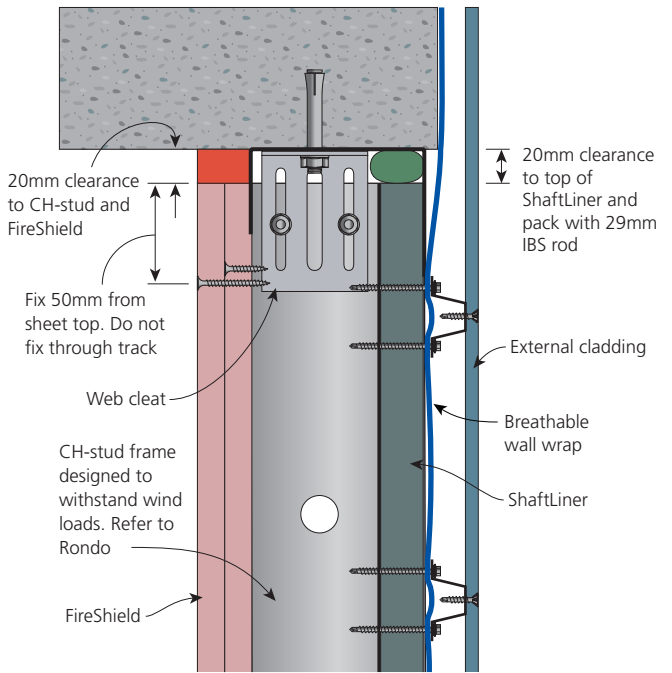


FIGURE 5
Fire rated external wall
Shaft Wall system

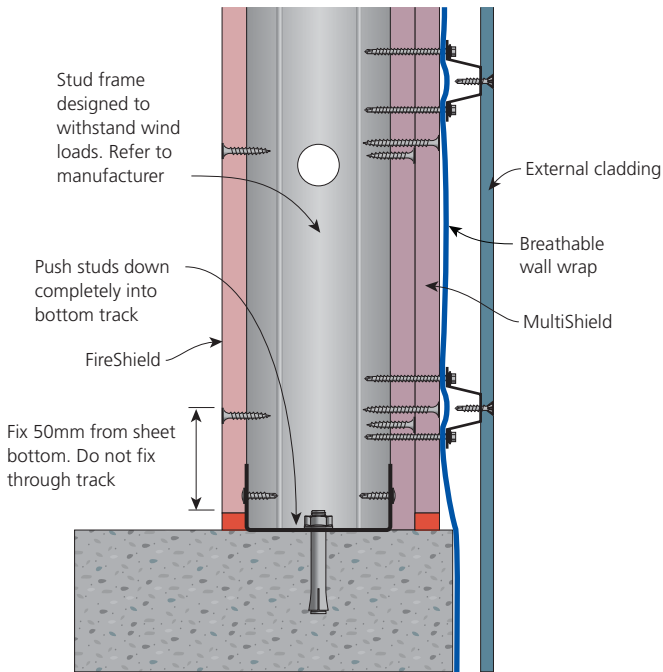


FIGURE 6
Fire rated external wall

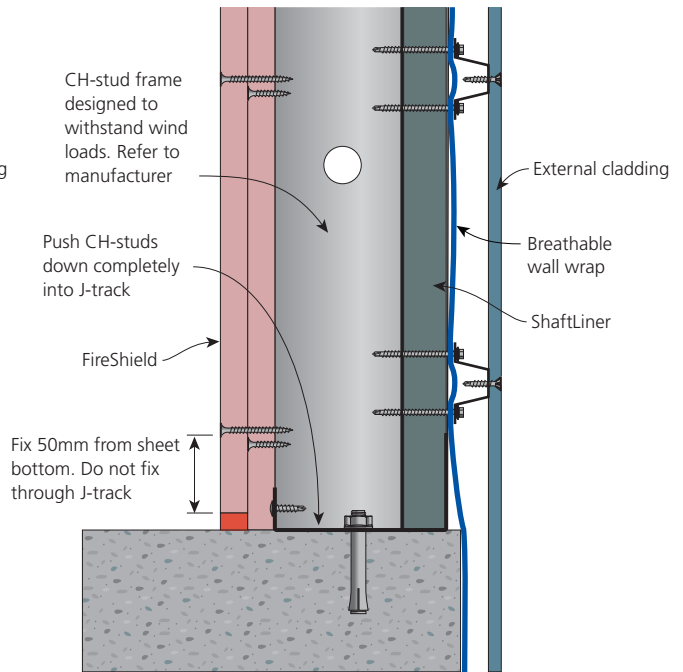


FIGURE 7
Fire rated external wall
Shaft Wall system



FIRE RATED

EXTERNAL SPANDREL WALLS - ELEVATION

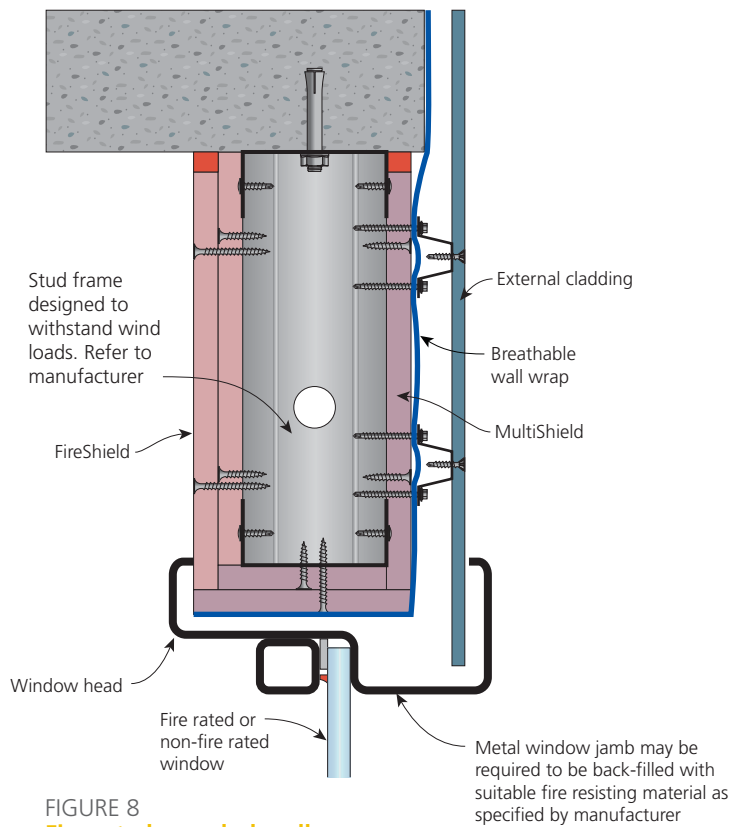


FIGURE 8
Fire rated spandrel wall
 Example only

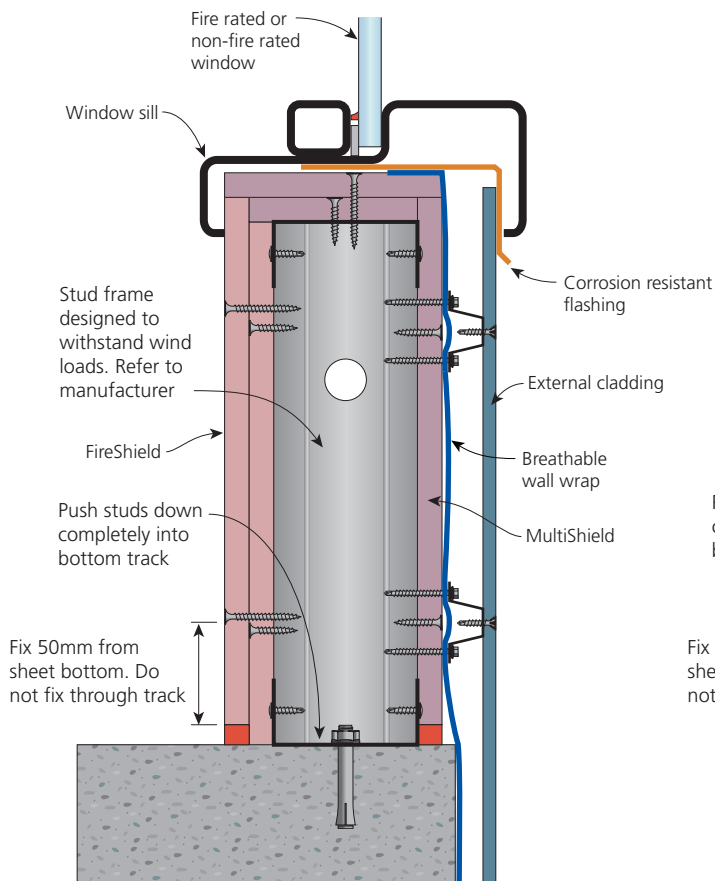


FIGURE 9
Fire rated spandrel wall
 Example only

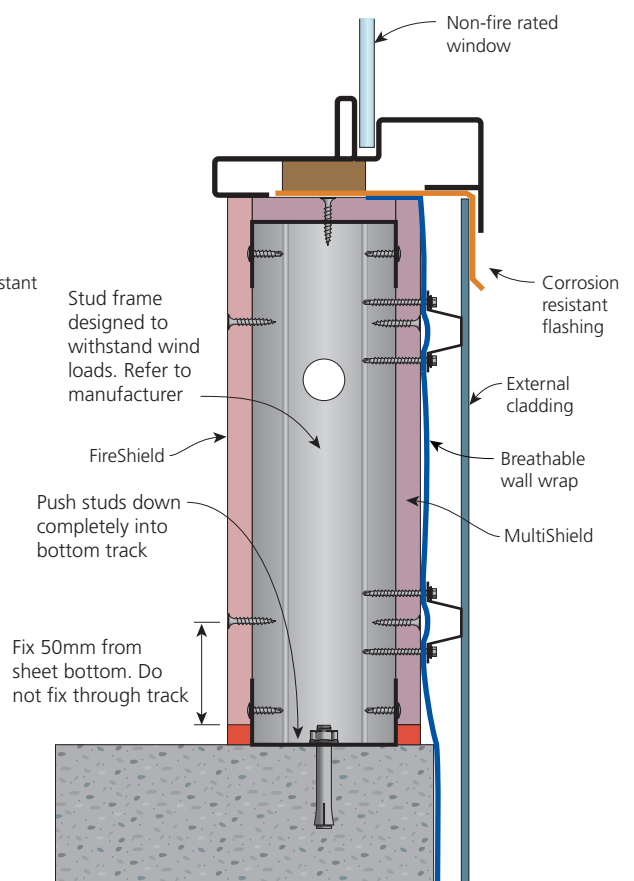


FIGURE 10
Fire rated spandrel wall
 Example only



FIRE RATED

EXTERNAL WALLS JUNCTION TO COLUMN AND CONTROL JOINTS - PLAN VIEW

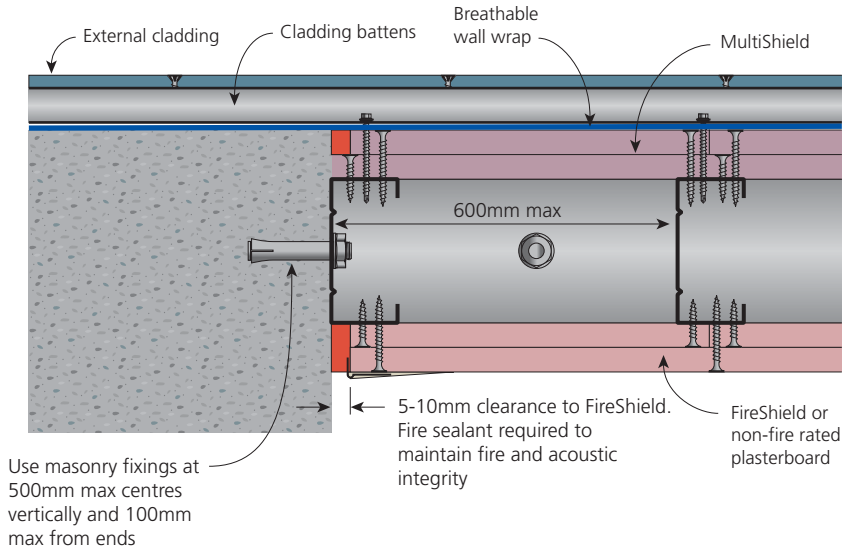


FIGURE 11
Fire rated external wall to concrete column

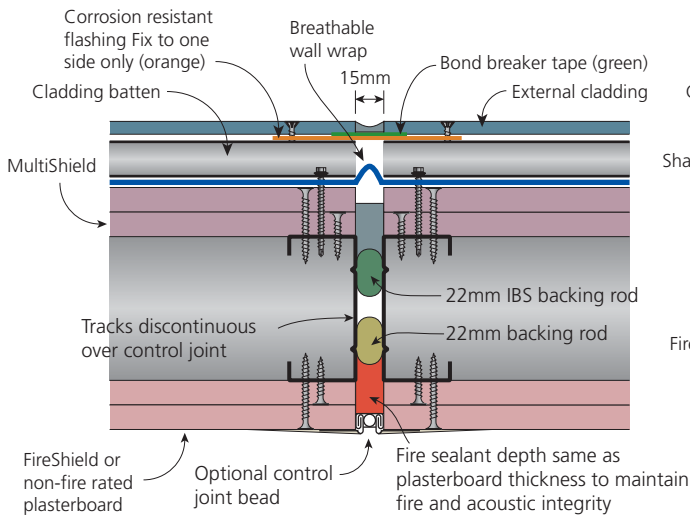


FIGURE 12
Fire rated external wall control joint

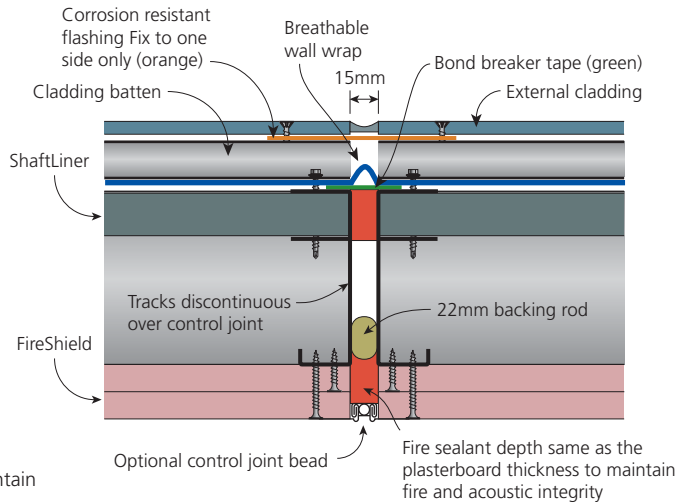


FIGURE 13
Fire rated external wall control joint
Shaft Wall system