



CERTIFICATE OF APPROVAL

No CF 10255

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

Grayson (GB) Ltd

**Cranmer House, Magna 34 Industrial Park, Temple Street,
Rotherham, S60 1FG, United Kingdom**

Have been assessed against the requirements of the Technical Schedule(s)
denoted below and are approved for use subject to the conditions
appended hereto:

CERTIFIED PRODUCT

FireBlox Plus – Cavity Barrier

TECHNICAL SCHEDULE

**TS39 Fire Resisting Cavity
Barrier Systems**

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

**Paul Duggan
Certification Manager**



Issued: 2nd July 2025
Frequency: Every 3 years
Valid to: 1st July 2030





CERTIFICATE No CF 10255

GRAYSON (GB) LTD

FireBlox Plus

1. This certification is provided to the client for their own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
2. This approval relates to the use of Grayson (GB) Ltd FireBlox Plus - for the fire protection of cavities within walls & floors (closed state). The detailed scope is given in the Approval Matrices included in this Certificate. This shows the thickness and acceptable services for the cavity barriers required to provide fire resistance periods utilising the temperature and pressure conditions of EN1366-4: 2021 of up to 120 minutes for differing services and wall/floor constructions.
3. The product is approved on the basis of:
 - i) Initial type testing
 - ii) Audit testing at the frequency specified in TS39
 - iii) A design appraisal against TS39
 - iv) Inspection and surveillance of factory production control
 - v) Production surveillance under ISO 9001:2015
4. The AAC, concrete, blockwork or masonry twin leaf, or SFS walls or floors shall have at least the same fire resistance performance as that required for the cavity barriers. AAC, concrete, blockwork or masonry, must have a minimum density of 670 kg/m³ and a minimum thickness of 100 mm for each leaf. Further specific requirements for the supporting construction are given in each approval matrix.
5. If an extension to scope is not explicitly detailed within the certificate, it should not be assumed to be acceptable by omission.
6. The approval relates to ongoing production. Product and/or its immediate packaging is identified with the manufacturers' name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.

Further Information

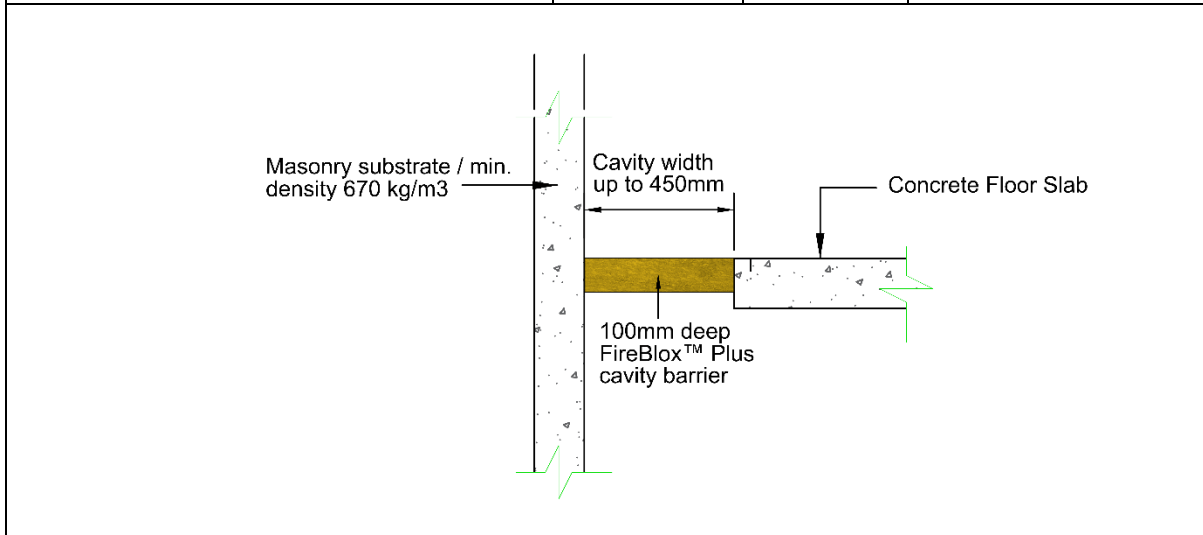
Further information regarding the details contained in this certificate may be obtained from Grayson (GB) Ltd (Tel: 03448 504050).

Further information regarding CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 655 116).

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Horizontal Orientation - fire from the underside only - concrete/masonry to concrete/masonry substrates

Summary of bracket requirements at a maximum of 500mm centres – see Grayson installation instructions for further details	Gap Width (mm)	Fire Resistance Performance Classification	
		Integrity (minutes)	Insulation (minutes)
The barrier is retained in place using FireBlox brackets – two per 1 metre length fixed at a maximum distance of 250mm from each end, a maximum spacing between brackets of 500 mm. Where the end brackets are spaced ≤ 500 mm, at least one intermediate bracket is still required. The brackets are through fixed to concrete substrate using one fixing per bracket. The bracket must penetrate the barrier at mid depth of at least $\frac{3}{4}$ of the width of the barrier/cavity.	20 - 200	120	120
	$> 200 \leq 250$	120	90
	$> 250 \leq 450$	120	60

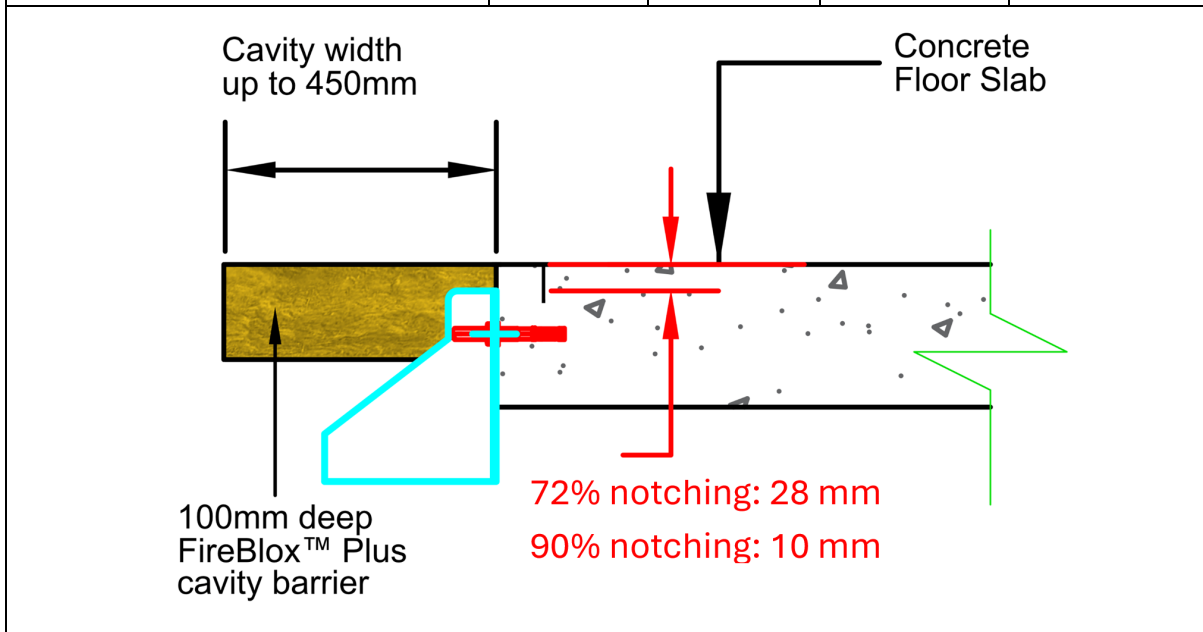


FireBlox Plus was tested against AAC slab of a density of 670kg/m³. Compression is a minimum of 5 mm and joints taped on the top side of the barrier. Barrier depth is 100mm full fill cavity FireBlox Plus.

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Horizontal Orientation - fire from the underside only - concrete/masonry to concrete/masonry substrates with masonry support brackets

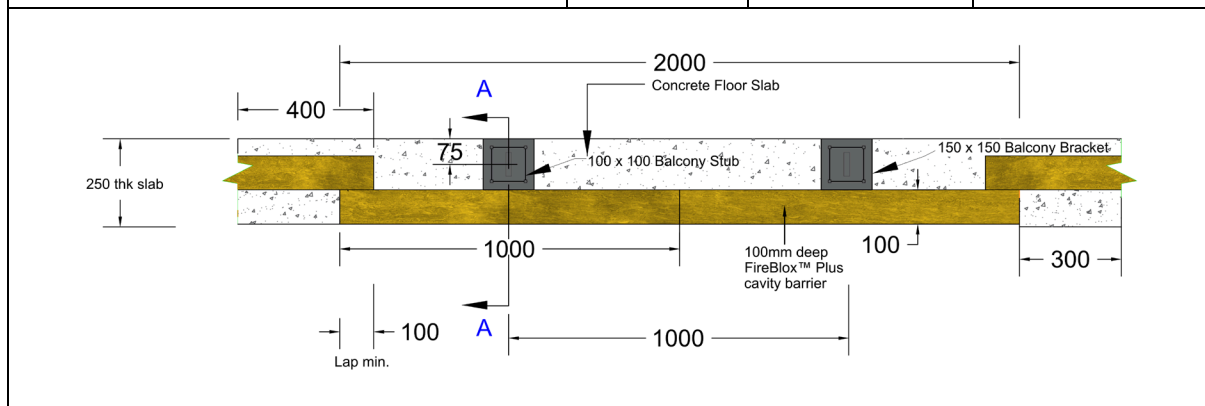
Summary of bracket requirements at a maximum of 500mm centres – see Grayson installation instructions for further details	Notching %	Gap Width (mm)	Fire Resistance Performance Classification	
			Integrity (minutes)	Insulation (minutes)
The barrier is notched by 72% or 90% of the total 100 mm thickness around the masonry support bracket and is retained in place using FireBlox brackets - two per 1 metre length fixed at a maximum distance of 250mm from each end, a maximum spacing between brackets of 500 mm. Where the end brackets are spaced ≤ 500 mm, at least one intermediate bracket is still required. The brackets are through fixed to concrete substrate using one fixing per bracket. The bracket must penetrate the barrier at mid depth of at least $\frac{3}{4}$ of the width of the barrier/cavity.	72	20 - 200	120	120
		$> 200 \leq 450$	60	60
	90	20 - 200	120	20



FireBlox Plus was tested against AAC slabs of a density of 670kg/m³. Compression is a minimum of 5 mm and joints taped on the top side of the barrier. Barrier depth is 100mm full fill cavity.

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Summary of bracket requirements at a maximum of 500mm centres – see Grayson installation instructions for further details	Gap Width (mm)	Fire Resistance Performance Classification	
		Integrity (minutes)	Insulation (minutes)
<p>The barrier is installed flush with the exposed face of the test construction in the middle section underneath the balcony stub and the two outer sections installed flush with the base of the Balcony Stub as a continuous barrier with an overlap of a minimum of 100 mm on each side.</p> <p>Aluminium foil faced tape is applied to both the butt and overlap joints on the unexposed face only. The barrier is retained in place using stainless steel FireBlox brackets - two per 1 metre length fixed at a maximum distance of 250mm from each end, a maximum spacing between brackets of 500 mm. Where the end brackets are spaced \leq 500 mm, at least one intermediate bracket is still required. The brackets are through fixed to concrete substrate using one fixing per bracket. The bracket must penetrate the barrier at mid depth of at least $\frac{3}{4}$ of the width of the barrier/cavity.</p>	200	120	30



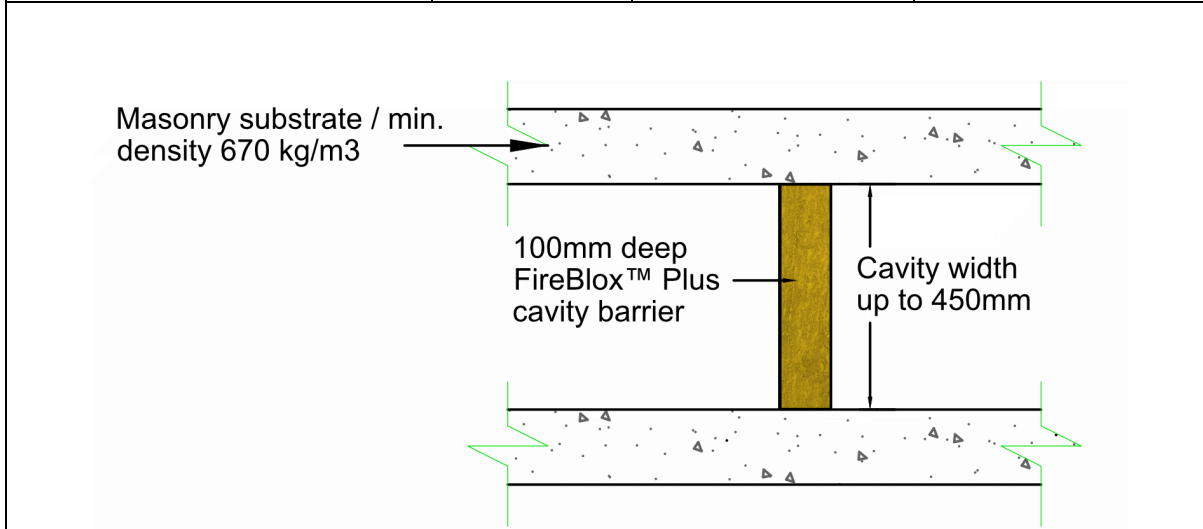
Horizontal Orientation - fire from the underside only - concrete/masonry to concrete/masonry substrates - Balcony stub detail

FireBlox Plus was tested against AAC of a density of 670kg/m³. Compression is a minimum of 5 mm and joints taped on the top side of the barrier. Barrier depth is 100mm full fill cavity.

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Vertical Orientation Concrete/masonry to Concrete/masonry substrates

Summary of bracket requirements at a maximum of 500mm centres – see Grayson installation instructions for further details	Gap Width (mm)	Fire Resistance Performance Classification	
		Integrity (minutes)	Insulation (minutes)
The barrier is retained in place using FireBlox brackets - two per 1 metre length fixed at a maximum distance of 250mm from each end, a maximum spacing between brackets of 500 mm. Where the end brackets are spaced ≤ 500 mm, at least one intermediate bracket is still required. The brackets are through fixed to concrete substrate using one fixing per bracket. The bracket must penetrate the barrier at mid depth of at least $\frac{3}{4}$ of the width of the barrier/cavity.	20 - 200	120	120
	$> 200 \leq 450$	120	60



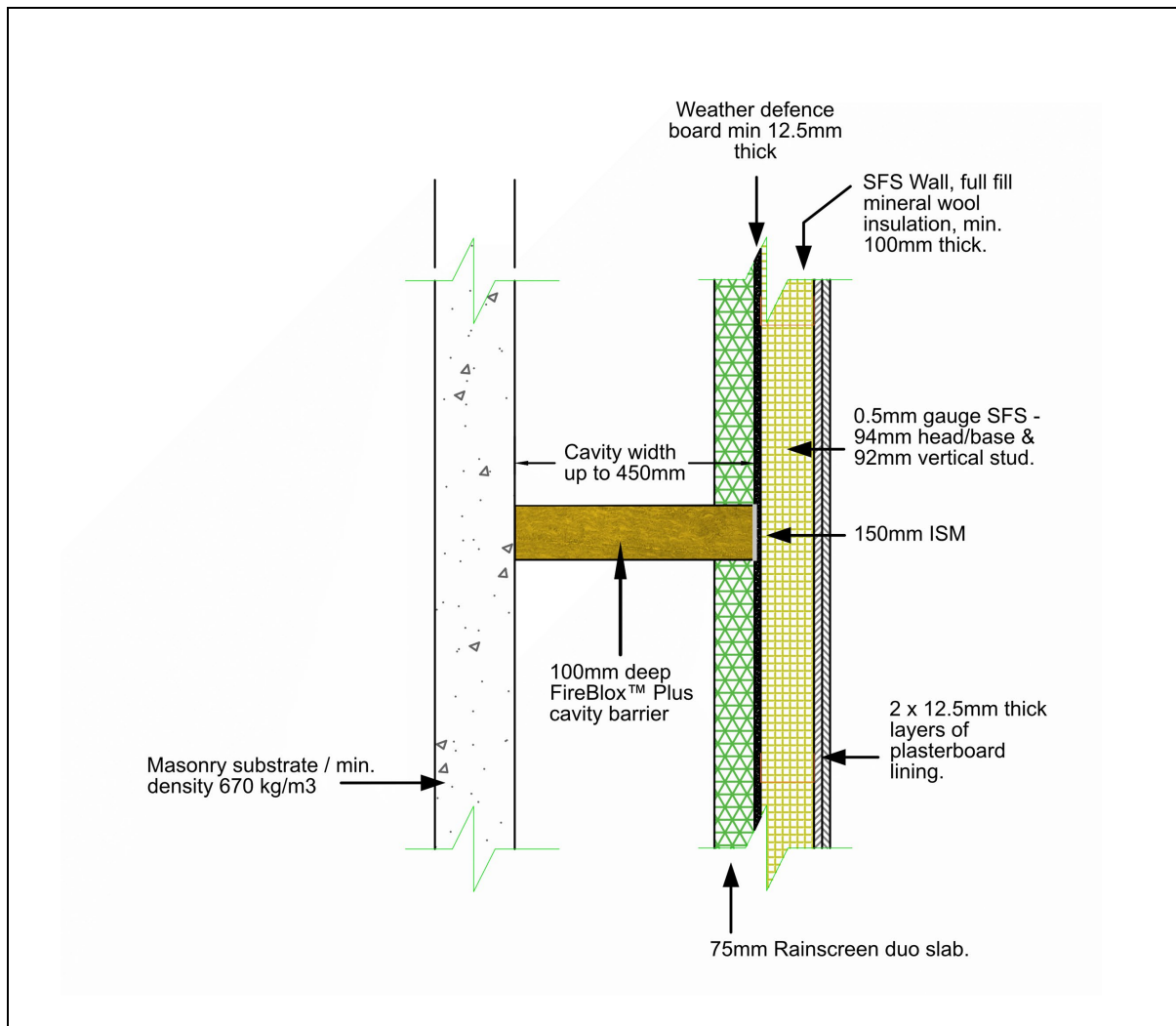
FireBlox Plus was tested against AAC of a density of 670kg/m3. Compression is a minimum of 5 mm and joints taped on both sides of the barrier. Barrier depth is 100mm full fill cavity.

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Horizontal Orientation - fire from the underside only - Steel framing system (SFS)

Summary of bracket requirements at a maximum of 500mm centres – see Grayson installation instructions for further details	Gap Width (mm)	Fire Resistance Performance Classification	
		Integrity (minutes)	Insulation (minutes)
<p>The barrier is retained in place using FireBlox brackets - two per 1 metre length fixed at a maximum distance of 250mm from each end, a maximum spacing between brackets of 500 mm. Where the end brackets are spaced ≤ 500 mm, at least one intermediate bracket is still required. The brackets are through fixed to SFS substrate using one fixing per bracket. The bracket must penetrate the barrier at mid depth of at least $\frac{3}{4}$ of the width of the barrier/cavity.</p> <p>SFS tested from right to left with 2 layers of 12.5mm Gyproc Fireline, 0.5mm Galvanised mild steel formed channel filled with 100mm Rockwool RWA45 full fill insulation, 1 layer of 12.5mm Siniat Weather Defence board and 75mm Rockwool Rainscreen Duo Slab.</p> <p>The Interface Sealing Membrane (ISM) Obex Cortex 0200FR is fixed with an adhesive zone of approximately 100 mm wide to the weather defence board on the fixed side.</p>	20 - 250	120	120
	$> 200 \leq 450$	120	60

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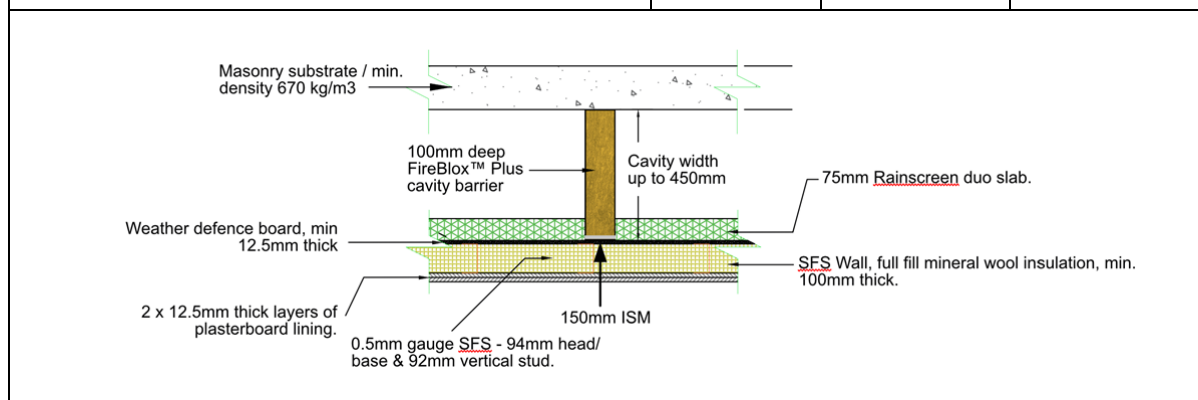


FireBlox Plus was tested on a steel framing system as detailed above. Compression is a minimum of 5 mm and joints taped on the top side of the barrier. Barrier depth is 100mm full fill cavity.

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Vertical Orientation - Steel framing system

Summary of bracket requirements at a maximum of 500mm centres and Description of the Steel Frame System build up – see Grayson installation instructions for further details	Gap Width (mm)	Fire Resistance Performance Classification	
		Integrity (minutes)	Insulation (minutes)
The barrier is retained in place using FireBlox brackets - two per 1 metre length fixed at a maximum distance of 250mm from each end, a maximum spacing between brackets of 500 mm. Where the end brackets are spaced ≤ 500 mm, at least one intermediate bracket is still required. The brackets are through fixed to SFS substrate using one fixing per bracket. The bracket must penetrate the barrier at mid depth of at least $\frac{3}{4}$ of the width of the barrier/cavity.	20 - 250	120	90
SFS tested from right to left with 2 layers of 12.5mm Gyproc Fireline, 0.5mm Galvanised mild steel formed channel filled with 100mm Rockwool full fill insulation, 1 layer of 12.5mm Siniat Weather Defence board and 75mm Rockwool Rainscreen Duo Slab.	> 250 \leq 450	120	60
The Interface Sealing Membrane (ISM) Obex Cortex 0200FR is fixed with an adhesive zone of approximately 100 mm wide to the weather defence board on the fixed side.			



FireBlox Plus was tested on a steel framing system as detailed above. Compression is a minimum of 5 mm and joints taped on both sides of the barrier. Barrier depth is 100mm full fill cavity.



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<u>Item</u>	<u>Description</u>
Cavity Barrier	
Manufacturer	: Grayson
Reference	: FireBlox Cavity Barrier
Sample Number	: A0-104058 (25/07/2024)
Material	: Stone mineral wool in foil face
Thickness	: 100 mm
Support Bracket	
Manufacturer	: Grayson
Reference	: FireBlox Support Bracket
Material	: Stainless steel, mill finish
Thickness	: 0.9 mm
Overall Size	: 25 mm width x minimum 75% of barrier slab width
Fixing method	: Through fixed to the concrete slab or the steel framing system at 500 mm centres with a dimensional tolerance or +/- 20%.
Fixings to concrete slab	
i. Manufacturer	: Rawplug
ii. Reference	: R-ACS-LX-05X055-HF-A2
iii. Type	: A2 stainless steel concrete screw bolt
iv. Size	: 55 mm long x 5 mm diameter
v. Centres	: 1 per bracket
Fixings to SFS	
i. Manufacturer	: Rawplug
ii. Reference	: OCS-55038S16
iii. Type	: Bi-Metal stainless steel self-drilling screw with S14 stainless steel and EPDM washer
iv. Size	: 38 mm long x 5.5 mm diameter
v. Centres	: 1 per bracket
DPC (Damp Proof Course)	
Manufacturer	: Visqueen
Reference	: DPC
Material	: Black polyethylene polymer sheet
Thickness	: 0.5 mm
Overall Size	: 150 mm width cut back to unexposed face and overlapped exposed face (fire side) x full specimens' length
Fixing method	: Friction fitted between cavity barrier and AAC slab



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ISM (Interface Sealing Membrane)

Manufacturer : OBEX Protection Ltd
Reference : Obex Cortex 0200FR
Material : Glass fibre fabric with a silicone coating
Thickness : 0.4 mm
Overall Size : 150 mm width x full specimens' length
Fixing method : The ISM is fixed with an adhesive zone of approximately 100 mm wide to the steel frame system on the fixed side.



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<u>Item</u>	<u>Description</u>
Paste Adhesive	
Manufacturer	: OBEX Protection Ltd
Reference	: Obex Cortex 0210FR
Batch No.	: G00162164, Production date 01/08/2024
Material	: Oxime base, ready mixed paste, black colour
Bead size	: Using caulking gun formed a wavy line with an approximate diameter of 5 mm and smeared into an area approximately 100 mm wide
Application Method	: Manual caulking gun
Curing Method	: Moisture curing
Foil Tape	
Manufacturer	: Directa
Reference	: 25512DSBP
Material	: Aluminium foil with synthetic rubber-resin adhesive
Thickness	: 30 microns, nominal
Overall Size	: 100 mm wide x full butt joint length
Fixing method	: Self-adhesive Foil Tape for covering butt joints on exposed and unexposed sides
Insulation	
Manufacturer	: Rockwool Limited
Reference	: Rockwool Rainscreen Duo Slab
Material	: Mineral wool Acoustic Slab
Thickness	: 75 mm
Density	: 60 kg/m ³ , (stated)
Fixing Method	: Fixed with screws with washer to SFS
Fixings details	
i. Type	: Drywall, self-drill screw
ii. Material	: Carbon steel
iii. Size	: 100 mm long x 4.8 mm diameter
iv. Centres	: at max 400 mm centres.



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<u>Item</u>	<u>Description</u>
SFS (Steel Framing System) supplied by Warringtonfire	
Overall Size	2600 mm x 600 mm x 131.5 mm
Construction Details	Figure 3 for details
Fixing method	Screw fixed to AAC slab at 600 mm centres
Plasterboard	
Manufacturer	British Gypsum
Type	Gyproc Fireline
Board size	600 mm x 2600 mm
Thickness	2 no. layers x 12.5 mm
Density	880 kg/m ³ , nominal
	The first layer was fixed with 25 mm self-drilling drywall screw, the second layer was fixed with 35 mm self-drilling drywall screws. On both layers, the screws were placed along the stud lines and at 10-15 mm from the edge of the boards and evenly spaced.
Fixings (inner layer)	
i. type	Drywall, self-drill screw
ii. size	3.5 mm diameter x 25 mm long
iii. centres	300 mm
Fixings (outer layer)	
i. type	Drywall, self-drill screw
ii. size	3.9 mm diameter x 35 mm long
iii. centres	300 mm
Plasterboard 2	
Manufacturer	Siniat
Type	GTEC Weather Defence Board
Board size	600 mm x 2600 mm
Thickness	1 no. layer x 12.5 mm
Density	860 kg/m ³ , nominal
Fixing method	Fixed with 25 mm self-drilling drywall screw around perimeter and stud centres
Fixings	
i. type	Drywall, self-drill screw
ii. size	3.5 mm diameter x 25 mm long
iii. centres	300 mm



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Head / Base Track

Manufacturer

Type

Material

Thickness

Section size

Fixing method

SpeedLine

SPT94

Galvanised mild steel formed channel

0.5 mm

94 mm x 32 mm

Fixed with 4.2 mm x 14 mm wafer head jack point screws at stud junctions



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<u>Item</u>	<u>Description</u>
Vertical Studs	
Manufacturer	British Gypsum
Type	Gypframe 48 S 50
Material	Galvanised mild steel formed channel
Thickness	0.5 mm
Section size	92 mm x 50 mm
Fixing method	Fixed to head and base track with 4.2 mm x 14 mm wafer head jack point screws at stud junctions
Cavity Insulation	
Manufacturer	: Rockwool
Reference	: RWA45
Material	: Rock fibre
Thickness	: 100 mm
Density	: 44 kg/m ³ , measured
Fixing Method	: Friction fitted into SFS cavities
Supporting construction supplied by Warringtonfire	
AAC Block	
Type	: Steel reinforced concrete slab
Material	: Steel reinforced autoclaved aerated concrete
Density	: 670 kg/m ³
Overall size	: 150 mm wide x 150 mm high x 2990 mm long 150mm wide x 250mm high x 2290 long
Overall size	: 150 mm wide x 600 mm high x 2990 mm long
Fixing method	: Ordinary sand/cement mortar, mix 3:1
Blockwork	
Manufacturer	: THERMALITE
Reference	: THERMALITE Shield
Material	: Lightweight concrete blocks
Overall size	: 100 / 150 mm wide x 215 mm high x 440 mm long
Density	: 915 / 884 kg/m ³ (measured)
Fixing method	: Ordinary sand/cement mortar, mix 3:1, didn't contact with specimens
Fire Cement	
Manufacturer	: Everbuild
Reference	: KOS Fire Cement (brown)
Material	: Ready mixed blend of thermo-setting resins and inorganic fillers



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Bead size : Beads of different sizes were used to fill the cavities between the AAC blocks, didn't contact with specimens

Application method : Cartridge gunned