

## FIRE PERFORMANCE CLASSIFICATION IN ACCORDANCE WITH BR135:2013 ANNEX B

### CLASSIFICATION REPORT EUI-24-000831

---

#### FIRE PERFORMANCE OF EXTERNAL THERMAL INSULATION FOR WALLS OF MULTI-STOREY BUILDINGS CLASSIFICATION IN ACCORDANCE WITH BR 135 (3<sup>rd</sup> edition): 2013 and BS 8414-2:2020.

**Sponsor:** ARCHITECTURAL FACADES  
Wilderspool Business Park  
Warrington WA4 6HL  
UNITED KINGDOM

**Prepared by:** EFFECTIS UK/IRELAND  
Unit 15F, Kilroot Business Park, Larne Road  
BT38 7PR CARRICKFERGUS  
UNITED KINGDOM

**System name:** External wall insulation system made of plasterboard, insulated SFS,  
sheathing board, adhesive mortar coat with encapsulated mesh, insulation,  
base adhesive mortar coat with encapsulated mesh and topcoat, panelised  
brick slip system, lime-based mortar pointing

**Classification report No.:** EUI-24-000831

**Issue number:** 1

**Date of issue:** 18<sup>th</sup> July 2025

## 1. DOCUMENT TRACKING

Revision Index.	Modification
0	Original document

## 2. INTRODUCTION

This classification report defines the classification assigned to External wall insulation system made of plasterboard, insulated SFS, sheathing board, adhesive mortar coat with encapsulated mesh, insulation, base adhesive mortar coat with encapsulated mesh and topcoat, panelised brick slip system, lime-based mortar pointing in accordance with the procedures given in BR 135 (3<sup>rd</sup> edition): 2013 and BS 8414-2:2020.

This classification report should be read in conjunction with the test reports referenced in section 4.1.

## 3. DETAILS OF CLASSIFIED SYSTEM

**Technical data and drawings concerning the sample and its composition have been supplied by the sponsor who attests their accuracy.**

**All test materials installed by the subcontractor PORTLEE ASSOCIATES**

**EFFECTIS UK/IRELAND was not involved in the drawings or specimen selection process and therefore cannot take any responsibility for the relationship between sample supplied for testing and product placed on the market.**

### 3.1. GENERAL

The system, External wall insulation system made of plasterboard, insulated SFS, sheathing board, adhesive mortar coat with encapsulated mesh, insulation, base adhesive mortar coat with encapsulated mesh and topcoat, panelised brick slip system, lime-based mortar pointing, is described below.

#### 3.1.1. Substrate

The external cladding system was fixed to, and supported by, a structural steel frame. The test apparatus utilized a vertical structural steel test frame, representative of a structural steel-framed building, with a vertical main test apparatus wall and a vertical return wall (wing) at a 90° angle to, and at one side of, the main test wall.

#### 3.1.2. Description of system

The list of component parts used in the construction of the system are shown on the table below.

Material	Reference	Composition	Characteristics	Manufacturer/Supplier
<b>Steel Frame system (SFS)</b>				
C studs	EOS C90	Cold rolled galvanised steel	Dimensions: 90 mm x 47 mm x 1.2 mm	EOS FRAMING
U tracks (bottom)	EOS U92	Cold rolled galvanised steel	Dimensions: 92 mm x 50 mm x 1.2 mm	EOS FRAMING
U tracks (top)	Slotted EOS U92	Cold rolled galvanised steel	Dimensions: 92 mm x 70 mm x 2 mm	EOS FRAMING
Insulation in the SFS	RWA45	Mineral wool	Nominal dimensions: 600 mm x 1200 mm Thickness: 100 mm Density: 45kg/m <sup>3</sup> Thermal conductivity: 0.035 W/m.K Reaction to fire: Class A1	ROCKWOOL
<b>Fixings</b>				
Screws to fix the U track to the lintels	R-WBT-61050	Stainless steel	Dimensions: Ø 6.1 x 50 mm	RAWLPLUG
Screws to fix the C studs to the U track	FP26 5.5 x 25	Stainless steel	Dimensions: Ø 5.5 x 25 mm	TIMCO
<b>Non-exposed side of the SFS</b>				
Plasterboard	Gyproc Wallboard	Aerated gypsum core encased in, and firmly bonded to, strong paper liners	Nominal dimensions: 2400 x 1200 mm Thickness: 12.5 mm Density: not provided <sup>1</sup> Thermal conductivity: 0.19 W/mK Reaction to fire: A2-s1, d0	BRITISH GYPSUM
Angle	GA4 Angle	Mild steel	Nominal dimensions: 3660 mm x 50 mm x 25 mm Thickness: 0.70 mm Reaction to fire: Class A1	BRITISH GYPSUM
Plasterboard sealant	Gyproc Sealant	Water based acrylic sealant	Colour: white Reaction to fire: Class E	BRITISH GYPSUM

<sup>1</sup> Information not provided by the manufacturer

Material	Reference	Composition	Characteristics	Manufacturer/Supplier
<b>Fixings</b>				
1 <sup>st</sup> layer of plasterboard fixing	25mm Jack-point screws	Zinc plated steel	Dimensions: Ø 3.5 x 25 mm Reaction to fire: Class A1	BRITISH GYPSUM
2 <sup>nd</sup> layer of plasterboard fixing	41mm Jack-point screws	Zinc plated steel	Dimensions: Ø 3.5 x 41 mm Reaction to fire: Class A1	BRITISH GYPSUM
<b>Exposed side of the SFS</b>				
Sheathing board	Klasse C-board	Calcium silicate cement external sheathing board	Nominal dimensions: 1200 mm x 2400 mm Thickness: 12 mm Density: > 1200kg/m <sup>3</sup> Thermal conductivity: 0.18 W/mk Reaction to fire: Class A1	KLASSE
Tape for sheathing board	Klasse Airtight Tape	LDPE film with silicone-coated paper liner	Size: 100 mm x 25 m roll Thickness: 0.29-0.31 mm	KLASSE
Sealant	Klasse FireFend FR silicone	One-part silicone sealant	Size: 600ml cartridge Colour: green	KLASSE
Mortar base coat	Parex Maité	Cement based powder	Size: 25 kg bag Colour: J20 Pale Yellow	SIKA
Primer applied to exposed face of concrete lintels	Parex Microgebetis 3000	Acrylic co-polymer dispersion of mineral filler and specific admixtures.	Size: 20 kg bucket Colour: pink	SIKA
Insulation	Rockwool EWI DD	Stone wool insulation	Nominal dimensions: 1200 mm x 600 mm Thickness: 150 mm Density: not provided <sup>2</sup> Thermal conductivity: 0.036W/mK Reaction to fire: Class A1	ROCKWOOL
Mesh	Parex 355 AVU Reinforcing mesh	Glass fibre mesh fabric	Size: 1.1 m x 50 m roll Thickness: 0.52 mm	SIKA
Mortar top coat	Parex Maité	Cement based powder	Size: 25 kg bag Colour: J20 Pale Yellow	SIKA
Panelised brick slips	BrickPlus Pro	Mortar brick slips integrating a mesh webbing	Dimensions: 215 mm x 65 mm (per brick slip) Thickness: 13 mm Density: not provided <sup>3</sup> Thermal conductivity: not provided <sup>3</sup>	MONOLITH

<sup>2</sup> Information not provided by the manufacturer

<sup>3</sup> Information not provided by the manufacturer

Material	Reference	Composition	Characteristics	Manufacturer/Supplier
Pistol-corner brick slips	BrickPlus Pro	Mortar brick slips	Dimensions: 215 mm x 100 mm x 65 mm Thickness: 13 mm Density: not provided <sup>3</sup> Thermal conductivity: not provided <sup>3</sup>	MONOLITH
Mortar for brick slips	Ultrascape Limepoint Regency	Cement free hydrated lime gun injected pointing mortar	Size: 25 kg bag Colour: Natural Density: 2.05kg/m <sup>3</sup> Thermal conductivity: 0.86 – 0.93 W/mk	INSTARMAC
Fire membrane adhesive for joints	SP025	Mono-component, non-sagging, elastic adhesive based on hybrid-polymers	Size: 600 ml packets Colour: Black Density: 1.6 g/cm <sup>3</sup> Reaction to fire: Class B-s1, d0 to EN 13501-1	ILLBRUCK
Foam tape for joints	TP600	Open cell polyurethane foam, impregnated with an acrylic based, UV stabilised resin	Size: 13-24 mm x 5.2 m roll Colour: Anthracite Thickness: 30 mm Thermal conductivity: < 0.048 W/mK	ILLBRUCK
Silicone sealant for joints	FA880	One component, low slump silicone	Size: 310 ml cartridge Colour: Dark oak Density: 1.3 g/cm <sup>3</sup>	ILLBRUCK
Top edge support brackets	EOS C90	Cold rolled galvanised steel	Dimensions: 90 mm x 47 mm x 1.2 mm	EOS FRAMING
<b>Fixings</b>				
Screws for sheathing board	R-CWT-48038-LG	Zinc plated carbon steel	Dimensions: Ø4.8 x 38 mm	RAWLPLUG
Screws for insulation	R-WX-55T200	Zinc plated carbon steel	Dimensions: Ø 5.5 x 200 mm	RAWLPLUG
Screws for insulation	R-WBT-61200	Zinc plated carbon steel	Dimensions: Ø 6.1 x 200 mm	RAWLPLUG
Washer	R-POK-070-ALZN	Zinc plated carbon steel	Dimensions: Ø 70 mm	RAWLPLUG
MBA Insulation fixings	R-MBA-SS-08200	Stainless steel	Dimensions: Ø 8 x 200 mm	RAWLPLUG
Metal insulation flanges	R-MKC-SS-85	Stainless steel	Dimensions: Ø 85 mm Thickness: 0.5 mm	RAWLPLUG

<b>Surrounding of the combustion chamber</b>				
Plasterboard	Gyproc Wallboard	Aerated gypsum core encased in, and firmly bonded to, strong paper liners	Nominal dimensions: 2000 x 110 mm Thickness: 12.5 mm Density: not provided <sup>4</sup> Thermal conductivity: 0.19 W/mK Reaction to fire: A2-s1, d0	BRITISH GYPSUM
Mortar base coat	Parex Maité	Cement based powder	Size: 25 kg bag Colour: J20 Pale Yellow	SIKA
Mesh	Parex 355 AVU Reinforcing mesh	Glass fibre mesh fabric	Size: 1.1 m x 50 m roll Thickness: 0.52 mm	SIKA
Mortar top coat	Parex Maité	Cement based powder	Size: 25 kg bag Colour: J20 Pale Yellow	SIKA
Pistol-corner brick slips	BrickPlus Pro	Mortar brick slips	Dimensions: 215 mm 100 mm x 65 mm Thickness: 13 mm Density: not provided <sup>4</sup> Thermal conductivity: not provided <sup>4</sup>	MONOLITH
Header brick slips	BrickPlus Pro	Mortar brick slips	Thickness: 13 mm Density: not provided <sup>4</sup> Thermal conductivity: not provided <sup>4</sup>	MONLITH
Mortar for brick slips	Ultrascape Limepoint Regency	Cement free hydrated lime gun injected pointing mortar	Size: 25 kg bag Colour: Natural Density: 2.05kg/m <sup>3</sup> Thermal conductivity: 0.86 – 0.93 W/mk	INSTARMAC
Fixings for support brackets	R-WBT-61050	Stainless steel	Dimensions: Ø 6.1 x 50 mm	RAWLPLUG
<b>Fixings</b>				
1 <sup>st</sup> layer of plasterboard fixing	25mm Jack-point screws	Zinc plated steel	Dimensions: Ø 3.5 x 25 mm Reaction to fire: Class A1 to EN 14566:2008	BRITISH GYPSUM
2 <sup>nd</sup> layer of plasterboard fixing	41mm Jack-point screws	Zinc plated steel	Dimensions: Ø 3.5 x 41 mm Reaction to fire: Class A1 to EN 14566:2008	BRITISH GYPSUM
Screws for sheathing board	R-CWT-48038-LG	Zinc plated carbon steel	Dimensions: Ø4.8 x 38 mm	RAWLPLUG

See test report referenced in section 4.1 for the detailed description of the system and its installation.

<sup>4</sup> Information not provided by the manufacturer

### 3.1.3. Installation sequence

#### 3.1.4. SFS (Steel Frame System) frame

The steel frame system (SFS) was constructed using cold rolled steel folded into C studs and U tracks of appropriate size.

- The C studs, reference EOS C90 (EOS FRAMING), were folded resulting dimensions 90 mm x 47 mm x 1.2 mm.
- The base U tracks, reference EOS U92 (EOS FRAMING), were folded resulting dimensions 92 mm x 50 mm x 1.2 mm.
- The head U tracks, reference Slotted EOS U92 (EOS FRAMING), were folded resulting dimensions 92 mm x 70 mm x 2 mm.

The U tracks were fixed to the concrete lintels with screws reference R-WBT-61050 (RAWLPLUG) of Ø 6.1 x 50 mm dimensions at 600 mm nominal horizontal centres.

The C studs were fixed to the U track with screws, reference FP26 5.5 x 25 (TIMCO) of Ø 5.5 X 25 mm dimensions at 600 mm nominal horizontal centres.

The SFS frame was filled with mineral wool insulation, reference RWA45 (ROCKWOOL) of nominal dimensions 600 mm x 1200 mm and thickness 100 mm. The insulation was self-fixed.

#### 3.1.5. Non-exposed side of the SFS

##### 3.1.5.1. Plasterboard

Two layers of plasterboard, reference Gyproc Wallboard (BRITISH GYPSUM) of nominal dimensions 1200 mm x 2400 mm and thickness 12.5 mm were attached to the rear of the SFS.

The 1<sup>st</sup> layer of plasterboard was fixed to the SFS using screws, reference 25 mm Jack-point screws (BRITISH GYPSUM) of Ø 3.5 x 25 mm dimensions at 300 mm vertical and 600 mm horizontal nominal centres.

The 2<sup>nd</sup> layer of plasterboard (installed on top of the 1<sup>st</sup> layer) was fixed to the SFS using screws, reference 41mm Jack-point screws (BRITISH GYPSUM) of Ø 3.5 x 41 mm dimensions at 300 mm vertical and 600 mm nominal centres.

The boards were butted tightly together and the joints were sealed with an acrylic sealant, reference Gyproc Sealant (BRITISH GYPSUM).

Metal angles for supporting the plasterboard, reference GA4 Angle (BRITISH GYPSUM) of 3660 mm x 50 mm x 25 mm dimensions and 0.7 mm thickness were positioned to the rear of the plasterboard and attached to the underside of the concrete lintels using screws, reference R-WBT-61050 (RAWLPLUG) of Ø 6.1 x 50 mm dimensions.

#### 3.1.6. Exposed side of the SFS

##### 3.1.6.1. Sheathing board

A layer of sheathing board, reference Klasse C-board (KLASSE) of nominal dimensions 1200 mm x 2400 mm and thickness 12 mm was attached to the front of the SFS.

It was fixed to the SFS using screws, reference R-CWT-48038-LG (RAWLPLUG) of Ø 4.8 x 38 mm dimensions at 300 mm nominal vertical centres and 600 mm nominal horizontal centres.

The boards were staggered, butted tightly together and the joints were sealed with a sealant, reference Klasse FireFend FR Silicone (KLASSE). Tape, reference Klasse Airtight Tape (KLASSE) of size 100 mm x 25 m roll, was then applied over the joints and sealant.

##### 3.1.6.2. Primer

On the exposed face of the concrete lintels, a single layer of primer, reference Parex Microgobetis 3000 (SIKA) was applied.

### 3.1.6.3. Insulation

An insulation layer, reference Rockwool EWI DD (ROCKWOOL) of nominal dimensions 1200 mm x 600 mm and thickness 150 mm were cut into appropriate sizes and attached to the front of the sheathing board.

The insulation slabs were fixed to the sheathing board using

- Adhesive: Parex Maité (SIKA) applied to a nominal thickness of 2 mm.
- Screws,
  - o reference R-WX-55T200 (RAWLPLUG) of Ø 5.5 x 200 mm dimensions
  - o reference R-WBT-61200 (RAWLPLUG) of Ø 6.1 x 200 mm dimensions,
- washers, reference R-POK-070-ALZN (RAWLPLUG) of Ø 70 mm diameter,
- Metal insulation flanges, reference R-MKC-SS-85 (RAWLPLUG) of Ø 85 mm diameter and 0.5 mm thickness.
- MBA insulation fixings, reference R-MBA-SS-08200 (RAWLPLUG) of Ø 8 x 200 mm dimension,

The screws and washers were placed at 400 mm nominal vertical centres and 250 mm nominal horizontal centres, while the MBA insulation fixings and insulation flanges were placed in the centre of each insulation board. The insulation boards were staggered and butted tightly together.

### 3.1.6.4. Adhesive mortar

On the exposed face of the insulation layer, a layer of adhesive mortar, reference Parex Maité (SIKA) was applied to a nominal thickness of 3 mm, The mortar was embedded with a glass fibre mesh, reference Parex 355 AVU Reinforcing mesh (SIKA) of 0.52 mm thickness.

### 3.1.6.5. External cladding – Brick slip system

A layer of panelised brick slips, reference BrickPlus: Pro (MONOLITH) of 215 mm x 65 mm dimensions, and 13 mm thickness (per brickslip) was set onto the mesh embedded mortar layer on the exposed face of the insulation, adhered using an additional layer of adhesive mortar, reference Parex Maité (SIKA) applied to a nominal thickness of 3 mm.

The joints between the brick slips were of 10 mm nominal width, and were filled using mortar, reference Ultrascap Limepoint Regency (INSTARMAC), which was mixed onsite.

### 3.1.7. Expansion joints

The vertical and horizontal expansion joints extended from the exposed face of the sheathing board layer to the exposed face of the brick slip cladding, and were filled in order from the sheathing board outwards with the following materials:

- Fire membrane adhesive, reference SP025 (ILLBRUCK)
- Mineral wool, reference Rockwool EWI DD (ROCKWOOL) cut to a width of 12 mm
- Foam tape, reference TP600 (ILLBRUCK) of size 13-24 mm x 5.2 m roll, and thickness 30 mm
- Silicone sealant, reference FA880 (ILLBRUCK)

### 3.1.8. Surrounding of the combustion chamber details

Two layers of plasterboard, reference Gyproc Wallboard (BRITISH GYPSUM) of 2000 mm x 110 mm nominal dimensions and 12.5 mm thickness were attached to the edge of the SFS using screws.

The 1<sup>st</sup> layer of plasterboard used screws, reference 25 mm Jack-point screws (BRITISH GYPSUM) of Ø 3.5 x 25 mm dimension at 300 mm nominal vertical centres and the 2<sup>nd</sup> layer of plasterboard (installed on top of the 1<sup>st</sup> layer) used screws, reference 41mm Jack-point screws (BRITISH GYPSUM) of Ø 3.5 x 41 mm dimensions at 300 mm nominal vertical centres.

On the edge of the insulation, a layer of adhesive mortar, reference Parex Maité (SIKA) was applied to a nominal thickness of 3 mm, The mortar was embedded with a glass fibre mesh, reference Parex 355 AVU Reinforcing mesh (SIKA) of 0.52 mm thickness.

A layer of pistol-corner brick slips, reference BrickPlus: Pro (MONOLITH) of 215 mm x 100 mm x 65 mm dimensions and 13 mm thickness, was set onto the mesh embedded mortar layer on the exposed face of the



insulation, placed around the edges of the chamber opening and adhered using an additional layer of adhesive mortar, reference Parex Maité (SIKA) applied to a nominal thickness of 3 mm.

Header brick slips, reference BrickPlus: Pro (MONOLITH) of 13 mm thickness cut to required dimensions were placed at the chamber's opening upper reveal.

The joints between the brick slips were of 10 mm nominal width, and were filled using mortar, reference Ultrascap Limepoint Regency (INSTARMAC), which was mixed onsite.

#### 3.1.9. Side edges details

On the top edge, and the side edges of the main face and return wing, a layer of sheathing board, reference Klasse C-board (KLASSE) of 90 mm x 2400 mm nominal dimensions and 12 mm thickness was attached to the edge of the SFS using screws, reference R-CWT-48038-LG (RAWLPLUG) of Ø4.8 x 38 mm dimensions at 300 mm nominal vertical centres.

On the edge of the insulation, a layer of adhesive mortar, reference Parex Maité (SIKA) was applied to a nominal thickness of 3 mm. The mortar was embedded with a glass fibre mesh, reference Parex 355 AVU Reinforcing mesh (SIKA) of 0.52 mm thickness.

A layer of pistol-corner brick slips, reference BrickPlus: Pro (MONOLITH) of 215 mm x 100 mm x 65 mm dimensions and 13 mm thickness, was set onto the mesh embedded mortar layer on the exposed face of the insulation, adhered using an additional layer of adhesive mortar, reference Parex Maité (SIKA) applied to a nominal thickness of 3 mm.

The joints between the brick slips were of 10 mm nominal width, and were filled using mortar, reference Ultrascap Limepoint Regency (INSTARMAC), which was mixed onsite.

Additionally, support brackets, reference EOS C90 (EOS FRAMING) of 90 mm x 47 mm dimensions and 1.2 mm thickness were attached to the top edge of the system and the testing rig using screws, reference R-WBT-61050 (RAWLPLUG) of Ø 6.1 x 50 mm dimensions. There were three support brackets, one positioned at each of the side edges, and one positioned at the internal corner.

#### 3.1.10. Joints

As per requirement of the BS:8414-2 2020 the test specimen had at least one joint placed (2400 ± 100) mm above the combustion chamber opening and a joint extending upwards on the centre line of the combustion chamber opening, with a tolerance of ± 100 mm. Two horizontal movement joints were incorporated into the face of the system at heights 2390 mm and 4640 mm above the chamber opening.

### 3.1.11. System's specifications

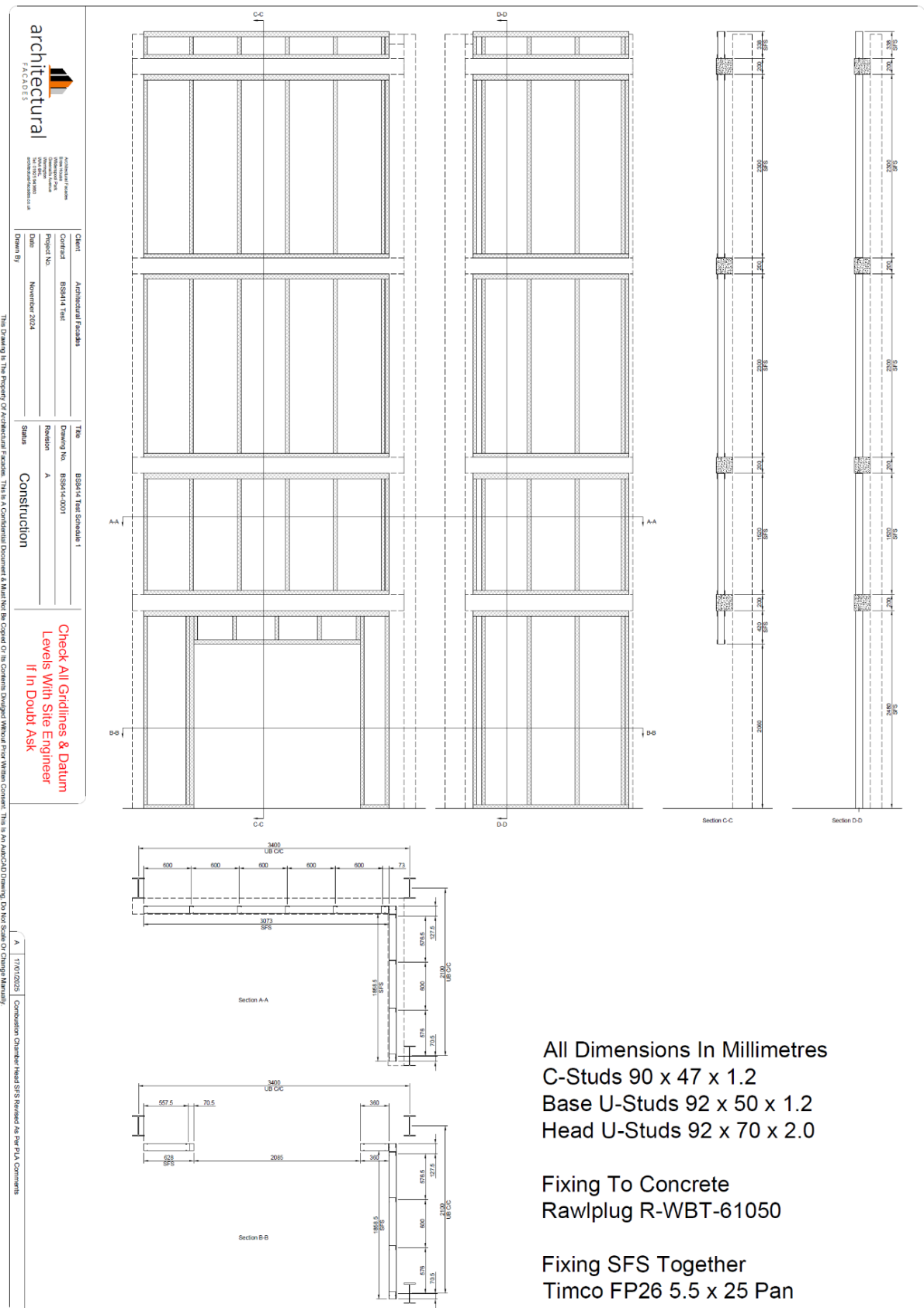


Figure 1. Sketch of the SFS layout

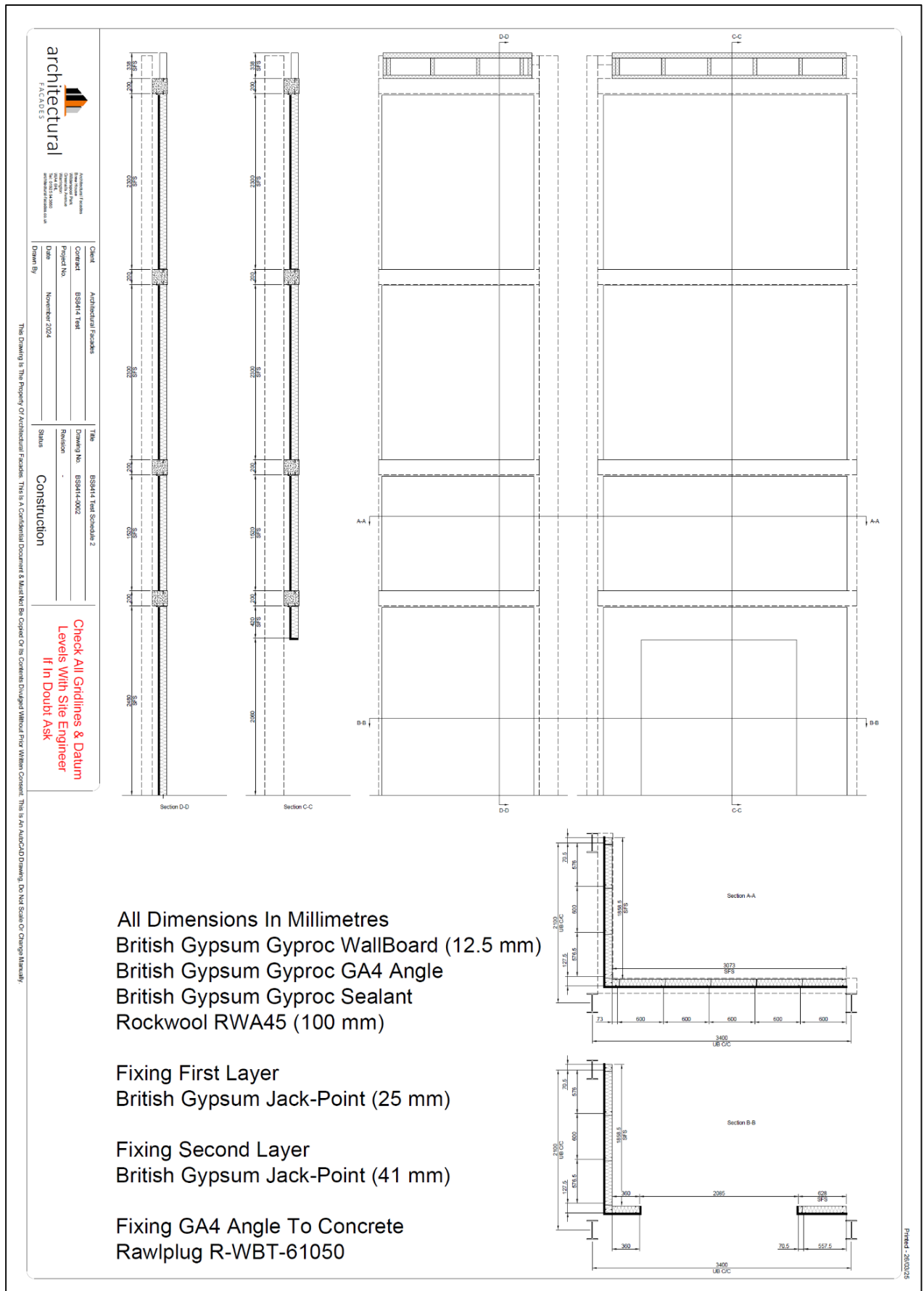
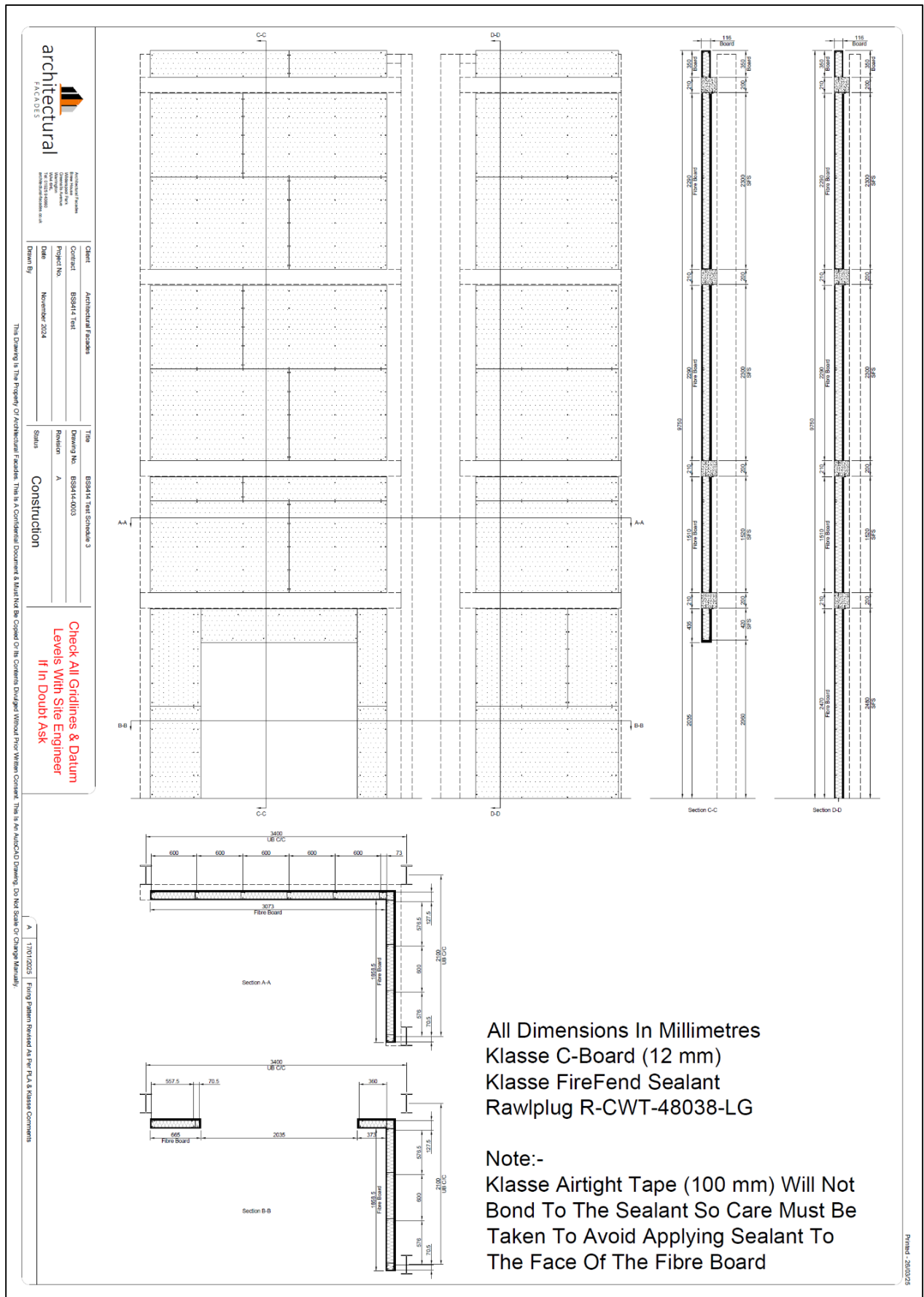
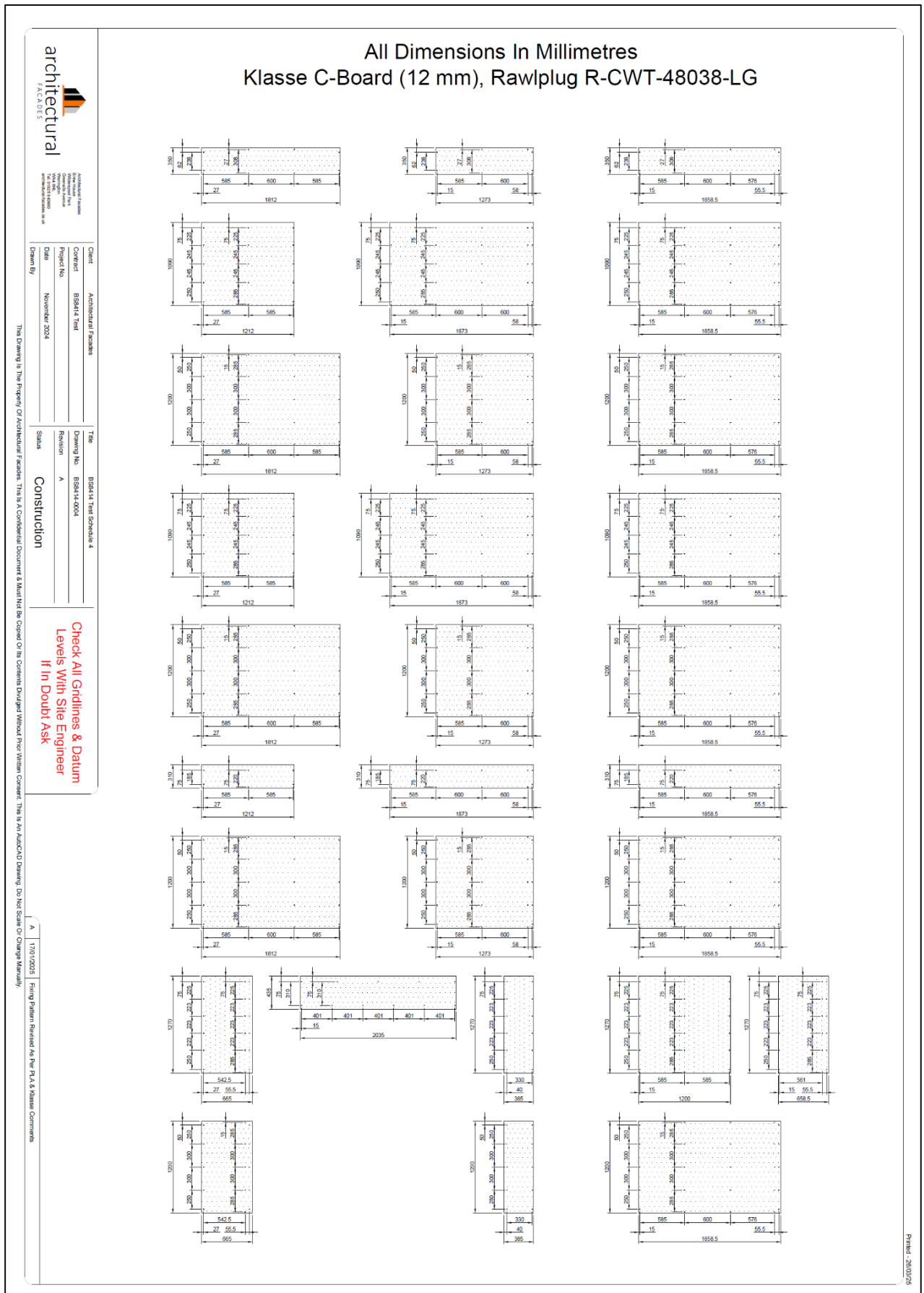


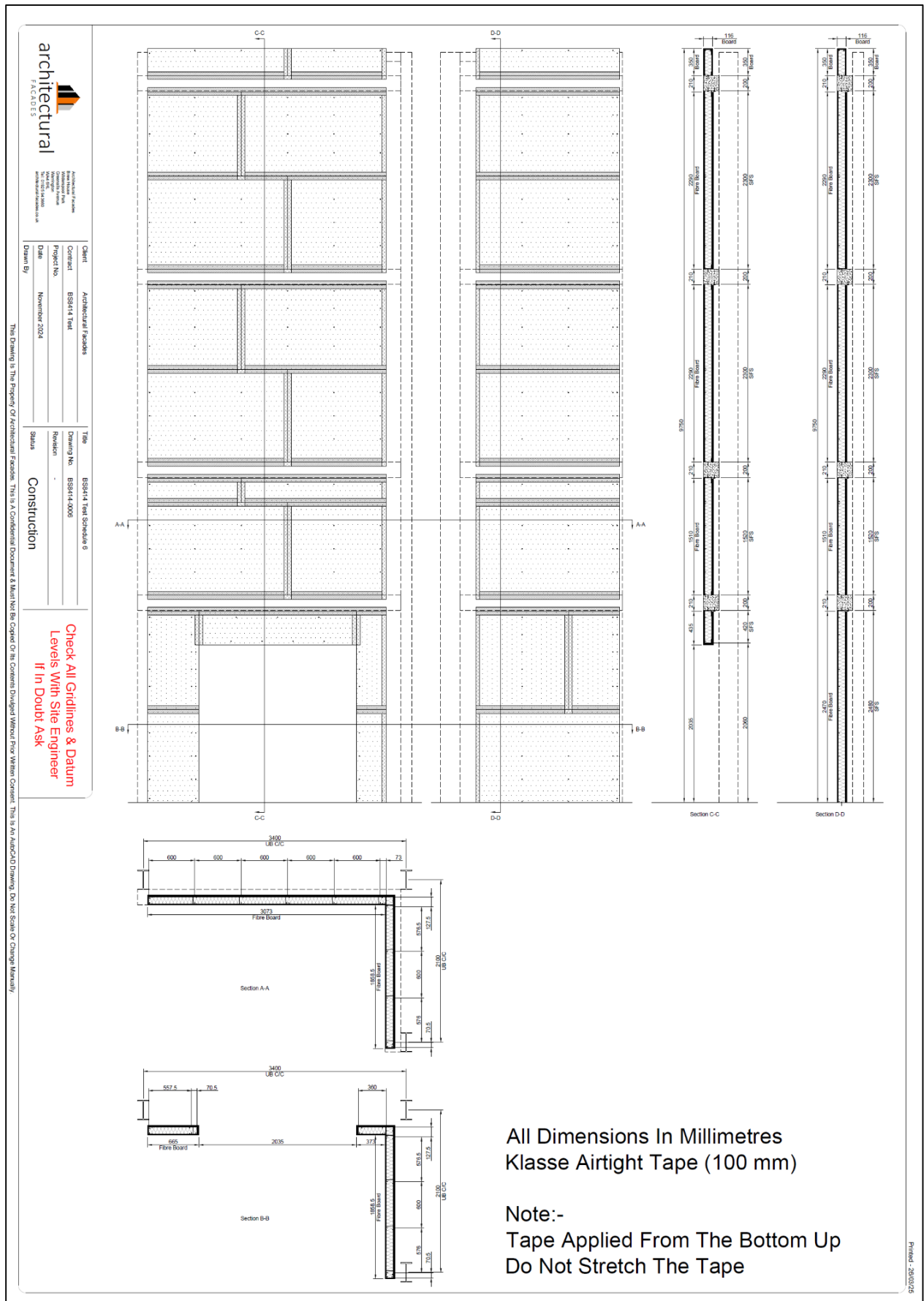
Figure 2. Sketch of the plasterboard layout



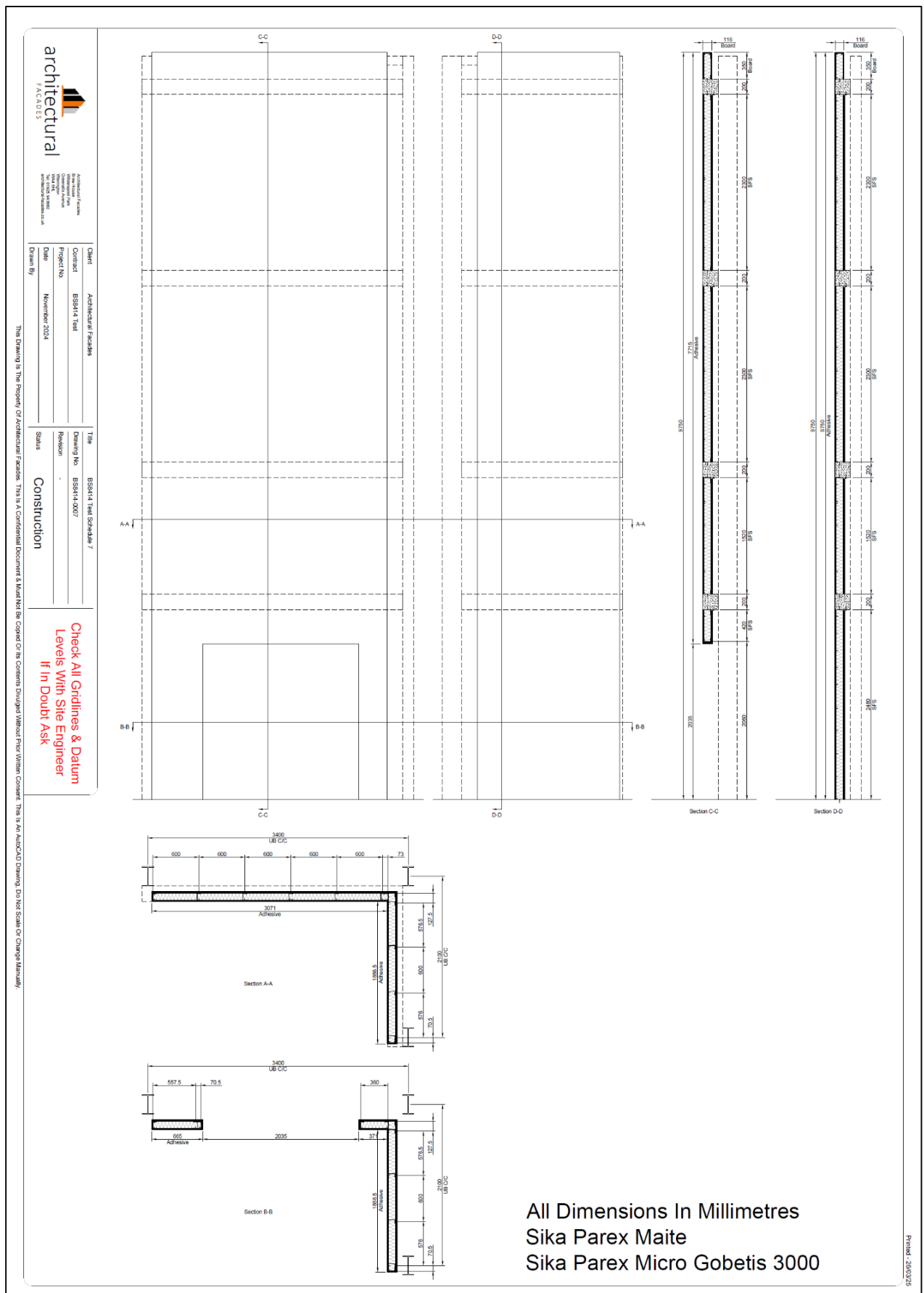
**Figure 3. Sketch of the sheathing board layout**



**Figure 4. Sketch of the sheathing board fixing locations**



**Figure 5. Sketch of the tape application**



**Figure 6. Sketch of the sheathing board mortar application**



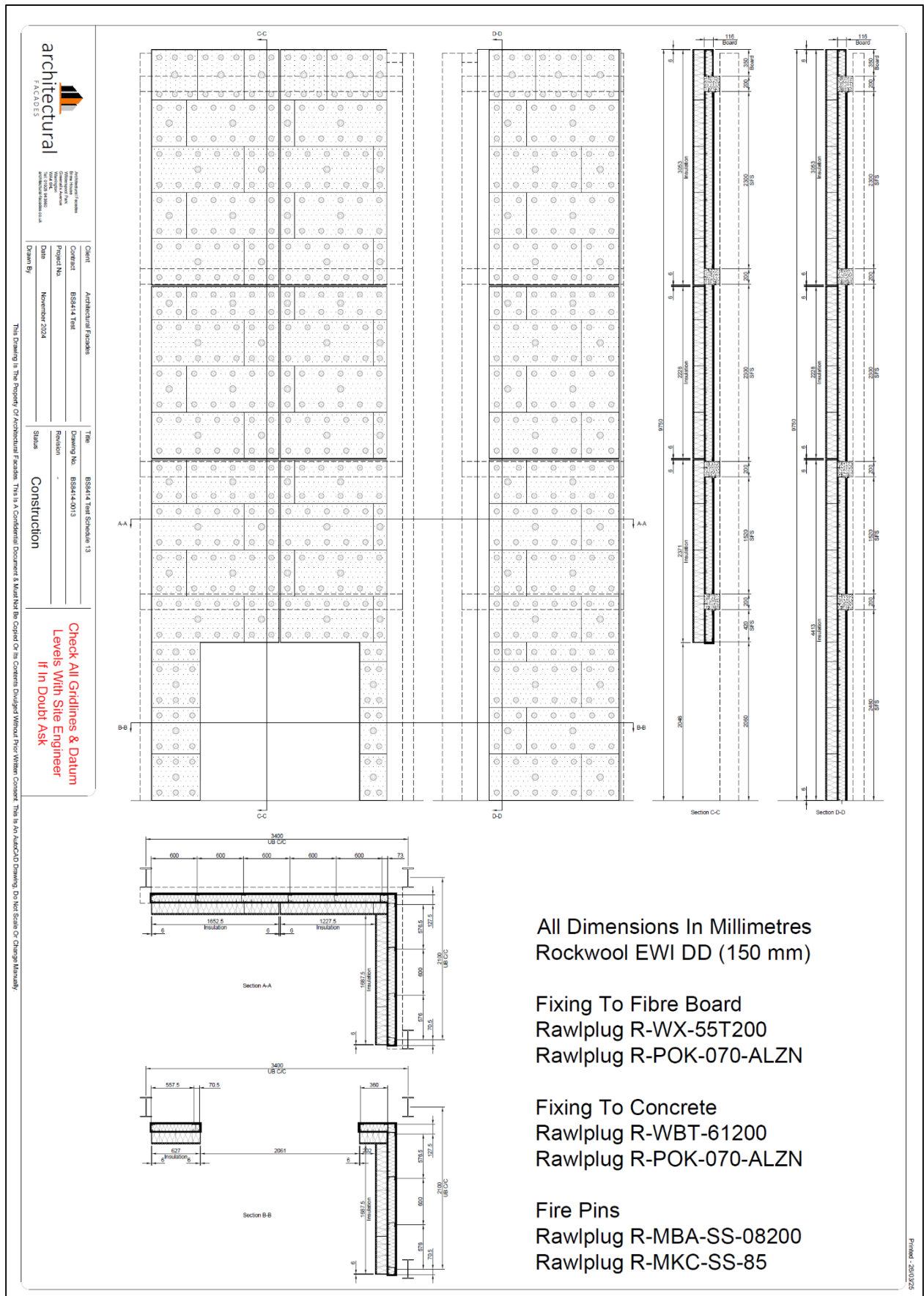
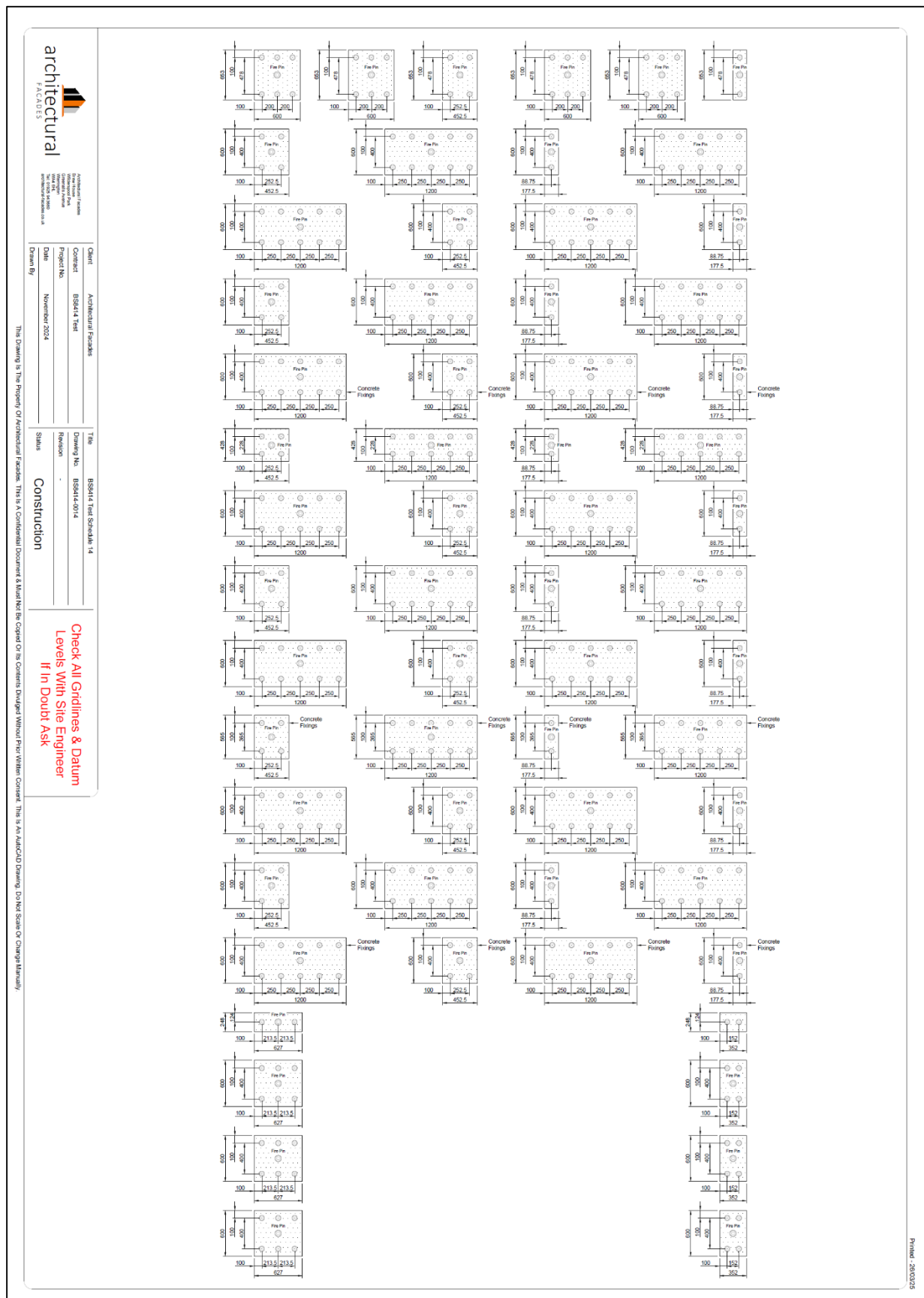


Figure 7. Sketch of the insulation layout





**Figure 8. Sketch of the insulations fixings locations (main face)**



**Figure 9. Sketch of the insulation fixings locations (return wing)**

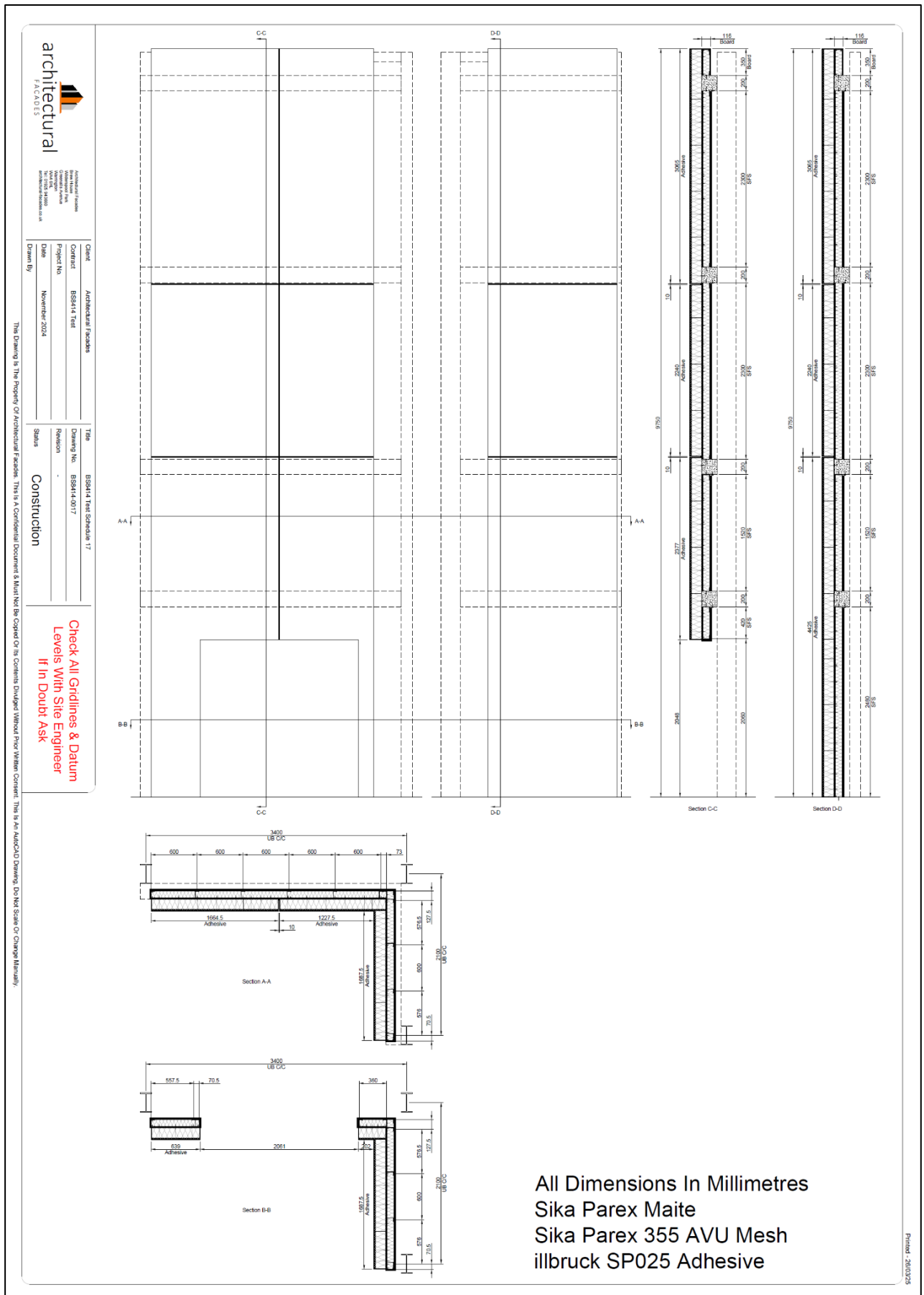
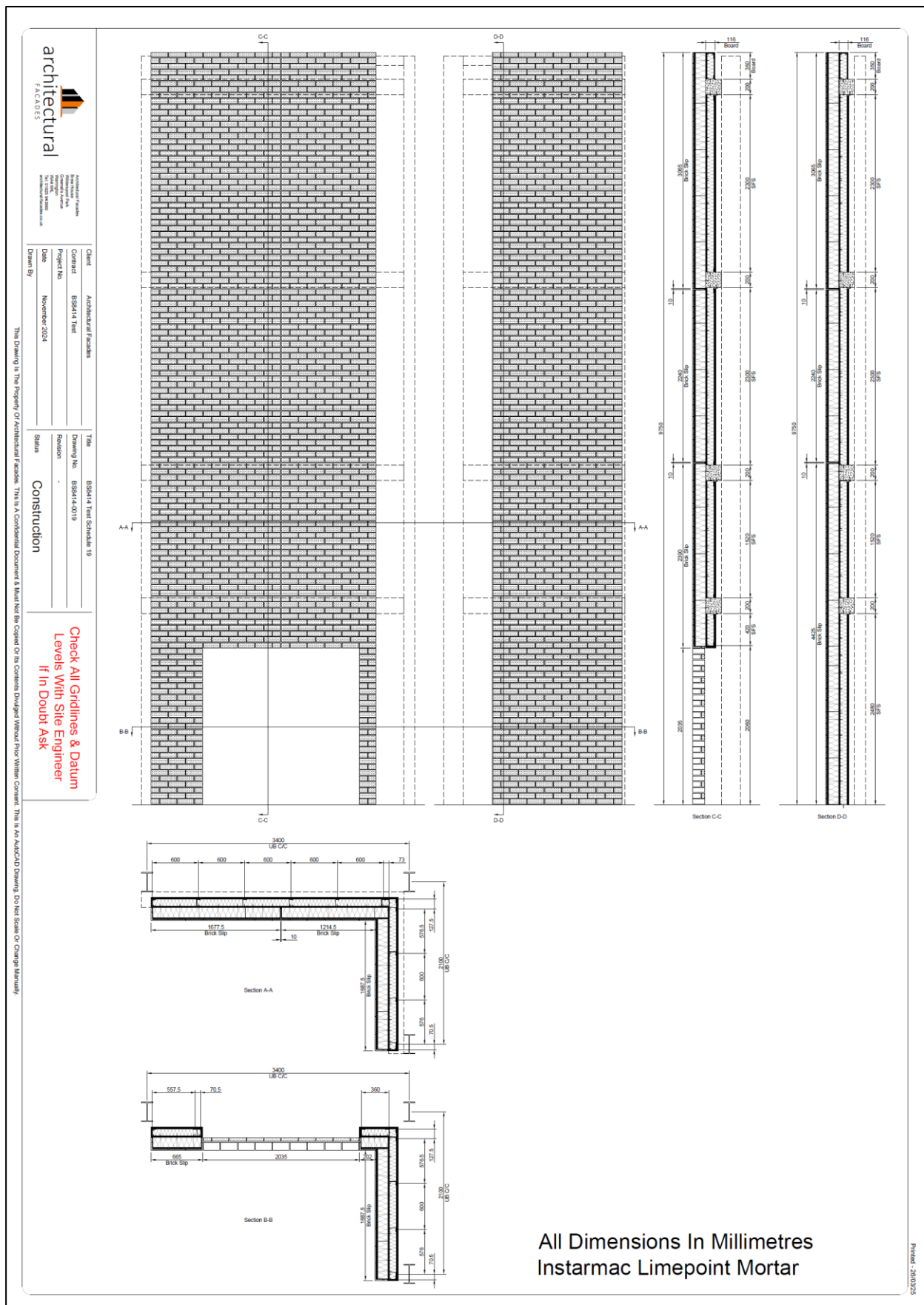


Figure 10. Sketch of the insulation mortar application



**Figure 11.Sketch of the brickslip layout**

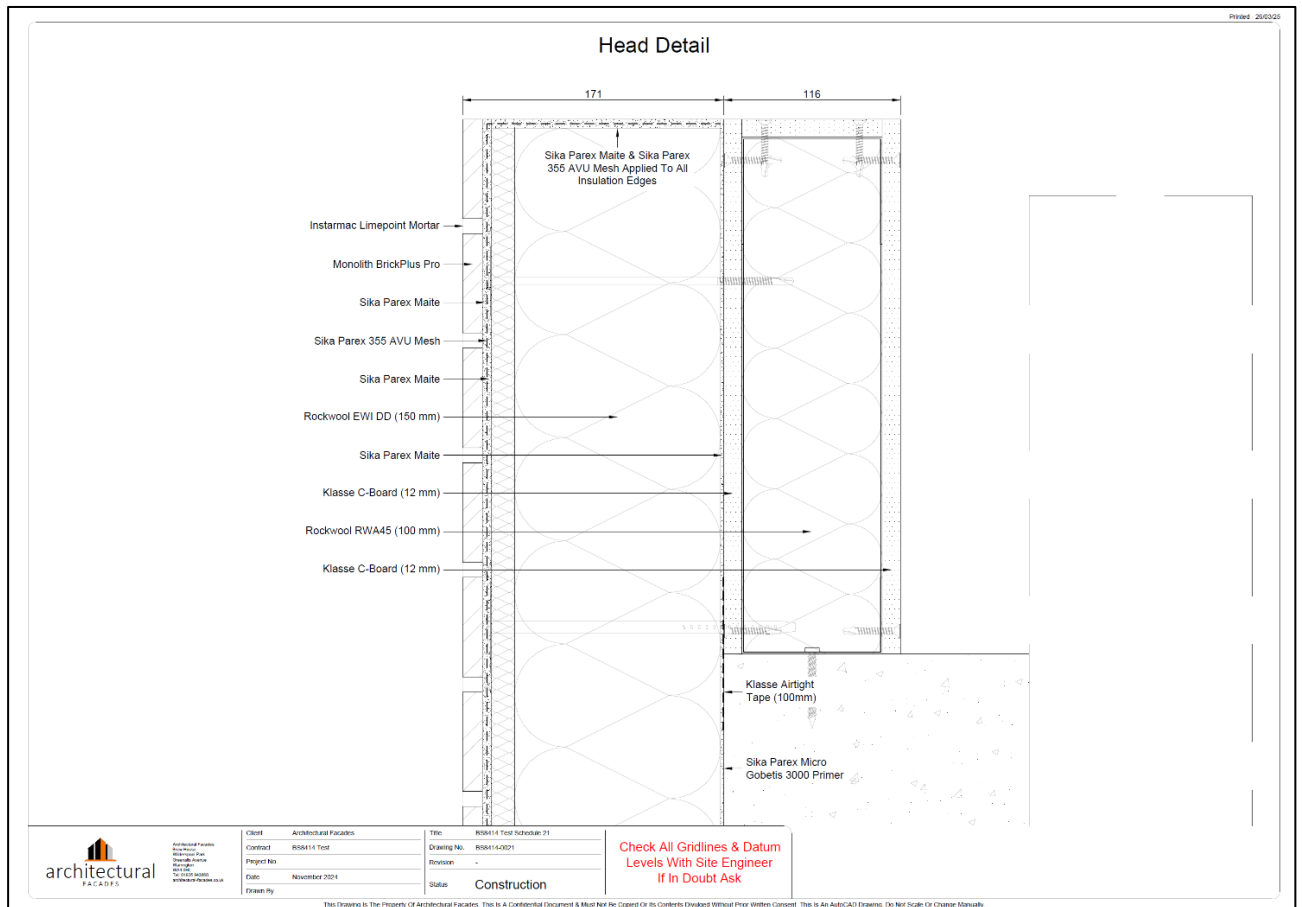


Figure 12. Sketch of the head details

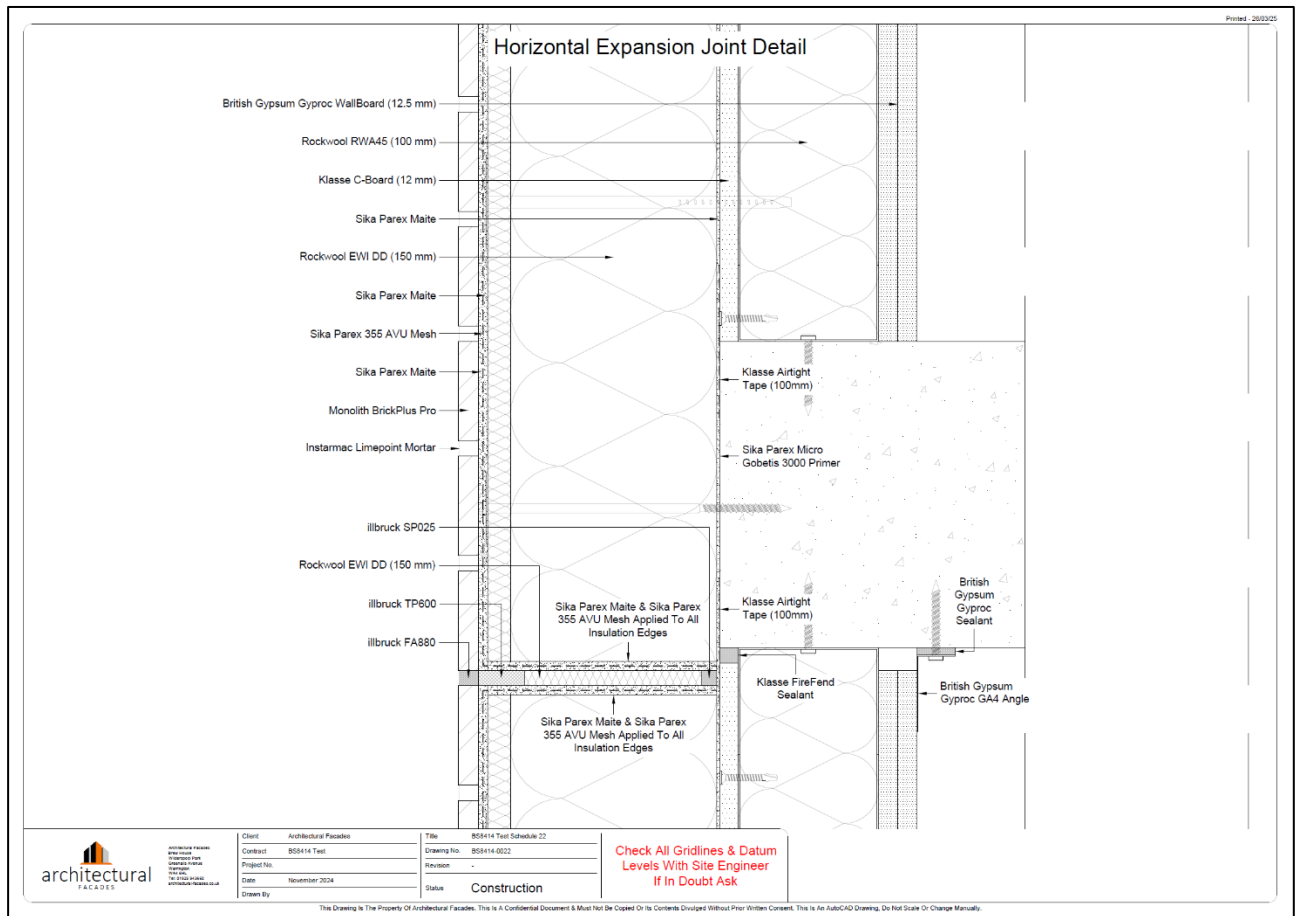


Figure 13. Sketch of the horizontal expansion joint details

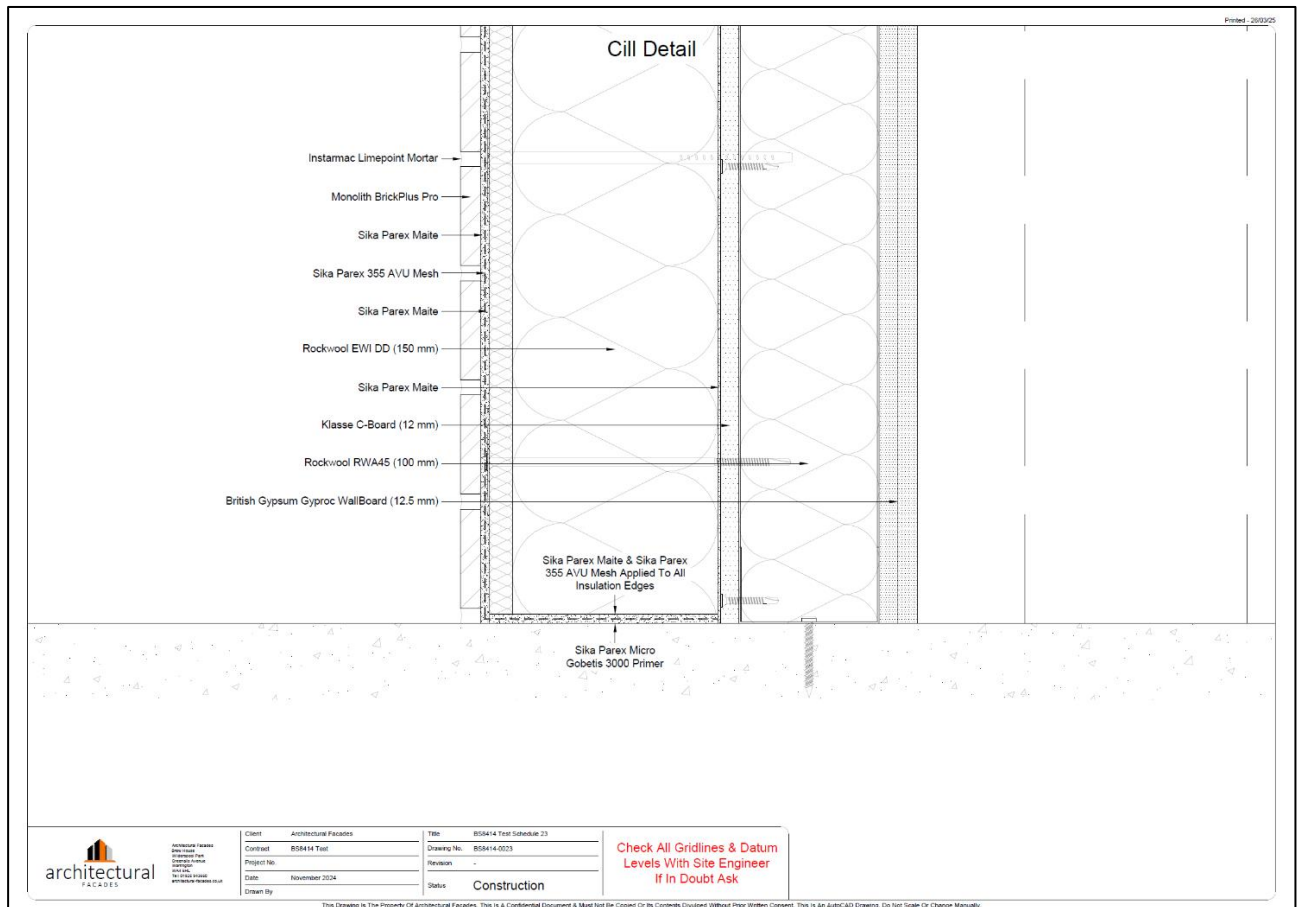


Figure 14. Sketch of the cill details



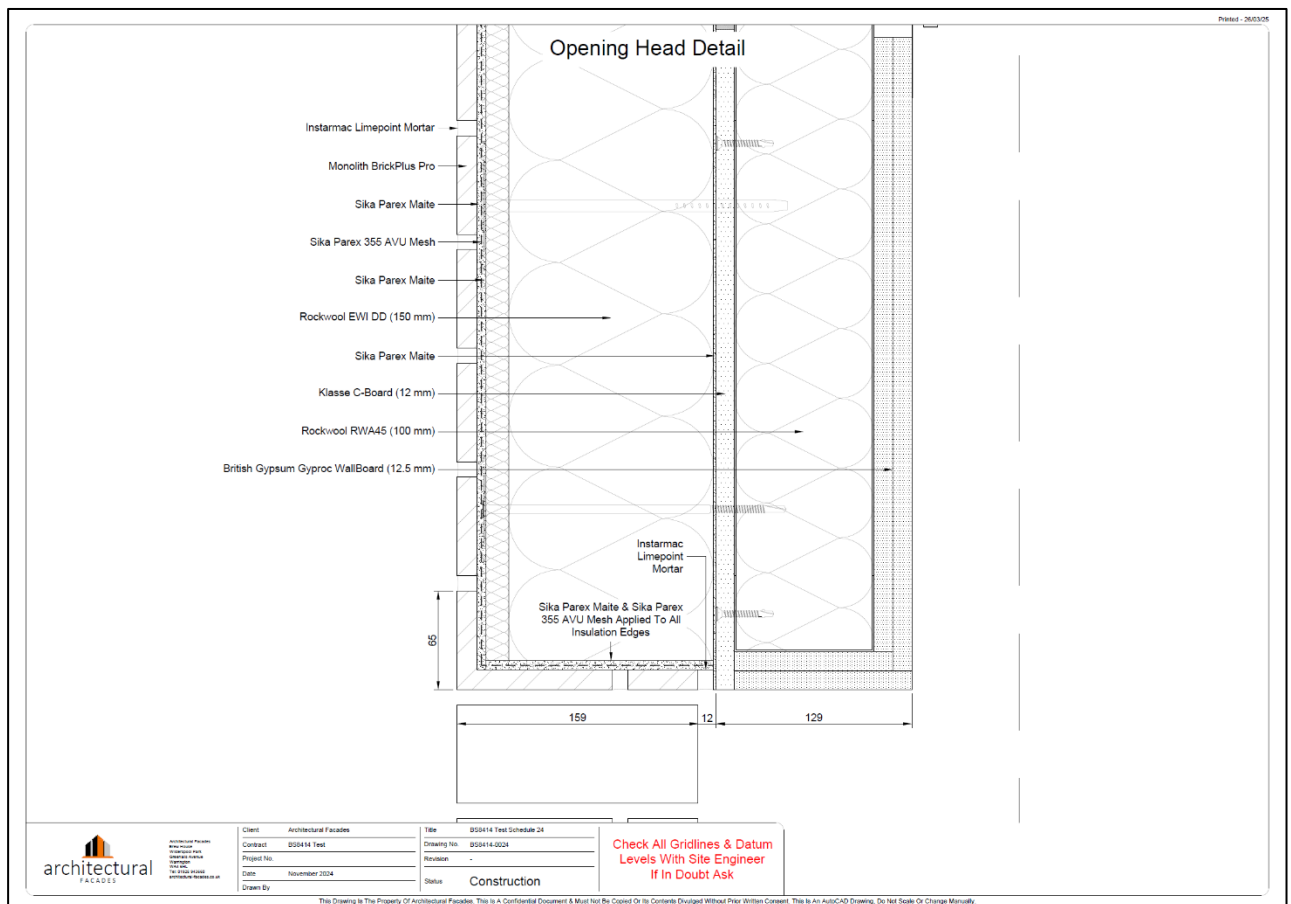


Figure 15. Sketch of the top of the chamber details



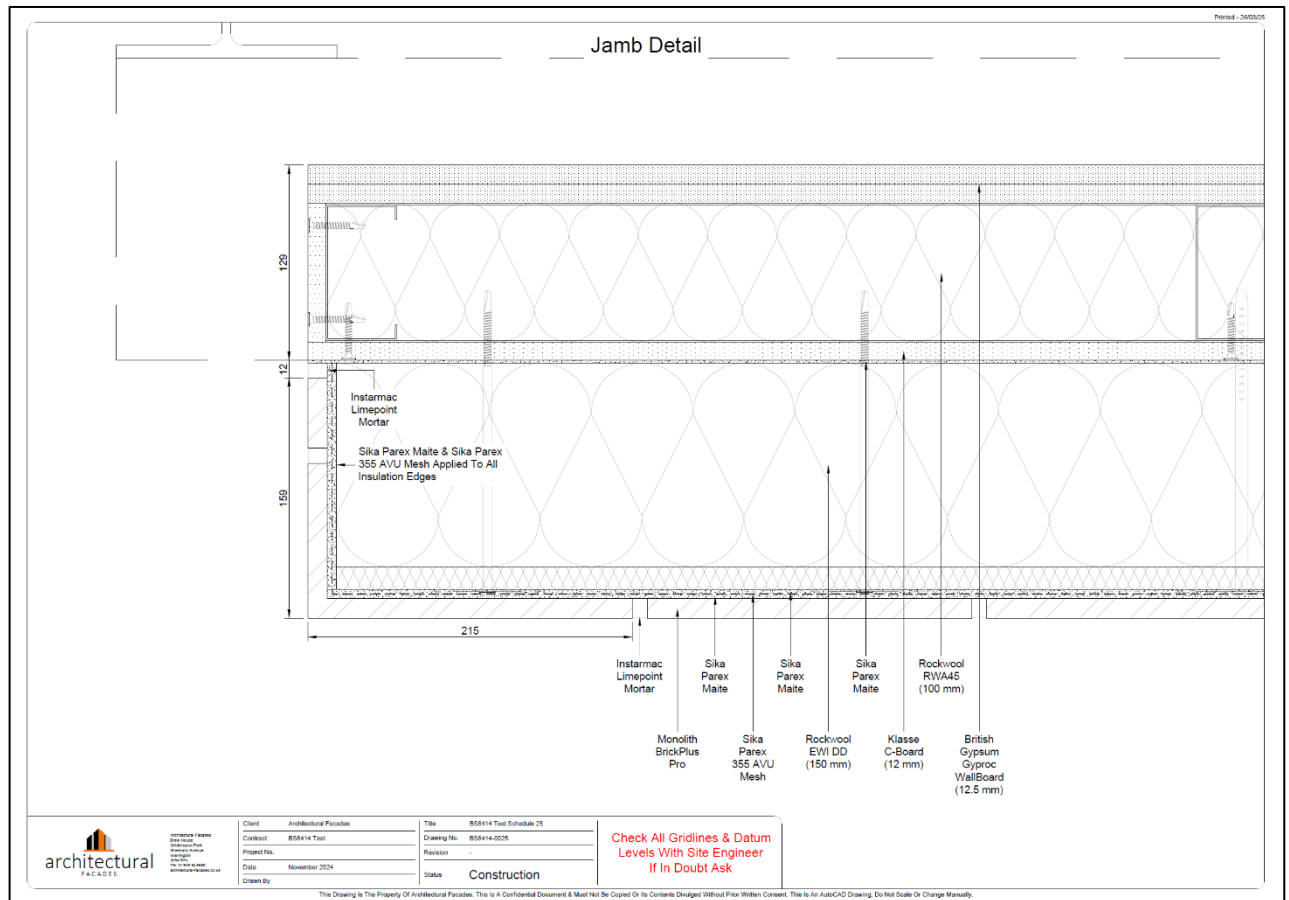


Figure 16. Sketch of the edge of the main face

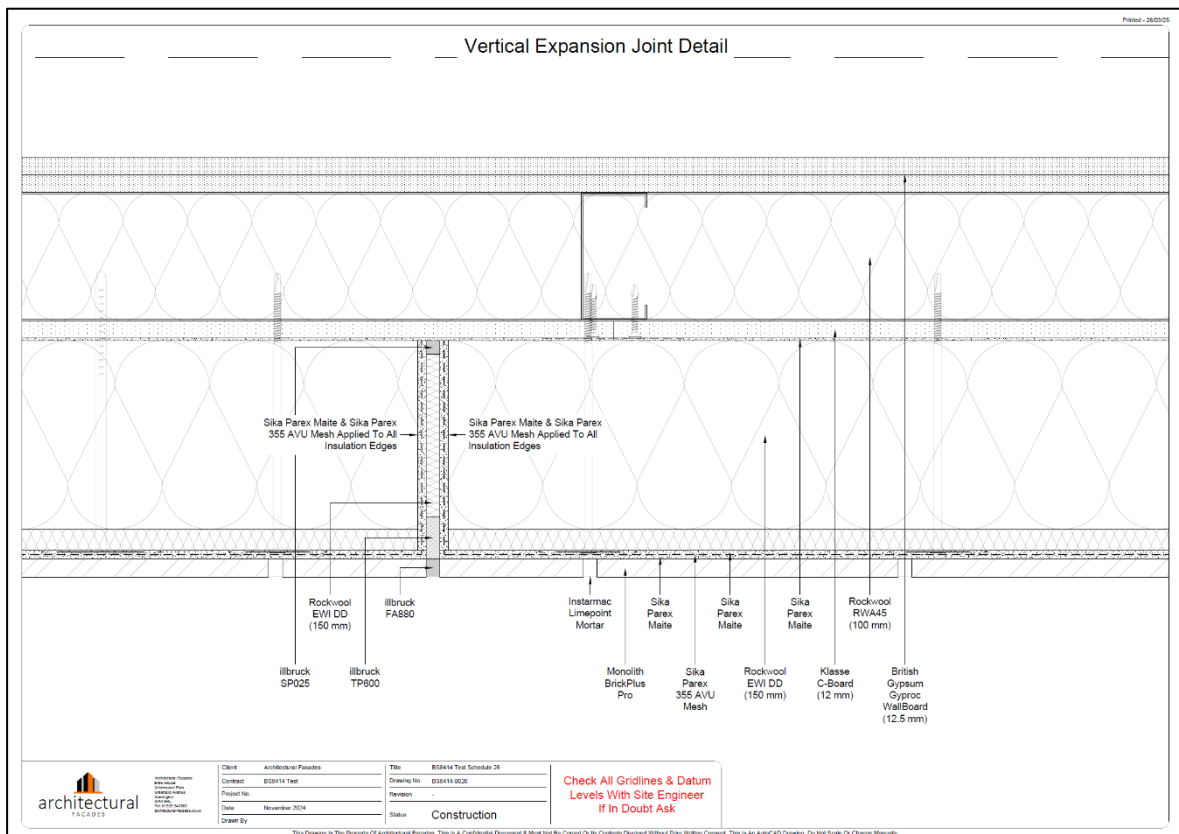


Figure 17. Sketch of the vertical expansion joint details

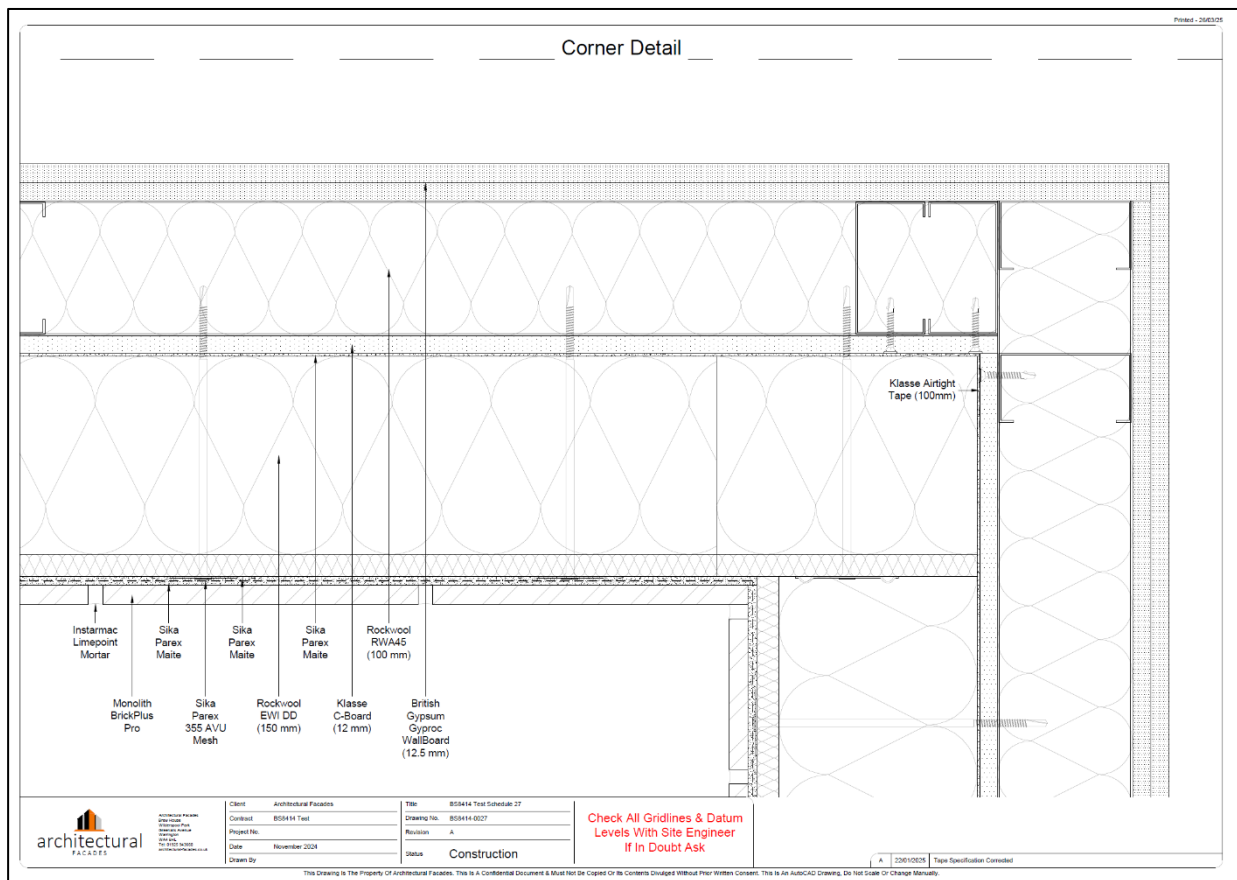
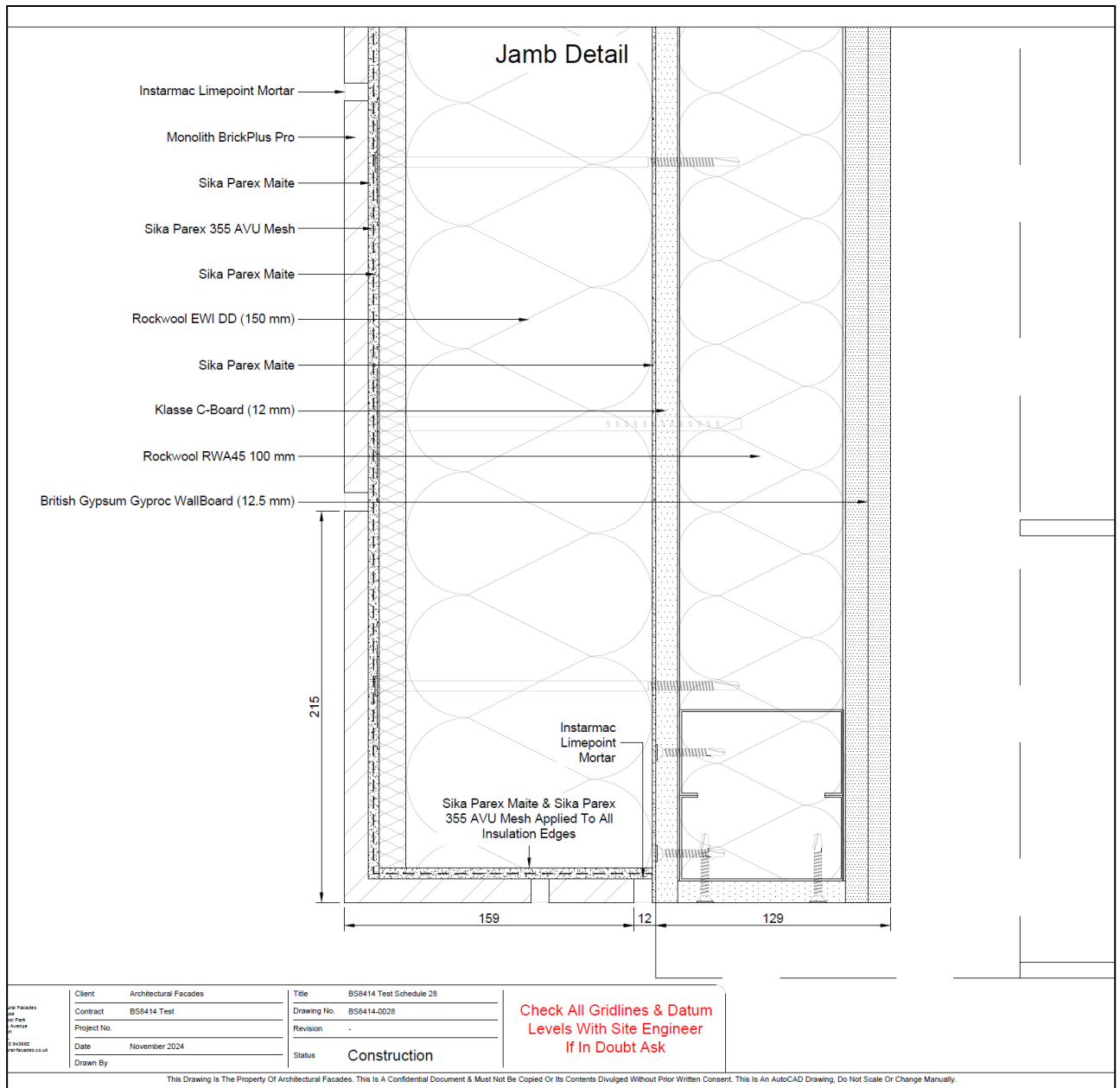


Figure 18. Sketch of the corner details



**Figure 19. Sketch of the edge of the return wing**

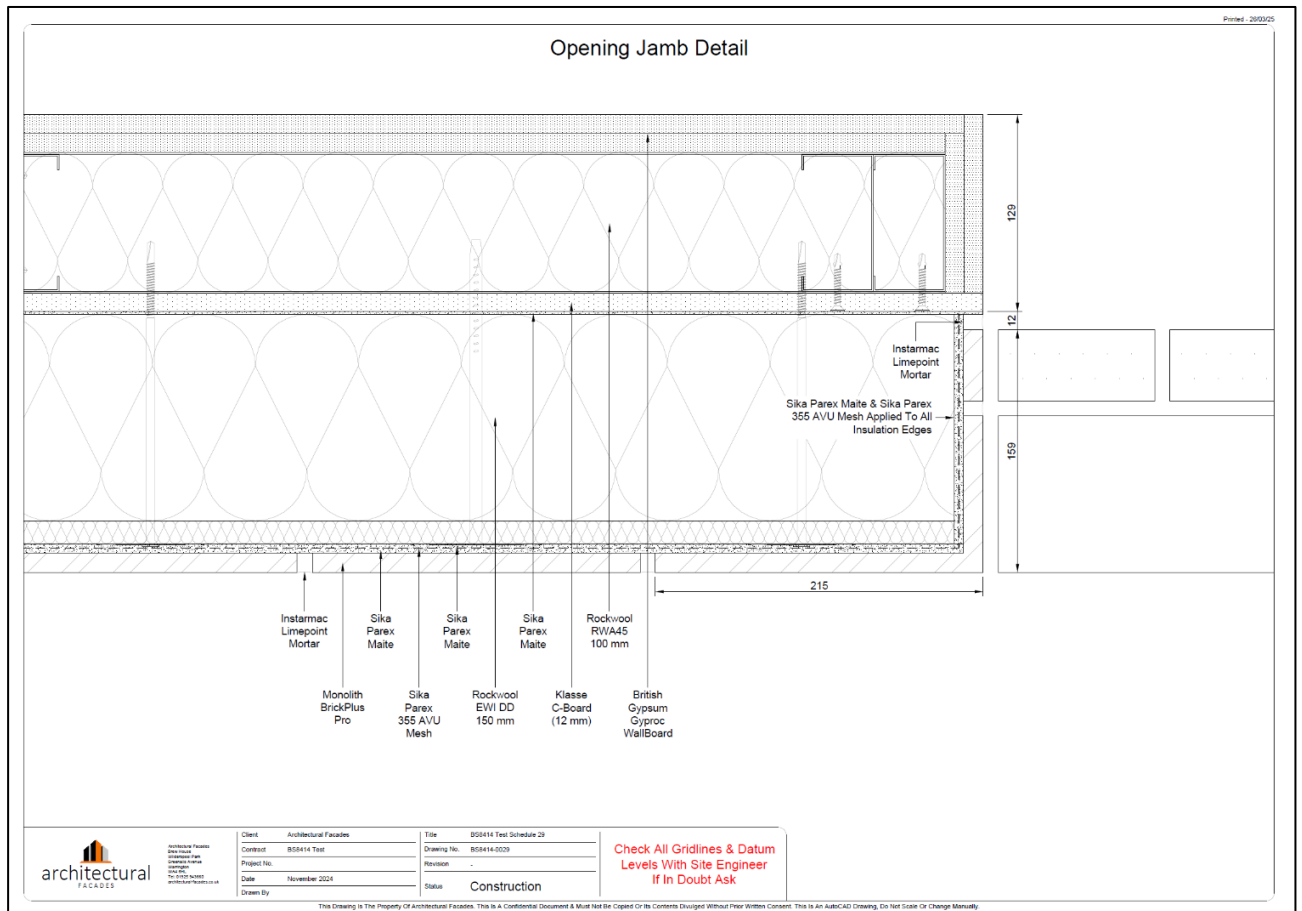


Figure 20. Sketch of the edge of the combustion chamber

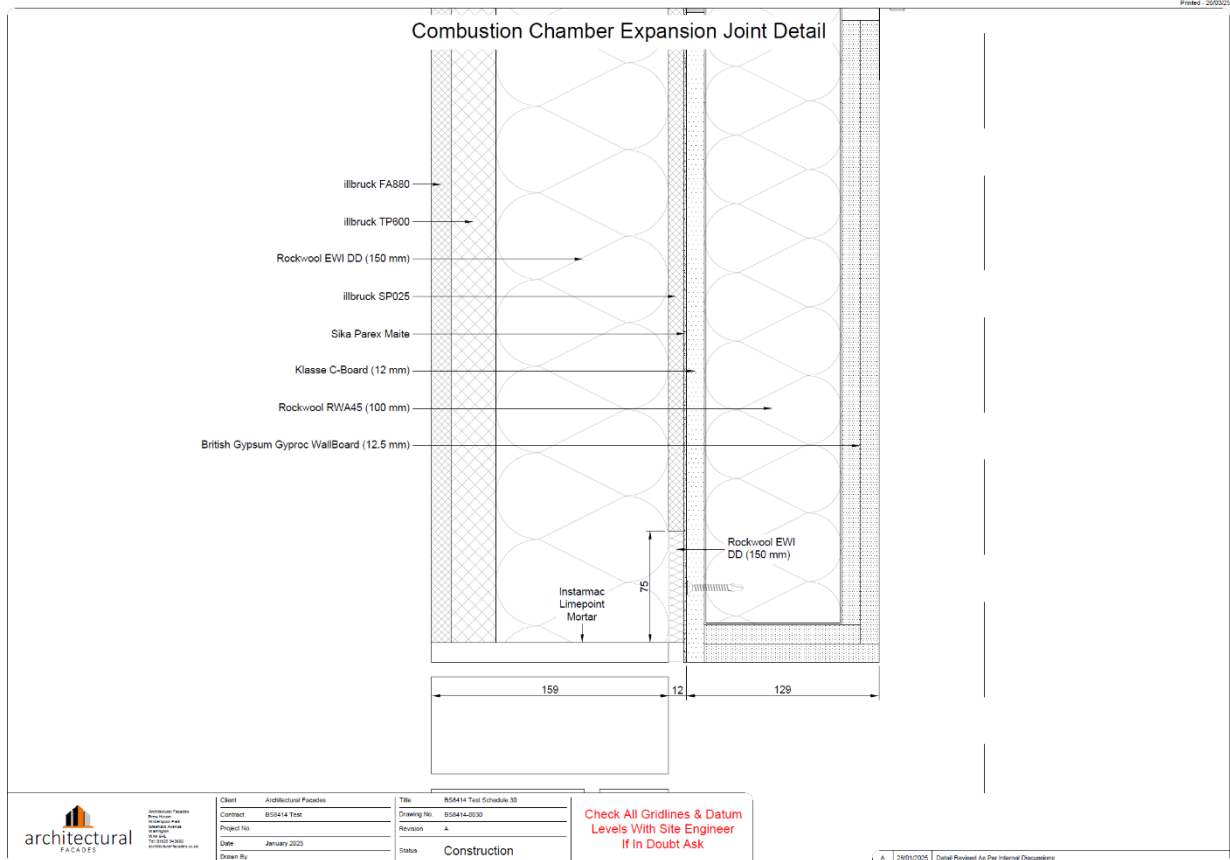


Figure 21. Sketch of the combustion chamber expansion joint



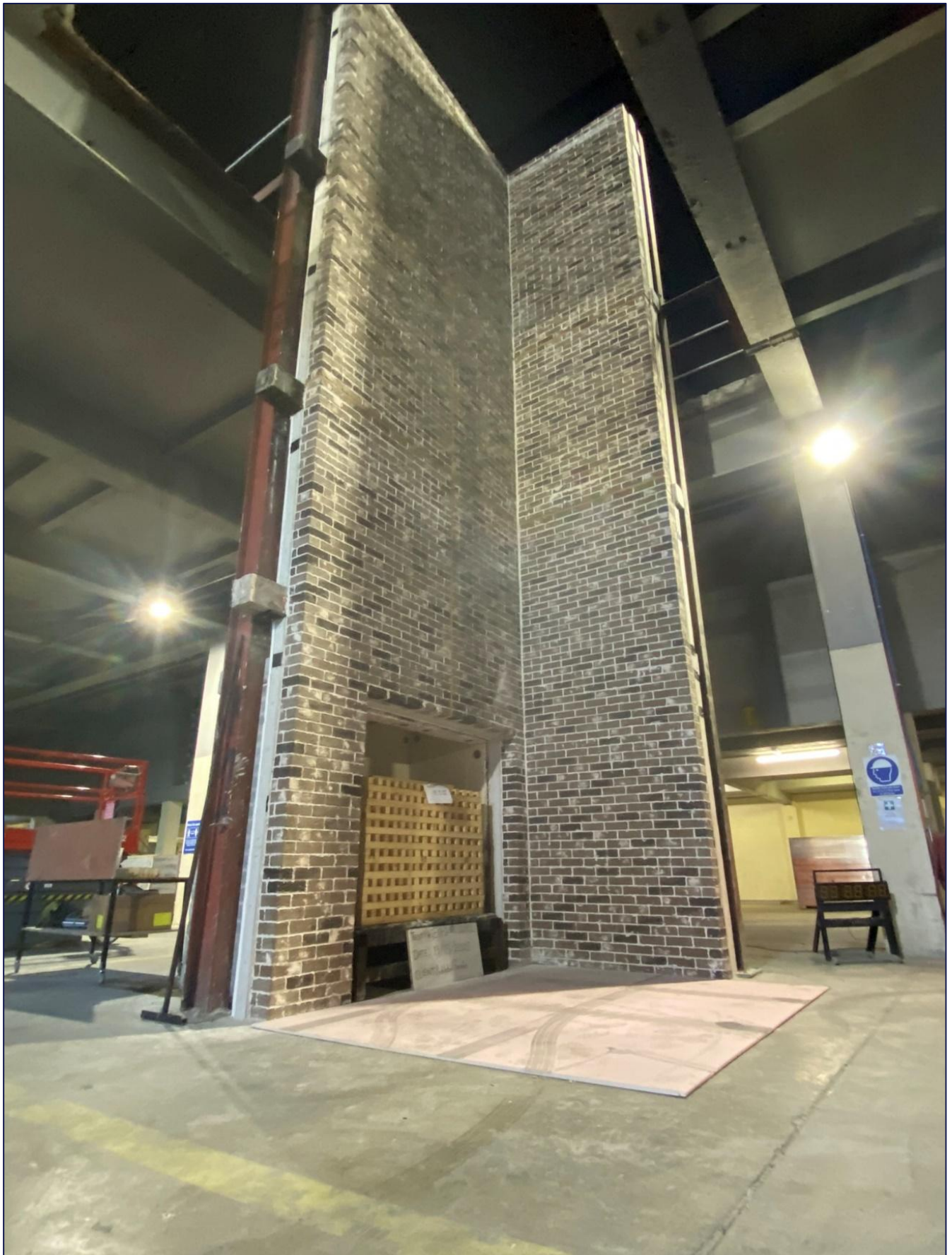


Figure 22. Cladding system before the test

## 4. REPORTS AND RESULTS IN SUPPORT OF THIS CLASSIFICATION

### 4.1. REPORTS

<i>Name of Laboratory</i>	<i>Name of sponsor</i>	<i>Report ref. no</i>	<i>Test method and version date</i>
EFFECTIS UK/IRELAND	ARCHITECTURAL FACADES	EUI-24-FFK1-000831	BS 8414-2:2020

### 4.2. RESULTS

#### 4.2.1. Fire spread

Fire-spread start time,  $t_s$  = 01 min 10 sec.

<i>Test method and test number</i>	<i>Parameter(s)</i>	<i>No. Tests</i>	<i>Results</i>	
			<i>Fire spread test result time, <math>t_s</math> (min)</i>	<i>Compliance with parameters in Annex B of BR135:2013</i>
BS 8414-2:2020	External fire spread	1	> 15 minutes	Compliant
	Internal fire spread: Cladding		> 15 minutes	Compliant
	Internal fire spread: Insulation		> 15 minutes	Compliant
	Internal fire spread: Sheathing board		> 15 minutes	Compliant
	Internal fire spread: SFS		> 15 minutes	Compliant
	Internal fire spread: Plasterboard		> 15 minutes	Compliant
	System burn-through		> 15 minutes	Compliant

#### 4.2.2. Mechanical performance

##### 4.2.2.1. Ongoing system combustion following extinguishment of the ignition source

After the extinguishment of the fire source, ongoing system combustion was noticed.

##### 4.2.2.2. System collapse

No system collapse was noticed during the test.

##### 4.2.2.3. Spalling

Spalling of the brickslips was recorded during the test at 4 mins 4 s.

##### 4.2.2.4. Delamination

No delamination was observed on the cladding system, only discoloration.

##### 4.2.2.5. Flaming debris

No flaming debris and flaming droplets were recorded during the test, starting at 9 mins 33 s

##### 4.2.2.6. Pool fires

No pool fires were recorded during the test

#### 4.2.3. System damage

##### 4.2.3.1. External cladding - brickslips

On the main face, discolouration was present on approximately 75% of the brickslip layer; the area of discolouration was located directly above the top of the combustion chamber and reached up to the height of the third lintel. Additionally, two bricks, located directly above the top of the opening of the combustion chamber, spalled during the test, the debris landing 9 m from the test rig. All other sections of the brickslip layer remained in place and intact after the test.

On the return wing, all sections of the brickslip layer remained in place and intact after the test.

##### 4.2.3.2. Combustion chamber surrounding

On both the top and sides of the combustion chamber surrounding, the lining of the plasterboard was completely destroyed, and cracks were present on the boards on all sides of the chamber. Additionally, there was discoloration and smoke staining on the bottom of the plasterboard on both of the side edges, reaching up to a height of 350 mm from floor level. All other sections of the combustion chamber surrounding remained in place and intact after the test.

##### 4.2.3.3. Insulation

On the main face, discolouration was present on approximately 25% of the insulation layer; the area of discolouration was located directly above the top of the combustion chamber and reached up to the height of the first lintel. All other sections of the insulation layer on the main face remained in place and intact after the test.

On the return wing, all sections of the insulation layer remained in place and intact after the test.

##### 4.2.3.4. Sheathing board

Note: Due to the insulation being adhered to the sheathing board with mortar, it was impossible to remove the insulation layer without removing the sheathing board, and therefore not possible to photograph and analyse the damage to the sheathing board.



#### 4.2.3.5. SFS frame

Smoke staining was present on the U-track directly above the chamber opening. Otherwise, on both the main face and the return wing, all sections of the SFS layer remained in place and intact after the test.

#### 4.2.3.6. Plasterboard

On both the main face and the return wing, all sections of the plasterboard layer remained in place and intact after the test.

## 5. CLASSIFICATION AND FIELD OF APPLICATION

---

### 5.1. REFERENCE OF CLASSIFICATION

This classification has been carried out in accordance with BS 8414-2:2020 and BR 135 (3<sup>rd</sup> edition):2013.

### 5.2. CLASSIFICATION

The element, External wall insulation system made of plasterboard, insulated SFS, sheathing board, adhesive mortar coat with encapsulated mesh, insulation, base adhesive mortar coat with encapsulated mesh and topcoat, panelised brick slip system, lime-based mortar pointing described in this classification report and in the test report referenced in section 4.1 has been tested and met the performance criteria set in Annex B of BR 135:2013.

### 5.3. FIELD OF APPLICATION

This classification is valid only for the system as installed and detailed in this classification report and in the test report referenced in section 4.1.

## 6. LIMITATIONS

---

This classification document does not represent type approval or certification of the system.

The classification applies only to the system as tested and detailed in the classification report. The classification report can only cover the details of the system as tested and should be read in conjunction with the test reports referenced in section 4.1.

The specification and interpretation of fire test methods are the subject of ongoing development and refinement. Changes in associated legislation may also occur. For these reasons, it is recommended that the relevance of test and classification reports over five years old should be considered by the user. The laboratory that issued the report will be able to offer, on behalf of the legal owner, a review of the procedures adopted for a particular test or classification to ensure that they are consistent with current practices, and if required may endorse the report.

**SIGNED**

**APPROVED**

X 

---

Project Leader  
Signed by: Shaneer VELLUKKANDY

X 

---

Testing Technical Supervisor  
Signed by: Maurice McKee