

Property Alliance Group/
Starwood Capital Group
Premier House
Facade Schedule & Quality Plan



0.0	Facade Quality Plan	4
1.0	Elevations	5
2.0	Bay Studies	10
3.0	Sample Panel	14
4.0	External Material Schedule	18
5.0	Facade Specification	23



Design Rationale

The façade has been inspired by the Manchester Cathedral's profiled window reveals and are angled towards the cathedral deliberately.

The anodised metal profile allows a modern high quality finish. The choice of colour was carefully selected to compliment the adjacent buildings.

Facade Quality Plan

This document is to set out the quality of material and management of the project façade elements to allow the pre commencement planning condition to be discharged.

The main façade elements are a metallic Polyester Powder Coated stick Curtain Wall System (CWS). At the ground floor the system is Silicone Glazed (SG) and at Levels 01-05 the CWS is a capped system.

The upper floor facade composition is made up from full height glazing with tapered profiled metal cladding. The tapered profile is a deliberate move and intended to open up views towards Manchester Cathedral. Within a typical 'bay' of the CWS will consist of a clear glazed element, bespoke perforated ventilation panel and a solid panel with an anodised profile secret fixed to the window system.

A façade engineer has been appointed to ensure that the quality of materials is achieved in refined detailing and captured in the façade specification.

At this stage no main contractor has been appointed. Once appointed the relevant contractor and their sub-contractors will be required to produce a Visual Mock Up for inspection by the Design Team and MCC Planning to approve all materials and interfaces.

Throughout the project JMA will be reviewing all sub contractors drawings and information to check specification compliance and that the design intent of detailing is maintained. The contractor to ensure that the sub-contractor's quality plan is implemented and that it meets architectural and facade specification requirements.

During the construction phase the contractor is to ensure that all façade panels to be stored on pallets off the ground, protected from inclement weather to keep dry and prevent soiling, chipping and contamination by salts and other deleterious substances.

After final completion by the façade contractor all element to be cleaned and any dirt or blemishes removed from exposed surfaces in accordance with the manufacturer's recommendations. The contractor should allow for all adjacent surfaces to be protected from damage during the cleaning operations.

Profiled Window Reveals



Manchester Cathedral

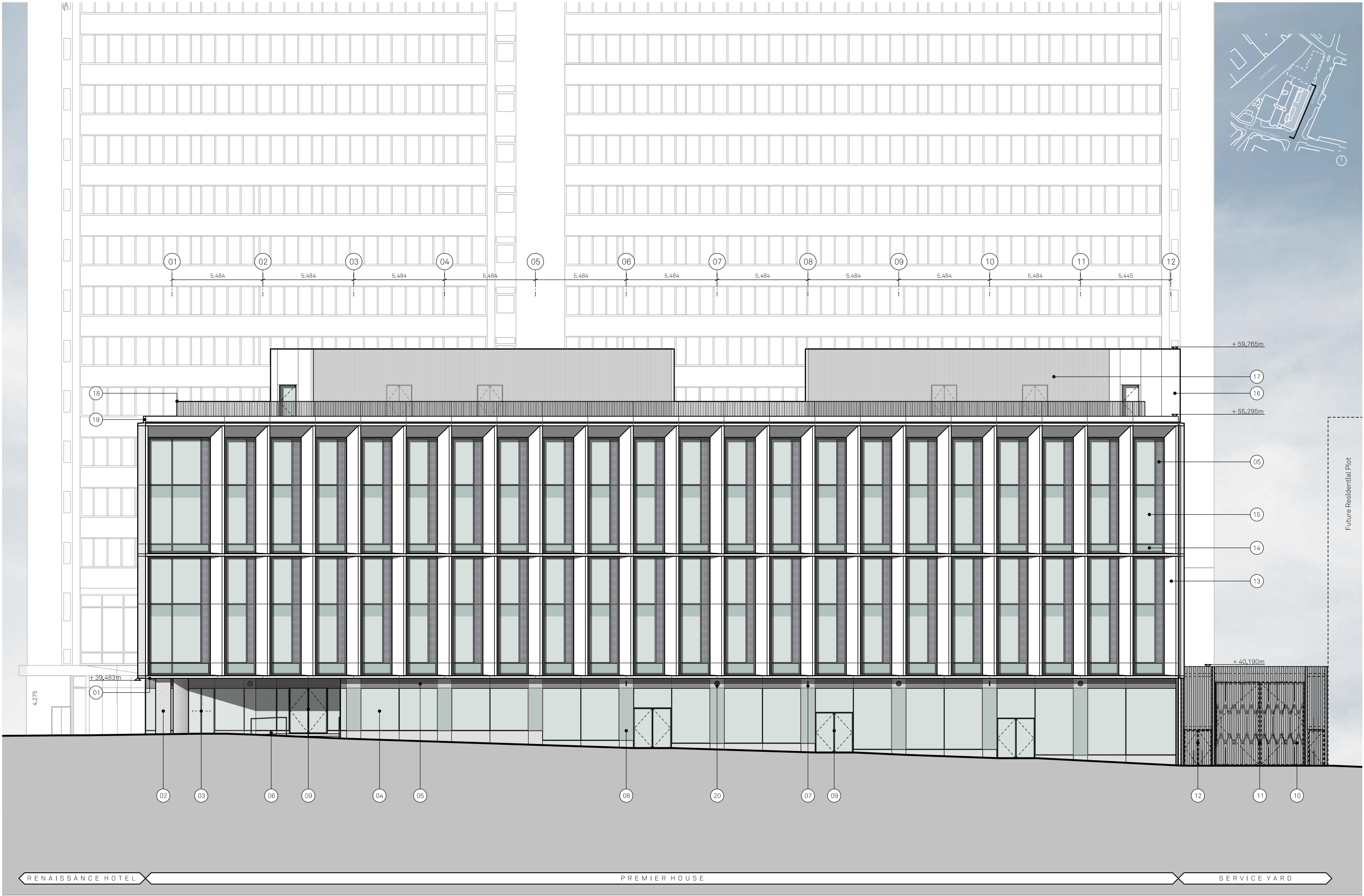
- Profiled window reveals are a prominent feature of the Grade I listed Manchester Cathedral

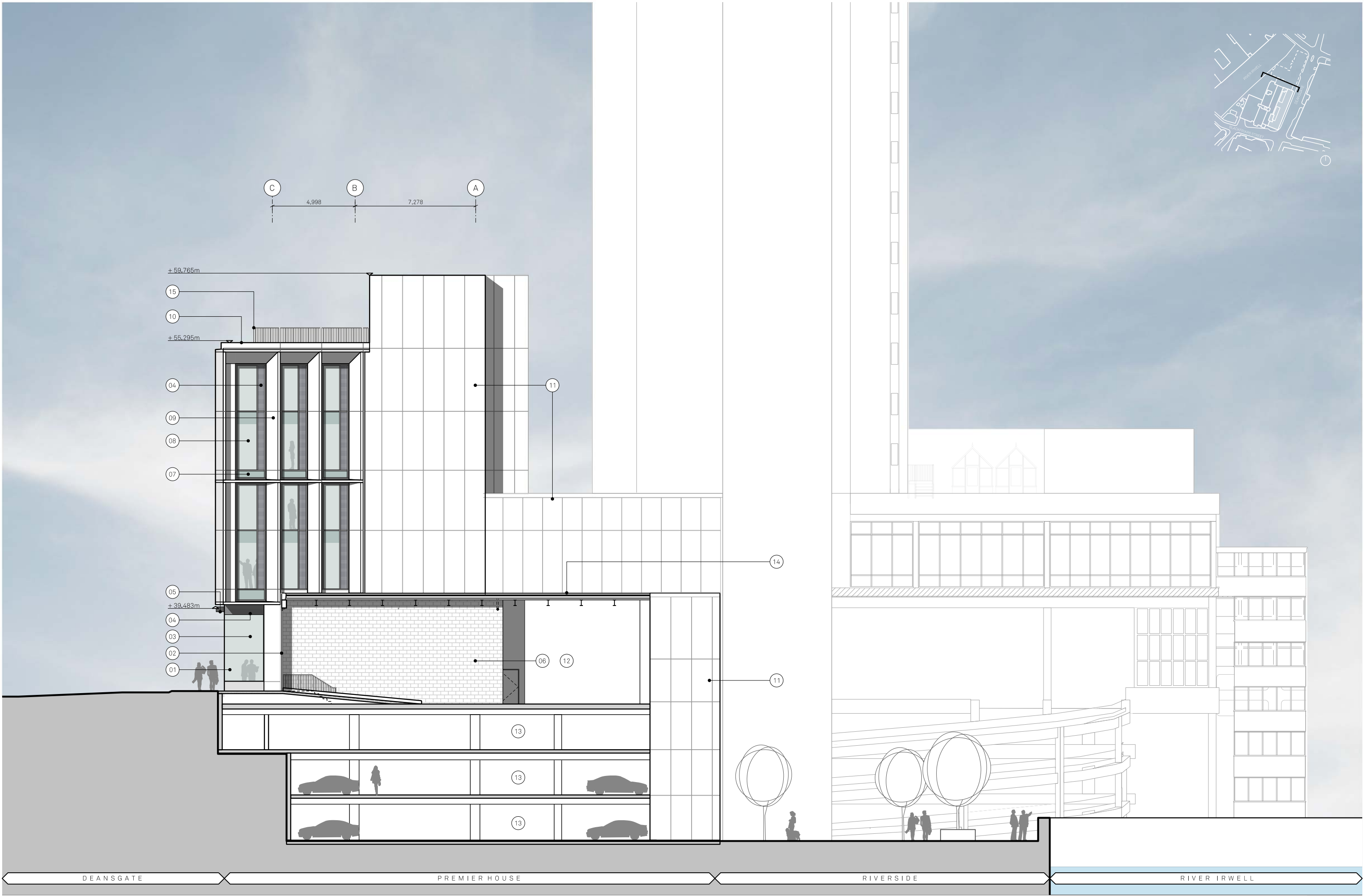
Premier House

- Inspired by the Manchester Cathedral interpreted profile window reveals form the top of the proposal
- Colour to compliment the adjacent buildings and using metal cladding to give a modern feeling



1.0 Elevations





MATERIALITY KEY:

- 01

Glazed corner to SG curtain walling
- 02

Metallic silver PPC metal fins to service yard entrance
- 03

SG Curtain wall system
- 04

Anodised silver laser cut vent panel Pattern TBC
- 05

Projecting retail totem signage with metallic silver PPC frame/ backing panel
- 06

Proposed blockwork to the service yard
- 07

Shadow box within metallic silver capped curtain wall
- 08

Metallic silver capped curtain wall system
- 09

Anodised tapered metal rainscreen cladding - champagne colour
- 10

Metallic PPC metal upstand flashing to parapet - champagne colour
- 11

Anodised silver metal rainscreen cladding
- 12

Existing Service Yard
- 13

Existing Car Park
- 14

Sedum roof to service yard
- 15

Metallic light grey PPC metal balustrade

Project Name: Renaissance		Title: Premier House - Block 1 Proposed North Elevation		Scale: 1:100@A1	
Drawn: DK	Checked: FM	Status: Planning	Project: 150	Drawing No: B1_04_2201	Rev: A
Detail: - 05/08/22 Issued for Planning					

Jon Matthews Architects

Union, 2-10 Albert Square, Manchester, M2 6LW

0161 974 3690

Copyright of this drawing is vested in Jon Matthews Architects and must not be copied or reproduced without written consent. Figured dimensions only are to be taken from this drawing. Do not scale from this drawing. For full company disclosure please visit www.jonmatthewsarchitects.com



MATERIALITY KEY:
Union, 2 - 10 Albert Square, Manchester, M2 6LW

- | | | | | | | | | |
|--|--------------------------------------|---|--|--|--|---|---|------------------------------|
| 01 Fire-rated curtain wall system | 03 Double-slide glazed entrance door | 05 Anodised silver laser cut vent panel Pattern TBC | 07 Anodised champagne colour soffit with integrated lights | 09 Projecting retail totem signage with metallic silver PPC frame/ backing panel | 11 Shadow box within metallic silver capped curtain wall | 13 Metallic light grey PPC metal upstand flashing to parapet - champagne colour | 15 Metallic light grey PPC metal balustrade | 17 Existing Concrete Parapet |
| 02 Fritted back painted glass within metallic curtain walling system | 04 SG Curtain Wall System | 06 GRC cladding to column - Dark grey | 08 Anodised silver metal rainscreen cladding | 10 Metallic silver capped curtain wall system | 12 Anodised tapered metal rainscreen cladding - champagne colour | 14 Metallic silver PPC metal fins to rooftop plant enclosure | 16 Metallic PPC micro louvers (Fire Rated) | |

0161 974 3690

Project Name:	Union, 2 - 10 Albert Square, Manchester, M2 6LW	Title:	Premier House - Block 1	Scale:	1:100@A1
Drawn:	DK	Checked:	FM	Status:	Planning
Project:	150	Drawing No:	B1_04_2202	Rev:	A
Detail:	05/08/22	Issued for Planning			

Jon Matthews Architects

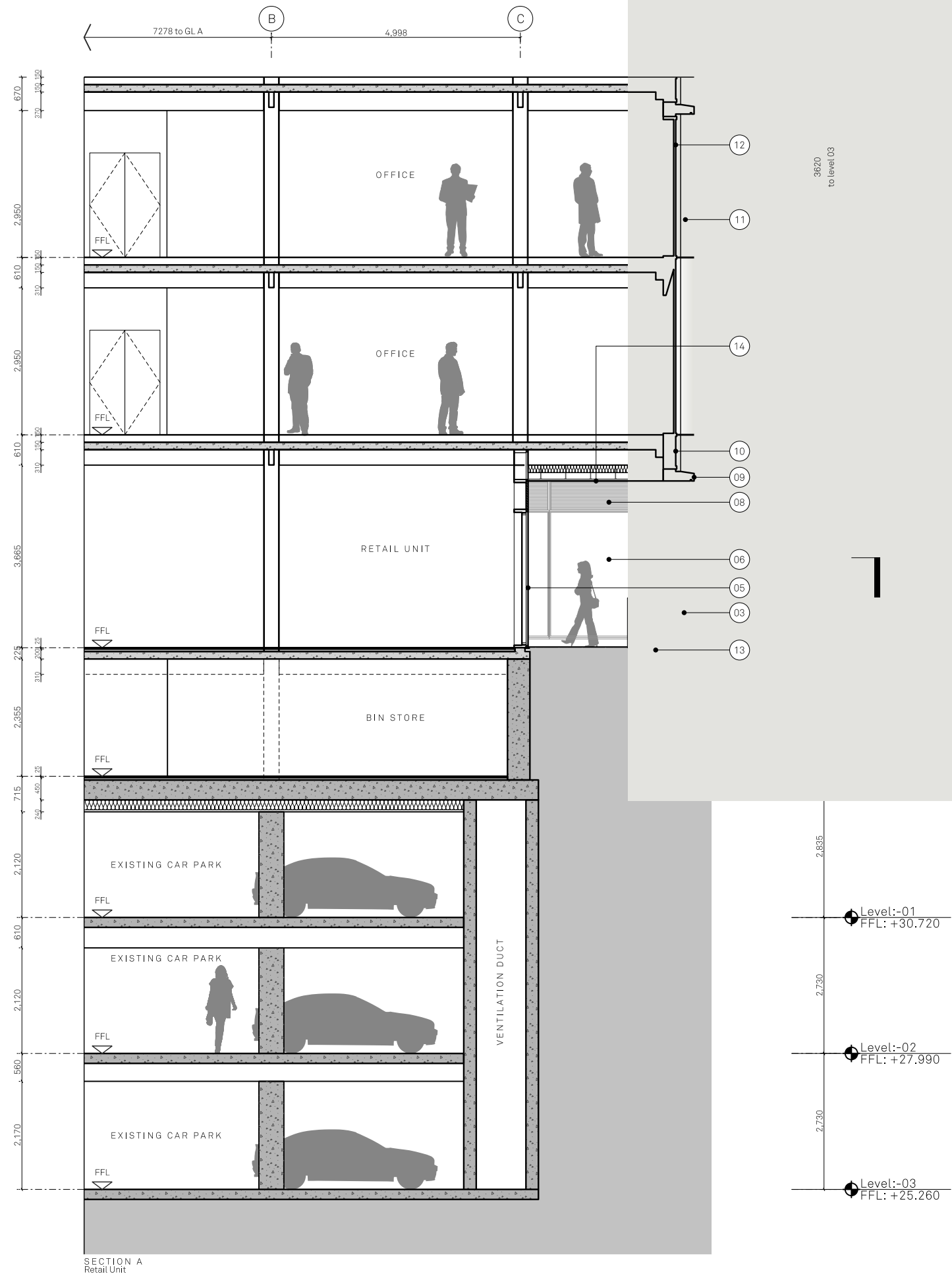
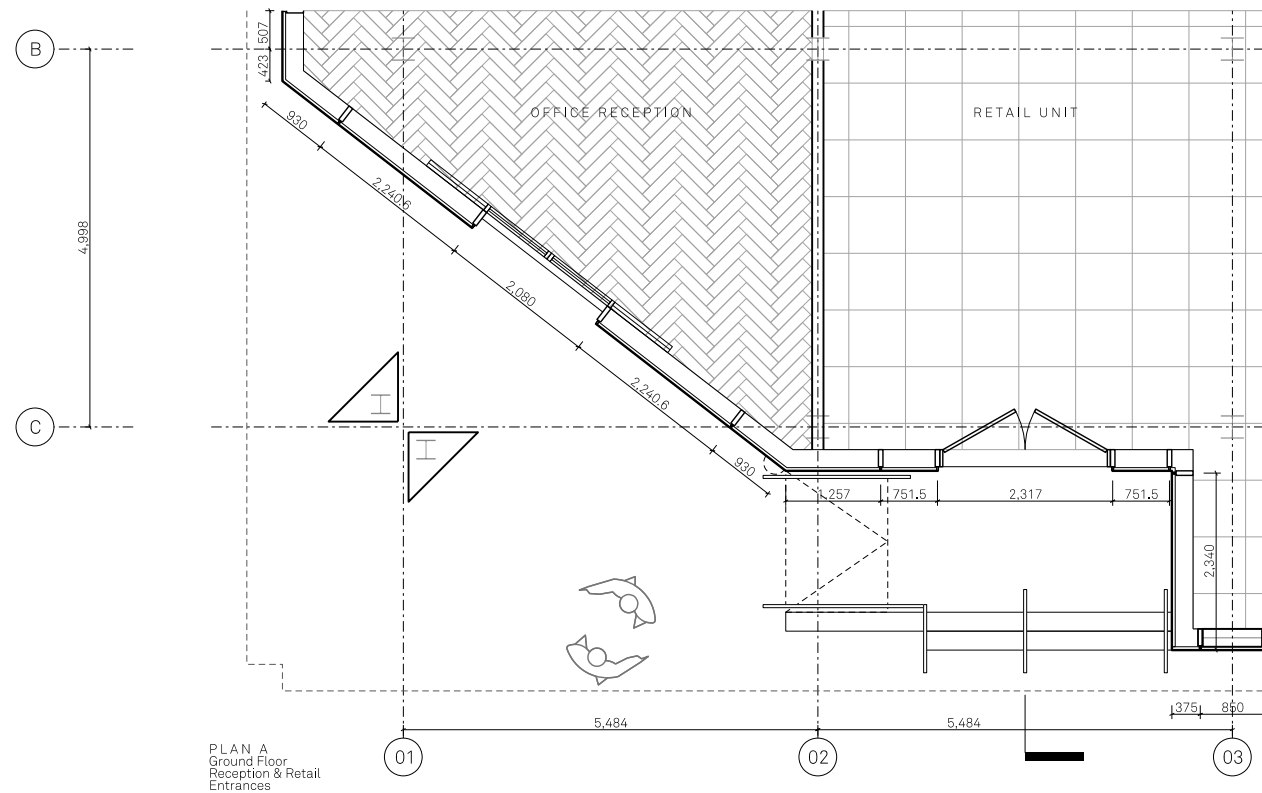
Union, 2-10 Albert Square, Manchester, M2 6LW

0161 974 3690

Copyright of this drawing is vested in Jon Matthews Architects and must not be copied or reproduced without written consent. Figured dimensions only are to be taken from this drawing. Do not scale from this drawing. For full company disclosure please visit www.jonmatthewsarchitects.com



2.0 Bay Studies



Union, 2 - 10 Albert Square, Manchester, M2 6LW

- MATERIALITY KEY:
- 01 GRC column cladding - dark grey
 - 02 Granite finish to SG curtain wall upstand
 - 03 Metallic silver PPC metal balustrade
 - 04 Fritted back painted glazing within SG curtain wall system
 - 05 Power-operated glazed entrance swing door
 - 06 SG curtain wall system
 - 07 CCTV camera with metallic silver PPC frame/ backing panel
 - 08 Anodised silver laser cut vent panel Pattern TBC
 - 09 Anodised rainscreen soffit-champagne coloured
 - 10 Shadow box within metallic silver capped curtain walling system
 - 11 Anodised tapered metal rainscreen cladding - champagne colour
 - 12 Metallic capped curtain wall system - champagne colour
 - 13 Ramp/ steps to retail unit
 - 14 Anodised champagne colour soffit with integrated lights
 - 15 Double-slide glazed entrance door

Project Name: Renaissance

Title: Premier House - Block 1

Scale: 1:50@ A1

Drawn: DK

Checked: FM

Status: Planning

Project: 150

Drawing No: B1_10_4200

Rev: A

Detail: - 05/08/22 Issued for Planning

Jon Matthews Architects

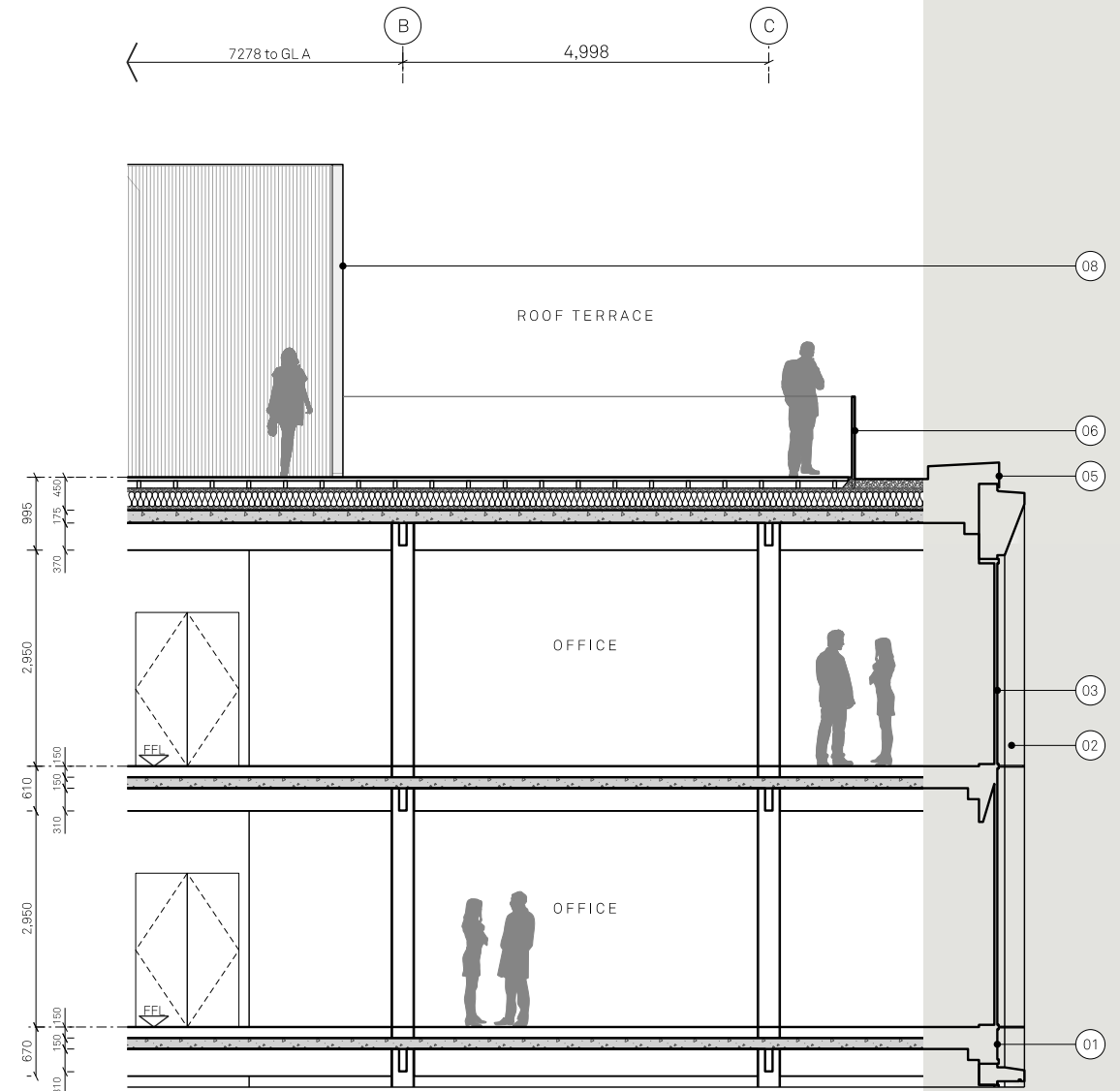
Union, 2-10 Albert Square, Manchester, M2 6LW

0161 974 3690

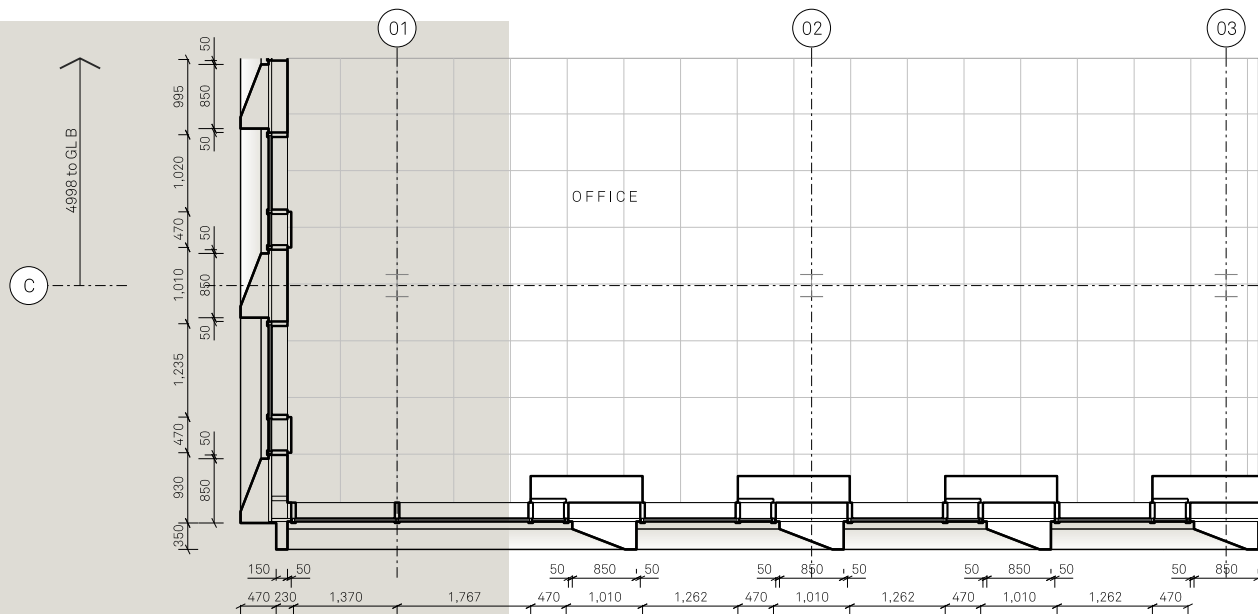
Copyright of this drawing is vested in Jon Matthews Architects and must not be copied or reproduced without written consent. Figured dimensions only are to be taken from this drawing. Do not scale from this drawing. For full company disclosure please visit www.jonmatthewsarchitects.com



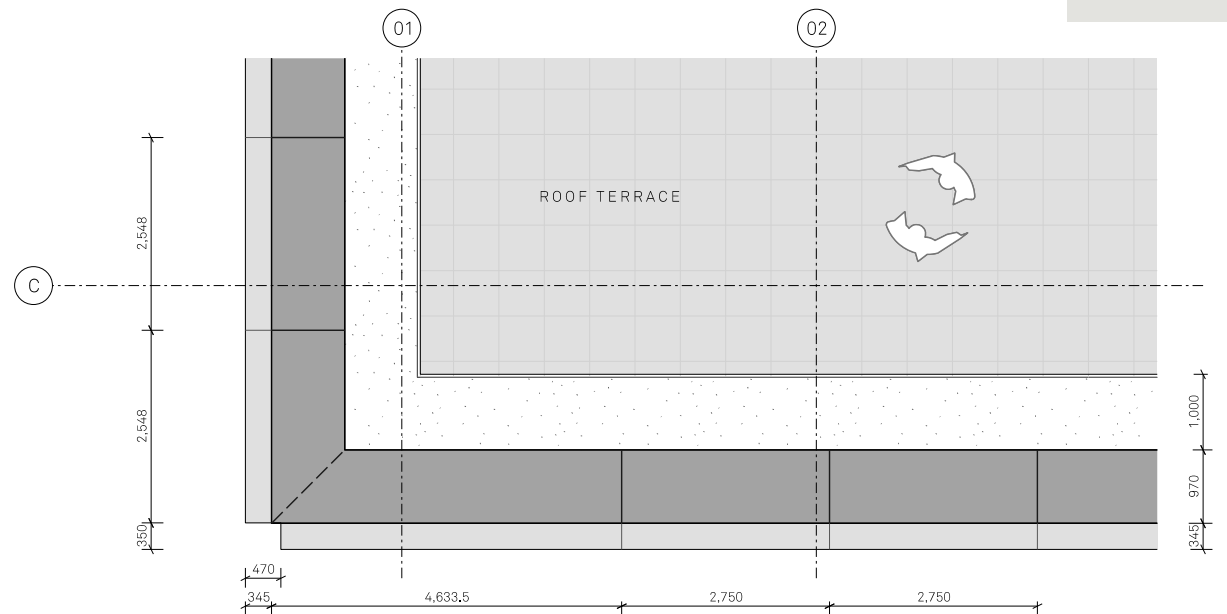
PARTIAL ELEVATION
Roof Terrace



SECTION A
Office Levels and Roof Terrace



PLAN A
Typical Office Level



PLAN B
Roof Level

MATERIALITY KEY:

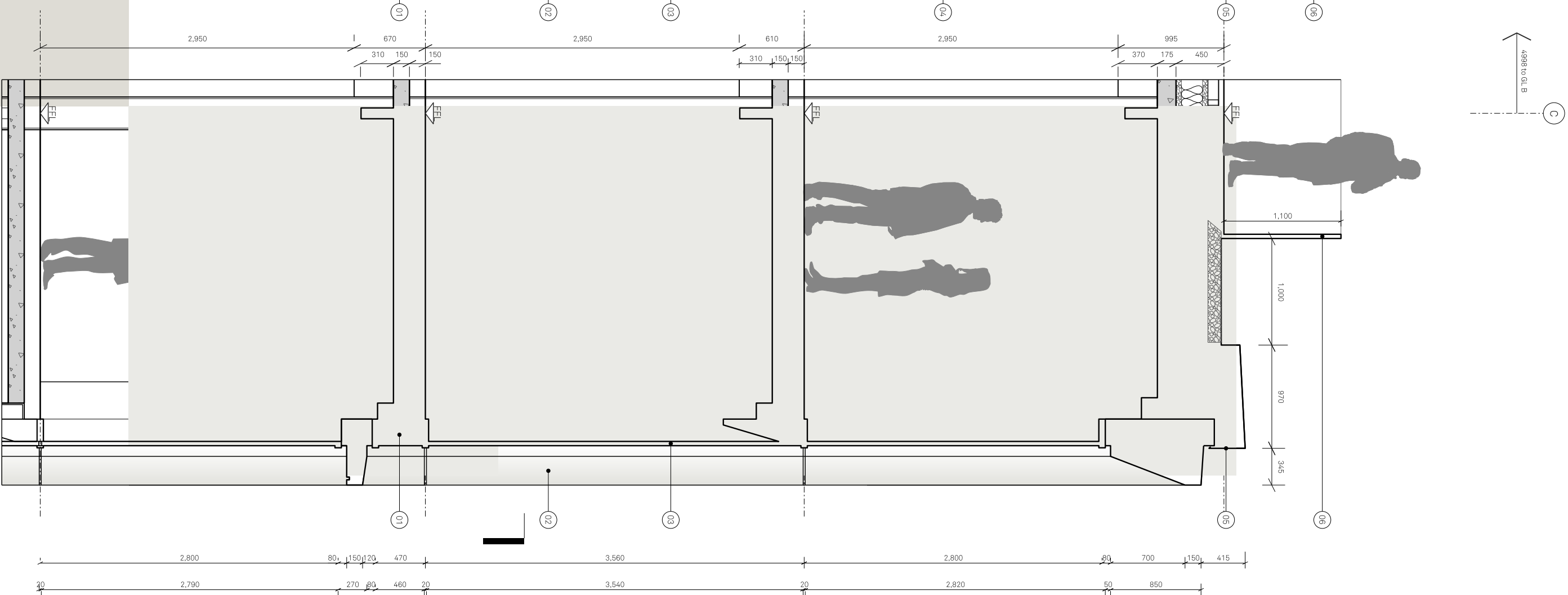
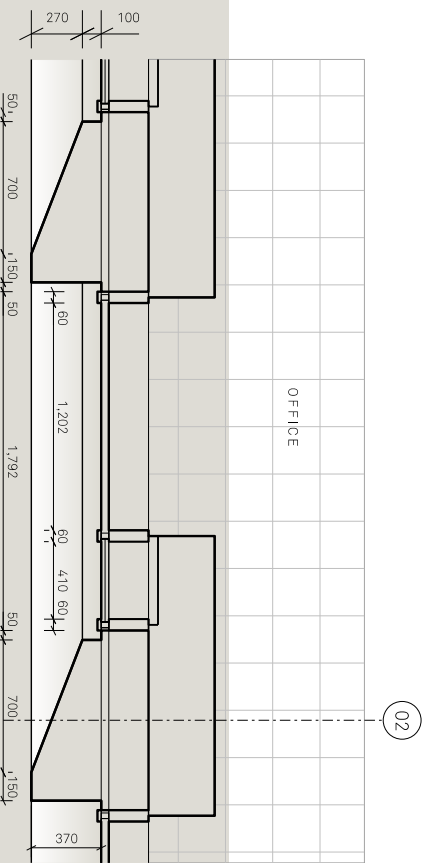
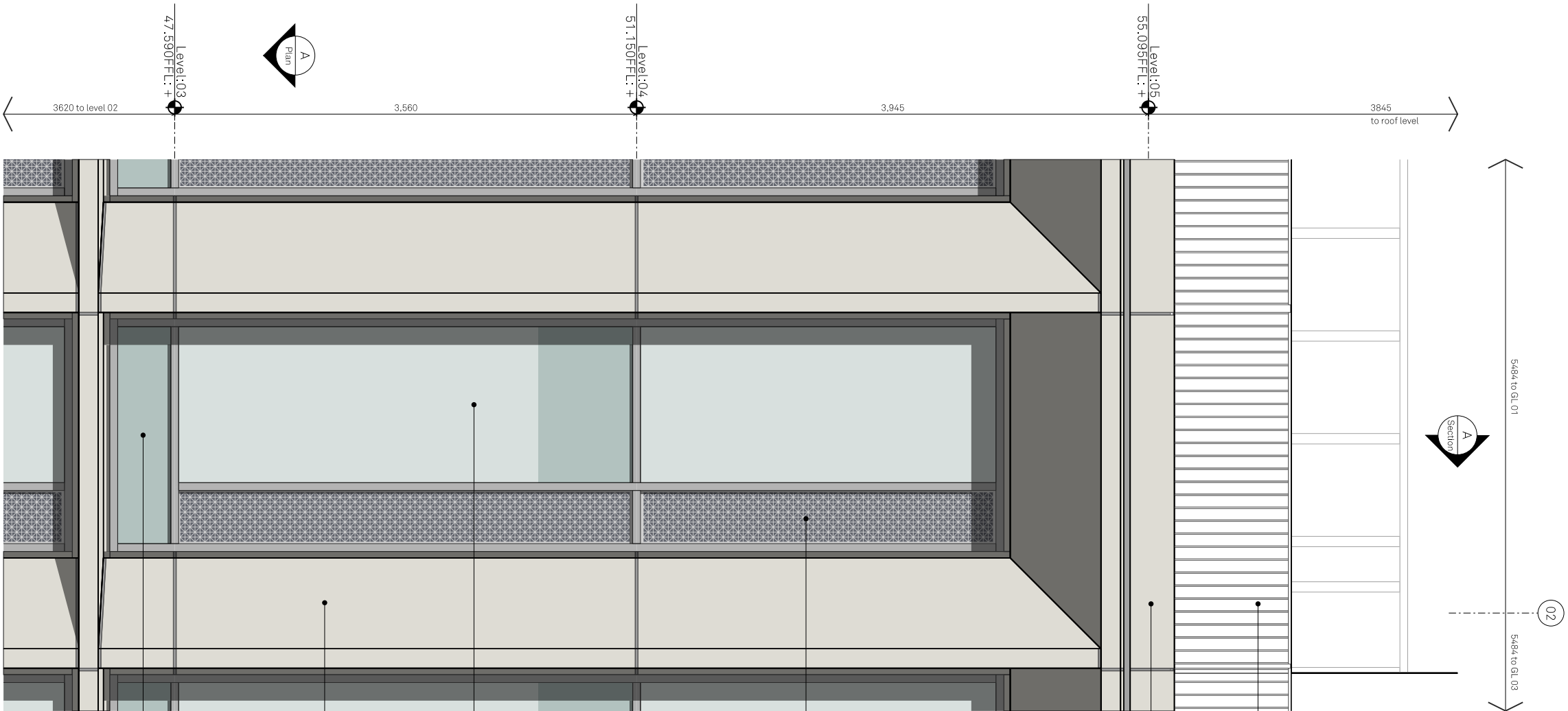
- 01 Shadow box within metallic silver capped curtain walling system
- 02 Anodised tapered metal rainscreen cladding - champagne colour
- 03 SG Curtain wall system
- 04 Anodised silver laser cut vent panel Pattern TBC
- 05 Metallic champagne PPC metal upstand flashing
- 06 Metallic silver PPC Metal Balustrade
- 07 Anodised silver metal rainscreen cladding
- 08 Metallic silver PPC metal fins to plant enclosure

Project Name:	Renaissance	Title:	Premier House - Block 1 Bay Study 02	Scale:	1:50@ A1
Drawn:	DK	Checked:	FM	Status:	Planning
Project:	150	Drawing No:	B1_10_4201	Rev:	B
Detail:	- 05/08/22 Issued for Planning				

Jon Matthews Architects

Union, 2-10 Albert Square, Manchester, M2 6LW 0161 974 3690

Copyright of this drawing is vested in Jon Matthews Architects and must not be copied or reproduced without written consent. Figured dimensions only are to be taken from this drawing. Do not scale from this drawing. For full company disclosure please visit www.jonmatthewsarchitects.com



01

Shadow box within metallic silver capped curtain walling system

02

Anodised tapered metal - Champagne coloured

03

Metallic silver capped curtain wall system

04

Anodised silver laser cut elect panel Pattern 1B

05

Metallic PPC metal upstand flashing - Champagne coloured

06

Metallic silver PPC metal balustrade

Project Name:

Thier

Scale:

Remainsance

Premier House - Block 1

1:20 @ A1

Drawn:

Checked:

By:

DK

FM

Planning

150

B1_10_4202

B

05/08/22

Issued for Planning

Copyright of this drawing is vested in Jon Matthews Architects and must not be copied or reproduced without written consent. All third parties are hereby notified that the content of this drawing is the property of Jon Matthews Architects and must not be copied or reproduced without written consent. All third parties are hereby notified that the content of this drawing is the property of Jon Matthews Architects and must not be copied or reproduced without written consent.

Urban, 2-10 Albert Square, Manchester, M2 6LW

Jon Matthews Architects

0161 971 9890

3.0 Sample Panel

Quality of finishes

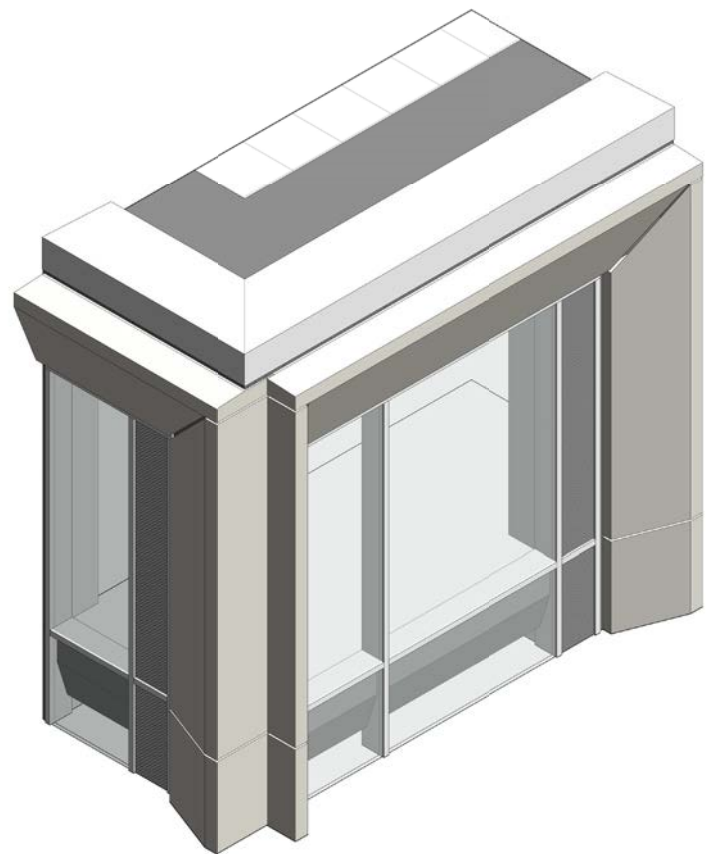
- All finishes and surfaces shall match the accepted sample.
- Finished samples to be submitted to the design team for acceptance prior to manufacturing.
- Discard and replace or correct any units that do not appear identical to the accepted samples.
- Panels may be rejected for the following reasons:
 - Exceeding specified installation tolerances;
 - Any damage during construction

Inspection

All completed units to be carefully inspected and checked for match with accepted sample(s) or control unit(s) and for compliance with the Architectural Specification before dispatch to Site.

Programme

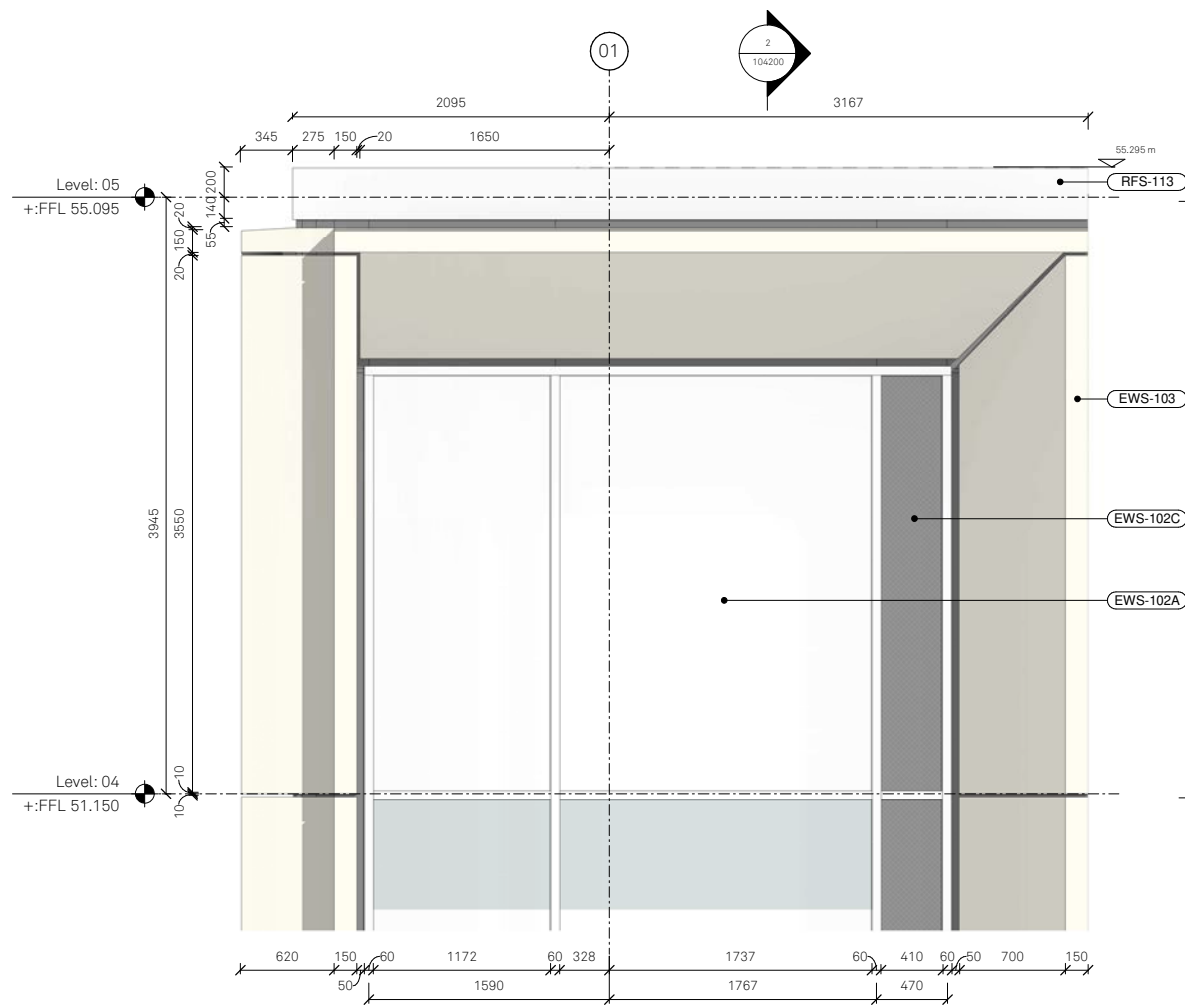
As per planning condition 3 'a programme for the production of the full sized sample panels' the project team will endeavour to have the Visual Mock Up Panel as shown in adjacent drawings available for viewing by 30th November 2023.



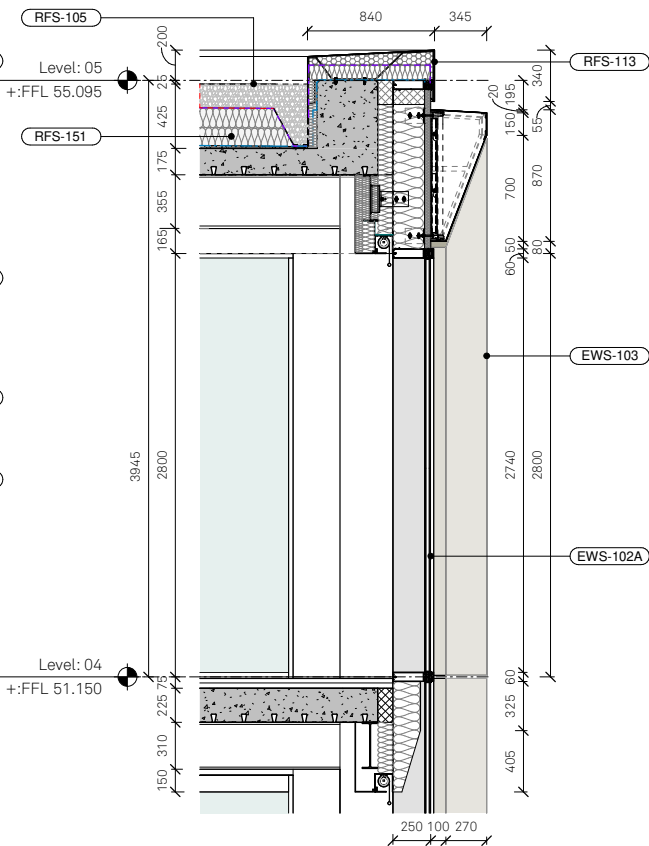
Perforated Panel

The pattern to the perforated panel is to be confirmed and subject to MCC approval.

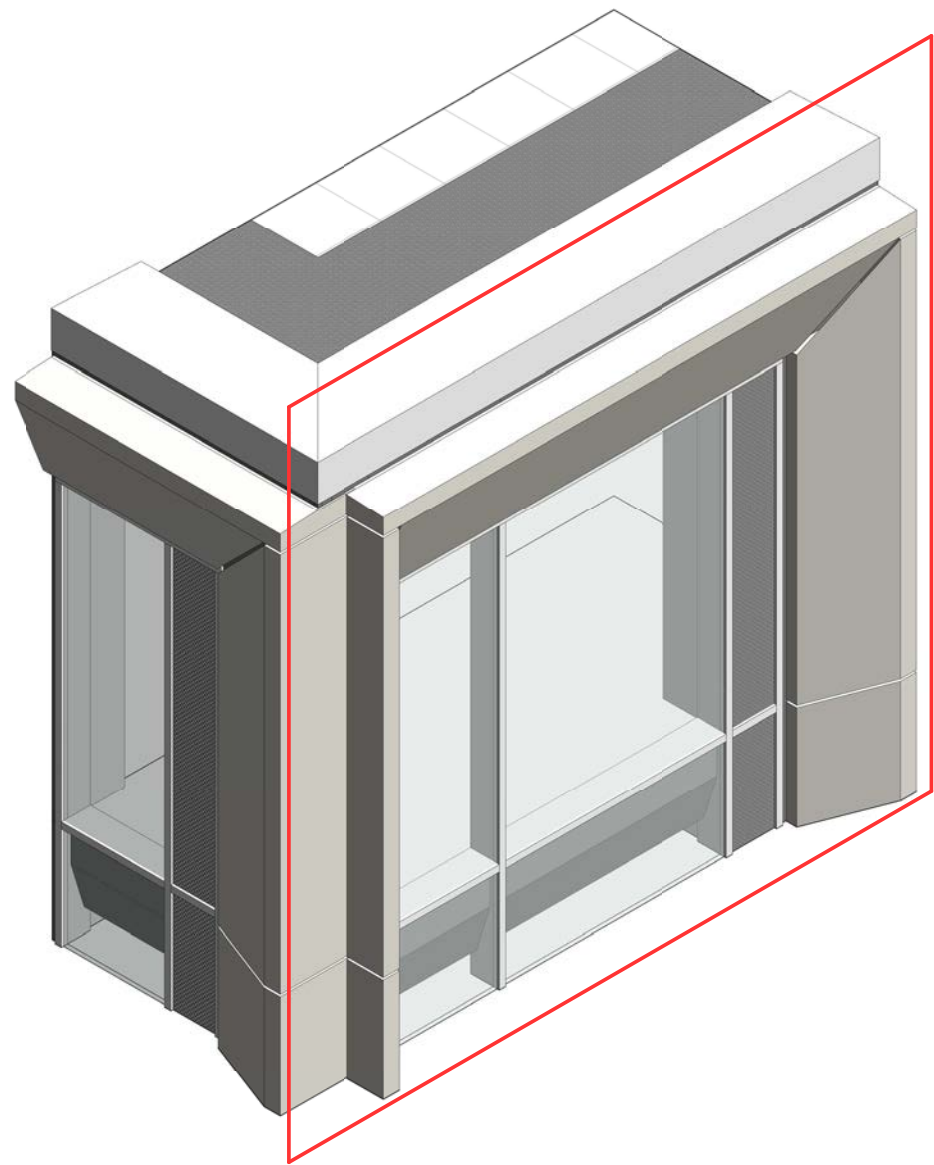




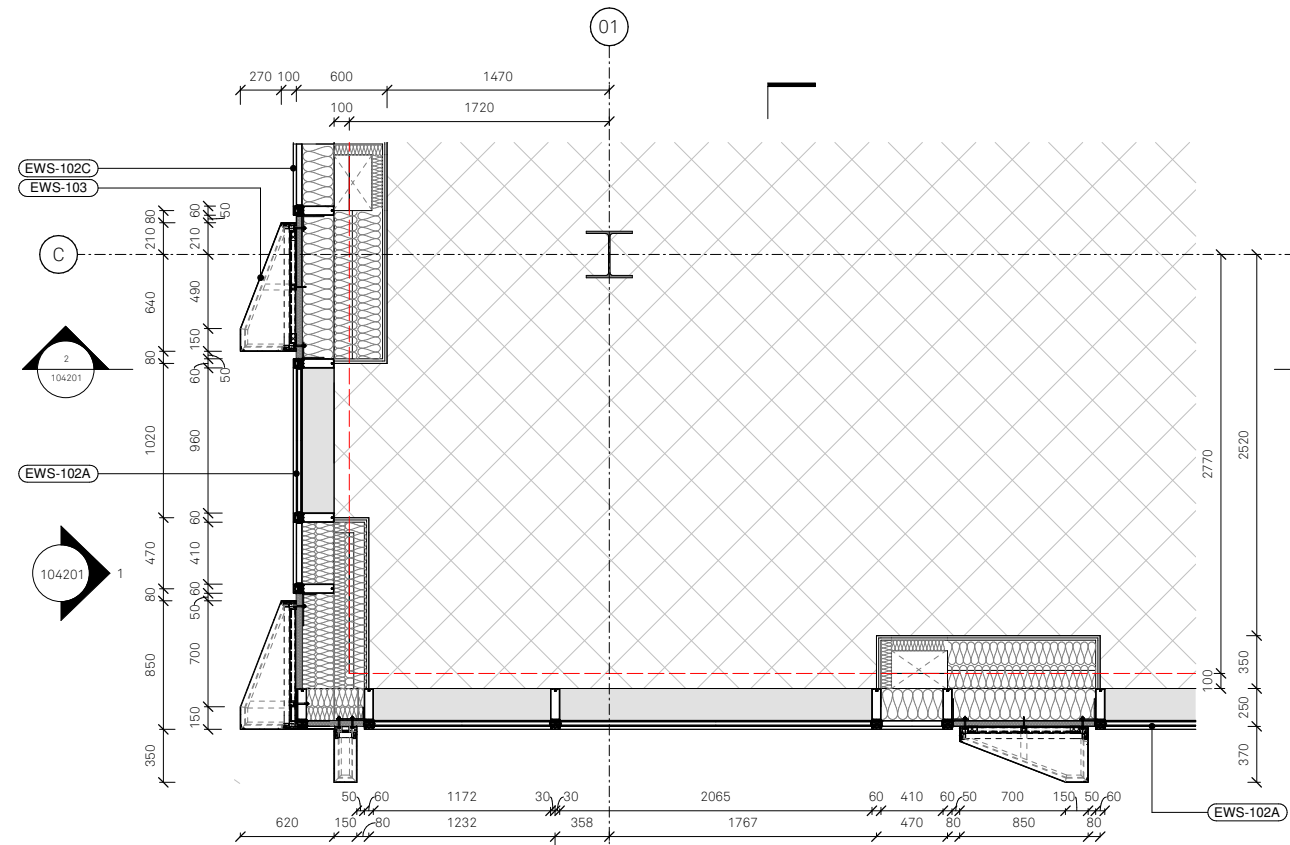
East Elevation (Corner)
1 : 25



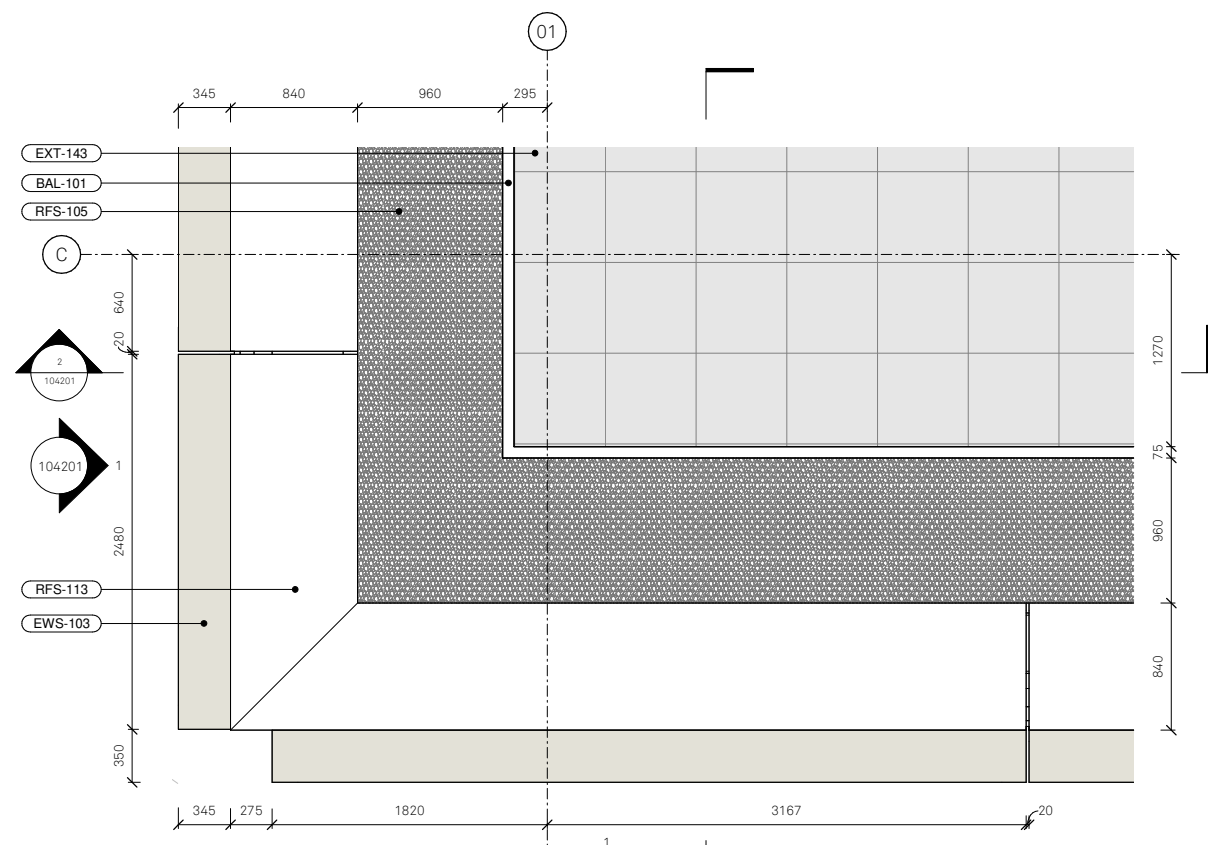
Section
1 : 25



3D View



Level 04 - Plan
1 : 25



Level 05 - Plan
1 : 25

Copyright of this drawing is vested in Jon Matthews Architects and it must not be copied or reproduced without written consent. Digital dimensions only are to be used from this drawing. Do not scale from the drawing.

All Contractors must visit the site and are responsible for testing and checking all dimensions relative to their work. Jon Matthews Architects are to be advised of any variation between drawings and site conditions.

Electronic plans are drawings created using CAD and are not intended for construction. All dimensions and notes should be read only from these values stated in text, on the drawings.

DISCLAIMER: It is understood that the proposed works are within the scope of a complete design and any other works or conditions have been identified, after consultation with the client, and are not included in this document.

Key Plan:

Specification Code Key:

BAL-101 > PPC Metallic Balustrade - Flat Bar

EWS-102A > Metallic PPC Capped Curtain Wall System

EWS-102C > Metallic PPC Capped Curtain Wall System (Anodised Laser Cut Vent Panel)

EWS-103 > Anodised Tapered Metal Aluminium Rainscreen Panels (Superframe)

EXT-143 > Porcelain External Tile to Roof Terrace

RFS-105 > Ballast Finish

RFS-113 > Metallic PPC Upstand Flashing to Parapet

RFS-151 > Hot Melt Inverted Roof System

Rev: _____ Date: _____ Details: _____

Jon Matthews Architects
Unit 2-10 Albert Square, Manchester, M2 6LW

Project:
Renaissance - Premier House

Title:
Sample Panel Bay Study - Sheet 1 of 2

Scale:
1:25 @ A1

Origin Date:
07/03/23

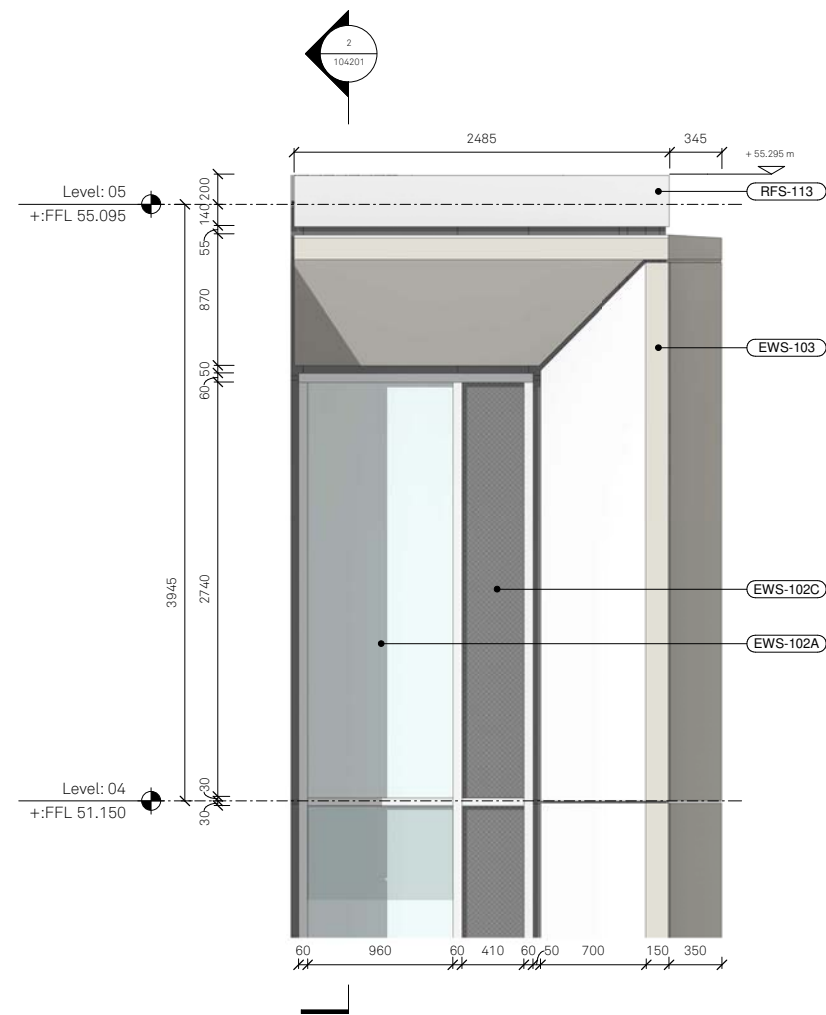
Drawn:
DK

Checked:
RS

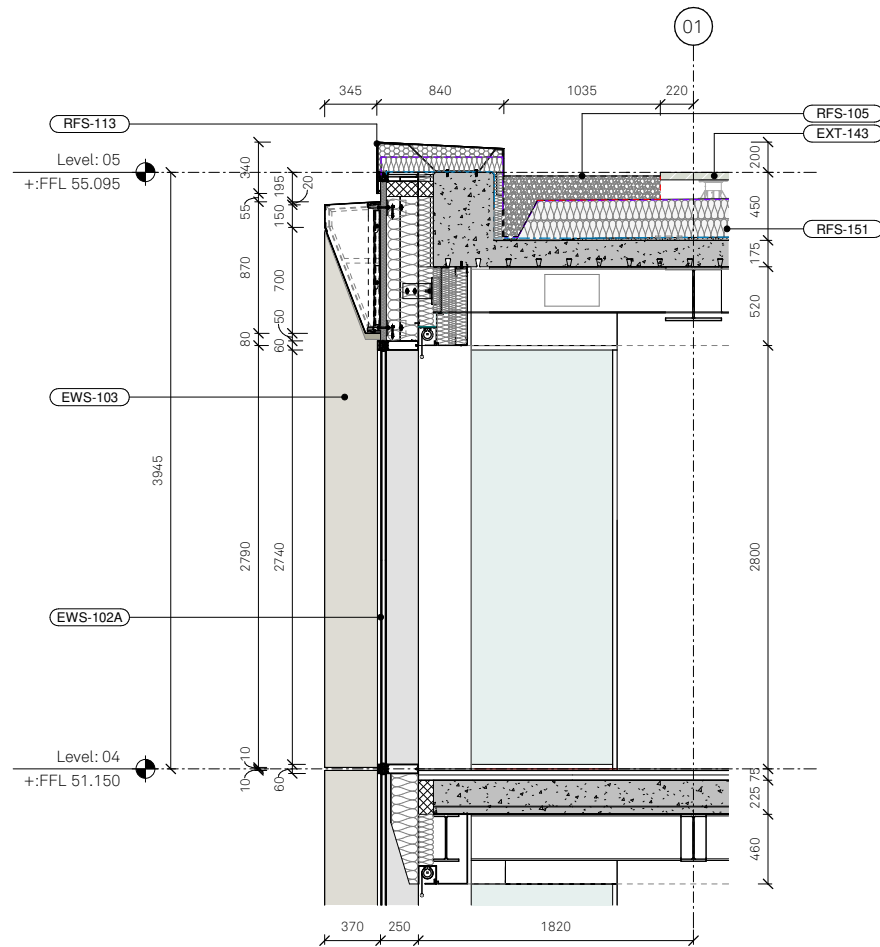
Status:
Status

Drawing No:
150-JMA-PH-XX-DR-104200

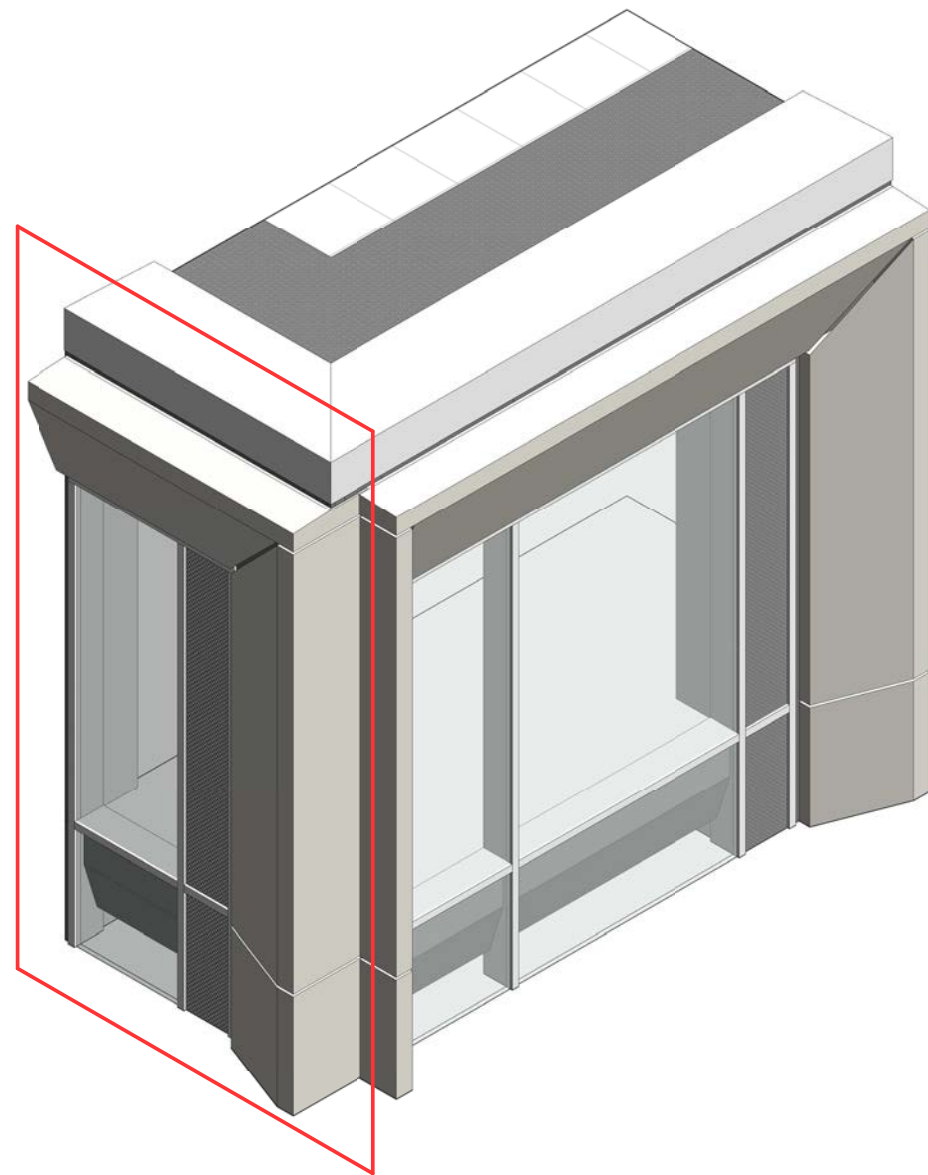
Rev:



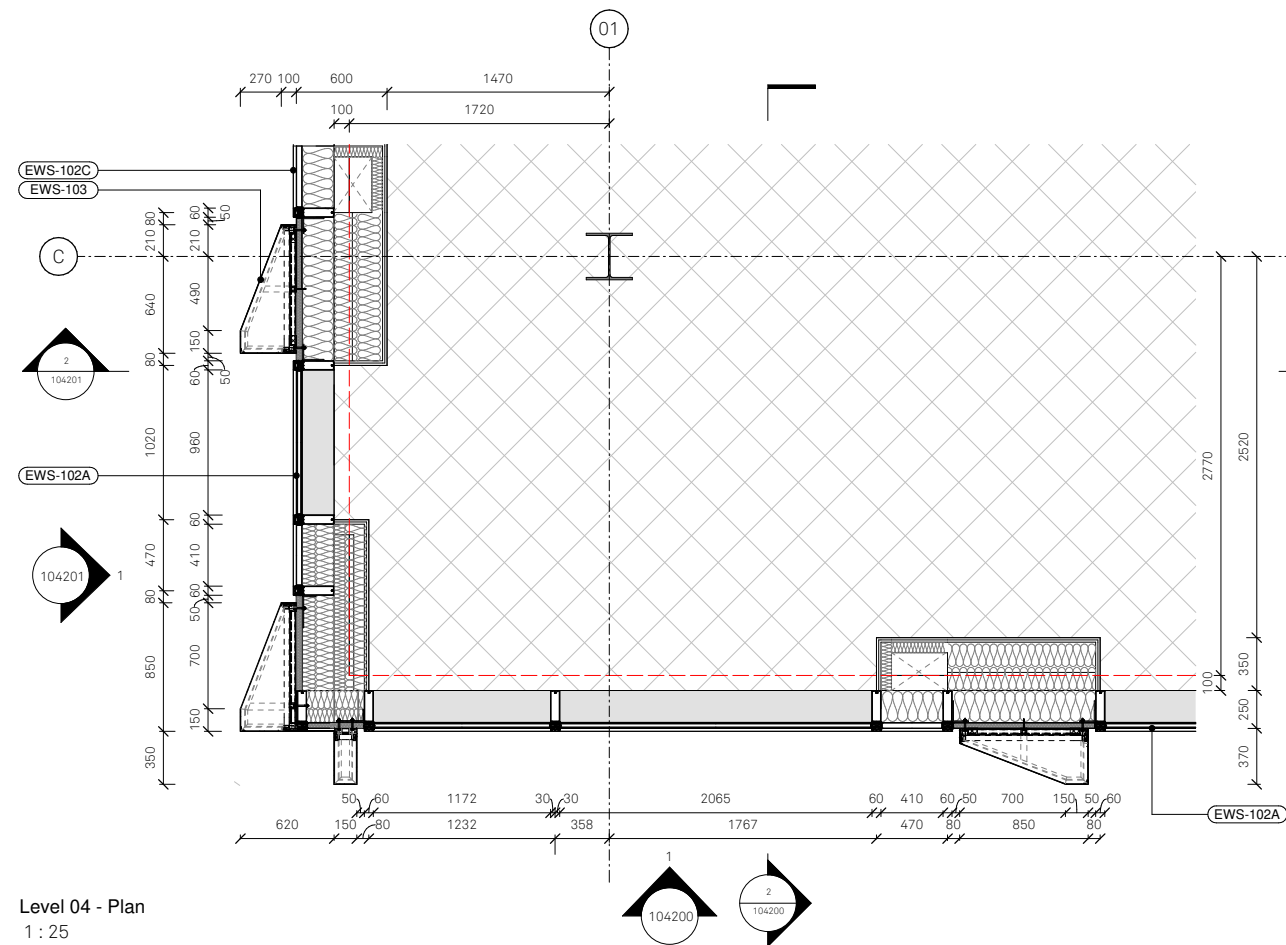
South Elevation (Corner)
1 : 25



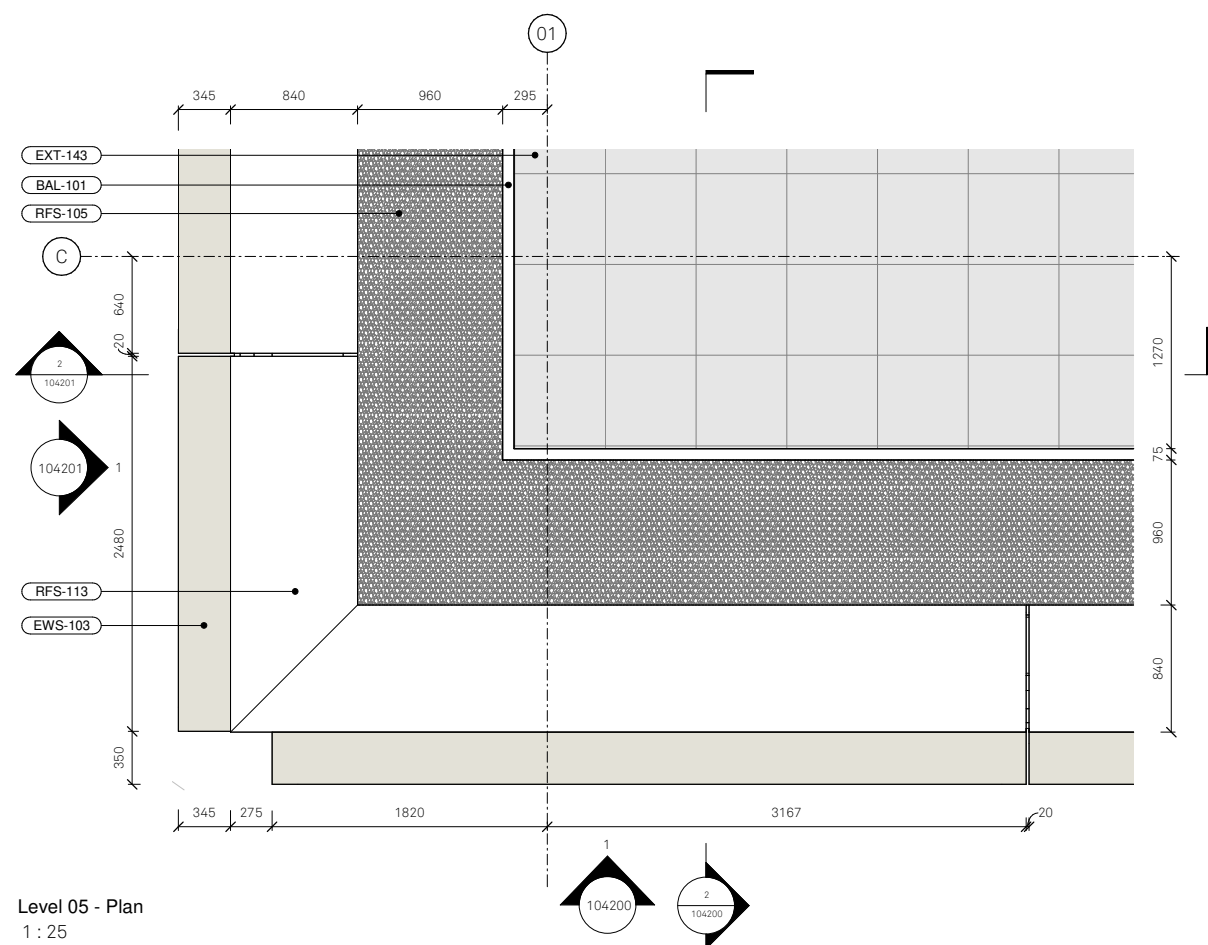
Section
1 : 25



3D View



Level 04 - Plan
1 : 25



Level 05 - Plan
1 : 25

Copyright of this drawing is vested in Jon Matthews Architects and it must not be copied or reproduced without written consent. Digital dimensions only are to be used from this drawing. Do not scale from the drawing.

All Contractors must visit the site and are responsible for testing and checking all dimensions relative to their work. Jon Matthews Architects are to be advised of any variation between drawings and site conditions.

Electronic plans are drawings created 'read only' and should not be manipulated for measurement. All dimensions and notes should be 'read only' from these values stated in text, on the drawings.

DISCLAIMER: It is recommended that the proposed works are within the scope of a competent Contractor and/or architect to ensure appropriate have been identified, refer to relevant Party.

Key Plan:

Specification Code Key:

BAL-101 >	PPC Metallic Balustrade - Flat Bar
EWS-102A >	Metallic PPC Capped Curtain Wall System
EWS-102C >	Metallic PPC Capped Curtain Wall System (Anodised Laser Cut Vent Panel)
EWS-103 >	Anodised Tapered Metal Aluminium Rainscreen Panels (Superframe)
EXT-143 >	Porcelain External Tile to Roof Terrace
RFS-105 >	Ballast Finish
RFS-113 >	Metallic PPC Upstand Flashing to Parapet
RFS-151 >	Hot Melt Inverted Roof System

4.0 External Material Schedule

Project Number:	150 - Renaissance - Premier House
Filing Code:	
Issue Date:	13.03.2023
Revision:	/

Spec Tag	Description	Level	Elevation Reference	Location	Drawing Reference	Image	Manufacturer	Product Range/Code	Colour/Finish
EWS-101C	SG Aluminium Curtain Wall System - Metallic PPC Silver Microlouvers	Ground Floor		South, East and North Elevations (within SG Aluminium Curtain Wall System)	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Argento 617 TIGER Drylac 68/90342 MF/MA B
EWS-101D	SG Aluminium Curtain Wall System - Anodized Metal Panel	Ground Floor		South, East and North Elevations (within SG Aluminium Curtain Wall System)	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202		United Anodisers	Anolok II	Stone Grey
EWS-101E	Granite Upstand	Ground Floor		South, East and North Elevations (within SG Aluminium Curtain Wall System)	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202		Hardscape Ltd	Granite	Classic'
EWS-102A	Metallic PPC Capped Curtain Wall System	Level 01-04		Across all elevations	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Argento 617 TIGER Drylac 68/90342 MF/MA B

Spec Tag	Description	Level	Elevation Reference	Location	Drawing Reference	Image	Manufacturer	Product Range/Code	Colour/Finish
EWS-102B	Spandrel Panel	Level 01 and Level 03		West Elevation (within the Metallic PPC Capped Curtain Wall System)	150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Silverglimmer 29/90092 MF/MA B
EWS-102C	Anodised Laser Cut Vent Panel (Pattern TBC)	Level 01 - 04		Across All Elevations (within the Metallic PPC Capped Curtain Wall System)	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		United Anodisers	Anolok II	Stone Grey
EWS-102D	Textured Shadow Box Detail	Level 01 and 03		North, East, South Elevations (within the Metallic PPC Capped Curtain Wall System)	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Silverglimmer 29/90092 MF/MA B
EWS-103	Anodised Tapered Metal Aluminium Rainscreen Panels (Superframe)	Level 01 - 04		Across All Elevations	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		United Anodisers	Anolok 541	Pale Umber
EWS-104	Anodised Aluminium Rainscreen Panels (Core)	Level 01 - Roof		Across All Elevations	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		United Anodisers	Anolok II	Stone Grey

Spec Tag	Description	Level	Elevation Reference	Location	Drawing Reference	Image	Manufacturer	Product Range/Code	Colour/Finish
EWS-105A	Metallic PPC Capped Curtain Wall	Levels 03, 04 and 05		West Elevation	150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Argento 617 TIGER Drylac 68/90342 MF/MA B
EWS-105B	Metallic PPC Capped Curtain Wall (Back Painted Spandrel Panel)	Level 03 and 04		West Elevation	150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Silverglimmer 29/90092 MF/MA B
EWS-106	PPC Fire Rated Curtain Wall	Ground and Level 01		South Elevation	150_B1_04_2202	-	-	-	Finish to match Hotel Curtain Wall System
EWS-107	Anodised Aluminium Clip-on Panels	Levels 02, 03 and 04		West Elevation	150_B1_04_2203		United Anodisers	Anolok 541	Pale Umber
EWS-108	GRC Dark Grey Cladding	Ground Floor		South and East Elevations - Encasement of external structural elements - columns	150_B1_04_2200 150_B1_04_2202		GRC UK	G152B	Light Blasted

Spec Tag	Description	Level	Elevation Reference	Location	Drawing Reference	Image	Manufacturer	Product Range/Code	Colour/Finish
EWS-731	Metallic PPC Louvers to Plant Enclosure	Roof		All Elevations	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Argento 617 TIGER Drylac 68/90342 MF/MA B
BAL-101	PPC Metallic Balustrade - Flat Bar	Roof		Across All Elevations	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Argento 617 TIGER Drylac 68/90342 MF/MA B
RFS-113	Metallic PPC Upstand Flashing to Parapet	Level 05		Across All Elevations	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Argento 617 TIGER Drylac 68/90342 MF/MA B
ESS-101	Anodised Soffit Cladding with Lights	Ground Floor		East and South Elevations	150_B1_04_2200 150_B1_04_2202		United Anodisers	Anolok 541	Pale Umber
ARM-101	Alumnium Parapet Coping	Roof		Across All Elevations	150_B1_04_2200 150_B1_04_2201 150_B1_04_2202 150_B1_04_2203		Tiger Coatings UK	Tiger Drylac Series 68 Metallics	Silverglimmer 29/90092 MF/MA B

5.0 Facade Specification

3.12 EWS-102 – Office Curtain Wall

3.12.1 Location:

- All elevations, Level 01 to Level 05 (Roof),
- North and South elevations, between Gridlines 'A' and 'C',
- East and West elevations, between Gridlines '01' and '12'.

3.12.2 Description:

The EWS-102 Office façade is the main glazing system to the premier house building, with a typical repeating configuration to all elevations. The system runs continuously across the face of the building consisting of vision glazing, constituting two thirds of the total area, with the remainder of opaque insulated panels. Most opaque panels are covered by an expressed metal rainscreen (EWS-103) and metal micro louvered architectural panels as per Architectural intent. The design of the system is proposed as follows:

- A Stick Curtain Wall system is present as the external façade layer, thermally broken with two lines of defence, having a zone drained and ventilated cavity. A proprietary system will be deemed acceptable.
- The framing members shall be minimal with sufficient allowance for glazing. An offset shall be present between the system capping and adjacent cladding to express a picture frame around the curtain wall.
- Due to the limited height of the building, reduced sail effect and limitation of deflection of the primary structure it is assumed that racking effects on the glazing infills will be minimal, however it is recommended that 'full height' glazing infills are packed at the vertical edges within the mullion rebates to resist racking forces on glass and thus reduce risk of breakage.

3.12.3 Configuration:

Glazing and cladding elements shall be flat and planar.

The build-up of the system is proposed as follows:

- Mullion profiles to typical floors are assumed as 60mm wide by 200mm deep. With steel insert sleeves
- A Vision Glazing zone, 4-edge captivated, assumed up to 60mm
- External horizontal capping expressed at a depth of 60mm
- A tolerance zone of 100mm shall be allowed between the rear of the profiles and primary structure.

3.12.4 Glazing

- Cladding and glazing retention shall be by 4-edge perimeter captivation via external profile capping.
- Glazing units shall be double glazing with standard perimeter spacers, flat with flush joints at edges.
- Glazed Spandrel Panels will be present to cover structural slab locations, configured from laminated external glass with ceramic coat to face 4 (400% cover) and monolithic heat strengthened on the inside. Monolithic on internal side is recommended to avoid PVB delamination due to induced high thermal stresses that can be achieved in the cavity.
- Insulated Sandwich Panels shall be present behind the Rainscreen cladding locations. Where panels are tall, additional dummy transoms may be required to resist internal barrier loads.
- The interface at Level 02 proposes that a 'Zero Spandrel' or 'Single Transom Spandrel' detail be adopted in place of a spandrel configuration. Details have been proposed but will need to be investigated and adopted by the tendering contractor pending final approval from Fire Engineers.
- Framing connections shall have EPDM gasket or mastic seals between surfaces to ensure the specified level of weather tightness for the frameworks.
- The system shall allow for removal and replacement of the external caps if necessary.

3.12.5 Attachment to Structure:

- Stick Curtain walling elements are much stricter regarding allowable deflections of the primary structure and as such deflection criteria have been proposed for the primary supporting frame in conjunction with requirements as stipulated later in section 3.
- The stick system is a two-storey mullion featuring the following:
 - Two storey continuous mullions
 - Top hung at slab at L03 and L05
 - Mullions connected by spigots allowing for vertical movements
 - Wind load carried at each floor
- The system shall be 'hung' from the primary structural frame from the head of the mullions via steel angle brackets finished depending on location (visible should be stainless) and hence 'dead-loaded' from that location. The system will be restrained at the lower level by a spigot sleeve attachment that allows for vertical movement but resists against wind loading, hence all mullions are simply supported in nature.
- For a ratio of 1:2 (WxH) a total deflection of L/1000 shall be allowed for considering a 60mm wide stick system, capped and packed at the top towards the mullion.
- Joints between mullions shall occur in the spandrel location above the bracket attachment and envisioned as no greater than 10mm. Joints shall be achieved and covered by overlapping presswork.

3.12.6 Ancillary Components:

The following items shall be required within the configuration of the EWS:

- A fully opaque alternative of the curtain wall system is considered for coverage of the stair core to the north-western end of premier house. This to be determined at the next design stage.
- Pressings and trims shall be present where required for interfaces of the glazing system and to cover any structural connections. Elements such as parapets to the Level 05 Roof and Soffit shall be required. Such presswork shall maintain a flat and uniform appearance.
- Mineral wool insulation shall be provided against thermal bridging of connections back to the main steelwork.
- Interfaces with adjacent structure shall incorporate thermal breaks and insulating layers as required to minimize risk of condensation towards the inside, and to achieve the U-values specified for the EWS type.
- Note that all element and material sizes are informative for description of the EWS only and all final section sizes and gauges shall be the responsibility of the successful contractor as part of their design proposals.

3.13 EWS-103 – Metal Rainscreen (Superframe)

3.13.1 Location:

- All elevations, Level 01 to Level 05 (Roof),
- North and South elevations, between Gridlines ‘A’ and ‘C’,
- East and West elevations, between Gridlines ‘01’ and ‘12’.

3.13.2 Description:

EWS-103 is the external cladding system covering the opaque portions of the EWS-102 Office Curtain Wall. It is split into the following elements:

Type A - Rainscreen Cassette Panels

- The rainscreen cassettes are shaped elements covering one third of the main office curtain wall system. They are predominantly vertical elements outboard of the opaque insulated areas, but also present as the horizontal element covering the Level 05 roof, L03 and L01 slab location). Panels are proposed mounted to the EWS-102 curtain wall behind, hung at the head of the panel and restrained at the lower end.
- The panels are proposed as shaped elements, formed from frameworks of aluminium profiles (horizontal and vertical) with an outer folded face of monolithic aluminium. It is the intention that these are provided as a single element, if possible, welded and finished together. This will be applicable if the final fabricated element is visually acceptable.
- At the building corners, panels will be rectangular casings in some places (like Type B).

Type B - Horizontal Casing Presswork

- The casing elements are formed from folded monolithic aluminium pressings supported on a framework of aluminium supporting profiles (Similar to Type A). These elements are then fixed to insulated aluminium panels to the curtain wall at the rear.
- Casings are typically rectangular; below glazing locations the top face shall be set at a 2° slope to facilitate drainage and discourage ponding. Faces to the underside may incorporate a drip detail.
- At intersection with the Cassette panels, casings may be shaped into cruciform elements which will be special fabrications that align with the shape of the cassette panels.
- The system acts as a Drained and Ventilated Rainscreen; open joints between the panels permit air movement, which allows moisture to evaporate from the cavity through the joints. The Rainscreen is intended with a Drained and Back-Ventilated approach, with ventilation allowance made at the head and floor margin and perimeters interfaces. Perforated holes in the panel returns may also be accommodated for additional ventilation.

3.13.3 Configuration:

Glazing and cladding elements shall be flat and planar.

- Cassette panels are typically 850mm wide and 370mm deep. There shall be 150mm margin to the front right-hand edge to align with type B horizontal elements.
- Casing elements are typically 150mm wide and 250mm deep.
- The outer aluminium skin thickness shall be no less than 4mm.
- Joints between panels shall typically be 20mm.
- Supporting framework to elements shall be as required.
- Please refer JMA Architectural drawings for final dimensions.

3.13.4 Cladding:

- Rainscreen cassette panels shall be supported by aluminium rainscreen channels and shall be fixed through curtain wall panels via angled brackets designed to carry the weight of the external materials.
- Channels shall be continuous and are assumed adjacent curtain wall mullions (with the allowance for the 'negative joint') and at the at panel centres and provide the site for hook-on of aluminium cassette panels,
- Cassette panels are loaded onto bolts present within the rainscreen channels, hooked on with slotted cut-outs in the hanger profiles to the rear of the panels. Typically, hooks are present to the top and bottom of panels, however additional hooks and bolts may be accommodated at regular centres if high wind suction loads are present, especially at building corners where wind acceleration may occur.
- Cassettes shall be closed off to the rear, underside and top by steel backing sheet to close of voids.
- Vertical and Horizontal Cavity Barriers shall be present at the perimeter of inner voids (particularly at interface with glazing).
- Cassettes shall have additional cable attachment to the support framework, fixed back to the supporting structure behind for additional redundancy.

3.13.5 Structural Elements:

- For large panel sizes, additional stiffener bars shall be bonded to rear within the folded panel zone to prevent dishing or warping of external skins.
- The supporting framing must be designed to avoid corrosion and not transfer stresses due to thermal expansion of the external cladding.

3.13.6 Ancillary Components:

The following items shall be required within the configuration of the EWS 103:

- Panels and presswork shall have weep holes at regular intervals for drainage.
- Drainage flashing shall be present within the cavity to deflect any rainwater to drainage channels. All miscellaneous cladding elements such as fascia, trims and soffits shall be composed of flat planar elements and coated to match the rainscreen system.
- Lightning protection systems shall be coordinated with exposed metal faces, rainscreen panels and curtain wall mullions.

3.14 EWS-104 – Metal Rainscreen (Core)

3.14.1 Location:

- All elevations, Level 01 to Core Roof,
- North and South elevations, between Gridlines ‘A’ and ‘C’,
- East and West elevations, between Gridlines ‘02’ and ‘04’.

3.14.2 Description:

- Aluminium Rainscreen Cladding system covering the core structure to the roof level and western elevation faces above the hotel, protecting the structure from direct rainfall.
- The system acts as a Drained and Ventilated Rainscreen; open joints between the panels permit air movement, which allows moisture to evaporate from the cavity through the joints. The Rainscreen is intended with a Drained and Back-Ventilated approach, with ventilation allowance made at the head and floor margin and perimeters interfaces. Perforated holes in the panel returns may also be accommodated for additional ventilation

3.14.3 Configuration:

- Cladding elements are to be flat and planar.
- The panels themselves vary in width but are typically to be 1.25m horizontal spacing. Rainscreen mullion profiles are assumed at panel centres and provide the site for hook-on of aluminium cassette panels,
- Panels are preferred at heights of 3.6m to 3.8m (cts), this shall be determined by additional stiffeners to panels against curtain wall load or additional supporting structure behind the panels.
- Joints between panels shall typically be 20mm.
- Please refer JMA Architectural drawings for final dimensions.

3.14.4 Cladding:

- Cladding elements to the cassette frames shall be monolithic aluminium sheets. The perimeter frames may be extruded aluminium or alternatively light-gauge steel providing the surfaces are isolated with tape to prevent galvanic corrosion.
- Vertical rainscreen panels shall be supported by aluminium rainscreen mullion channels and shall be fixed back to the backing wall with angled brackets designed to carry the weight of the external materials.
- Cassette panels are loaded onto bolts present within the rainscreen mullions or fixing angles, hooked on with slotted cut-out in the hanger profiles to the rear of the panels. Typically, hooks are present to the top and bottom of panels, however additional hooks and bolts may be accommodated at regular centres if high wind suction loads are present, especially at building corners where wind acceleration may occur.
- Panels shall have baffled joints with gaskets to prevent inlet of high wind pressure. Any wind driven rain shall be discharged by the channel mullions behind and outlet at the base of the screen or with flashings as each floor level.
- Flipper gaskets shall be present to the front faces of joints to discourage the entrance of airborne dust and pests.

3.14.5 Structural Elements:

- For large panel sizes, additional stiffener bars shall be bonded to rear within the folded panel zone to prevent dishing or warping of external skins,
- The supporting framing must be designed to avoid corrosion and not transfer stresses due to thermal expansion of the external cladding. Fixing of support frameworks through to structural columns shall be by an approved hot-rolled cast-in channel and fixing bolt system.

3.14.6 Ancillary Components:

The following items shall be required within the configuration of the EWS 104.

- Presswork shall be present as jambs, heads or cills to interface with doors or windows to the core structure. All presswork shall be aluminium coated to match the surrounding panels and shall be no less than 3mm thick.
- Vertical and horizontal cavity barriers shall be present at the surrounds of windows and doors. They shall be present at each building level and at corners to sub-divide the cavities to the rainscreen cavity.
- Drainage flashing shall be present within the cavity to deflect any rainwater to drainage channels. All miscellaneous cladding elements such as fascia, trims and soffits shall be composed of flat planar elements and coated to match the rainscreen system.
- Lightning protection systems shall be coordinated with exposed metal faces, rainscreen panels and curtain wall mullions.

Simple, elegant design.