

FALCONER CHESTER HALL



Design intelligence, commercial flair.

DUCIE STREET, MANCHESTER

—
P21110-FCH-XX-XX-RG-A-0003
PLANNING APPLICATION PROPOSED AMENDMENTS - OVERVIEW
APPLICATION REF: 120149/FO/2018

—
BIG RED CONSTRUCTION

—
MAY 2024

P06

Planning Application Proposed Amendments - Overview

Big Red Construction

Ducie Street,
Manchester,
M1 2JQ



DUCIE STREET, MANCHESTER

This document provides an overview of proposed variations to the planning consented scheme '120149/FO/2018'.

In brief the proposed alterations are as below. A summary of the proposals and the reasons for proposing these amendments are described on page 4, with illustrations on the following pages.

01. Change balcony balustrades from frameless glass to a bespoke metal railing with angled balusters.
02. Add collective edge protection to roof level.
03. Re-set out metal cladding panels to suit manufacturing constraints.
04. Amend location of roller shutter door and plant room louvred panels to suit internal layout amendments.
05. Revise entrance door & lobby glazing to suit internal layout amendments.
06. Simplify appearance of glazed fire escape door.
07. Amend location of louvred bin store doors to align opening with brick vertical movement joint reducing visual impact of the movement joint.
08. Split perforated panels on north-east & south-west elevations and roof privacy screens due to manufacturers limitations.
09. Minor adjustment to soldier course brick detail on West & East Elevations to suit masonry support limitations.
10. Change of window opening type to meet natural purge ventilation requirements on Lomax Street elevation.



Illustrative CGI image from the Design and Access statement.

DUCIE STREET, MANCHESTER

01. Change balcony balustrades from frameless glass to bespoke metal railing with angled ballusters.

In the Approved Proposal there is frameless glass balustrade with secret fixings to the perimeter of the projecting an inset balconies.

Please refer to the below statement from our Approved Inspector (Ball & Berry), who have advised that they would not accept glazed balustrades under Regulation 7 (2), this includes even fire rated/ framed balustrade products.

"After reviewing this internally, unfortunately again Ball & Berry would not accept this under Regulation 7(2).

We would advise that the government recently undertook a review and chose not to omit or exempt laminated glass to balconies i.e. balcony attached to an external wall where regulation 7(2) is applicable.

It is worth noting this also appears to be the stance of several of the leading warranty providers."

The proposal is to amend the glazed balustrades to angled metal rod ballusters arranged in a bespoke design with flat top, base and side rails. The metal would be in a tone and finish similar to the metal cladding.

Fixings will be as per the frameless glass balustrades, for the recessed and projecting balconies this would be down to the structural slab. For the Juliette balconies this would be to the window frame with colour matched capped screws.

Please refer to page 6 to 9 for comparative GA elevations, page 10 for a summary of the proposed design

Please see Appendix A for the metal railing design development document shared with MCC during the pre-application process.

02. Add collective edge protection to roof level.

With reference to the 'Hierarchy of Risk Reduction Measures' provided by the HSE, a collective measure such as a balustraded rail would be less susceptible to human error and therefore safer than an individual protection system such as the man-safe or running line system suggested in the Approved Design and Access Statement.

Whilst the balustraded rail is visible on the elevations, it has been set back from the roof edge so that when the building is seen from street level the rails should mostly not be visible or are only minimally visible. This should have no impact on the overall appearance of the building.

It is felt that the requirement to design in accordance with CDM and Working at Height Regulations should, in this case, take precedence over the negligible visual consideration.

Please refer to page 11 for illustrative diagrams.

03. Re-set out metal cladding panels to suit manufacturing constraints.

Please refer to pages 6-9 for comparative elevations showing the metal cladding panel arrangements. Vertical format has been retained, panels have been re-set out to best suit manufacturing sizes.

04. Amend location of roller shutter door and plant room louvred panels to suit internal layout amendments.

Reconfiguration of the ground floor internal layout was required in order to accommodate:

- a switch room
- a life safety room
- a generator room

05. Revise entrance door & lobby glazing to suit internal layout amendments.

As above.

06. Simplify appearance of glazed fire escape door.

Design Development.

07. Amend location of louvred bin store doors to align opening with brick vertical movement joint reducing visual impact of the movement joint.

Design Development.

08. Split perforated panels on north-east & south-west elevations and roof privacy screens due to manufacturers limitations.

Please refer to pages 6-9 for comparative elevations showing the metal cladding panels. Panels have been split vertically in the centre to limit visual impact of the new joint.

Please see Appendix B for the metal railing design development document.

09. Minor adjustment to Level 01 soldier course brick detail on Ducie St, West & East Elevations to suit masonry support and structural frame installation.

Please refer to pages 6-9 for comparative elevations showing the brick coursing and page 13 for detailed elevations. It is proposed to marginally reduce extent and recess the soldier coursing above the ground floor balconies only due to complications in installing the masonry support and achieving tolerances on the structural frame.

10. Change of window opening type to meet natural purge ventilation requirements on Lomax Street elevation.

Vent style openings not able to achieve minimum requirements for AD:Part F and a natural solution was preferred over a mechanical one. Please refer to pages 6-9 for comparative elevations and page 14 for comparative studies.

INTRODUCTION

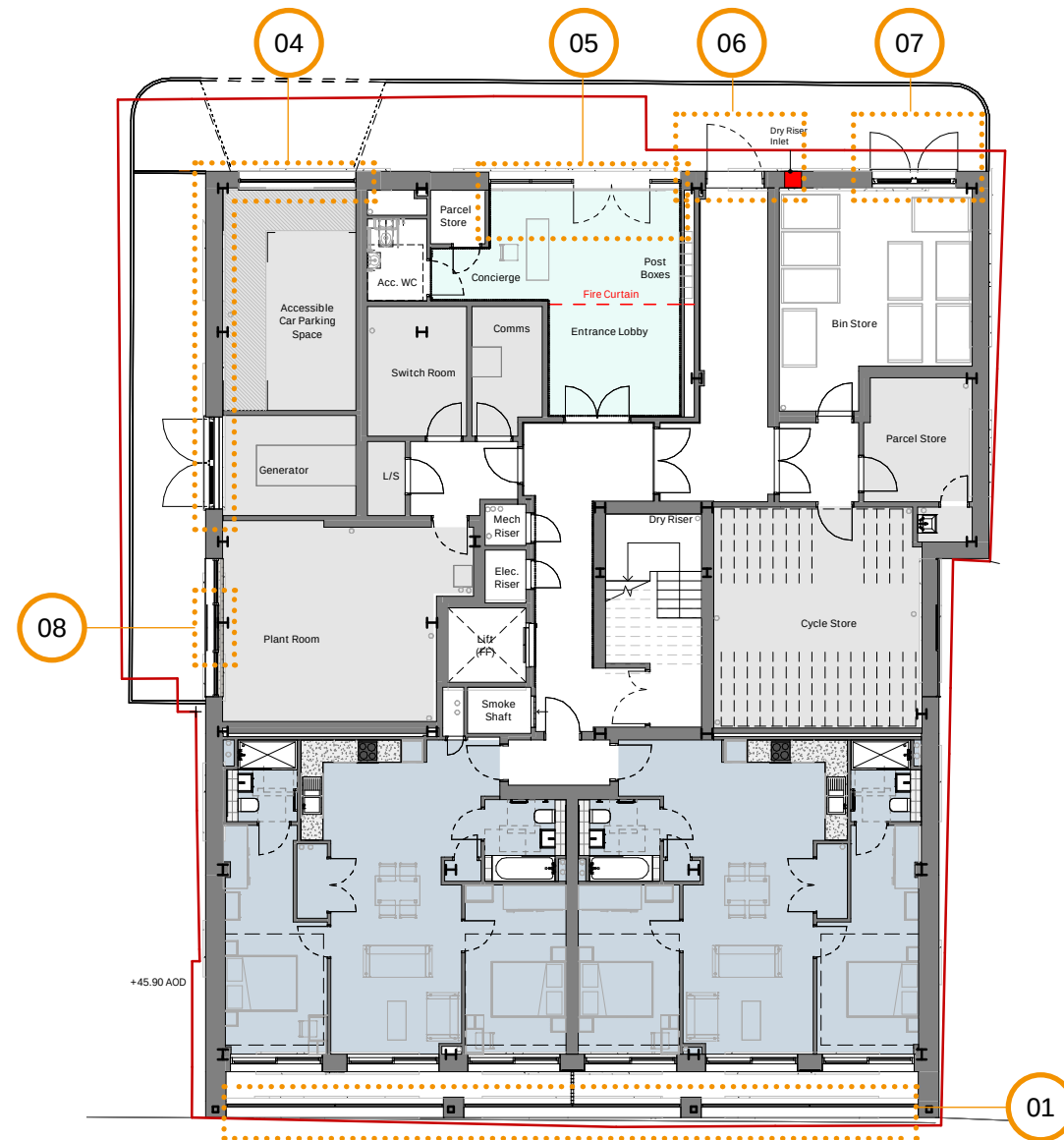
DUCIE STREET, MANCHESTER

MCC Consultation Timeline

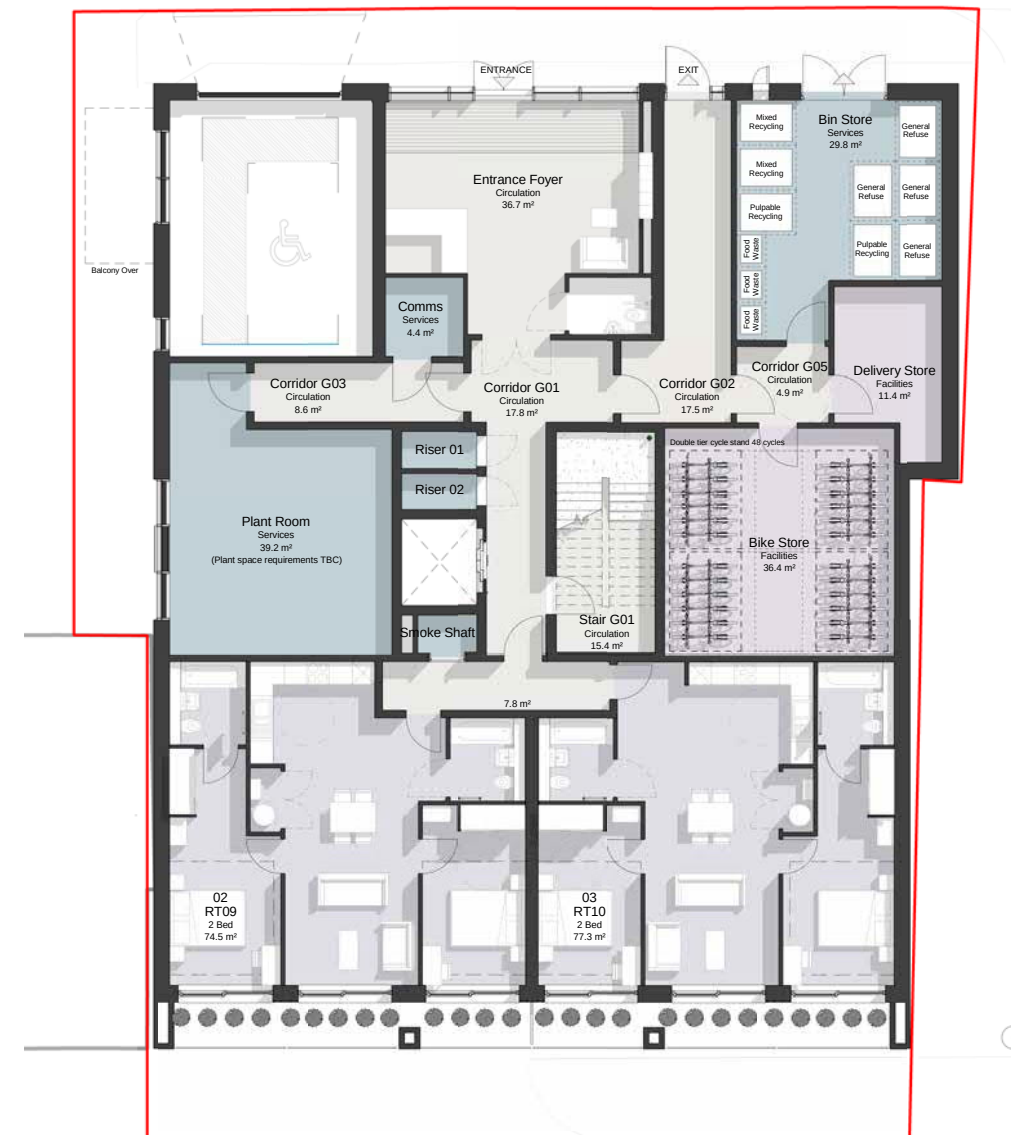
- 09 November 2022 - Document - P21110-FCH-XX-XX-RP-A-0003 rev. P01
- Summary of proposed changes to; roof edge protection, metal panel setting out, glazed balustrade to metal railing, amendments to ground floor doors/ glazing to communal/ ancilliary areas. (items 01 to 07)
- 17 February 2023 - Document - P21110-FCH-XX-XX-RP-A-0003 rev. P02
- Updated with quote from Approved Inspector regarding use of glass balustrades on a relevant building.
- 28 February 2023 - Document - P21110-FCH-XX-XX-RP-A-0003 rev. P03
- Updated with expanded detail collective edge protection to main roof level.
- 03 May 2023 - On-site Review - 1sqm Brick & Mortar Samples
- 11 August 2023 - On-site Review - VMU Brick and Window
- 24 August 2023 - Documents - P21110-FCH-BA-XX-SK-A-0028/ 0029/ 0030
- Window Opening Variation Lomax St Elevation (item 10)
- 05 September 2023 - On-site Review - Full VMU - metal cladding/ perforated panel/ sill/ coping
- 20 October 2023 - On-site Review - Full VMU - metal cladding/ perforated panel/ sill/ coping (workmanship issues corrected)
- 08 January 2024 - Document - P21110-FCH-XX-XX-RP-A-0003 rev. P04
- Updated with initial design for metal railing.
- 13 May 2024 - Document - P21110-FCH-XX-XX-RP-A-0003 rev. P05
- Updated with developed design for metal railing & split in selected perforated panels (item 08)
- 14 May 2024 - On-site review - Brick Lintel, metal railing, exterior lights, roller shutter door
- 23 May 2024 - Document - P21110-FCH-XX-XX-RP-A-0003 rev. P06
- Updated to capture all consultation comments and soldier coursing to Ducie St elevation (item 09)



Ground Floor Plan - Proposed Amendments 1:200



Ground Floor Plan - Consented 1:200

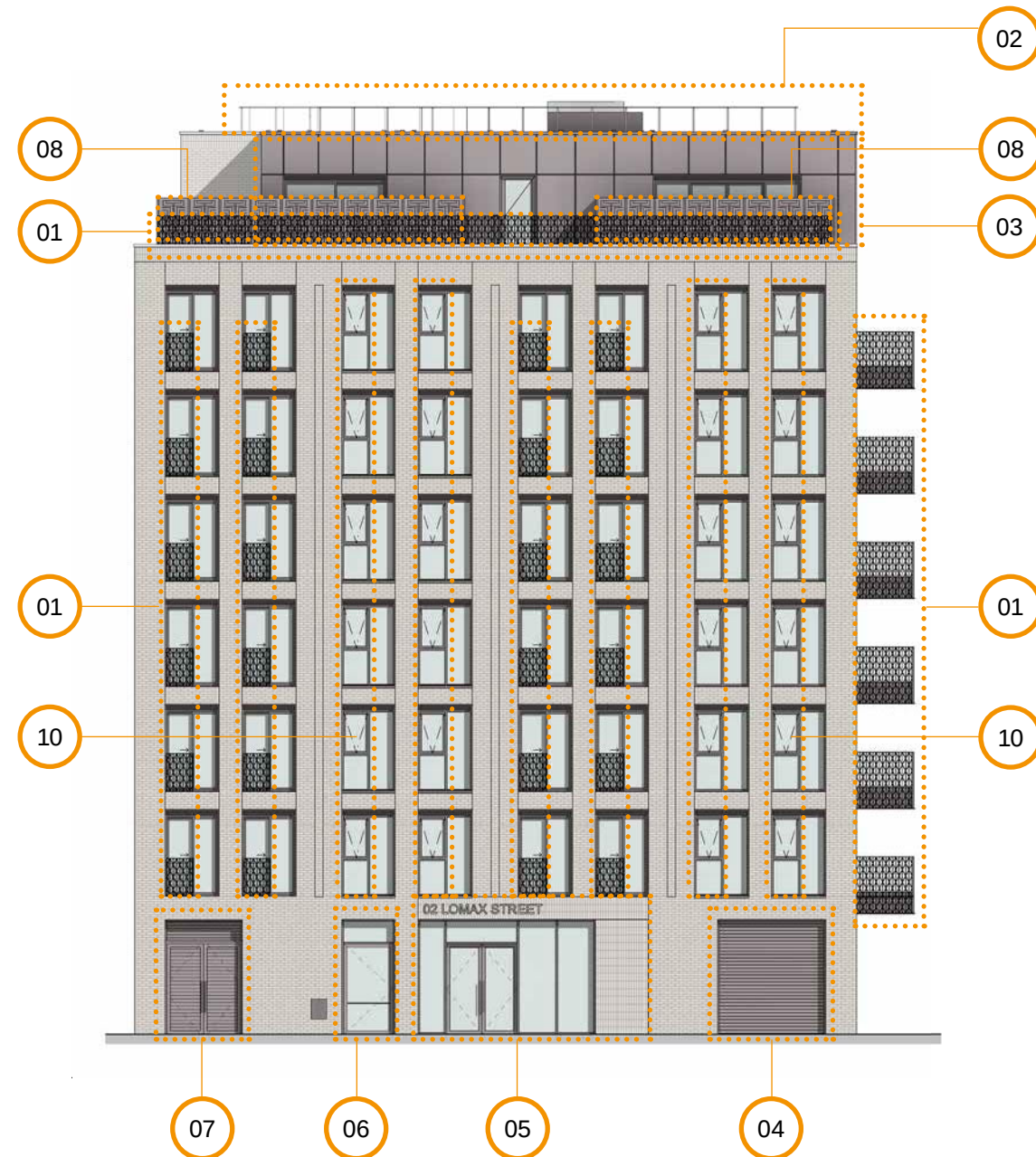


- 01. Change the balcony balustrades from frameless glass to metal railing to suit Building Regulation approval requirements.
- 02. Add collective edge Protection to Roof level.
- 03. Re-set out metal cladding panels to suit manufacturing constraints.



- 04. Amend roller shutter door, louvred panels and add new louvred door to suit internal layout amendments.
- 05. Revise entrance door and glazing on Lomax St elevation to suit to internal layout amendments.
- 06. Simplify the arrangement of the Glazed Fire Escape Door on Lomax St elevation.
- 07. Amend location of louvred doors to align opening with brick vertical movement joint reducing visual impact of the movement joint.
- 08. Split perforated panels on north-east & south-west elevations and roof privacy screens due to manufacturers limitations.
- 09. Minor adjustment to soldier course brick detail on West & East Elevations to suit masonry support limitations.
- 10. Change of window opening type to meet natural purge ventilation requirements on Lomax Street elevation.

North West Elevation - Proposed Amendments 1:200



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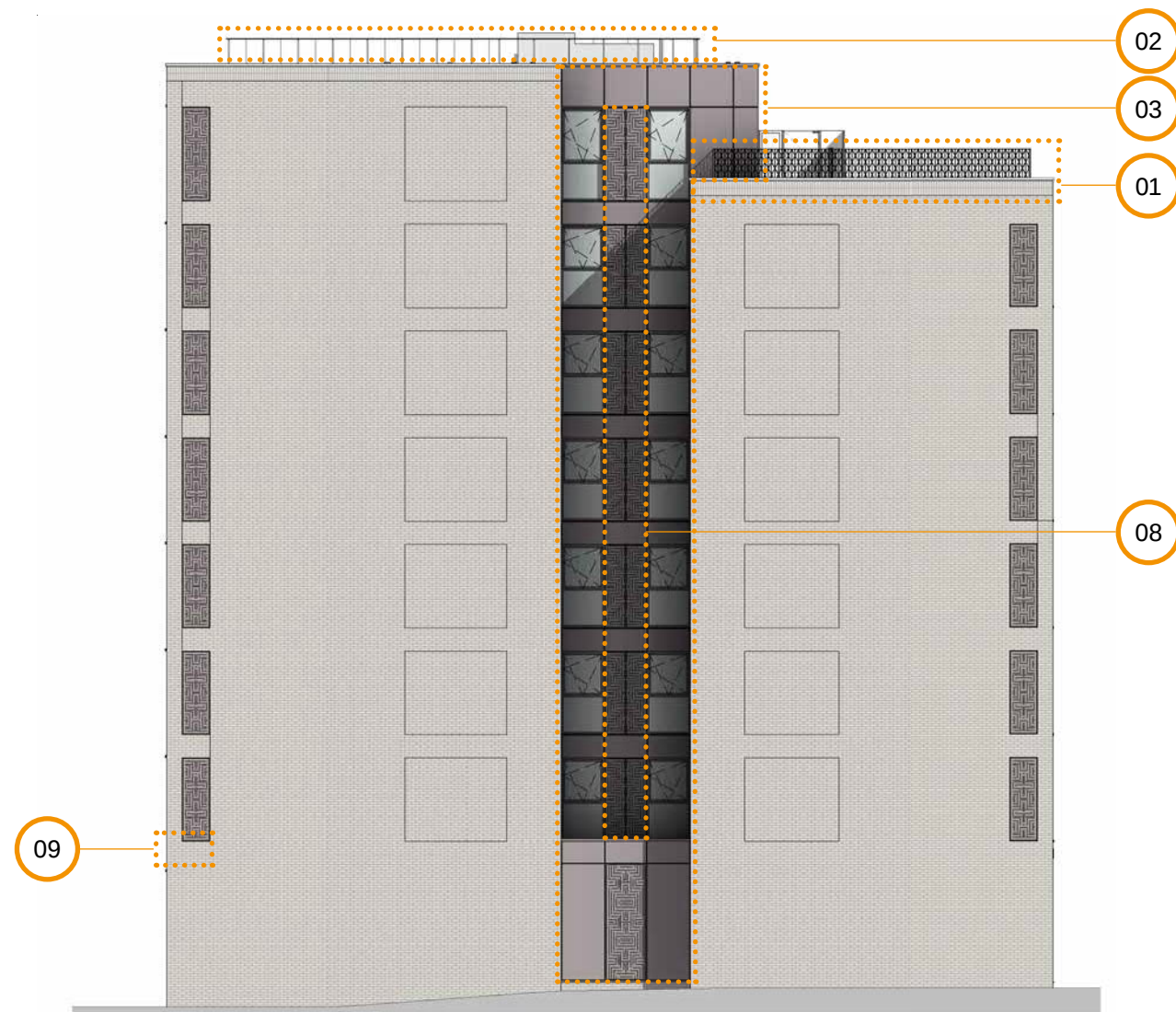


North West Elevation - Consented 1:200



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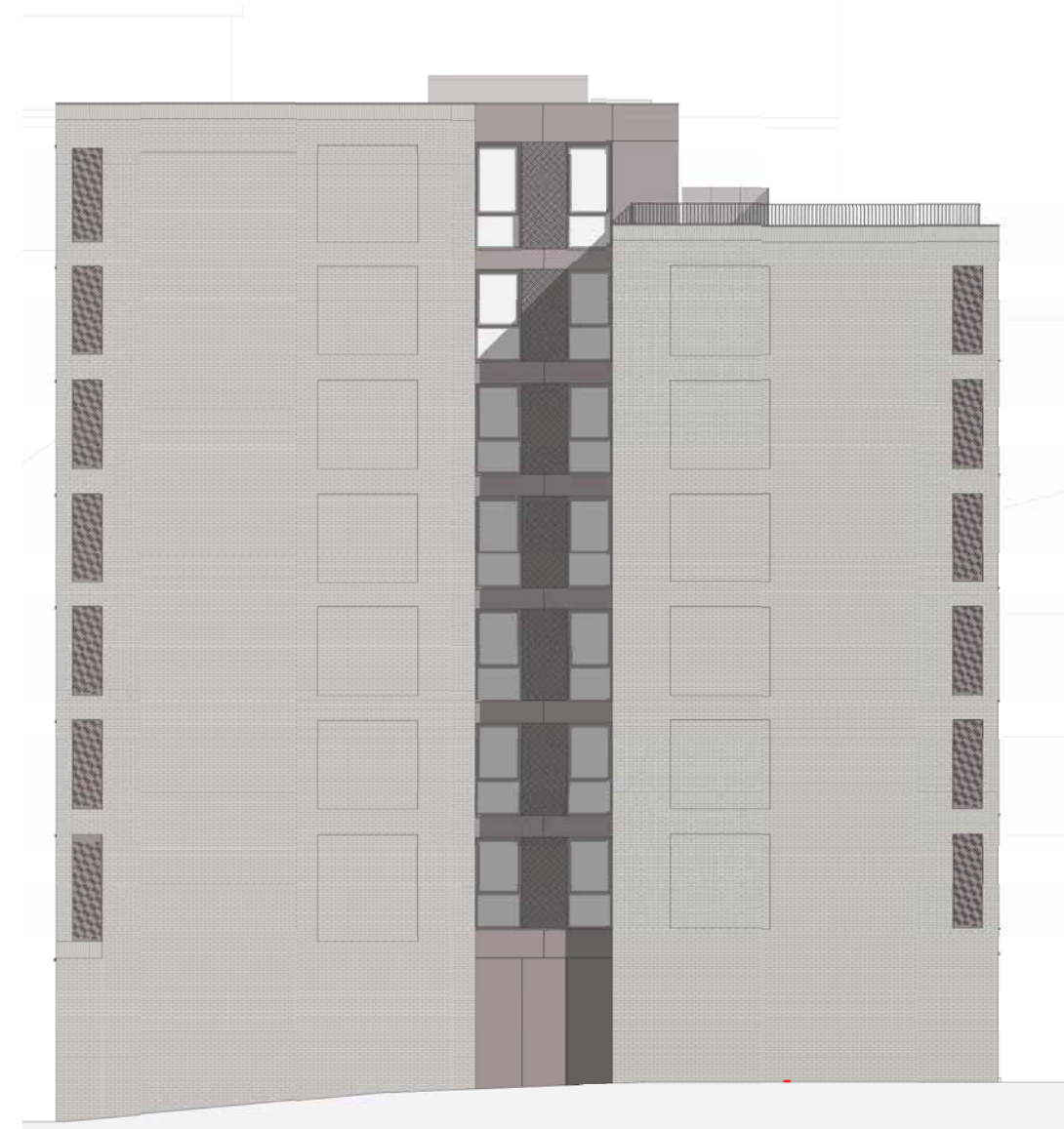
North East Elevation - Proposed Amendments 1:200



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North East Elevation - Consented 1:200

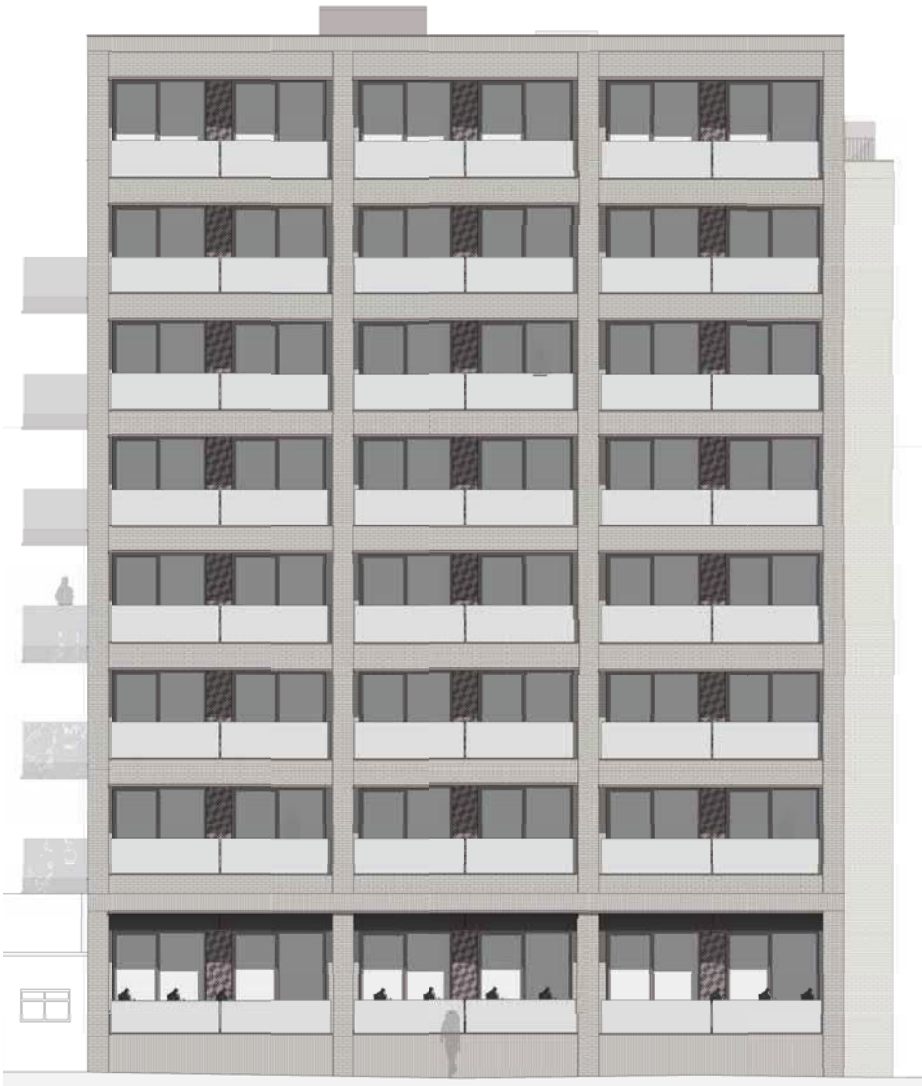


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South East Elevation - Proposed Amendments 1:200



South East Elevation - Consented 1:200

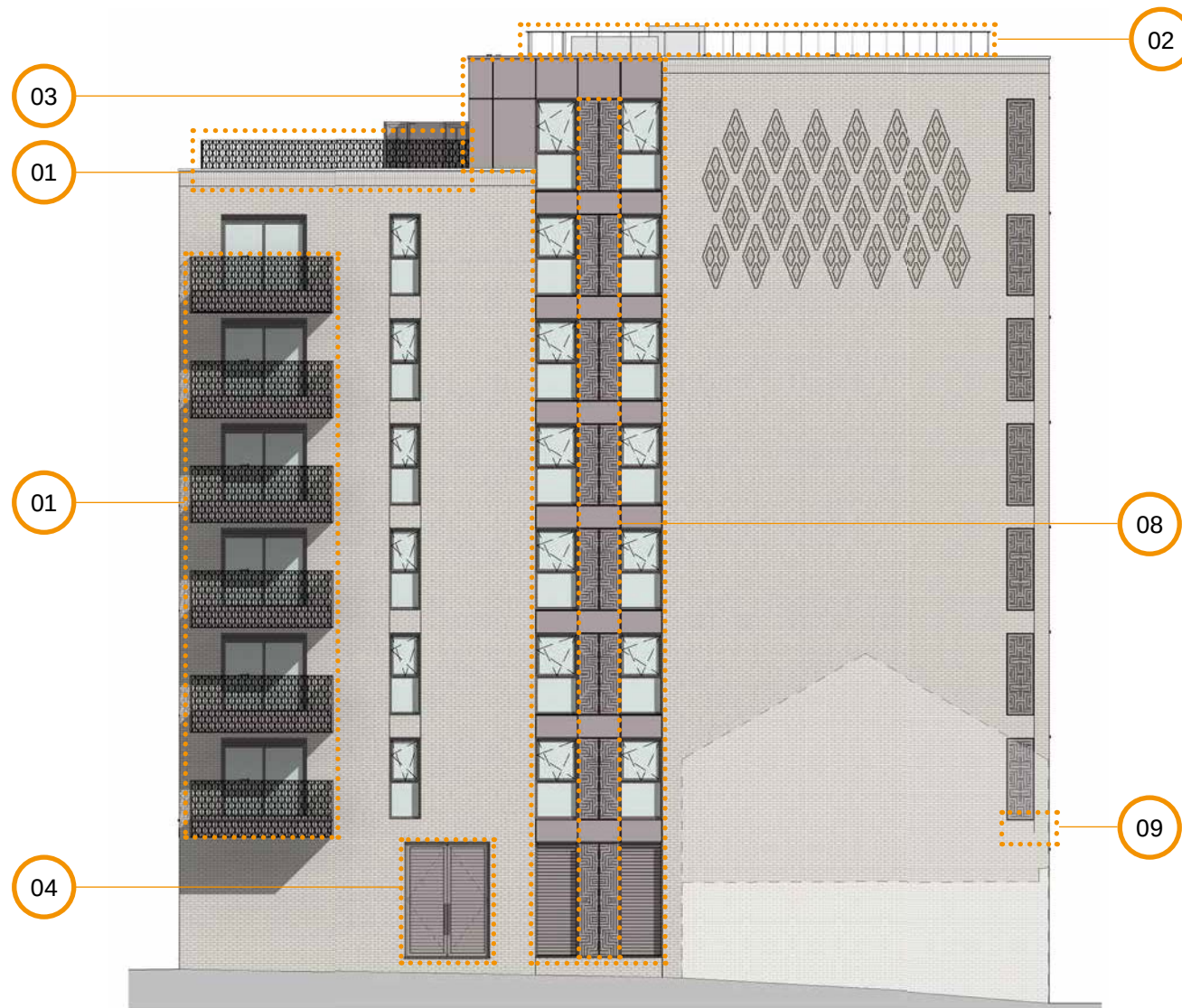


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South West Elevation - Proposed Amendments 1:200



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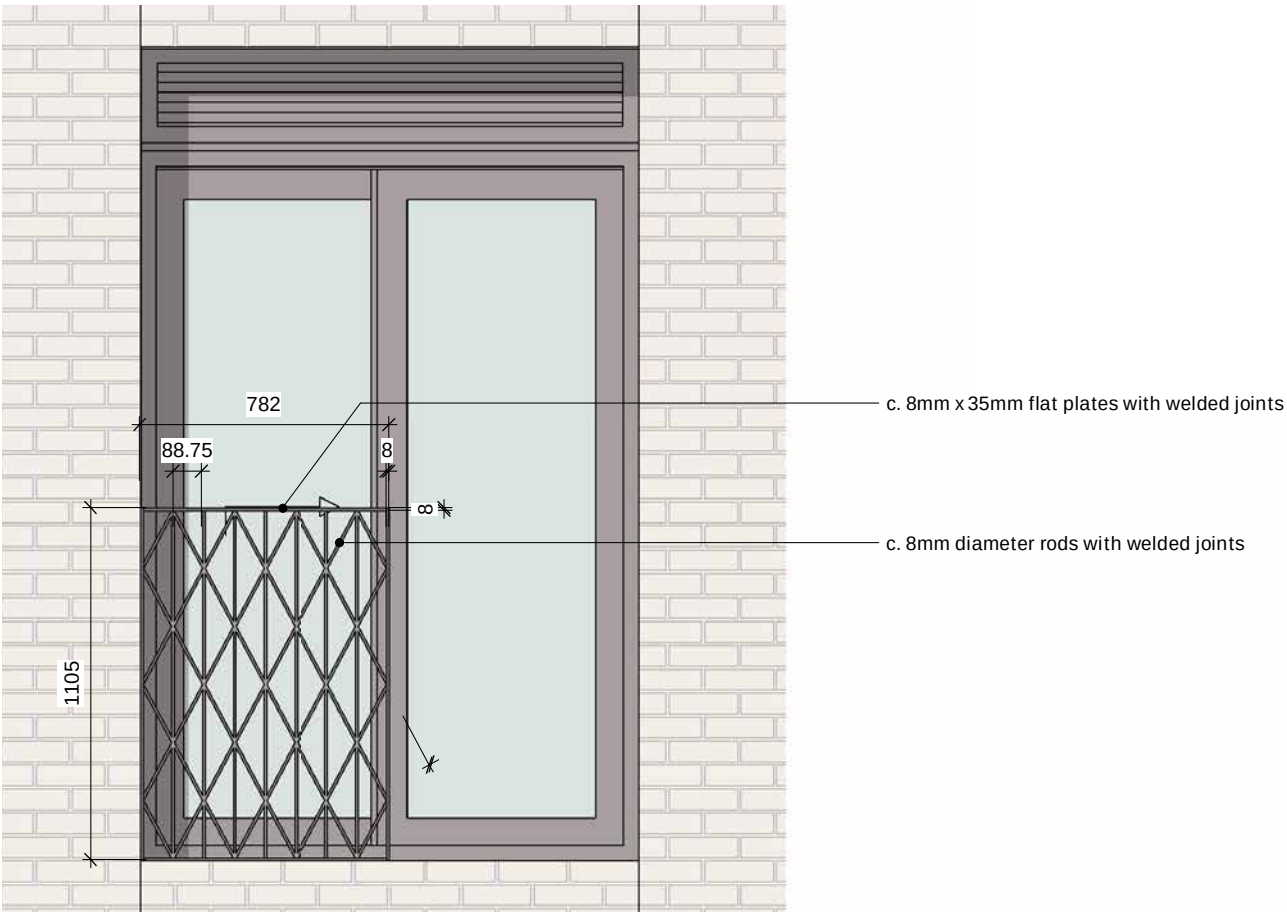
South West Elevation - Consented 1:200



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Item 01. Elevation Details - Railing Design Proposal (Refer to Appendix A)

Elevation of metal juliette balcony balustrade



Metal recessed balcony balustrade



Metal projecting balcony balustrade



Sample images of metal juliette balcony balustrade (unpainted)



Metal juliette balcony balustrade



Item 02. Illustrative Views from Street Level - Visibility of Permanent Edge Protection to Roof Level

View from Ducie Street looking North East



View from Ducie Street looking South West



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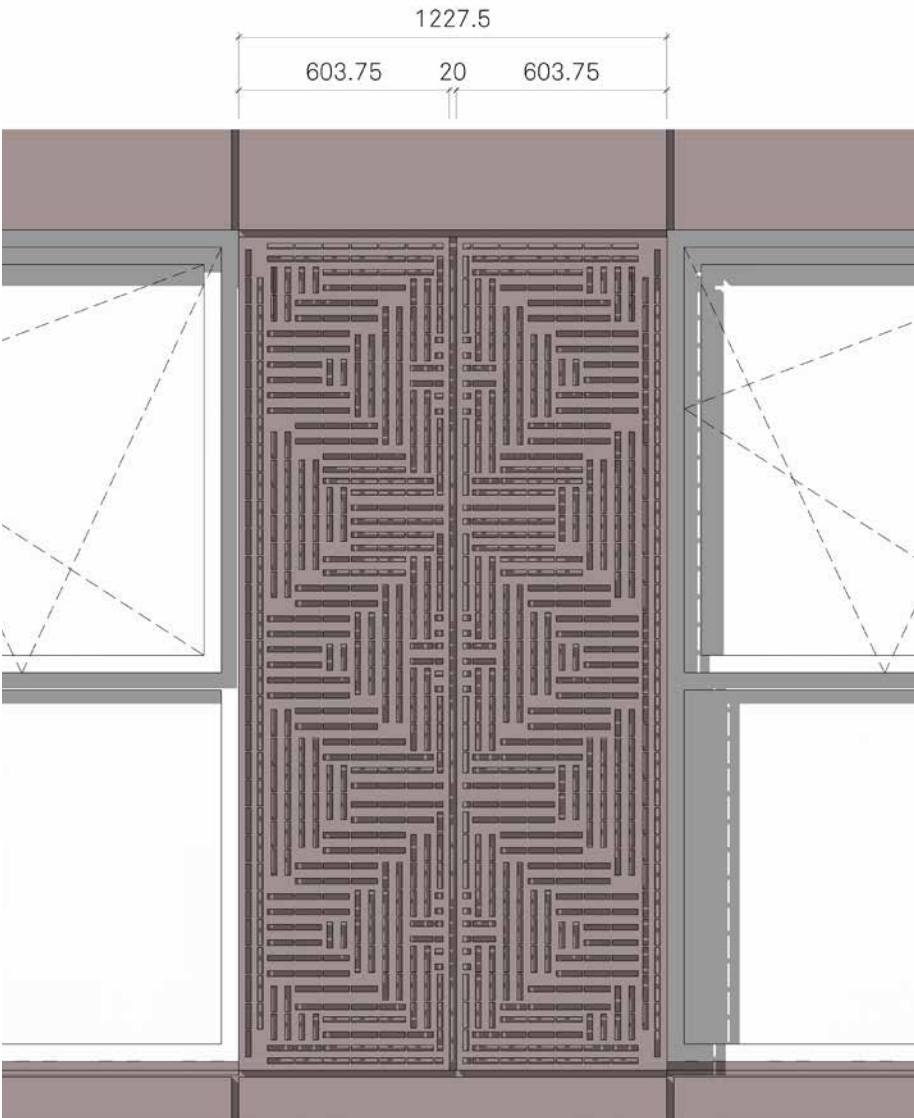
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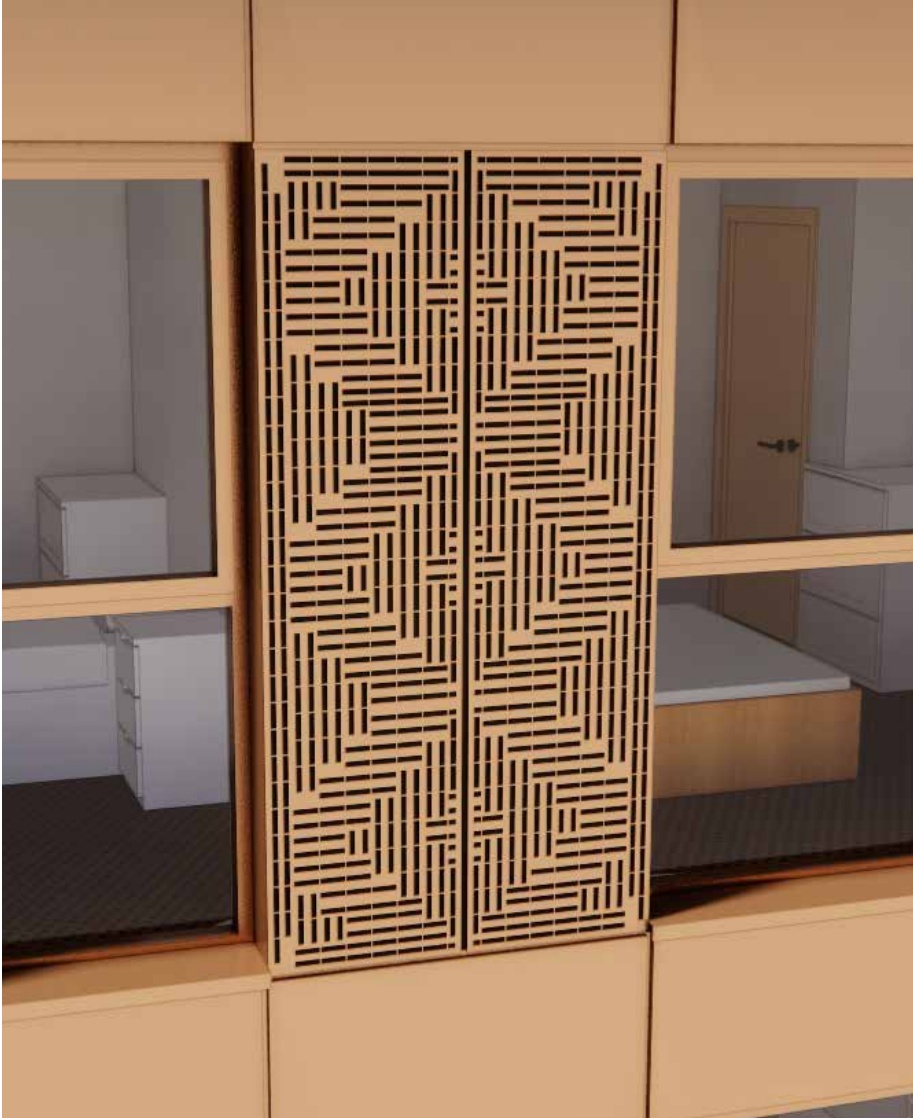
Item 08. Elevation Details - Perforated Panel Proposal (Refer to Appendix B)

Please note colours on these images are indicative and finishes shall be as per agreed samples.

Elevation of vertically split perforated panel on south-west / north-east elevations



3D image of vertically split perforated panel on south-west / north-east facades



3D image of vertical perforated panels on south-west facade



Item 09. Minor amendment to soldier coursing on Ducie Street Elevation Ground Floor

It is proposed to marginally reduce extent of the soldier coursing due to complications in installing the masonry support and achieving tolerances on the structural frame.

This means that the soldier coursing in this location would need to be recessed by 30mm in order to maintain suitable bedding onto the masonry support.

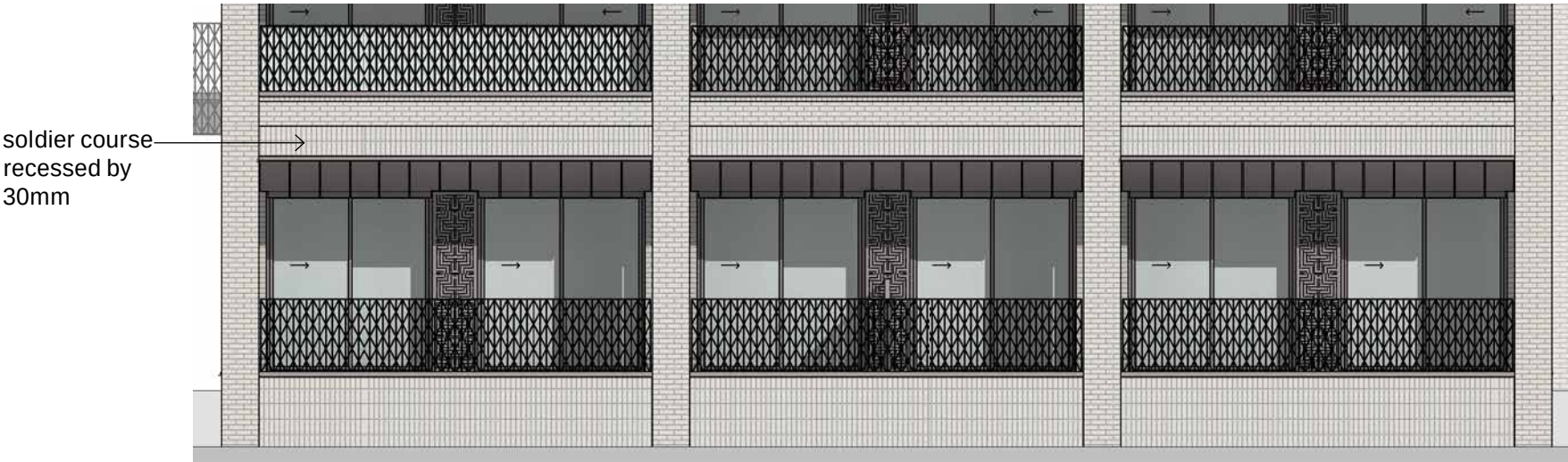
Since we have 30mm recessed brickwork elsewhere on the project it is felt that this ties in with current design language. It would also offer visual relief to the planar elevation, enhancing it's appearance.

The original proposal wrapped the soldier coursing around the corners and across the vertical piers - however our opinion is that limiting the recessed soldier coursing to above the balcony openings enhances the vertical proportion of this facade and the legibility of the balcony openings.

South East Elevation - Consented 1:100



South East Elevation - Proposed Amendments 1:100



Item 10. Change of window opening type to meet natural purge ventilation requirements

The consented design failed meet the free area requirements for natural purge ventilation with the tilt-open windows indicated on the Lomax Street elevation. The design team would prefer to stick with a natural solution rather than mechanical in order to reduce the operational energy needs of the building. AD:Part F requires a minimum 15 degree opening which the manufacturer has advised cannot be achieved with a vent oening.

Two options were reviewed; changing to a half-light swing-opening type or change to a full swing opening door with juliette railing.

The half light amendment is preferred for appearance, as will continue the visual language of 4xno. alternating strips of window styles. Half light windows are used elsewhere on the scheme already as part of the planning approved design. See East and West Elevations for this window type used in the metal cladding sections. Transoms will be set at 1140mm above FFL the same as the other half-light windows, which will also line through with the juliette top rail.

North East Elevation - Consented



North East Elevation - Option 01 - Half Transom (proposed)



North East Elevation - Option 02 - Juliette



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DUCIE STREET, MANCHESTER

—
P21110-FCH-XX-XX-RG-A-0005
BALUSTRADE DESIGN DEVELOPMENT
APPLICATION REF: 120149/FO/2018

—
BIG RED CONSTRUCTION

—
APRIL 2024

P01

FALCONER
CHESTER
HALL

120149/FO/2018

Balustrade Design Development

Big Red Construction

Ducie Street,
Manchester,
M1 2JQ



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DUCIE STREET, MANCHESTER

INTRODUCTION

120149/FO/2018

This document has been prepared by Falconer Chester Hall Architects on behalf of Big Red Construction for the site at Ducie Street, Manchester. This document is intended to record the development of the balustrade designs for the scheme at Ducie Street and present the alternative proposal which will form part of a non-material amendment application for approval 120149/FO/2018.

This document will contain the following parts:

- Glazed Balustrade - Approved Design
- Glazed Balustrade - Technical Approval
- Metal Balustrade - Alternative Design
- Metal Balustrade - Developed Design Options
- Metal Balustrade - Proposed Design



Illustrative CGI image from the Design and Access statement.

DUCIE STREET, MANCHESTER

GLAZED BALUSTRADE - APPROVED DESIGN

120149/FO/2018

The Approved Documents feature a frameless glass balustrade with secret fixings to the perimeter of the projecting and inset balconies.

Post-planning, the RIBA Stage 3 design process undertook a review of either toughened or laminated glass for these items. The design team discussed the following:

Option A – Toughened heat soaked glass.

- The amount of force required to break or shatter the glass will be high, but there is the risk of any failed glass falling from height and injuring someone below.
- In addition to this there is also the risk of the unguarded edge that is left behind.
- Heat soaking exposes NiS inclusions, panels will not pass if any NiS is present.
- NiS inclusions could cause the toughened glass to fail insitu.

Option B – Framed, toughened and laminated heat-soaked glass.

- The frame would encapsulate the laminate layer and therefore could be acceptable for AD:Part B subject to test data.
- The laminate will hold the glass in place if there is a break and there is no unguarded edge. Most similar to the planning approved design intent.
- A minor visual change which could require a S96A planning amendment.
- Heat soaking exposes NiS inclusions, panels will not pass if any NiS is present.
- NiS inclusions could cause the toughened glass to fail insitu.

In conclusion, Option A was not recommended by the design team on the grounds of safety, the risk of an unguarded edge and falling failed glass was deemed unacceptable.

Therefore Option B was pursued.



Ducie Street Elevation (nts) - extracted from consented Drawing 'DUCIE_STREET_ELEVATION-915784'

DUCIE STREET, MANCHESTER

GLAZED BALUSTRADE - TECHNICAL APPROVAL

A detailed review was undertaken of the test data and certifications for several products, the most promising solution being the laminated glass balustrade system ‘Pyroguard T’ which comprises 2no. layers toughened glass with a gel interlayer and perimeter sealant.

Whilst the project’s Fire Engineer (DFC) found the test data satisfactory to comply with AD;Part B, the BCO (Ball & Berry) were unable to advise that any product of this type would meet the criteria defined in Regulation 7 (fig. 01). Ball & Berry’s statement extraced below for clarity:

“After reviewing this internally, unfortunately again Ball & Berry would not accept this under Regulation 7(2).

We would advise that the government recently undertook a review and chose not to omit or exempt laminated glass to balconies i.e. balcony attached to an external wall where regulation 7(2) is applicable.

It is worth noting this also appears to be the stance of several of the leading warranty providers.”

fig. 01 - BCO (Ball & Berry) statement for all laminated glass balustrade systems

From:

Sent:

To:

Cc:

Subject:

Alex Portis <Alex.Portis@ballandberry.co.uk>

23 August 2022 17:17

Iain Macfarlane; Deborah Mclean; Bilal Siddiqui; Alex Eagle

Stephen Wardle; Paul Soper; Richard Cymler

RE: P21-110 - Ducie St. Manchester - Glass Balustrades

Deborah/Iain,

After reviewing this internally, unfortunately again Ball & Berry would not accept this under Regulation 7(2).

We would advise that the government recently undertook a review and chose not to omit or exempt laminated glass to balconies i.e. balcony attached to an external wall where regulation 7(2) is applicable.

It is worth noting this also appears to be the stance of several of the leading warranty providers.

Kind Regards,

Alex Portis

Associate Director

BSc (Hons) MRICS C.Build E MCABE

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APPROVED INSPECTORS

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DUCIE STREET, MANCHESTER

METAL BALUSTRADE - ALTERNATIVE DESIGN

120149/FO/2018

An Alternative To Glazed Balustrades

Following the conclusion that in order to satisfy both safety and Regulation 7 requirements a glazed balustrade would not be appropriate for this project - an alternative solution was sought.

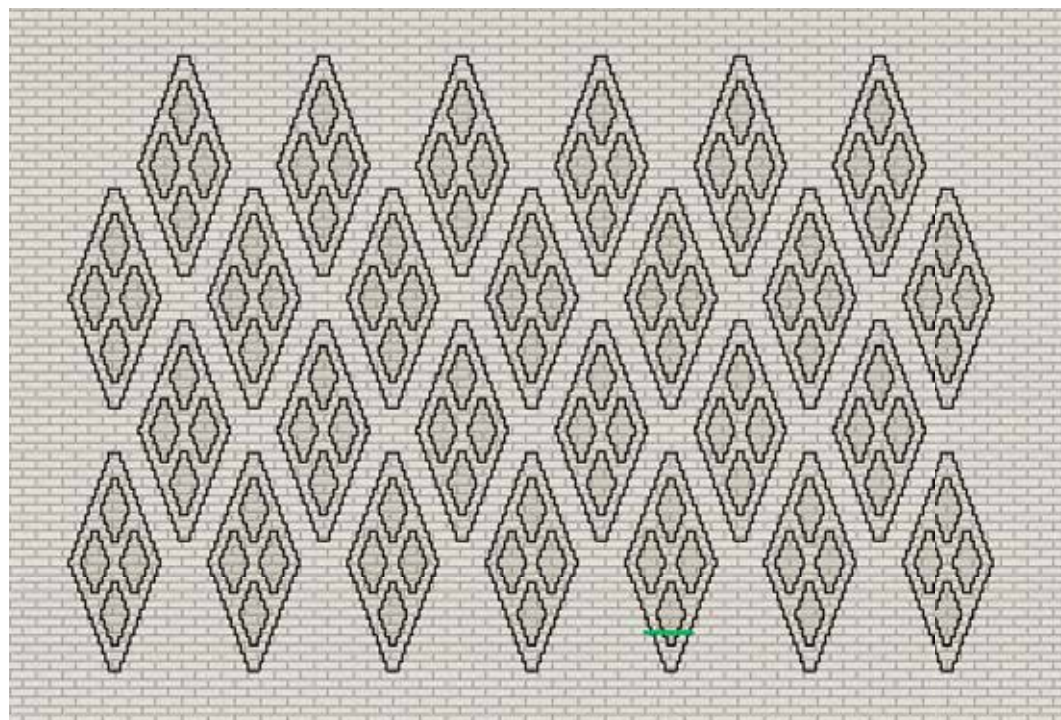
Metal railings are both already used in the existing context and on newer developments in the area. This option was also felt to be appropriate since the project's consented design already features flat bar metal railings to the perimeter of the L07 roof terrace and the Juliette balconies.

The proposal is to amend the glazed balustrades to angled metal rod ballusters with flat top, base and side rails, with a tone and finish that matches the bronze window frames.

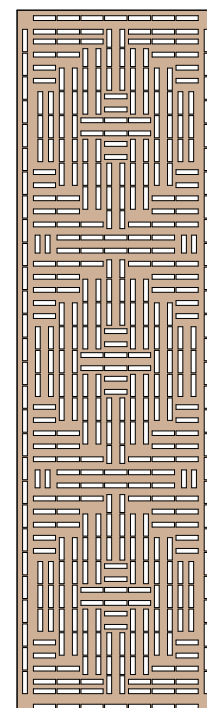
As part of this amended proposal we would also update the terrace and Juliette railings to match so that all the railings are the same across the project.

The images on this page provide design reference, below is the brick diapering detail and the perforation pattern for the feature metal panels. Both of these elements form part of the consented design. To the right are photo precedent of railings found in the surrounding area to the site.

Ducie St - decorative brick detailing on the south-west elevation.



Ducie St - decorative perforated metal panels.



Railings on George Leigh St



Railings on George Leigh St



Gates to Murray's Mill



Railings on Old Mill street



Gates to Victoria Square



Railings on Postal Street



Angled Railings - Precedent Images



METAL BALUSTRADE - DEVELOPED DESIGN OPTIONS

Developed Design Options

Following initial discussions with MCC and internal review, further design testing was undertaken to review whether the level of detail in the proposed design was striking the right balance.

We looked to retain the 'lightness' and visual transparency of the initial design, while incorporating a more obvious reference to the diamond motif.

We wanted the design to be formed from the railing elements themselves, excluding a solution that would 'face fix' details to a sub-frame. This was felt to be more aligned with the contextual/ historical railing references.

Option 01

Pros:

- visual permeability

Cons:

- simple and repetitive
- too similar with previous metal railing option
- not linked enough with decorative panels
- design not bespoke enough



Option 02

Pros:

- closely aligns with 'textile' motif pattern
- visual permeability
- bespoke and decorative

Cons:

- pattern too distracting/ too complicated
- competes with perforated panel pattern



Option 03

Pros:

- closely aligns with 'textile' motif pattern
- visual permeability
- bespoke and decorative

Cons:

- vertical and horizontal bars too distracting



METAL BALUSTRADE - DEVELOPED DESIGN OPTIONS

Option 04

Pros:

- closely aligns with 'textile' motif pattern
- visual permeability
- bespoke and decorative

Cons:

- pattern too similar to perforated panels
- would need to be constructed as 'face-fixed' zig-zags rather than integral to the railing design



Option 05

Pros:

- closely aligns with 'textile' motif pattern
- bespoke and decorative

Cons:

- not enough visual permeability
- pattern too distracting
- introduces a new linear language



METAL BALUSTRADE - PROPOSED DESIGN

Option 03 was preferred, striking a suitable balance of detail and decoration without overloading the overall building appearance. It was felt to have more direct reference to the diamond motif without directly repeating the perforated panel pattern.

In the final development of this proposal we chose to omit the horizontal bars, which improved the legibility of the diamond pattern whilst also improving the visual permeability.

The images adjacent illustrate how the proposed railings would look on the 3no. different balcony types. The proposed railing would also be used behind the mid-height parapet wall on the Level 07 roof terrace - replacing the approved flat-metal bar railings.

Balustrade Type 01 -

Inset balcony to Ducie Street south-east elevation.

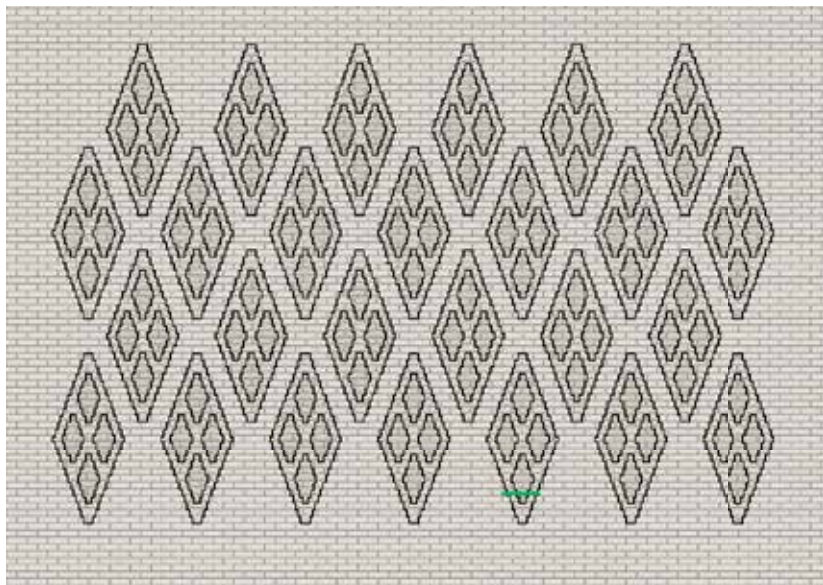


Balustrade Type 02 -

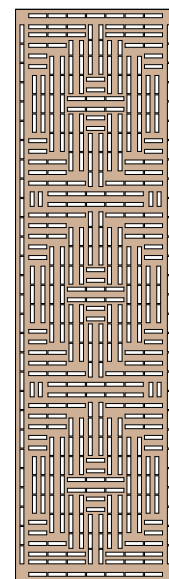
External projecting balcony to south-west elevation.



Decorative brick detailing on the south-west elevation.



Ducie St - decorative perforated metal panels.



Balustrade Type 03 -

Juliet balcony to Lomax Street north-west elevation.



METAL BALUSTRADE - PROPOSED DESIGN

Proposed Metal Balustrade - Prototype No. 2 (unpainted)

The adjacent photos are of the fabricated prototype for the Juliette balcony. This prototype is the raw material only i.e. as yet unpainted.

All proposed railings will have a metallic PPC finish to match the window frames (ref. Tiger 68/60307 C-33). This finish was reviewed with MCC on the VMU on site and agreed to be visually similar to the Anodized Aluminium finish of the metal cladding panels and therefore a suitable finish for thin elements such as the window frames, all joints are welded.

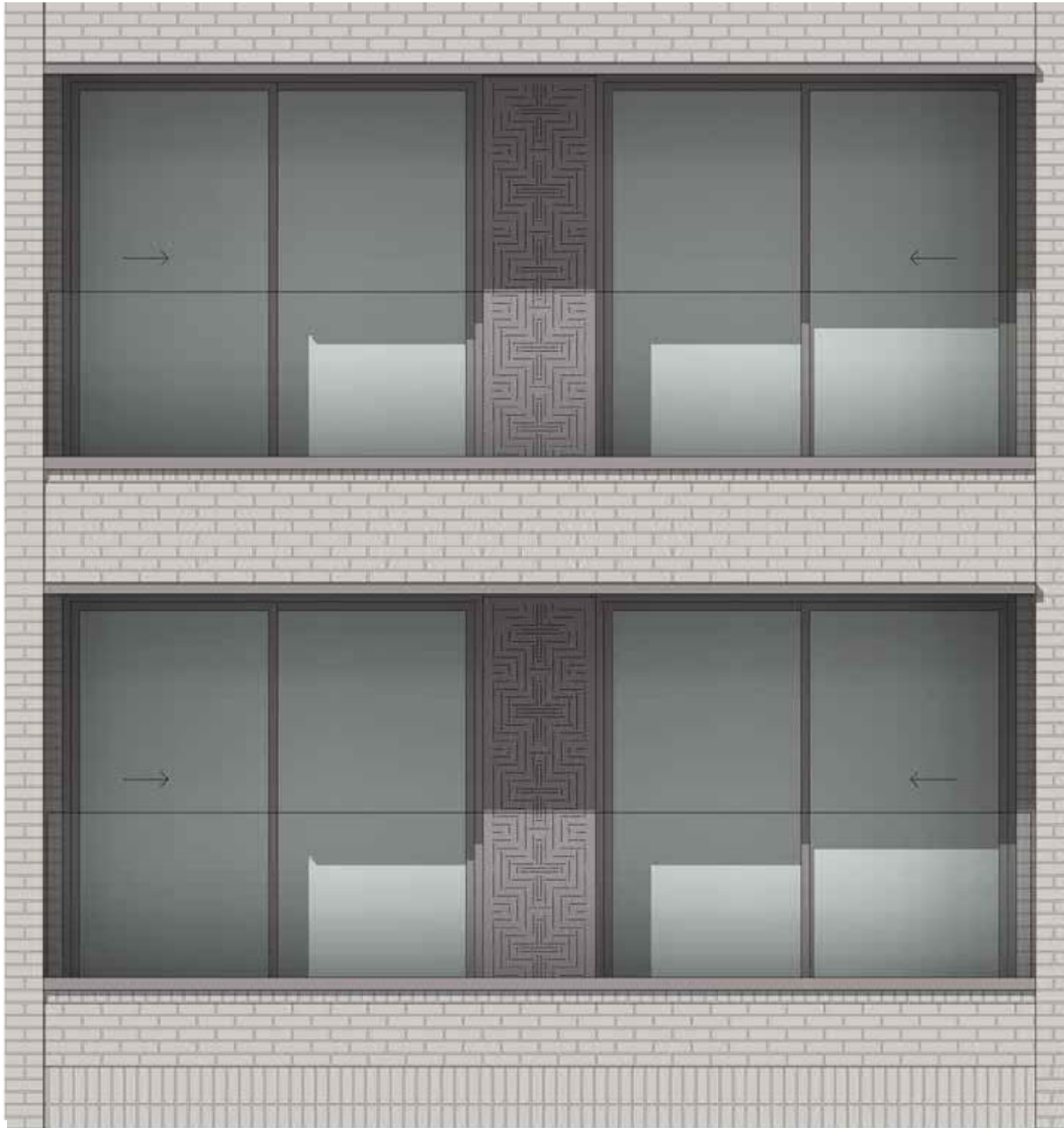
The staggering of the layers of rods is visible on the prototype which adds some depth to the railing and is preferred to an in-line arrangement.

Refinements were made following the first prototype; the thickness of the top rail of the frame were reduced, the location of the fixings into the window frame were moved up into the corner of the frame and size of the fixing plates was also reduced.

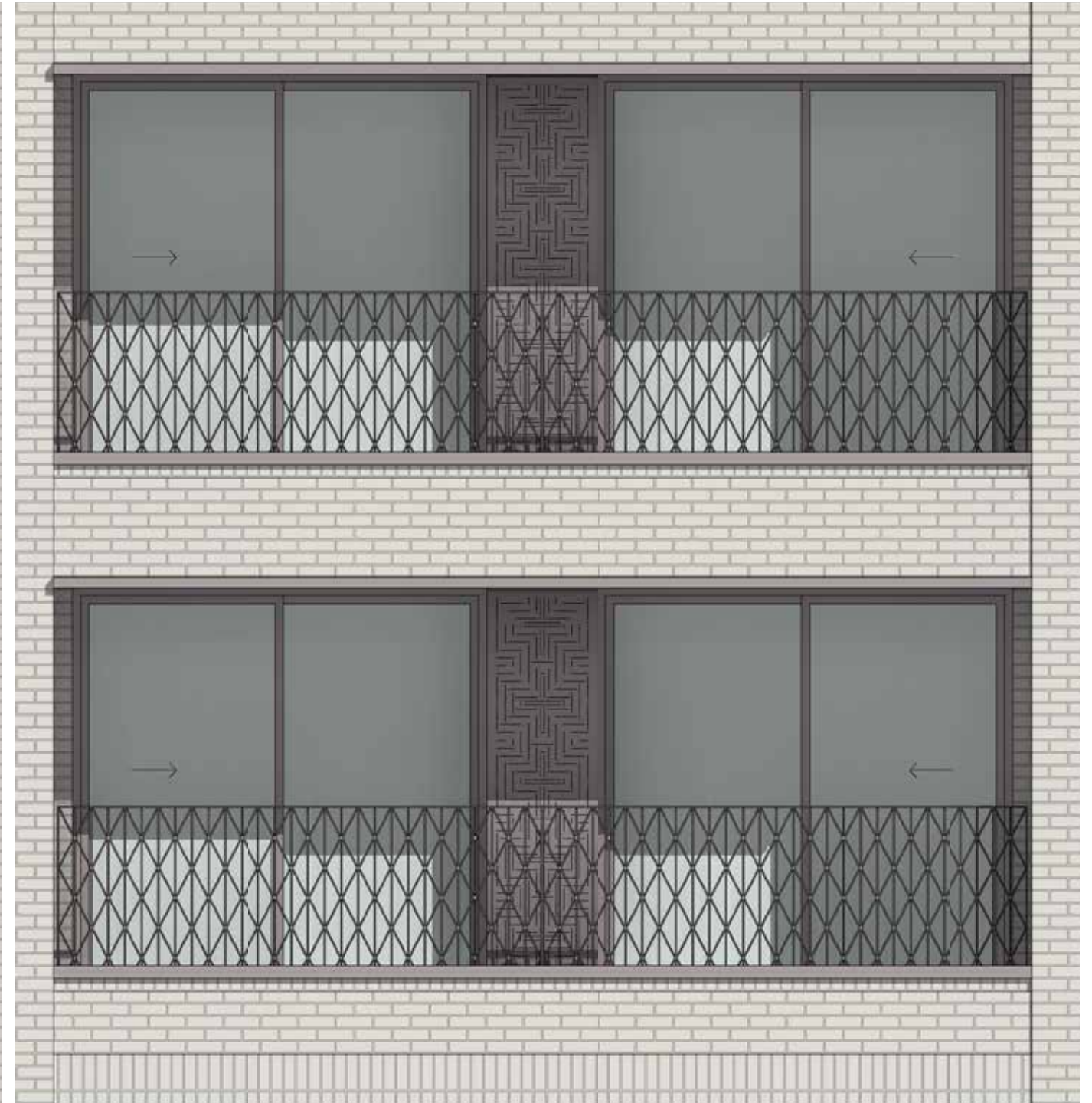


METAL BALUSTRADE - PROPOSED DESIGN

Approved Glazed Balustrade - Recessed Balcony (nts)



Proposed Metal Balustrade - Recessed Balcony (nts)



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DUCIE STREET, MANCHESTER

—
P21110-FCH-XX-XX-RG-A-0006
PERFORATED PANELS DESIGN DEVELOPMENT
APPLICATION REF: 120149/FO/2018

—
BIG RED CONSTRUCTION

—
MAY 2024

P01

Perforated Panels Design Development

Big Red Construction

Ducie Street,
Manchester,
M1 2JQ



DUCIE STREET, MANCHESTER

INTRODUCTION

120149/FO/2018

This document has been prepared by Falconer Chester Hall Architects on behalf of Big Red Construction for the site at Ducie Street, Manchester.

As part of the technical development of the design for the metal cladding, the fabricators have advised that the perforated panels must be limited in width to 1525mm. This is due to the maximum flat sheet size, clamping area and panel returns. A number of the perforated panels in the approved design exceed this limit, therefore we need to consider splitting them into two slimmer panels.

This document is intended to record the development of the above and present an alternative proposal which will form part of a non-material amendment application for approval 120149/FO/2018.

This document will contain the following parts:

- Affected Panel Locations
- East Elevation
- West Elevation
- Perforated Panel - Joint Options
- Proposed Perforated Panel - 20mm Joint



Illustrative CGI image from the Design and Access statement.

DUCIE STREET, MANCHESTER

AFFECTED PANEL LOCATIONS

 Perforated panels affected by fabrication constraints

Proposed North Elevation (NTS)



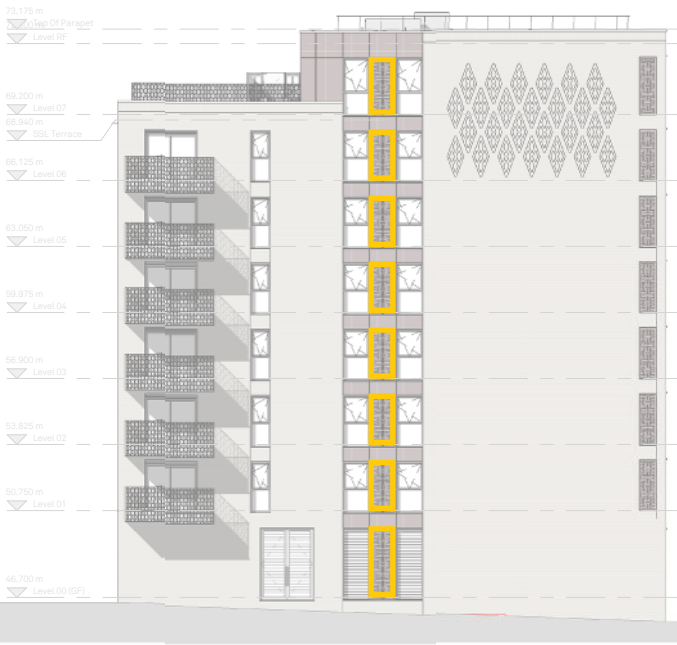
Proposed East Elevation (NTS)



Proposed South Elevation (NTS)



Proposed West Elevation (NTS)



DUCIE STREET, MANCHESTER
EAST ELEVATION

120149/FO/2018

Approved East Elevation (NTS)



Proposed East Elevation (NTS)



DUCIE STREET, MANCHESTER

WEST ELEVATION

120149/FO/2018

Approved West Elevation (NTS)



Proposed West Elevation (NTS)



DUCIE STREET, MANCHESTER

PERFORATED PANEL - JOINT OPTIONS

120149/FO/2018

As part of the development of the perforated panels, we have looked at the options available for the joint between the vertical split panels.

We have explored the following two joint options:

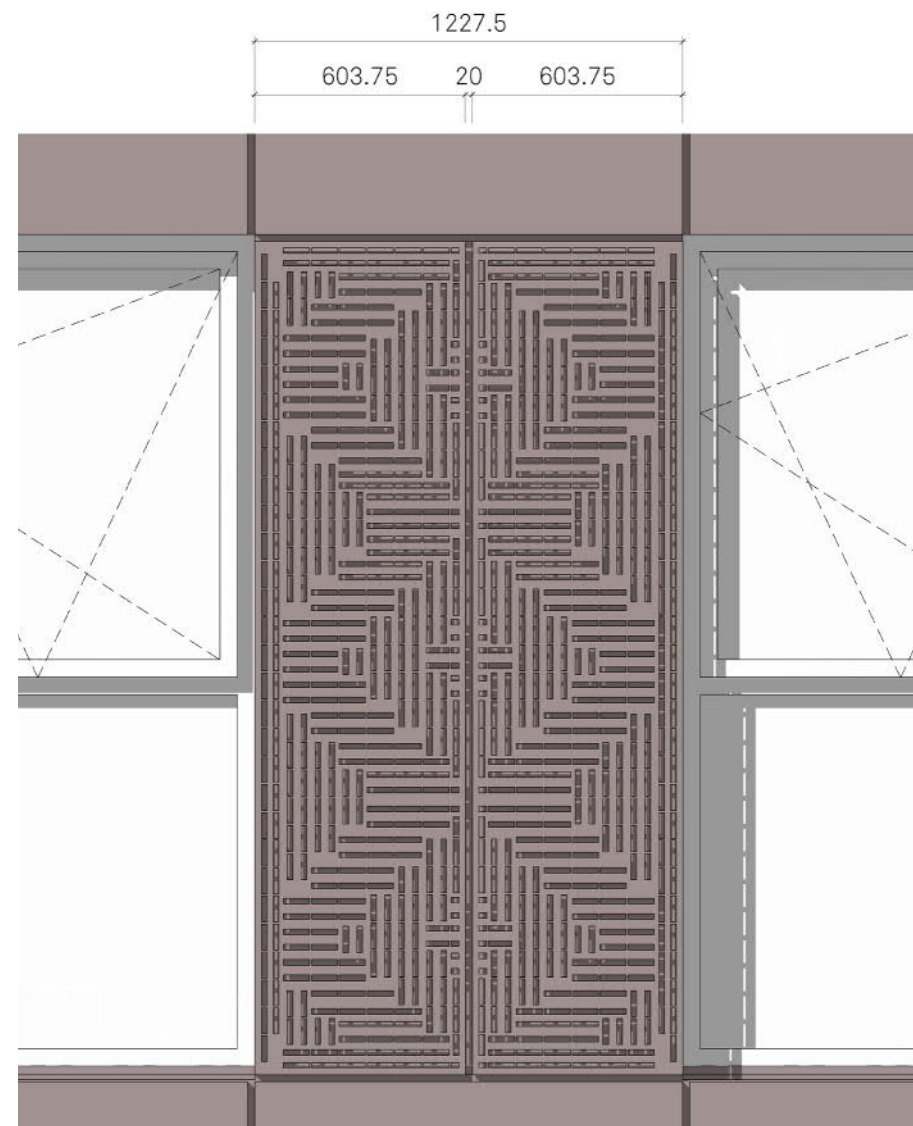
Option A - 20mm Joint

This joint has been developed to mimic the perforations of the panels and blend within the pattern. This has been explored by replicating the width of the perforations for the joint to camouflage the seam with the perforations.

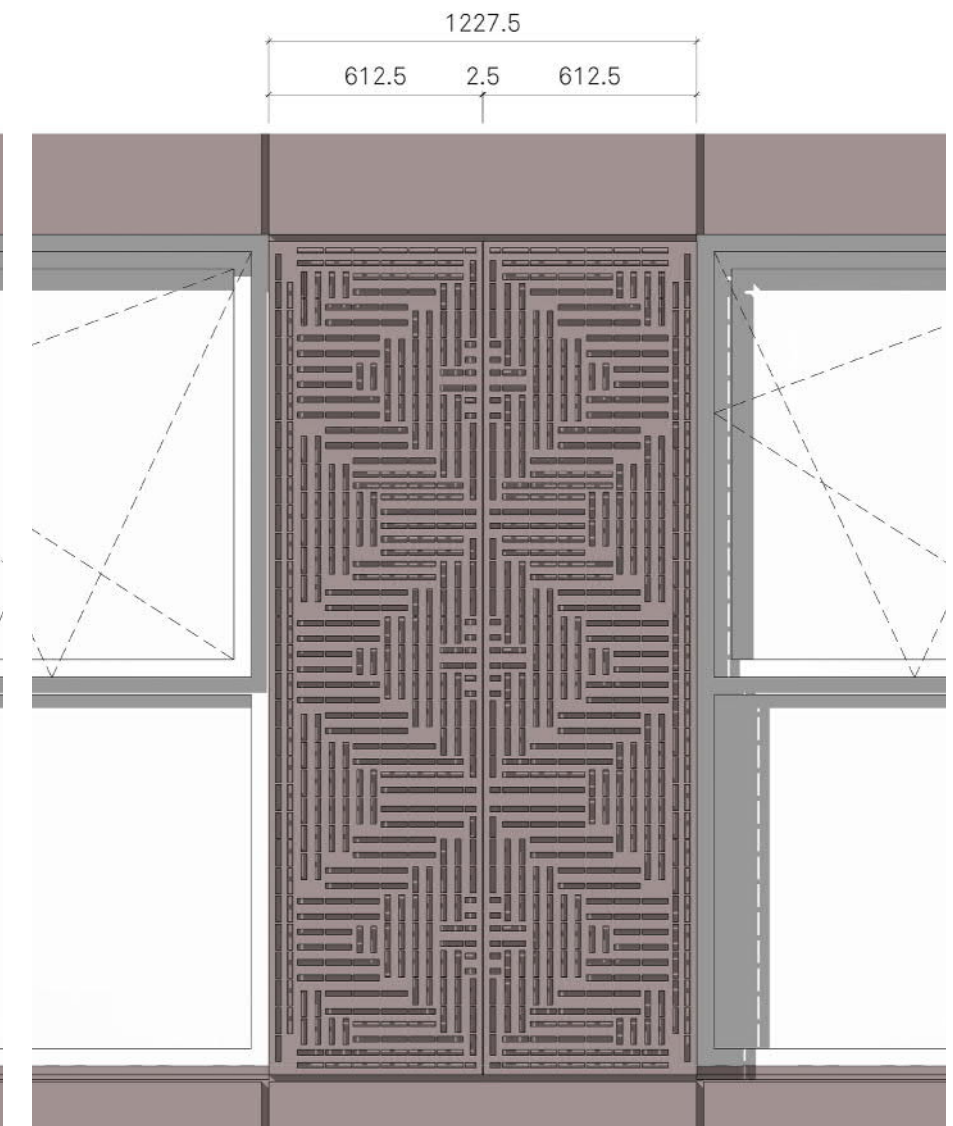
Option B - Hairline Joint

This joint has been developed to reduce the visibility of the seam between the newly split panels. This has been explored by reducing the width of the joint to reduce the visual impact of the seam.

Option A - 20mm Joint



Option B - Hairline Joint



DUCIE STREET, MANCHESTER

PERFORATED PANEL - JOINT OPTIONS

120149/FO/2018

Through the development and by exploring the panels in 3D, we have identified the where the two join options are effective and where they are unsuccessful.

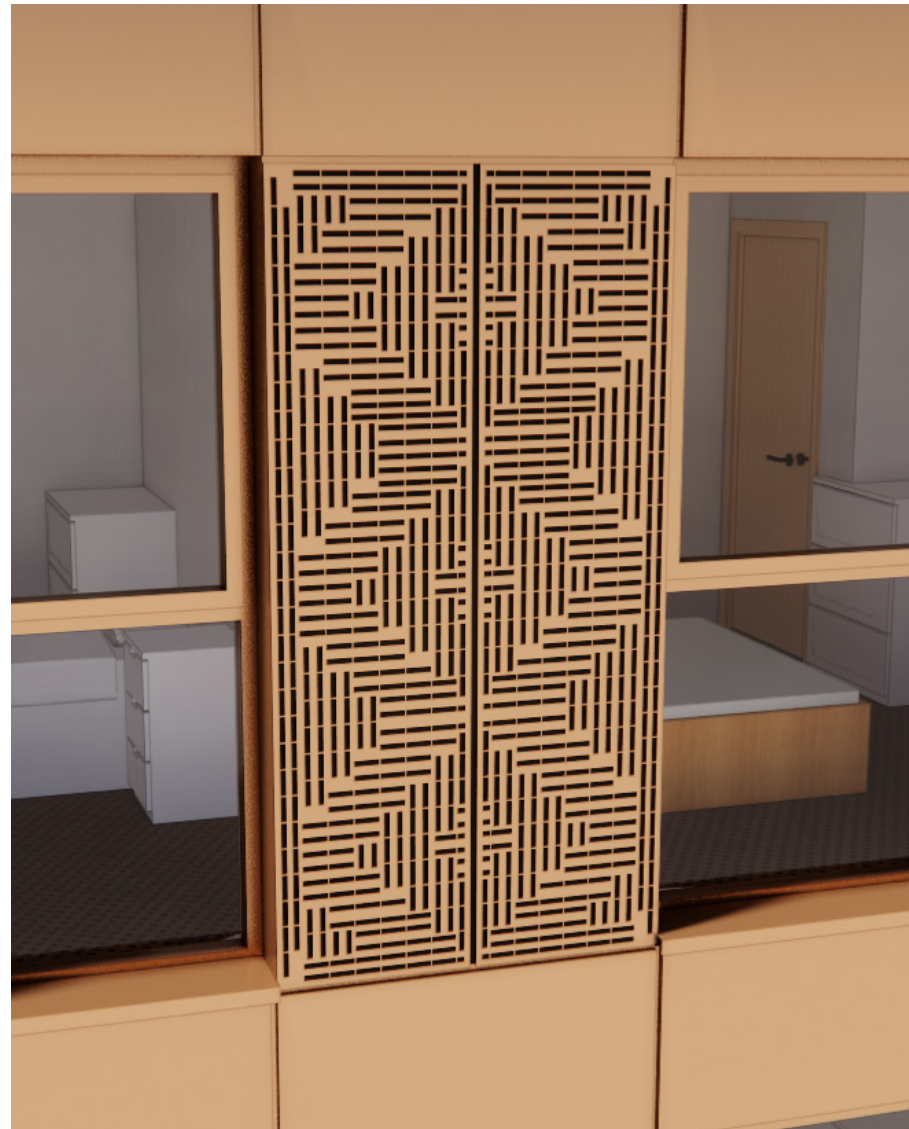
Option A - 20mm Joint

While this joint is the most visually prominent of the two, the similar width of the seam to the size of the perforations allows the junction between the panels to blend in with the pattern of the perforations quite effectively.

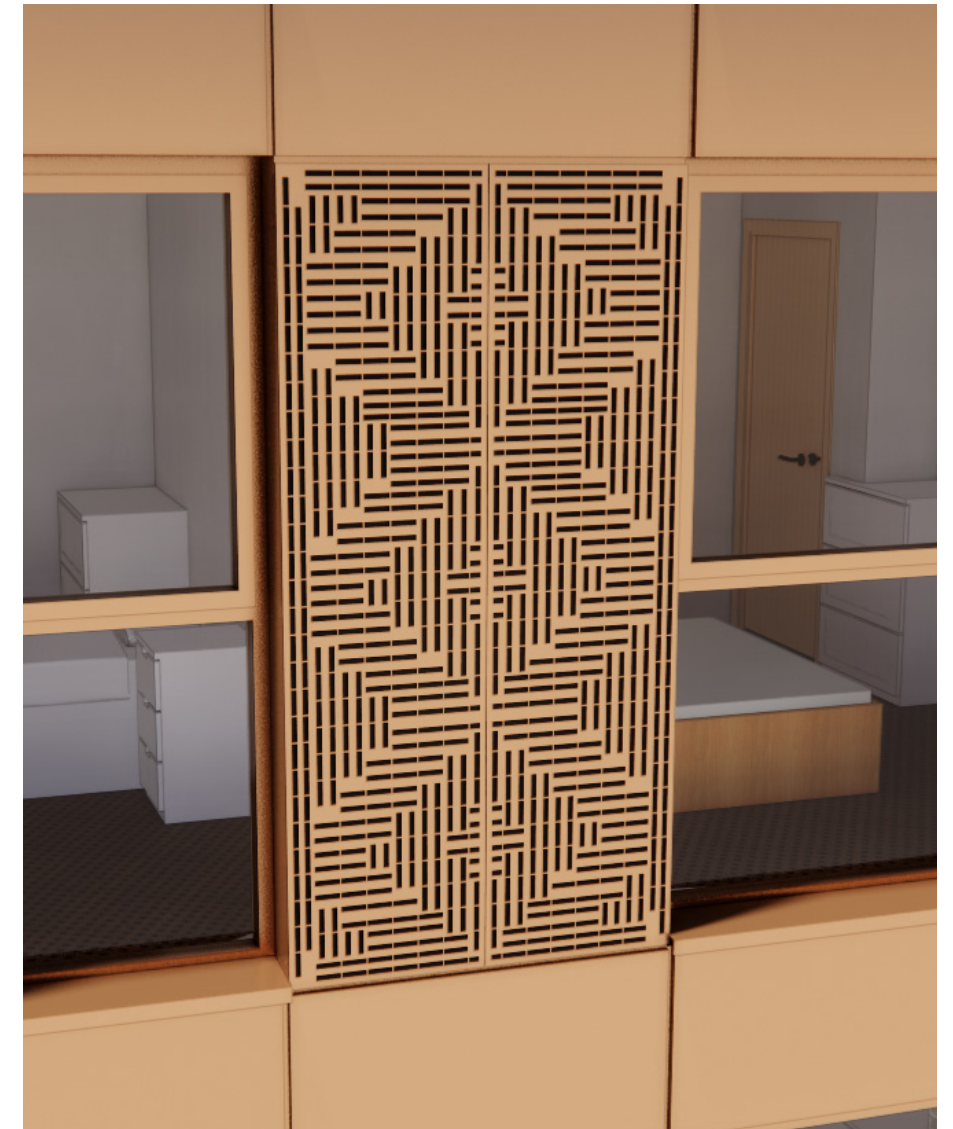
Option B - Hairline Joint

While this join reduces the size of the junction, the pattern of the perforations and the required 19mm clear area to the edge of the panel results in a more noticeable seam between the panels.

Option A - 20mm Joint



Option B - Hairline Joint



PROPOSED PERFORATED PANEL - 20MM JOINT

The 20mm joint was the preferred option, providing a solution which integrates well into the pattern of the perforations.

This joint type also reduces the visual impact that this change will have on the elevations.

Perforated Panel - 20mm Joint



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