

Manchester Art Gallery



Roof Lantern Replacement [Ref: 137015/LO/2023]
Discharge of Condition 3, Item 3
December 2024



Version history

Project name: Manchester Art Gallery

Project number: 9604

Client: Manchester City Council | Manchester Art Gallery

Rev:	Date:	Status	Name	Description
P01	Dec 24	For discharge of conditions	Hannah Bellerby Architect	First Issue

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Manchester Studio + Registered Office

Buttress Architects Ltd.
41 Bengal St.
Manchester
M4 6AF

T: 0161 236 3303
www.buttress.net

Leeds Studio

Buttress Architects Ltd.
Clockwise, Yorkshire House, Greek St.
Leeds
LS1 5SH

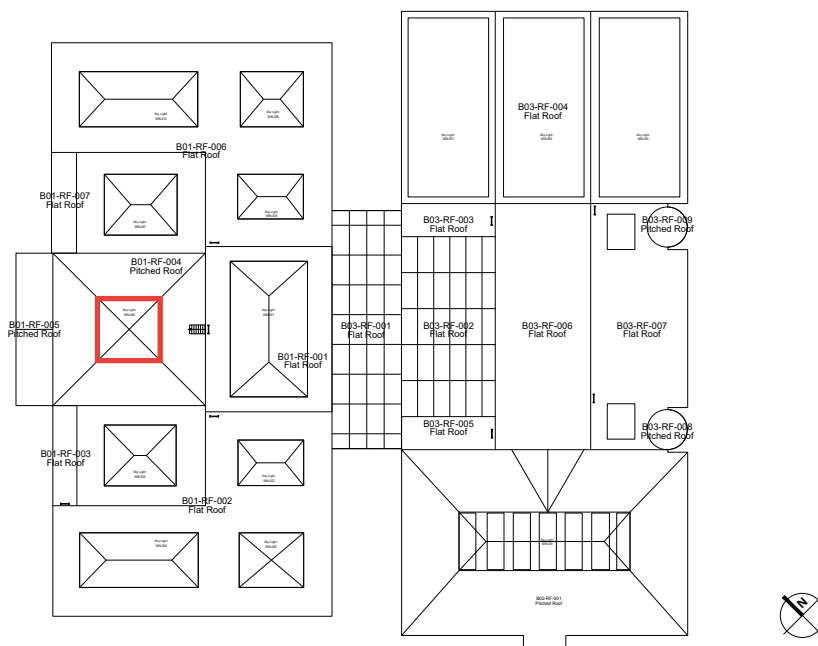
T: 0113 539 7965
www.buttress.net

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Location Plan



1.0 Internal Photographs and Profiles

1.1 Internal Photographs



Figure 1 General View



Figure 2 Glazing Bar, Internal Photograph



Figure 3 Hip Section, Internal Photograph



Figure 4 Cental Boss, Internal Photograph

1.2 Internal Profiles

The proposal submitted as part of application 137015/LO/2023 included for timber capping pieces to be affixed to the aluminium glazing and hips bars internally, to match the existing assumed timber profiles (see Figures 5 and 6 adjacent). The intention was to measure the existing timber profiles once close access to the rooflight could be achieved following the erection of the internal scaffold, and fabricate the timber profiles accordingly.

A visit to the view the rooflight was undertaken on 02/12/24 between Buttress Architects, Robertson Construction and the Manchester City Council (MCC) Planning and Conservation Officers, and it was found upon close inspection that there are no existing timber mouldings to the glazing bars, hip rafters or central boss as existing. The hip rafter comprises of two inverted steel angles, and the glazing bars have a simple flat steel capping piece applied (see Figures 1-4 on the previous page).

In light of this information, and with no existing profiles to replicate, the intention is to omit the internal timber mouldings to the aluminium hip rafters and glazing bars. A circular boss is still proposed at the apex to match the existing appearance. This was agreed in principle with MCC during the site visit on 02/12/24.

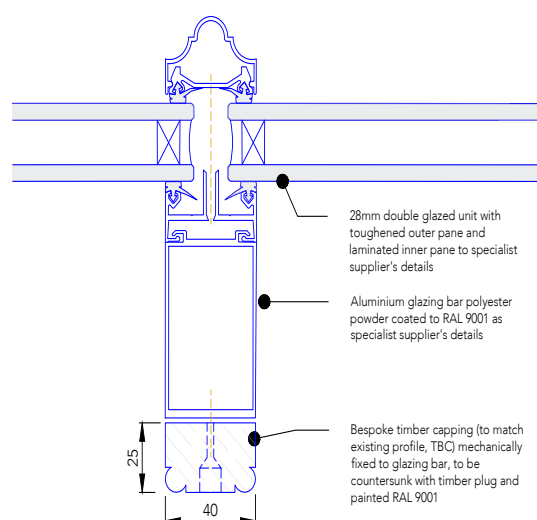


Figure 5 Previously proposed glazing bar timber capping profile submitted as part of 137015/LO/2023

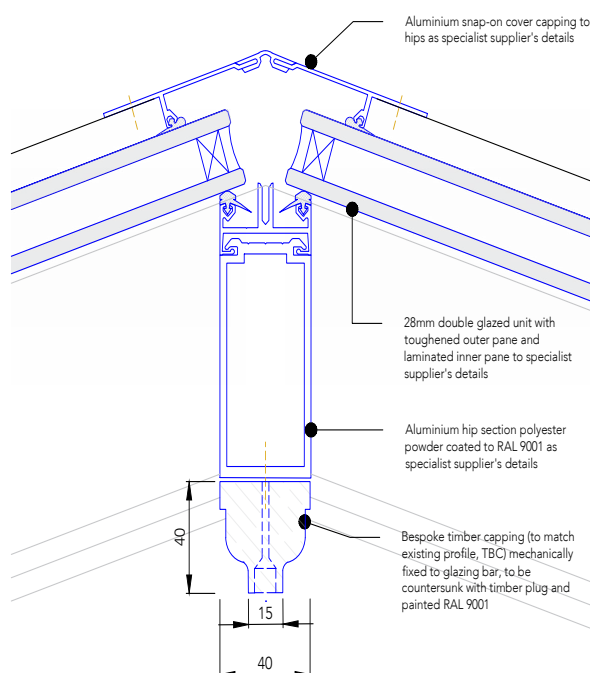


Figure 6 Previously proposed hip profile timber capping submitted as part of 137015/LO/2023

2.0 Installation Methodology

by Robertson Construction

The greatest challenge with this project is the logistics involved with gaining access to the lantern

whilst the gallery remains open and live to the public, does not impinge on the daily gallery operations to greatly, allows the access ramp to remain operation, fire exits not blocked or compromised, has no detrimental effect of the listed building and also allows safe access for operatives and materials to carry out the works.

We have considered many options of how to complete this work with the following being the agreed strategy and methodology.

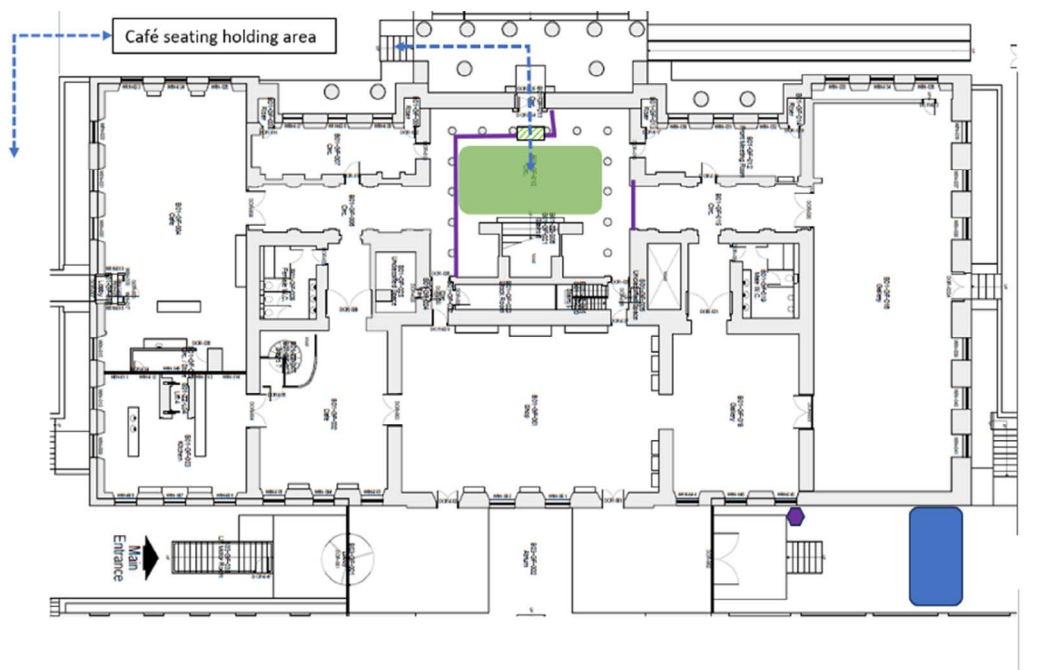
Public and Construction Segregation:

A key consideration is to ensure physical segregation of the construction activities from the public and staff within the gallery whilst maintaining the use of the various facilities.

Internally we shall erect a free standing PVC sheet hoarding internally that's separates the construction area from the public area. Externally the works area will be segregated using metal fencing with the majority of the works being carried out from our established construction compound.

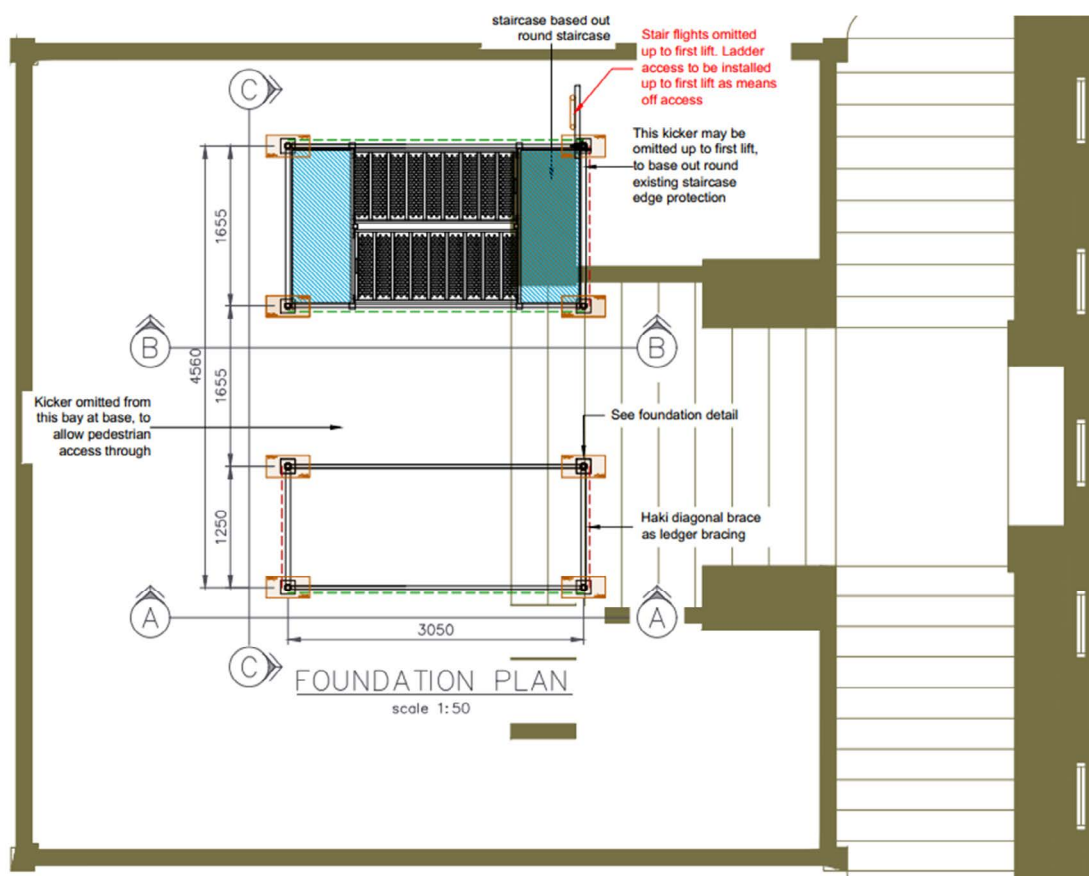
Protection and Access:

Once the hoardings are erected all areas of the building fabric will be protected using a combination of breathable felt and "impact board", a corrugated plastic sheet made from 100% recycled material with the impact resistance of plywood.

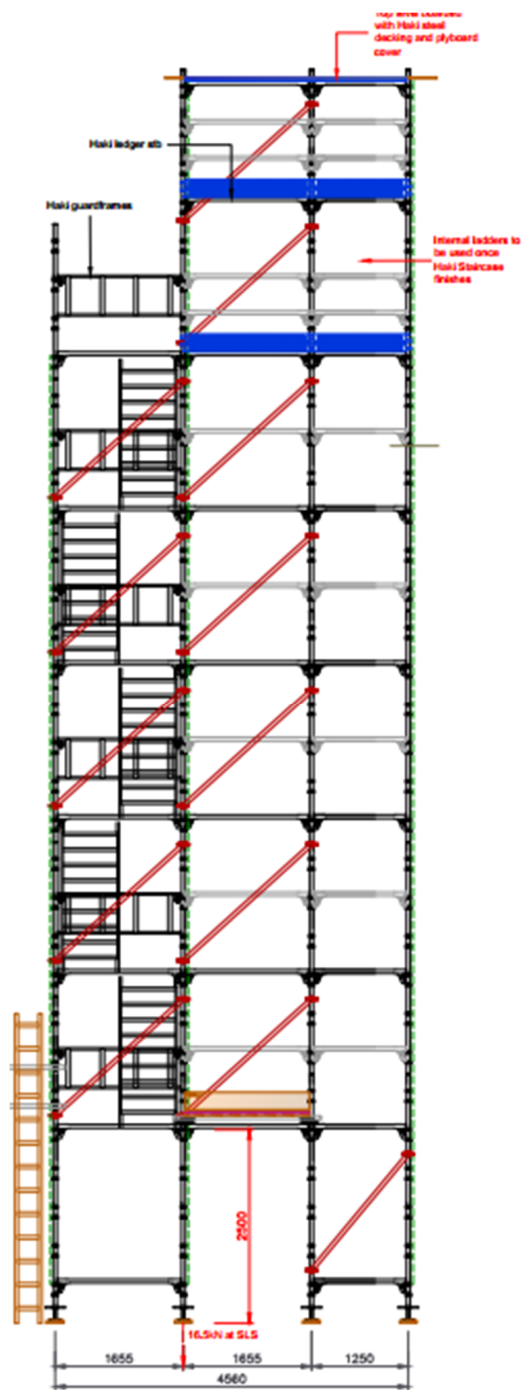


Both an internal and external scaffold is required to allow safe access to the work area, provide a crash deck for any falling materials and a temporary roof over the opening to protect the gallery from the elements during the works.

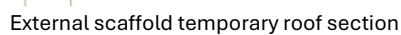
A hoist will be fixed to the external scaffold and will be used to transport the existing roof lantern to the ground for disposal and transport the components of the new roof lantern to the roof area for installation.



Internal scaffold plan



Internal scaffold elevation



Sequence of work:

The existing lantern will be removed by hand from the external scaffold with the asbestos containing elements removed by specialist contractors.

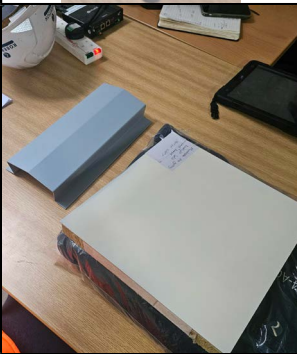
Once removed a full assessment of the existing kerb can be carried out and any repair or upgrade works carried out to the timber and lead work as required.

The new roof lantern will be installed in component form in situ on the roof with the aluminium upstand first, followed by the glazing and capping.

The existing lightening protection finial will be reinstated, and new lighting protection tapes installed and connected to the existing earth path.

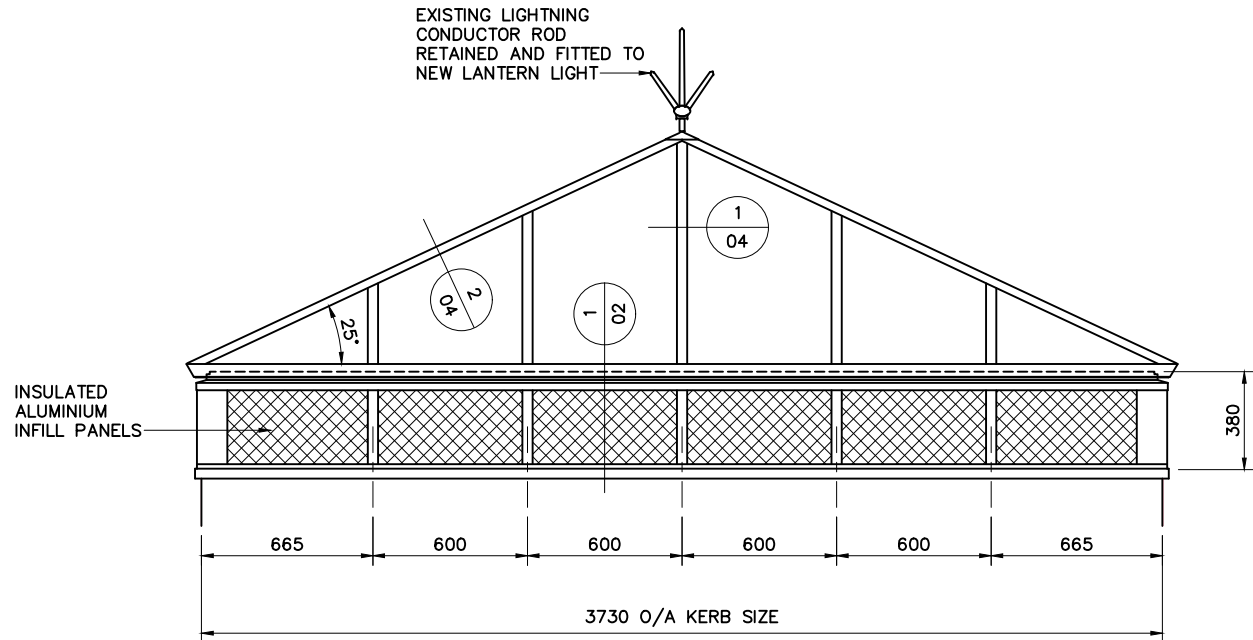
The scaffold will be removed from the top down and any damaged or dislodged slates replaced.

3.0 Schedule of Submitted Samples

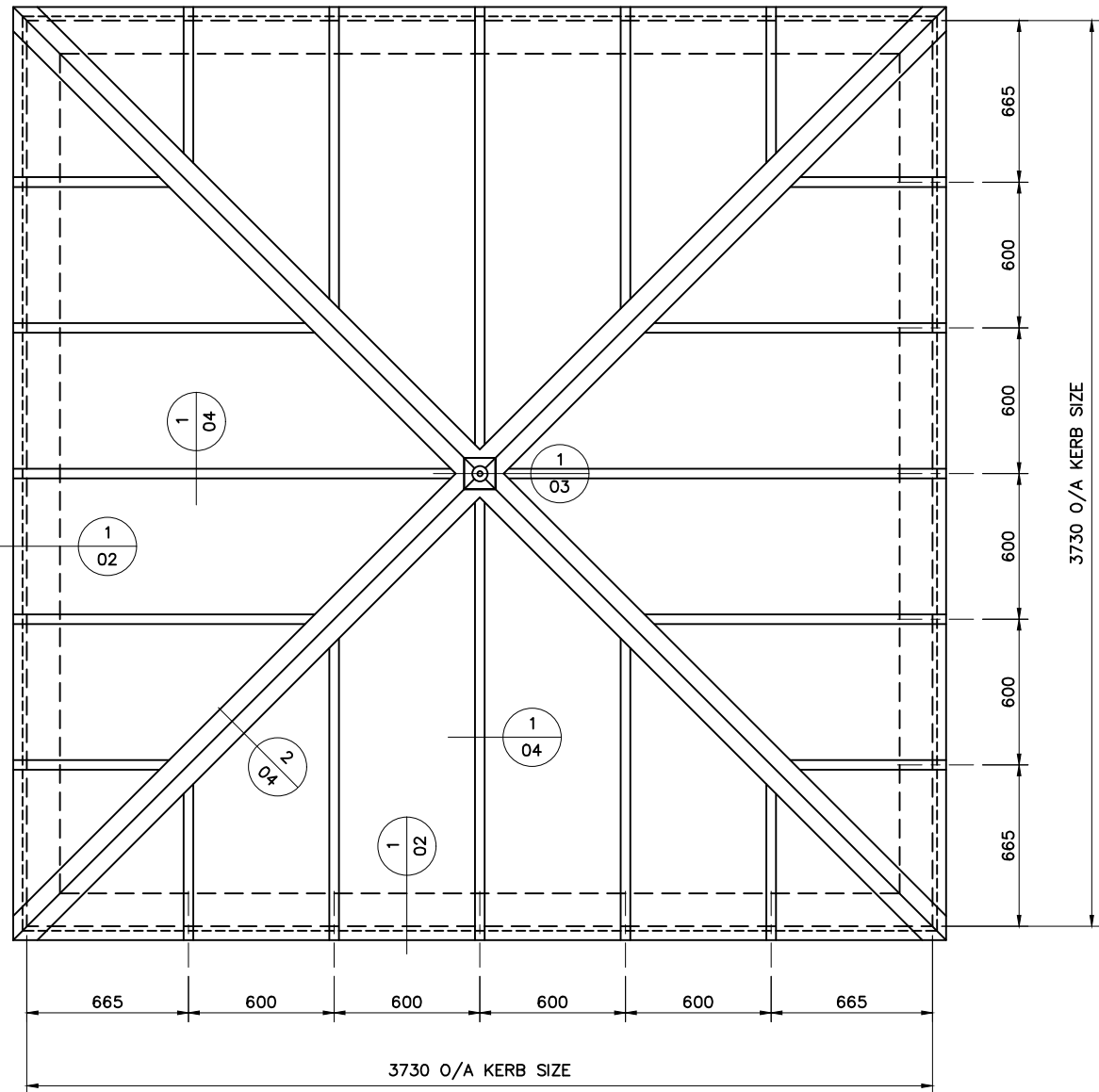
No.	Item	Material and Finish	Photograph	Submitted to	Relevant dates	Comments / Feedback
1	Glazing bar sample	Aluminium, Polyester Powder Coated		Michael Pearson [Career Graded Planning Officer] & Paul Mason [Conservation Officer] Manchester City Council	Sample submitted to MCC on 18/09/24	MCC confirmed happy with sample of glazing bar, but requested further samples of hip and infill panels
2	Hip flashing and vertical panel samples	Aluminium, sprayed (for approval of proposed colours only)		Michael Pearson [Career Graded Planning Officer] & Paul Mason [Conservation Officer] Manchester City Council	Samples submitted to MCC on 16/10//24	Colours agreed as: - Internal: RAL 9001 - Glazing bars: RAL 7001 Requested to see samples in factory finish (PPC)
3	Window frame sample in proposed finish	Aluminium, Polyester Powder Coated in Anthracite Grey (for approval of 60 micron coating only)		Michael Pearson [Career Graded Planning Officer] & Paul Mason [Conservation Officer] Manchester City Council	Sample approved during site visit 6/11/24	60 micron PPC finish accepted.
4	Hip flashing and vertical panel samples	Aluminium, Polyester Powder Coated (60 micron coating)		Michael Pearson [Career Graded Planning Officer] & Paul Mason [Conservation Officer] Manchester City Council	Samples submitted to MCC and approved on 12/11//24	Infill panel external colour accepted (RAL 7015). Final approval of samples.

4.0 Fabrication Drawings

by Rooflights and Atriums



ELEVATION OF LANTERN LIGHT



PLAN OF LANTERN LIGHT

SPECIFICATION: –

REPLACEMENT PYRAMID LANTERN LIGHT CONSTRUCTED FROM LONSDALE THERMGARD SELF SUPPORTING LANTERN WITH ALM100 SERIES HERITAGE GLAZING BARS AND CAPPING FROM LONSDALE METAL CO. LTD.
FINISH: POLYESTER POWDER COATED SILVER GREY RAL 7001 (60 MICRONS) OUTSIDE AND CREAM RAL 9001 (60 MICRONS) INSIDE

GLASS: 28MM. THK. DOUBLE GLAZED UNITS COMPRISING: –
6MM. CLEAR HEAT SOAKED TOUGHENED OUTER/12MM. ARGON GAS FILLED CAVITY WITH BLACK WARM EDGE SPACER/9.5MM. TOUGHENED WHITE LAMINATED INNER GIVING A UV REDUCTION OF 99.9%

CILLS: INTEGRAL WITH THE SYSTEM
FINISH: POLYESTER POWDER COATED SILVER GREY RAL 7001 (60 MICRONS)

INFILL PANELS: 28MM. THK. INSULATED ALUMINIUM SANDWICH PANELS COMPRISING: –
2MM. THK. ALUM. SHEET OUTER SKIN/24MM. THK. RIGID INSULATION/2MM. THK. ALUM. SHEET INNER SKIN ALL BONDED TOGETHER
FINISH: POLYESTER POWDER COATED SLATE GREY RAL 7015 (60 MICRONS) OUTSIDE AND CREAM RAL 9001 (60 MICRONS) INSIDE

C01	EXTERNAL COLOUR OF INFILL PANEL REVISED; 60 MICRONS ADDED TO ALL COLOURS; TITLE BLOCK REVISED	PD	22.11.2024
D	LADDER RAIL REMOVED; INTERNAL COLOUR CREAM CONFIRMED ISSUED FOR CONSTRUCTION	PD	6.10.2024
C	THICKNESS OF INNER PANE OF DGU ALTERED FROM 6.8MM. LAM. TO 9.5MM. LAM.; TRICKLE VENTS REMOVED; TUBULAR LADDER RAIL ADDED	PD	13.2.2024
B	ROOF PITCH ALTERED FROM 30° TO 25°; SYSTEM REFERENCE CORRECTED	PD	14.12.2023
A	DGU'S TO VERTICAL FRAMES ALTERED TO ALUMINIUM INFILL PANELS; TRICKLE VENTS ADDED; RAFTER BOX SECTIONS ALTERED TO HERITAGE SECTIONS	PD	8.12.2023
REV:	DESCRIPTION:	BY:	DATE:

STATUS: CONSTRUCTION ISSUE



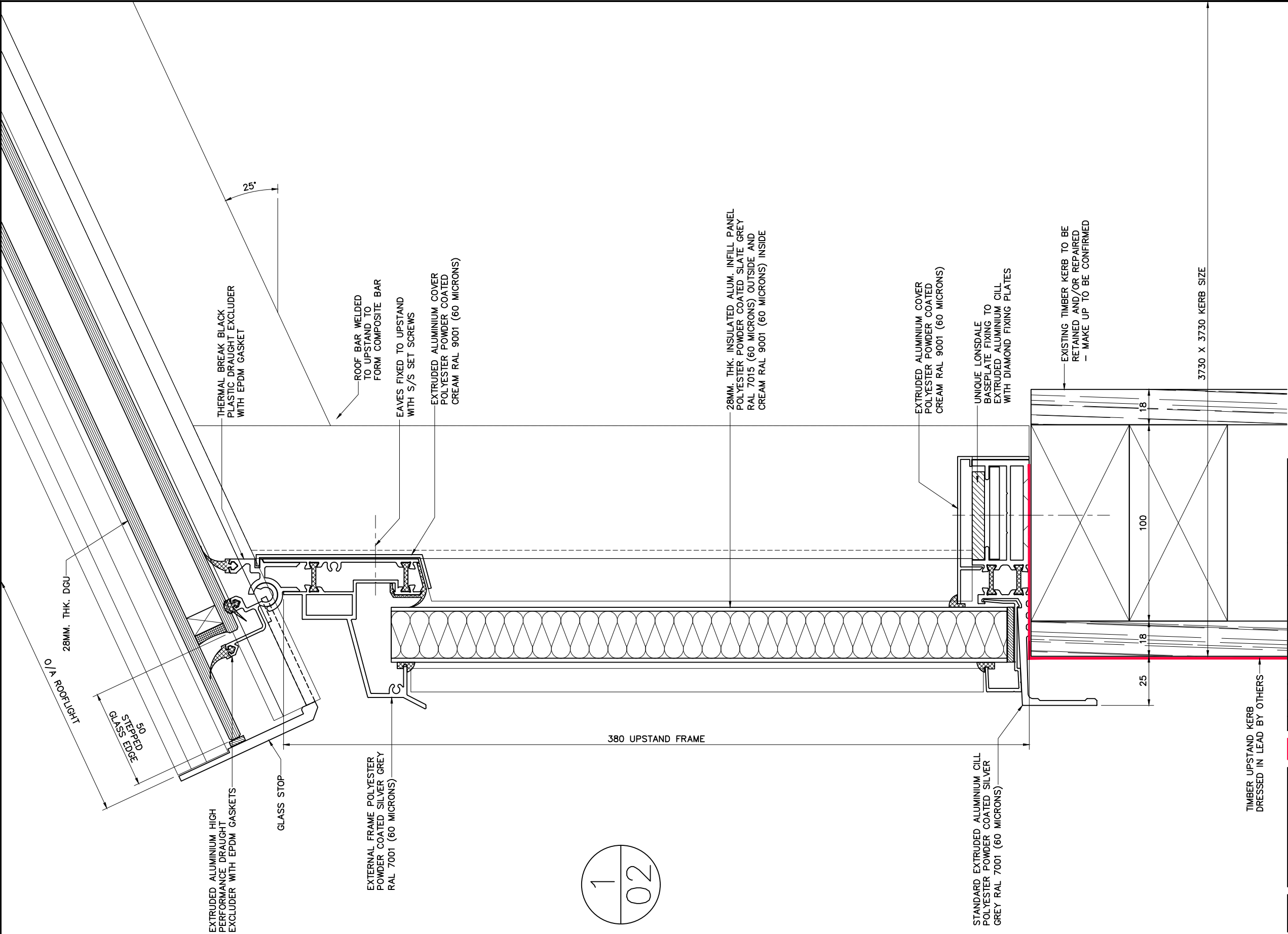
Rooflights and Atriums
2nd Floor, Didsbury House,
748 - 754 Wilmslow Road, Manchester M20 2DW
07908 441 987
rooflightsandatriums@gmail.com

CLIENT:
ROBERTSON NORTH WEST

SITE:
MANCHESTER ART GALLERY

TITLE:
REPLACEMENT LANTERN LIGHT
PLAN, ELEVATION AND SPECIFICATION

R&A PROJECT NO: SC20194	SCALE AT A3: 1:15	DATE: 7.12.2023	DRAWN: PD	CHECKED: WB
DRAWING NO: RAL-17-RL-DR-X-47-0001				REVISION: C01



C01	INTERNAL BESPOKE TIMBER CAPPING REMOVED; EXTERNAL COLOUR OF INFILL PANEL REVISED; 60 MICRONS ADDED TO ALL COLOURS; TITLE BLOCK REVISED	PD	22.11.2024
E	LADDER RAIL REMOVED ISSUED FOR CONSTRUCTION	PD	6.10.2024
D	INTERNAL HERITAGE PRESSURE PLATE AND SNAP ON COVER CAP REPLACED WITH BESPOKE TIMBER CAPPING; TRICKLE VENT REMOVED; TUBULAR LADDER RAIL ADDED	PD	13.2.2024
C	RAFTER ALTERED FROM 100/1 40MM. TO 100/2 63.5MM.	PD	9.1.2024
B	ROOF PITCH ALTERED FROM 30° TO 25°; HERITAGE CAP ADDED TO RAFTER INTERNALLY	PD	14.12.2023
A	DGU TO VERTICAL FRAME ALTERED TO ALUMINIUM INFILL PANEL; TRICKLE VENT ADDED	PD	8.12.2023
REV:	DESCRIPTION:	BY:	DATE:

STATUS: CONSTRUCTION ISSUE



Rooflights and Atriums
2nd Floor, Didsbury House,
748 - 754 Wilmslow Road, Manchester M20 2DW
07908 441 987
rooflightsandatriums@gmail.com

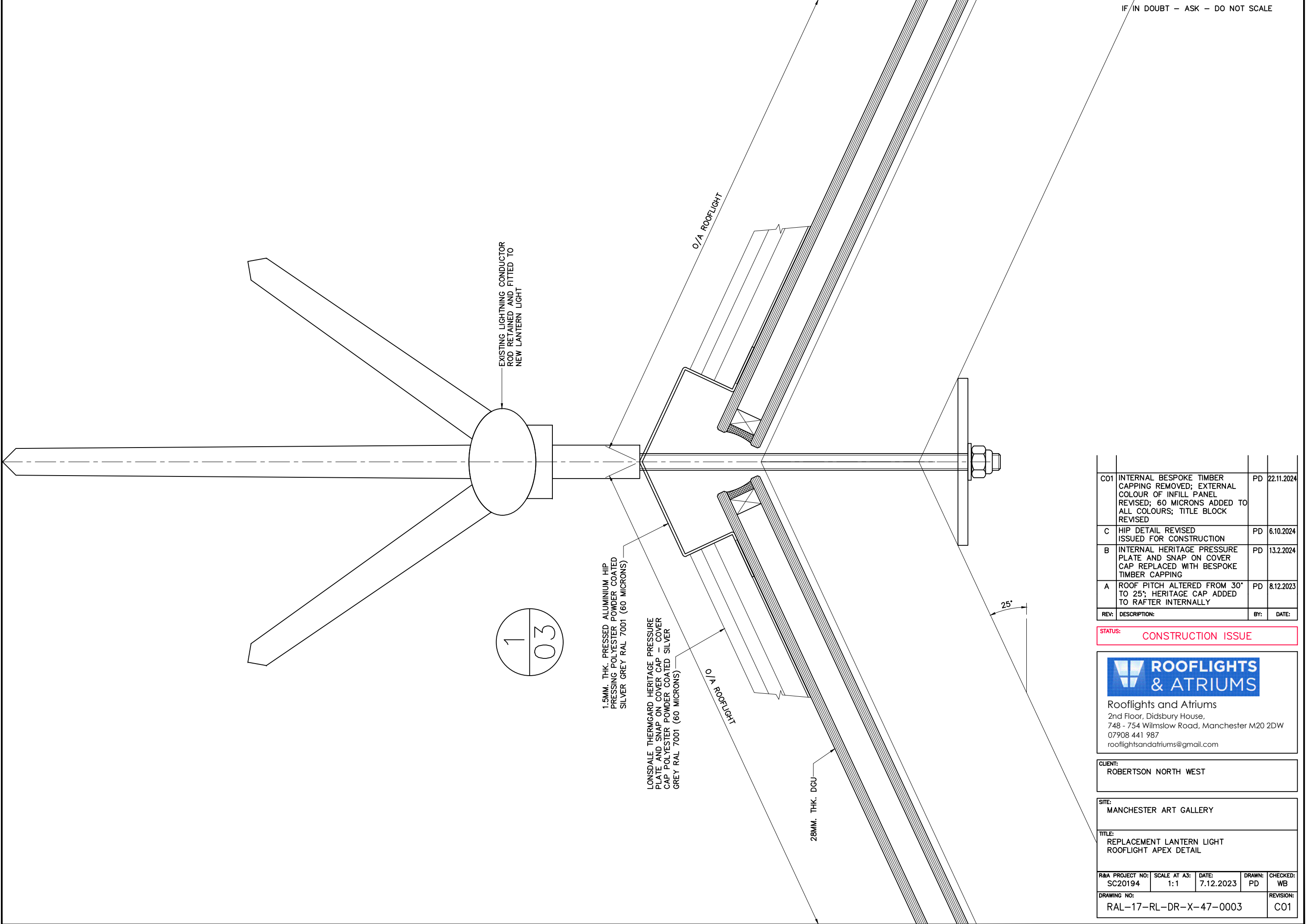
CLIENT:
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SITE:
MANCHESTER ART GALLERY

TITLE:
REPLACEMENT LANTERN LIGHT
CILL AND VERTICAL FRAME DETAIL

R&A PROJECT NO: SC20194	SCALE AT A3: 1:1	DATE: 7.12.2023	DRAWN: PD	CHECKED: WB
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DRAWING NO: RAL-17-RL-DR-X-47-0002	REVISION: C01
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IF IN DOUBT - ASK - DO NOT SCALE

CO1	INTERNAL BESPOKE TIMBER CAPPING REMOVED; EXTERNAL COLOUR OF INFILL PANEL REVISED; 60 MICRONS ADDED TO ALL COLOURS; TITLE BLOCK REVISED	PD	22.11.2024
C	HIP DETAIL REVISED ISSUED FOR CONSTRUCTION	PD	6.10.2024
B	INTERNAL HERITAGE PRESSURE PLATE AND SNAP ON COVER CAP REPLACED WITH BESPOKE TIMBER CAPPING	PD	13.2.2024
A	ROOF PITCH ALTERED FROM 30° TO 25°; HERITAGE CAP ADDED TO RAFTER INTERNALLY	PD	8.12.2023
REV:	DESCRIPTION:	BY:	DATE:

STATUS: CONSTRUCTION ISSUE



Rooflights and Atriums
2nd Floor, Didsbury House,
748 - 754 Wilmslow Road, Manchester M20 2DW
07908 441 987
rooflightsandatriums@gmail.com

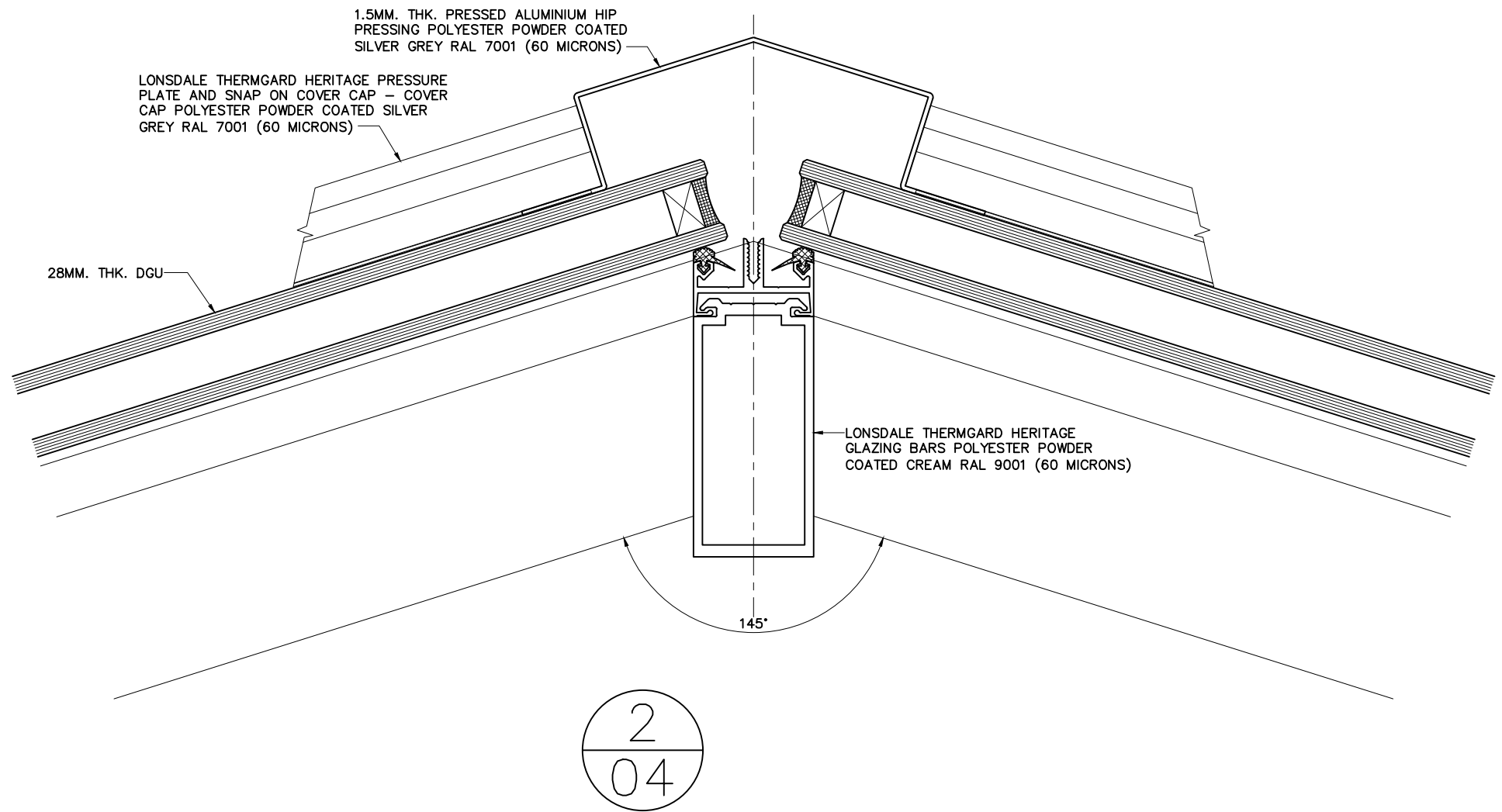
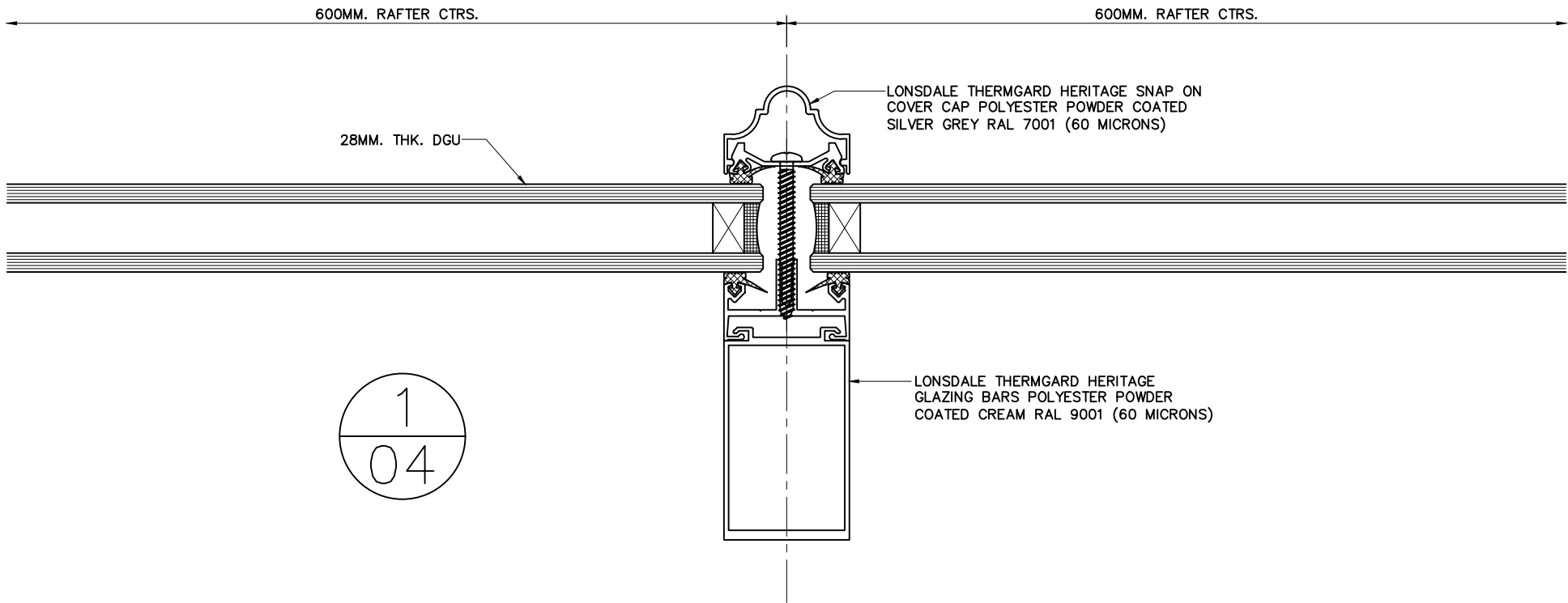
CLIENT:
ROBERTSON NORTH WEST

SITE:
MANCHESTER ART GALLERY

TITLE:
REPLACEMENT LANTERN LIGHT
ROOFLIGHT APEX DETAIL

R&A PROJECT NO:	SCALE AT A3:	DATE:	DRAWN:	CHECKED:
SC20194	1:1	7.12.2023	PD	WB

DRAWING NO:	REVISION:
RAL-17-RL-DR-X-47-0003	C01



C01	INTERNAL BESPOKE TIMBER CAPPING REMOVED; 60 MICRONS ADDED TO ALL COLOURS; TITLE BLOCK REVISED	PD	22.11.2024
E	HIP DETAIL 2 REVISED ISSUED FOR CONSTRUCTION	PD	6.10.2024
D	INTERNAL HERITAGE PRESSURE PLATE AND SNAP ON COVER CAP REPLACED WITH BESPOKE TIMBER CAPPING	PD	13.2.2024
C	RAFTER ALTERED FROM 100/1 40MM. TO 100/2 63.5MM.	PD	9.1.2024
B	RAFTER BOX SECTIONS ALTERED TO ACCEPT HERITAGE CAP INTERNALLY; HIP ANGLE REVISED TO SUIT NEW ROOF PITCH OF 25°	PD	14.12.2023
A	RAFTER BOX SECTIONS ALTERED TO HERITAGE SECTIONS; HIP RAFTER BOX ADDED	PD	8.12.2023
REV:	DESCRIPTION:	BY:	DATE:

STATUS: CONSTRUCTION ISSUE



Rooflights and Atriums
2nd Floor, Didsbury House,
748 - 754 Wilmslow Road, Manchester M20 2DW
07908 441 987
rooflightsandatriums@gmail.com

CLIENT:
ROBERTSON NORTH WEST

SITE:
MANCHESTER ART GALLERY

TITLE:
REPLACEMENT LANTERN LIGHT
RAFTER AND HIP DETAILS

R&A PROJECT NO: SC20194	SCALE AT A3: 1:1	DATE: 7.12.2023	DRAWN: PD	CHECKED: WB
DRAWING NO: RAL-17-RL-DR-X-47-0004				REVISION: C01

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