

Ormond Council Chamber

Listed Building Structural Report

Curtins Ref: 084479-CUR-00-XX-T-S-00001

Revision: V02

Issue Date: 29 September 2023

Client Name: Manchester Metropolitan University

Client Address: Bridgewater House,
7th Floor, 58-60 Whitworth Street,
Manchester,
M1 6LT

Site Address: Ormond Building, Metropolitan University, Lower Ormond St, Manchester
M15 6BX

Rev	Description	Issued by	Checked	Date
V01	First Issue	VC	VC	27 September 2023
V02	Updated with comments	VC	VC	29 September 2023

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Contents

1 Introduction 1

2 Existing First Floor Construction 2

3 Proposed works 3

4 Proposed Methodology 4

4.1 Formation of 200mm diameter openings (Supply Ductwork) 4

4.2 Formation of Rectangular openings (Floor boxes and Extract Ductwork) 4

Appendix A – CPW drawing of Proposed Works

1 Introduction

Ormond Council Chamber is a Grade II listed building in Manchester. The building was originally designed by Mangnall and Littlewood and completed in 1880.

The building sits on a site surrounded by Lower Ormond Street to the east and Cavendish Street to the South.

The building consists of generally two storeys and a basement.



Figure 1.0 – Photo from Lower Ormond Street (Google Maps)

The proposed works are the installation of electrical floor boxes and a new heating and cooling system.

The structural element to these works will be the formation of new openings through the existing first floor slab. The floor boxes are to be embedded into the floor plate and the heating and cooling system requires openings for the supply and extract ducts.

This report sets out the structural implications on the existing building fabric, with respect to attaining listed building consent for the proposed works.

Due to the constraints provided by the building's age and listed status, we have explored structural options which will have the least impact on the existing structure, whilst still enabling the installation of the proposed mechanical and electrical improvements.

2 Existing First Floor Construction

Curtins have visited the site and reviewed the existing available information to determine the form of construction of the existing floor plate.



Figure 2.0 – Historical photograph of floor plate (taken 2019)



Figure 2.1 – Historical photograph of floor plate (taken 2019)

The existing floor plate has been confirmed as a “filler joist” floor. This type of floor comprises of embedded steel joists at circa 600mm centres spanning one way between internal down stand beams and onto the external masonry walls. The embedded steels are encased in concrete made with clinker or coke breeze.



Figure 2.2 – Typical Construction of Filler Joist Floors

3 Proposed works

The proposed works are indicated on CPW drawing 230543-CPW-XX-01-DR-N-301003, refer to Appendix A for further details.

The works comprise of the formation of the following openings;

- 8 No. 200mm diameter openings for supply ductwork
- 8 No. Rectangular openings for extract ductwork
- 4 No. rectangular openings for floor boxes

To minimise the works to the existing structure, these openings are to be co-ordinated to ensure that they do not clash with either of the down stand beams or the embedded steels.

4 Proposed Methodology

The proposed methodology is based on maintaining structural integrity but also limiting the required structural intervention works.

4.1 Formation of 200mm diameter openings (Supply Ductwork)

The following methodology is to be adopted in the formation of these opening:

1. Ceiling boards to be removed locally to determine position of embedded steel beams
2. Opening to be located centrally within span of concrete infill
3. Opening to be formed using a core drill
4. Works to be inspected by structural engineer

4.2 Formation of Rectangular openings (Floor boxes and Extract Ductwork)

The following methodology is to be adopted in the formation of these opening:

1. Ceiling boards to be removed locally to determine position of embedded steel beams.
2. The existing slab in the vicinity of these openings is to be removed fully in between the embedded steels beams.
3. Opening position to be reviewed to by design team to review whether the rectangular openings can be set out so that the longer edge is parallel to the span of the concrete slab to minimize the intervention works.
4. The infill around the required opening is to be formed using timber joists, which will sit withing the depth of the existing slab and span between the steel infills fixed to a timber infill which will be bolted through the steel web. This timber will support a timber flooring and a boarded ceiling.
5. Works to be inspected by structural engineer.

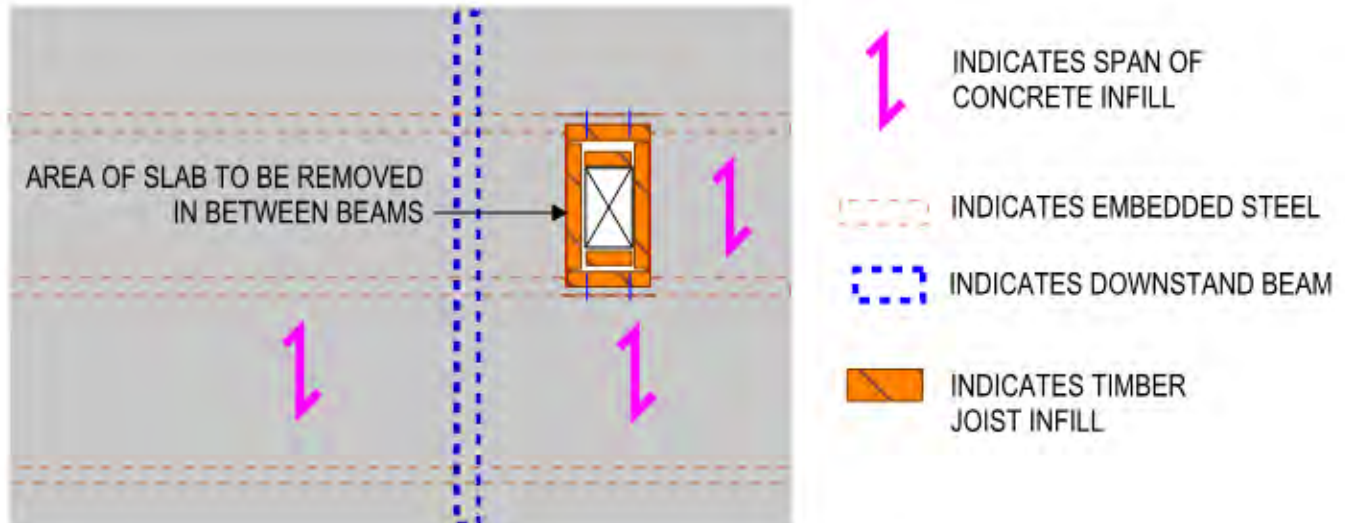


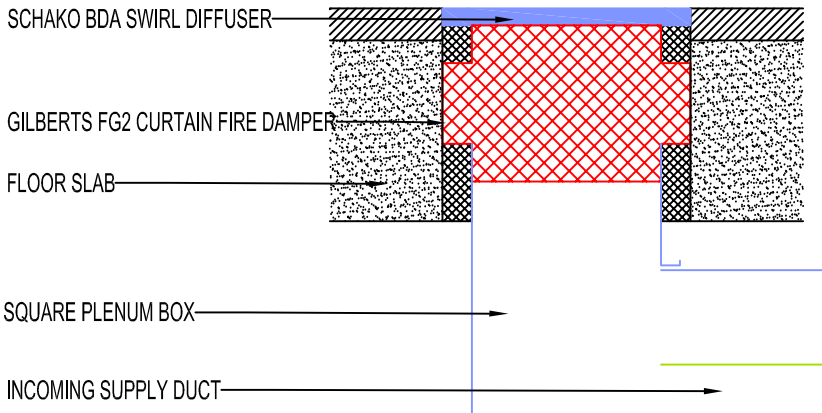
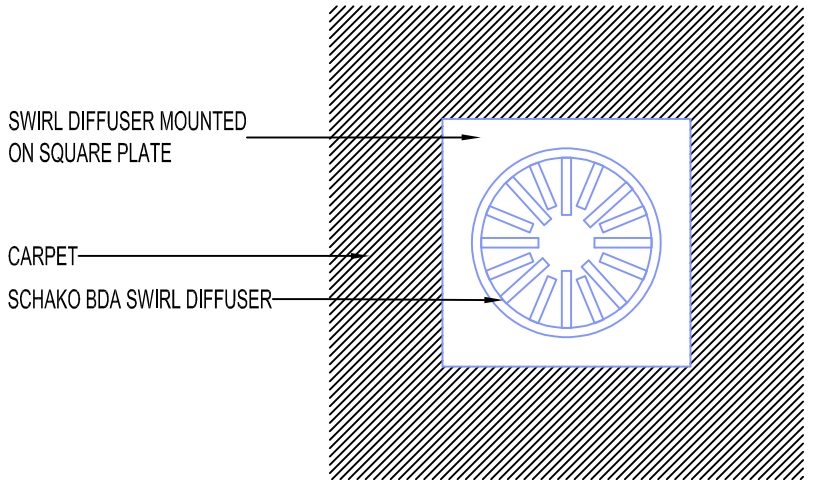
Figure 2.2 – Plan of proposed works to form rectangular opening

Appendix A – CPW drawing of Proposed Works

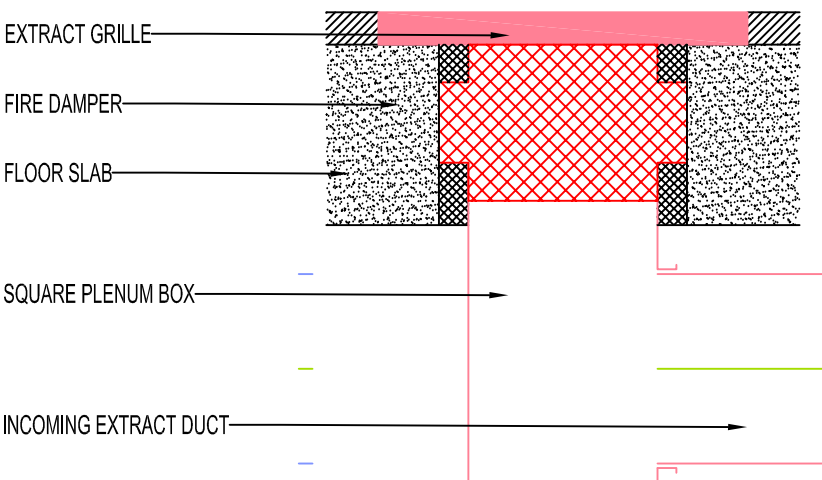
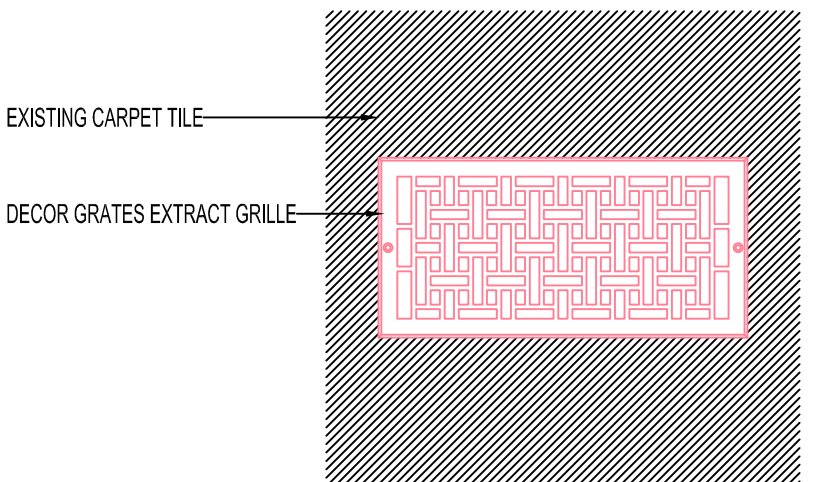
THIS DRAWING IS AN INDICATIVE LAYOUT ONLY, DEMONSTRATING THE CONCEPTUAL REQUIREMENTS CORRELATING WITH THE AGREED SCHEMATIC SOLUTIONS. THE PURPOSE OF THIS DRAWING IS TO DEMONSTRATE DESIGN INTENT, FOR FURTHER DEVELOPMENT BY THE RELEVANT SERVICES DESIGNER ONLY.

THIS DRAWING SHALL BE PRINTED IN COLOUR TO FULLY UNDERSTAND CONCEPTUAL REQUIREMENTS SHOWIN WITHIN

SCHAKO BDA FLOOR SWIRL DIFFUSER INSTALLATION DETAIL



DETAIL B - DECOR GRATES EXTRACT INSTALLATION DETAIL



Q200 SUPPLY AIR DUCT RISES FROM BELOW TO SERVE SWIRL DIFFUSER.



APPROXIMATE LOCATION OF EXISTING FLOOR BOX

NEW IN-LINE SUPPLY AIR TEMPERATURE SENSOR MOUNTED IN EXISTING DUCTWORK. EXISTING CONTROL VALVE ACTUATOR REPLACED WITH 0-10V SIGNAL TYPE. BMS AMENDED TO ALLOW REMOTE SETPOINT ADJUSTMENT OF SUPPLY AIR TEMPERATURE.

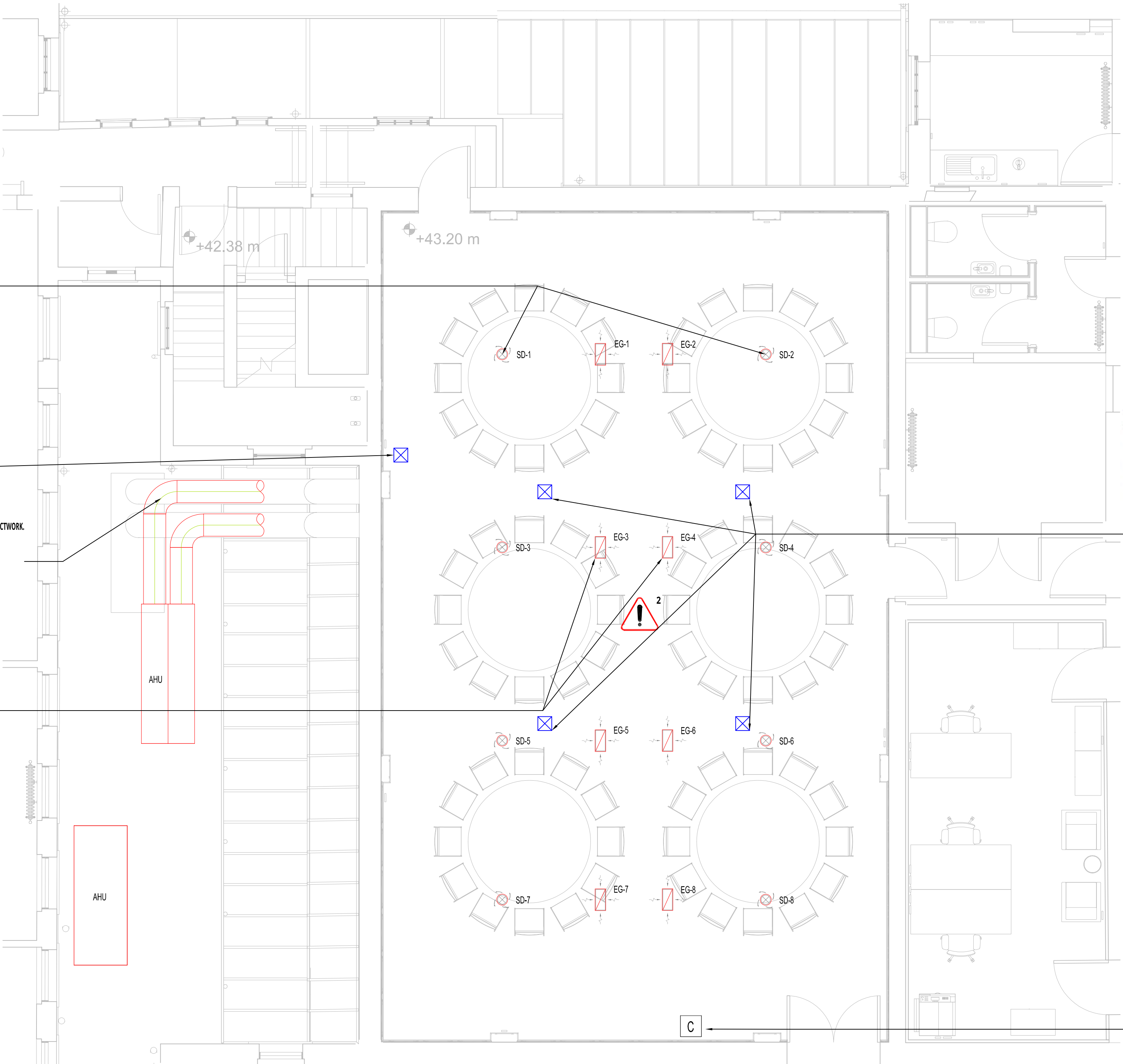


DECOR GRATES EXTRACT GRILLE, SEE DETAIL B

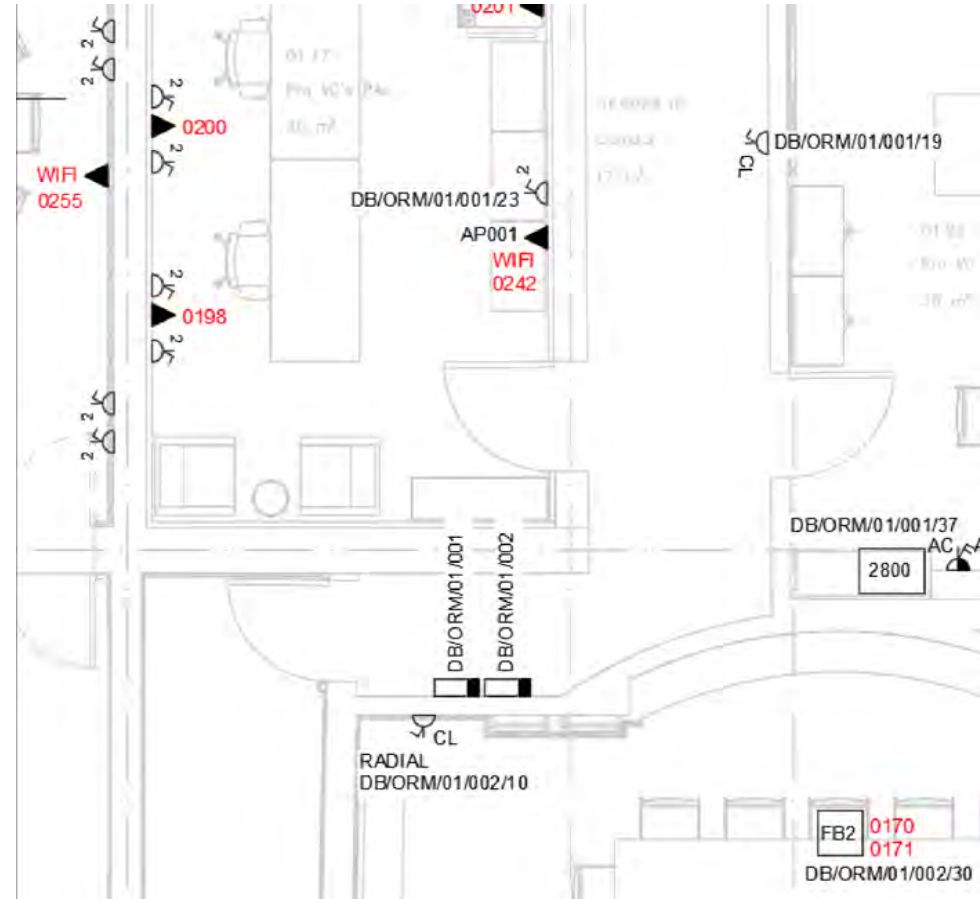
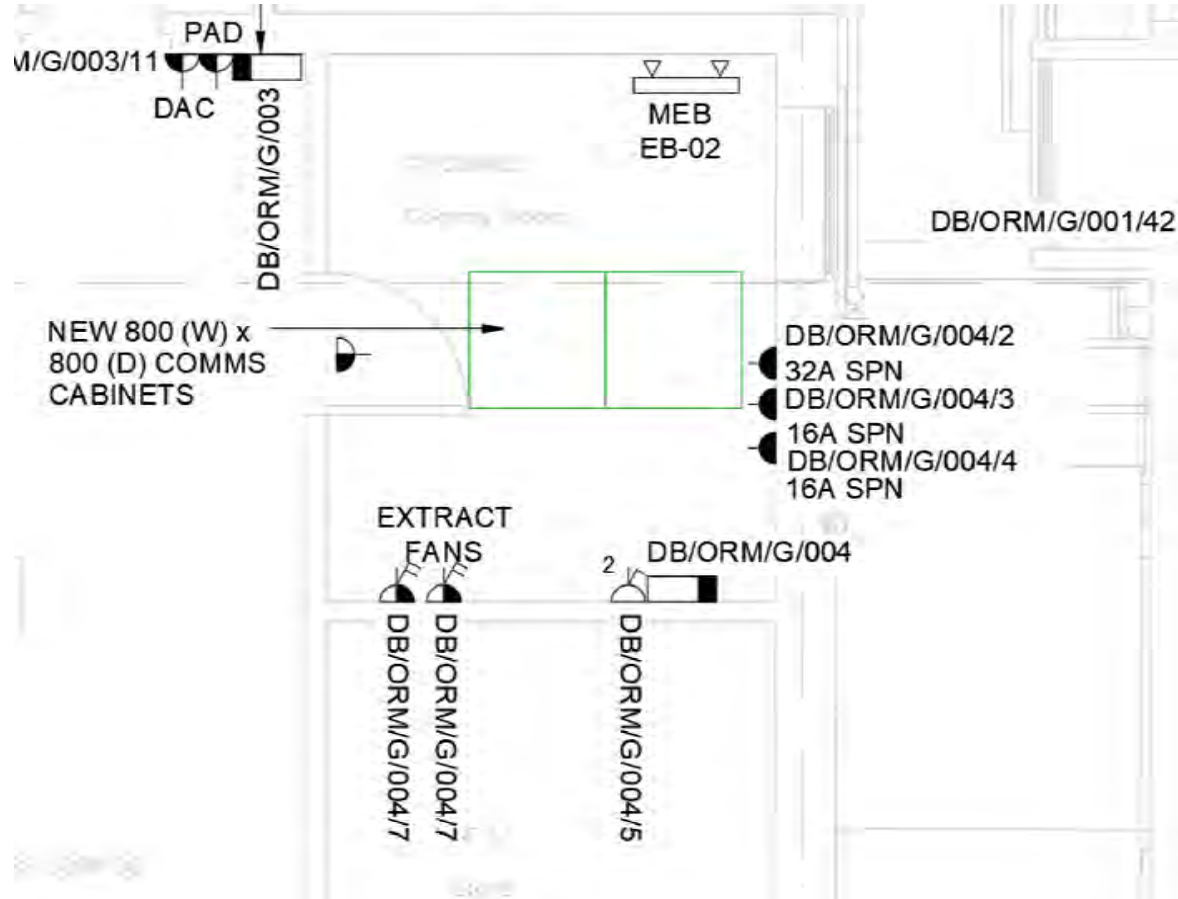
SWIRL DIFFUSER SCHEDULE			
SR. NO	MANUFACTURER	MODEL	FLOW RATE (L/s)
SD-1	SCHAKO	BDA	71
SD-2	SCHAKO	BDA	71
SD-3	SCHAKO	BDA	71
SD-4	SCHAKO	BDA	71
SD-5	SCHAKO	BDA	71
SD-6	SCHAKO	BDA	71
SD-7	SCHAKO	BDA	71
SD-8	SCHAKO	BDA	71

EXTRACT GRILLE SCHEDULE			
SR. NO	MANUFACTURER	MODEL	FLOW RATE (L/s)
EG-1	DECOR GRATES	AJL614W-NKL	71
EG-2	DECOR GRATES	AJL614W-NKL	71
EG-3	DECOR GRATES	AJL614W-NKL	71
EG-4	DECOR GRATES	AJL614W-NKL	71
EG-5	DECOR GRATES	AJL614W-NKL	71
EG-6	DECOR GRATES	AJL614W-NKL	71
EG-7	DECOR GRATES	AJL614W-NKL	71
EG-8	DECOR GRATES	AJL614W-NKL	71

FIRE DAMPER SCHEDULE					
SR. NO	MANUFACTURER	MODEL	LENGTH (mm)	WIDTH (mm)	OPEN AREA (0mm)
FD-1	GILBERTS	FG2	262	262	200
FD-2	GILBERTS	FG2	262	262	200
FD-3	GILBERTS	FG2	262	262	200
FD-4	GILBERTS	FG2	262	262	200
FD-5	GILBERTS	FG2	262	262	200
FD-6	GILBERTS	FG2	262	262	200
FD-7	GILBERTS	FG2	262	262	200
FD-8	GILBERTS	FG2	262	262	200



REPLACE EXISTING CONTROLLER MITSUBISHI PAR-41MAA STANDARD WIRED REMOTE CONTROLLER



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All scaled dimensions taken from this drawing are to be verified on site

HEALTH AND SAFETY INFORMATION

Standard hazards and risks may not necessarily be identified on this drawing. The caution symbols that are identified, but not limited to, related to specific hazards and risks associated with this type of project.

Reference should be made to the DRA for further details.

DRA Ref No.	Description
2	Drilling holes in ceiling/walls may cause exposure to asbestos
It is assumed that all works shall be undertaken by a competent contractor working, where appropriate, to an approved method statement.	

NOTES

- ALL BUILDERSWORK HOLES FOR TO HAVE FIRE AND ACOUSTIC TREATMENT.
- SWIRL DIFFUSER AND EXTRACT GRILLE LOCATIONS ARE INDICATIVE ONLY AND TO COORDINATED WITH NEW DUCTWORK LAYOUT ON GROUND FLOOR.
- NEW FLOOR BOXES TO BE BY CMD LTD. POWER SUPPLIES TO BE DERIVED FROM DB/ORM/01/001. PROVIDE NEW 32A RING MAIN CIRCUIT C/W RCBO & AFDD PROTECTION. 15(L2 4 sq.mm 6491B IN EXISTING TRUNKING & CONDUIT ALLOW ADDITIONAL SECONDARY CONTAINMENT IN THE GROUND FLOOR OFFICE SPACE FROM THE PRIMARY CONTAINMENT IN THE FLOOR BOX LOCATIONS TO MATCH EXISTING.
- ALL FLOOR PENETRATIONS TO BE FIRE AND ACOUSTIC TREATED IN ACCORDANCE WITH MMU STANDARDS.
- ALL WORKS TO BE UNDERTAKEN IN ACCORDANCE WITH MMU STANDARDS.
- FLOOR BOX CAT 6A DATA CABLE TO BE ROUTED FROM GROUND FLOOR DATA CABINET LOCATION. FOR TENDER PURPOSES ALLOW TO PROVIDE ADDITIONAL PATCH PANEL TO EXISTING RACK.

LEGEND

	SUPPLY SWIRL DIFFUSER
	EXTRACT GRILLE
	CMD LTD 3 COMPARTMENT FLOOR BOX COMPLETE WITH TWO TWIN SWITCHES, SOCKET OUTLETS AND 4 DATA POINTS
	AC CONTROLLER

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STAGE 4

Status

TENDER

Client



Project

ORMOND BUILDING COUNCIL CHAMBER

Drawing Title

FIRST FLOOR
PROPOSED FLOOR COORDINATION LAYOUT

Scale (A1): 1:50 Date: AUG '23 By: UA Ve: JH

ProjID	Designer	Technical	Scale	Form	Checklist	Number	Size	Revision
230543	CPW	XX	01	DR	N	301003	S0	T01

230543-CPW-XX-01-DR-N-301003 S0 T01

CPW Project No. 230543

Linked Files