

Notes:

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DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. The contractor shall ensure that rodding eyes and access points are accessible for maintenance purposes. Where they are accessible by destructive access these shall be marked up on the as fitted drawings.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and bird mesh, and openings by main contractor. Detail as per architect and roofing specialists drawings.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev:	Date:	Status/Amendments:	By:
C4	12.06.23	CHANGES CLOUDED	M.H
C3	11.05.23	DIMENSIONS ADDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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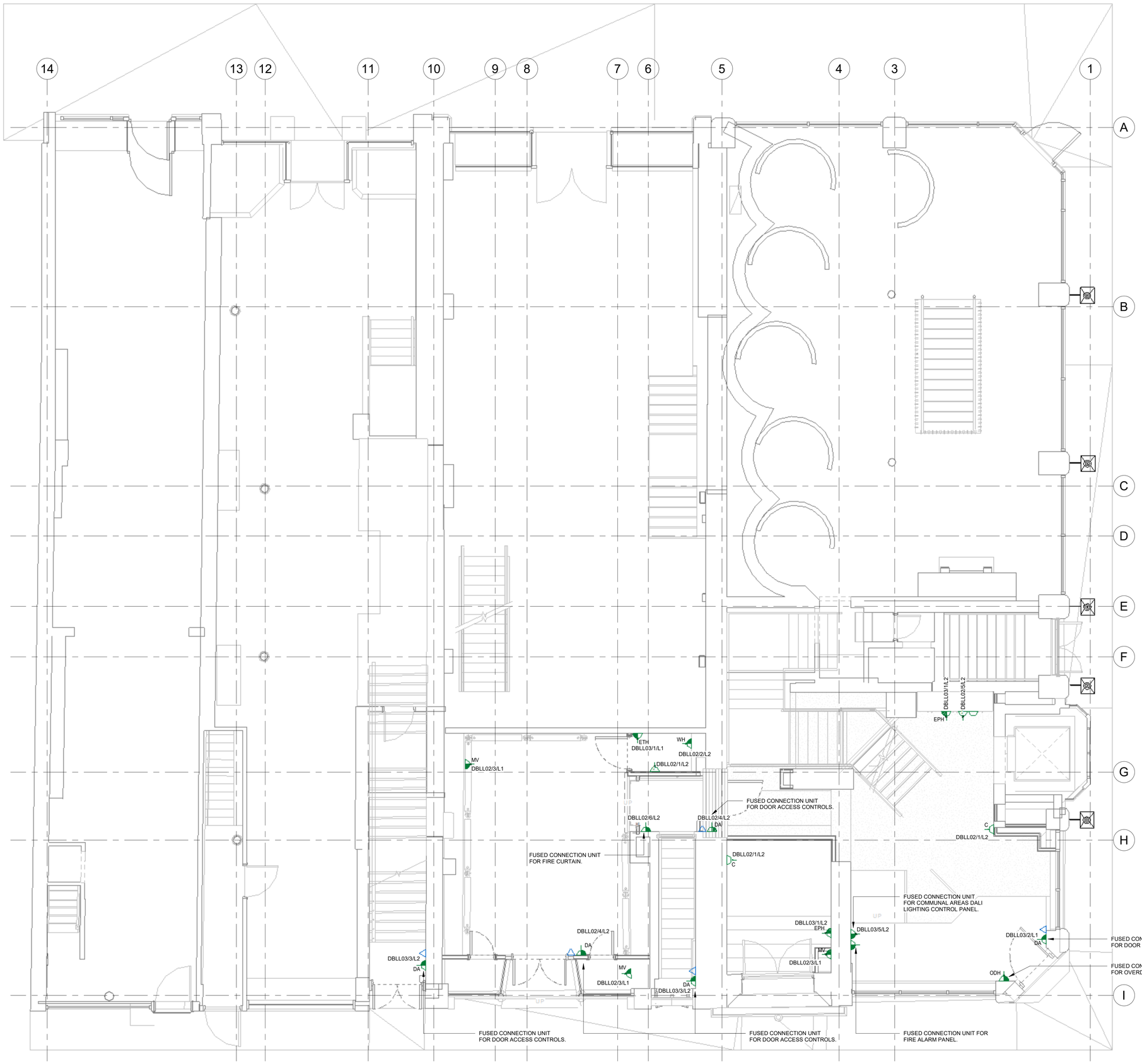
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
SECOND FLOOR, ABOVE GROUND
DRAINAGE LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	01/12/22
Drawing Number:		Drawing Revision:
4052-KIN- XX-02-DR-M-5200		C4



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Small Power Legend

- 32A SPN IP65 isolator for lift to manufacturers requirements.
- CU/** Consumer Unit.
- USB Twin Switched Socket Outlet with Integral USB Charger.
- Twin Switched Socket Outlet (N Denotes Number of Units).
- Switched Fused Connection Unit (N Denotes Number of Units).
- Single Switched Socket Outlet.
- C Single Switched Lockable Cleaners Socket Outlet.
- Single Unswitched Socket Outlet.
- Cable Outlet.
- Single Back Box and Blank Plate.
- Shaver Outlet (With Integral Isolating Transformer)
- TV/LP TV Outlet Lounge Plate.
- TV/BP TV Outlet Bedroom Plate.
- Telecoms Master Outlet.
- Single Data Outlet
- Engraved Isolating DP Switch.
- Unswitched Fused Connection Unit

H/L	-	High Level
L/L	-	Low Level
WH	-	Water Heater
ODH	-	Over Door Heater
TR	-	Towel Rail
MV	-	Mechanical Ventilation
EPH	-	Electrical Panel Heater
ESH	-	Electrical Storage Heater
ETH	-	Electrical Tube Heater
MV	-	Microwave
DW	-	Dishwasher
DA	-	Door Access Control
WM	-	Washing Machine
CH	-	Cooker Hood
OV	-	Oven
HO	-	Hob
FR	-	Fridge / Freezer
FSD	-	Fire and Smoke Damper

Rev:	Date:	Status/Amendments :	By:
C4	05.05.23	PRELIMINARY ISSUE	K.S
C3	14.04.23	PRELIMINARY ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	20.02.23	PRELIMINARY ISSUE	K.S

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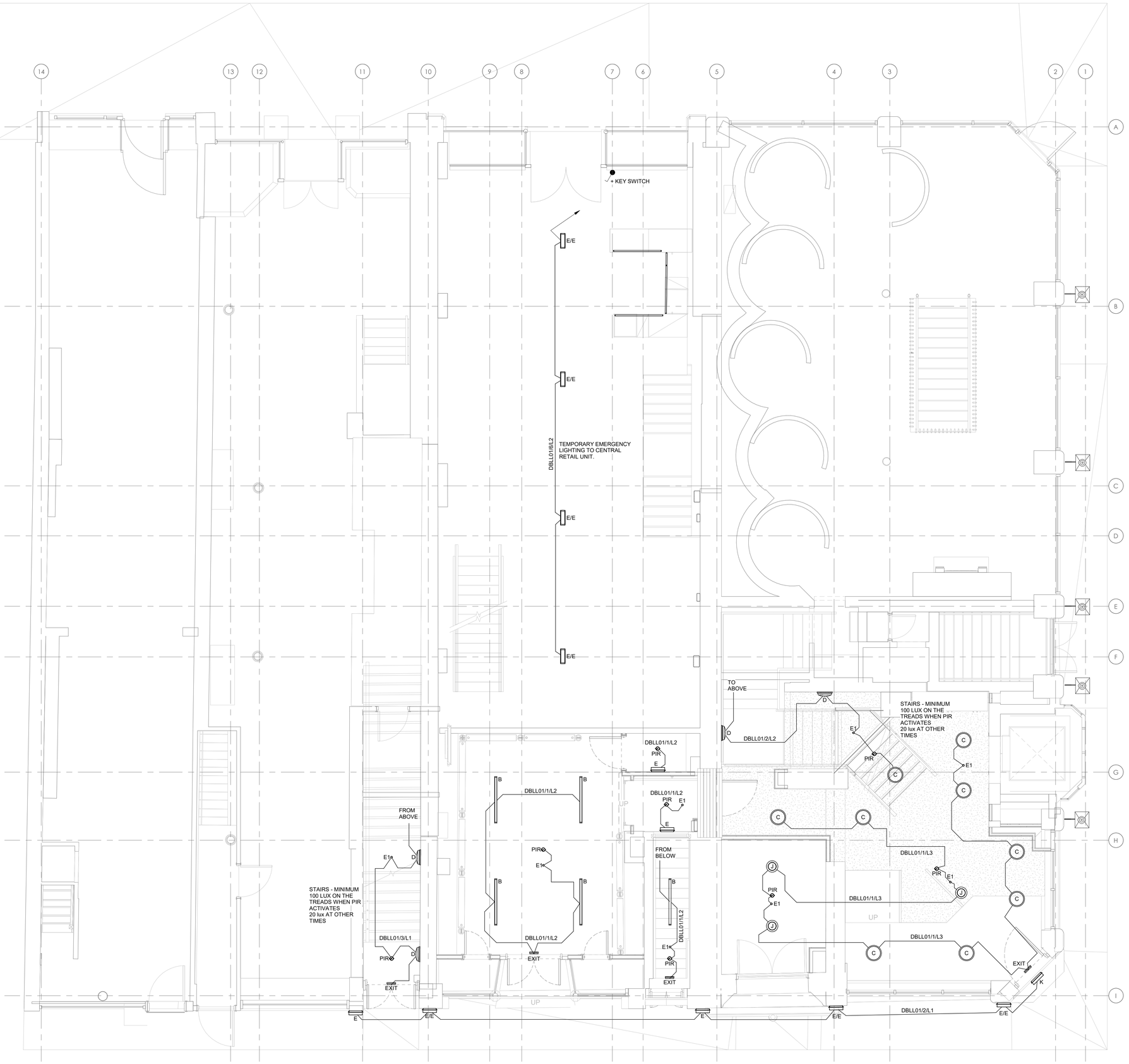
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
GROUND FLOOR, SMALL POWER AND DATA/COMMS LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 13.02.2023
Drawing Number: 4052-KIN- XX-00-DR-E-6200		Drawing Revision: C4



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Lighting Legend

- A — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H2 lite T.
- A1 — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H4 lite T.
- B — 4000 LED, weatherproof luminaire, IP65, 7300lm, 58w - as Sylvania Start Waterproof.
- C — 3000K LED dimmable circular luminaire - exact specification by architect.
- D — 3000K LED dimmable surface-mounted luminaire - exact specification by architect.
- E1 — 2W LED recessed emergency pin-spot luminaire, local self-test, 190lm, as Philip Payne TYKE860YS, colour to be confirmed by architect.
- E — 3000K LED weatherproof luminaire, IP65, 684lm, 9W - as Concord Sterling Bulkhead LED 4063831. E - denotes 3hr local self-test emergency version.
- F — 3000K LED 8mm x 2mm lightstrip beneath kitchen units or in coving detail, IP65, 9.6W/m, as Ledridge LED96 / EXT-SL8
- G — Pendant Luminaire - exact specification by architect
- H — 3000K LED surface-mounted luminaire, exact specification by architect.
- J — 3000K LED pendant feature luminaire, exact specification by architect.
- K — 3000K LED surface-mounted luminaire, IP65, exact specification by architect.
- EXIT — LED Emergency exit sign, as Philip Payne 250MCSV
- PIR — PIR presence detector
- 2 Way light switch
- 1 Way light switch
- Dimmer switch
- INT — Intermediate switch

Rev:	Date:	Status/Amendments :	By:
C2	28.04.23	CONSTRUCTION ISSUE	K.S
C1	21.04.23	PRELIMINARY ISSUE	K.S

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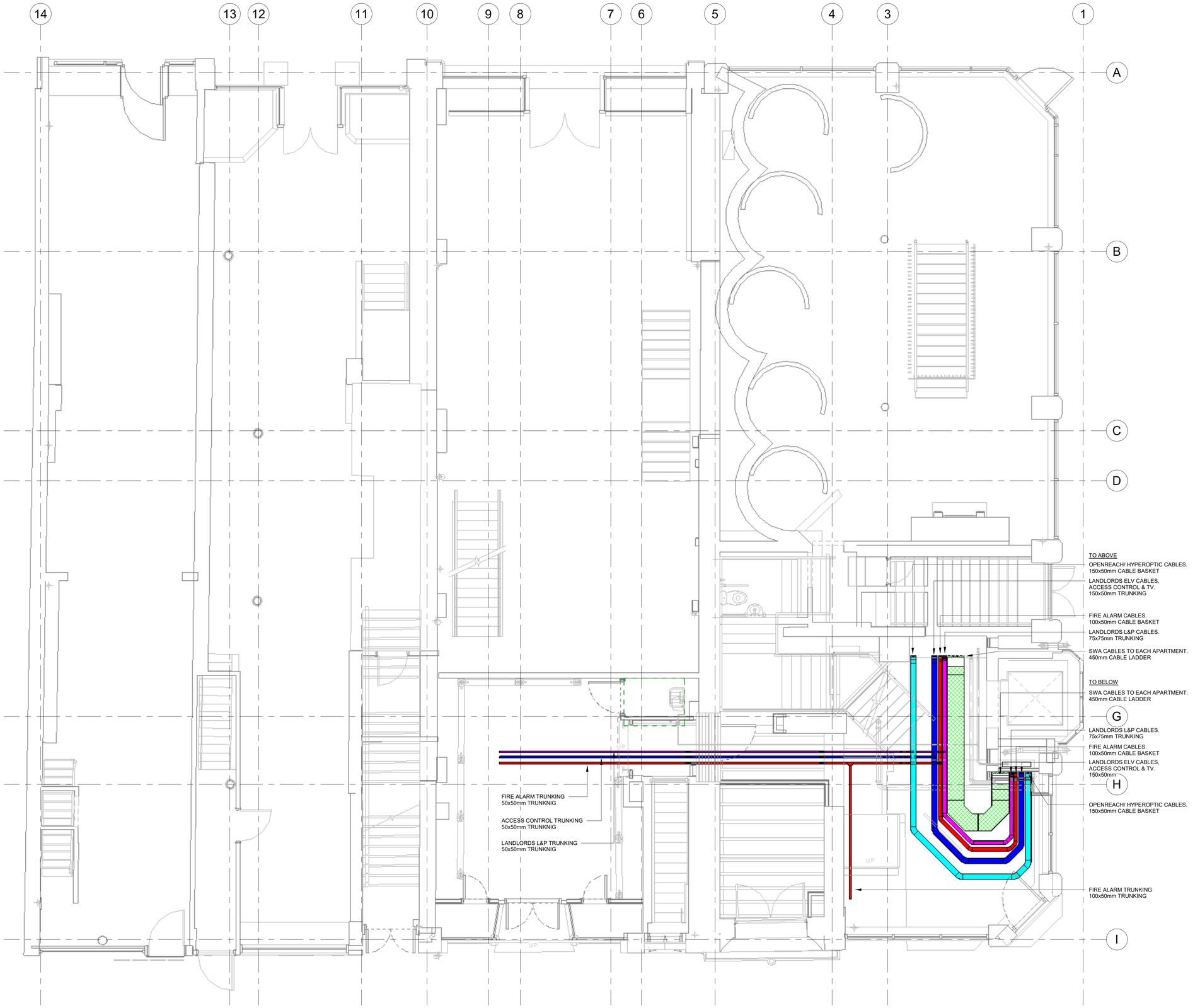
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
GROUND FLOOR, LIGHTING LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	K.S	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 19.04.2023
Drawing Number: 4052-KIN- XX-00-DR-E-6300		Drawing Revision: C2



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Containment Services Legend

- Cable Basket (Apartment Cables)
- Trunking (Landlords L&P)
- Cable Basket (Fire Alarm Cables)
- Cable Basket (Landlords ELV & Access Control)
- Cable Basket (Openreach / Hyperoptic Cables)

Rev:	Date:	Status/Amendments :	By:
C2	19.04.23	ISSUED FOR CONSTRUCTION	K.S
C1	14.04.23	PRELIMINARY ISSUE	K.S

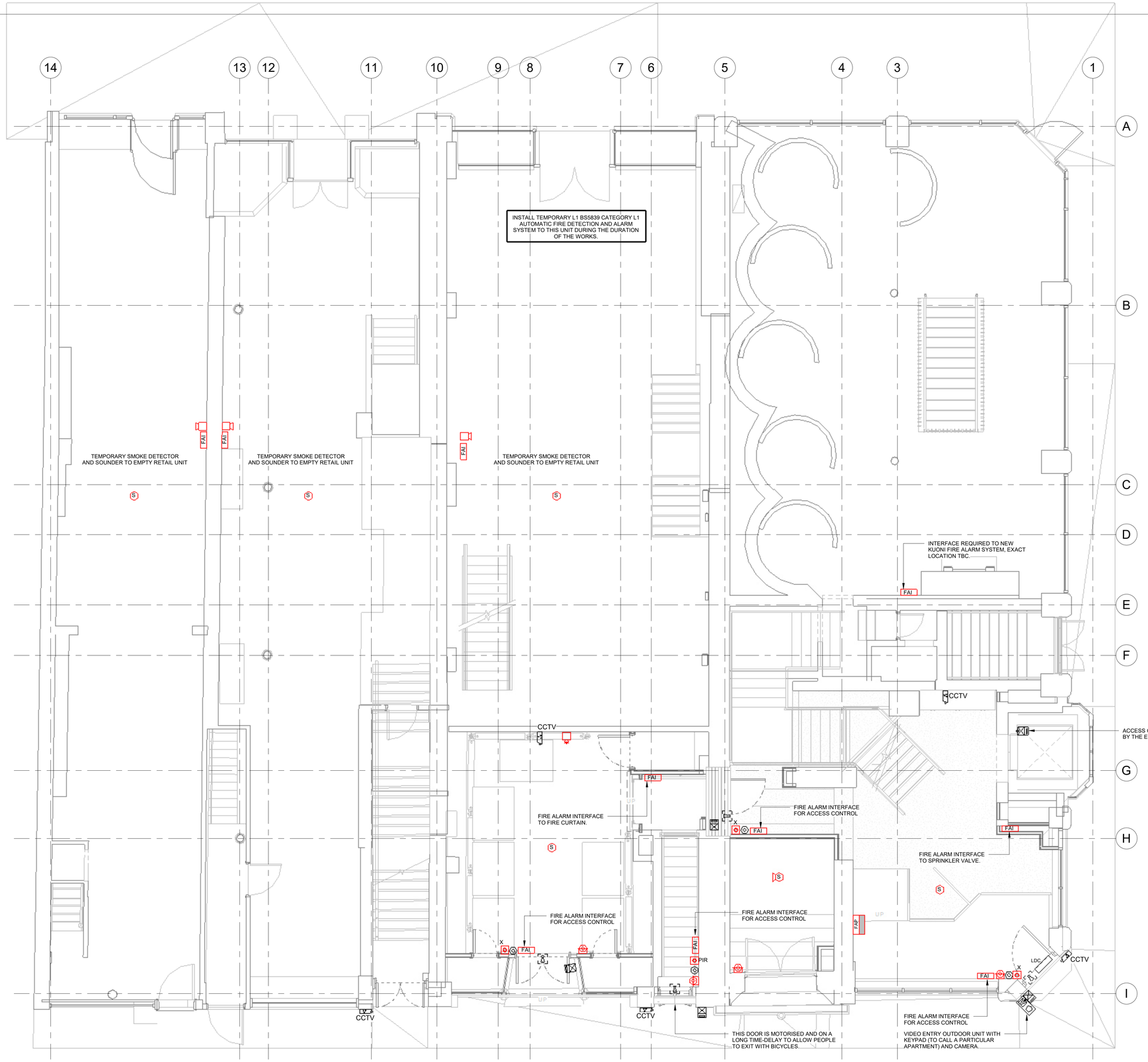
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
GROUND FLOOR, CONTAINMENT
SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	APRIL 2023
Drawing Number:		Drawing Revision:
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Fire Alarm Notes

OPEN PLAN APARTMENT FIRE ALARM
BS5839-6 Grade D category LD1. Heat detector/sounder in kitchen. Optical smoke detector/sounder in all bedrooms, optical smoke detector in all circulation spaces that form part of the escape routes and all areas where fire might start, but not in bathrooms, shower rooms or toilets.

COMMUNAL AREAS FIRE ALARM
Apartment corridors - BS5839-6 category L5. Optical smoke detectors in all areas to activate AOV units and alert main panel.

GF / Basement /Roof Communal Areas - BS5839-1 category L3 coverage, activation in this area causes all alarms to sound.

Fire Alarm, Access Control & CCTV Legend

- Electric Door Lock
- Emergency Door Release Break Glass
- X — Exit Push
- PIR — PIR to Unlock Door When Movement Is Detected on the Stairs
- Access System Card Reader
- Video Entry Handsfree Monitor (WIFI)
- Video Entry Panel with Camera, Microphone/Speaker, Digital Call Keypad and Access Card Reader
- LDC — Local Door Controller with Battery Backup
- Heat Detector c/w Sounder
- Optical Smoke Detector c/w Sounder
- Optical Smoke Detector
- FAI — Fire Alarm Interface Unit
- Manual Break Glass
- Fire Alarm Sounder Beacon
- Fire Alarm Sounder
- FAP — Fire Alarm Panel
- CCTV — CCTV Camera

Rev:	Date:	Status/Amendments :	By:
C4	21.04.23	ISSUED FOR CONSTRUCTION	K.S
C3	18.04.23	PRELIMINARY ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	22.02.23	PRELIMINARY ISSUE	K.S

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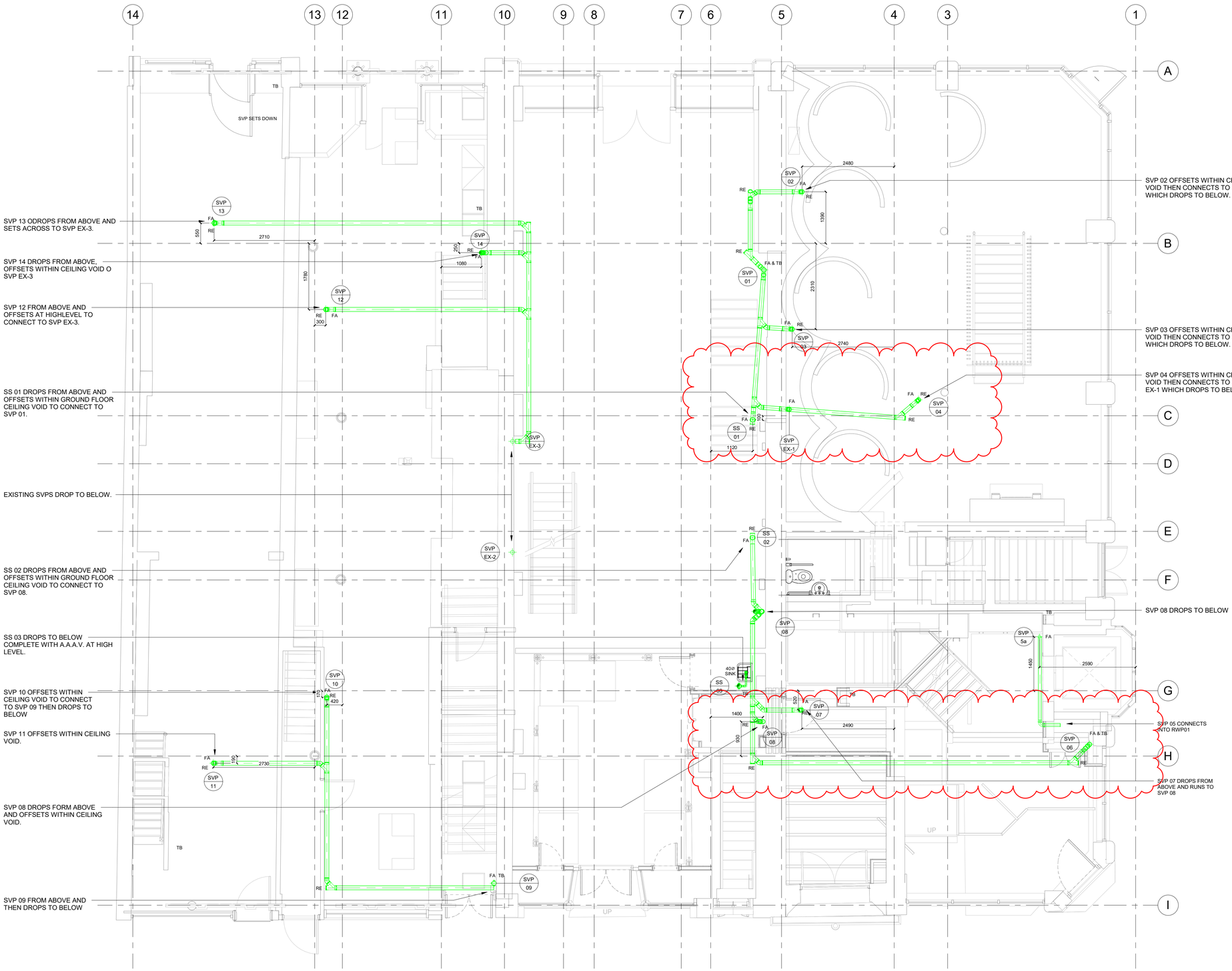
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Client:
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Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
GROUND FLOOR, FIRE ALARM AND ACCESS CONTROL SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 21.02.2023
Drawing Number: 4052-KIN- XX-00-DR-E-6700		Drawing Revision: C4



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Rev:	Date:	Status/Amendments:	By:
C5	04.08.23	CHANGES CLOUDED.	M.H
C4	21.07.23	CHANGES CLOUDED.	M.H
C3	11.05.23	DIMENSIONS ADDED. CHANGES CLOUDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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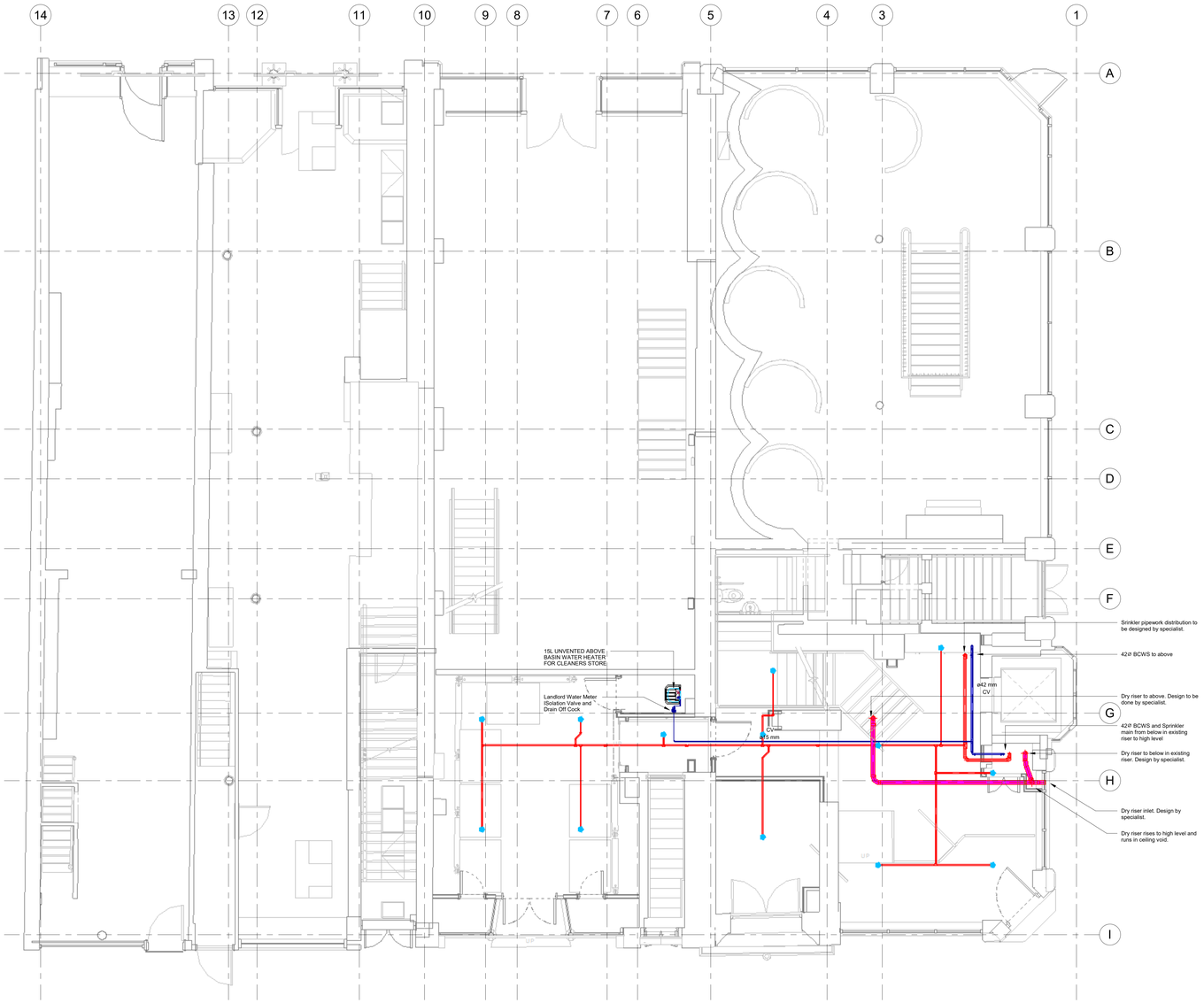
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
GROUND FLOOR, ABOVE GROUND
DRAINAGE LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale: 1 : 50	Paper Size: A1	Date Created: 12/12/22
Drawing Number: 4052-KIN- XX-00-DR-M-5200		Drawing Revision: C5



Domestic Hot & Cold Water Services Legend

	Mains Cold Water Service
	Boosted Cold Water Service
	Balanced Cold Water Service (Apt)
	Hot Water Service (Apt)
	Sprinkler Pipework (by Specialist)
	Dry Riser Pipework (by Specialist)
MCWS	Mains Cold Water Services
BCWS	Boosted Cold Water Services
DHWS	Domestic Hot Water Services
SC	Stop Cock
IV	Isolation Valve
TMV	Thermostatic Mixing Valve
DOC	Drain Off Cock
DTLL	Drop to Low Level
RTA	Rise to Above
DTB	Drop to Below
LL	Low Level
HL	High Level
WC	Water Closet
WHB	Wash Hand Basin
DW	Dishwasher
WM	Washing Machine
CV	Ceiling Void
CYL	Hot Water Cylinder

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Domestic Hot & Cold Water Services Notes

1. The domestic water services installation indicated on these drawings consists of:
   Installation of incoming mains water supply.
   Installation of hot water generation system.
2. Hot & cold pipework contained within voids shall be installed in copper to BS 2871 Part 1, Table X of the sizes and in the position indicated on the drawings. All pipework shall be copper tube of British manufacture, complying entirely to BS EN 1057: 1996.
3. All final connections to sanitaryware shall be supplied with a ballofix type stop valve of the same size as the pipework shown on the drawings.
4. 15mm drain cocks shall be installed at any low points in the system where water may remain after normal drainage throughout the system.
5. Thermal insulation shall be carried out by a specialist sub contractor. Insulation to be mineral wool, pre formed pipe sections with normal density 80kg/m. Thermal conductivity not exceeding 0.04W/mK. Reinforced aluminium foil finish with at least 25mm overlap (All insulation shall be Class 0 or equivalent).
6. Upon completion of the flushing and testing of the domestic water services pipework, the installations shall be satisfactorily chlorinated in accordance with BS 6700.
7. All pipework passing through fire compartment walls and floor slabs to be fire stopped.
8. All pipework to be run in voids where possible, or boxed-in to architect's detail.
9. All fittings on copper pipework shall be integral solder ring type fitting containing a "lead free" solder and suitable for wholesome / potable water as I.M.I Yorkshire Fitting Limited and each fitting clearly marked with "YP" logo.
10. All rising pipework shall be truly "plumb" and where exposed in rooms, the contractor shall discreetly route the pipework into the corners. No pipework is to be routed across windows nor shall it obstruct doorway access.
11. All bends, elbows, sets - both double and single - and other fittings necessary to carry out the complete installation, but not necessarily shown due to the scale of the drawings, shall be allowed for including sets, bends, etc. necessary for passing round soil vents, rain-water pipes and waste pipes, etc.
12. The contractor shall include for providing and installing all neccesary supports, brackets and steelwork, etc. Including primary supports / steelwork as required.
13. The contractor shall provide and install valves where indicated on the schematic and layouts. Drain cocks shall be provided at all low points.
14. All valves and cocks must be fitted in such a manner that they are accessible for operation and maintenance.
15. All isolating, regulating, and check valves shall be in accordance with the water supply (water fittings) regulations 1999.
16. Isolating and double check valves shall be installed in hot and cold water services pipework connections serving washing machines.
17. All isolating, regulating, and check valves positioned on copper pipework shall be suitable for compression connection.
18. All stopcocks shall be of an approved clearway, high pressure screw down type with crutch handled and raised seating and suitable for compression connection and all in accordance with BS 1010.
19. Drain cocks on internal M.W.S. services shall be of the screw down pattern drain tap with externally serrated hose nozzle to be fitted, where necessary, and where indicated for emptying the pipes, etc. and all in accordance with BS 2897.

Rev:	Date:	Status/Amendments:	By:
C3	;13.10.23;	CONSTRUCTION ISSUE - Sprinklers added.	M.H
C2	02.05.23	CHANGES CLOUDED	M.H
C1	24.02.23	PRELIMINARY ISSUE	M.H

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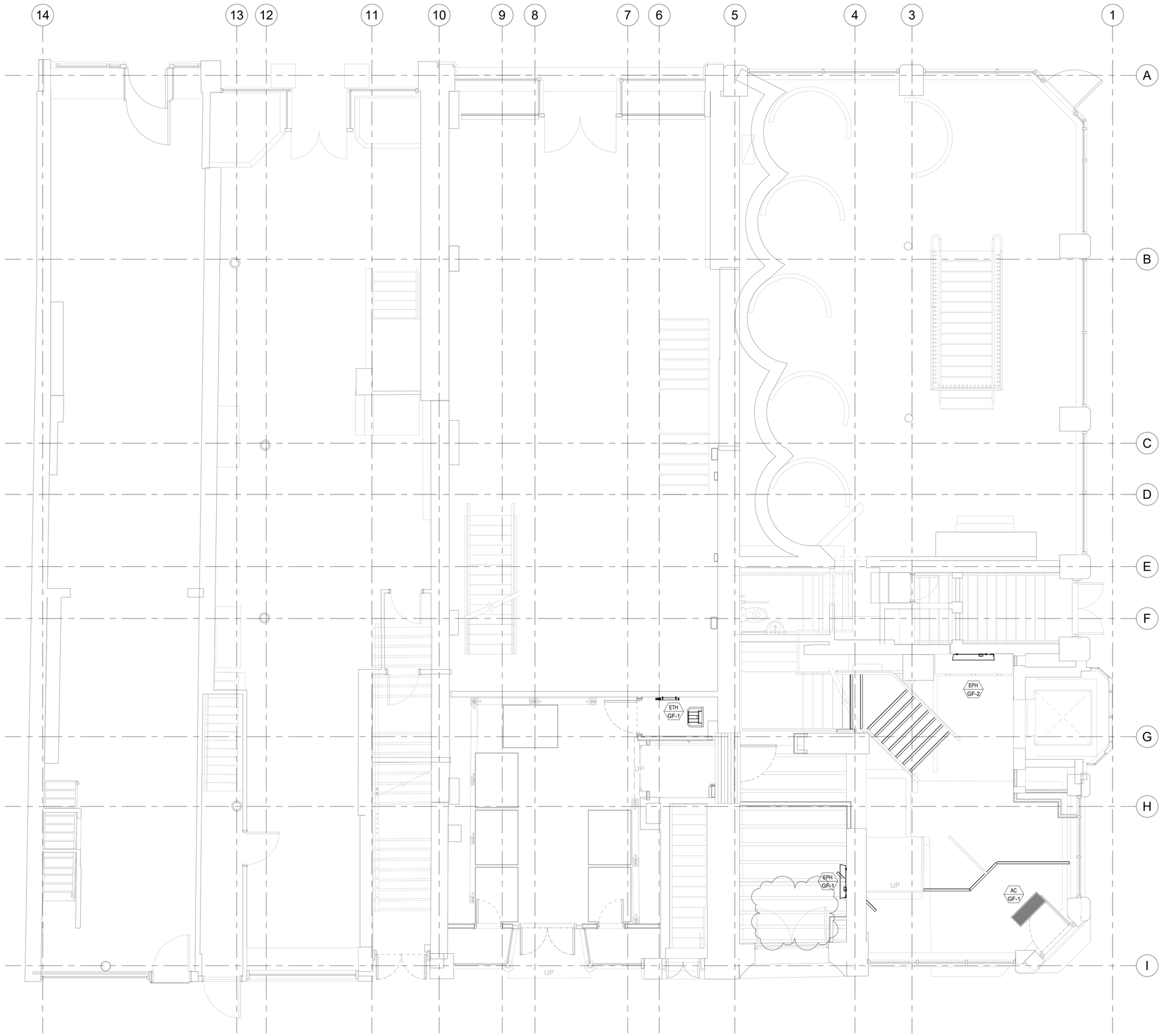
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
GROUND FLOOR, DOMESTIC HOT & COLD WATER SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
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Scale:	Paper Size:	Date Created:
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Heating Legend

	Electric Storage Heater
	Overdoor Air Curtain
	Electric Tubular Heater
	Electric Towel Heater
ESH	Electric Storage Heater
EPH	Electric Panel Heater
AC	Overdoor Air Curtain
ETH	Electric Tubular Heater
ETR	Electric Towel Rail

Rev:	Date:	Status/Amendments:	By:
C2	20.04.23	AIR CURTAIN OMITTED	M.H
C1	06.03.23	PRELIMINARY ISSUE	M.H

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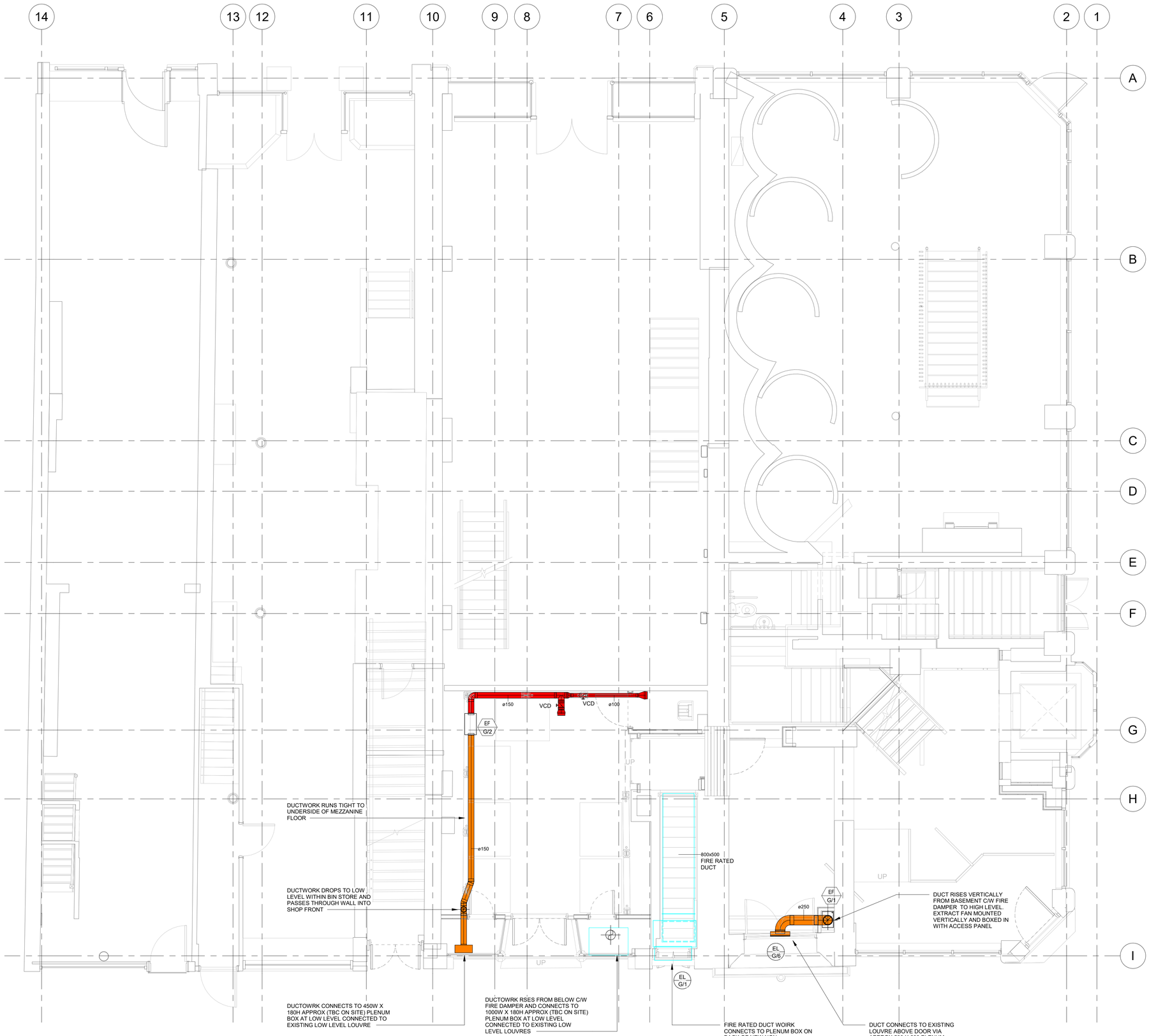
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Client:
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Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
GROUND FLOOR, HEATING SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	28.03.23
Drawing Number:		Drawing Revision:
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Ventilation Notes

1. All ductwork shall be manufactured & installed in accordance with besa dw154 for plastic ductwork within apartments and dw144 for ductwork in communal areas.
2. Fire dampers/fire collars or wraps shall be provided where ductwork passes through any fire rated structure.
3. Thermal insulation shall be applied to the following areas:
   Untreated fresh air ductwork from external louvre to fan within the building.
   Exhaust ductwork from external louvre to fan within the building.
4. All fire dampers require suitable access. Access doors in plasterboard ceilings/walls are to be provided by the main contractor where ductwork access doors are shown.
5. All fire damper openings are to be trimmed by walling contractor to allow fixing into proprietary stub work in accordance with the manufacturers details.
6. Suitable space is to be left along ductwork to facilitate correct before and after spacings for test points.
7. Commissioning engineers are to include for test points and also providing and installing test point caps.
8. All ductwork to be tested in compliance with the requirements for the project specific epc/part l compliance check list.
9. The ductwork contractor is deemed to or include for all necessary offsets and bends to provide a complete installtion.
10. Access doors are to be installed in accordance with the below:-

circular dampers	-	upstream and downstream
rectangular dampers	-	upstream and downstream
fire dampers	-	to suit damper maintenance / opposite side
attenuators	-	upstream and downstream
change in direction	-	one panel to suit
fans	-	upstream and downstream at
louvres	-	one panel to suit
fire rated ducts	-	see dw/172
standard ducts	-	every 15m
vertical ducts	-	top and bottom each accessible floor

Ventilation Legend

- Fresh Air Intake Insulated Ductwork
- Room Supply Air Ductwork
- Room Extract Air Ductwork
- Exhaust Air Insulated Ductwork
- Attenuator
- VCD — Volume Control Damper
- FD — Fire Damper

Rev:	Date:	Status/Amendments:	By:
C1	20.04.23	PRELIMINARY ISSUE	M.H

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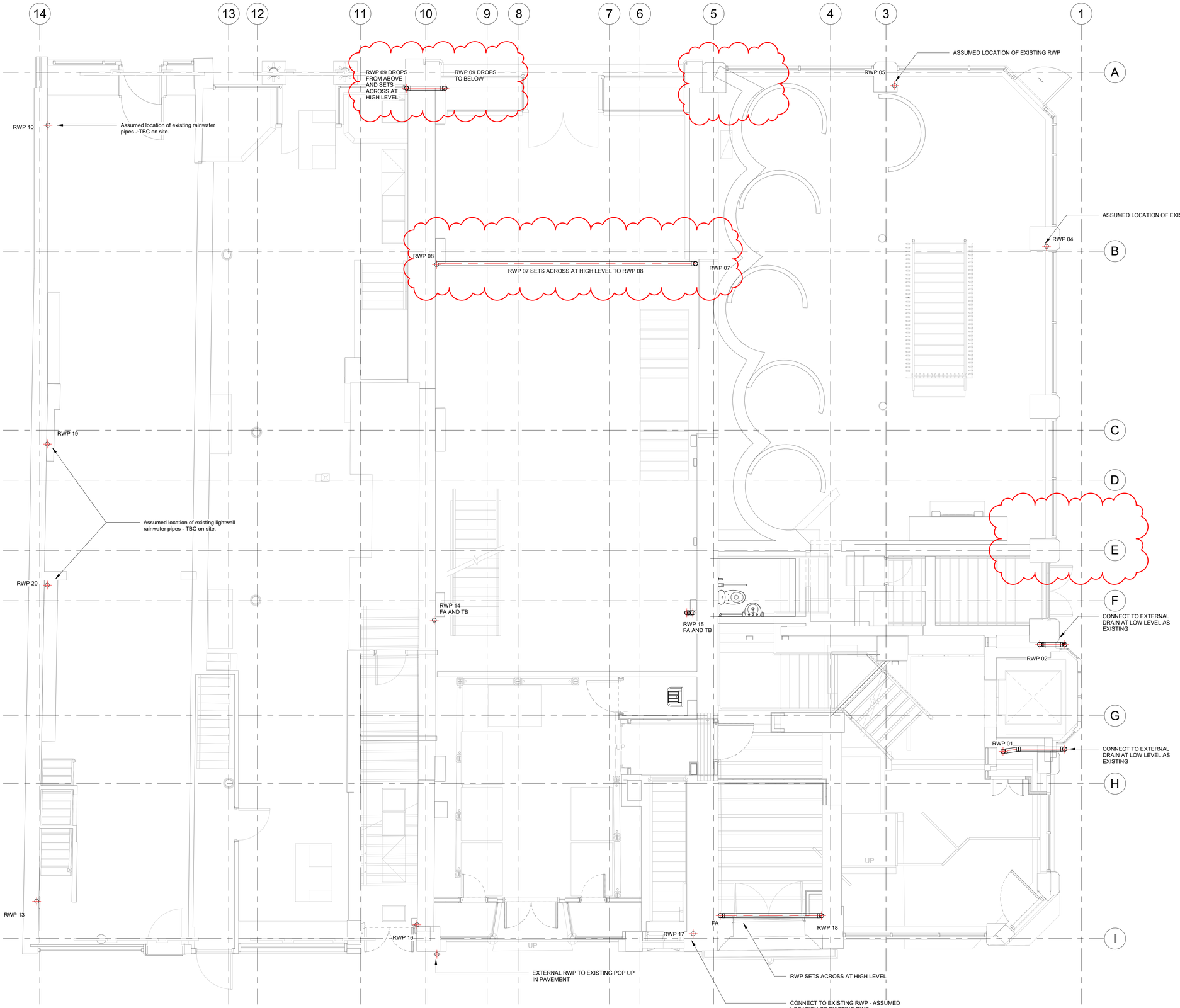
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Project:
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Drawing Title:
MECHANICAL SERVICES
GROUND FLOOR VENTILATION LAYOUT

Drawn By:	Checked By:	Cad By:
Author	Checker	
Scale: 1 : 50	Paper Size: A1	Date Created: 04/20/23
Drawing Number: 4052-KIN- XX-00-DR-M-5701		Drawing Revision: C1



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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC). ALL PIPEWORK TO BE 100Ø UNLESS OTHERWISE STATED.
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE PROPOSED ROOF WORKS AND MEP DESIGN
8. MAIN CONTRACTOR TO TAKE COGNISANCE THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 - 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1000mm HORIZONTAL AND 1000mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF.
RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTORS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND SYSTEM TO BE DETERMINED BY ACIES.
17. THE RAINWATER SYSTEM VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS, THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED INLINE WITH THE ACOUSTICIANNS REPORT. RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C4	21.07.23	CHANGES CLOUDED	M.H
C3	04.05.23	CHANGES CLOUDED	M.H
C2	21.04.23	REVISED FOLLOWING COMMENTS	M.H
C1	06.03.23	PRELIMINARY ISSUE	M.H

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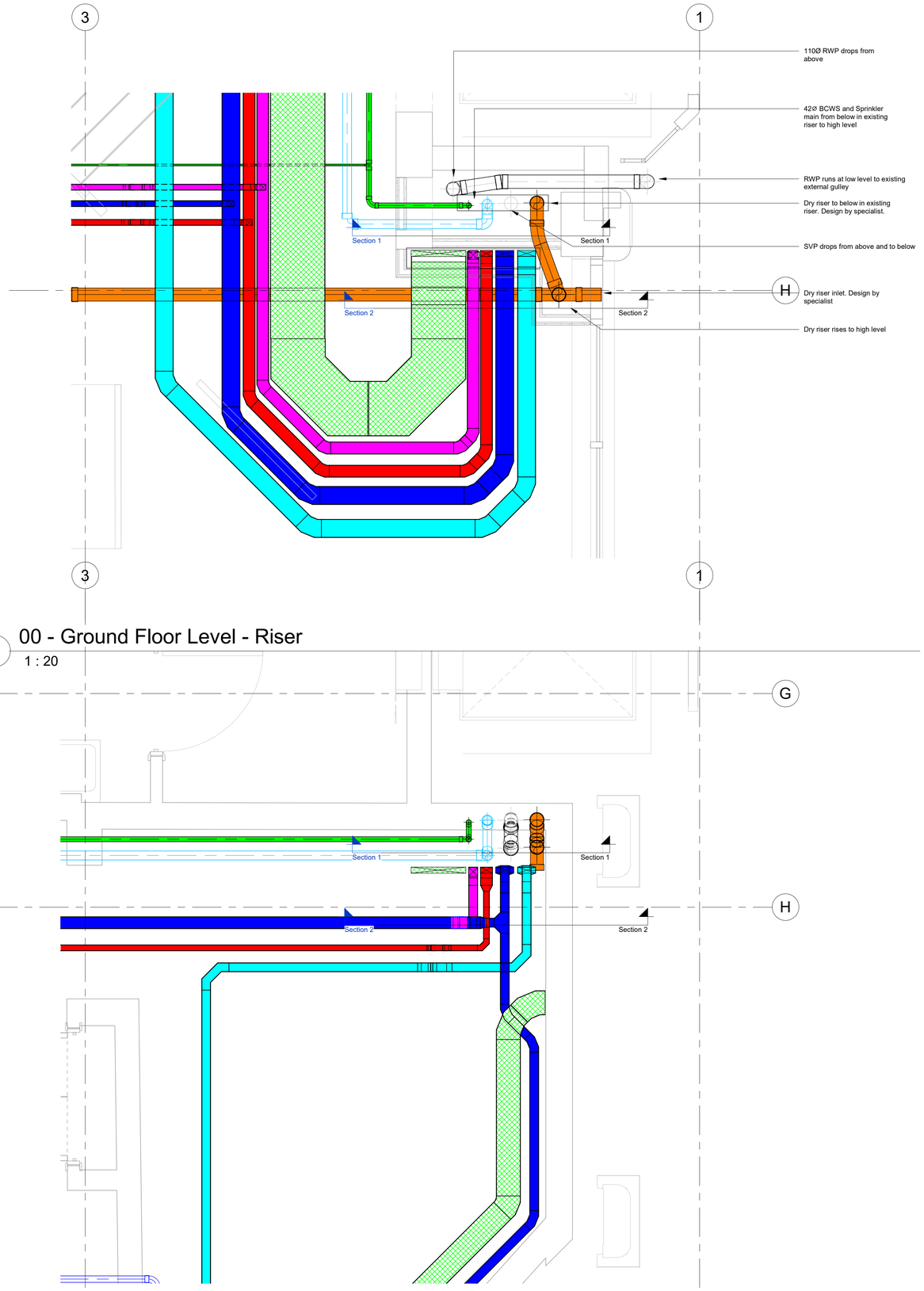
Email: info@kingassociates.uk
www.kingassociates.uk

Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
GROUND FLOOR, RAINWATER DRAINAGE

Drawn By:	Checked By:	Cad By:
Author	MH	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	10/03/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-00-DR-M-5800		C4

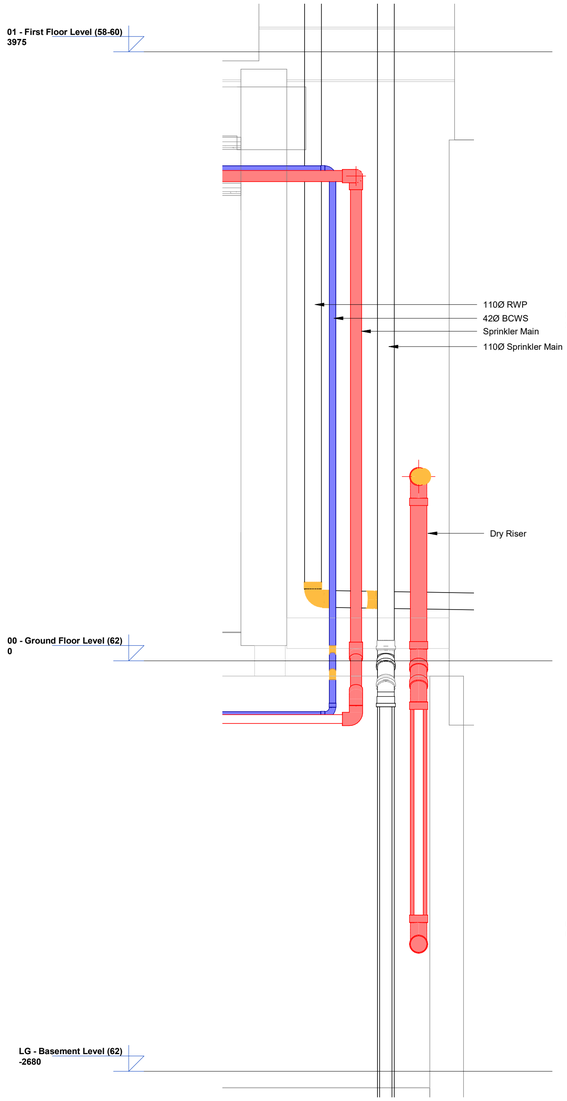


4 00 - Ground Floor Level - Riser

1 : 20

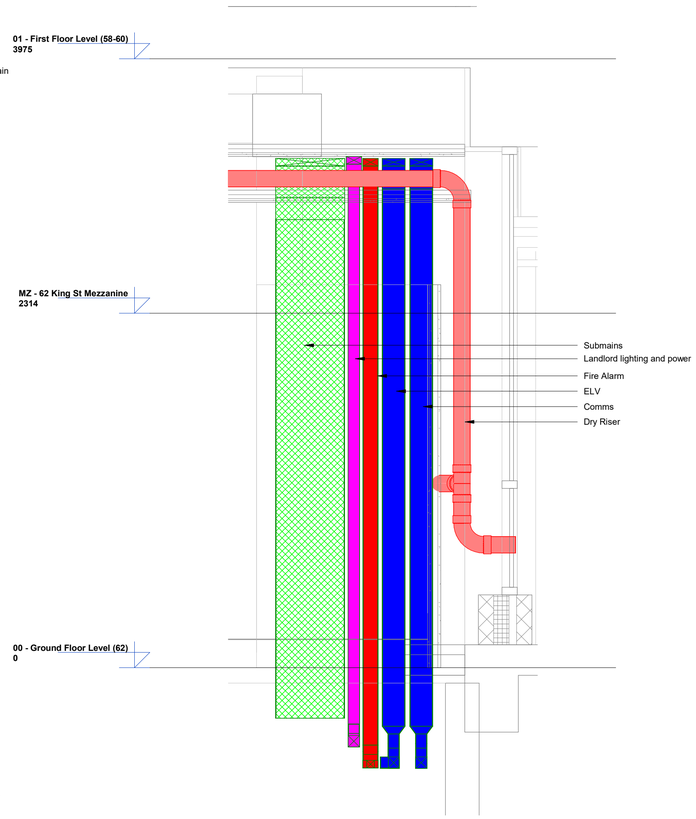
3 LG - Basement Level - Riser

1 : 20



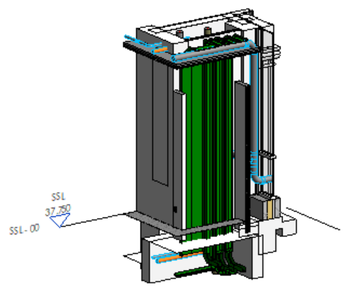
1 Section 1

1 : 20

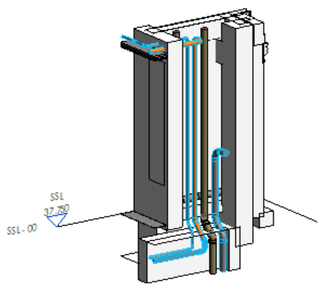


2 Section 2

1 : 20



5 Containment Riser



6 Pipework Riser

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Rev:	Date:	Status/Amendments:	By:
C1	02.05.23	FIRST ISSUE	M.H

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Client:
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58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
BASEMENT TO GROUND FLOOR RISER LAYOUT

Drawn By:	Checked By:	Cad By:
Author	Checker	
Scale:	Paper Size:	Date Created:
1 : 20	A1	05/02/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-00-DR-M-5920		C1

ELEVATIONS BETWEEN GRIDLINES 14 - 10 TAKEN FROM 01 - First Floor Level (58-60)

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 10 - 5 TAKEN FROM Survey - B Level 01

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 5 - 2 TAKEN FROM Survey - C Level 01

Note:- All builders work elevation references are to the centre of the hole

14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I

Apt 7 Apt 5 Apt 3 Apt 2 Apt 1 Apt 6 Apt 4

C5

SURVEY - B LEVEL 01

SURVEY - C LEVEL 01

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Rev:	Date:	Status/Amendments:	By:
C5	06.09.23	CONSTRUCTION ISSUE	M.H
C4	17.07.23	CONSTRUCTION ISSUE - riser BW holes added	M.H
C3	16.06.23	CONSTRUCTION ISSUE - dims to partiton walls	M.H
C2	26.05.23	CONSTRUCTION ISSUE	M.H
C1	18.05.23	CONSTRUCTION ISSUE	M.H

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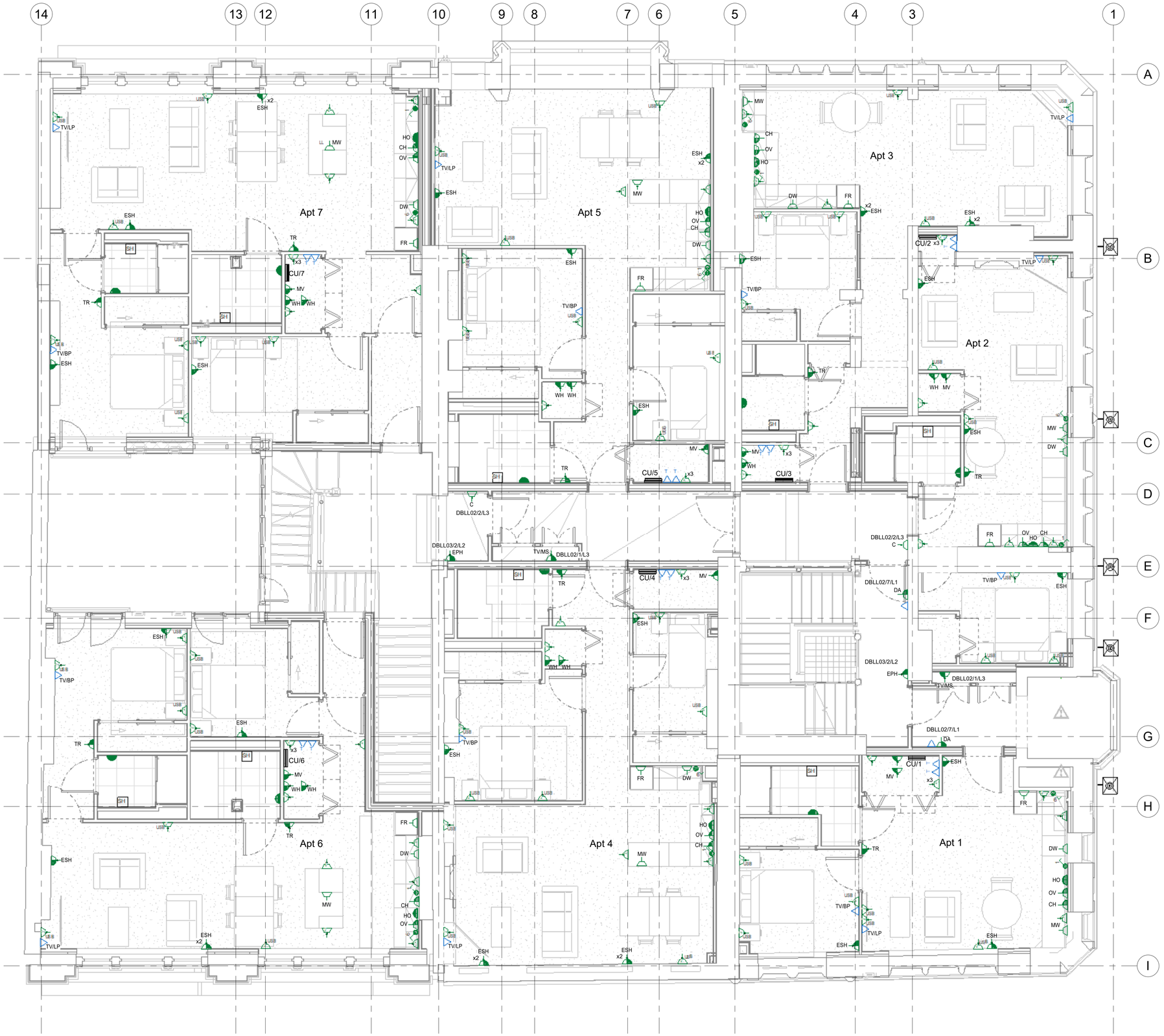
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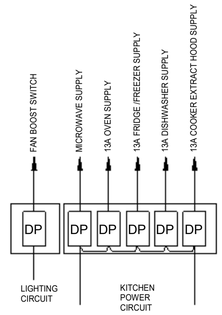
Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FIRST FLOOR, BUILDERSWORK

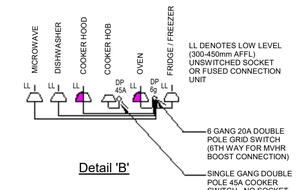
Drawn By:	Checked By:	Cad By:
M.E	M.H	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	17.05.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-BW-M-5700		C5





Detail 'A'

6 GANG APPLIANCE SWITCH - 20A DP GRID LOCATION AS SHOWN ON DRAWINGS.



Detail 'B'

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Small Power Legend

- 32A SPN IP65 isolator for lift to manufacturers requirements.
- CU/** — Consumer Unit.
- TUSB — Twin Switched Socket Outlet with Integral USB Charger.
- Twin Switched Socket Outlet (N Denotes Number of Units).
- Switched Fused Connection Unit (N Denotes Number of Units).
- Single Switched Socket Outlet.
- TC — Single Switched Lockable Cleaners Socket Outlet.
- Single Unswitched Socket Outlet.
- Cable Outlet.
- Single Back Box and Blank Plate.
- Shaver Outlet (With Integral Isolating Transformer)
- TV/LP — TV Outlet Lounge Plate.
- TV/BP — TV Outlet Bedroom Plate.
- Telecoms Master Outlet.
- Single Data Outlet
- Engraved Isolating DP Switch.
- Unswitched Fused Connection Unit

H/L	-	High Level
L/L	-	Low Level
WH	-	Water Heater
ODH	-	Over Door Heater
TR	-	Towel Rail
MV	-	Mechanical Ventilation
EPH	-	Electrical Panel Heater
ESH	-	Electrical Storage Heater
ETH	-	Electrical Tube Heater
MV	-	Microwave
DW	-	Dishwasher
DA	-	Door Access Control
WM	-	Washing Machine
CH	-	Cooker Hood
OV	-	Oven
HO	-	Hob
FR	-	Fridge / Freezer
FSD	-	Fire and Smoke Damper

Rev:	Date:	Status/Amendments :	By:
C3	12.10.23	CONSTRUCTION ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	20.02.23	PRELIMINARY ISSUE	K.S

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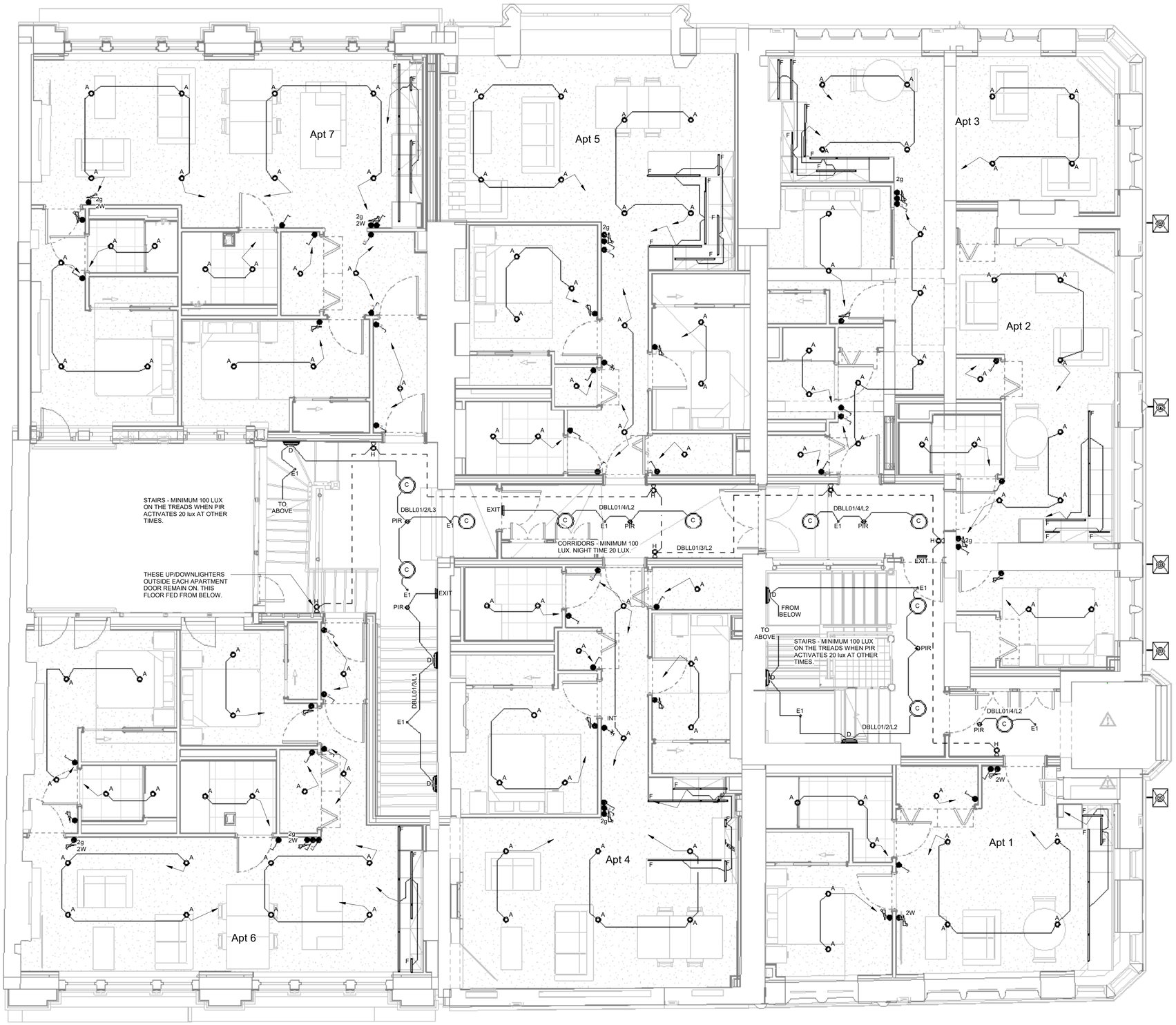
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
FIRST FLOOR, SMALL POWER AND DATA/COMMS LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 20.01.2023
Drawing Number: 4052-KIN- XX-01-DR-E-6200		Drawing Revision: C3



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Lighting Legend

- A — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H2 lite T.
- A1 — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H4 lite T.
- B — 4000 LED, weatherproof luminaire, IP65, 7300lm, 58w - as Sylvania Start Waterproof.
- C — 3000K LED dimmable circular luminaire - exact specification by architect.
- D — 3000K LED dimmable surface-mounted luminaire - exact specification by architect.
- E1 — 2W LED recessed emergency pin-spot luminaire, local self-test, 190lm, as Philip Payne TYKE860YS, colour to be confirmed by architect.
- E — 3000K LED weatherproof luminaire, IP65, 684lm, 9W - as Concord Sterling Bulkhead LED 4063831. E - denotes 3hr local self-test emergency version.
- F — 3000K LED 8mm x 2mm lightstrip beneath kitchen units or in coving detail, IP65, 9.6W/m, as Ledridge LED96 / EXT-SL8
- G — Pendant Luminaire - exact specification by architect
- H — 3000K LED surface-mounted luminaire, exact specification by architect.
- 3000K LED pendant feature luminaire, exact specification by architect.
- K — 3000K LED surface-mounted luminaire, IP65, exact specification by architect.
- EXIT — LED Emergency exit sign, as Philip Payne 250MCSV
- PIR — PIR presence detector
- 2 Way light switch
- 1 Way light switch
- Dimmer switch
- INT — Intermediate switch

Rev:	Date:	Status/Amendments :	By:
C3	18.08.23	CONSTRUCTION ISSUE - RCP Co-ordination	K.S
C2	28.04.23	CONSTRUCTION ISSUE - revisions clouded	K.S
C1	21.04.23	PRELIMINARY ISSUE	K.S

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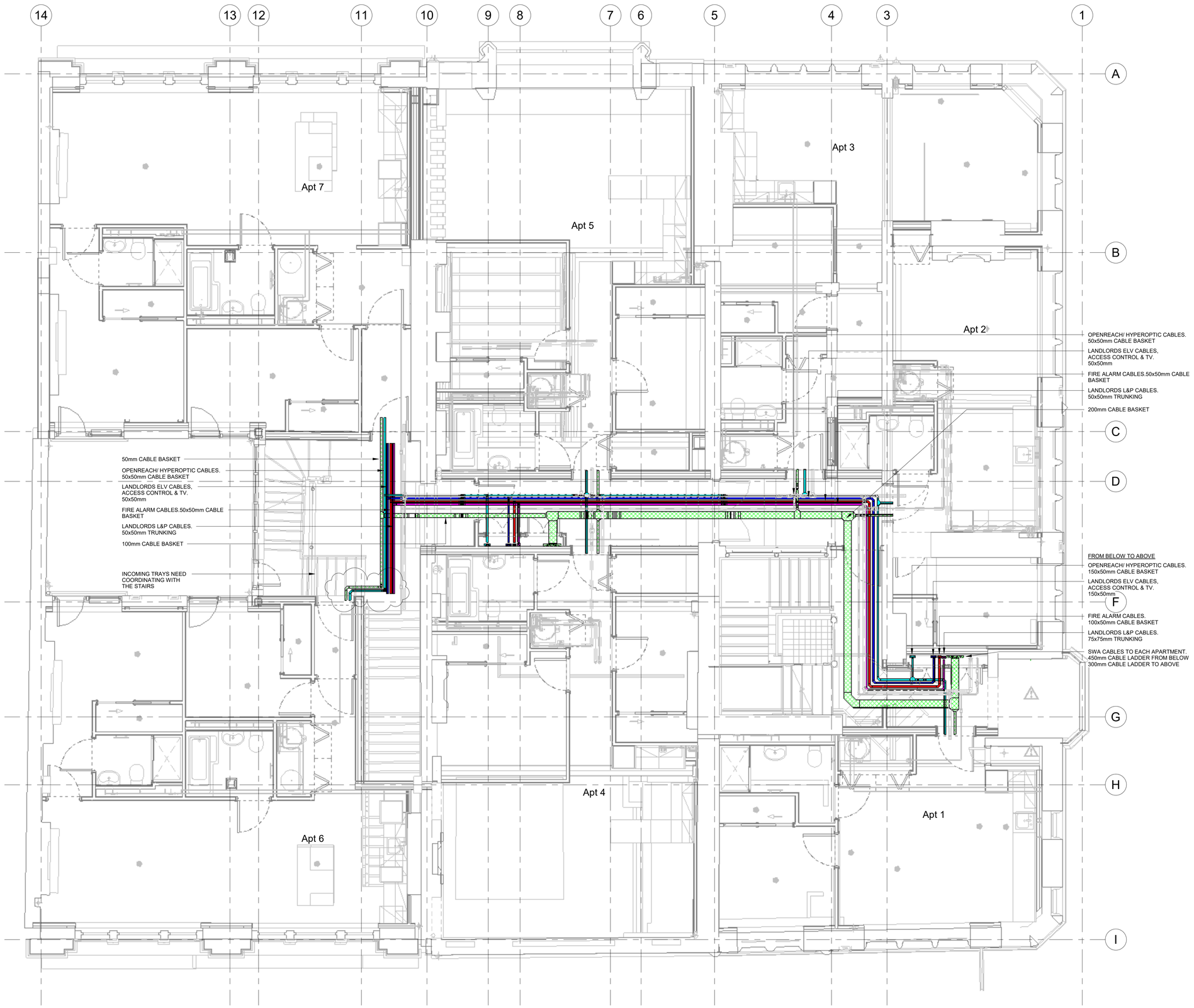
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Client:
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Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
FIRST FLOOR, LIGHTING LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	K.S	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	19.04.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-DR-E-6300		C3



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Containment Services Legend

- Cable Basket (Apartment Cables)
- Trunking (Landlords L&P)
- Cable Basket (Fire Alarm Cables)
- Cable Basket (Landlords ELV & Access Control)
- Cable Basket (Openreach / Hyperoptic Cables)

Rev:	Date:	Status/Amendments :	By:
C2	19.04.23	ISSUED FOR CONSTRUCTION	K.S
C1	14.04.23	PRELIMINARY ISSUE	K.S

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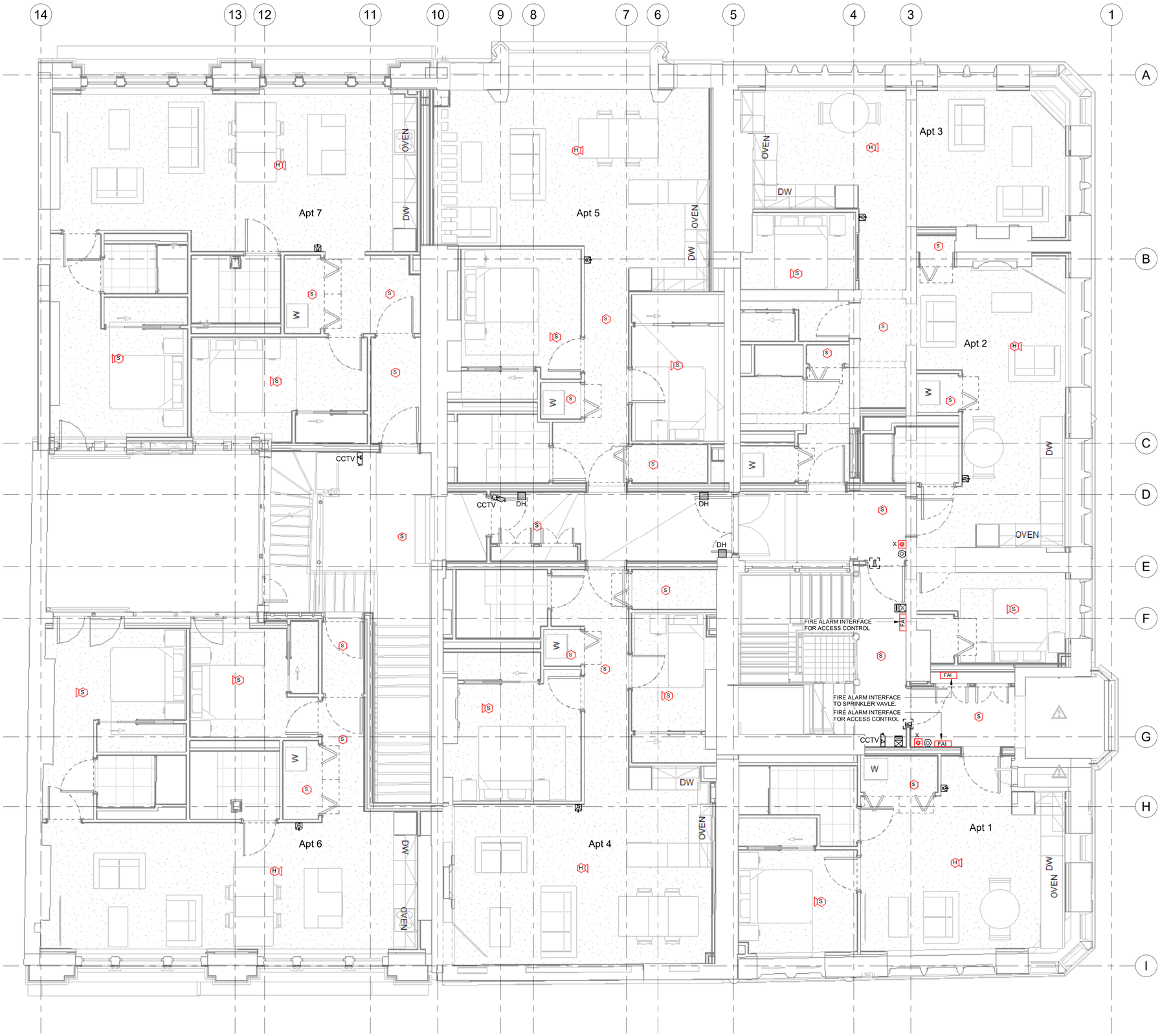
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Client:
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Project:
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Drawing Title:
ELECTRICAL SERVICES
FIRST FLOOR, CONTAINMENT SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	APRIL 2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-DR-E-6600		C2



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Fire Alarm Notes

OPEN PLAN APARTMENT FIRE ALARM
BS5839-6 Grade D category LD1. Heat detector/sounder in kitchen. Optical smoke detector/sunder in all bedrooms, optical smoke detector in all circulation spaces that form part of the escape routes and all areas where fire might start, but not in bathrooms, shower rooms or toilets.

COMMUNAL AREAS FIRE ALARM
Apartment corridors - BS5839-6 category L5. Optical smoke detectors in all areas to activate AOV units and alert main panel.

GF / Basement /Roof Communal Areas - BS5839-1 category L3 coverage, activation in this area causes all alarms to sound.

CCTV and Access Control Notes

1. All CCTV and Access Control items are in abeyance, awaiting client instruction.

Fire Alarm, Access Control & CCTV Legend

- Electric Door Lock
- Emergency Door Release Break Glass
- X — Exit Push
- PIR — PIR to Unlock Door When Movement Is Detected on the Stairs
- Access System Card Reader
- Video Entry Handsfree Monitor (WIFI)
- Video Entry Panel with Camera, Microphone/Speaker, Digital Call Keypad and Access Card Reader
- LDC — Local Door Controller with Battery Backup
- H — Heat Detector c/w Sounder
- S — Optical Smoke Detector c/w Sounder
- S — Optical Smoke Detector
- FAI — Fire Alarm Interface Unit
- Manual Break Glass
- Fire Alarm Sounder Beacon
- Fire Alarm Sounder
- FAP — Fire Alarm Panel
- CCTV — CCTV Camera
- DH — Door Hold Open Device

Rev:	Date:	Status/Amendments :	By:
C6	18.08.23	ISSUED FOR CONSTRUCTION - RCP Co-ordination	K.S
C5	04.05.23	ISSUED FOR CONSTRUCTION	K.S
C4	21.04.23	ISSUED FOR CONSTRUCTION	K.S
C3	18.04.23	PRELIMINARY ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	22.02.23	PRELIMINARY ISSUE	K.S

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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
FIRST FLOOR, FIRE ALARM AND ACCESS CONTROL SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	21.02.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-DR-E-6700		C6



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DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. The contractor shall ensure that rodding eyes and access points are accessible for maintenance purposes. Where they are accessible by destructive access these shall be marked up on the as fitted drawings.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and bird mesh, and openings by main contractor. Detail as per architect and roofing specialists drawings.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev:	Date:	Status/Amendments:	By:
C5	21.07.23	CHANGES CLOUDED	M.H
C4	12.06.23	CHANGES CLOUDED	M.H
C3	11.05.23	DIMENSIONS ADDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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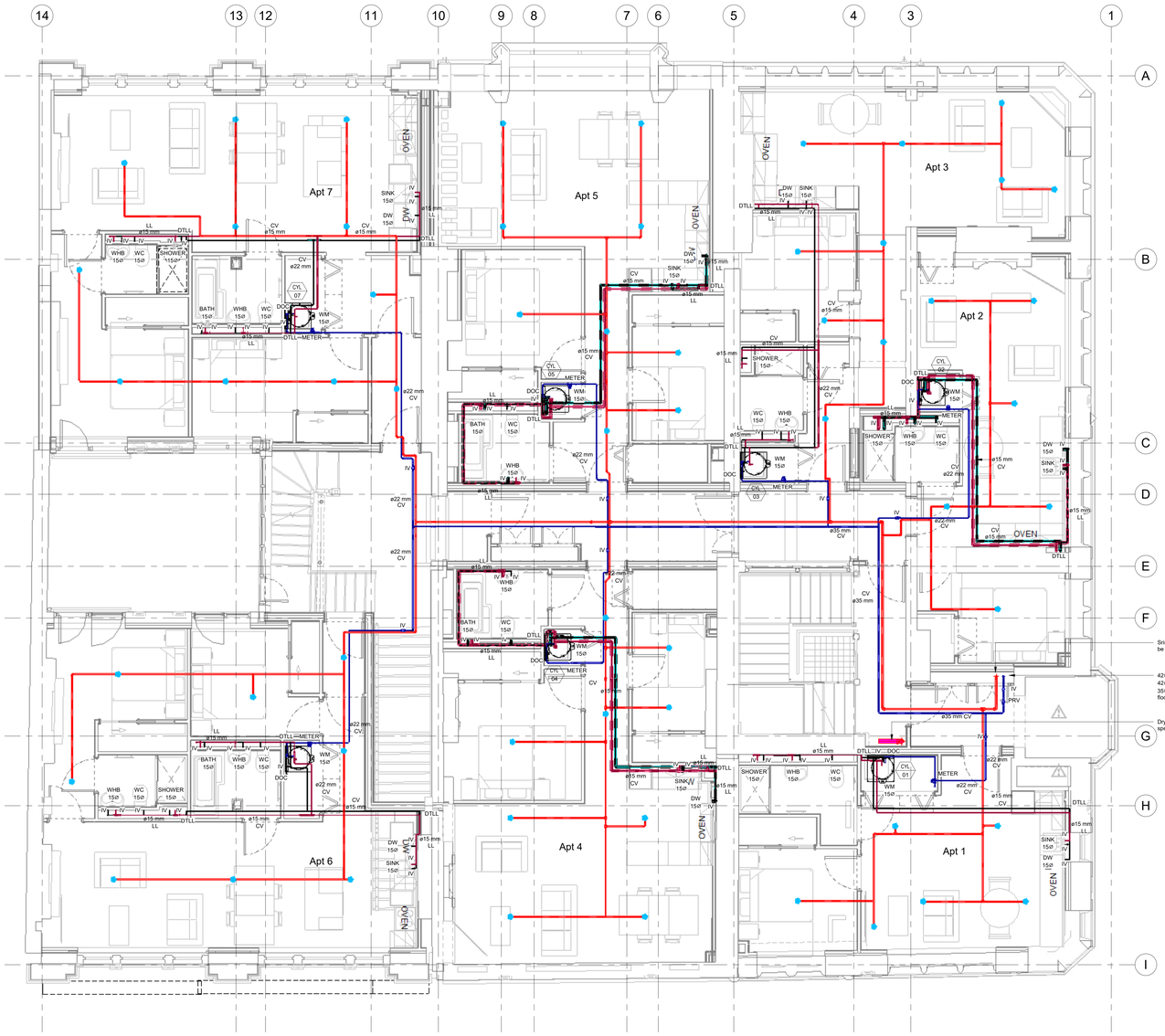
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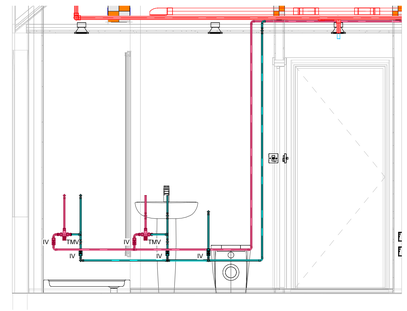
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FIRST FLOOR, ABOVE GROUND
DRAINAGE LAYOUT

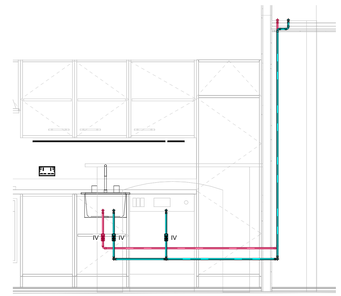
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G.M	M.H	G.M
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4052-KIN- XX-01-DR-M-5200		C5



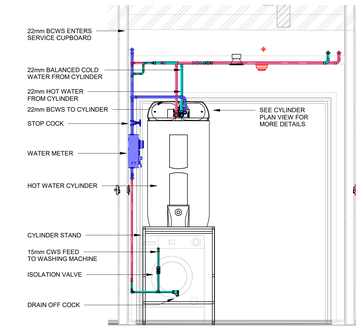
1 01 - First Floor Level - Water distribution and supply systems
1 : 50



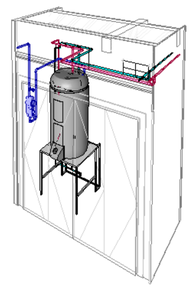
2 1st Typical Bathroom Elevation
1 : 20



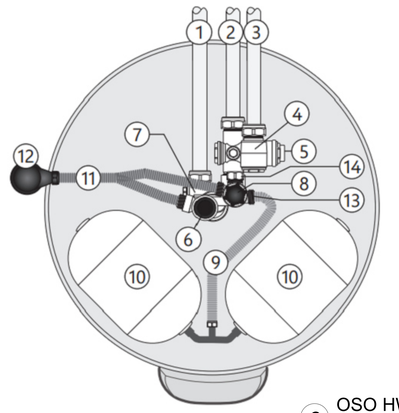
3 1st Typical Kitchen Elevation
1 : 20



4 1st Typical Service Cupboard
1 : 20



5 1st Floor Typical Services Cupboard 3D



6 OSO HWC - Pipe & Valve Arrangement
1 : 1

No.	Description	Dim.
1	Domestic hot water outlet (DHW out)	ø22 mm
2	Balanced cold water connection (Bal. CW)	ø22 mm
3	Cold water main supply inlet (CW in)	ø22 mm
4	Line strainer	-
5	Pressure reducing valve - 3 bar	-
6	Expansion relief valve - 8 bar	1/2"
7	Hot water blending valve	-
8	Temp&pressure relief valve - 90°C / 10 bar	1/2"
9	Flexible hose and T-piece (120-250 l. only)	-
10	Expansion vessel(s) (120-250 l. only)	-
11	Flexible Y-hose	-
12	Tundish	-
13	Expansion vessel connection point	1/2" BSPM
14	Secondary Return - SX 250-300 l. only	1/2"male / ø15

Domestic Hot & Cold Water Services Legend

- Mains Cold Water Service
- Boosted Cold Water Service
- Balanced Cold Water Service (Apt)
- Hot Water Service (Apt)
- Sprinkler Pipework (by Specialist)
- Dry Riser Pipework (by Specialist)

MCWS	Mains Cold Water Services
BCWS	Boosted Cold Water Services
DHWS	Domestic Hot Water Services
SC	Stop Cock
IV	Isolation Valve
TMV	Thermostatic Mixing Valve
DOC	Drain Off Cock
DTLL	Drop to Low Level
RTA	Rise to Above
DTB	Drop to Below
LL	Low Level
HL	High Level
WC	Water Closet
WHB	Wash Hand Basin
DW	Dishwasher
WM	Washing Machine
CV	Ceiling Void
CYL	Hot Water Cylinder

Notes:

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4. All dimensions are in millimetres unless otherwise stated

Domestic Hot & Cold Water Services Notes

1. The domestic water services installation indicated on these drawings consists of:
   Installation of incoming mains water supply.
   Installation of hot water generation system.
2. Hot & cold pipework contained within voids shall be installed in copper to BS 2871 Part 1, Table X of the sizes and in the position indicated on the drawings. All pipework shall be copper tube of British manufacture, complying entirely to BS EN 1057: 1996.
3. All final connections to sanitaryware shall be supplied with a ballofix type stop valve of the same size as the pipework shown on the drawings.
4. 15mm drain cocks shall be installed at any low points in the system where water may remain after normal drainage throughout the system.
5. Thermal insulation shall be carried out by a specialist sub contractor. Insulation to be mineral wool, pre formed pipe sections with normal density 80kg/m. Thermal conductivity not exceeding 0.04W/mK. Reinforced aluminium foil finish with at least 25mm overlap (All insulation shall be Class 0 or equivalent).
6. Upon completion of the flushing and testing of the domestic water services pipework, the installations shall be satisfactorily chlorinated in accordance with BS 6700.
7. All pipework passing through fire compartment walls and floor slabs to be fire stopped.
8. All pipework to be run in voids where possible, or boxed-in to architect's detail.
9. All fittings on copper pipework shall be integral solder ring type fitting containing a "lead free" solder and suitable for wholesome / potable water as I.M.I Yorkshire Fitting Limited and each fitting clearly marked with "YP" logo.
10. All rising pipework shall be truly "plumb" and where exposed in rooms, the contractor shall discreetly route the pipework into the corners. No pipework is to be routed across windows nor shall it obstruct doorway access.
11. All bends, elbows, sets - both double and single - and other fittings necessary to carry out the complete installation, but not necessarily shown due to the scale of the drawings, shall be allowed for including sets, bends, etc. necessary for passing round soil vents, rain-water pipes and waste pipes, etc.
12. The contractor shall include for providing and installing all neccesary supports, brackets and steelwork, etc. Including primary supports / steework as required.
13. The contractor shall provide and install valves where indicated on the schematic and layouts. Drain cocks shall be provided at all low points.
14. All valves and cocks must be fitted in such a manner that they are accessible for operation and maintenance.
15. All isolating, regulating, and check valves shall be in accordance with the water supply (water fittings) regulations 1999.
16. Isolating and double check valves shall be installed in hot and cold water services pipework connections serving washing machines.
17. All isolating, regulating, and check valves positioned on copper pipework shall be suitable for compression connection.
18. All stopcocks shall be of an approved clearway, high pressure screw down type with crutch handled and raised seating and suitable for compression connection and all in accordance with BS 1010.
19. Drain cocks on internal M.W.S. services shall be of the screw down pattern drain tap with externally serrated hose nozzle to be fitted, where necessary, and where indicated for emptying the pipes, etc. and all in accordance with BS 2897.

Rev:	Date:	Status/Amendments:	By:
C4	13.10.23	CONSTRUCTION ISSUE - Sprinklers added.	M.H
C3	02.05.23	ARCHITECTS LAYOUT UPDATED	M.H
C2	10.03.23	PRELIMINARY ISSUE - APT NUMBERS ADDED	M.H
C1	24.02.23	PRELIMINARY ISSUE	M.H

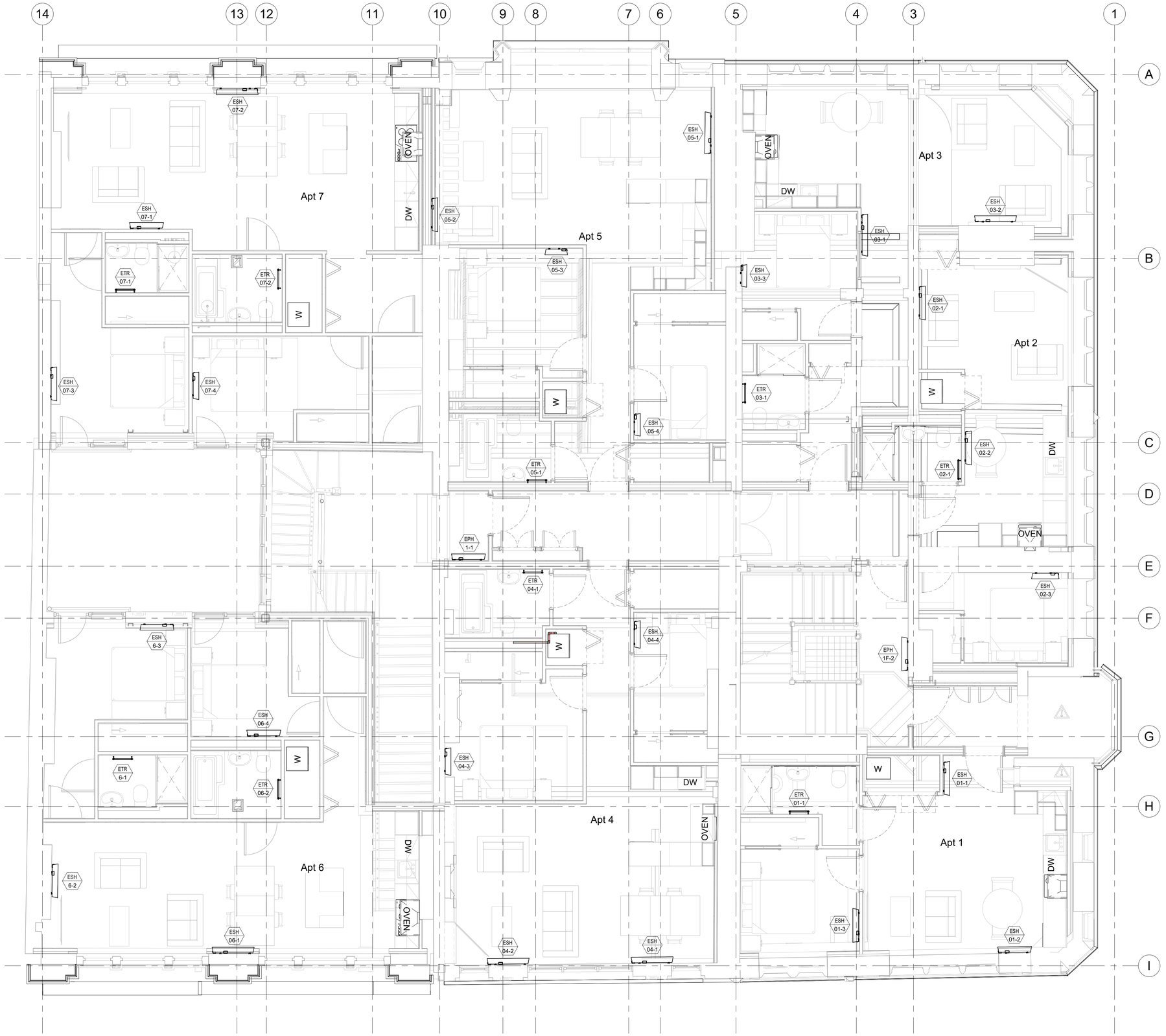
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FIRST FLOOR, DOMESTIC HOT & COLD WATER SERVICES LAYOUT

Drawn By:	Checked By:	Cost By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A0	21.02.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-DR-M-5300		C3



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Heating Legend

	Electric Storage Heater
	Overdoor Air Curtain
	Electric Tubular Heater
	Electric Towel Heater
ESH	Electric Storage Heater
EPH	Electric Panel Heater
AC	Overdoor Air Curtain
ETH	Electric Tubular Heater
ETR	Electric Towel Rail

Rev:	Date:	Status/Amendments:	By:
C2	20.04.23	APARTMENT NUMBERS ADDED	M.H
C1	06.03.23	PRELIMINARY ISSUE	M.H

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Drawing Title:
MECHANICAL SERVICES
FIRST FLOOR, HEATING SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	28.03.23
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-DR-M-5600		C2



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Ventilation Notes

1. All ductwork shall be manufactured & installed in accordance with besa dw154 for plastic ductwork within apartments and dw144 for ductwork in communal areas.
2. All ductwork within apartments shall be 204 x 60 unless otherwise stated.
3. Fire dampers/fire collars or wraps shall be provided where ductwork passes through any fire rated structure.
4. Thermal insulation shall be applied to the following areas:

   Untreated fresh air ductwork from external louvre to fan within the building.

   Exhaust ductwork from external louvre to fan within the building.
5. Bathroom/wc doors shall be undercut to provide ventilation air path routes.
6. Where apartment normal ventilation rates (based on floor area) are equal to the minimum high ventilation rates, a 20% margin is to be applied to high rate figures.
7. Openable windows to provide short periods of purge ventilation to remove odours, excess humidity and reduce temperatures in habitable rooms. Where there are no external windows in a habitable room, purge shall be provided by increases the speed of the MVHR.
8. All external louvres shall be Rytons A1 Fire Rated Square Holed Double Air Brick Ducting kits.

Ventilation Legend

- Fresh Air Intake Insulated Ductwork
- Room Supply Air Ductwork
- Room Extract Air Ductwork
- Exhaust Air Insulated Ductwork
- MVHR Unit - ECO2
- MVHR Unit - ECO4
- Attenuator
- VCD — Volume Control Damper
- COMBINED INTAKE / EXHAUST ROOF TERMINAL NUAIRE TERMINATOR OR SIMILAR.

Rev:	Date:	Status/Amendments:	By:
C2	18.08.23	CONSTRUCTION ISSUE	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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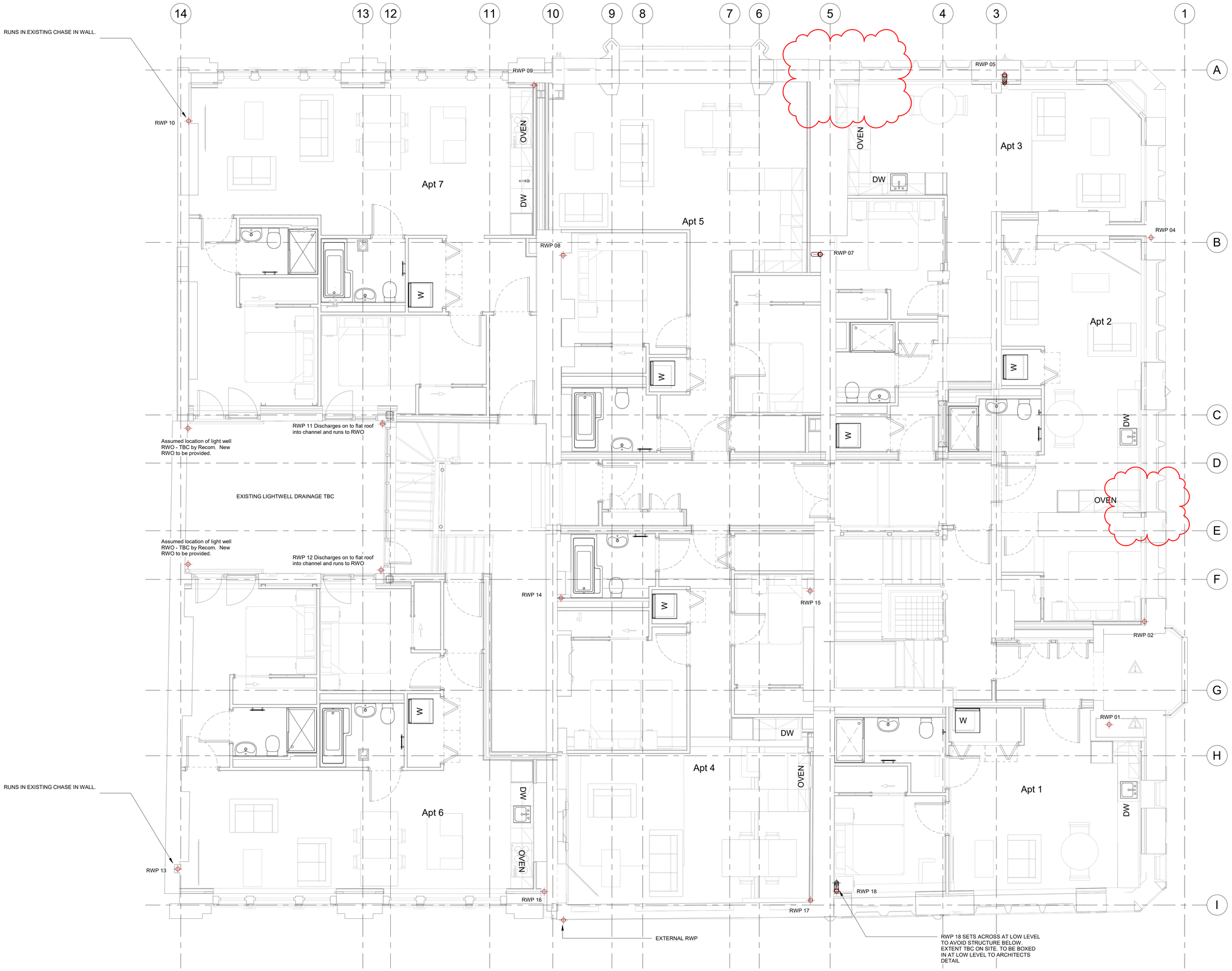
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FIRST FLOOR, VENTILATION LAYOUT

Drawn By:	Checked By:	Cad By:
M.H	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	12.12.2022
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-DR-M-5700		C2



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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC). ALL PIPEWORK TO BE 100Ø UNLESS OTHERWISE STATED.
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE PROPOSED ROOF WORKS AND MEP DESIGN
8. MAIN CONTRACTOR TO TAKE COGNISANCE THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 - 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1000mm HORIZONTAL AND 1000mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF. RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTORS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND SYSTEM TO BE DETERMINED BY ACIES.
17. THE RAINWATER SYSTEM VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS, THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED INLINE WITH THE ACOUSTICIANNS REPORT, RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C4	21.07.23	CHANGES CLOUDED	M.H
C3	04.05.23	CHANGES CLOUDED	M.H
C2	21.04.23	REVISED FOLLOWING COMMENTS	M.H
C1	11.04.23	PRELIMINARY ISSUE	M.H

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Drawing Title:
MECHANICAL SERVICES
FIRST FLOOR, RAINWATER DRAINAGE

Drawn By:	Checked By:	Cad By:
Author	Checker	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	03/10/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-01-DR-M-5800		C4

ELEVATIONS BETWEEN GRIDLINES 14 - 10 TAKEN FROM
02 - Second Floor Level (58-60)

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 10 - 5 TAKEN FROM
Survey - B Level 02

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 5 - 2 TAKEN FROM
Survey - C Level 02

Note:- All builders work elevation references are to the centre of the hole

14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I

Apt 14

Apt 12

Apt 10

Apt 9

Apt 8

Apt 11

Apt 13

C6

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2659mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2659mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	175mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2770mm
Width	604mm
Height	160mm
Service	Ducts

Elevation	2770mm
Width	564mm
Height	160mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2700mm
Width	402mm
Height	165mm
Service	Multi

Elevation	2450mm
Width	930mm
Height	150mm
Service	Multi
SURVEY - C LEVEL 02	

Elevation	1769mm
Width	930mm
Height	150mm
Service	Multi

Elevation	2700mm
Width	402mm
Height	165mm
Service	Multi

Elevation	3420mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2304mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	3294mm
Width	700mm
Height	320mm
Service	Ducts

Elevation	2304mm
Width	700mm
Height	190mm
Service	Ducts

Elevation	2304mm
Width	700mm
Height	190mm
Service	Ducts

Elevation	2304mm
Width	610mm
Height	190mm
Service	Ducts

Elevation	2278mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	1855mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2811mm
Width	100mm
Height	100mm
Service	Containment
SURVEY - C LEVEL 02	

Elevation	2686mm
Width	300mm
Height	100mm
Service	Containment
SURVEY - C LEVEL 02	

Elevation	1800mm
Width	402mm
Height	165mm
Service	Multi

Elevation	3294mm
Width	700mm
Height	190mm
Service	Ducts

Elevation	3296mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	3298mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2692mm
Width	598mm
Height	320mm
Service	Ducts

Elevation	2280mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	3298mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2810mm
Width	598mm
Height	190mm
Service	Ducts

Elevation	2810mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2810mm
Width	598mm
Height	190mm
Service	Ducts

Elevation	2810mm
Width	817mm
Height	211mm
Service	Ducts

Elevation	2810mm
Width	495mm
Height	140mm
Service	Ducts

Elevation	1844mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2314mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2811mm
Width	450mm
Height	100mm
Service	Containment
SURVEY - C LEVEL 02	

Elevation	2289mm
Width	320mm
Height	190mm
Service	Ducts

Elevation	2314mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2289mm
Width	320mm
Height	190mm
Service	Ducts

Elevation	2314mm
Width	320mm
Height	190mm
Service	Ducts

Elevation	3074mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	3250mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	3069mm
Width	320mm
Height	190mm
Service	Ducts

Elevation	3074mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	3250mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	3070mm
Width	660mm
Height	191mm
Service	Ducts

Elevation	2810mm
Width	646mm
Height	190mm
Service	Ducts

Elevation	2810mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2543mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2810mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2810mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2810mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2810mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2810mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2870mm
Width	576mm
Height	160mm
Service	Ducts

Elevation	2870mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2790mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2790mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2550mm
Width	402mm
Height	165mm
Service	Multi

Elevation	2810mm
Width	402mm
Height	165mm
Service	Multi

Elevation	2725mm
Width	930mm
Height	150mm
Service	Multi
SURVEY - C LEVEL 02	

Elevation	1800mm
Width	402mm
Height	165mm
Service	Multi

Elevation	2725mm
Width	930mm
Height	150mm
Service	Multi

Elevation	2730mm
Width	930mm
Height	150mm
Service	Multi

Elevation	2550mm
Width	930mm
Height	150mm
Service	Multi

Elevation	2870mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2510mm
Width	100mm
Height	100mm
Service	Containment

Elevation	2510mm
Width	375mm
Height	100mm
Service	Containment

Elevation	2568mm
Width	775mm
Height	200mm
Service	Multi

Elevation	2550mm
Width	402mm
Height	165mm
Service	Multi

Elevation	2470mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2470mm
Width	320mm
Height	190mm
Service	Ducts

Elevation	2470mm
Width	320mm
Height	190mm
Service	Ducts

Elevation	2470mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2470mm
Width	270mm
Height	140mm
Service	Ducts

Elevation	2470mm
Width	320mm
Height	190mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2760mm
Width	584mm
Height	160mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2770mm
Width	584mm
Height	160mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

Elevation	2760mm
Width	254mm
Height	110mm
Service	Ducts

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Rev:	Date:	Status/Amendments:	By:
C6	03.10.23	CONSTRUCTION ISSUE	M.H
C5	06.09.23	CONSTRUCTION ISSUE	M.H
C4	17.07.23	CONSTRUCTION ISSUE - riser BW holes added	M.H
C3	16.06.23	CONSTRUCTION ISSUE - dims to partiton walls	M.H
C2	26.05.23	CONSTRUCTION ISSUE	M.H
C1	18.05.23	CONSTRUCTION ISSUE	M.H

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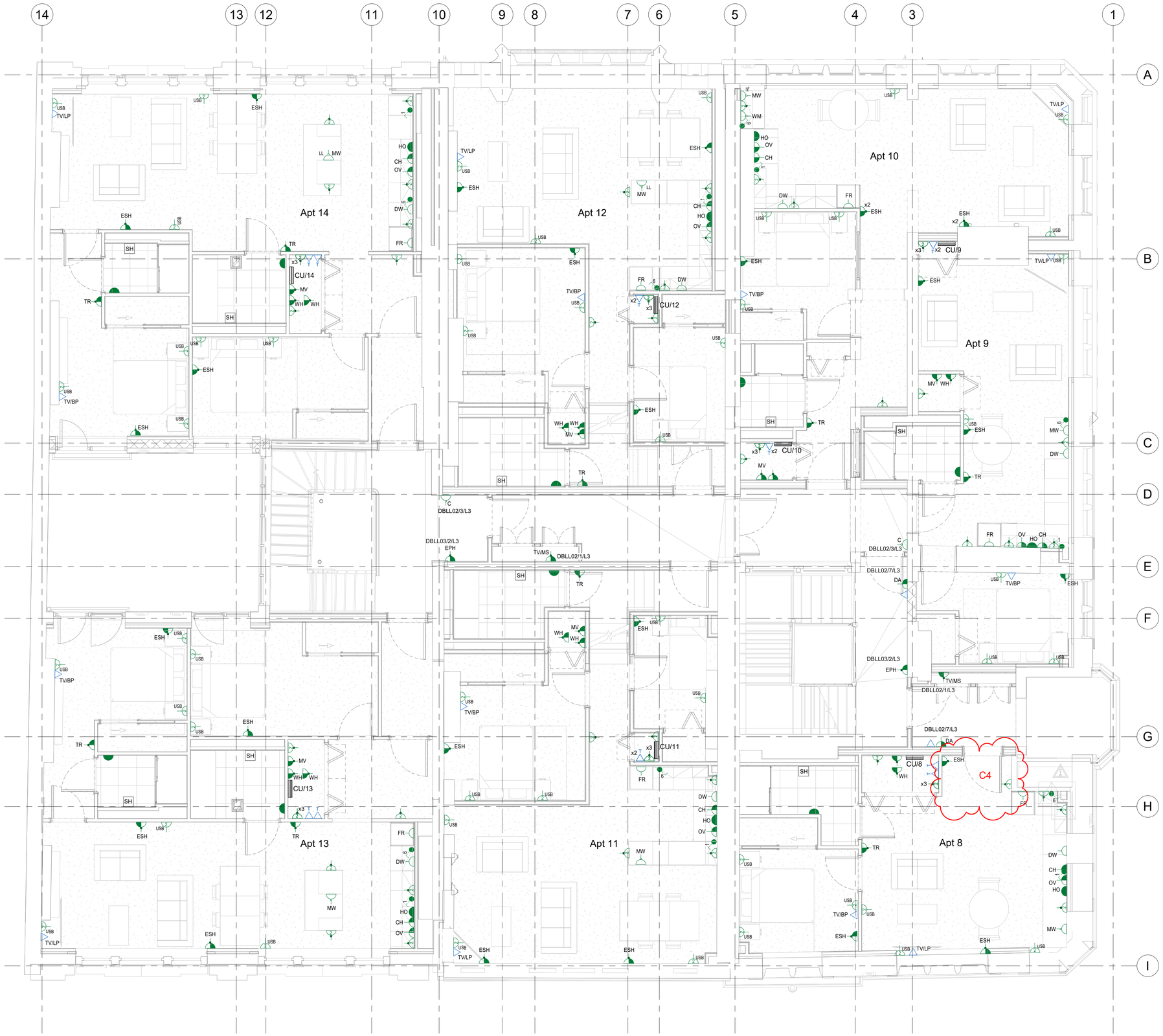
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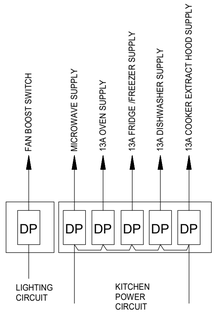
Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
SECOND FLOOR, BUILDERSWORK

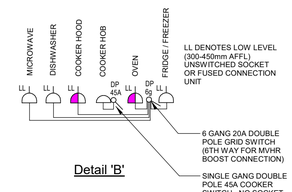
Drawn By:	Checked By:	Cad By:
M.E	M.H	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	18.05.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-02-BW-M-5700		C6





Detail 'A'

6 GANG APPLIANCE SWITCH - 20A DP GRID LOCATION AS SHOWN ON DRAWINGS.



Detail 'B'

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Small Power Legend

- 32A SPN IP65 isolator for lift to manufacturers requirements.
- CU/** — Consumer Unit.
- Twin Switched Socket Outlet with Integral USB Charger.
- Twin Switched Socket Outlet (N Denotes Number of Units).
- Switched Fused Connection Unit (N Denotes Number of Units).
- Single Switched Socket Outlet.
- Single Switched Lockable Cleaners Socket Outlet.
- Single Unswitched Socket Outlet.
- Cable Outlet.
- Single Back Box and Blank Plate.
- Shaver Outlet (With Integral Isolating Transformer)
- TV/LP — TV Outlet Lounge Plate.
- TV/BP — TV Outlet Bedroom Plate.
- Telecoms Master Outlet.
- Single Data Outlet
- Engraved Isolating DP Switch.
- Unswitched Fused Connection Unit

H/L	-	High Level
L/L	-	Low Level
WH	-	Water Heater
ODH	-	Over Door Heater
TR	-	Towel Rail
MV	-	Mechanical Ventilation
EPH	-	Electrical Panel Heater
ESH	-	Electrical Storage Heater
ETH	-	Electrical Tube Heater
MV	-	Microwave
DW	-	Dishwasher
DA	-	Door Access Control
WM	-	Washing Machine
CH	-	Cooker Hood
OV	-	Oven
HO	-	Hob
FR	-	Fridge / Freezer
FSD	-	Fire and Smoke Damper

Rev:	Date:	Status/Amendments :	By:
C4	30.10.23	CONSTRUCTION ISSUE	K.S
C3	12.10.23	CONSTRUCTION ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	20.02.23	PRELIMINARY ISSUE	K.S

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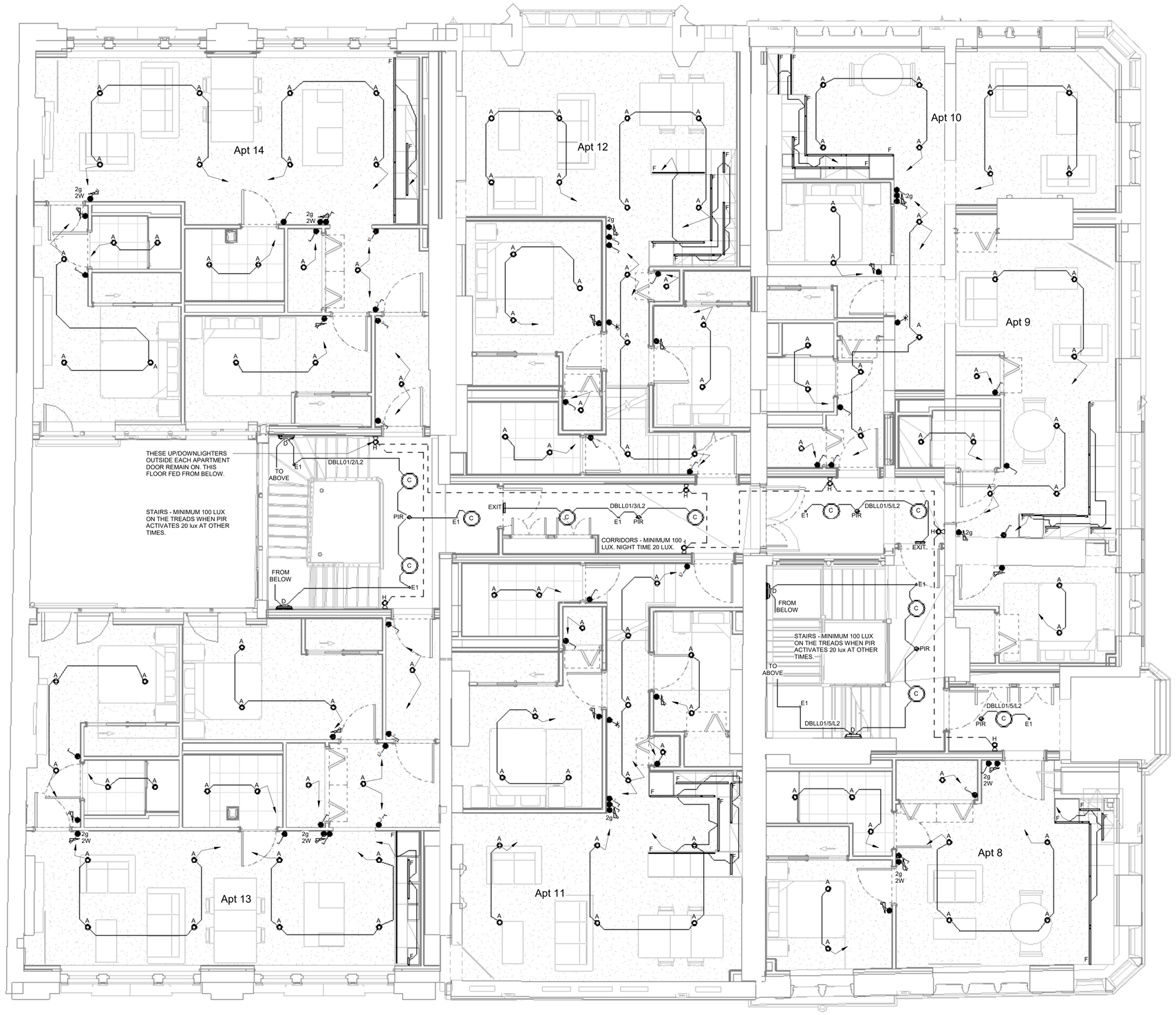
Email: info@kingassociates.uk
www.kingassociates.uk

Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
SECOND FLOOR, SMALL POWER AND DATA/COMMS LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	K.S	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 10.02.2023
Drawing Number: 4052-KIN- XX-02-DR-E-6200		Drawing Revision: C4



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4. All dimensions are in millimetres unless otherwise stated

Lighting Legend

- A — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H2 lite T.
- A1 — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H4 lite T.
- B — 4000 LED, weatherproof luminaire, IP65, 7300lm, 58w - as Sylvania Start Waterproof.
- C — 3000K LED dimmable circular luminaire - exact specification by architect.
- D — 3000K LED dimmable surface-mounted luminaire - exact specification by architect.
- E1 — 2W LED recessed emergency pin-spot luminaire, local self-test, 190lm, as Philip Payne TYKE860YS, colour to be confirmed by architect.
- E — 3000K LED weatherproof luminaire, IP65, 684lm, 9W - as Concord Sterling Bulkhead LED 4063831. E - denotes 3hr local self-test emergency version.
- F — 3000K LED 8mm x 2mm lightstrip beneath kitchen units or in coving detail, IP65, 9.6W/m, as Ledridge LED96 / EXT-SL8
- G — Pendant Luminaire - exact specification by architect
- H — 3000K LED surface-mounted luminaire, exact specification by architect.
- 3000K LED pendant feature luminaire, exact specification by architect.
- K — 3000K LED surface-mounted luminaire, IP65, exact specification by architect.
- EXIT — LED Emergency exit sign, as Philip Payne 250MCSV
- PIR — PIR presence detector
- 2 Way light switch
- 1 Way light switch
- Dimmer switch
- INT — Intermediate switch

Rev:	Date:	Status/Amendments :	By:
C3	18.08.23	CONSTRUCTION ISSUE - RCP Co-ordination	K.S
C2	28.04.23	CONSTRUCTION ISSUE - revisions clouded	K.S
C1	21.04.23	PRELIMINARY ISSUE	K.S

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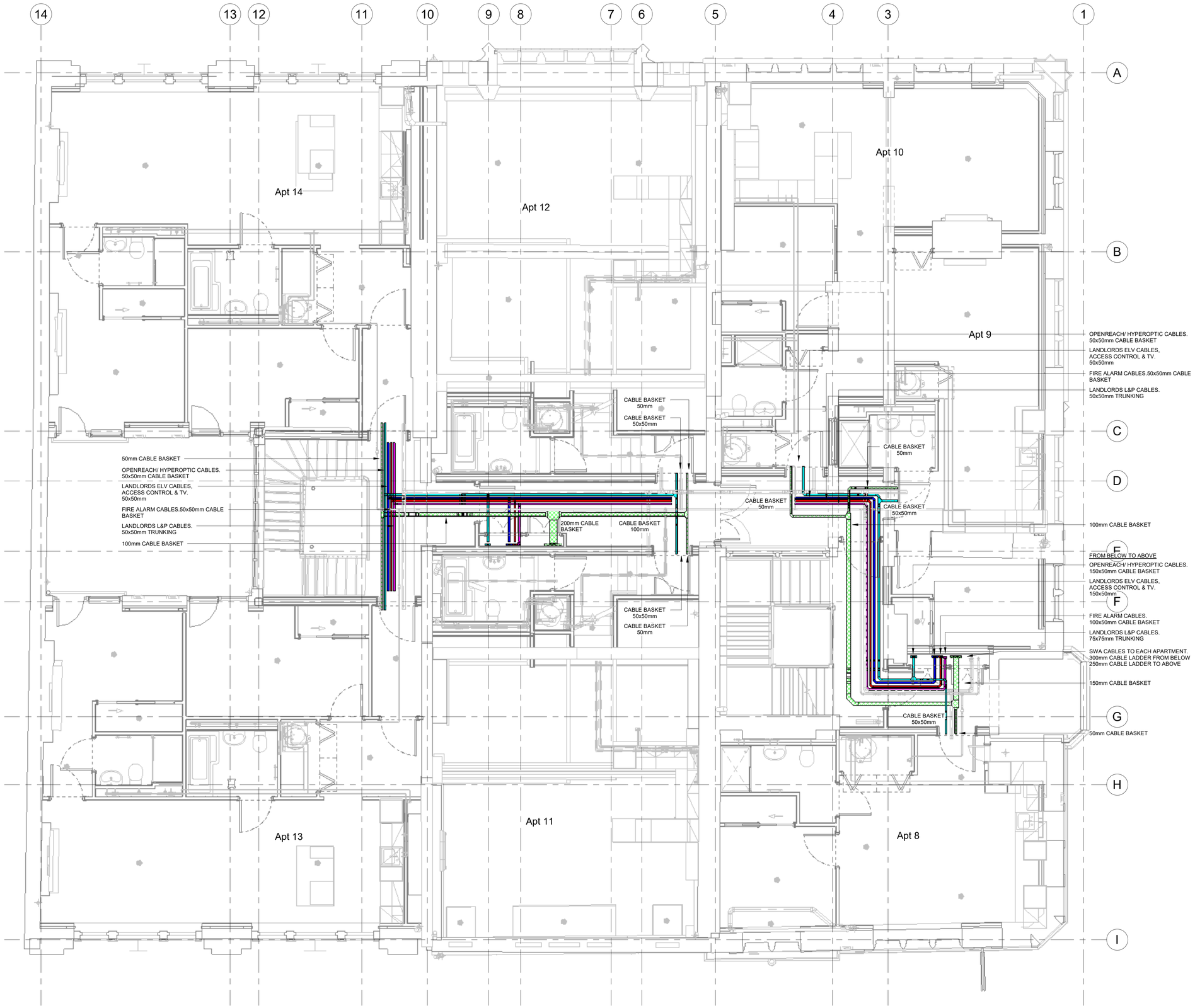
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
SECOND FLOOR, LIGHTING LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	K.S	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 04/19/23
Drawing Number: 4052-KIN- XX-02-DR-E-6300		Drawing Revision: C3



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Containment Services Legend

- Cable Basket (Apartment Cables)
- Trunking (Landlords L&P)
- Cable Basket (Fire Alarm Cables)
- Cable Basket (Landlords ELV & Access Control)
- Cable Basket (Openreach / Hyperoptic Cables)

Rev:	Date:	Status/Amendments :	By:
C2	19.04.23	ISSUED FOR CONSTRUCTION	K.S
C1	14.04.23	PRELIMINARY ISSUE	K.S

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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
SECOND FLOOR, CONTAINMENT SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	G.M
Scale: 1 : 50	Paper Size: A1	Date Created: APRIL 2023
Drawing Number: 4052-KIN- XX-02-DR-E-6600		Drawing Revision: C2



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Fire Alarm Notes

OPEN PLAN APARTMENT FIRE ALARM
BS5839-6 Grade D category LD1. Heat detector/sounder in kitchen. Optical smoke detector/sounder in all bedrooms, optical smoke detector in all circulation spaces that form part of the escape routes and all areas where fire might start, but not in bathrooms, shower rooms or toilets.

COMMUNAL AREAS FIRE ALARM
Apartment corridors - BS5839-6 category L5. Optical smoke detectors in all areas to activate AOV units and alert main panel.

GF / Basement /Roof Communal Areas - BS5839-1 category L3 coverage, activation in this area causes all alarms to sound.

Fire Alarm, Access Control & CCTV Legend

- Electric Door Lock
- Emergency Door Release Break Glass
- X — Exit Push
- PIR — PIR to Unlock Door When Movement Is Detected on the Stairs
- Access System Card Reader
- Video Entry Handsfree Monitor (WIFI)
- Video Entry Panel with Camera, Microphone/Speaker, Digital Call Keypad and Access Card Reader
- LDC — Local Door Controller with Battery Backup
- H — Heat Detector c/w Sounder
- S — Optical Smoke Detector c/w Sounder
- S — Optical Smoke Detector
- FAI — Fire Alarm Interface Unit
- Manual Break Glass
- Fire Alarm Sounder Beacon
- Fire Alarm Sounder
- FAP — Fire Alarm Panel
- CCTV — CCTV Camera
- DH — Door Hold Open Device

Rev:	Date:	Status/Amendments :	By:
C6	18.08.23	ISSUED FOR CONSTRUCTION - RCP Co-ordination	K.S
C5	04.05.23	ISSUED FOR CONSTRUCTION	K.S
C4	21.04.23	ISSUED FOR CONSTRUCTION	K.S
C3	18.04.23	PRELIMINARY ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	22.02.23	PRELIMINARY ISSUE	K.S

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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
SECOND FLOOR, FIRE ALARM AND ACCESS CONTROL SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 21.02.2023
Drawing Number: 4052-KIN- XX-02-DR-E-6700		Drawing Revision: C6



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DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. The contractor shall ensure that rodding eyes and access points are accessible for maintenance purposes. Where they are accessible by destructive access these shall be marked up on the as fitted drawings.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and bird mesh, and openings by main contractor. Detail as per architect and roofing specialists drawings.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev:	Date:	Status/Amendments:	By:
C5	21.07.23	CHANGES CLOUDED	M.H
C4	12.06.23	CHANGES CLOUDED	M.H
C3	11.05.23	DIMENSIONS ADDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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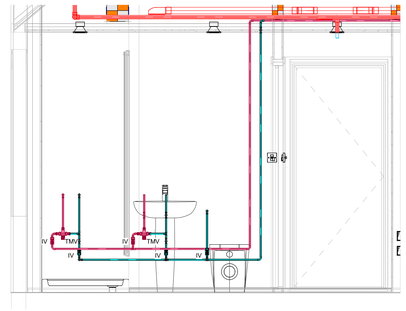
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
SECOND FLOOR, ABOVE GROUND
DRAINAGE LAYOUT

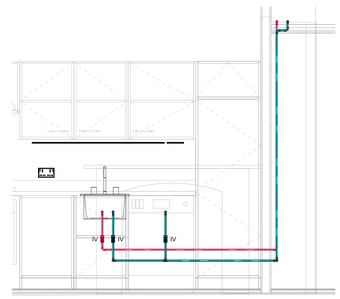
Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	01/12/22
Drawing Number:		Drawing Revision:
4052-KIN- XX-02-DR-M-5200		C5



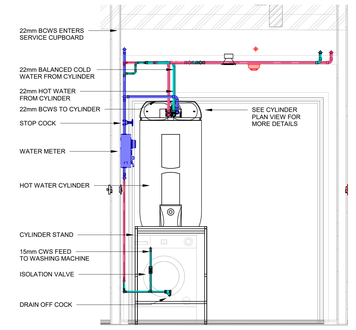
1 02 - Second Floor Level - Water distribution and supply systems
1 : 50



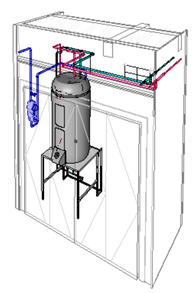
2 2nd Typical Bathroom Elevation
1 : 20



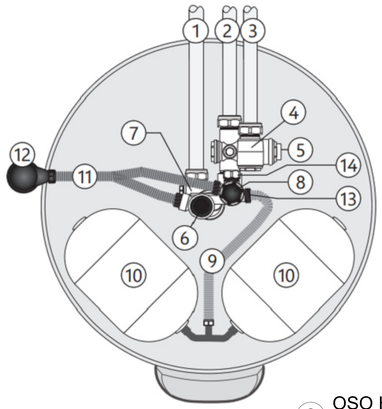
3 2nd Typical Kitchen Elevation
1 : 20



4 2nd Typical Service Cupboard
1 : 20



5 2nd Floor Typical Services Cupboard 3D



6 OSO HWC - Pipe & Valve Arrangement
1 : 1

No.	Description	Dim.
1	Domestic hot water outlet (DHW out)	ø22 mm
2	Balanced cold water connection (Bal. CW)	ø22 mm
3	Cold water main supply inlet (CW in)	ø22 mm
4	Line strainer	-
5	Pressure reducing valve - 3 bar	-
6	Expansion relief valve - 8 bar	1/2"
7	Hot water blending valve	-
8	Temp&pressure relief valve - 90°C / 10 bar	1/2"
9	Flexible hose and T-piece (120-250 l. only)	-
10	Expansion vessel(s) (120-250 l. only)	-
11	Flexible Y-hose	-
12	Tundish	-
13	Expansion vessel connection point	1/2" BSPM
14	Secondary Return - SX 250-300 l. only	1/2"male / ø15

Domestic Hot & Cold Water Services Legend

- Mains Cold Water Service
- Boosted Cold Water Service
- Balanced Cold Water Service (Apt)
- Hot Water Service (Apt)
- Sprinkler Pipework (by Specialist)
- Dry Riser Pipework (by Specialist)

MCWS	Mains Cold Water Services
BCWS	Boosted Cold Water Services
DHWS	Domestic Hot Water Services
SC	Stop Cock
IV	Isolation Valve
TMV	Thermostatic Mixing Valve
DOC	Drain Off Cock
DTLL	Drop to Low Level
RTA	Rise to Above
DTB	Drop to Below
LL	Low Level
HL	High Level
WC	Water Closet
WHB	Wash Hand Basin
DW	Dishwasher
WM	Washing Machine
CV	Ceiling Void
CYL	Hot Water Cylinder

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Domestic Hot & Cold Water Services Notes

1. The domestic water services installation indicated on these drawings consists of:
   Installation of incoming mains water supply.
   Installation of hot water generation system.
2. Hot & cold pipework contained within voids shall be installed in copper to BS 2871 Part 1, Table X of the sizes and in the position indicated on the drawings. All pipework shall be copper tube of British manufacture, complying entirely to BS EN 1057: 1996.
3. All final connections to sanitaryware shall be supplied with a ballofix type stop valve of the same size as the pipework shown on the drawings.
4. 15mm drain cocks shall be installed at any low points in the system where water may remain after normal drainage throughout the system.
5. Thermal insulation shall be carried out by a specialist sub contractor. Insulation to be mineral wool, pre formed pipe sections with normal density 80kg/m. Thermal conductivity not exceeding 0.04W/mK. Reinforced aluminium foil finish with at least 25mm overlap (All insulation shall be Class 0 or equivalent).
6. Upon completion of the flushing and testing of the domestic water services pipework, the installations shall be satisfactorily chlorinated in accordance with BS 6700.
7. All pipework passing through fire compartment walls and floor slabs to be fire stopped.
8. All pipework to be run in voids where possible, or boxed-in to architect's detail.
9. All fittings on copper pipework shall be integral solder ring type fitting containing a "lead free" solder and suitable for wholesome / potable water as I.M.I Yorkshire Fitting Limited and each fitting clearly marked with "YP" logo.
10. All rising pipework shall be truly "plumb" and where exposed in rooms, the contractor shall discreetly route the pipework into the corners. No pipework is to be routed across windows nor shall it obstruct doorway access.
11. All bends, elbows, sets - both double and single - and other fittings necessary to carry out the complete installation, but not necessarily shown due to the scale of the drawings, shall be allowed for including sets, bends, etc. necessary for passing round soil vents, rain-water pipes and waste pipes, etc.
12. The contractor shall include for providing and installing all necessary supports, brackets and steelwork, etc. Including primary supports / steelwork as required.
13. The contractor shall provide and install valves where indicated on the schematic and layouts. Drain cocks shall be provided at all low points.
14. All valves and cocks must be fitted in such a manner that they are accessible for operation and maintenance.
15. All isolating, regulating, and check valves shall be in accordance with the water supply (water fittings) regulations 1999.
16. Isolating and double check valves shall be installed in hot and cold water services pipework connections serving washing machines.
17. All isolating, regulating, and check valves positioned on copper pipework shall be suitable for compression connection.
18. All stopcocks shall be of an approved clearway, high pressure screw down type with crutch handled and raised seating and suitable for compression connection and all in accordance with BS 1010.
19. Drain cocks on internal M.W.S. services shall be of the screw down pattern drain tap with externally serrated hose nozzle to be fitted, where necessary, and where indicated for emptying the pipes, etc. and all in accordance with BS 2897.

Rev	Date	Status/Amendments:	By:
C4	13.10.23	CONSTRUCTION ISSUE - Sprinklers added.	M.H
C3	02.05.23	ARCHITECTS LAYOUT UPDATED	M.H
C2	10.03.23	PRELIMINARY ISSUE - APT NUMBERS ADDED	M.H
C1	24.02.23	PRELIMINARY ISSUE	M.H

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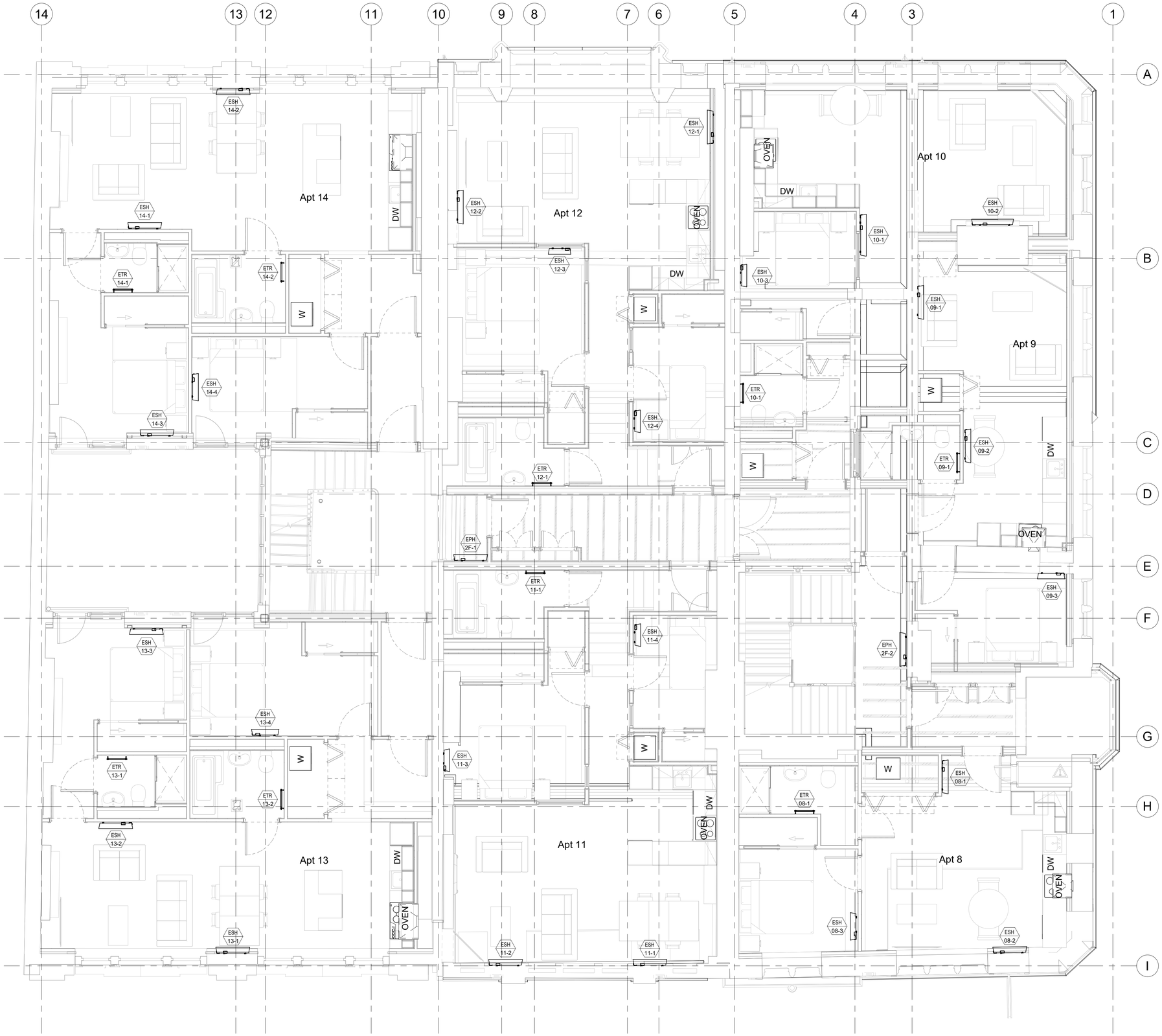
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
SECOND FLOOR, DOMESTIC HOT & COLD WATER SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
As indicated	A0	21.02.2023
Drawing Number:		Drawing Revision:
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Heating Legend

	Electric Storage Heater
	Overdoor Air Curtain
	Electric Tubular Heater
	Electric Towel Heater
ESH	Electric Storage Heater
EPH	Electric Panel Heater
AC	Overdoor Air Curtain
ETH	Electric Tubular Heater
ETR	Electric Towel Rail

Rev:	Date:	Status/Amendments:	By:
C2	20.04.23	APARTMENT NUMBERS ADDED	M.H
C1	06.03.23	PRELIMINARY ISSUE	M.H

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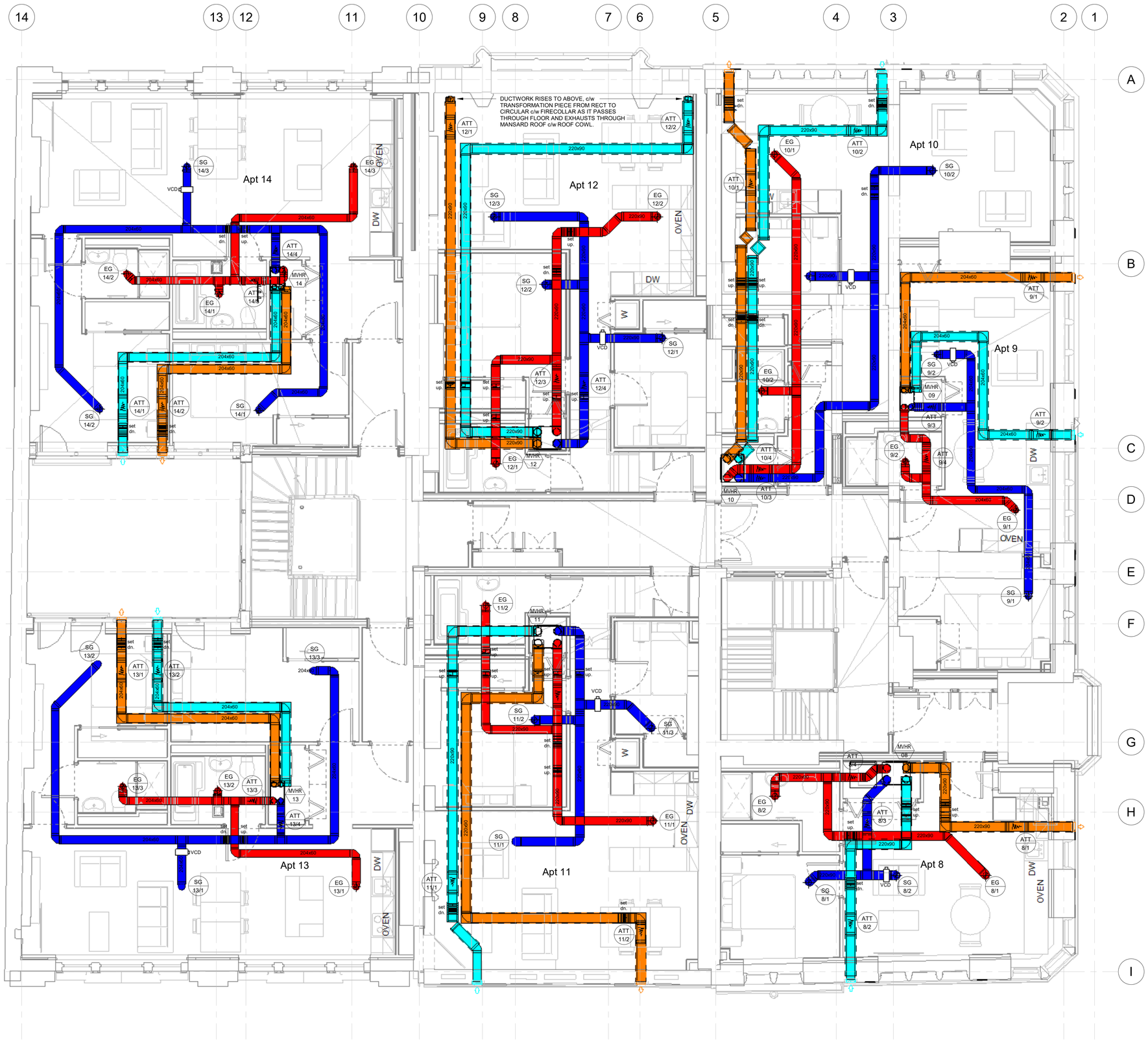
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Client:
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Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
SECOND FLOOR, HEATING SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	28.03.23
Drawing Number:		Drawing Revision:
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Ventilation Notes

1. All ductwork shall be manufactured & installed in accordance with besa dw154 for plastic ductwork within apartments and dw144 for ductwork in communal areas.
2. All ductwork within apartments shall be 204 x 60 unless otherwise stated.
3. Fire dampers/fire collars or wraps shall be provided where ductwork passes through any fire rated structure.
4. Thermal insulation shall be applied to the following areas:

   Untreated fresh air ductwork from external louvre to fan within the building.

   Exhaust ductwork from external louvre to fan within the building.
5. Bathroom/wc doors shall be undercut to provide ventilation air path routes.
6. Where apartment normal ventilation rates (based on floor area) are equal to the minimum high ventilation rates, a 20% margin is to be applied to high rate figures.
7. Openable windows to provide short periods of purge ventilation to remove odours, excess humidity and reduce temperatures in habitable rooms. Where there are no external windows in a habitable room, purge shall be provided by increases the speed of the MVHR.
8. All external louvres shall be Rytons A1 Fire Rated Square Holed Double Air Brick Ducting kits.

Ventilation Legend

- Fresh Air Intake Insulated Ductwork
- Room Supply Air Ductwork
- Room Extract Air Ductwork
- Exhaust Air Insulated Ductwork
- MVHR Unit - ECO2
- MVHR Unit - ECO4
- Attenuator
- VCD — Volume Control Damper
- COMBINED INTAKE / EXHAUST ROOF TERMINAL NUAIRE TERMINATOR OR SIMILAR.

Rev:	Date:	Status/Amendments:	By:
C2	18.08.23	CONSTRUCTION ISSUE	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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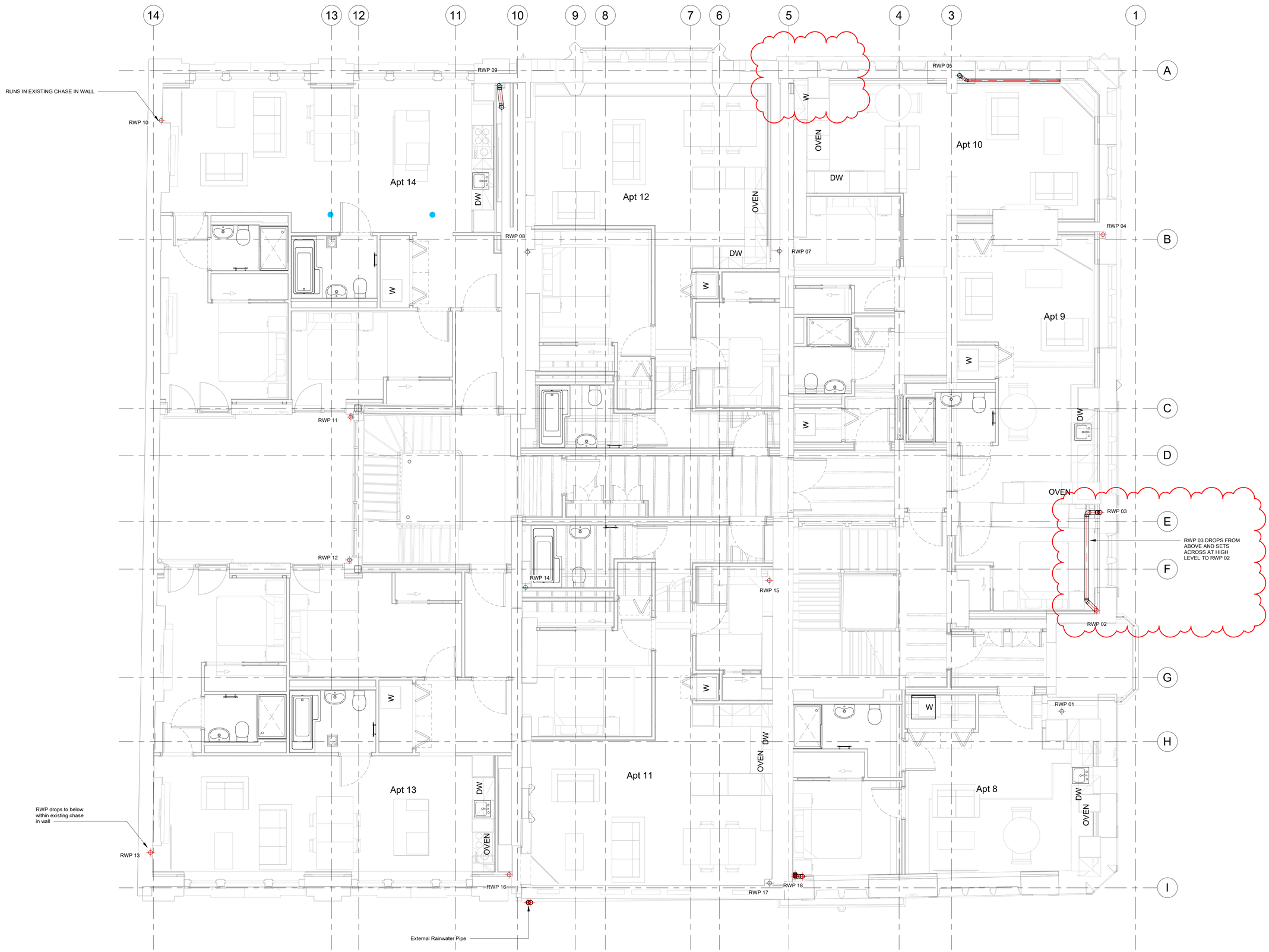
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
SECOND FLOOR, VENTILATION LAYOUT

Drawn By:	Checked By:	Cad By:
M.H	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	12.12.2022
Drawing Number:		Drawing Revision:
4052-KIN- XX-02-DR-M-5700		C2



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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC). ALL PIPEWORK TO BE 100Ø UNLESS OTHERWISE STATED.
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE PROPOSED ROOF WORKS AND MEP DESIGN
8. MAIN CONTRACTOR TO TAKE COGNISANCE THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 - 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1000mm HORIZONTAL AND 1000mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF.
RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTORS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND SYSTEM TO BE DETERMINED BY ACIES.
17. THE RAINWATER SYSTEM VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS, THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED INLINE WITH THE ACOUSTICIANNS REPORT, RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C4	21.07.23	CHANGES CLOUDED	M.H
C3	04.05.23	CHANGES CLOUDED	M.H
C2	21.04.23	REVISED FOLLOWING COMMENTS	M.H
C1	11.04.23	PRELIMINARY ISSUE	M.H

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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
SECOND FLOOR, RAINWATER DRAINAGE

Drawn By:	Checked By:	Cad By:
GM	MH	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	03/10/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-02-DR-M-5800		C4

ELEVATIONS BETWEEN GRIDLINES 14 - 10 TAKEN FROM
03 - Third Floor Level (58-60)

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 10 - 5 TAKEN FROM
Survey - B Level 03

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 5 - 2 TAKEN FROM
Survey - C Level 03

Note:- All builders work elevation references are to the centre of the hole

14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I

Apt 21

Apt 19

Apt 17

Apt 16

Apt 20

Apt 18

Apt 15
Duplex

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C1	10.08.23	CONSTRUCTION ISSUE	M.H

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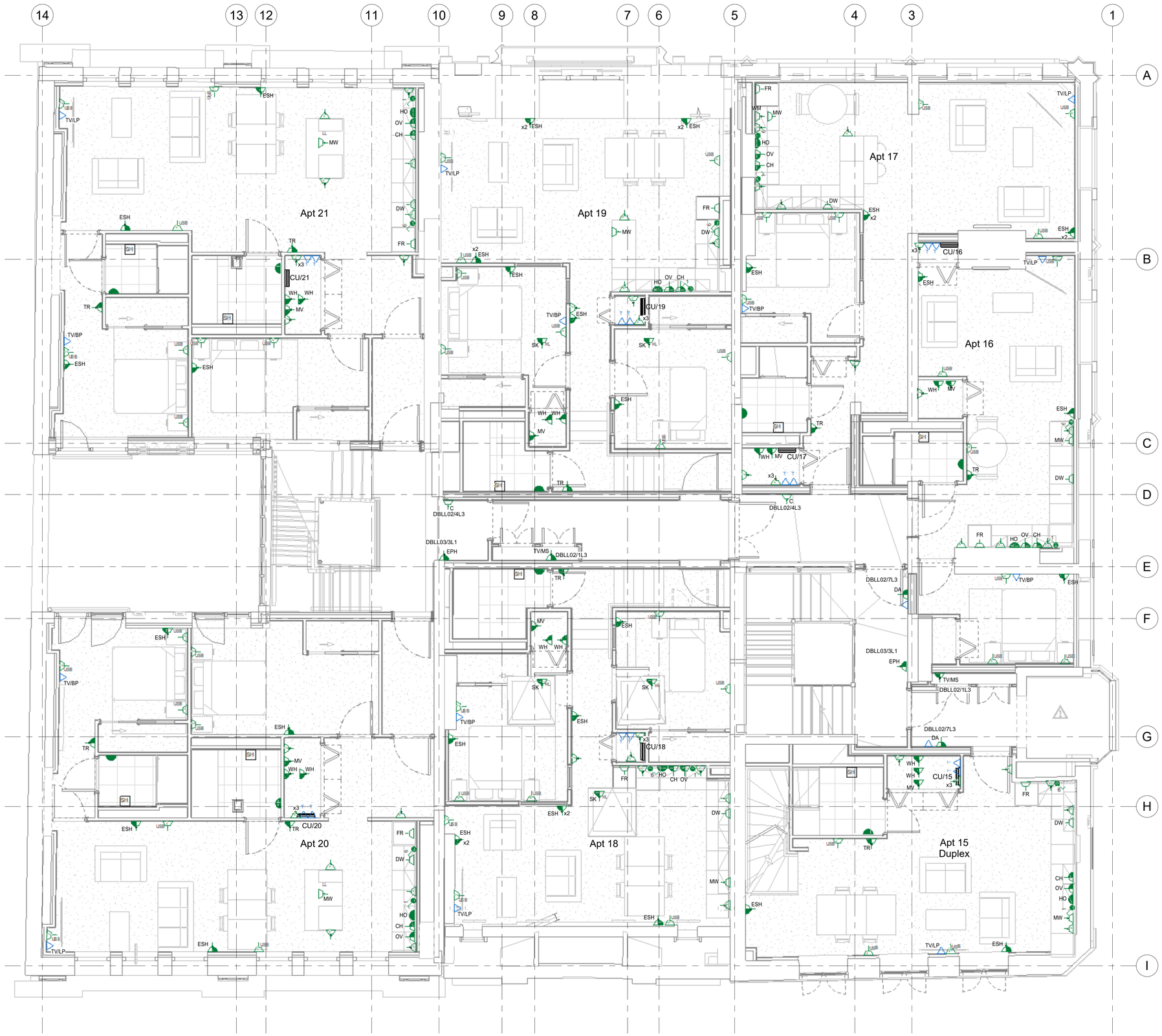
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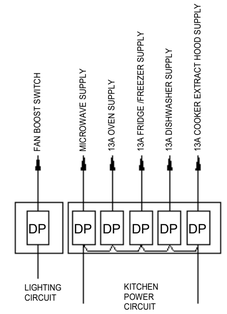
Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
THIRD FLOOR, BUILDERSWORK

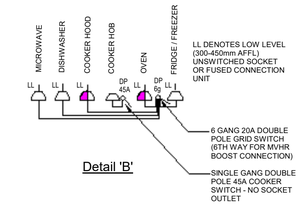
Drawn By:	Checked By:	Cad By:
M.E	M.H	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	09.09.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-03-BW-M-5700		C1





Detail 'A'

6 GANG APPLIANCE SWITCH - 20A DP GRID LOCATION AS SHOWN ON DRAWINGS.



LL DENOTES LOW LEVEL (300-450mm AFFL) UNSWITCHED SOCKET OR FUSED CONNECTION UNIT

Detail 'B'

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Small Power Legend

- 32A SPN IP65 isolator for lift to manufacturers requirements.
- CU/** Consumer Unit.
- TUSB Twin Switched Socket Outlet with Integral USB Charger.
- Twin Switched Socket Outlet (N Denotes Number of Units).
- Switched Fused Connection Unit (N Denotes Number of Units).
- Single Switched Socket Outlet.
- TC Single Switched Lockable Cleaners Socket Outlet.
- Single Unswitched Socket Outlet.
- Cable Outlet.
- Single Back Box and Blank Plate.
- Shaver Outlet (With Integral Isolating Transformer)
- TV/LP TV Outlet Lounge Plate.
- TV/BP TV Outlet Bedroom Plate.
- Telecoms Master Outlet.
- Single Data Outlet
- Engraved Isolating DP Switch.
- Unswitched Fused Connection Unit

H/L	-	High Level
L/L	-	Low Level
WH	-	Water Heater
ODH	-	Over Door Heater
TR	-	Towel Rail
MV	-	Mechanical Ventilation
EPH	-	Electrical Panel Heater
ESH	-	Electrical Storage Heater
ETH	-	Electrical Tube Heater
MV	-	Microwave
DW	-	Dishwasher
DA	-	Door Access Control
WM	-	Washing Machine
CH	-	Cooker Hood
OV	-	Oven
HO	-	Hob
FR	-	Fridge / Freezer
FSD	-	Fire and Smoke Damper

Rev:	Date:	Status/Amendments :	By:
C3	11.10.23	CONSTRUCTION ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	20.02.23	PRELIMINARY ISSUE	K.S

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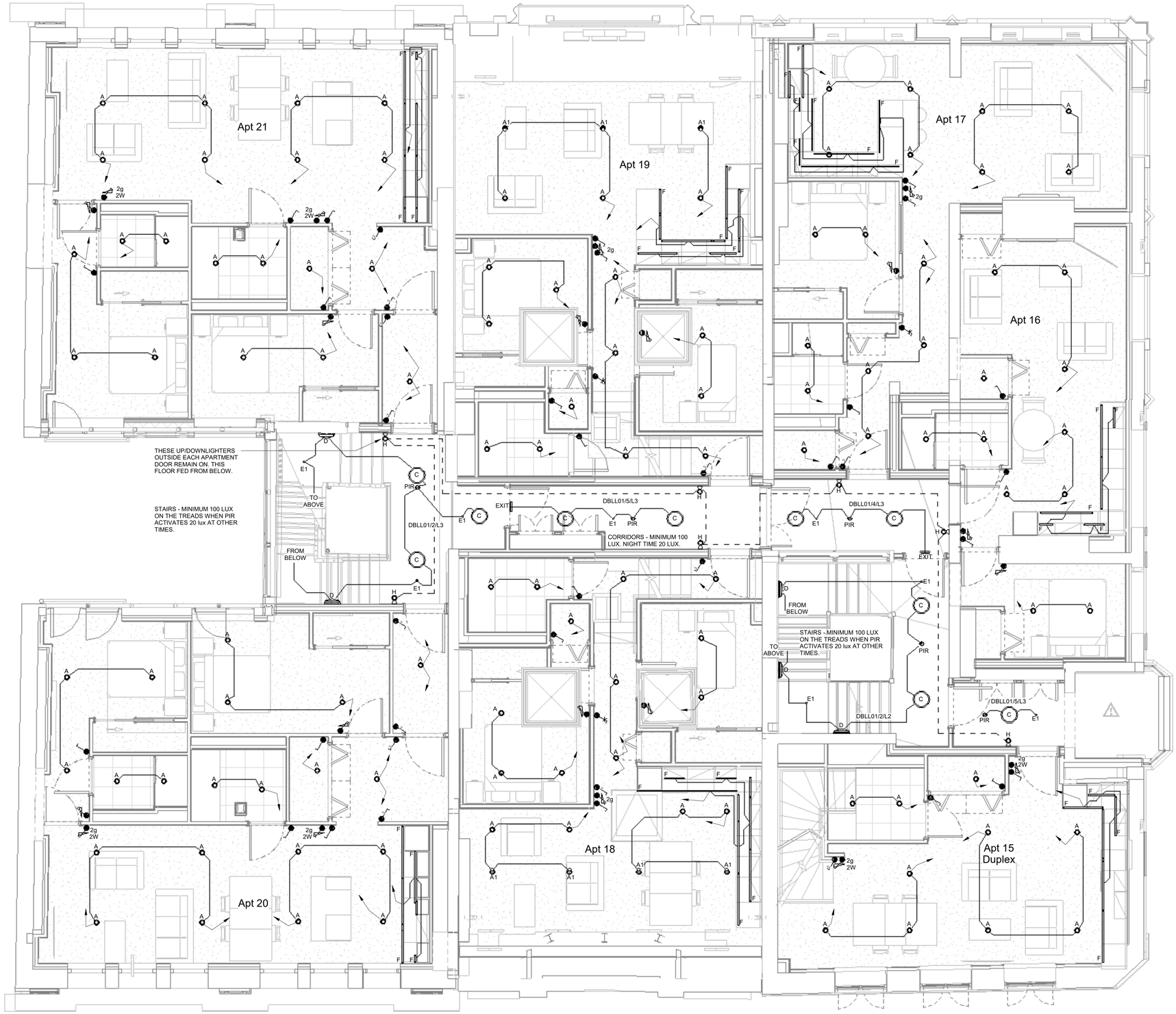
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Client:
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Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
THIRD FLOOR, SMALL POWER AND DATA/COMMS LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	10.02.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-03-DR-E-6200		C3



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Lighting Legend

- A — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H2 lite T.
- A1 — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H4 lite T.
- B — 4000 LED, weatherproof luminaire, IP65, 7300lm, 58w - as Sylvania Start Waterproof.
- C — 3000K LED dimmable circular luminaire - exact specification by architect.
- D — 3000K LED dimmable surface-mounted luminaire - exact specification by architect.
- E1 — 2W LED recessed emergency pin-spot luminaire, local self-test, 190lm, as Philip Payne TYKE860YS, colour to be confirmed by architect.
- E — 3000K LED weatherproof luminaire, IP65, 684lm, 9W - as Concord Sterling Bulkhead LED 4063831. E - denotes 3hr local self-test emergency version.
- F — 3000K LED 8mm x 2mm lightstrip beneath kitchen units or in coving detail, IP65, 9.6W/m, as Ledridge LED96 / EXT-SL8
- G — Pendant Luminaire - exact specification by architect
- H — 3000K LED surface-mounted luminaire, exact specification by architect.
- 3000K LED pendant feature luminaire, exact specification by architect.
- K — 3000K LED surface-mounted luminaire, IP65, exact specification by architect.
- EXIT — LED Emergency exit sign, as Philip Payne 250MCSV
- PIR — PIR presence detector
- 2 Way light switch
- 1 Way light switch
- Dimmer switch
- INT — Intermediate switch

Rev:	Date:	Status/Amendments :	By:
C3	18.08.23	CONSTRUCTION ISSUE - RCP Co-ordination	K.S
C2	28.04.23	CONSTRUCTION ISSUE - revisions clouded	K.S
C1	21.04.23	PRELIMINARY ISSUE	K.S

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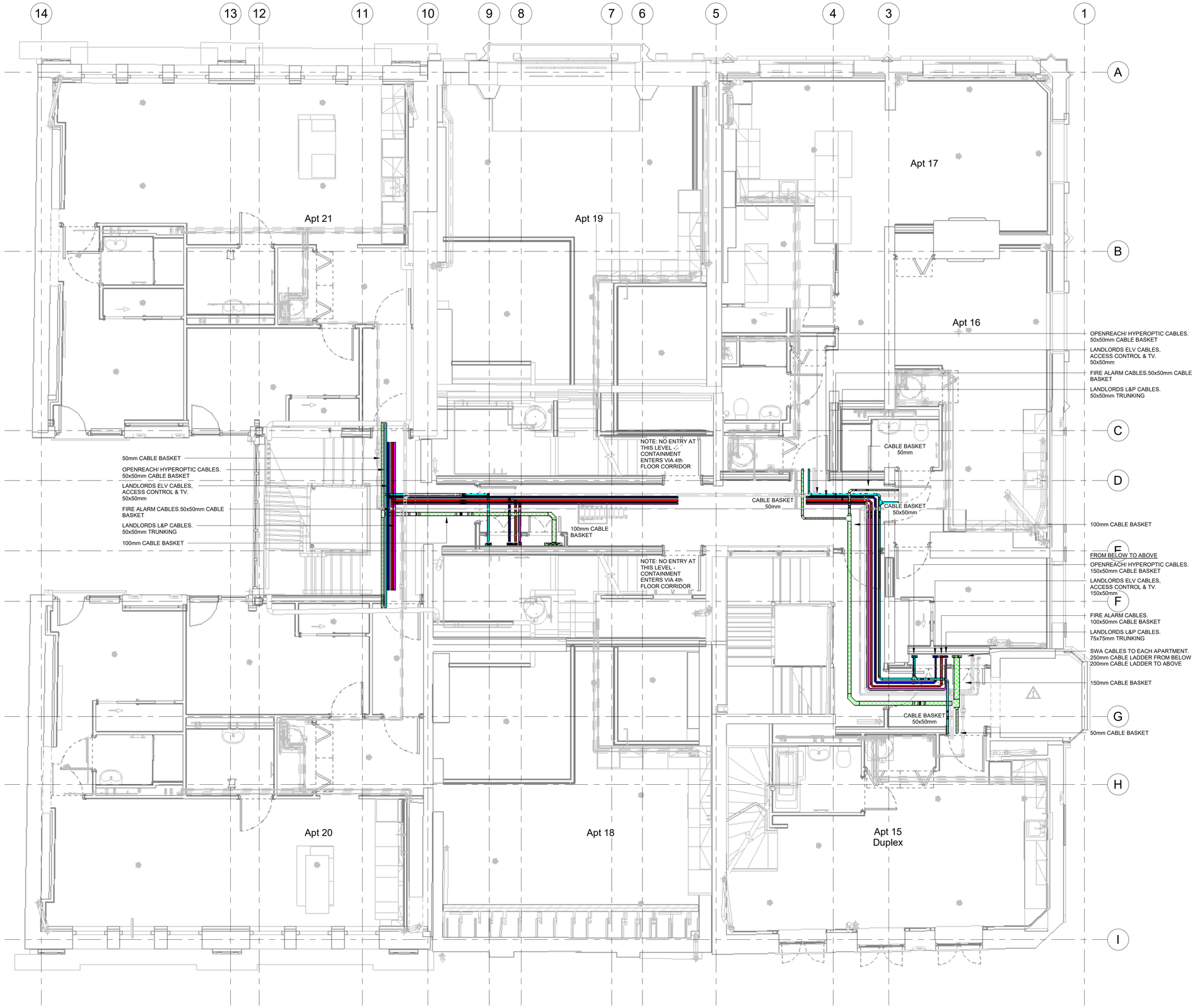
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
THIRD FLOOR, LIGHTING LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	K.S	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 19.04.2023
Drawing Number: 4052-KIN- XX-03-DR-E-6300		Drawing Revision: C3



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Containment Services Legend

- Cable Basket (Apartment Cables)
- Trunking (Landlords L&P)
- Cable Basket (Fire Alarm Cables)
- Cable Basket (Landlords ELV & Access Control)
- Cable Basket (Openreach / Hyperoptic Cables)

Rev:	Date:	Status/Amendments :	By:
C2	19.04.23	ISSUED FOR CONSTRUCTION	K.S
C1	14.04.23	PRELIMINARY ISSUE	K.S

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Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
THIRD FLOOR, CONTAINMENT SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	APRIL 2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-03-DR-E-6600		C2



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Fire Alarm Notes

OPEN PLAN APARTMENT FIRE ALARM
BS5839-6 Grade D category LD1. Heat detector/sounder in kitchen. Optical smoke detector/sounder in all bedrooms, optical smoke detector in all circulation spaces that form part of the escape routes and all areas where fire might start, but not in bathrooms, shower rooms or toilets.

COMMUNAL AREAS FIRE ALARM
Apartment corridors - BS5839-6 category L5. Optical smoke detectors in all areas to activate AOV units and alert main panel.

GF / Basement /Roof Communal Areas - BS5839-1 category L3 coverage, activation in this area causes all alarms to sound.

Fire Alarm, Access Control & CCTV Legend

- Electric Door Lock
- Emergency Door Release Break Glass
- X — Exit Push
- PIR — PIR to Unlock Door When Movement Is Detected on the Stairs
- Access System Card Reader
- Video Entry Handsfree Monitor (WIFI)
- Video Entry Panel with Camera, Microphone/Speaker, Digital Call Keypad and Access Card Reader
- LDC — Local Door Controller with Battery Backup
- H — Heat Detector c/w Sounder
- S — Optical Smoke Detector c/w Sounder
- S — Optical Smoke Detector
- FAI — Fire Alarm Interface Unit
- Manual Break Glass
- Fire Alarm Sounder Beacon
- Fire Alarm Sounder
- FAP — Fire Alarm Panel
- CCTV — CCTV Camera
- DH — Door Hold Open Device

Rev:	Date:	Status/Amendments :	By:
C6	18.08.23	ISSUED FOR CONSTRUCTION - RCP Co-ordination	K.S
C5	04.05.23	ISSUED FOR CONSTRUCTION	K.S
C4	21.04.23	ISSUED FOR CONSTRUCTION	K.S
C3	18.04.23	PRELIMINARY ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	23.02.23	PRELIMINARY ISSUE	K.S

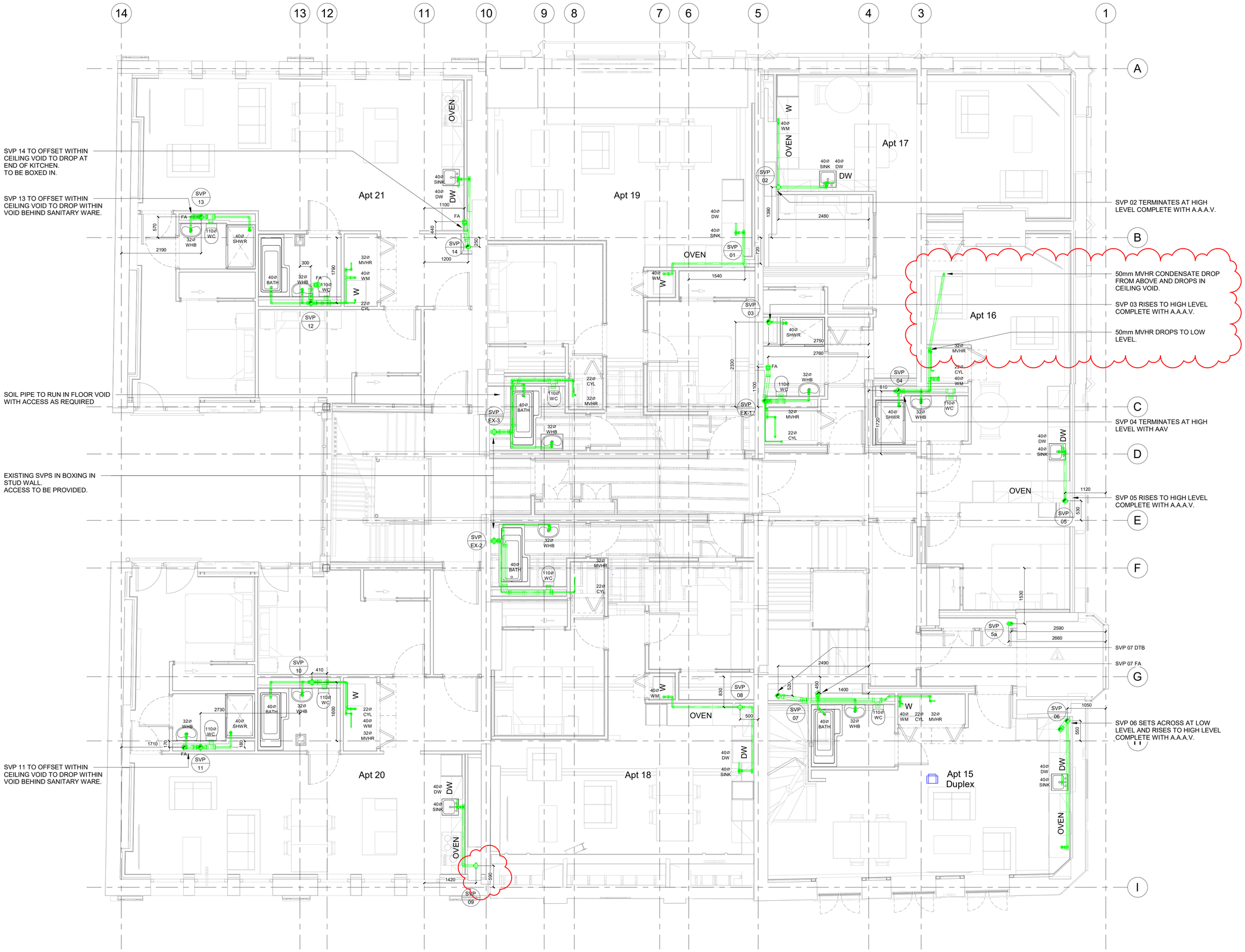
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
THIRD FLOOR, FIRE ALARM AND ACCESS CONTROL SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	A.A	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 21.02.2023
Drawing Number: 4052-KIN- XX-03-DR-E-6700		Drawing Revision: C6



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4. All dimensions are in millimetres unless otherwise stated

DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. The contractor shall ensure that rodding eyes and access points are accessible for maintenance purposes. Where they are accessible by destructive access these shall be marked up on the as fitted drawings.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and bird mesh, and openings by main contractor. Detail as per architect and roofing specialists drawings.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev:	Date:	Status/Amendments:	By:
C5	21.07.23	CHANGES CLOUDED	M.H
C4	12.06.23	CHANGES CLOUDED	M.H
C3	11.05.23	DIMENSIONS ADDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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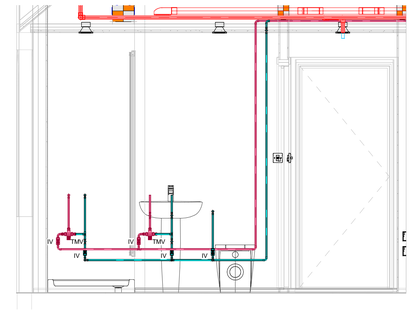
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
THIRD FLOOR, ABOVE GROUND DRAINAGE

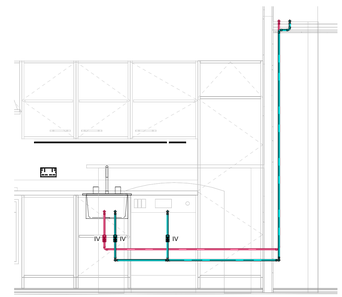
Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale: 1 : 50	Paper Size: A1	Date Created: 01/12/22
Drawing Number: 4052-KIN- XX-03-DR-M-5200		Drawing Revision: C5



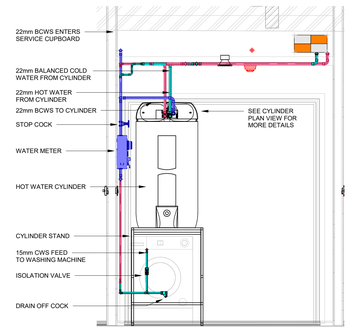
1 03 - Third Floor Level - Water distribution and supply systems
1 : 50



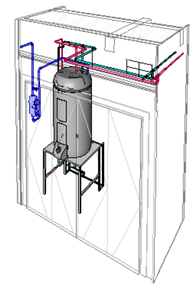
2 3rd Typical Bathroom Elevation
1 : 20



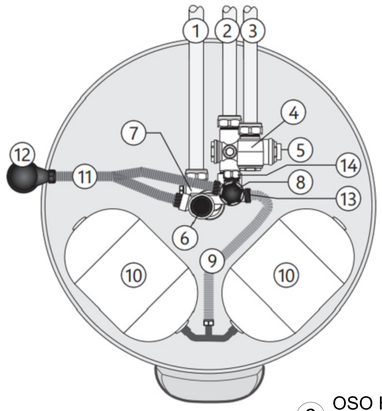
3 3rd Typical Kitchen Elevation
1 : 20



4 3rd Typical Service Cupboard
1 : 20



5 3rd Floor Typical Services Cupboard 3D



6 OSO HWC - Pipe & Valve Arrangement
1 : 1

No.	Description	Dim.
1	Domestic hot water outlet (DHW out)	ø22 mm
2	Balanced cold water connection (Bal. CW)	ø22 mm
3	Cold water main supply inlet (CW in)	ø22 mm
4	Line strainer	-
5	Pressure reducing valve - 3 bar	-
6	Expansion relief valve - 8 bar	1/2"
7	Hot water blending valve	-
8	Temp&pressure relief valve - 90°C / 10 bar	1/2"
9	Flexible hose and T-piece (120-250 l. only)	-
10	Expansion vessel(s) (120-250 l. only)	-
11	Flexible Y-hose	-
12	Tundish	-
13	Expansion vessel connection point	1/2" BSPM
14	Secondary Return - SX 250-300 l. only	1/2"male / ø15

Domestic Hot & Cold Water Services Legend

- Mains Cold Water Service
- Boosted Cold Water Service
- Balanced Cold Water Service (Apt)
- Hot Water Service (Apt)
- Sprinkler Pipework (by Specialist)
- Dry Riser Pipework (by Specialist)

MCWS	Mains Cold Water Services
BCWS	Boosted Cold Water Services
DHWS	Domestic Hot Water Services
SC	Stop Cock
IV	Isolation Valve
TMV	Thermostatic Mixing Valve
DOC	Drain Off Cock
DTLL	Drop to Low Level
RTA	Rise to Above
DTB	Drop to Below
LL	Low Level
HL	High Level
WC	Water Closet
WHB	Wash Hand Basin
DW	Dishwasher
WM	Washing Machine
CV	Ceiling Void
CYL	Hot Water Cylinder

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Domestic Hot & Cold Water Services Notes

1. The domestic water services installation indicated on these drawings consists of:
   Installation of incoming mains water supply.
   Installation of hot water generation system.
2. Hot & cold pipework contained within voids shall be installed in copper to BS 2871 Part 1, Table X of the sizes and in the position indicated on the drawings. All pipework shall be copper tube of British manufacture, complying entirely to BS EN 1057: 1996.
3. All final connections to sanitaryware shall be supplied with a ballofix type stop valve of the same size as the pipework shown on the drawings.
4. 15mm drain cocks shall be installed at any low points in the system where water may remain after normal drainage throughout the system.
5. Thermal insulation shall be carried out by a specialist sub contractor. Insulation to be mineral wool, pre formed pipe sections with normal density 80kg/m. Thermal conductivity not exceeding 0.04W/mK. Reinforced aluminium foil finish with at least 25mm overlap (All insulation shall be Class O or equivalent).
6. Upon completion of the flushing and testing of the domestic water services pipework, the installations shall be satisfactorily chlorinated in accordance with BS 6700.
7. All pipework passing through fire compartment walls and floor slabs to be fire stopped.
8. All pipework to be run in voids where possible, or boxed-in to architect's detail.
9. All fittings on copper pipework shall be integral solder ring type fitting containing a "lead free" solder and suitable for wholesome / potable water as I.M.I Yorkshire Fitting Limited and each fitting clearly marked with "YP" logo.
10. All rising pipework shall be truly "plumb" and where exposed in rooms, the contractor shall discreetly route the pipework into the corners. No pipework is to be routed across windows nor shall it obstruct doorway access.
11. All bends, elbows, sets - both double and single - and other fittings necessary to carry out the complete installation, but not necessarily shown due to the scale of the drawings, shall be allowed for including sets, bends, etc. necessary for passing round soil vents, rain-water pipes and waste pipes, etc.
12. The contractor shall include for providing and installing all necessary supports, brackets and steelwork, etc. Including primary supports / steework as required.
13. The contractor shall provide and install valves where indicated on the schematic and layouts. Drain cocks shall be provided at all low points.
14. All valves and cocks must be fitted in such a manner that they are accessible for operation and maintenance.
15. All isolating, regulating, and check valves shall be in accordance with the water supply (water fittings) regulations 1999.
16. Isolating and double check valves shall be installed in hot and cold water services pipework connections serving washing machines.
17. All isolating, regulating, and check valves positioned on copper pipework shall be suitable for compression connection.
18. All stopcocks shall be of an approved clearway, high pressure screw down type with crutch handled and raised seating and suitable for compression connection and all in accordance with BS 1010.
19. Drain cocks on internal M.W.S. services shall be of the screw down pattern drain tap with externally serrated hose nozzle to be fitted, where necessary, and where indicated for emptying the pipes, etc. and all in accordance with BS 2897.

Rev:	Date:	Status/Amendments:	By:
C4	13.10.23	CONSTRUCTION ISSUE - Sprinklers added.	M.H
C3	02.05.23	ARCHITECTS LAYOUT UPDATED	M.H
C2	10.03.23	PRELIMINARY ISSUE - APT NUMBERS ADDED	M.H
C1	24.02.23	PRELIMINARY ISSUE	M.H

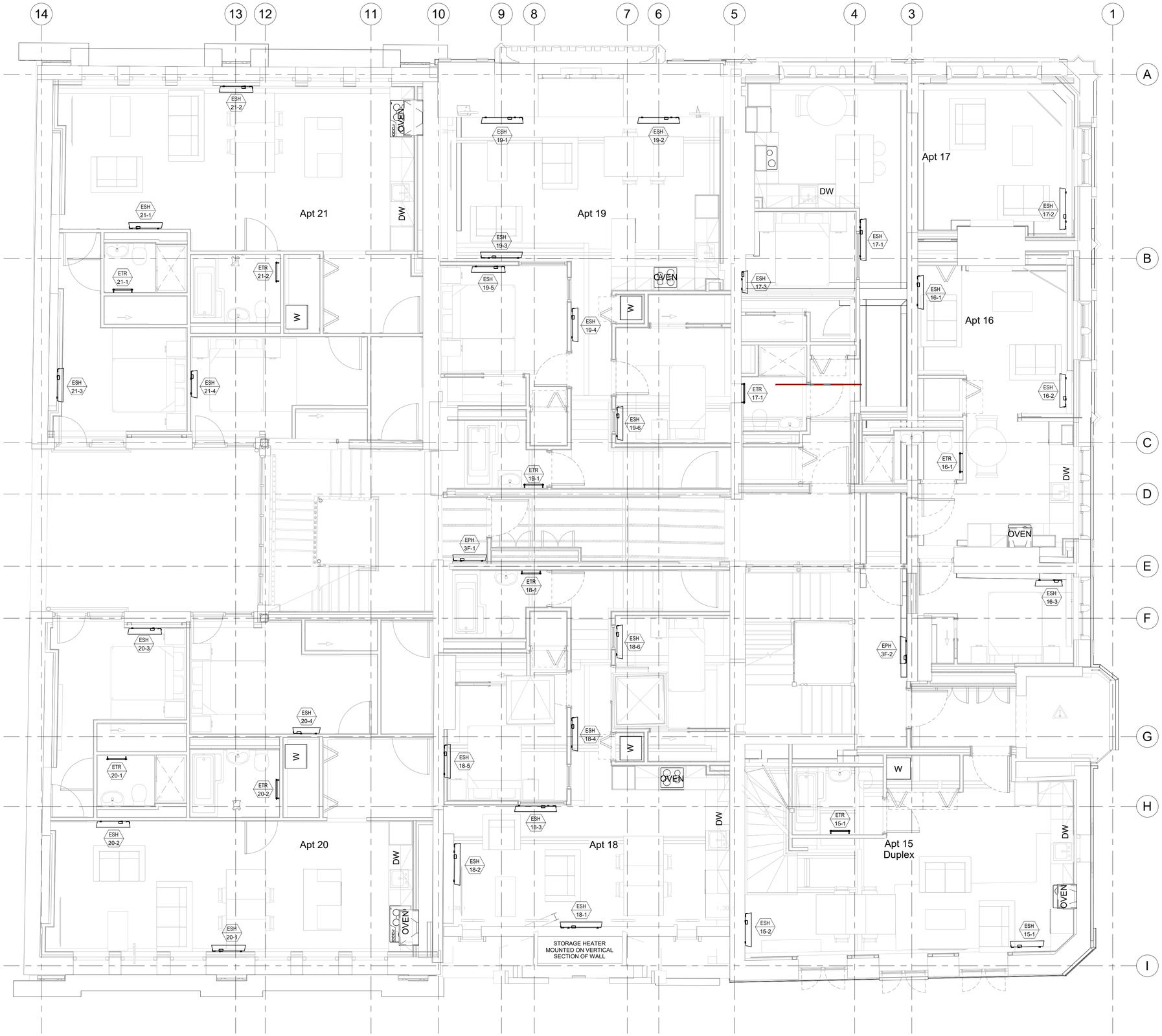
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
THIRD FLOOR, DOMESTIC HOT & COLD WATER SERVICES LAYOUT

Drawn By:	Checked By:	Cod By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A0	21.02.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-03-DR-M-5300		C4



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Heating Legend

	Electric Storage Heater
	Overdoor Air Curtain
	Electric Tubular Heater
	Electric Towel Heater
ESH	Electric Storage Heater
EPH	Electric Panel Heater
AC	Overdoor Air Curtain
ETH	Electric Tubular Heater
ETR	Electric Towel Rail

Rev:	Date:	Status/Amendments:	By:
C2	20.04.23	APARTMENT NUMBERS ADDED	M.H
C1	06.03.23	PRELIMINARY ISSUE	M.H

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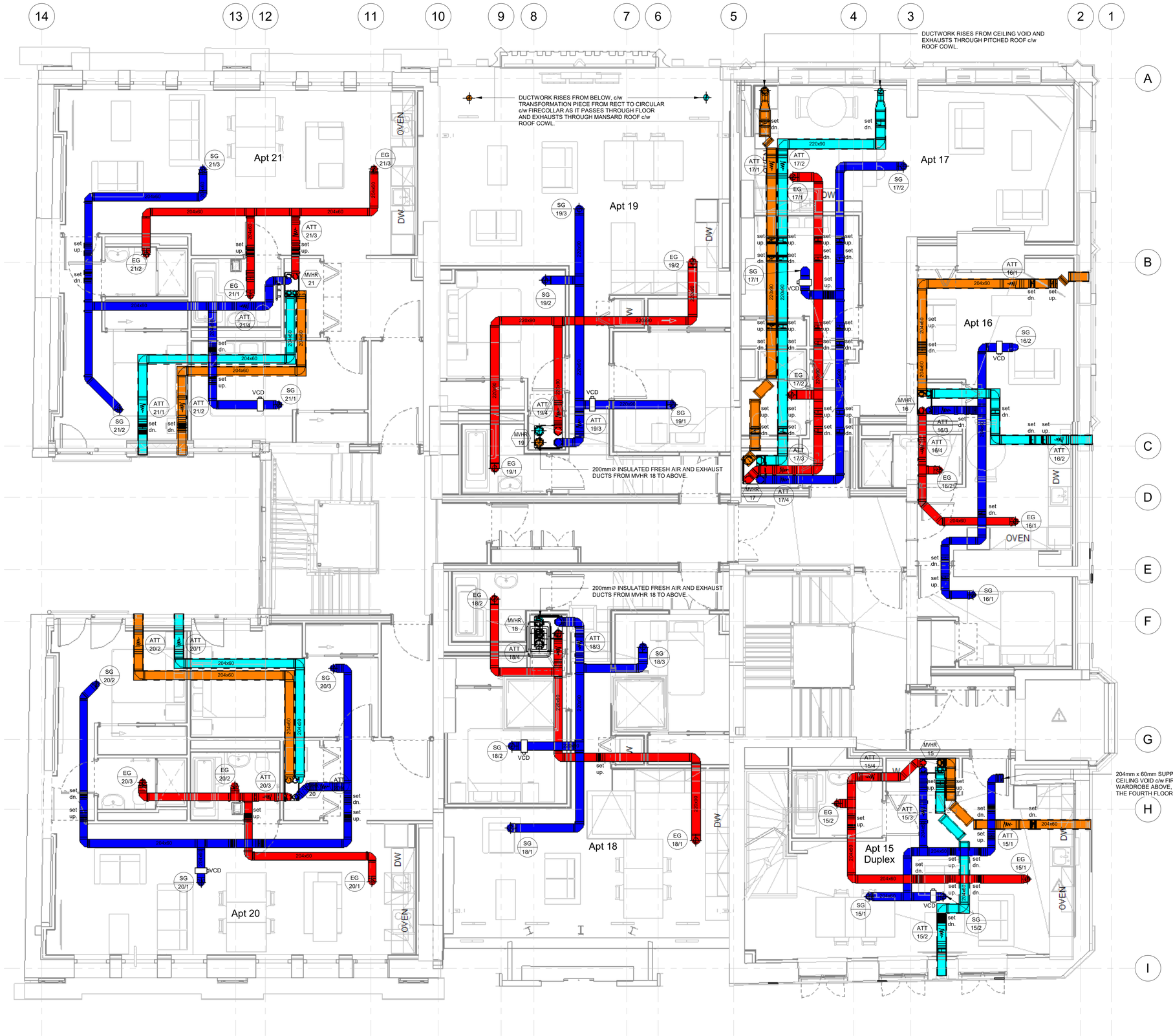
Email: info@kingassociates.uk
www.kingassociates.uk

Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
THIRD FLOOR, HEATING SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	28.03.23
Drawing Number:		Drawing Revision:
4052-KIN- XX-03-DR-M-5600		C2



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4. All dimensions are in millimetres unless otherwise stated

Ventilation Notes

1. All ductwork shall be manufactured & installed in accordance with besa dw154 for plastic ductwork within apartments and dw144 for ductwork in communal areas.
2. All ductwork within apartments shall be 204 x 60 unless otherwise stated.
3. Fire dampers/fire collars or wraps shall be provided where ductwork passes through any fire rated structure.
4. Thermal insulation shall be applied to the following areas:

   Untreated fresh air ductwork from external louvre to fan within the building.

   Exhaust ductwork from external louvre to fan within the building.
5. Bathroom/wc doors shall be undercut to provide ventilation air path routes.
6. Where apartment normal ventilation rates (based on floor area) are equal to the minimum high ventilation rates, a 20% margin is to be applied to high rate figures.
7. Openable windows to provide short periods of purge ventilation to remove odours, excess humidity and reduce temperatures in habitable rooms. Where there are no external windows in a habitable room, purge shall be provided by increases the speed of the MVHR.
8. All external louvres shall be Rytons A1 Fire Rated Square Holed Double Air Brick Ducting kits.

Ventilation Legend

- Fresh Air Intake Insulated Ductwork
- Room Supply Air Ductwork
- Room Extract Air Ductwork
- Exhaust Air Insulated Ductwork
- MVHR Unit - ECO2
- MVHR Unit - ECO4
- Attenuator
- VCD — Volume Control Damper
- COMBINED INTAKE / EXHAUST ROOF TERMINAL NUAIRE TERMINATOR OR SIMILAR.

Rev:	Date:	Status/Amendments:	By:
C2	18.08.23	CONSTRUCTION ISSUE	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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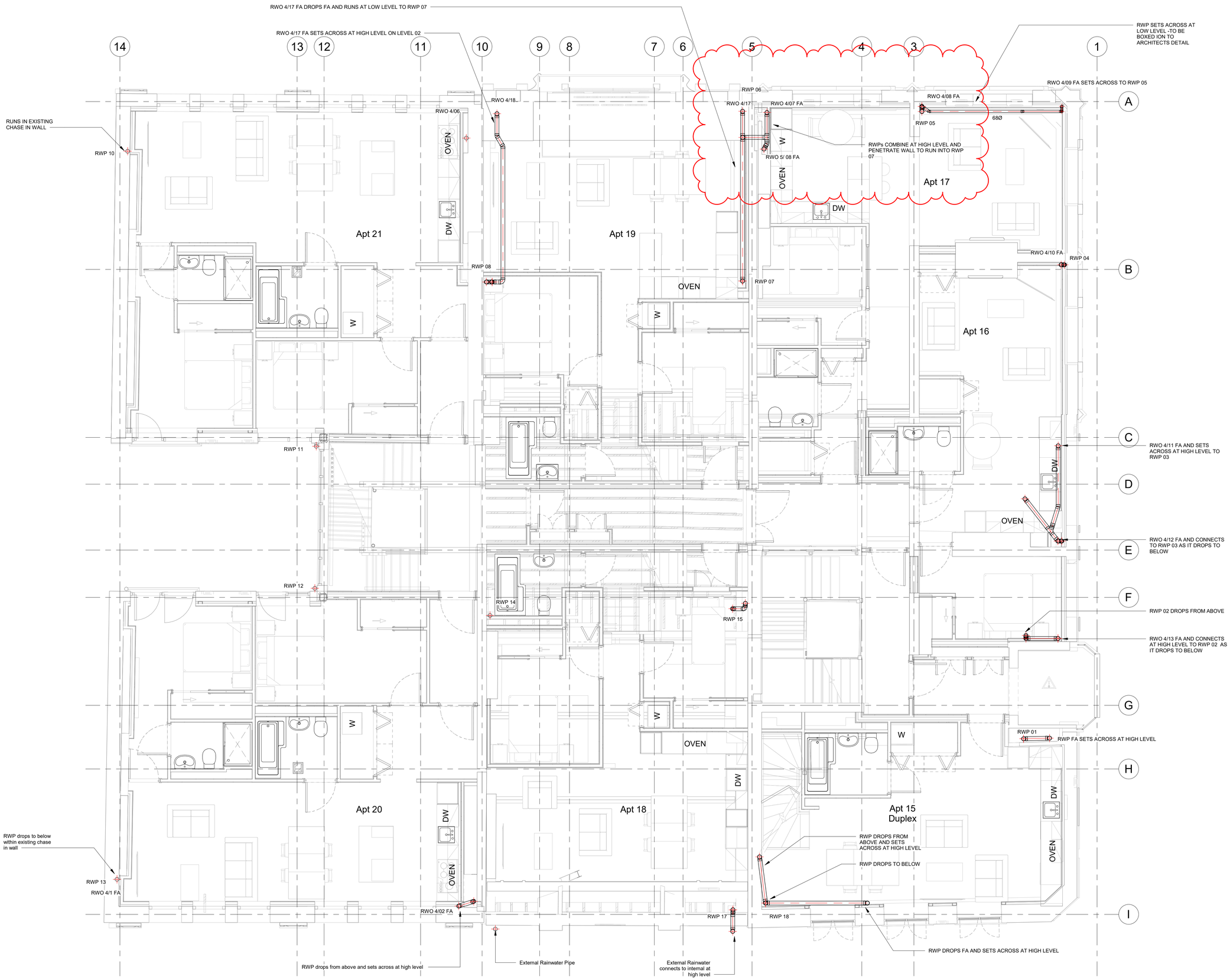
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
THIRD FLOOR, VENTILATION LAYOUT

Drawn By:	Checked By:	Cad By:
M.H	A.A	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 13.12.2022
Drawing Number: 4052-KIN- XX-03-DR-M-5700		Drawing Revision: C2



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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC). ALL PIPEWORK TO BE 100Ø UNLESS OTHERWISE STATED.
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE PROPOSED ROOF WORKS AND MEP DESIGN
8. MAIN CONTRACTOR TO TAKE COGNISANCE THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 - 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1000mm HORIZONTAL AND 1000mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF. RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTORS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILIATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND SYSTEM TO BE DETERMINED BY ACIES.
17. THE RAINWATER SYSTEM VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS, THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED INLINE WITH THE ACOUSTICIANNS REPORT, RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C4	21.07.23	CHANGES CLOUDED	M.H
C3	04.05.23	CHANGES CLOUDED	M.H
C2	21.04.23	REVISED FOLLOWING COMMENTS	M.H
C1	11.04.23	PRELIMINARY ISSUE	M.H

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58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
THIRD FLOOR, RAINWATER DRAINAGE

Drawn By:	Checked By:	Cad By:
Author	Checker	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	10/03/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-03-DR-M-5800		C4

ELEVATIONS BETWEEN GRIDLINES 14 - 10 TAKEN FROM
04 - Fourth Floor Level (58-60)

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 10 - 5 TAKEN FROM
Survey - B Level 04

Note:- All builders work elevation references are to the centre of the hole

ELEVATIONS BETWEEN GRIDLINES 5 - 2 TAKEN FROM
Survey - C Level 04

Note:- All builders work elevation references are to the centre of the hole

14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I

Apt 24

Apt 23

Apt 22

Apt 15
Duplex

Elevation	2600mm
Width	200mm
Height	200mm
Service	Ducts
Comment	For Circular Duct

Elevation	2600mm
Width	304mm
Height	160mm
Service	Ducts

Elevation	2600mm
Width	570mm
Height	160mm
Service	Ducts

Elevation	2600mm
Width	250mm
Height	200mm
Service	Ducts
Comment	For Circular Duct

Elevation	2650mm
Width	900mm
Height	225mm
Service	Multi
	SURVEY - C LEVEL 04

Elevation	2650mm
Width	100mm
Height	100mm
Service	Containment
	SURVEY - C LEVEL 04

Elevation	2650mm
Width	450mm
Height	100mm
Service	Containment
	SURVEY - C LEVEL 04

Elevation	2600mm
Width	402mm
Height	165mm
Service	Ducts
	SURVEY - C LEVEL 04

Elevation	2575mm
Width	500mm
Height	275mm
Service	Ducts

Elevation	2500mm
Width	402mm
Height	165mm
Service	Ducts
	SURVEY - C LEVEL 04

Elevation	2500mm
Width	300mm
Height	100mm
Service	Containment
	SURVEY - C LEVEL 04

Elevation	2475mm
Width	304mm
Height	160mm
Service	Ducts

Elevation	2275mm
Width	304mm
Height	160mm
Service	Ducts

Elevation	2800mm
Width	402mm
Height	165mm
Service	Ducts
	SURVEY - C LEVEL 04

Elevation	2100mm
Width	1000mm
Height	150mm
Service	Multi
	SURVEY - C LEVEL 04

Elevation	2550mm
Width	175mm
Height	150mm
Service	Containment
	SURVEY - C LEVEL 04

Elevation	2525mm
Width	300mm
Height	250mm
Service	Multi
	SURVEY - C LEVEL 04

Elevation	2533mm
Width	100mm
Height	150mm
Service	Containment
	SURVEY - C LEVEL 04

Elevation	2500mm
Width	402mm
Height	165mm
Service	Ducts
	SURVEY - C LEVEL 04

Elevation	2520mm
Width	304mm
Height	160mm
Service	Ducts

Elevation	2500mm
Width	200mm
Height	200mm
Service	Ducts
Comment	For Circular Duct

Elevation	2500mm
Width	304mm
Height	160mm
Service	Ducts

Elevation	2550mm
Width	100mm
Height	100mm
Service	Containment
	SURVEY - C LEVEL 04

Elevation	2550mm
Width	250mm
Height	100mm
Service	Containment
	SURVEY - C LEVEL 04

Elevation	2525mm
Width	300mm
Height	225mm
Service	Pipes
	SURVEY - C LEVEL 04

300x100 Opening through structural beam.

250x110 Opening through structural beam.

250x100 Opening through structural beam.

250x110 Opening through structural beam.

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Rev:	Date:	Status/Amendments:	By:
C2	18.08.23	CONSTRUCTION ISSUE - Revision Clouded	M.H
C1	17.08.23	CONSTRUCTION ISSUE	M.H

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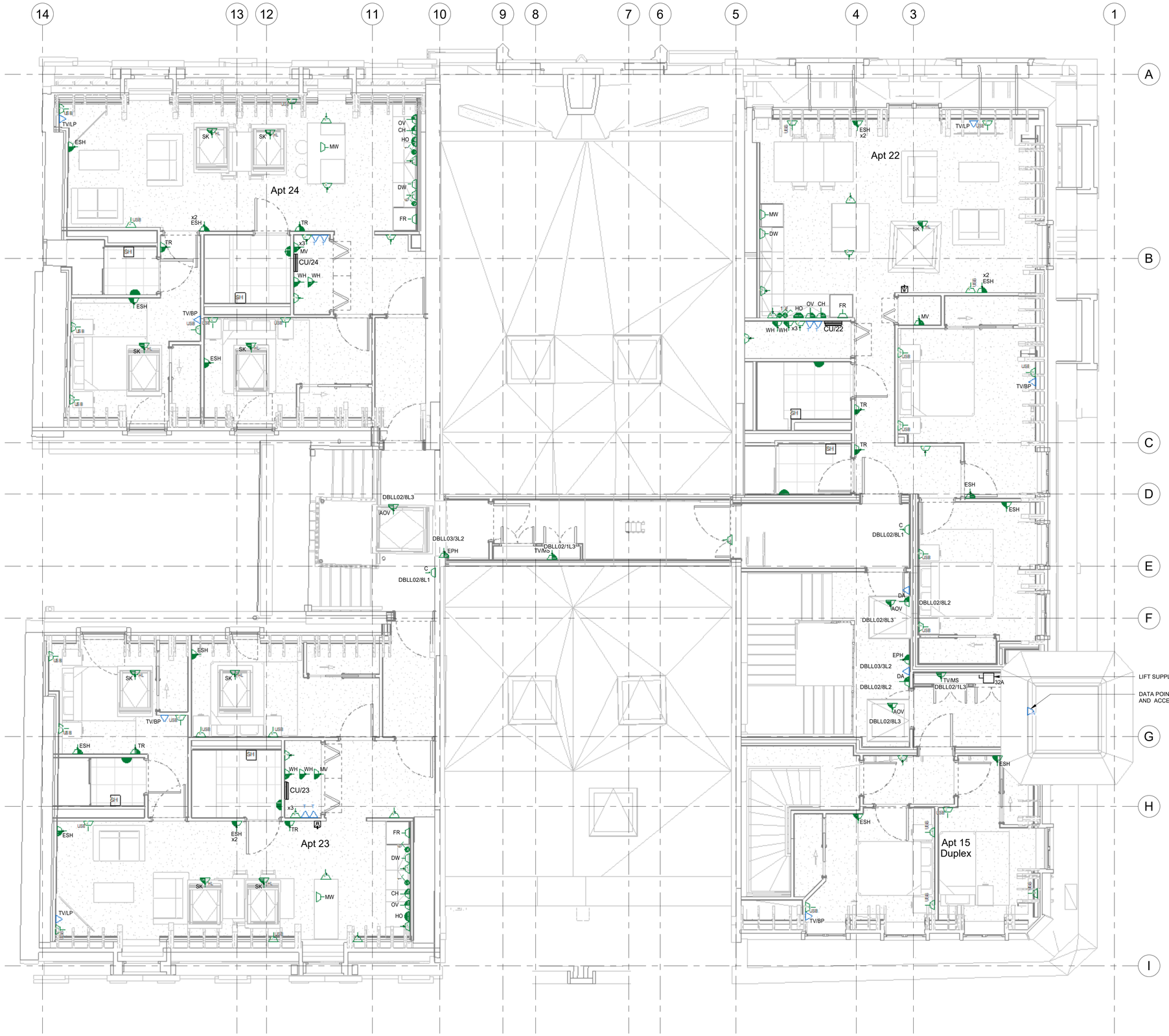
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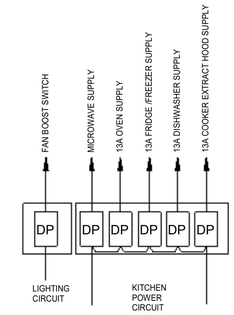
Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, BUILDERSWORK

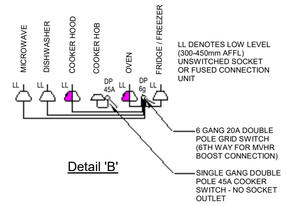
Drawn By:	Checked By:	Cad By:
G.M	M.H	
Scale:	Paper Size:	Date Created:
1 : 50	A1	14.08.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-04-BW-M-5700		C2





Detail 'A'

6 GANG APPLIANCE SWITCH - 20A DP GRID LOCATION AS SHOWN ON DRAWINGS.



Detail 'B'

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Small Power Legend

- 32A SPN IP65 isolator for lift to manufacturers requirements.
- CU/** Consumer Unit.
- USB Twin Switched Socket Outlet with Integral USB Charger.
- Twin Switched Socket Outlet (N Denotes Number of Units).
- Switched Fused Connection Unit (N Denotes Number of Units).
- Single Switched Socket Outlet.
- LC Single Switched Lockable Cleaners Socket Outlet.
- Single Unswitched Socket Outlet.
- Cable Outlet.
- Single Back Box and Blank Plate.
- Shaver Outlet (With Integral Isolating Transformer)
- TV/LP TV Outlet Lounge Plate.
- TV/BP TV Outlet Bedroom Plate.
- Telecoms Master Outlet.
- Single Data Outlet
- Engraved Isolating DP Switch.
- Unswitched Fused Connection Unit

H/L	-	High Level
L/L	-	Low Level
WH	-	Water Heater
ODH	-	Over Door Heater
TR	-	Towel Rail
MV	-	Mechanical Ventilation
EPH	-	Electrical Panel Heater
ESH	-	Electrical Storage Heater
ETH	-	Electrical Tube Heater
MV	-	Microwave
DW	-	Dishwasher
DA	-	Door Access Control
WM	-	Washing Machine
CH	-	Cooker Hood
OV	-	Oven
HO	-	Hob
FR	-	Fridge / Freezer
FSD	-	Fire and Smoke Damper

Rev:	Date:	Status/Amendments :	By:
C3	12.10.23	CONSTRUCTION ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	20.02.23	PRELIMINARY ISSUE	K.S

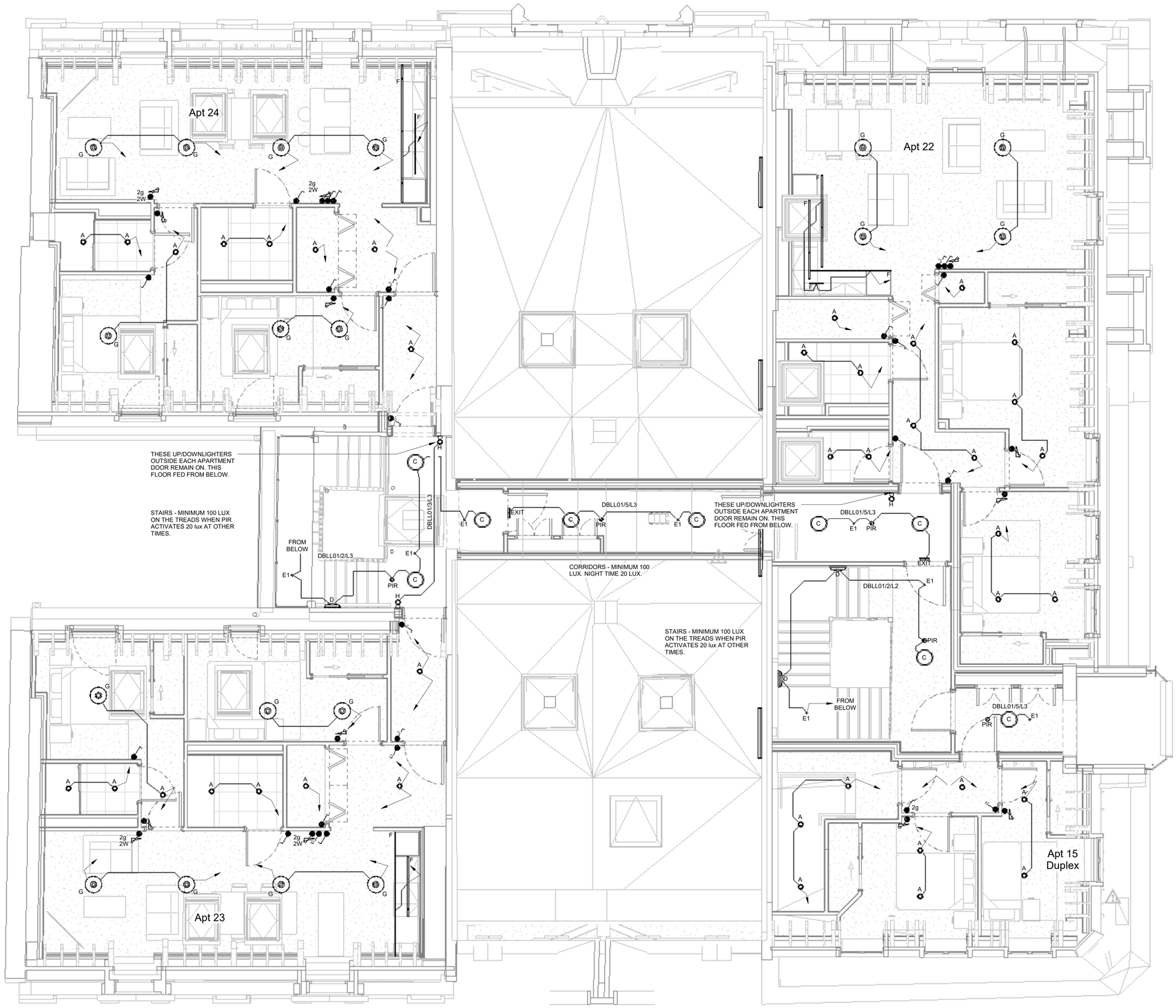
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
FOURTH FLOOR, SMALL POWER AND DATA/COMMS LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	10.02.2023
Drawing Number:		Drawing Revision:
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Lighting Legend

- A — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H2 lite T.
- A1 — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H4 lite T.
- B — 4000 LED, weatherproof luminaire, IP65, 7300lm, 58w - as Sylvania Start Waterproof.
- C — 3000K LED dimmable circular luminaire - exact specification by architect.
- D — 3000K LED dimmable surface-mounted luminaire - exact specification by architect.
- E1 — 2W LED recessed emergency pin-spot luminaire, local self-test, 190lm, as Philip Payne TYKE860YS, colour to be confirmed by architect.
- E — 3000K LED weatherproof luminaire, IP65, 684lm, 9W - as Concord Sterling Bulkhead LED 4063831. E - denotes 3hr local self-test emergency version.
- F — 3000K LED 8mm x 2mm lightstrip beneath kitchen units or in coving detail, IP65, 9.6W/m, as Ledridge LED96 / EXT-SL8
- G — Pendant Luminaire - exact specification by architect
- H — 3000K LED surface-mounted luminaire, exact specification by architect.
- J — 3000K LED pendant feature luminaire, exact specification by architect.
- K — 3000K LED surface-mounted luminaire, IP65, exact specification by architect.
- EXIT — LED Emergency exit sign, as Philip Payne 250MCSV
- PIR — PIR presence detector
- 2 Way light switch
- 1 Way light switch
- Dimmer switch
- INT — Intermediate switch

Rev:	Date:	Status/Amendments :	By:
C3	18.08.23	CONSTRUCTION ISSUE - RCP Co-ordination	K.S
C2	28.04.23	CONSTRUCTION ISSUE -revisions clouded	K.S
C1	21.04.23	PRELIMINARY ISSUE	K.S

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Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
FOURTH FLOOR, LIGHTING LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	K.S	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 19.04.2023
Drawing Number: 4052-KIN- XX-04-DR-E-6300		Drawing Revision: C3

14 13 12 11 10 9 8 7 6 5 4 3 1

A B C D E F G H I

Apt 24

Apt 22

Apt 23

Apt 15
Duplex

OPENREACH/ HYPEROPTIC CABLES.
50x50mm CABLE BASKET

50mm CABLE BASKET

LANDLORDS ELV CABLES,
ACCESS CONTROL & TV.
50x50mm

FIRE ALARM CABLES.50x50mm CABLE
BASKET

LANDLORDS L&P CABLES.
50x50mm TRUNKING

CONTAINMENT TO DROP
UNDERNEATH CEILING AND RUN
TIGHT ALONG WALL TO AVOID STEEL
BEAMS. SEE DETAIL 1

CONTAINMENT TO RISE INTO CEILING
VOID TO BE DISTRIBUTED TO
APARTMENT 23

OPENREACH/ HYPEROPTIC
CABLES. 50x50mm CABLE BASKET
ENTERS APARTMENT

50mm CABLE BASKET ENTERS
APARTMENT

CABLE BASKET 50x50mm

CABLE BASKET 50mm

CABLE BASKET 50x50mm

CABLE BASKET 50mm

LANDLORDS L&P CABLES.
50x50mm TRUNKING

FIRE ALARM CABLES.50x50mm CABLE
BASKET

LANDLORDS ELV CABLES,
ACCESS CONTROL & TV.
50x50mm

OPENREACH/ HYPEROPTIC CABLES.
50x50mm CABLE BASKET

FROM BELOW TO ABOVE

OPENREACH/ HYPEROPTIC CABLES.
150x50mm CABLE BASKET

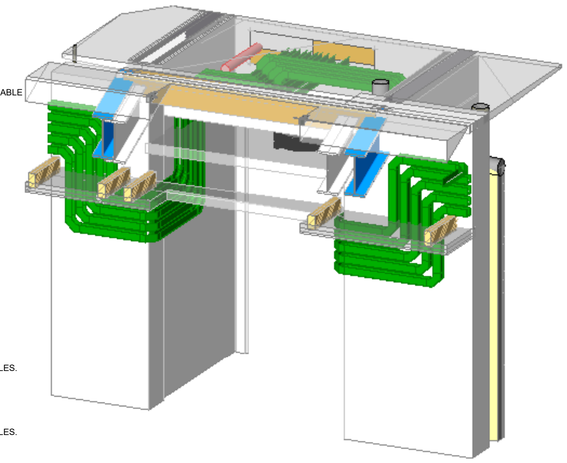
LANDLORDS ELV CABLES,
ACCESS CONTROL & TV.
150x50mm

FIRE ALARM CABLES.
100x50mm CABLE BASKET

LANDLORDS L&P CABLES.
75x75mm TRUNKING

SWA CABLES TO EACH APARTMENT.
200mm CABLE LADDER FROM BELOW

NOTE: NO ENTRY AT
THIS LEVEL -
DUPLEX APARTMENT



DETAIL 1
4th FLOOR LIGHTWELL
CONTAINMENT

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Containment Services Legend

- Cable Basket (Apartment Cables)
- Trunking (Landlords L&P)
- Cable Basket (Fire Alarm Cables)
- Cable Basket (Landlords ELV & Access Control)
- Cable Basket (Openreach / Hyperoptic Cables)

Rev:	Date:	Status/Amendments :	By:
C3	29.09.23	ISSUED FOR CONSTRUCTION	K.S
C2	19.04.23	ISSUED FOR CONSTRUCTION	K.S
C1	14.04.23	PRELIMINARY ISSUE	K.S

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58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
FOURTH FLOOR, CONTAINMENT
SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	G.M
Scale: 1 : 50	Paper Size: A1	Date Created: APRIL 2023
Drawing Number: 4052-KIN- XX-04-DR-E-6600		Drawing Revision: C3



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Fire Alarm Notes

OPEN PLAN APARTMENT FIRE ALARM
BS5839-6 Grade D category LD1. Heat detector/sounder in kitchen. Optical smoke detector/sounder in all bedrooms, optical smoke detector in all circulation spaces that form part of the escape routes and all areas where fire might start, but not in bathrooms, shower rooms or toilets.

COMMUNAL AREAS FIRE ALARM
Apartment corridors - BS5839-6 category L5. Optical smoke detectors in all areas to activate AOV units and alert main panel.

GF / Basement /Roof Communal Areas - BS5839-1 category L3 coverage, activation in this area causes all alarms to sound.

Fire Alarm, Access Control & CCTV Legend

- Electric Door Lock
- Emergency Door Release Break Glass
- X — Exit Push
- PIR — PIR to Unlock Door When Movement Is Detected on the Stairs
- Access System Card Reader
- Video Entry Handsfree Monitor (WIFI)
- Video Entry Panel with Camera, Microphone/Speaker, Digital Call Keypad and Access Card Reader
- LDC — Local Door Controller with Battery Backup
- H — Heat Detector c/w Sounder
- S — Optical Smoke Detector c/w Sounder
- S — Optical Smoke Detector
- FAI — Fire Alarm Interface Unit
- Manual Break Glass
- Fire Alarm Sounder Beacon
- Fire Alarm Sounder
- FAP — Fire Alarm Panel
- CCTV — CCTV Camera
- DH — Door Hold Open Device

Rev:	Date:	Status/Amendments :	By:
C6	18.08.23	ISSUED FOR CONSTRUCTION - RCP Co-ordination	K.S
C5	04.05.23	ISSUED FOR CONSTRUCTION	K.S
C4	21.04.23	ISSUED FOR CONSTRUCTION	K.S
C3	18.04.23	PRELIMINARY ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	22.02.23	PRELIMINARY ISSUE	K.S

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Drawing Title:
ELECTRICAL SERVICES
FOURTH FLOOR, FIRE ALARM AND ACCESS CONTROL SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 21.02.2023
Drawing Number: 4052-KIN- XX-04-DR-E-6700		Drawing Revision: C6



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DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. The contractor shall ensure that rodding eyes and access points are accessible for maintenance purposes. Where they are accessible by destructivce access these shall be marked up on the as fitted drawings.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and bird mesh, and openings by main contractor. Detail as per architect and roofing specialists drawings.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev:	Date:	Status/Amendments:	By:
C6	04.08.23	CHANGES CLOUDED	M.H
C5	21.07.23	CHANGES CLOUDED	M.H
C4	12.06.23	CHANGES CLOUDED	M.H
C3	11.05.23	DIMENSIONS ADDED. CHANGES CLOUDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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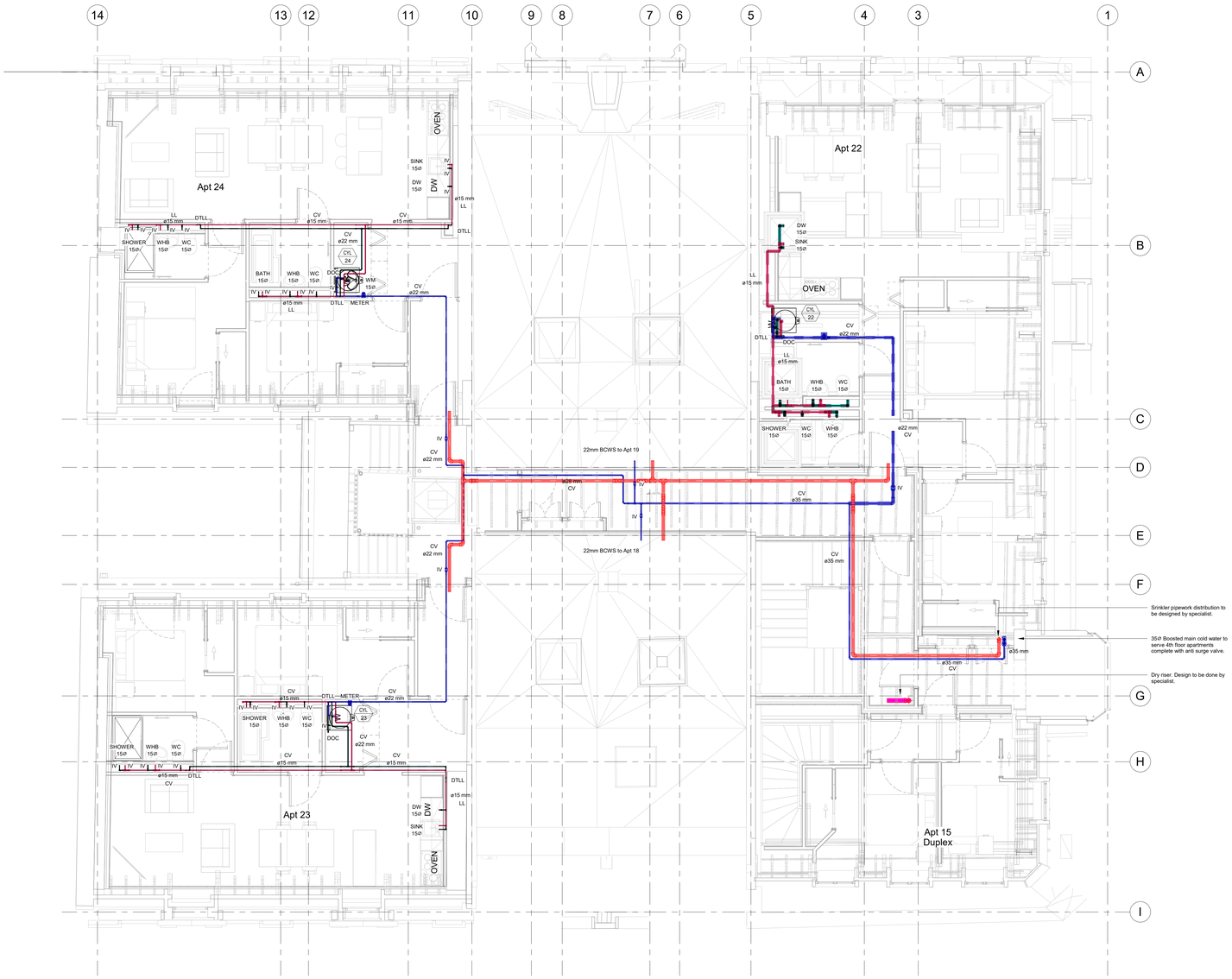
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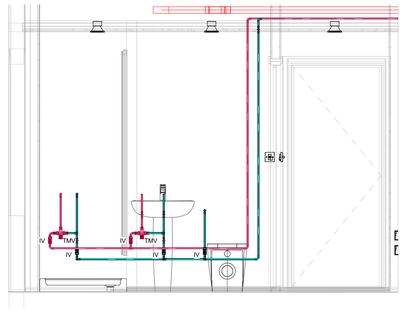
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, ABOVE GROUND DRAINAGE LAYOUT

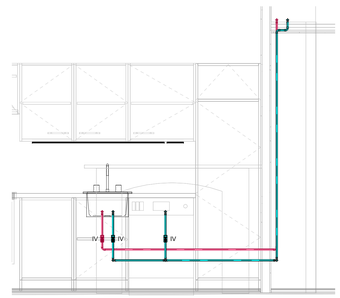
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G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
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Drawing Number:		Drawing Revision:
4052-KIN- XX-04-DR-M-5200		C6



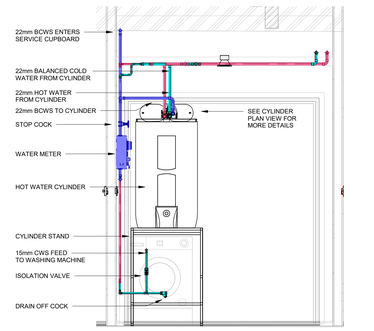
1 04 - Fourth Floor Level - Water distribution and supply systems
1 : 50



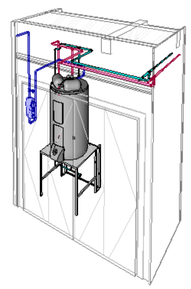
2 4th Typical Bathroom Elevation
1 : 20



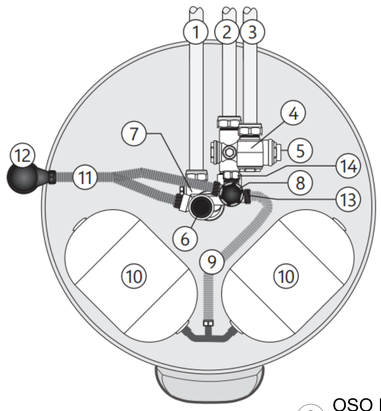
3 4th Typical Kitchen Elevation
1 : 20



4 4th Typical Service Cupboard
1 : 20



5 4th Floor Typical Services Cupboard 3D



6 OSO HWC - Pipe & Valve Arrangement
1 : 1

No.	Description	Dim.
1	Domestic hot water outlet (DHW out)	ø22 mm
2	Balanced cold water connection (Bal. CW)	ø22 mm
3	Cold water main supply inlet (CW in)	ø22 mm
4	Line strainer	-
5	Pressure reducing valve - 3 bar	-
6	Expansion relief valve - 8 bar	1/2"
7	Hot water blending valve	-
8	Temp&pressure relief valve - 90°C / 10 bar	1/2"
9	Flexible hose and T-piece (120-250 l. only)	-
10	Expansion vessel(s) (120-250 l. only)	-
11	Flexible Y-hose	-
12	Tundish	-
13	Expansion vessel connection point	1/2" BSPM
14	Secondary Return - SX 250-300 l. only	1/2"male / ø15

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Domestic Hot & Cold Water Services Legend

	Mains Cold Water Service
	Boosted Cold Water Service
	Balanced Cold Water Service (Apt)
	Hot Water Service (Apt)
	Sprinkler Pipework (by Specialist)
	Dry Riser Pipework (by Specialist)
MCWS	Mains Cold Water Services
BCWS	Boosted Cold Water Services
DHWS	Domestic Hot Water Services
SC	Stop Cock
IV	Isolation Valve
TMV	Thermostatic Mixing Valve
DOC	Drain Off Cock
DTLL	Drop to Low Level
RTA	Rise to Above
DTB	Drop to Below
LL	Low Level
HL	High Level
WC	Water Closet
WHB	Wash Hand Basin
DW	Dishwasher
WM	Washing Machine
CV	Ceiling Void
CYL	Hot Water Cylinder

Domestic Hot & Cold Water Services Notes

1. The domestic water services installation indicated on these drawings consists of:
   Installation of incoming mains water supply.
   Installation of hot water generation system.
2. Hot & cold pipework contained within voids shall be installed in copper to BS 2871 Part 1, Table X of the sizes and in the position indicated on the drawings. All pipework shall be copper tube of British manufacture, complying entirely to BS EN 1057: 1996.
3. All final connections to sanitaryware shall be supplied with a ballofix type stop valve of the same size as the pipework shown on the drawings.
4. 15mm drain cocks shall be installed at any low points in the system where water may remain after normal drainage throughout the system.
5. Thermal insulation shall be carried out by a specialist sub contractor. Insulation to be mineral wool, pre formed pipe sections with normal density 80kg/m. Thermal conductivity not exceeding 0.04W/mK. Reinforced aluminium foil finish with at least 25mm overlap (All insulation shall be Class 0 or equivalent).
6. Upon completion of the flushing and testing of the domestic water services pipework, the installations shall be satisfactorily chlorinated in accordance with BS 6700.
7. All pipework passing through fire compartment walls and floor slabs to be fire stopped.
8. All pipework to be run in voids where possible, or boxed-in to architect's detail.
9. All fittings on copper pipework shall be integral solder ring type fitting containing a "lead free" solder and suitable for wholesome / potable water as I.M.I Yorkshire Fitting Limited and each fitting clearly marked with "YP" logo.
10. All rising pipework shall be truly "plumb" and where exposed in rooms, the contractor shall discreetly route the pipework into the corners. No pipework is to be routed across windows nor shall it obstruct doorway access.
11. All bends, elbows, sets - both double and single - and other fittings necessary to carry out the complete installation, but not necessarily shown due to the scale of the drawings, shall be allowed for including sets, bends, etc. necessary for passing round soil vents, rain-water pipes and waste pipes, etc.
12. The contractor shall include for providing and installing all neccesary supports, brackets and steelwork, etc. Including primary supports / steelwork as required.
13. The contractor shall provide and install valves where indicated on the schematic and layouts. Drain cocks shall be provided at all low points.
14. All valves and cocks must be fitted in such a manner that they are accessible for operation and maintenance.
15. All isolating, regulating, and check valves shall be in accordance with the water supply (water fittings) regulations 1999.
16. Isolating and double check valves shall be installed in hot and cold water services pipework connections serving washing machines.
17. All isolating, regulating, and check valves positioned on copper pipework shall be suitable for compression connection.
18. All stopcocks shall be of an approved clearway, high pressure screw down type with crutch handled and raised seating and suitable for compression connection and all in accordance with BS 1010.
19. Drain cocks on internal M.W.S. services shall be of the screw down pattern drain tap with externally serrated hose nozzle to be fitted, where necessary, and where indicated for emptying the pipes, etc. and all in accordance with BS 2897.

Rev:	Date:	Status/Amendments:	By:
C3	02.05.23	ARCHITECTS LAYOUT UPDATED	M.H
C2	10.03.23	PRELIMINARY ISSUE - APT NUMBERS ADDED	M.H
C1	24.02.23	PRELIMINARY ISSUE	M.H

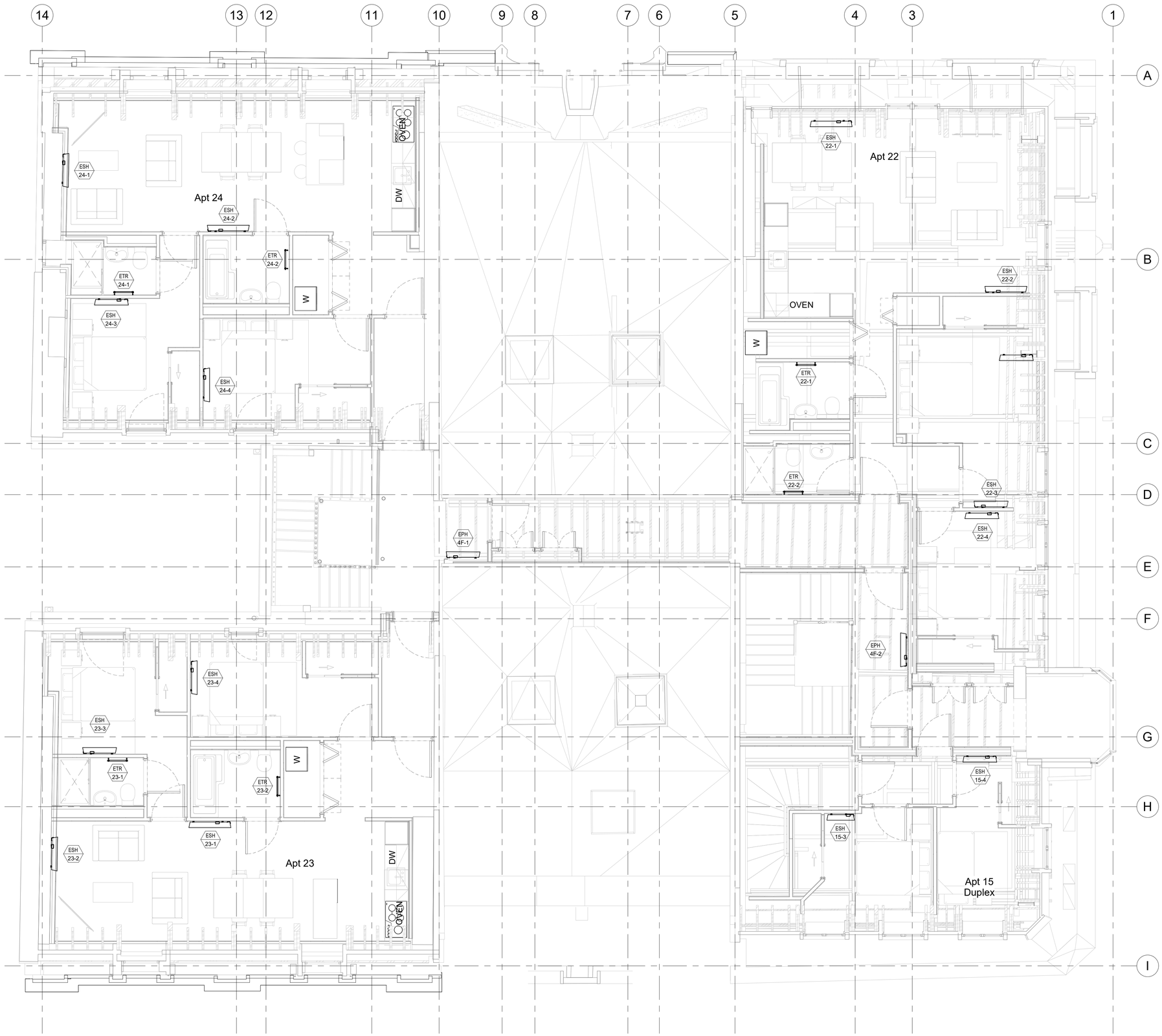
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Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, DOMESTIC HOT & COLD WATER SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A0	21.02.2023
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Heating Legend

	Electric Storage Heater
	Overdoor Air Curtain
	Electric Tubular Heater
	Electric Towel Heater
ESH	Electric Storage Heater
EPH	Electric Panel Heater
AC	Overdoor Air Curtain
ETH	Electric Tubular Heater
ETR	Electric Towel Rail

Rev:	Date:	Status/Amendments:	By:
C2	20.04.23	APARTMENT NUMBERS ADDED	M.H
C1	06.03.23	PRELIMINARY ISSUE	M.H

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Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, HEATING SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
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1 : 50	A1	28.03.23
Drawing Number:		Drawing Revision:
4052-KIN- XX-04-DR-M-5600		C2



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Ventilation Notes

1. All ductwork shall be manufactured & installed in accordance with besa dw154 for plastic ductwork within apartments and dw144 for ductwork in communal areas.
2. All ductwork within apartments shall be 204 x 60 unless otherwise stated.
3. Fire dampers/fire collars or wraps shall be provided where ductwork passes through any fire rated structure.
4. Thermal insulation shall be applied to the following areas:

   Untreated fresh air ductwork from external louvre to fan within the building.

   Exhaust ductwork from external louvre to fan within the building.
5. Bathroom/wc doors shall be undercut to provide ventilation air path routes.
6. Where apartment normal ventilation rates (based on floor area) are equal to the minimum high ventilation rates, a 20% margin is to be applied to high rate figures.
7. Openable windows to provide short periods of purge ventilation to remove odours, excess humidity and reduce temperatures in habitable rooms. Where there are no external windows in a habitable room, purge shall be provided by increases the speed of the MVHR.
8. All external louvres shall be Rytons A1 Fire Rated Square Holed Double Air Brick Ducting kits.

Ventilation Legend

- Fresh Air Intake Insulated Ductwork
- Room Supply Air Ductwork
- Room Extract Air Ductwork
- Exhaust Air Insulated Ductwork
- MVHR Unit - ECO2
- MVHR Unit - ECO4
- Attenuator
- VCD — Volume Control Damper
- COMBINED INTAKE / EXHAUST ROOF TERMINAL NUAIRE TERMINATOR OR SIMILAR.

Rev:	Date:	Status/Amendments:	By:
C2	18.08.23	CONSTRUCTION ISSUE	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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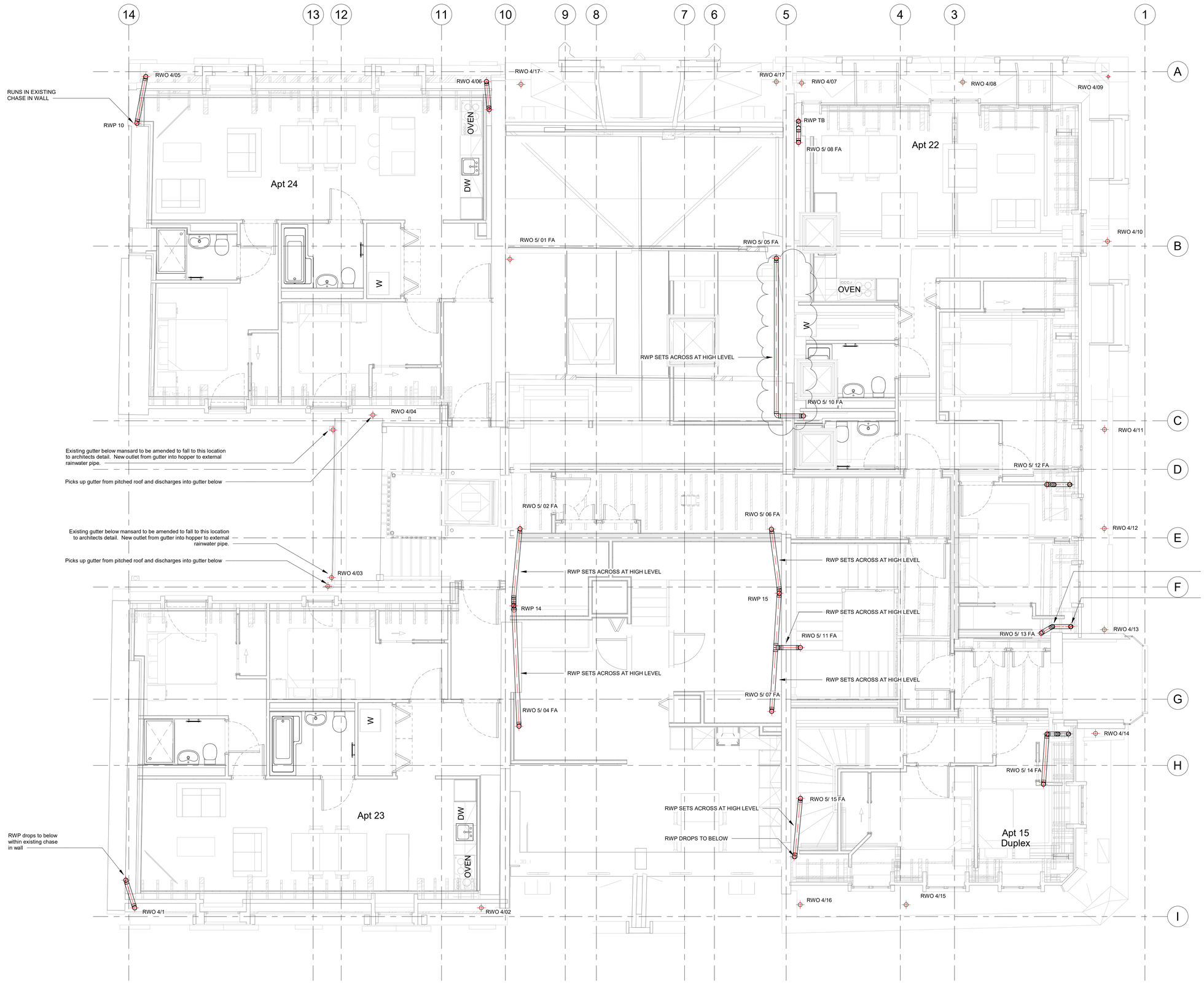
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Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, VENTILATION LAYOUT

Drawn By:	Checked By:	Cad By:
M.H	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	14.12.2022
Drawing Number:		Drawing Revision:
4052-KIN- XX-04-DR-M-5700		C2



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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC). ALL PIPEWORK TO BE 100Ø UNLESS OTHERWISE STATED.
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE PROPOSED ROOF WORKS AND MEP DESIGN
8. MAIN CONTRACTOR TO TAKE COGNISANCE THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 - 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1000mm HORIZONTAL AND 1000mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF.
RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTORS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND SYSTEM TO BE DETERMINED BY ACIES.
17. THE RAINWATER SYSTEM VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS, THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED INLINE WITH THE ACOUSTICIANNS REPORT, RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C3	04.05.23	CHANGES CLOUDED	M.H
C2	21.04.23	REVISED FOLLOWING COMMENTS	M.H
C1	11.04.23	PRELIMINARY ISSUE	M.H

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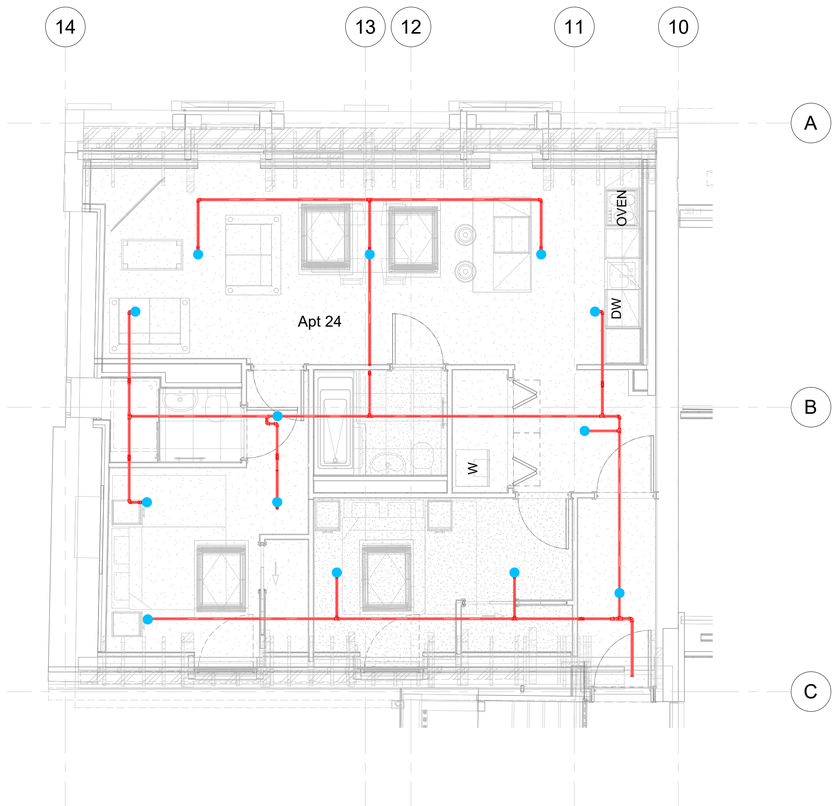
Project:
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Drawing Title:
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FOURTH FLOOR, RAINWATER DRAINAGE

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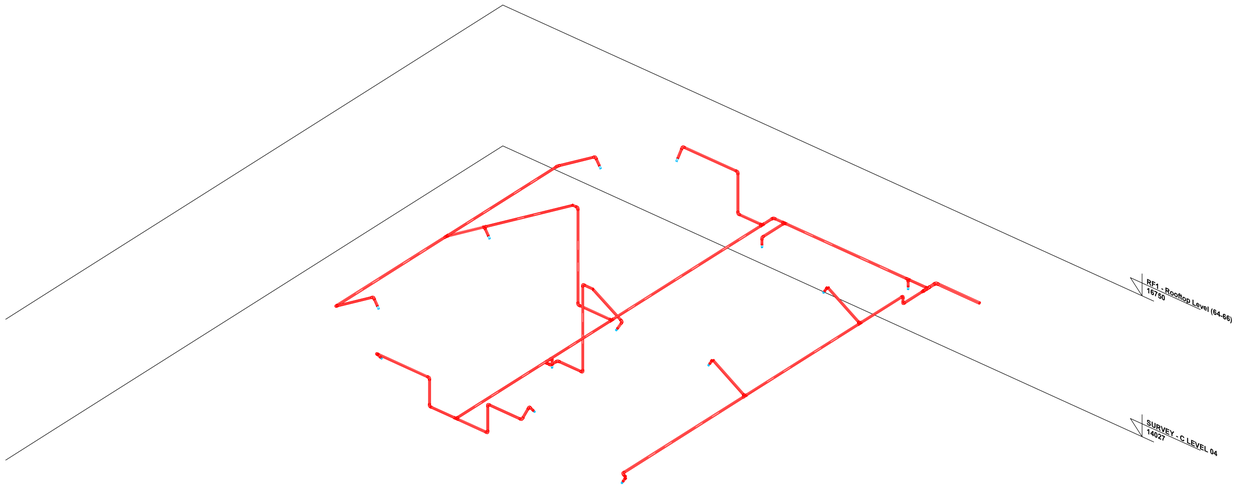
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1 04 - Fourth Floor Level (58-60) - Sprinkler - Apartment 24

1 : 50



2 4th Floor Sprinkler Isometric - Apartment 24

Rev:	Date:	Status/Amendments:	By:
P1	24.08.23	PRELIMINARY ISSUE	M.H

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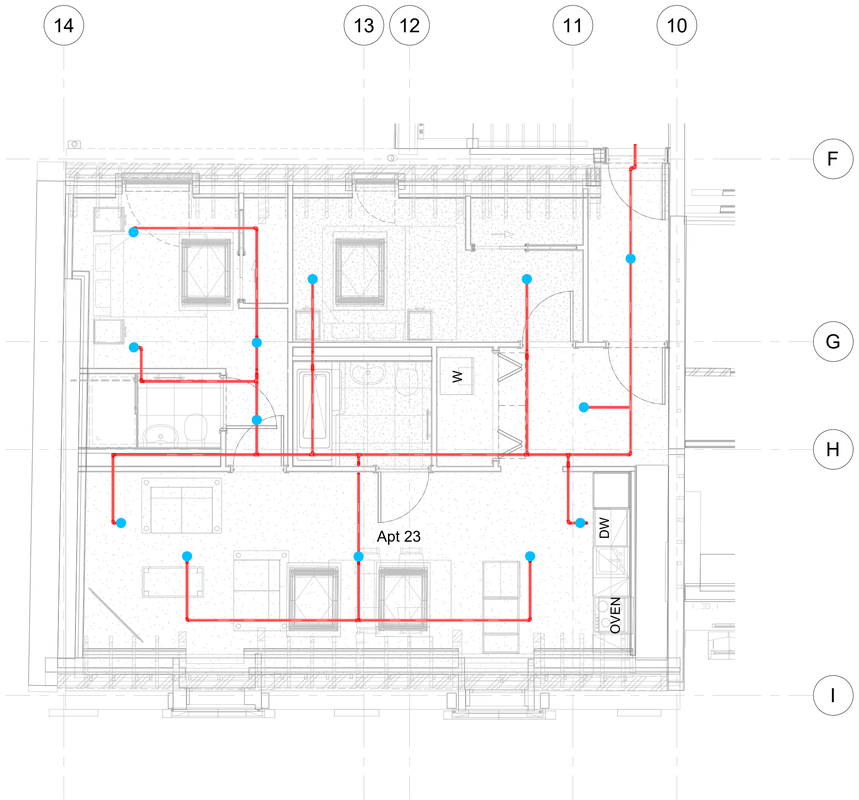
Project:
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Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, APARTMENT 24
SPRINKLER LAYOUT

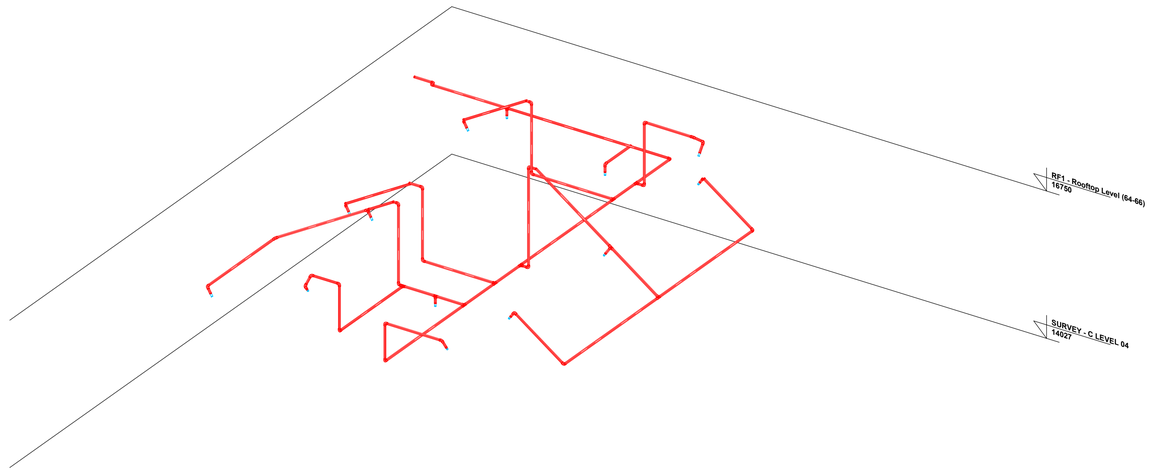
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1 04 - Fourth Floor Level (58-60) - Sprinkler - Apartment 23
1 : 50



2 4th Floor Sprinkler Isometric - Apartment 23

Rev:	Date:	Status/Amendments:	By:
P1	24.08.23	PRELIMINARY ISSUE	M.H

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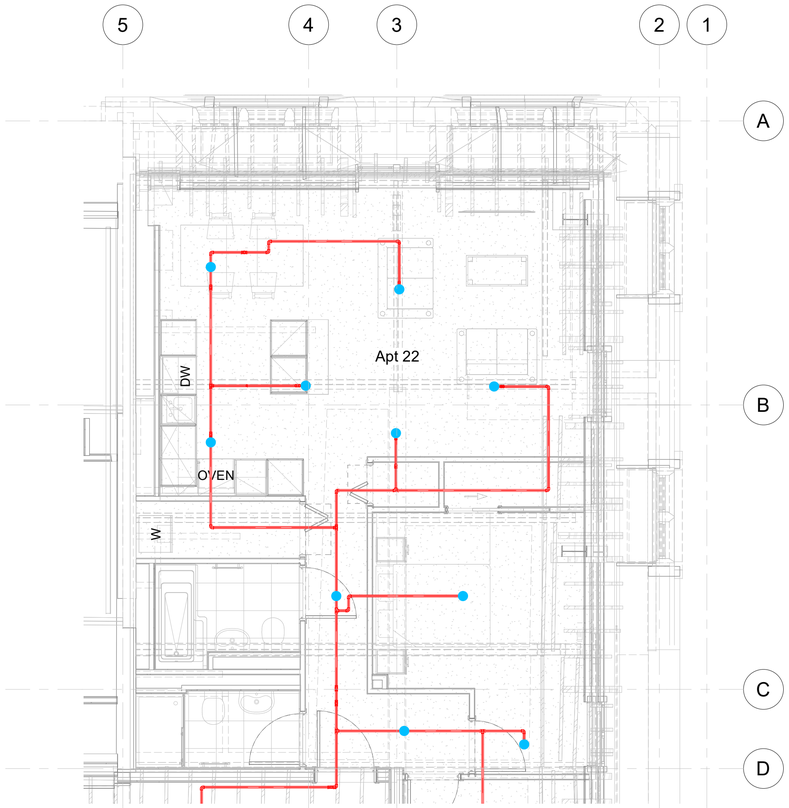
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, APARTMENT 23
SPRINKLER LAYOUT

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G.M	M.H	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	24.08.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-04-SK-M-5802		P1

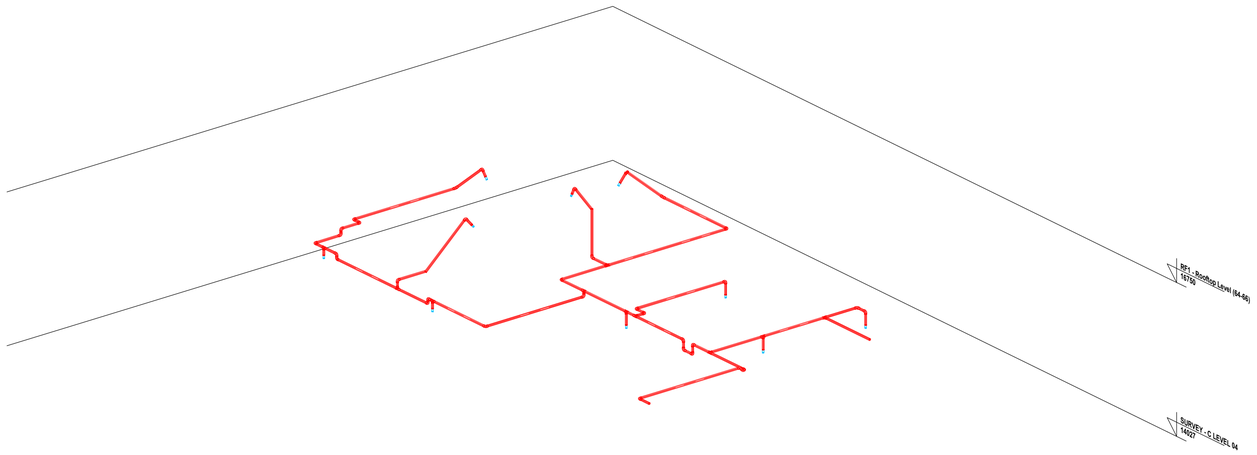
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2 04 - Fourth Floor Level (58-60) - Sprinkler - Apartment 22

1 : 50



1 4th Floor Sprinkler Isometric - Apartment 22

Rev:	Date:	Status/Amendments:	By:
P1	28.04.23	PRELIMINARY ISSUE	M.H

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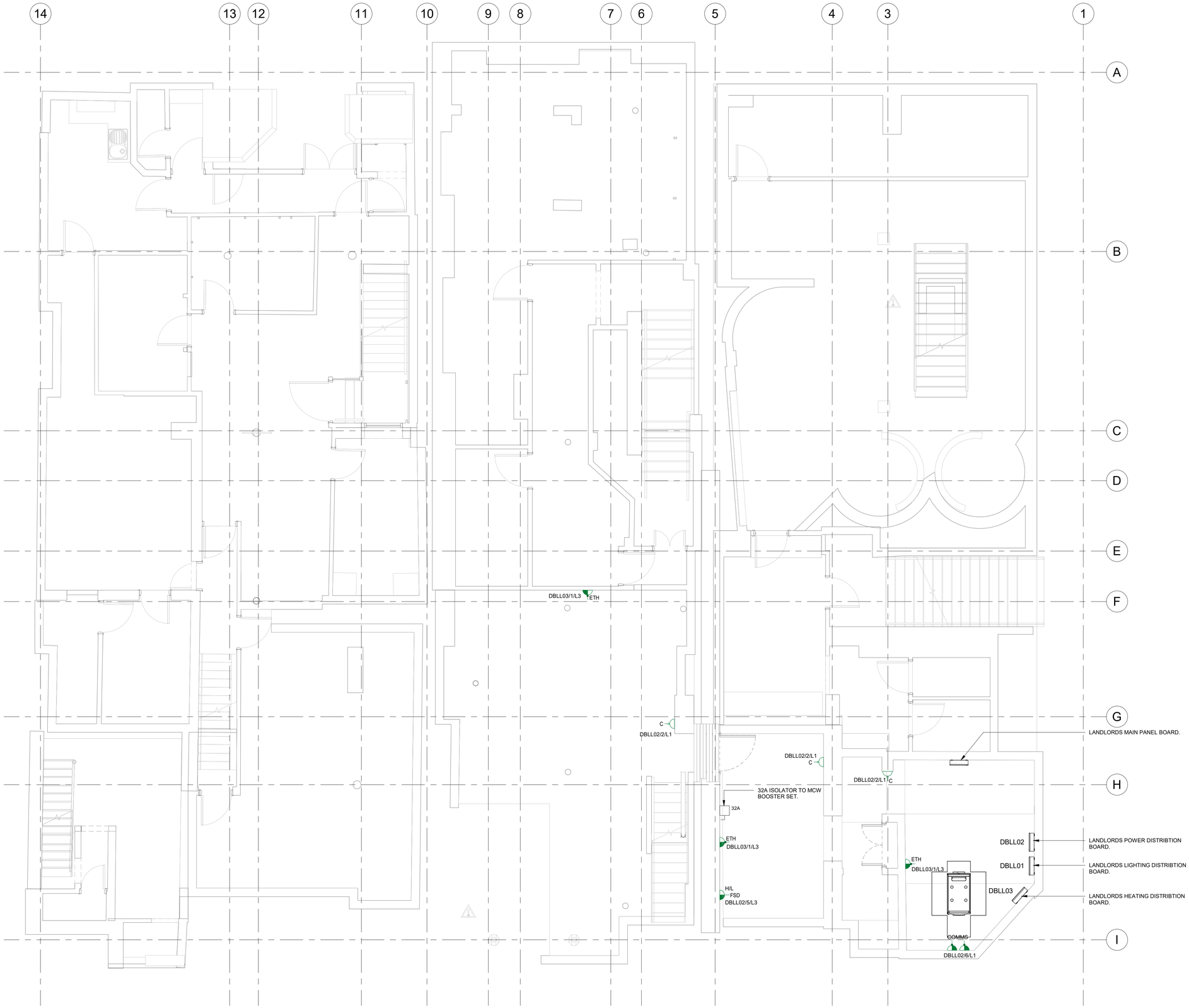
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Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR, APARTMENT 22
SPRINKLER LAYOUT

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G.M	M.H	M.E
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1 : 50	A1	24.08.2023
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Small Power Legend

- 32A SPN IP65 isolator for lift to manufacturers requirements.
- CU/** Consumer Unit.
- USB Twin Switched Socket Outlet with Integral USB Charger.
- Twin Switched Socket Outlet (N Denotes Number of Units).
- Switched Fused Connection Unit (N Denotes Number of Units).
- Single Switched Socket Outlet.
- C Single Switched Lockable Cleaners Socket Outlet.
- Single Unswitched Socket Outlet.
- Cable Outlet.
- Shaver Outlet (With Integral Isolating Transformer)
- TV/LP TV Outlet Lounge Plate.
- TV/BP TV Outlet Bedroom Plate.
- Telecoms Master Outlet.
- Engraved Isolating DP Switch.
- Unswitched Fused Connection Unit

H/L	-	High Level
L/L	-	Low Level
WH	-	Water Heater
ODH	-	Over Door Heater
TR	-	Towel Rail
MV	-	Mechanical Ventilation
EPH	-	Electrical Panel Heater
ESH	-	Electrical Storage Heater
ETH	-	Electrical Tube Heater
MV	-	Microwave
DW	-	Dishwasher
DA	-	Door Access Control
WM	-	Washing Machine
CH	-	Cooker Hood
OV	-	Oven
HO	-	Hob
FR	-	Fridge / Freezer
FSD	-	Fire and Smoke Damper

Rev:	Date:	Status/Amendments :	By:
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	20.02.23	PRELIMINARY ISSUE	K.S

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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
BASEMENT LEVEL, SMALL POWER AND DATA/COMMS LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	13.02.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-B1-DR-E-6200		C2



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Lighting Legend

- A — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H2 lite T.
- A1 — 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H4 lite T.
- B — 4000 LED, weatherproof luminaire, IP65, 7300lm, 58w - as Sylvania Start Waterproof.
- C — 3000K LED dimmable circular luminaire - exact specification by architect.
- D — 3000K LED dimmable surface-mounted luminaire - exact specification by architect.
- E1 — 2W LED recessed emergency pin-spot luminaire, local self-test, 190lm, as Philip Payne TYKE860YS, colour to be confirmed by architect.
- E — 3000K LED weatherproof luminaire, IP65, 684lm, 9W - as Concord Sterling Bulkhead LED 4063831. E - denotes 3hr local self-test emergency version.
- F — 3000K LED 8mm x 2mm lightstrip beneath kitchen units or in coving detail, IP65, 9.6W/m, as Ledridge LED96 / EXT-SL8
- G — Pendant Luminaire - exact specification by architect
- H — 3000K LED surface-mounted luminaire, exact specification by architect.
- J — 3000K LED pendant feature luminaire, exact specification by architect.
- K — 3000K LED surface-mounted luminaire, IP65, exact specification by architect.
- EXIT — LED Emergency exit sign, as Philip Payne 250MCSV
- PIR — PIR presence detector
- 2 Way light switch
- 1 Way light switch
- Dimmer switch
- INT — Intermediate switch

Rev:	Date:	Status/Amendments :	By:
C2	28.04.23	CONSTRUCTION ISSUE - revisions clouded	K.S
C1	21.04.23	PRELIMINARY ISSUE	K.S

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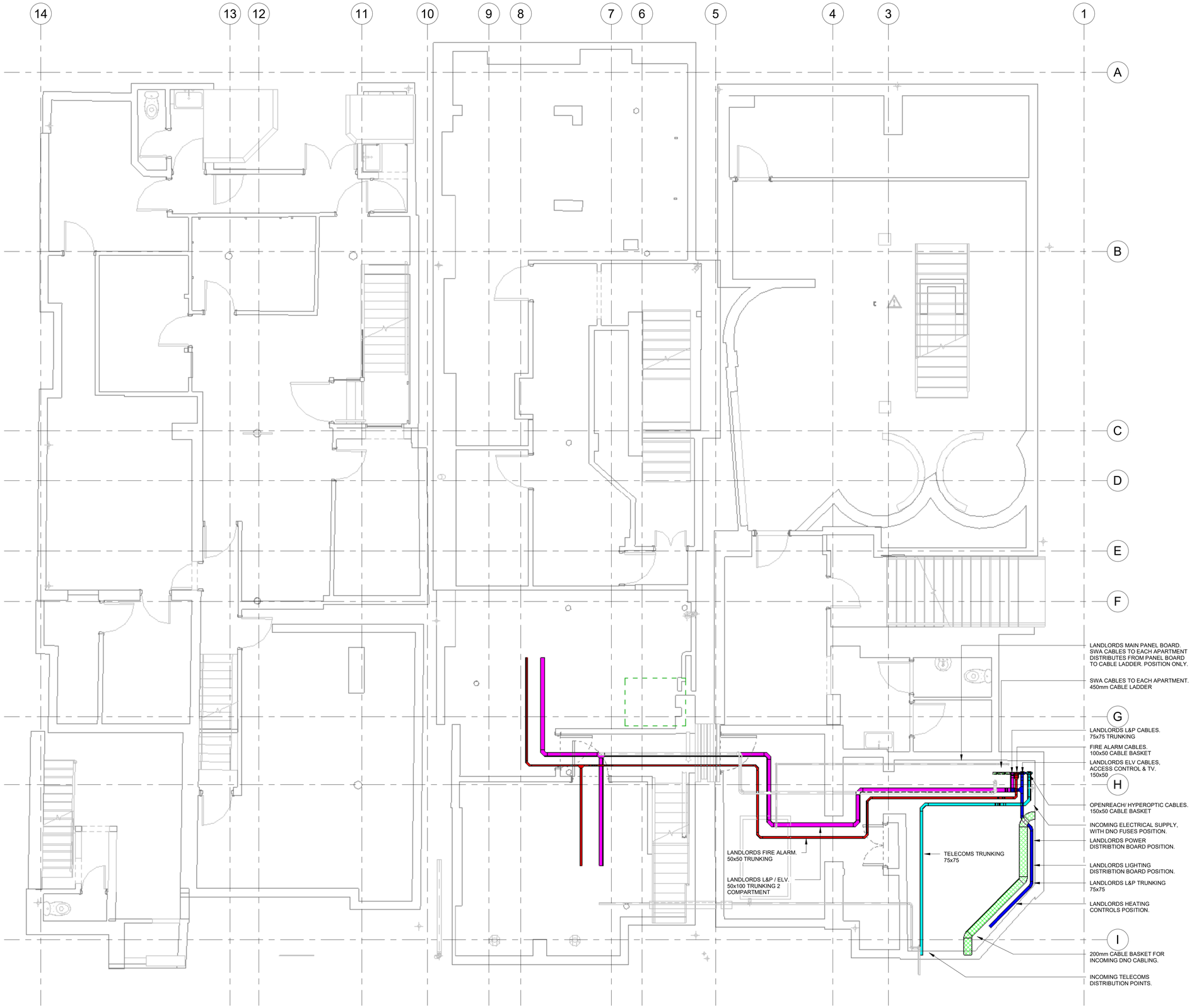
Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
BASEMENT LEVEL, LIGHTING LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	K.S	M.E
Scale: 1 : 50	Paper Size: A1	Date Created: 19.04.2023
Drawing Number: 4052-KIN- XX-B1-DR-E-6300		Drawing Revision: C2

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Containment Services Legend

- Cable Basket (Apartment Cables)
- Trunking (Landlords L&P)
- Cable Basket (Fire Alarm Cables)
- Cable Basket (Landlords ELV & Access Control)
- Cable Basket (Openreach / Hyperoptic Cables)

Rev:	Date:	Status/Amendments :	By:
C2	19.04.23	ISSUED FOR CONSTRUCTION	K.S
C1	14.04.23	PRELIMINARY ISSUE	K.S

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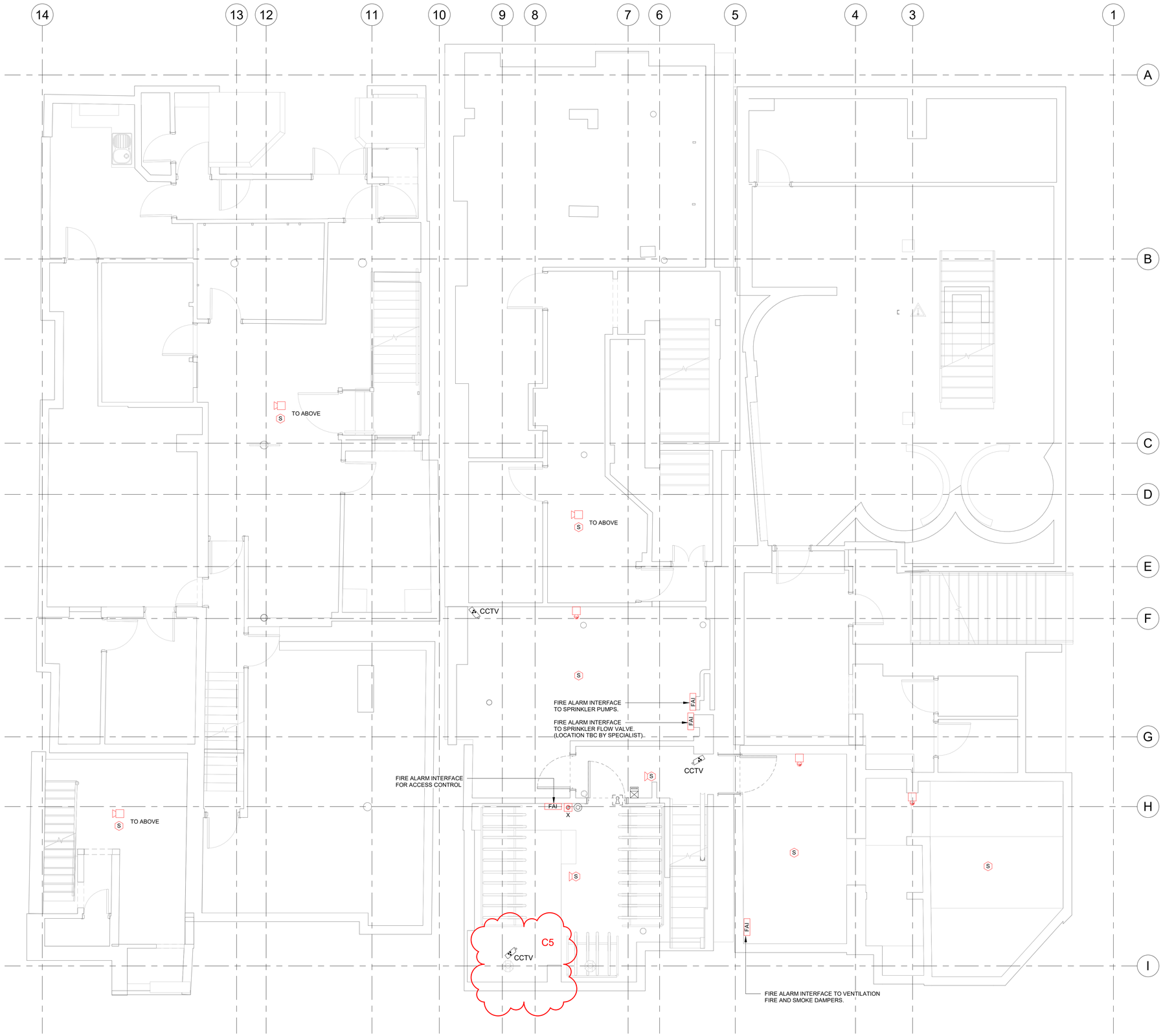
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Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
BASEMENT LEVEL, CONTAINMENT
SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	G.M
Scale: 1 : 50	Paper Size: A1	Date Created: APRIL 2023
Drawing Number: 4052-KIN- XX-B1-DR-E-6600		Drawing Revision: C2



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Fire Alarm Notes

OPEN PLAN APARTMENT FIRE ALARM
BS5839-6 Grade D category LD1. Heat detector/sounder in kitchen. Optical smoke detector/sounder in all bedrooms, optical smoke detector in all circulation spaces that form part of the escape routes and all areas where fire might start, but not in bathrooms, shower rooms or toilets.

COMMUNAL AREAS FIRE ALARM
Apartment corridors - BS5839-6 category L5. Optical smoke detectors in all areas to activate AOV units and alert main panel.

GF / Basement /Roof Communal Areas - BS5839-1 category L3 coverage, activation in this area causes all alarms to sound.

Fire Alarm, Access Control & CCTV Legend

- Electric Door Lock
- Emergency Door Release Break Glass
- X — Exit Push
- PIR — PIR to Unlock Door When Movement Is Detected on the Stairs
- Access System Card Reader
- Video Entry Handsfree Monitor (WIFI)
- Video Entry Panel with Camera, Microphone/Speaker, Digital Call Keypad and Access Card Reader
- LDC — Local Door Controller with Battery Backup
- H — Heat Detector c/w Sounder
- S — Optical Smoke Detector c/w Sounder
- S — Optical Smoke Detector
- FAI — Fire Alarm Interface Unit
- Manual Break Glass
- Fire Alarm Sounder Beacon
- Fire Alarm Sounder
- FAP — Fire Alarm Panel
- CCTV — CCTV Camera
- DH — Door Hold Open Device

Rev:	Date:	Status/Amendments :	By:
C5	01.11.23	ISSUED FOR CONSTRUCTION	K.S
C4	21.04.23	ISSUED FOR CONSTRUCTION	K.S
C3	18.04.23	PRELIMINARY ISSUE	K.S
C2	10.03.23	PRELIMINARY ISSUE	K.S
C1	22.02.23	PRELIMINARY ISSUE	K.S

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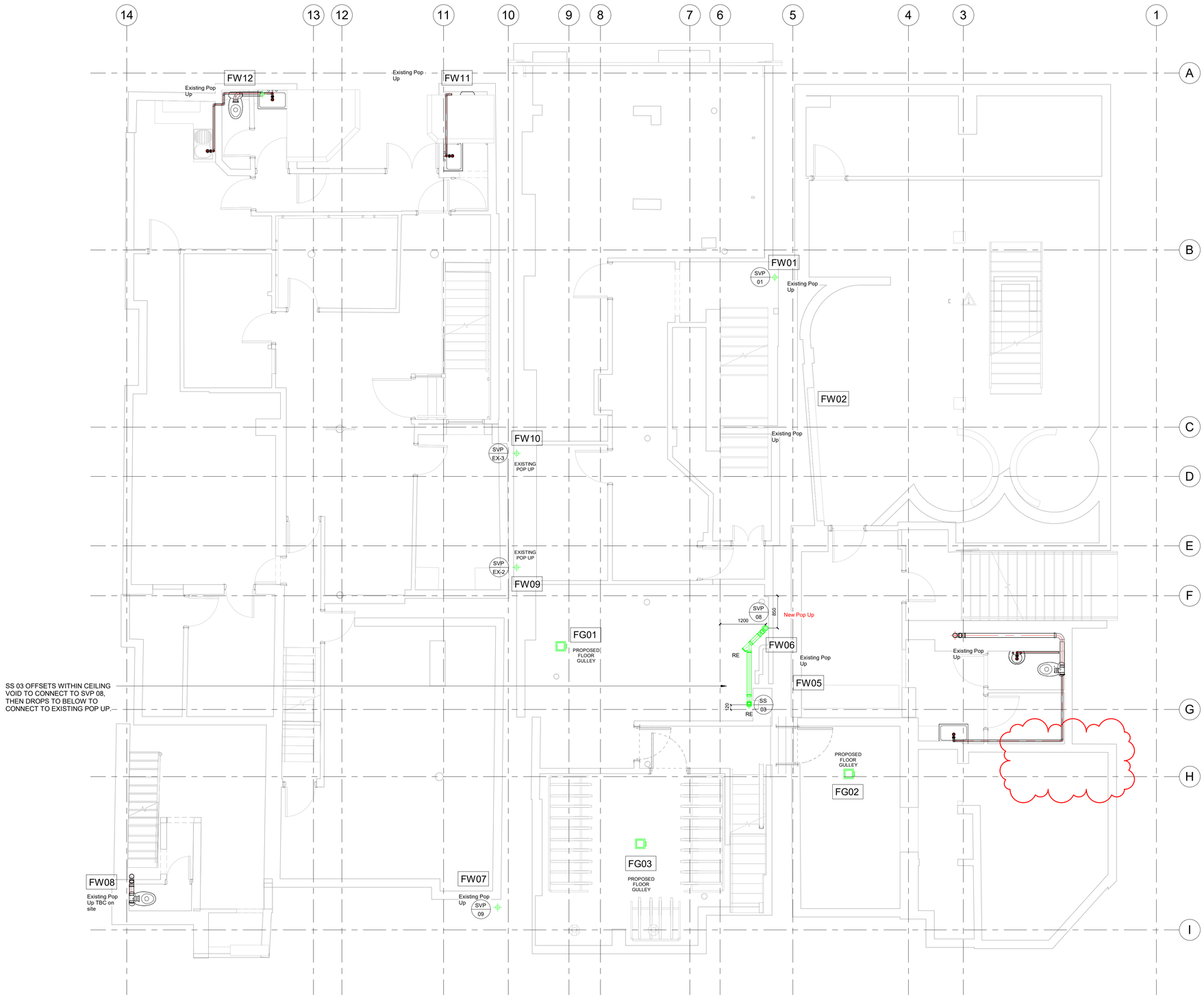
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
BASEMENT LEVEL, FIRE ALARM AND ACCESS CONTROL SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
M.E	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	22.02.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-B1-DR-E-6700		C5



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DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. The contractor shall ensure that rodding eyes and access points are accessible for maintenance purposes. Where they are accessible by destructivce access these shall be marked up on the as fitted drawings.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and bird mesh, and openings by main contractor. Detail as per architect and roofing specialists drawings.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev:	Date:	Status/Amendments:	By:
C5	04.08.23	CHANGES CLOUDED.	M.H
C4	21.07.23	CHANGES CLOUDED.	M.H
C3	11.05.23	DIMENSIONS ADDED. CHANGES CLOUDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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Drawing Title:
MECHANICAL SERVICES
BASEMENT LEVEL, ABOVE GROUND
DRAINAGE LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	12/12/22
Drawing Number:		Drawing Revision:
4052-KIN- XX-B1-DR-M-5200		C5



Domestic Hot & Cold Water Services Legend

- Mains Cold Water Service
- Boosted Cold Water Service
- Balanced Cold Water Service (Apt)
- Hot Water Service (Apt)
- Sprinkler Pipework (by Specialist)
- Dry Riser Pipework (by Specialist)

MCWS	Mains Cold Water Services
BCWS	Boosted Cold Water Services
DHWS	Domestic Hot Water Services
SC	Stop Cock
IV	Isolation Valve
TMV	Thermostatic Mixing Valve
DOC	Drain Off Cock
DTLL	Drop to Low Level
RTA	Rise to Above
DTB	Drop to Below
LL	Low Level
HL	High Level
WC	Water Closet
WHB	Wash Hand Basin
DW	Dishwasher
WM	Washing Machine
CV	Ceiling Void
CYL	Hot Water Cylinder

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Domestic Hot & Cold Water Services Notes

1. The domestic water services installation indicated on these drawings consists of:
   Installation of incoming mains water supply.
   Installation of hot water generation system.
2. Hot & cold pipework contained within voids shall be installed in copper to BS 2871 Part 1, Table X of the sizes and in the position indicated on the drawings. All pipework shall be copper tube of British manufacture, complying entirely to BS EN 1057: 1996.
3. All final connections to sanitaryware shall be supplied with a ballofix type stop valve of the same size as the pipework shown on the drawings.
4. 15mm drain cocks shall be installed at any low points in the system where water may remain after normal drainage throughout the system.
5. Thermal insulation shall be carried out by a specialist sub contractor. Insulation to be mineral wool, pre formed pipe sections with normal density 80kg/m. Thermal conductivity not exceeding 0.04W/mK. Reinforced aluminium foil finish with at least 25mm overlap (All insulation shall be Class 0 or equivalent).
6. Upon completion of the flushing and testing of the domestic water services pipework, the installations shall be satisfactorily chlorinated in accordance with BS 6700.
7. All pipework passing through fire compartment walls and floor slabs to be fire stopped.
8. All pipework to be run in voids where possible, or boxed-in to architect's detail.
9. All fittings on copper pipework shall be integral solder ring type fitting containing a "lead free" solder and suitable for wholesome / potable water as I.M.I Yorkshire Fitting Limited and each fitting clearly marked with "YP" logo.
10. All rising pipework shall be truly "plumb" and where exposed in rooms, the contractor shall discreetly route the pipework into the corners. No pipework is to be routed across windows nor shall it obstruct doorway access.
11. All bends, elbows, sets - both double and single - and other fittings necessary to carry out the complete installation, but not necessarily shown due to the scale of the drawings, shall be allowed for including sets, bends, etc. necessary for passing round soil vents, rain-water pipes and waste pipes, etc.
12. The contractor shall include for providing and installing all necessary supports, brackets and steelwork, etc. Including primary supports / steelwork as required.
13. The contractor shall provide and install valves where indicated on the schematic and layouts. Drain cocks shall be provided at all low points.
14. All valves and cocks must be fitted in such a manner that they are accessible for operation and maintenance.
15. All isolating, regulating, and check valves shall be in accordance with the water supply (water fittings) regulations 1999.
16. Isolating and double check valves shall be installed in hot and cold water services pipework connections serving washing machines.
17. All isolating, regulating, and check valves positioned on copper pipework shall be suitable for compression connection.
18. All stopcocks shall be of an approved clearway, high pressure screw down type with crutch handled and raised seating and suitable for compression connection and all in accordance with BS 1010.
19. Drain cocks on internal M.W.S. services shall be of the screw down pattern drain tap with externally serrated hose nozzle to be fitted, where necessary, and where indicated for emptying the pipes, etc. and all in accordance with BS 2897.

Rev:	Date:	Status/Amendments:	By:
C4	13.10.23	CONSTRUCTION ISSUE - Sprinklers added.	M.H
C3	02.05.23	ARCHITECTS LAYOUT UPDATED	M.H
C2	10.03.23	PRELIMINARY ISSUE - CHANGES CLOUDED	M.H
C1	24.02.23	PRELIMINARY ISSUE	M.H

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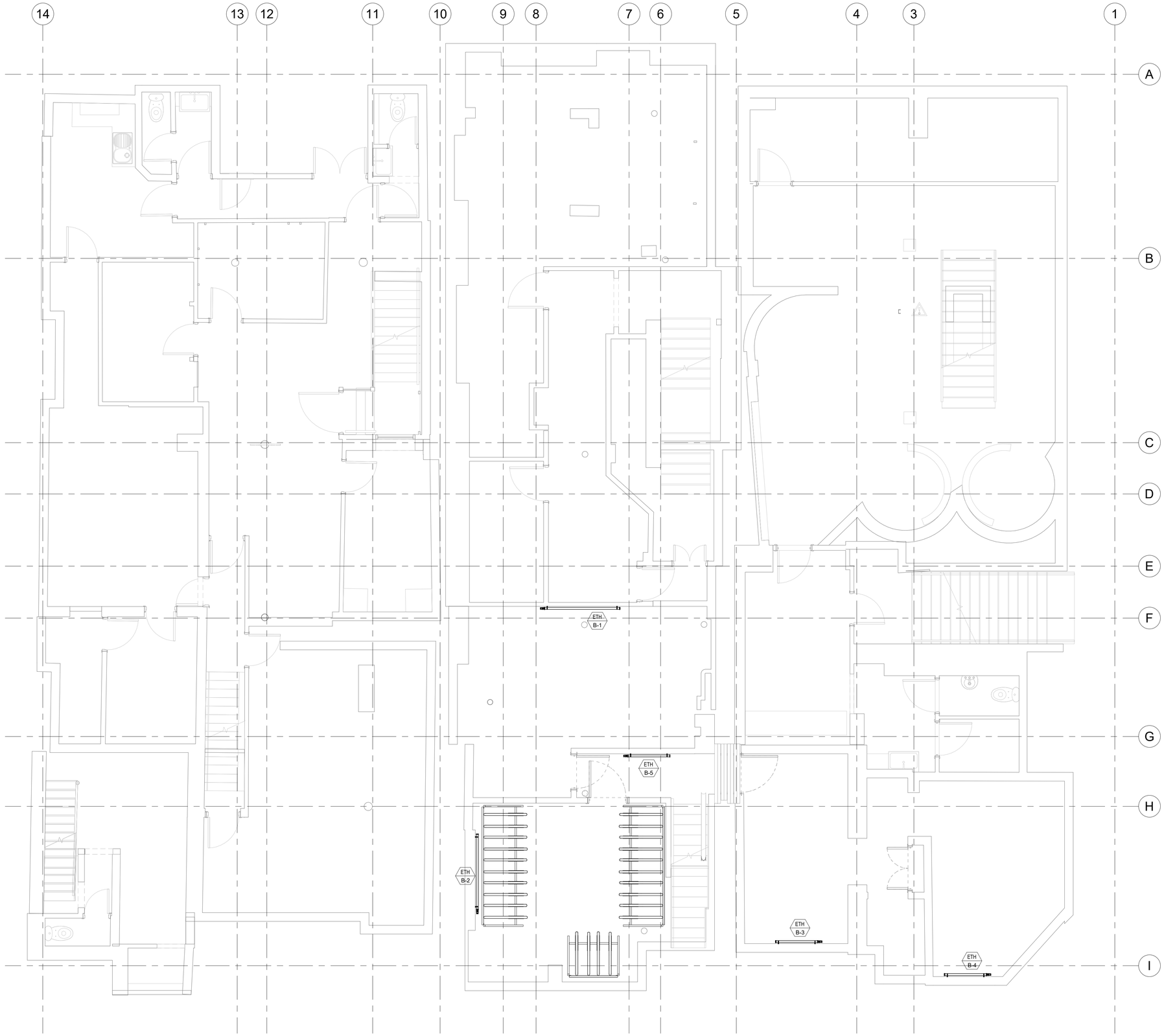
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
BASEMENT LEVEL, DOMESTIC HOT & COLD WATER SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
1 : 50	A0	02/21/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-B1-DR-M-5300		C4



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Heating Legend

	Electric Storage Heater
	Overdoor Air Curtain
	Electric Tubular Heater
	Electric Towel Heater
ESH	Electric Storage Heater
EPH	Electric Panel Heater
AC	Overdoor Air Curtain
ETH	Electric Tubular Heater
ETR	Electric Towel Rail

Rev:	Date:	Status/Amendments:	By:
C2	20.04.23	ARCHIECTS LAYOUT AMENDED	M.H
C1	06.03.23	PRELIMINARY ISSUE	M.H

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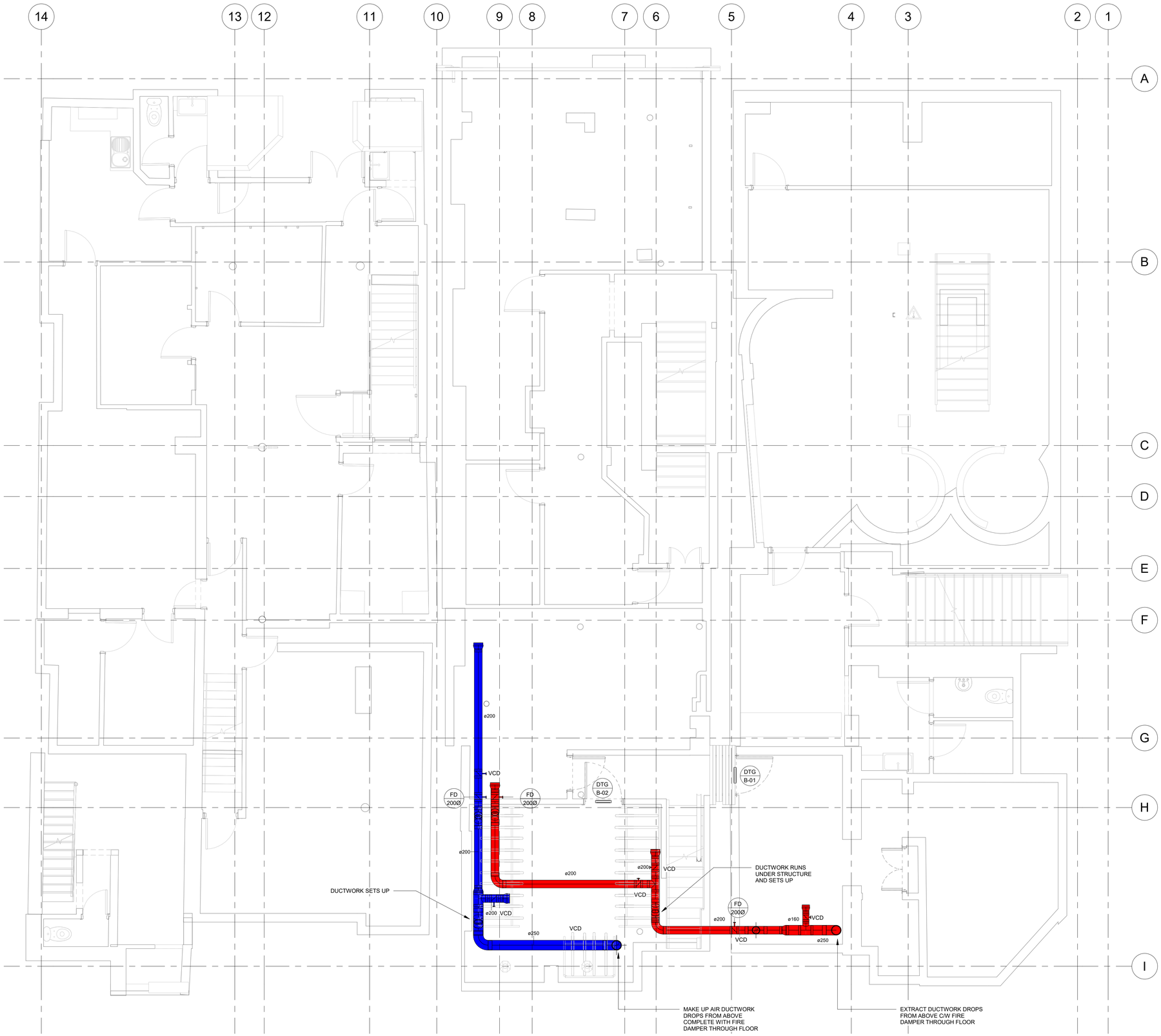
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Client:
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Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
BASEMENT LEVEL, HEATING SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale: 1 : 50	Paper Size: A1	Date Created: 28.03.23
Drawing Number: 4052-KIN- XX-B1-DR-M-5600		Drawing Revision: C2



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Ventilation Notes

1. All ductwork shall be manufactured & installed in accordance with besa dw154 for plastic ductwork within apartments and dw144 for ductwork in communal areas.
2. Fire dampers/fire collars or wraps shall be provided where ductwork passes through any fire rated structure.
3. Thermal insulation shall be applied to the following areas:
   Untreated fresh air ductwork from external louvre to fan within the building.
   Exhaust ductwork from external louvre to fan within the building.
4. All fire dampers require suitable access. Access doors in plasterboard ceilings/walls are to be provided by the main contractor where ductwork access doors are shown.
5. All fire damper openings are to be trimmed by walling contractor to allow fixing into proprietary stub work in accordance with the manufacturers details.
6. Suitable space is to be left along ductwork to facilitate correct before and after spacings for test points.
7. Commissioning engineers are to include for test points and also providing and installing test point caps.
8. All ductwork to be tested in compliance with the requirements for the project specific epc/part l compliance check list.
9. The ductwork contractor is deemed to or include for all necessary offsets and bends to provide a complete installtion.
10. Access doors are to be installed in accordance with the below:-

circular dampers	-	upstream and downstream
rectangular	-	upstream and downstream dampers
fire dampers	-	to suit damper maintenance / opposite side
attenuators	-	upstream and downstream
change in direction	-	one panel to suit
fans	-	upstream and downstream at
louvres	-	one panel to suit
fire rated ducts	-	see dw/172
standard ducts	-	every 15m
vertical ducts	-	top and bottom each accessible floor

Ventilation Legend

- Fresh Air Intake Insulated Ductwork
- Room Supply Air Ductwork
- Room Extract Air Ductwork
- Exhaust Air Insulated Ductwork
- Attenuator
- VCD — Volume Control Damper
- FD — Fire Damper

Rev:	Date:	Status/Amendments:	By:
C1	20.04.23	PRELIMINARY ISSUE	M.H

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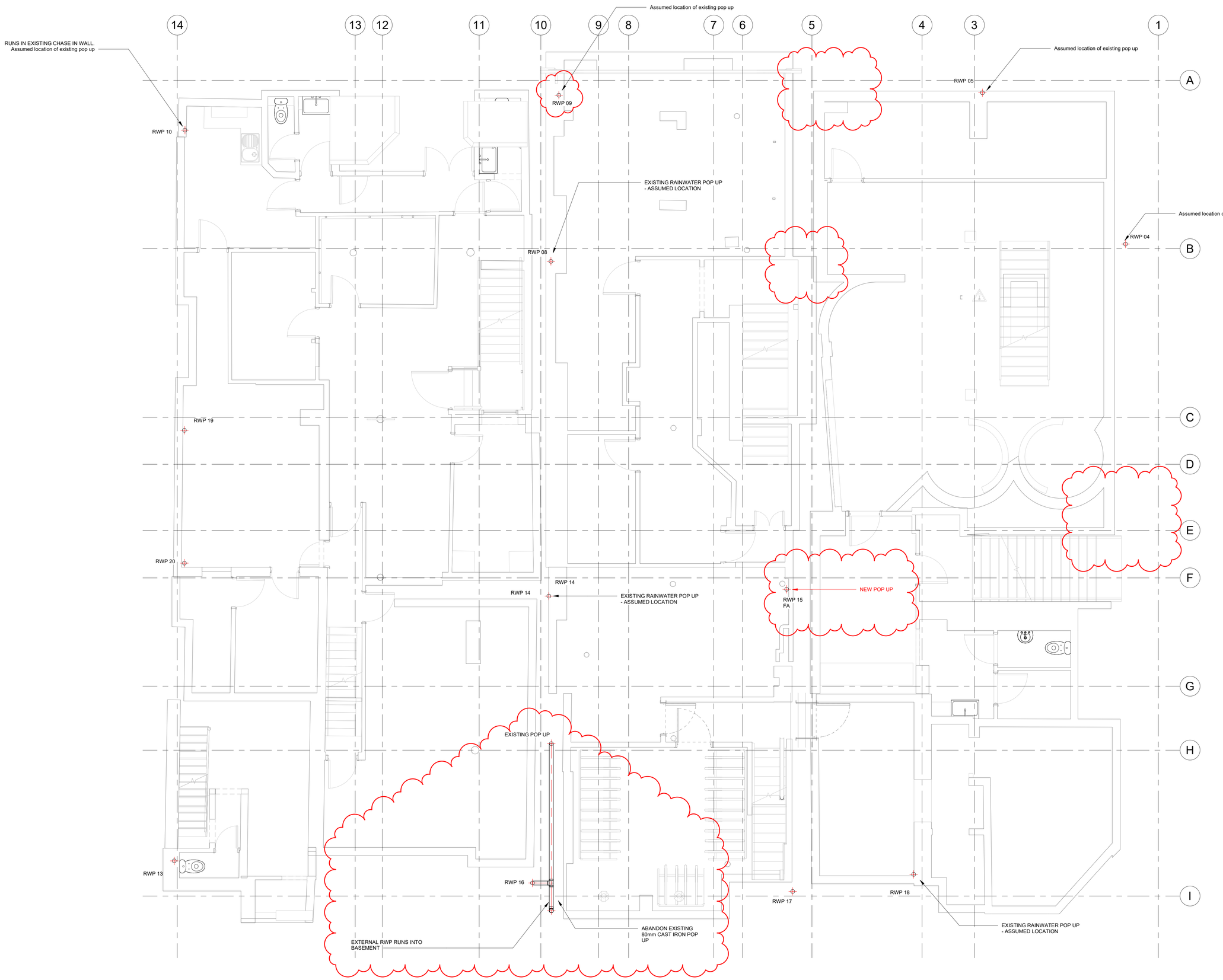
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
BASEMENT LEVEL, VENTILATION
LAYOUT

Drawn By:	Checked By:	Cad By:
Author	Checker	
Scale:	Paper Size:	Date Created:
1 : 50	A1	04/20/23
Drawing Number:		Drawing Revision:
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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC). ALL PIPEWORK TO BE 100Ø UNLESS OTHERWISE STATED.
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE PROPOSED ROOF WORKS AND MEP DESIGN
8. MAIN CONTRACTOR TO TAKE COGNISANCE THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 - 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1000mm HORIZONTAL AND 1000mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF.
RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTORS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND SYSTEM TO BE DETERMINED BY ACIES.
17. THE RAINWATER SYSTEM VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS. THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED INLINE WITH THE ACOUSTICIANNS REPORT. RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C3	21.07.23	CHANGES CLOUDED	M.H
C2	10.05.23	UPDATED WITH STACKS IN RETAIL UNITS	M.H
C1	11.04.23	PRELIMINARY ISSUE	M.H

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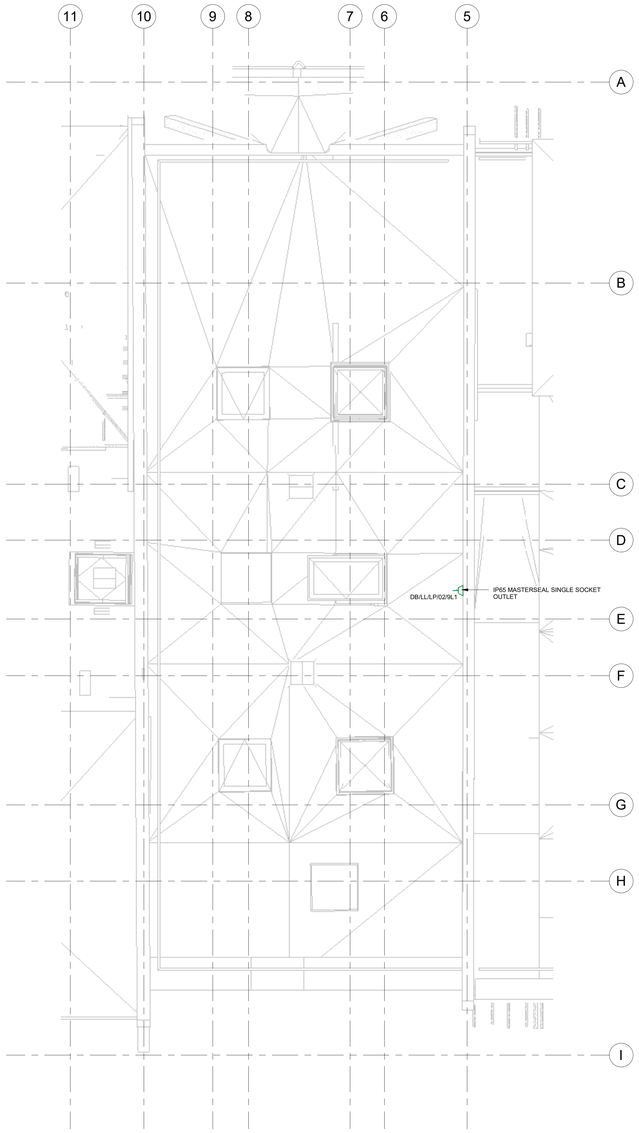
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Project:
58-64 King Street, Manchester

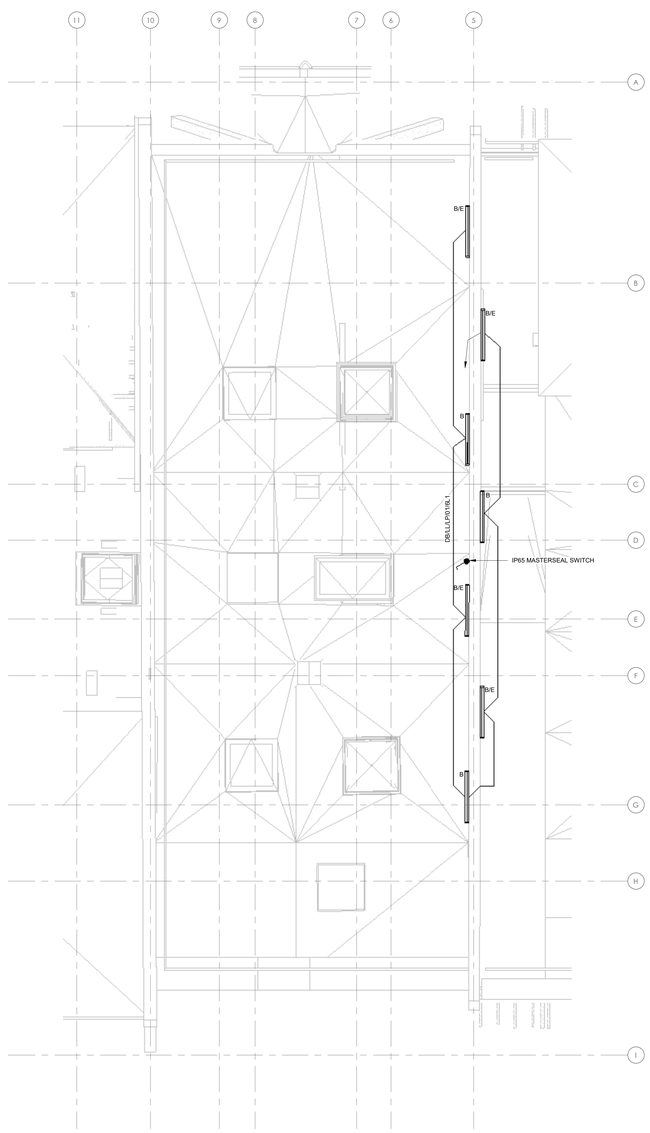
Drawing Title:
MECHANICAL SERVICES
BASEMENT LEVEL, RAINWATER
DRAINAGE

Drawn By:	Checked By:	Cad By:
GM	MH	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	03/10/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-B1-DR-M-5800		C3



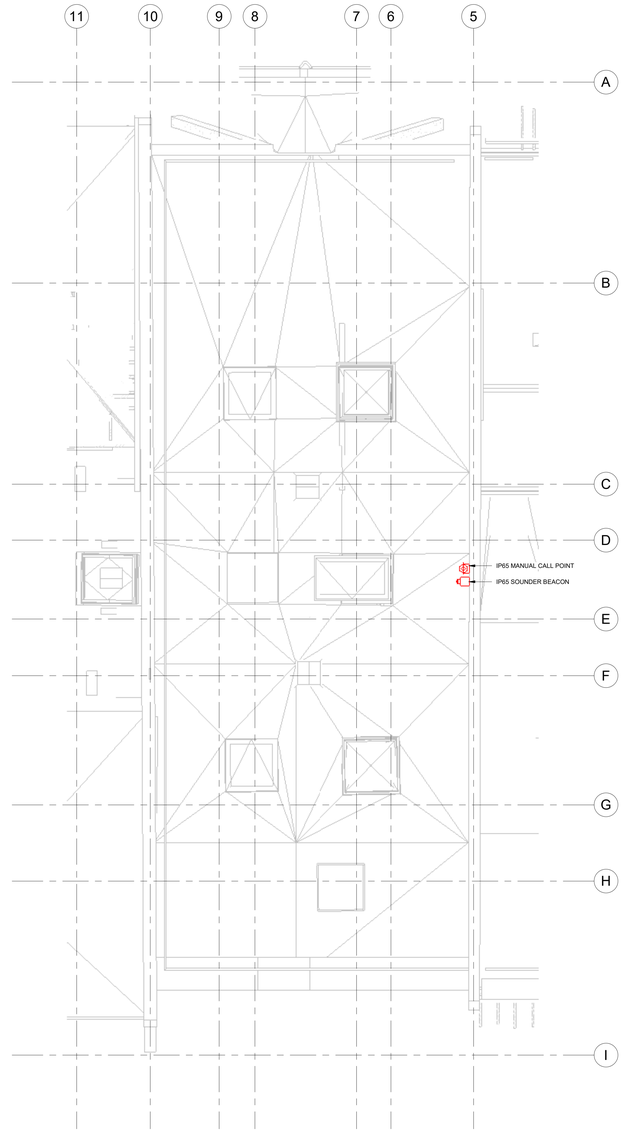
1 RF1 - Rooftop Level (64-66) - Small Power Layout

1 : 50



2 RF1 - Rooftop Level (64-66) - Lighting Layout

1 : 50



3 RF1 - Rooftop Level (64-66) - Fire Alarm and Security Layout

1 : 50

Small Power Legend

- 32A SPN IP65 isolator for lift to manufacturers requirements.
- CU/** Consumer Unit.
- USB Twin Switched Socket Outlet with Integral USB Charger.
- Twin Switched Socket Outlet (N Denotes Number of Units).
- Switched Fused Connection Unit (N Denotes Number of Units).
- Single Switched Socket Outlet.
- TC Single Switched Lockable Cleaners Socket Outlet.
- Single Unswitched Socket Outlet.
- Cable Outlet.
- Shaver Outlet (With Integral Isolating Transformer)
- TV/LP TV Outlet Lounge Plate.
- TV/BP TV Outlet Bedroom Plate.
- Telecoms Master Outlet.
- Single Data Outlet
- Engraved Isolating DP Switch.
- Unswitched Fused Connection Unit

H/L	-	High Level
L/L	-	Low Level
WH	-	Water Heater
ODH	-	Over Door Heater
TR	-	Towel Rail
MV	-	Mechanical Ventilation
EPH	-	Electrical Panel Heater
ESH	-	Electrical Storage Heater
ETH	-	Electrical Tube Heater
MV	-	Microwave
DW	-	Dishwasher
DA	-	Door Access Control
WM	-	Washing Machine
CH	-	Cooker Hood
OV	-	Oven
HO	-	Hob
FR	-	Fridge / Freezer
FSD	-	Fire and Smoke Damper

Lighting Legend

- A 3000K LED, recessed fire-rated luminaire IP65, 440lm, 4.4w - as Collingwood H2 lite T.
- B 4000 LED, weatherproof luminaire, IP65, 7300lm, 58w - as Sylvania Start Waterproof.
- C 3000K LED dimmable circular luminaire - exact specification by architect.
- D 3000K LED dimmable surface-mounted luminaire - exact specification by architect.
- E1 2W LED recessed emergency pin-spot luminaire, local self-test, 190lm, as Philip Payne TYKE860YS, colour to be confirmed by architect.
- E 3000K LED weatherproof luminaire, IP65, 684lm, 9W - as Concord Sterling Bulkhead LED 4063831. E - denotes 3hr local self-test emergency version.
- F 3000K LED 8mm x 2mm lightstrip beneath kitchen units or in coving detail, IP65, 9.6W/m, as Ledridge LED96 / EXT-SL8
- G Pendant Luminaire - exact specification by architect
- H 3000K LED surface-mounted luminaire, exact specification by architect.
- 3000K LED pendant feature luminaire, exact specification by architect.
- K 3000K LED surface-mounted luminaire, IP65, exact specification by architect.
- EXIT LED Emergency exit sign, as Philip Payne 250MCSV
- PIR PIR presence detector
- 2 Way light switch
- 1 Way light switch
- Dimmer switch
- INT Intermediate switch

Fire Alarm, Access Control & CCTV Legend

- Electric Door Lock
- Emergency Door Release Break Glass
- X Exit Push
- PIR PIR to Unlock Door When Movement Is Detected on the Stairs
- Access System Card Reader
- Video Entry Handsfree Monitor (WIFI)
- Video Entry Panel with Camera, Microphone/Speaker, Digital Call Keypad and Access Card Reader
- LDC Local Door Controller with Battery Backup
- Heat Detector c/w Sounder
- Optical Smoke Detector c/w Sounder
- Optical Smoke Detector
- FAI Fire Alarm Interface Unit
- Manual Break Glass
- Fire Alarm Sounder Beacon
- Fire Alarm Sounder
- FAP Fire Alarm Panel
- CCTV CCTV Camera

Notes:

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Fire Alarm Notes

OPEN PLAN APARTMENT FIRE ALARM
BS5839-6 Grade D category LD1. Heat detector/sounder in kitchen. Optical smoke detector/sounder in all bedrooms, optical smoke detector in all circulation spaces that form part of the escape routes and all areas where fire might start, but not in bathrooms, shower rooms or toilets.

COMMUNAL AREAS FIRE ALARM
Apartment corridors - BS5839-6 category L5. Optical smoke detectors in all areas to activate AOV units and alert main panel.

GF / Basement /Roof Communal Areas - BS5839-1 category L3 coverage, activation in this area causes all alarms to sound.

Rev:	Date:	Status/Amendments:	By:
C1	26.04.23	PRELIMINARY ISSUE	K.S

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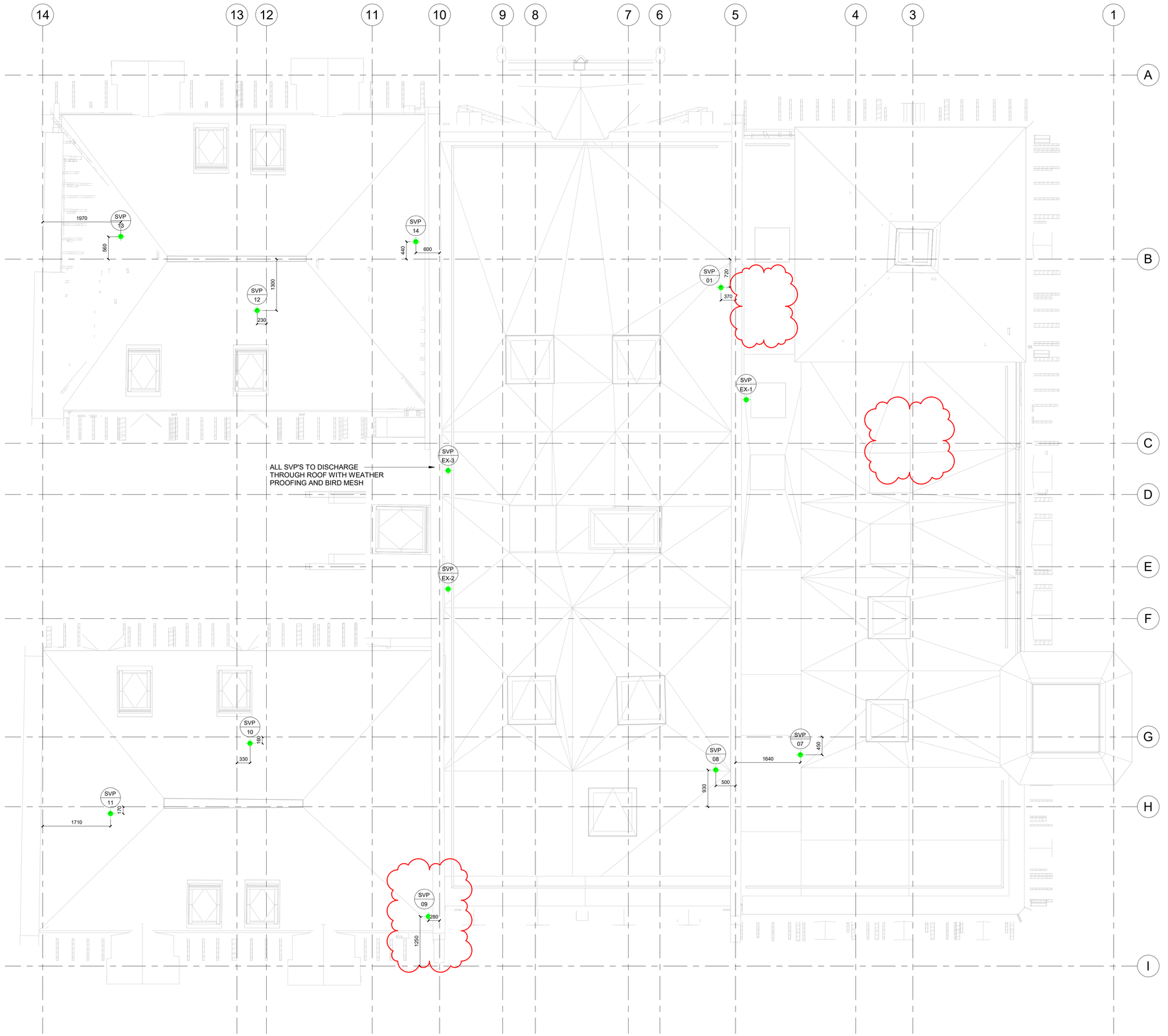
Email: info@kingassociates.uk
www.kingassociates.uk

Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
ELECTRICAL SERVICES
ROOF LEVEL ELECTRICAL SERVICES LAYOUT

Drawn By:	Checked By:	Cad By:
K.S	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A0	25.04.2023
Drawing Number:		Drawing Revision:
4052-KIN- XX-R1-DR-E-6000		C1



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DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. The contractor shall ensure that rodding eyes and access points are accessible for maintenance purposes. Where they are accessible by destructivce access these shall be marked up on the as fitted drawings.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and bird mesh, and openings by main contractor. Detail as per architect and roofing specialists drawings.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev:	Date:	Status/Amendments:	By:
C4	21.07.23	CHANGES CLOUDED.	M.H
C3	11.05.23	DIMENSIONS ADDED. CHANGES CLOUDED.	M.H
C2	28.04.23	ARCHITECTS LAYOUT AMENDED	M.H
C1	17.02.23	PRELIMINARY ISSUE	M.H

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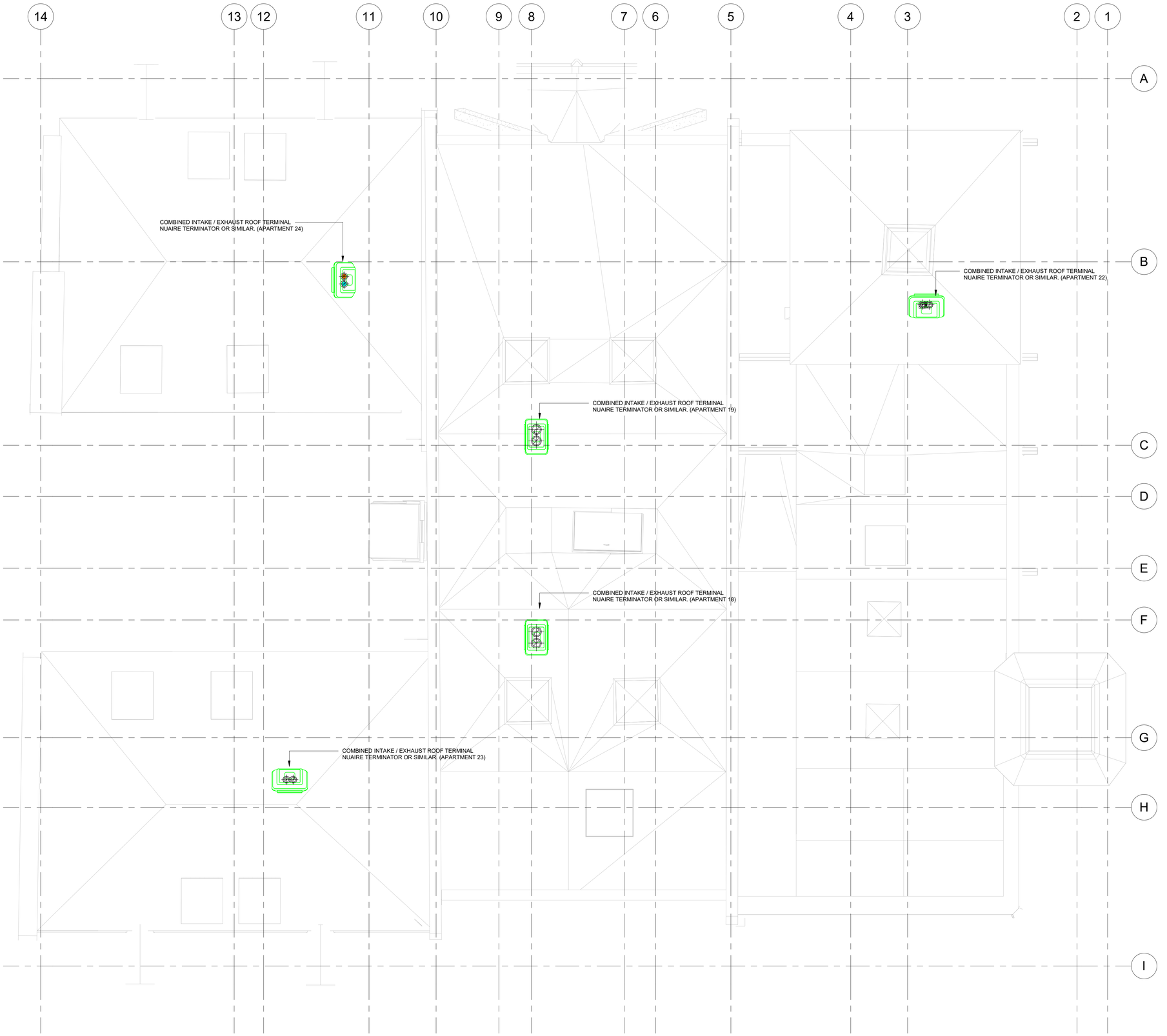
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
ROOF LEVEL, ABOVE GROUND
DRAINAGE LAYOUT

Drawn By:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	12/12/22
Drawing Number:		Drawing Revision:
4052-KIN- XX-R1-DR-M-5200		C4



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Ventilation Notes

1. All ductwork shall be manufactured & installed in accordance with besa dw154 for plastic ductwork within apartments and dw144 for ductwork in communal areas.
2. All ductwork within apartments shall be 204 x 60 unless otherwise stated.
3. Fire dampers/fire collars or wraps shall be provided where ductwork passes through any fire rated structure.
4. Thermal insulation shall be applied to the following areas:

   Untreated fresh air ductwork from external louvre to fan within the building.

   Exhaust ductwork from external louvre to fan within the building.
5. Bathroom/wc doors shall be undercut to provide ventilation air path routes.
6. Where apartment normal ventilation rates (based on floor area) are equal to the minimum high ventilation rates, a 20% margin is to be applied to high rate figures.
7. Openable windows to provide short periods of purge ventilation to remove odours, excess humidity and reduce temperatures in habitable rooms. Where there are no external windows in a habitable room, purge shall be provided by increases the speed of the MVHR.
8. All external louvres shall be Rytons A1 Fire Rated Square Holed Double Air Brick Ducting kits.

Ventilation Legend

- Fresh Air Intake Insulated Ductwork
- Room Supply Air Ductwork
- Room Extract Air Ductwork
- Exhaust Air Insulated Ductwork
- MVHR Unit - ECO2
- MVHR Unit - ECO4
- Attenuator
- VCD — Volume Control Damper
- COMBINED INTAKE / EXHAUST ROOF TERMINAL NUAIRE TERMINATOR OR SIMILAR.

Rev:	Date:	Status/Amendments:	By:
C1	17.02.23	PRELIMINARY ISSUE	M.H

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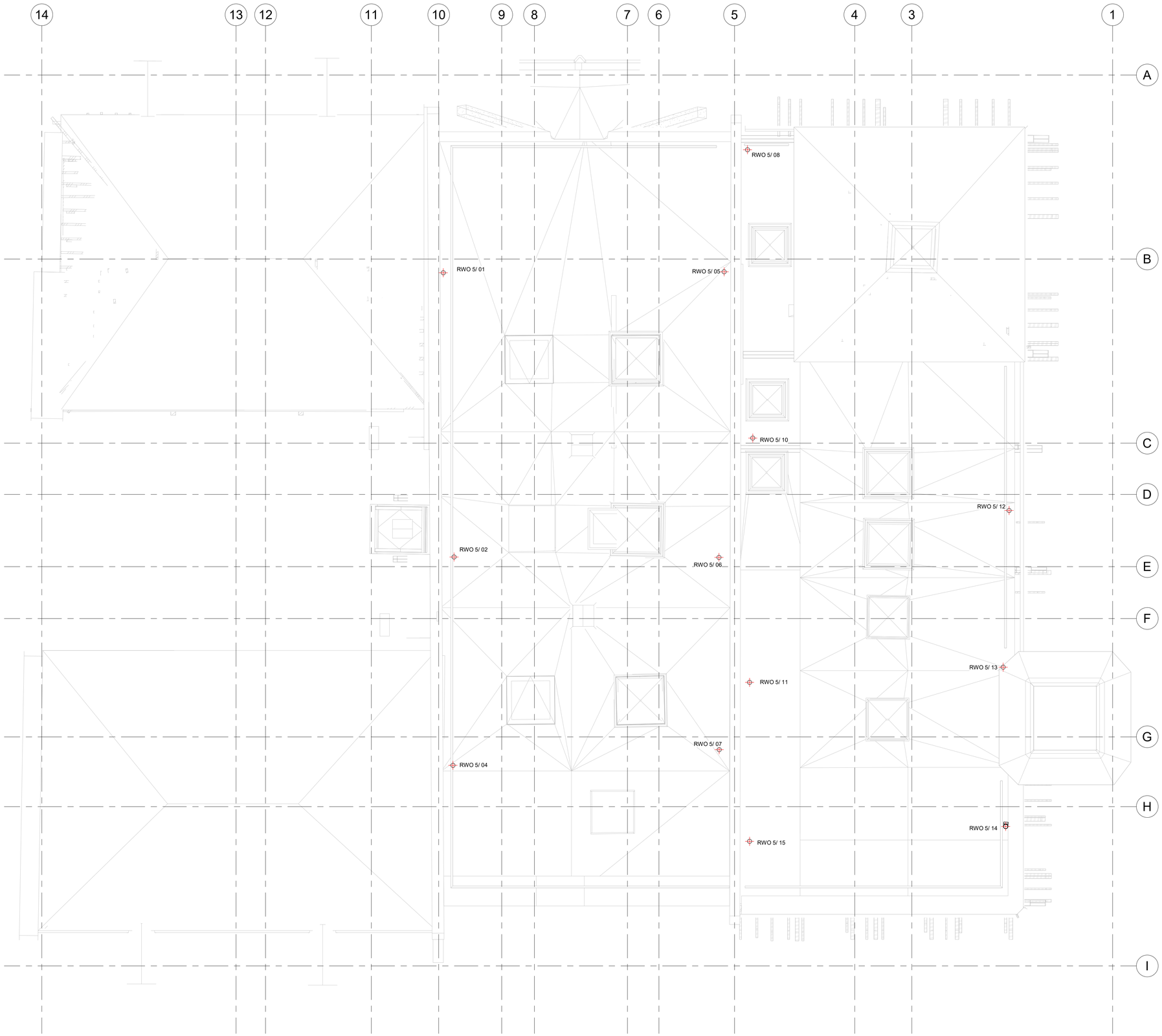
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
ROOF LEVEL, VENTILATION LAYOUT

Drawn By:	Checked By:	Cad By:
M.H	A.A	M.E
Scale:	Paper Size:	Date Created:
1 : 50	A1	14.12.2022
Drawing Number:		Drawing Revision:
4052-KIN- XX-R1-DR-M-5700		C1



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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC).
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE PROPOSED ROOF WORKS AND MEP DESIGN
8. MAIN CONTRACTOR TO TAKE COGNISANCE THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 - 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1000mm HORIZONTAL AND 1000mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF. RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTORS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND SYSTEM TO BE DETERMINED BY ACIES.
17. THE RAINWATER SYSTEM. VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS, THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED. RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C2	21.04.23	REVISED FOLLOWING COMMENTS	M.H
C1	11.04.23	PRELIMINARY ISSUE	M.H

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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
ROOF LEVEL, RAINWATER DRAINAGE

Drawn By:	Checked By:	Cad By:
Author	Checker	G.M
Scale:	Paper Size:	Date Created:
1 : 50	A1	10/03/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-R1-DR-M-5800		C2

Project: 4052 - 56-58 King Street EPC
Job No: 4052
Rev: C

Prepared by:
Checked By:

Sap Calculations

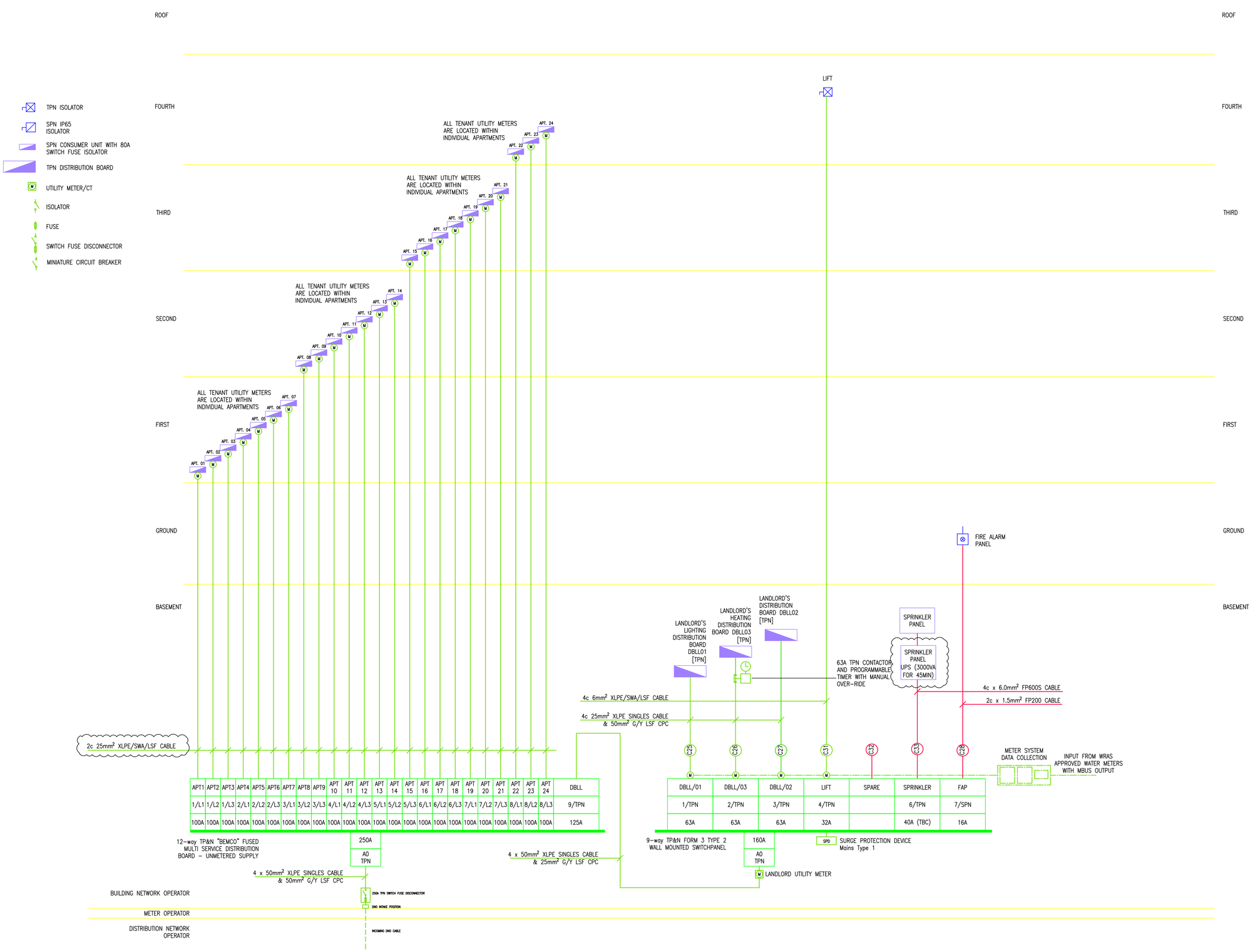
	Apartment 1	Apartment 2	Apartment 3	Apartment 4	Apartment 5
Walls(W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	1.24 (W/m2.K)	1.24 (W/m2.K)
Floor(W/m2.K)	N/A	N/A	N/A	N/A	N/A
Roof (W/m2.K)	N/A	N/A	N/A	N/A	N/A
Windows (W/m2.K)	1.8 (W/m2.K)	1.2 (W/m2.K)	1.2 (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)
Existing Roof lights	N/A	N/A	N/A	N/A	N/A
New Roof lights	N/A	N/A	N/A	N/A	N/A
Doors (W/m2.K)	N/A	N/A	N/A	N/A	N/A
Thermal Bridging (y)	0.15	0.15	0.15	0.15	0.15
Thermal Mass parameter	Medium	Medium	Medium	Medium	Medium
Air Permeability (m3/h.m2 @ 50pa)	15	15	12	8	8
Window G value	0.6	0.6	0.6	0.6	0.6
Ventilation	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO4	Nuaire MRXBOXAB-ECO4
Heating	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters
Heating controls	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff
DHW(Dual immersion)	Electric Direct Cylinder - 120lit single immersion heaters	Electric Direct Cylinder - 120lit single immersion heaters	Electric Direct Cylinder - 120lit single immersion heaters	Electric Direct Cylinder-150lit dual immersion heater	Electric Direct Cylinder-150lit dual immersion heater
WWHR	N/A	N/A	N/A	N/A	N/A
Lighting	LED	LED	LED	LED	LED
Renewables(PV) as proportion	N/A	N/A	N/A	N/A	N/A
EPC Rating	C	C	C	C	C

	Apartment 6	Apartment 7	Apartment 8	Apartment 9	Apartment 10
Walls(W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)
Floor(W/m2.K)	N/A	N/A	N/A	N/A	N/A
Roof (W/m2.K)	N/A	N/A	N/A	N/A	N/A
Windows (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)	1.2 (W/m2.K)
Existing Roof lights	N/A	N/A	N/A	N/A	N/A
New Roof lights	N/A	N/A	N/A	N/A	N/A
Doors (W/m2.K)	N/A	N/A	N/A	N/A	N/A
Thermal Bridging (y)	0.15	0.15	0.15	0.15	0.15
Thermal Mass parameter	Medium	Medium	Medium	Medium	Medium
Air Permeability (m3/h.m2 @ 50pa)	8	8	15	15	15
Window G value	0.6	0.6	0.6	0.6	0.6
Ventilation	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B
Heating	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters
Heating controls	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff
DHW(Dual immersion)	Electric Direct Cylinder-180lit dual immersion heater	Electric Direct Cylinder-180lit dual immersion heater	Electric Direct Cylinder - 120lit single immersion heaters	Electric Direct Cylinder - 120lit single immersion heaters	Electric Direct Cylinder - 120lit single immersion heaters
WWHR	N/A	N/A	N/A	N/A	N/A
Lighting	LED	LED	LED	LED	LED
Renewables(PV)	N/A	N/A	N/A	N/A	N/A
EPC Rating	C	C	C	C	C

	Apartment 11	Apartment 12	Apartment 13	Apartment 14	Apartment 15
Walls(W/m2.K)	1.24 (W/m2.K)	1.24 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	1.24 (W/m2.K)
Mansard roof (W/m2.K)					0.45 (W/m2.K)
Floor(W/m2.K)	N/A	N/A	N/A	N/A	N/A
Roof (W/m2.K)	N/A	N/A	N/A	N/A	0.16 (W/m2.K)
Windows (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)	1.2 (W/m2.K) / 1.3 (W/m2.K)
Existing Roof lights	N/A	N/A	N/A	N/A	1.8 (W/m2.K)
New Roof lights	N/A	N/A	N/A	N/A	N/A
Doors (W/m2.K)	N/A	N/A	N/A	N/A	N/A
Thermal Bridging (y)	0.15	0.15	0.15	0.15	0.15
Thermal Mass parameter	Medium	Medium	Medium	Medium	Medium
Air Permeability (m3/h.m2 @ 50pa)	15	15	15	15	12
Window G value	0.6	0.6	0.6	0.6	0.6
Ventilation	Nuaire MRXBOXAB-ECO4	Nuaire MRXBOXAB-ECO4	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B
Heating	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters
Heating controls	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff
DHW(Dual immersion)	Electric Direct Cylinder-150lit dual immersion heater	Electric Direct Cylinder-150lit dual immersion heater	Electric Direct Cylinder-180lit dual immersion heater	Electric Direct Cylinder-180lit dual immersion heater	Electric Direct Cylinder-150lit dual immersion heater
WWHR	N/A	N/A	N/A	N/A	N/A
Lighting	LED	LED	LED	LED	LED
Renewables(PV)	N/A	N/A	N/A	N/A	N/A
EPC Rating	C	C	C	C	C

	Apartment 16	Apartment 17	Apartment 18	Apartment 19	Apartment 20
Walls(W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)	0.3 (W/m2.K)
Floor(W/m2.K)	N/A	N/A	N/A	N/A	N/A
Roof (W/m2.K)	N/A	N/A	0.16 (W/m2.K)	0.15 (W/m2.K)	N/A
Windows (W/m2.K)	1.8 (W/m2.K)	1.8 (W/m2.K)	1.45 (W/m2.K)	1.45 (W/m2.K)	1.8 (W/m2.K)
Existing Roof lights	N/A	N/A	1.6 (W/m2.K)	1.6 (W/m2.K)	N/A
New Roof lights	N/A	N/A	1.6 (W/m2.K)	1.6 (W/m2.K)	N/A
Doors (W/m2.K)	N/A	N/A	N/A	N/A	N/A
Thermal Bridging (y)	0.15	0.15	0.15	0.15	0.15
Thermal Mass parameter	Medium	Medium	Medium	Medium	Medium
Air Permeability (m3/h.m2 @ 50pa)	15	15	15	15	15
Window G value	0.6	0.6	0.6	0.6	0.6
Ventilation	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO4	Nuaire MRXBOXAB-ECO4	Nuaire MRXBOXAB-ECO4	Nuaire MRXBOXAB-ECO2B
Heating	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters
Heating controls	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff
DHW(Dual immersion)	Electric Direct Cylinder - 120lit single immersion heaters	Electric Direct Cylinder - 120lit single immersion heaters	Electric Direct Cylinder-150lit dual immersion heater	Electric Direct Cylinder-150lit dual immersion heater	Electric Direct Cylinder-180lit dual immersion heater
WWHR	N/A	N/A	N/A	N/A	N/A
Lighting	LED	LED	LED	LED	LED
Renewables(PV)	N/A	N/A	N/A	N/A	N/A
EPC Rating	C	C	C	C	C

	Apartment 21	Apartment 22	Apartment 23	Apartment 24
Walls(W/m2.K)	0.3 (W/m2.K)	N/A	0.3 (W/m2.K)	0.3 (W/m2.K)
Floor(W/m2.K)	N/A	N/A	N/A	N/A
Mansard Roof (W/m2.K)	N/A	0.45 (W/m2.K)	0.45 (W/m2.K)	0.45 (W/m2.K)
Roof (W/m2.K)	N/A	0.15 (W/m2.K)	0.15 (W/m2.K)	0.15 (W/m2.K)
Windows (W/m2.K)	1.8 (W/m2.K)	1.3 / 1.32 / 1.45 (W/m2.K)	1.16 / 1.18 / 1.19 1.28 (W/m2.K)	1.2 (W/m2.K)
Existing Roof lights	N/A	1.6 (W/m2.K)	N/A	N/A
New Roof lights	N/A	N/A	1.6 (W/m2.K)	1.6 (W/m2.K)
Doors (W/m2.K)	N/A	N/A	N/A	N/A
Thermal Bridging (y)	0.15	0.15	0.15	0.15
Thermal Mass parameter	Medium	Medium	Medium	Medium
Air Permeability (m3/h.m2 @ 50pa)	15	12	8	8
Window G value	0.6	0.6	0.6	0.6
Ventilation	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B	Nuaire MRXBOXAB-ECO2B
Heating	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters	Slimline storage heaters
Heating controls	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff	Controls for high heat retention storage heaters - Electricity tariff :7 Hour tariff
DHW	Electric Direct Cylinder-180lit dual immersion heater	Electric Direct Cylinder-180lit dual immersion heater	Electric Direct Cylinder-180lit dual immersion heater	Electric Direct Cylinder-180lit dual immersion heater
WWHR	N/A	N/A	N/A	N/A
Lighting	LED	LED	LED	LED
Renewables(PV)	N/A	N/A	N/A	N/A
EPC Rating	C	C	C	C



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Rev:	Date:	Status/Amendments:	By:
C2	10.05.23	STAGE 5 ISSUE	K.S
C1	10.02.23	STAGE 5 ISSUE	K.S

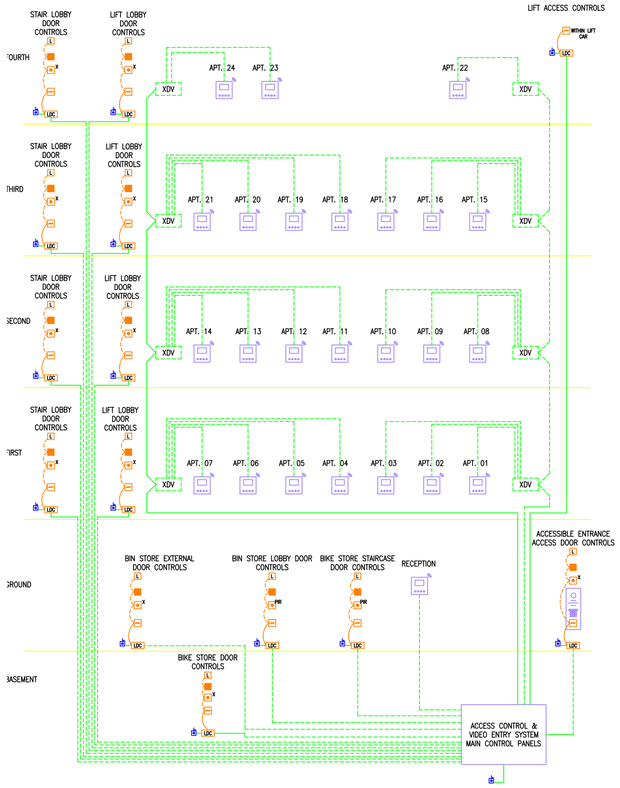
King Associates
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Email: info@kingassociates.uk
www.kingassociates.uk
KingAssociates

Client:
GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:
58-64 KING STREET
MANCHESTER

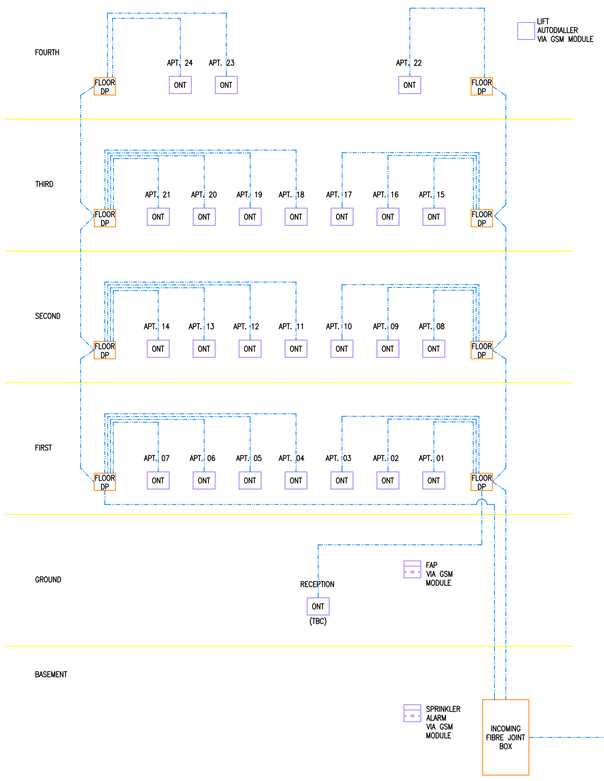
Drawing Title:
ELECTRICAL SERVICES
LV SCHEMATIC

Engineer:	Checked By:	Cad By:
K.S	A.A	K.S
Scale: NTS	Paper Size: A1	Date Created: DEC 2023
Drawing Number: 4052-KIN-XX-XX-SC-E-6100		Drawing Revision: C2



ACCESS CONTROL SCHEMATIC.(NTS)

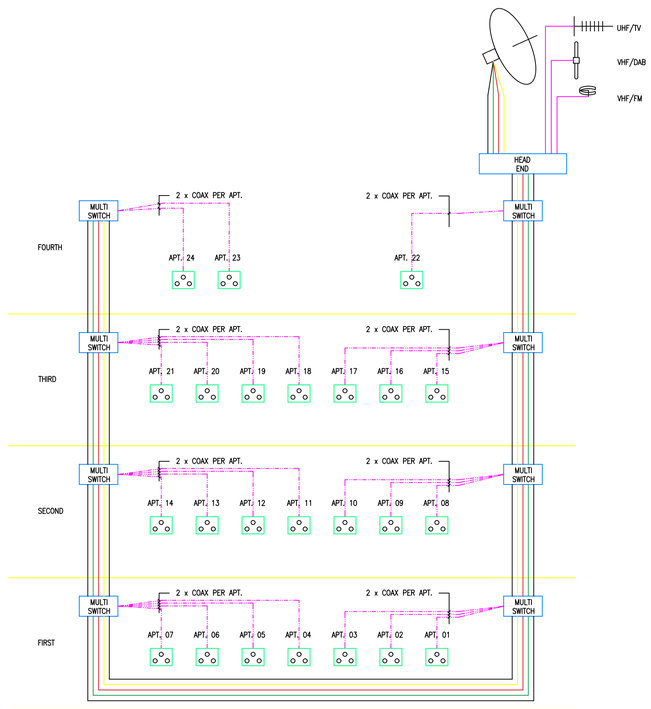
- UNSWITCHED FUSED CONNECTION UNIT
- ELECTRIC DOOR LOCK
- EMERGENCY DOOR RELEASE BREAK GLASS
- EXIT PUSH
- PIR TO UNLOCK DOOR WHEN MOVEMENT IS DETECTED ON THE STAIRS
- ACCESS SYSTEM CARD READER
- VIDEO ENTRY HANDSFREE MONITOR (WITH WI-FI)
- VIDEO ENTRY PANEL WITH CAMERA, MICROPHONE/SPEAKER, DIGITAL CALL KEYPAD, AND ACCESS CARD READER
- XDV — VIDEO DISTRIBUTOR/NETWORK SWITCH
- VIDEO ENTRY CABLE
- ACCESS CONTROL CABLE
- LDC — LOCAL DOOR CONTROLLER WITH BATTERY BACK-UP



TELECOM DISTRIBUTION SCHEMATIC.(NTS)

REPRESENTATIVE - BOTH OPENREACH AND HYPEROPTIC NETWORKS ARE TO BE INSTALLED

- ONT — OPTICAL NETWORK TERMINATION
- FIBRE CABLE
- FLOOR DP — FLOOR DISTRIBUTION POINT



TV DISTRIBUTION SCHEMATIC.(NTS)

- TRIPLEX TV/DAB OUTLET
- COAXIAL CABLE
- MULTI SWITCH — MULTI-SWITCH

Notes:

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4. All dimensions are in millimetres unless otherwise stated.

Rev:	Date:	Status/Amendments:	By:
C2	10.05.23	REDESIGNED	K.S
C1	10.02.23	STAGE 5 ISSUE	K.S

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Client:

GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

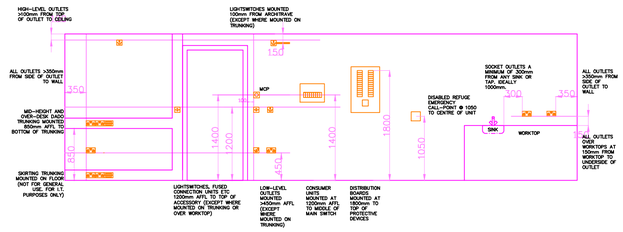
Project:

58-64 KING STREET
MANCHESTER

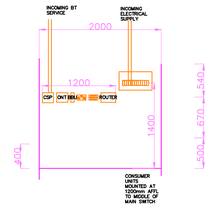
Drawing Title:

ELECTRICAL SERVICES
TV / TELECOMS / ACCESS CONTROL SCHEMATICS

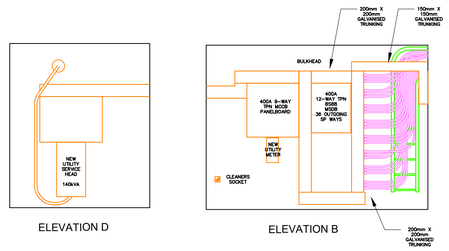
Engineer:	Checked By:	Cad By:
K.S	A.A	K.S
Scale:	Paper Size:	Date Created:
NTS	A1	FEB 2023
Drawing Number:		Drawing Revision:
4052-KIN-XX-XX-SC-E-6101		C2



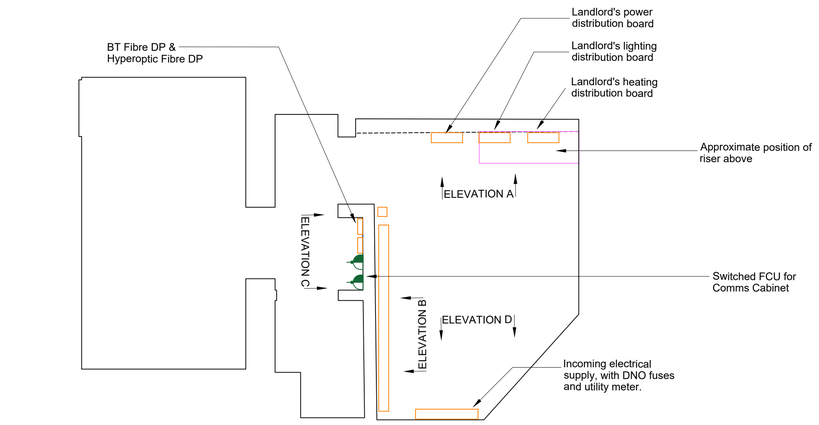
STANDARD MOUNTING HEIGHTS



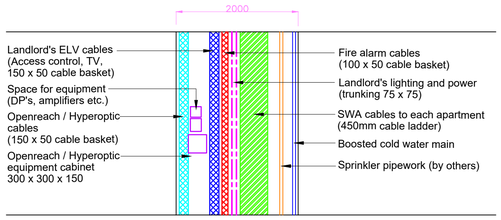
APARTMENT BT AND CONSUMER UNIT DETAIL (ELEVATION)



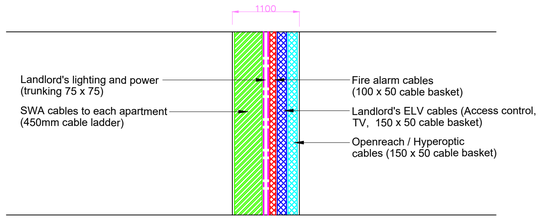
PROPOSED METER ROOM WITH LANDLORD METERING (ELEVATIONS)



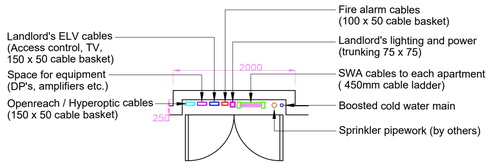
PROPOSED METER ROOM WITH LANDLORD METERING (PLAN)



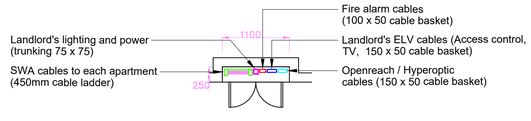
PROPOSED M&E RISER (ELEVATION) GROUND TO FIRST FLOOR



PROPOSED M&E RISER (ELEVATION) GROUND TO FIRST FLOOR



PROPOSED M&E RISER GROUND TO FIRST FLOOR



PROPOSED ELECTRICAL RISER BASEMENT TO GROUND FLOOR

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Rev:	Date:	Status/Amendments:	By:
C1	03.11.23	CONSTRUCTION ISSUE (redesign)	K.S
P5	28.04.23	PRELIMINARY ISSUE (redesign)	K.S
P4	16.12.22	PRELIMINARY ISSUE (changes indicated)	K.S
P3	15.12.22	PRELIMINARY ISSUE (changes indicated)	K.S
P2	25.11.22	PRELIMINARY ISSUE (changes indicated)	K.S
P1	14.10.22	PRELIMINARY ISSUE	K.S

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KingAssociates

Client:

GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:

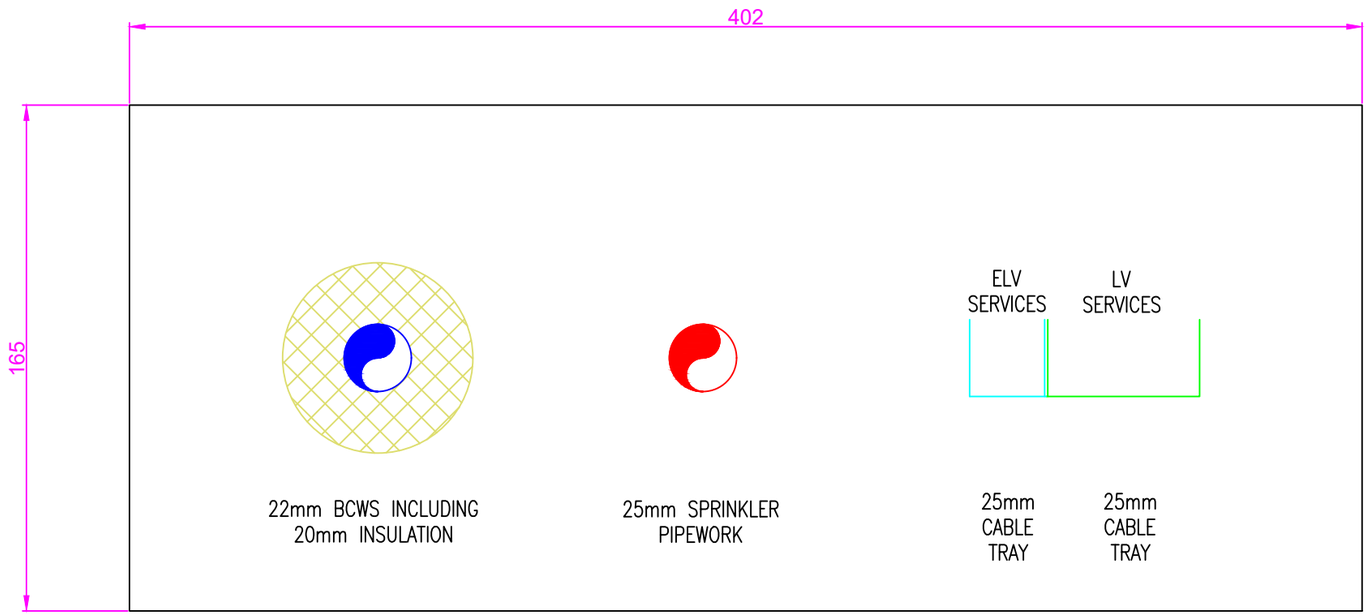
58-64 KING STREET
MANCHESTER

Drawing Title:

ELECTRICAL SERVICES
ELECTRICAL SWITCHROOM & RISER LAYOUTS

Engineer:	Checked By:	Cad By:
K.S	A.A	K.S
Scale: NTS	Paper Size: A1	Date Created: OCT 2022
Drawing Number: 4052-KIN-XX-XX-SC-E-6102		Drawing Revision: C1

TO BE READ IN CONJUNCTION WITH
ARCHITECTS DRAWING:
11702-AEW-XX-XX-DR-A-6010



LETTERBOX DETAIL FOR WATER PIPEWORK, SPRINKLER AND ELECTRICAL TRAY

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Rev:	Date:	Status/Amendments:	By:
C1	15.09.23	UPDATED INLINE WITH ARCHITECTS DETAIL	M.H
P2	18.11.22	PRELIMINARY ISSUE	M.H
P1	16.11.22	PRELIMINARY ISSUE	M.H

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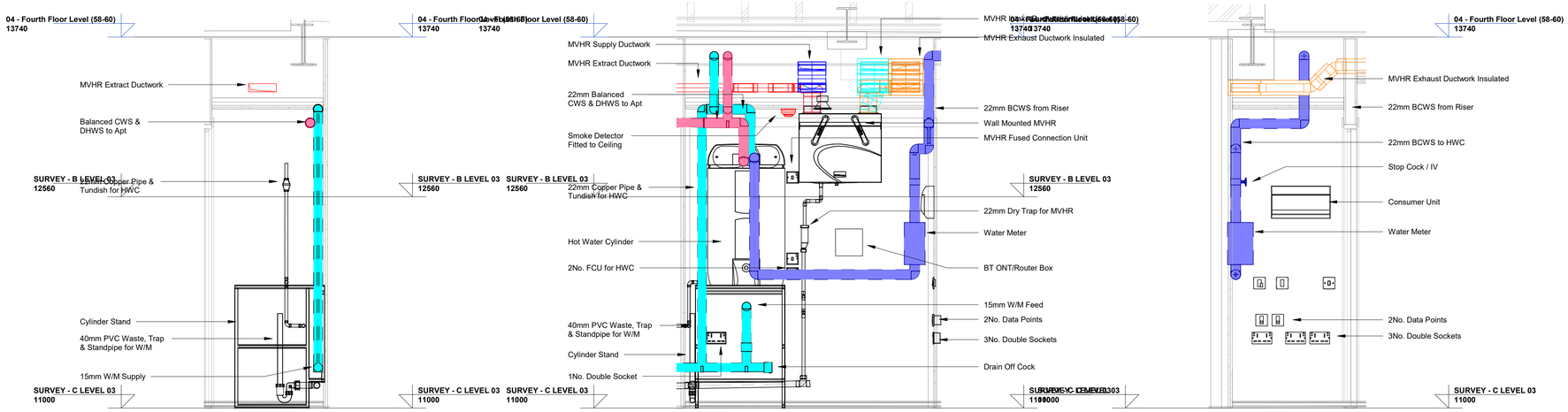
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Client:
GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:
58-64 KING STREET
MANCHESTER

Drawing Title:
MECHANICAL & ELECTRICAL SERVICES
APARTMENT INCOMING UTILITIES
LETTERBOX TYPE DETAIL

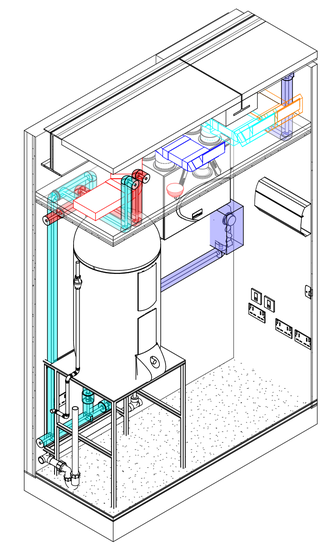
Drawn By:	Checked By:	Cad By:
K.S	M.H	G.M
Scale: 1:2	Paper Size: A3	Date Created: NOV 2022
Drawing Number: 4052-KIN-XX-ZZ-DR-ME-5000		Drawing Revision: C1



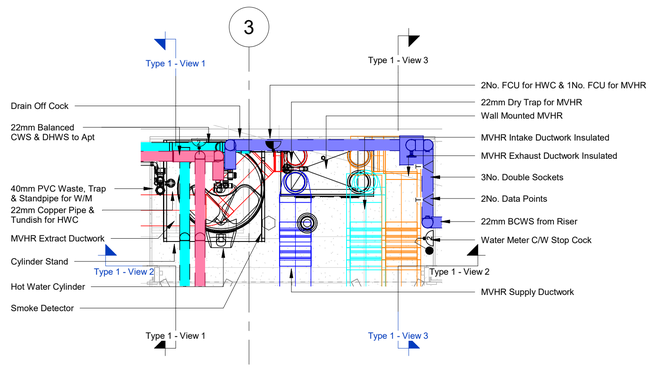
2 Type 1 - View 1
1 : 20

3 Type 1 - View 2
1 : 20

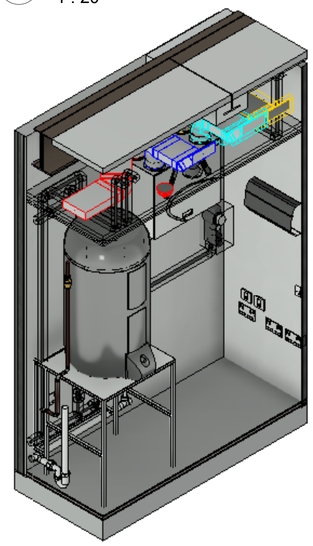
4 Type 1 - View 3
1 : 20



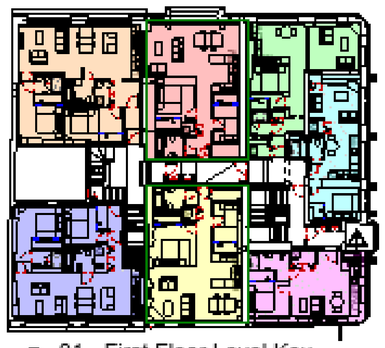
5 3D - Cupboard Type 1



1 Service Cupboard Type 1 Worst Case Apt 15
1 : 20



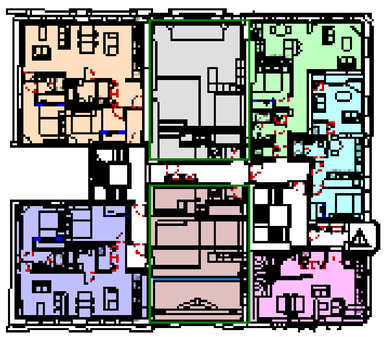
6 3D - Cupboard Type 1 Realistic



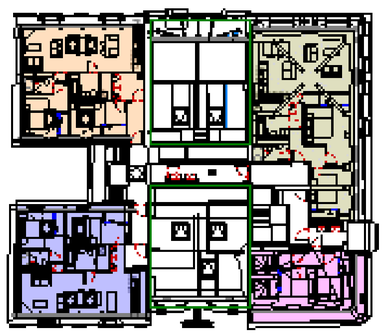
7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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Manchester
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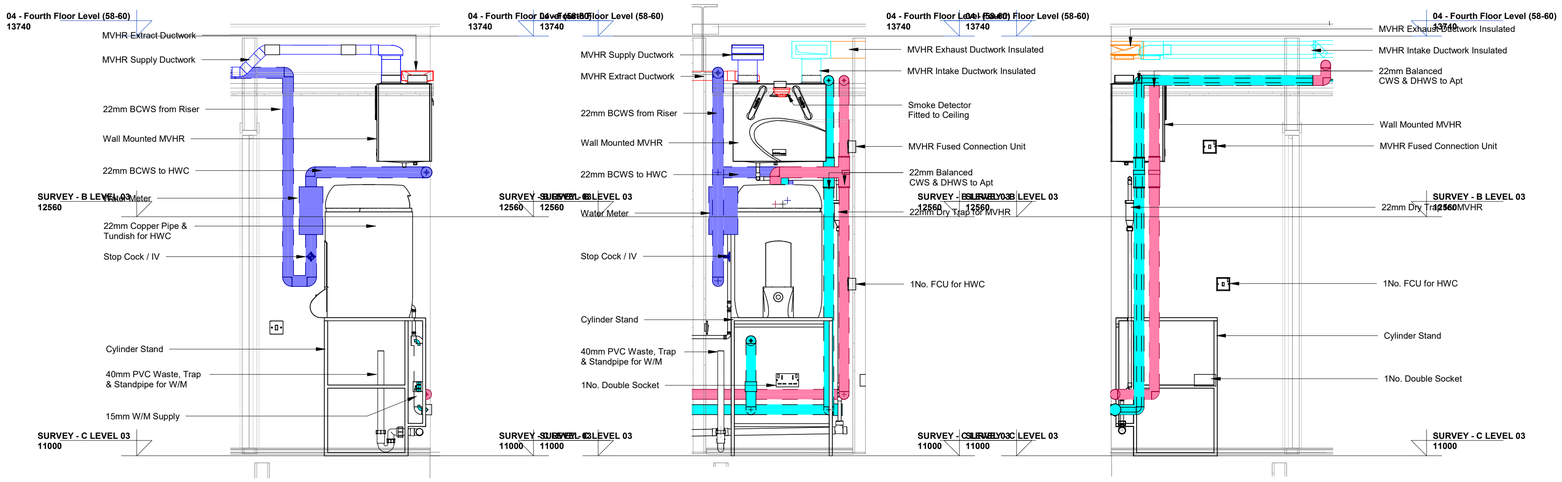
Email: info@kingassociates.uk
www.kingassociates.uk

Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 1 - APTS 1, 8 & 15

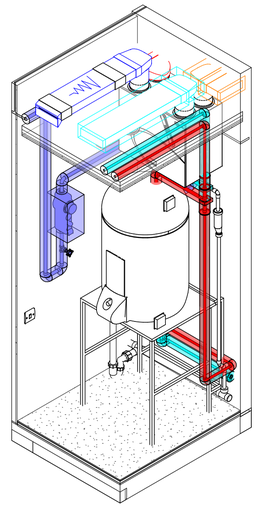
Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/07/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-ZZ-DR-ME-5901		C2



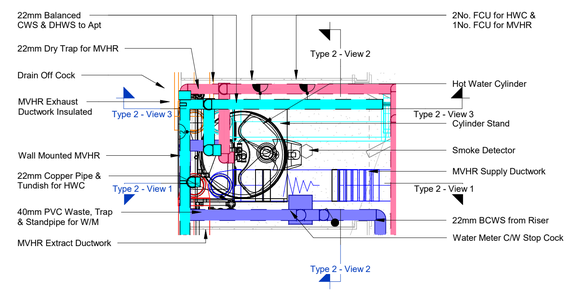
2 Type 2 - View 1
1 : 20

3 Type 2 - View 2
1 : 20

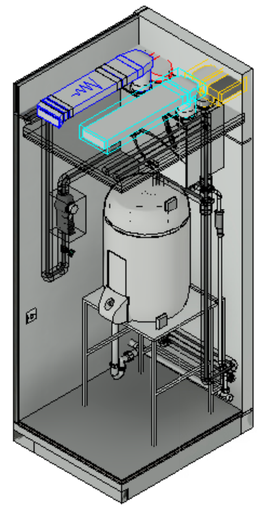
4 Type 2 - View 3
1 : 20



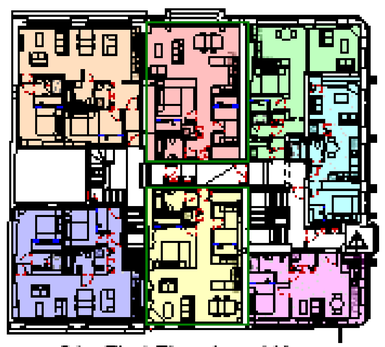
5 3D - Cupboard Type 2



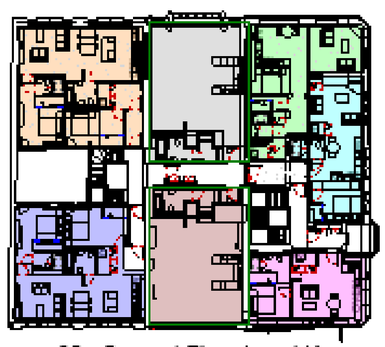
1 Service Cupboard Type 2
Worst Case Apt 16
1 : 20



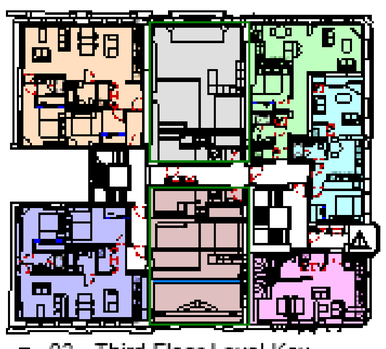
6 3D - Cupboard Type 2
Realistic



7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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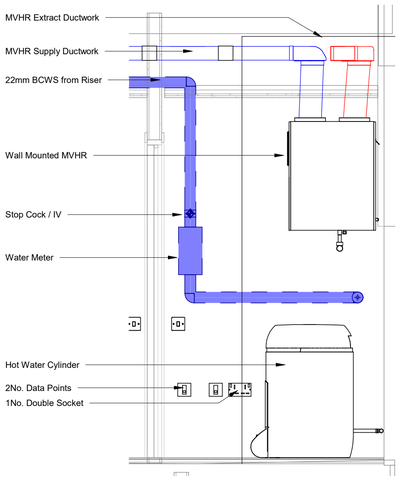
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

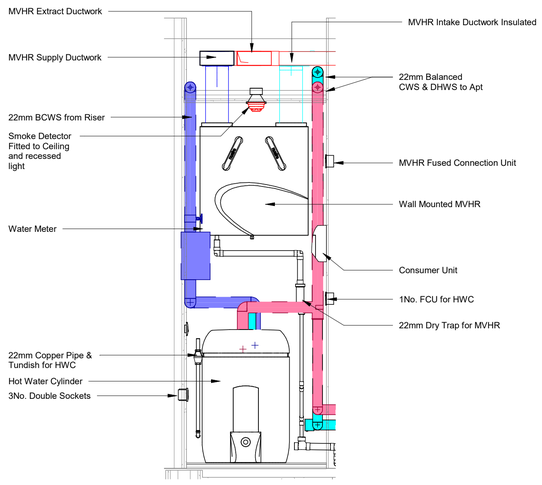
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 2
APTS 2, 9 & 16

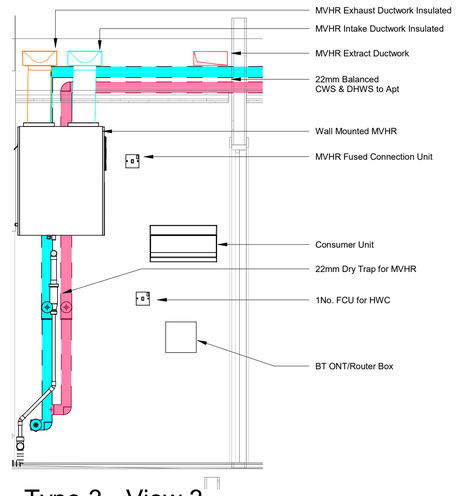
Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
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As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-ZZ-DR-ME-5902		C2



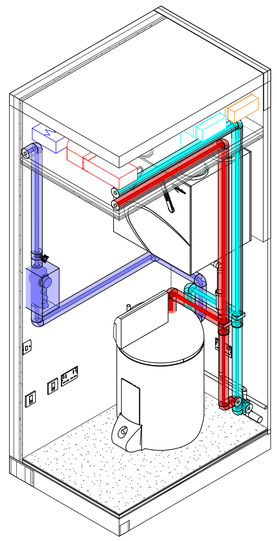
2 Type 3 - View 1
1 : 20



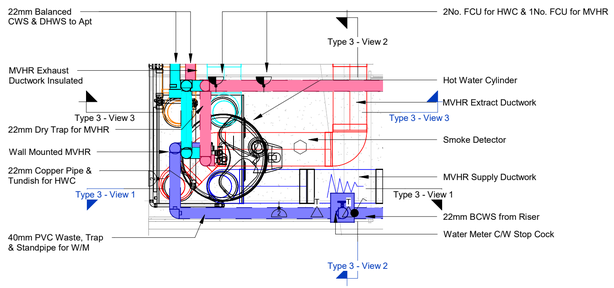
3 Type 3 - View 2
1 : 20



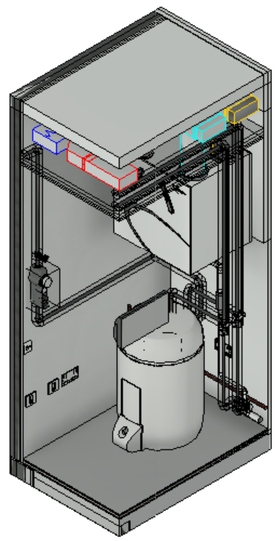
4 Type 3 - View 3
1 : 20



5 3D - Cupboard Type 3



1 Service Cupboard Type 3 Worst Case Apt 17
1 : 20



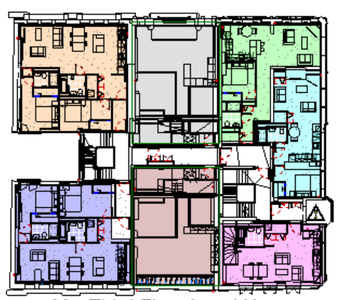
6 3D - Cupboard Type 3 Realistic



1 01 - First Floor Level Key
1 : 200



2 02 - Second Floor Level Key
1 : 200



3 03 - Third Floor Level Key
1 : 200



4 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

Type 1
Type 2
Type 3
Type 4
Type 5
Type 6
Type 7
Type 8
Type 9
Type 10
Type 11

Rev:	Date:	Status/Amendments:	By:
C2	12.05.23	WASHING MACHINE REMOVED FROM UTILITY	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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5 John Dalton St
Manchester
M2 6ET

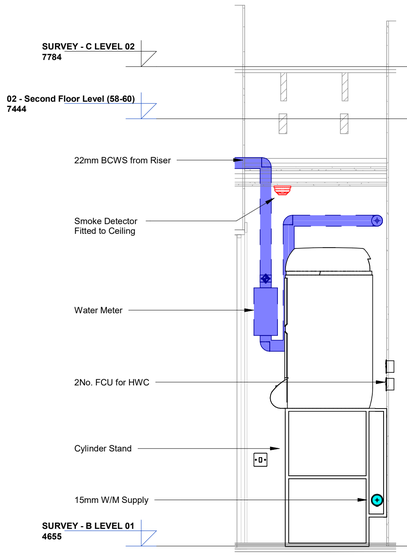
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

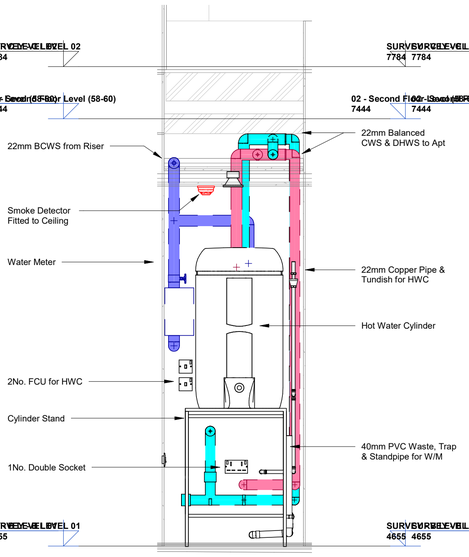
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 3
APTS 10 & 17

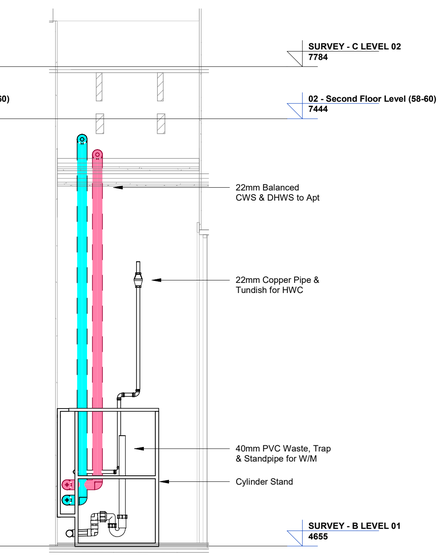
Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-ZZ-DR-ME-5903		C2



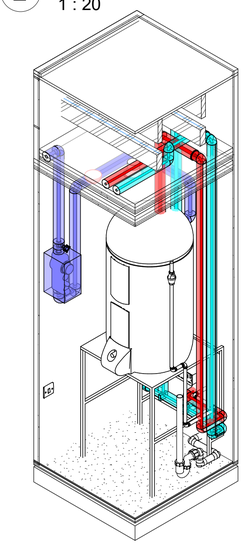
2 Type 4 - View 1
1 : 20



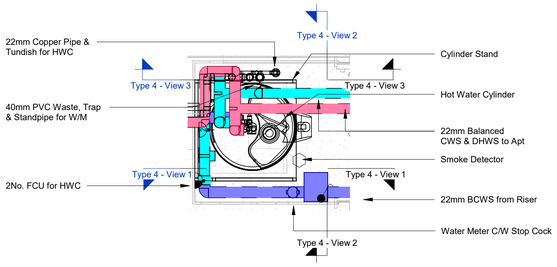
3 Type 4 - View 2
1 : 20



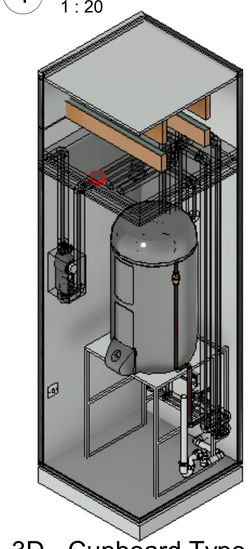
4 Type 4 - View 3
1 : 20



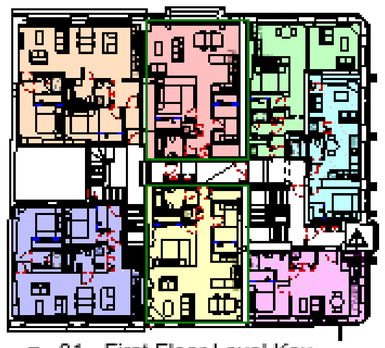
5 3D - Cupboard Type 4



Service Cupboard Type 4
1 Worst Case Apt 4
1 : 20



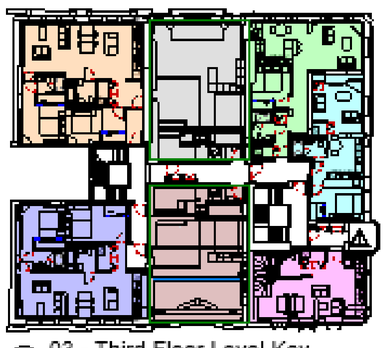
6 3D - Cupboard Type 4
Realistic



7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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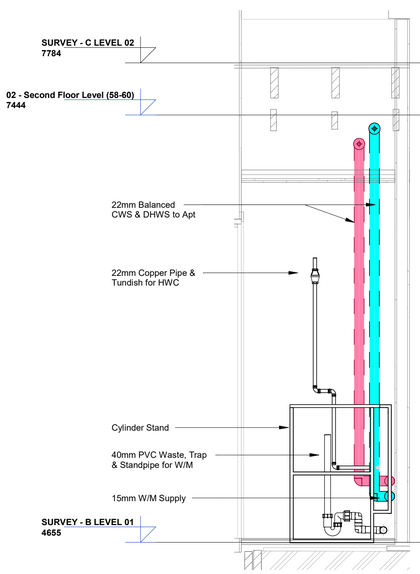
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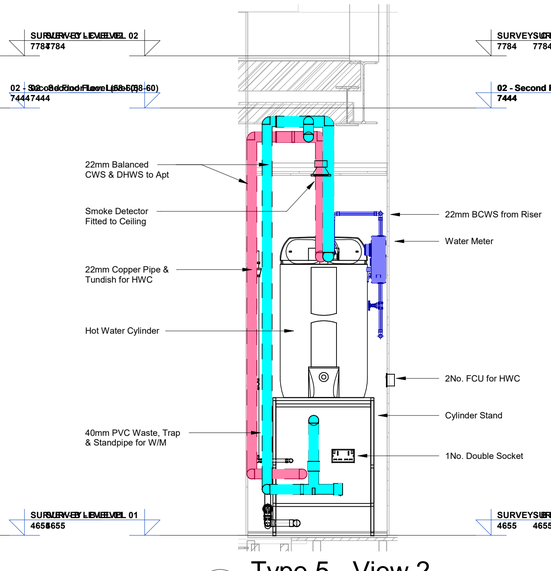
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 4
APT 4

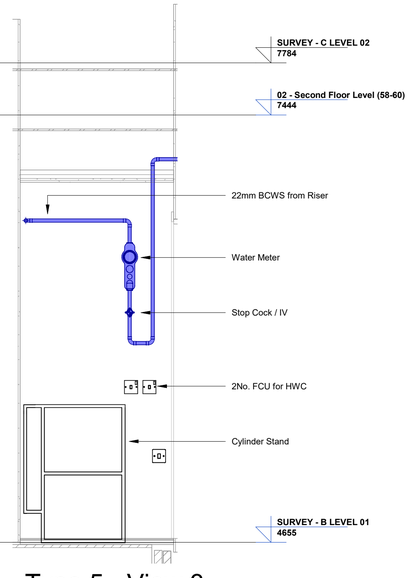
Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-ZZ-DR-ME-5904		C2



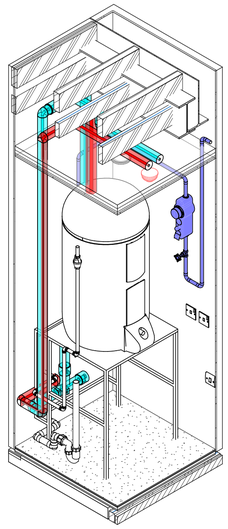
2 Type 5 - View 1
1 : 20



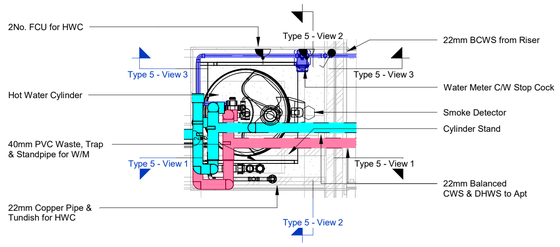
3 Type 5 - View 2
1 : 20



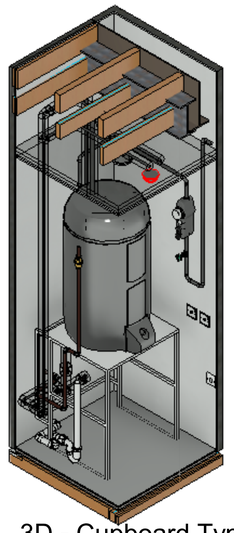
4 Type 5 - View 3
1 : 20



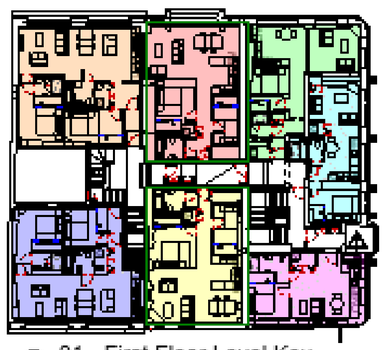
5 3D - Cupboard Type 5



Service Cupboard Type 5
Worst Case Apt 5
1 1 : 20



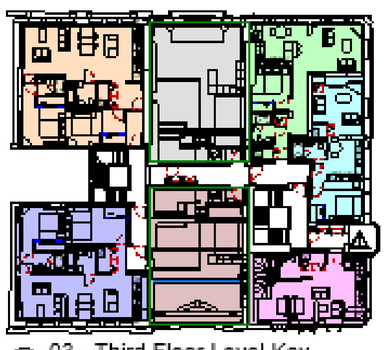
6 3D - Cupboard Type 5
Realistic



7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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Manchester
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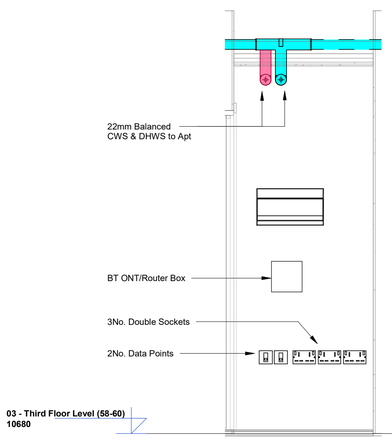
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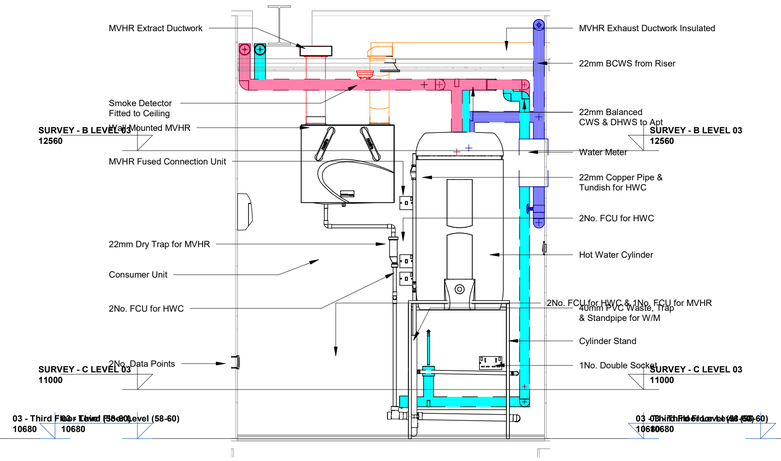
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 5
APT 5

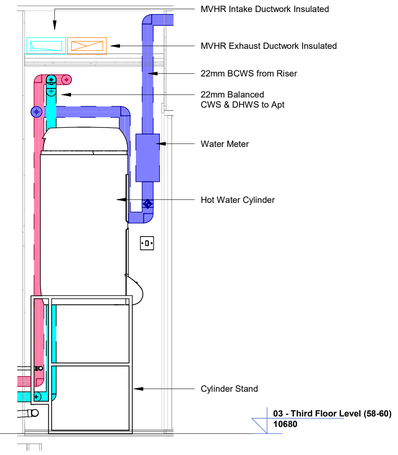
Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
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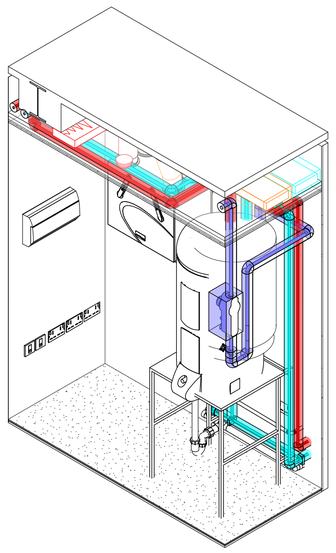
2 Type 6 - View 1
1 : 20



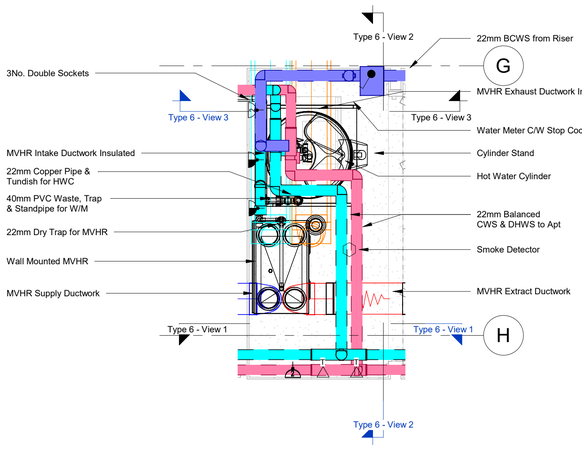
3 Type 6 - View 2
1 : 20



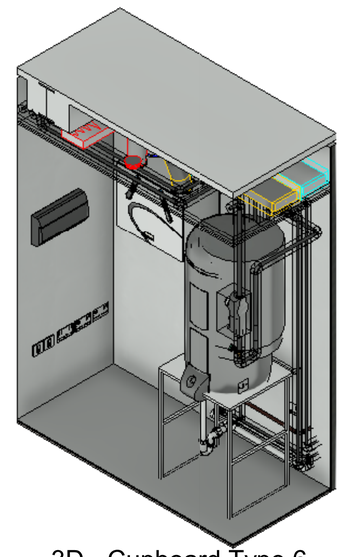
4 Type 6 - View 3
1 : 20



5 3D - Cupboard Type 6



1 Service Cupboard Type 6
Worst Case Apt 20
1 : 20



6 3D - Cupboard Type 6
Realistic



7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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5 John Dalton St
Manchester
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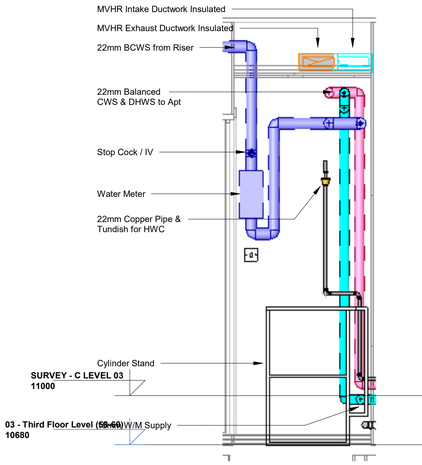
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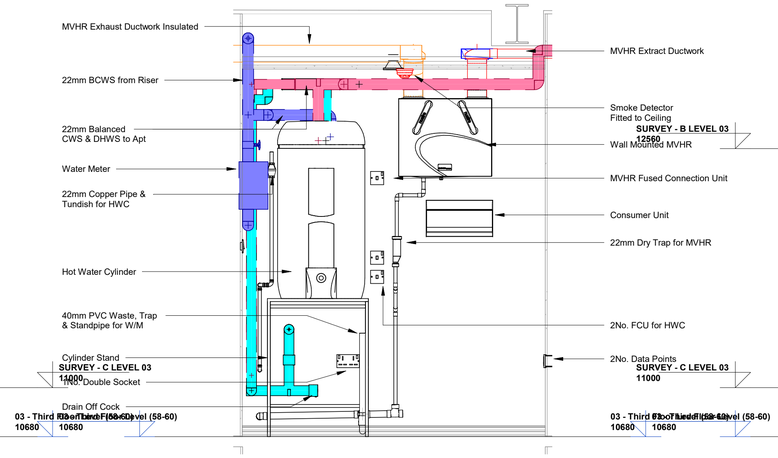
Project:
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Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 6
APT 6, 13, 20 & 23

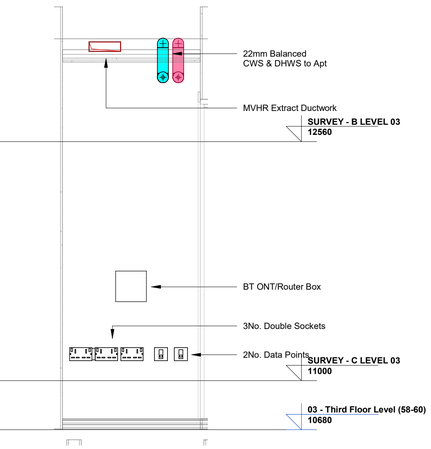
Drawn By:	Checked By:	Cad By:
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Scale:	Paper Size:	Date Created:
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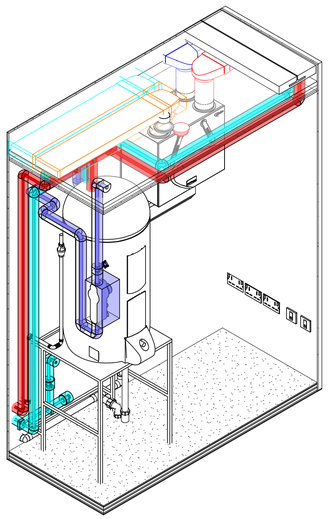
2 Type 7 - View 1
1 : 20



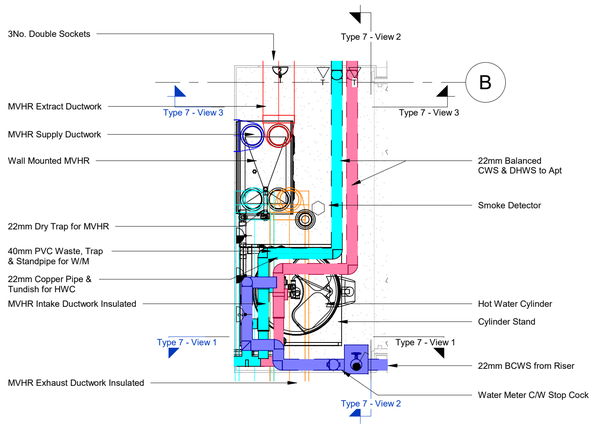
3 Type 7 - View 2
1 : 20



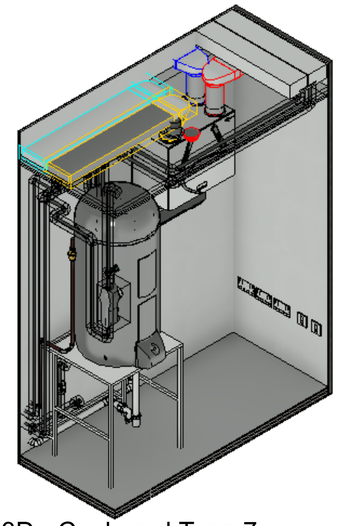
4 Type 7 - View 3
1 : 20



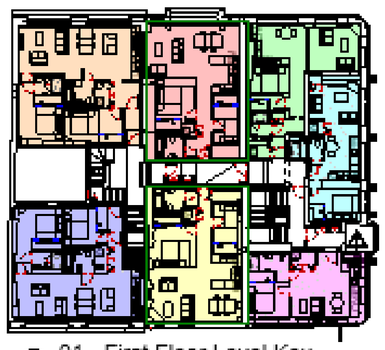
5 3D - Cupboard Type 7



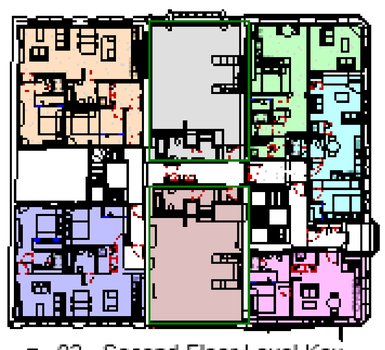
1 Service Cupboard Type 7
Worst Case Apt 21
1 : 20



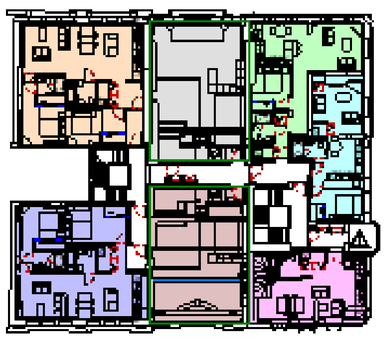
6 3D - Cupboard Type 7
Realistic



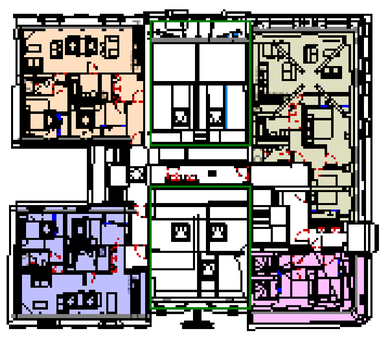
7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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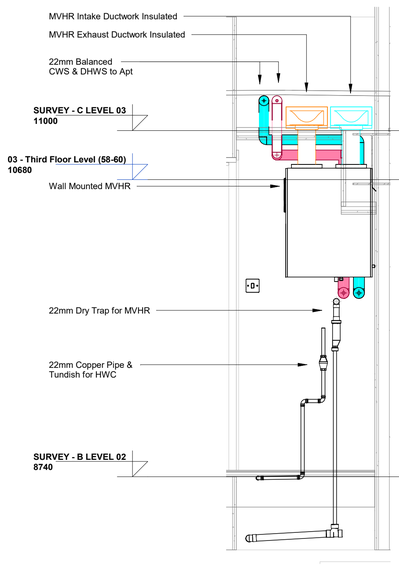
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Client:
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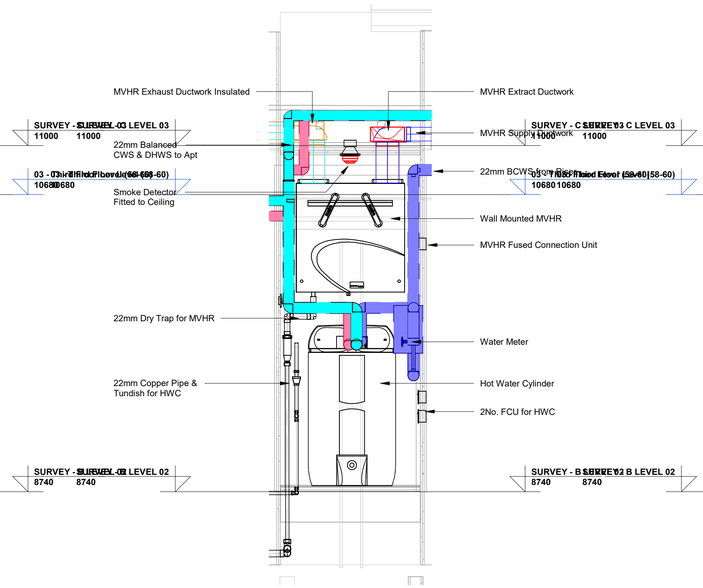
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 7
APTS 7, 14, 21 & 24

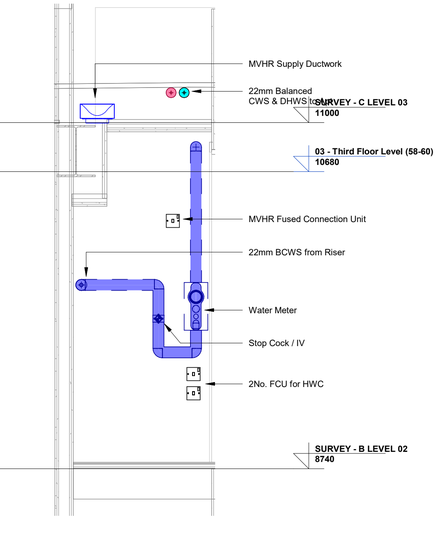
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G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
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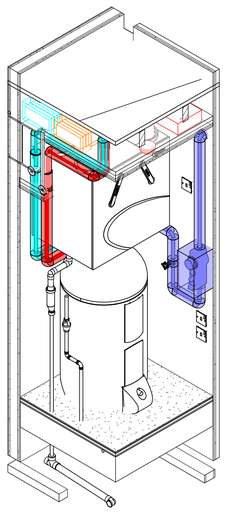
2 Type 8 - View 1
1 : 20



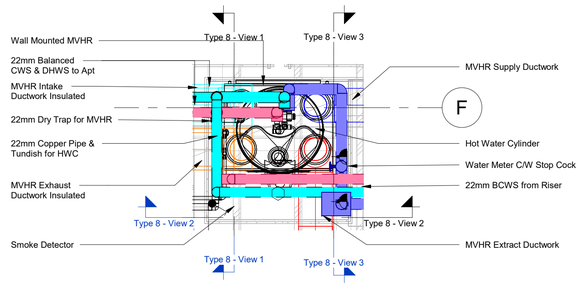
3 Type 8 - View 2
1 : 20



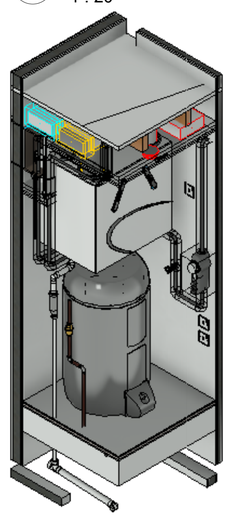
4 Type 8 - View 3
1 : 20



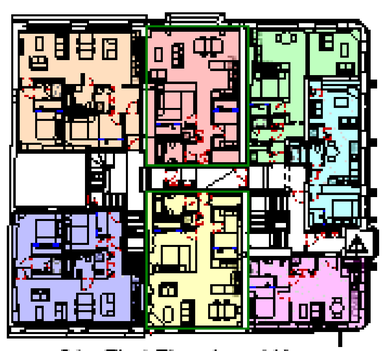
5 3D - Cupboard Type 8



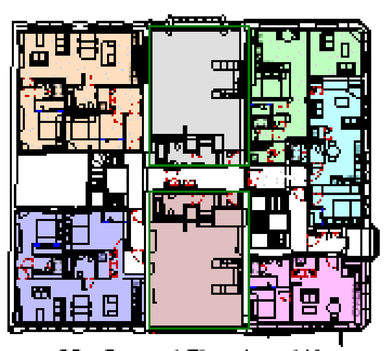
1 Service Cupboard Type 8
Worst Case Apt 11
1 : 20



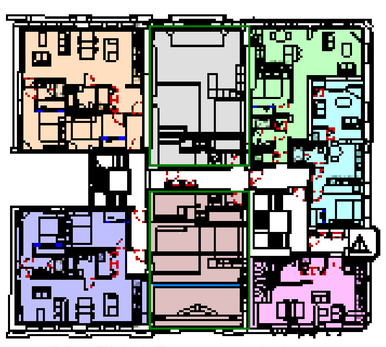
6 3D - Cupboard Type 8
Realistic



7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

Notes:

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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5 John Dalton St
Manchester
M2 6ET

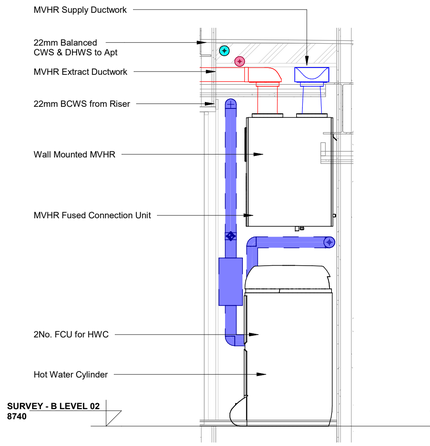
Email: info@kingassociates.uk
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Glasgow City Council as Trustees of Strathclyde Pension Fund

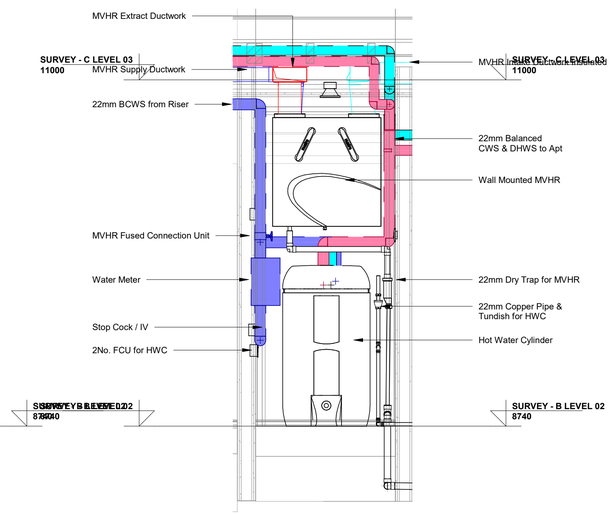
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 8
APTS 11 & 18

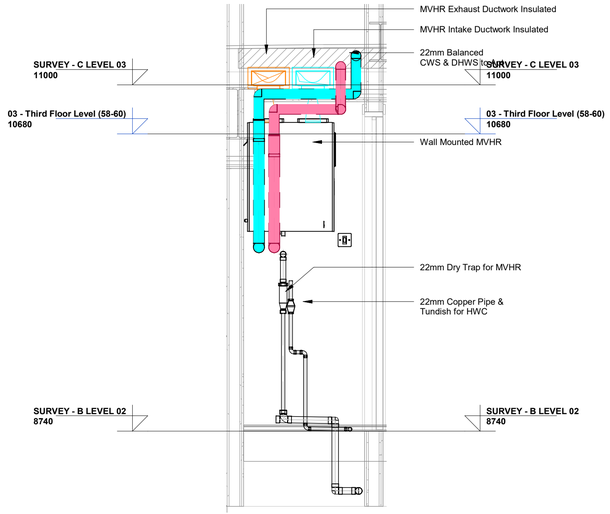
Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-ZZ-DR-ME-5908		C2



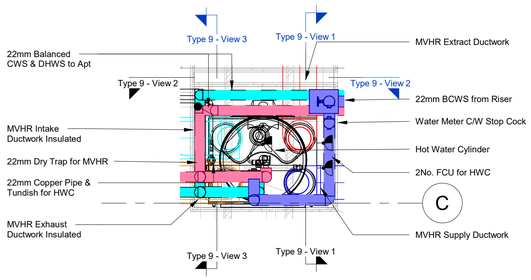
2 Type 9 - View 1
1 : 20



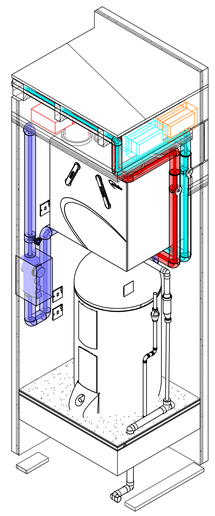
3 Type 9 - View 2
1 : 20



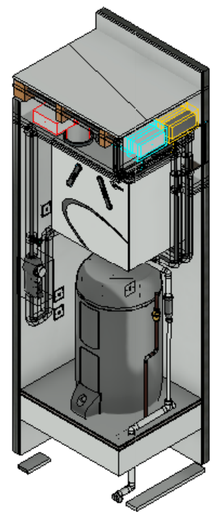
4 Type 9 - View 3
1 : 20



1 Service Cupboard Type 9
Worst Case Apt 12
1 : 20



5 3D - Cupboard Type 9



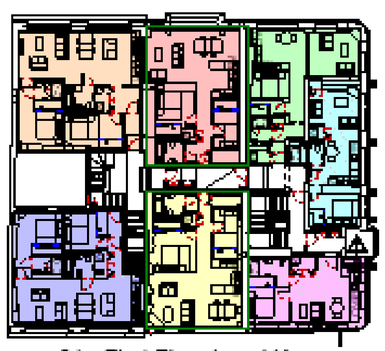
6 3D - Cupboard Type 9
Realistic

Notes:

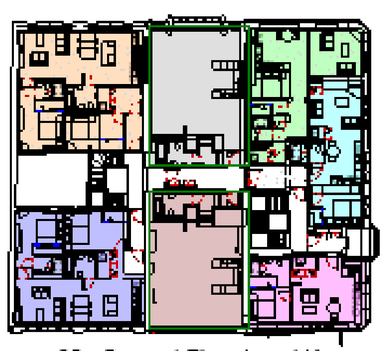
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Cupboard Type Legend

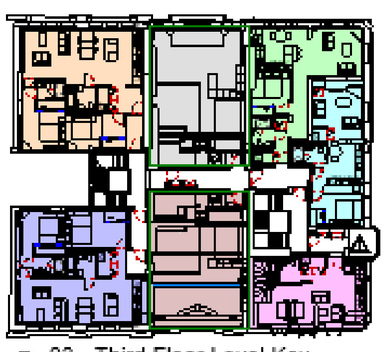
- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10



7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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5 John Dalton St
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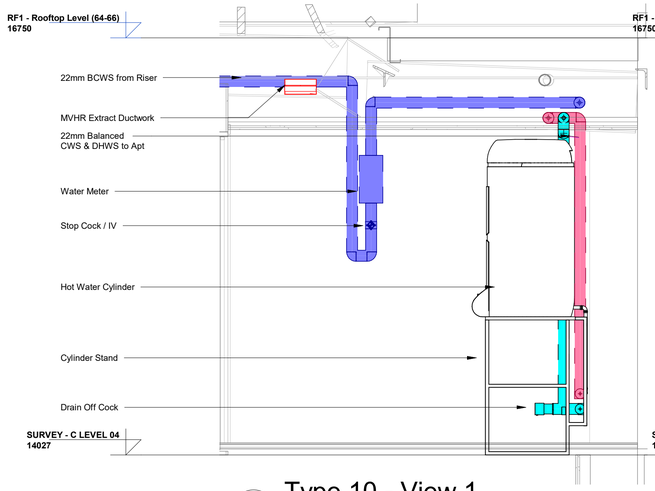
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

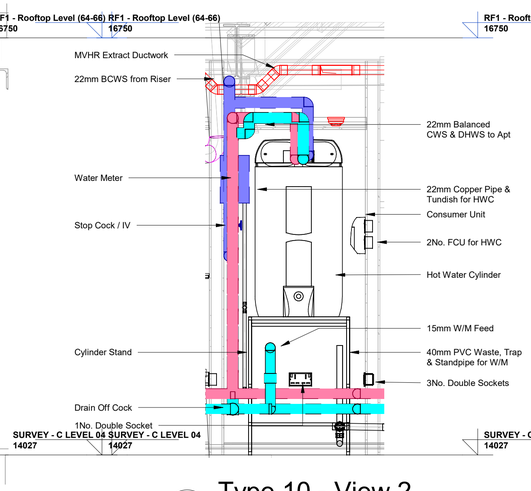
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 9
APTS 12 & 19

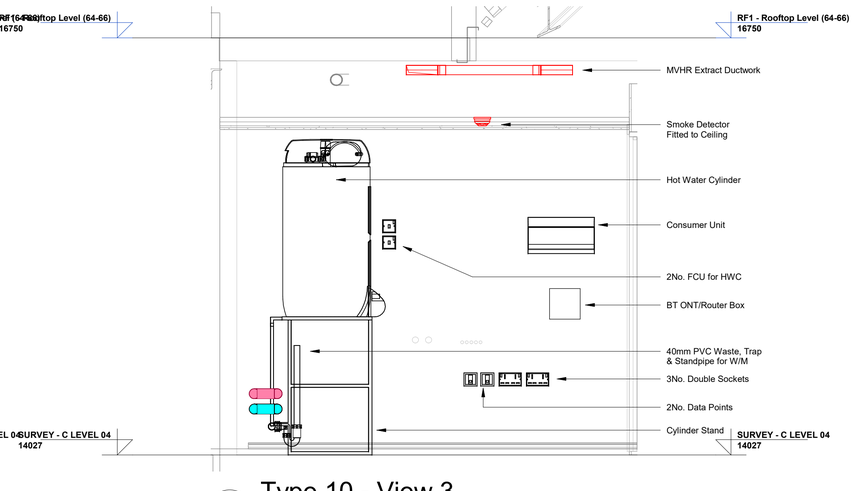
Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-ZZ-DR-ME-5909		C2



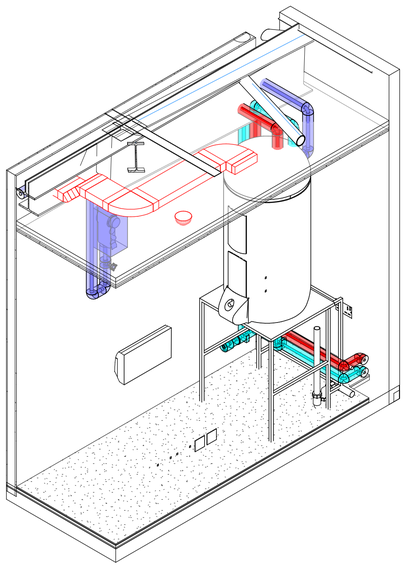
2 Type 10 - View 1
1 : 20



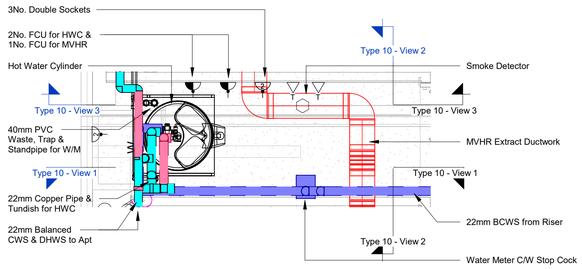
3 Type 10 - View 2
1 : 20



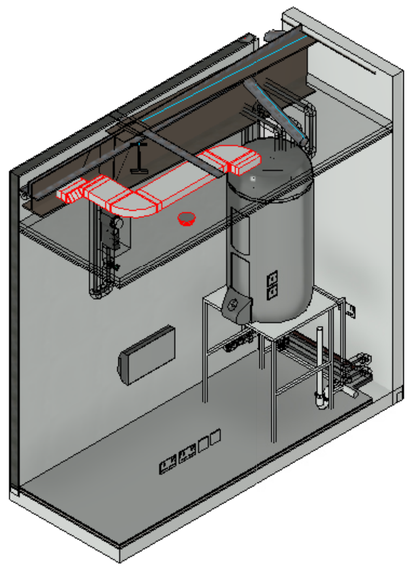
6 Type 10 - View 3
1 : 20



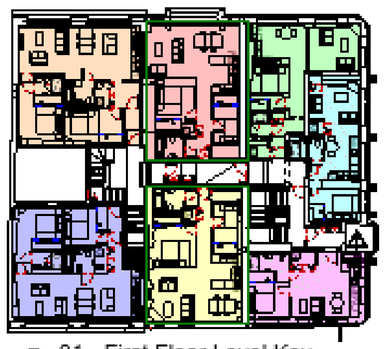
5 3D - Cupboard Type 10
W/M & Cyl



1 Service Cupboard Type 10
W/M & Cylinder
1 : 25



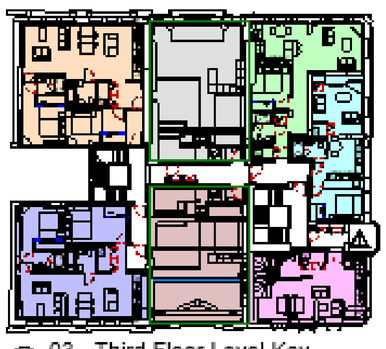
7 3D - Cupboard Type 10
W/M & Cyl Realistic



7 01 - First Floor Level Key
1 : 200



8 02 - Second Floor Level Key
1 : 200



9 03 - Third Floor Level Key
1 : 200



10 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10

Rev:	Date:	Status/Amendments:	By:
C2	18.04.23	COMMENTS INCORPORATED	M.H
C1	14.03.23	PRELIMINARY ISSUE	M.H

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5 John Dalton St
Manchester
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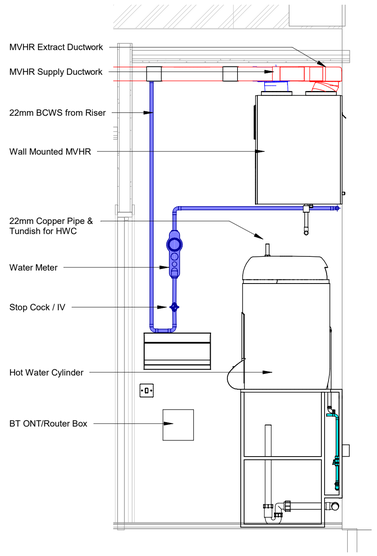
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

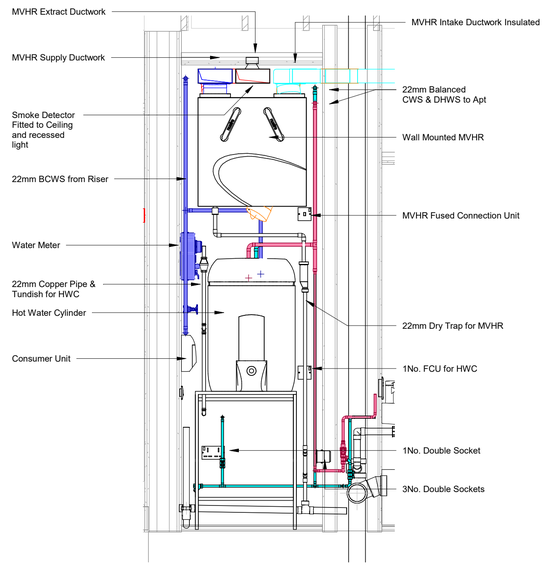
Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 10
APT 22

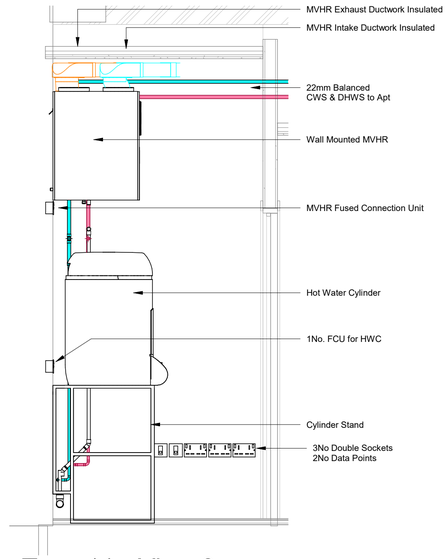
Drawn By:	Checked By:	Cad By:
Author	Checker	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	03/08/23
Drawing Number:		Drawing Revision:
4052-KIN- XX-ZZ-DR-ME-5910		C2



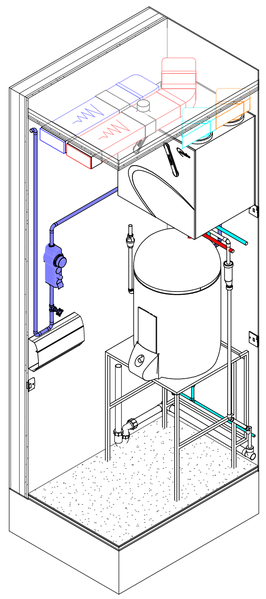
2 Type 11 - View 1
1 : 20



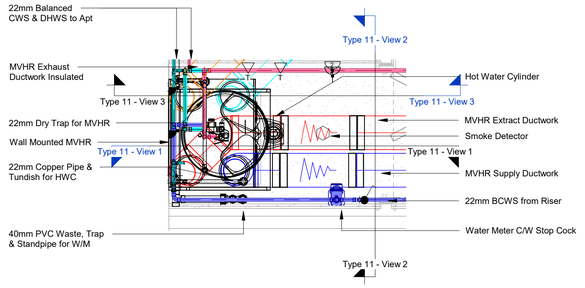
3 Type 11 - View 2
1 : 20



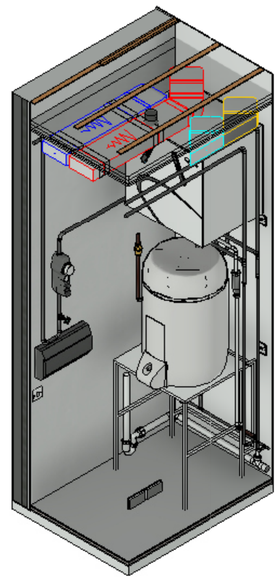
4 Type 11 - View 3
1 : 20



5 3D - Cupboard Type 11



1 Service Cupboard Type 11 Worst Case Apt 3
1 : 20



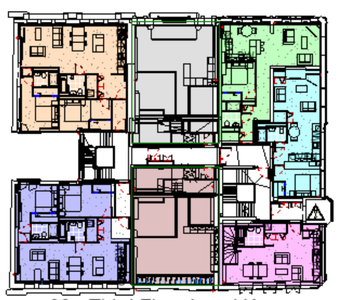
6 3D - Cupboard Type 11 Realistic



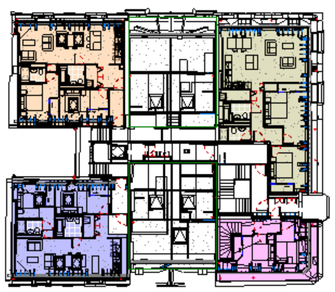
1 01 - First Floor Level Key
1 : 200



2 02 - Second Floor Level Key
1 : 200



3 03 - Third Floor Level Key
1 : 200



4 04 - Fourth Floor Level Key
1 : 200

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Cupboard Type Legend

- Type 1
- Type 2
- Type 3
- Type 4
- Type 5
- Type 6
- Type 7
- Type 8
- Type 9
- Type 10
- Type 11

Rev:	Date:	Status/Amendments:	By:
C1	12.05.23	PRELIMINARY ISSUE	M.H

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Manchester
M2 6ET

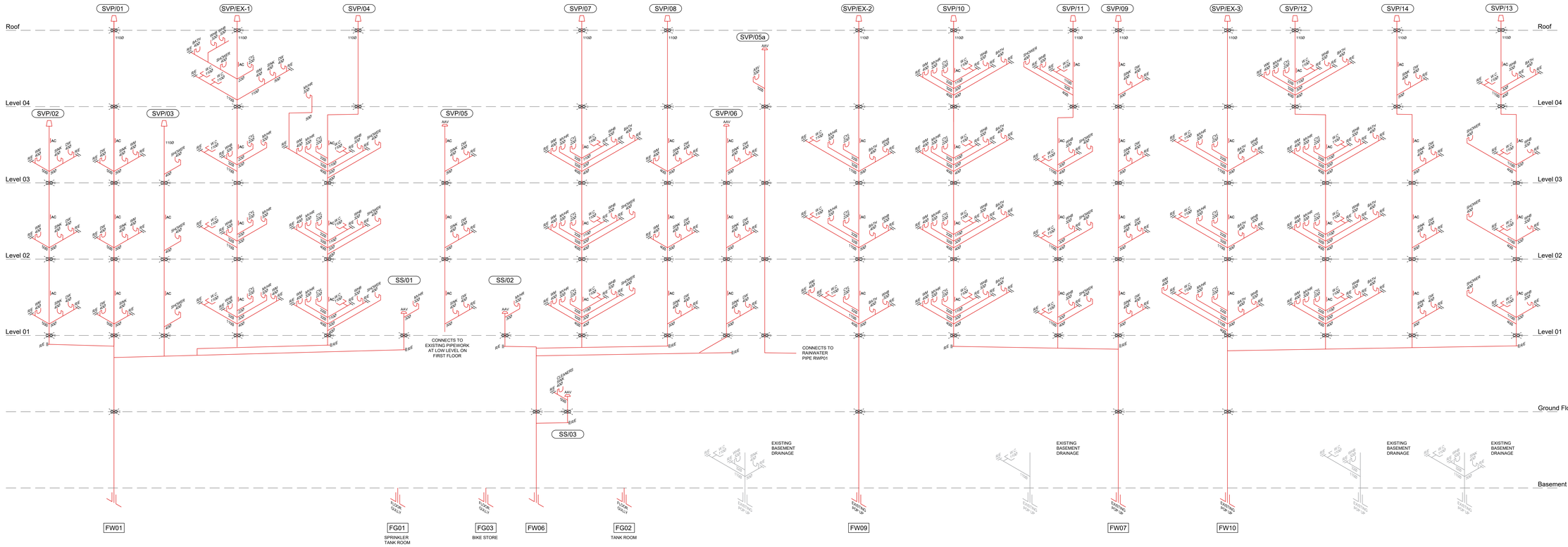
Email: info@kingassociates.uk
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Client:
Glasgow City Council as Trustees of Strathclyde Pension Fund

Project:
58-64 King Street, Manchester

Drawing Title:
MECHANICAL SERVICES
TYPICAL SERVICE CUPBOARD TYPE 11 APT 3

Drawn By:	Checked By:	Cad By:
G.M	M.H	GM
Scale:	Paper Size:	Date Created:
As indicated	A1	12/05/23
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DRAINAGE NOTES

1. All plant and equipment shall be installed in accordance with the manufacturer's instructions.
2. All soil stacks shall be uPVC fully lagged in line with the acoustic report.
3. All joints in uPVC pipework shall be made using solvent weld fittings and shall be tested prior to handover.
4. All above ground drainage shall comply with the requirements of BS EN 12056 and building regulations Approved Document Part H.
5. All SVP's passing through fire barriers to have intumescent fire collars.
6. All stacks will be provided with rodding points and access points in accordance with BS EN 12056 to enable cleaning & maintenance.
7. Each stub stack shall be complete with an automatic air admittance valve mounted at approx 1500mm AFFL.
8. Rodding eyes are accessed via destructive means.
9. All exposed above ground drainage pipework to be boxed in and insulated.
10. All SVP's to discharge through roof with weather proofing and openings by main contractor. Detail to be agreed with architect and roofing specialist.
11. Thermal expansion in pipework to be accommodated with suitable expansion fittings in accordance with manufacturers recommendations.
12. The contractor shall allow to make all final connections to sanitary ware and items of equipment. Anti siphon valves shall be utilised for the connection of all sanitary equipment.
13. Insulate the foul drainage pipework in order to achieve the required sound attenuation of Building Regulations Part E, and to avoid condensation in accordance with Building Regulations Part F.
14. Condensate from MVHR units shall be routed to the nearest stack complete with waterless trap.

Rev.	Date:	Status/Amendments:	By:
C5	04.08.23	Revised to suit amended layouts	G.M
C4	12.06.23	Revisions clouded	G.M
C3	28.04.23	Revisions clouded	G.M
C2	17.02.23	PRELIMINARY ISSUE - revisions now clouded	G.M
C1	10.02.23	PRELIMINARY ISSUE	G.M

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Manchester
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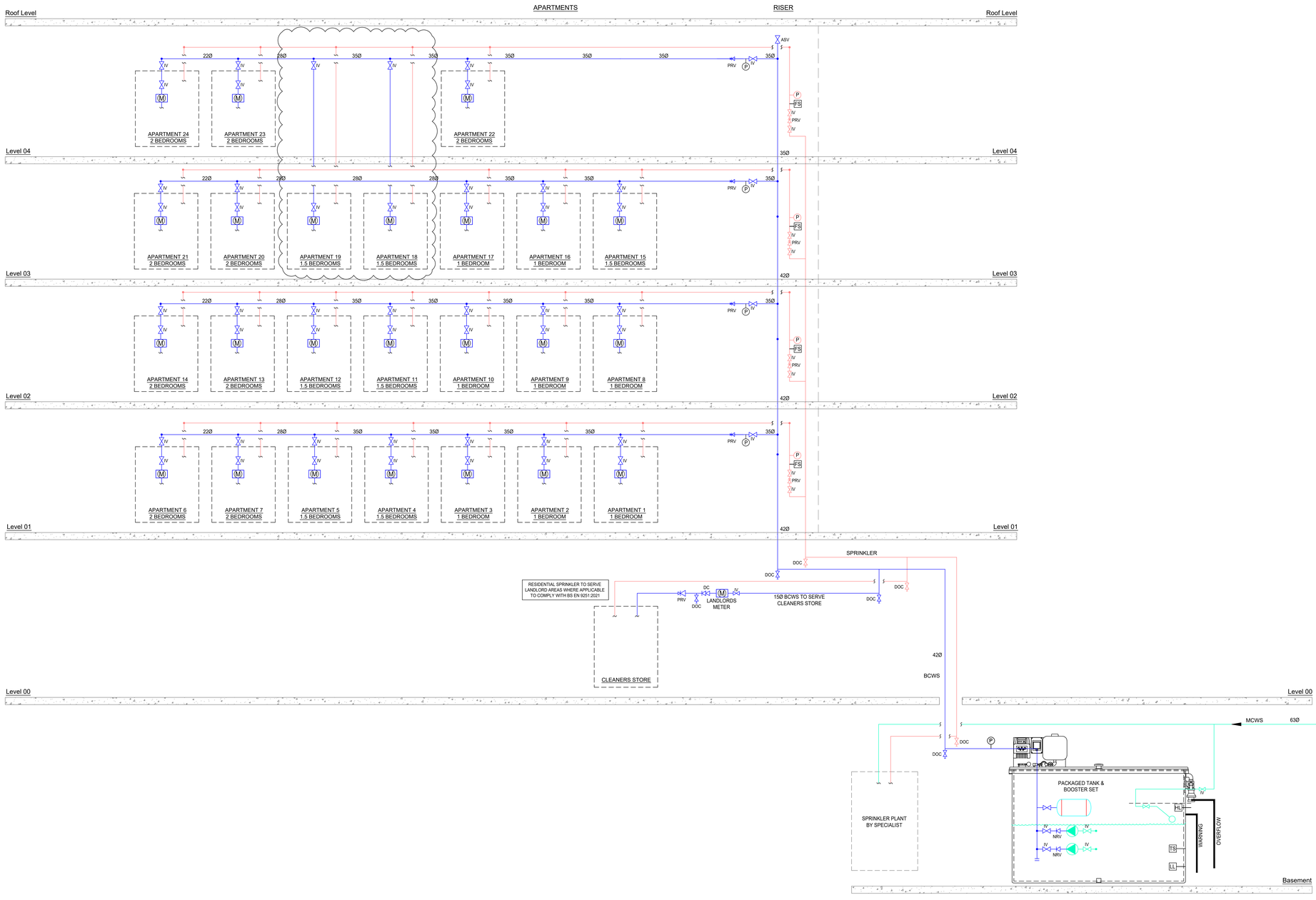
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Client:
GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:
58-64 KING STREET
MANCHESTER

Drawing Title:
MECHANICAL SERVICES
ABOVE GROUND DRAINAGE
SCHEMATIC

Engineer:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
N.T.S	A0	SEP 2022
Drawing Number:		Drawing Revision:
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LEGEND

- DOC — DRAIN OFF COCK.
- DC — DOUBLE CHECK VALVE.
- NRV — NON RETURN VALVE.
- IV — ISOLATION VALVE.
- M — METER.
- PRV — PRESSURE REDUCING VALVE.
- ASV — ANTI SURGE PROTECTION VALVE
- PUMP
- HOT / COLD WATER OUTLET
- FLOAT VALVE
- TS — TEMPERATURE SENSOR
- LL — LOW LEVEL SWITCH
- FS — FLOW SWITCH
- HL — HIGH LEVEL SWITCH
- P — PRESSURE GAUGE

ABBREVIATIONS

BCWS	BOOSTED COLD WATER SUPPLY
MCWS	MAINS COLD WATER SUPPLY

Rev	Date:	Status/Amendments:	By:
C3	24.02.23	PRELIMINARY ISSUE - apt 18 & 19 fed from 4th floor	G.M
C2	17.02.23	PRELIMINARY ISSUE	G.M
C1	10.02.23	PRELIMINARY ISSUE	G.M

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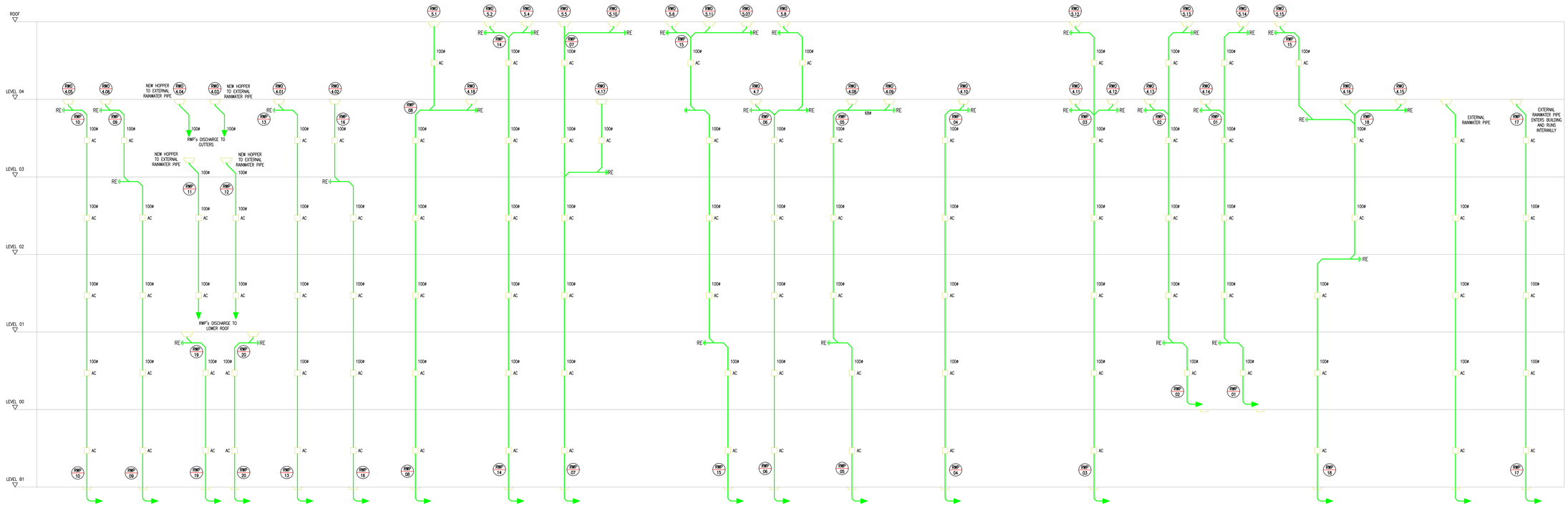
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Client:
GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:
58-64 KING STREET
MANCHESTER

Drawing Title:
MECHANICAL SERVICES
DOMESTIC WATER SERVICES
SCHEMATIC

Engineer:	Checked By:	Cod By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
N.T.S	A0	SEP 2022
Drawing Number:		Drawing Revision:
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NOTES:

1. RAINWATER PIPEWORK TO BE COORDINATED WITH ABOVE GROUND FOUL DRAINAGE.
2. RAINWATER PIPEWORK DISTRIBUTING THROUGH OCCUPIED AREAS SHALL BE INSULATED TO ACHIEVE THE ACOUSTIC REQUIREMENTS.
3. ROUTING AND SIZING BASED ON A TRADITIONAL RAINWATER SYSTEM (I.E. NON-SYPHONIC). ALL PIPEWORK TO BE 100Ø UNLESS OTHERWISE STATED.
4. EXPANSION JOINTS TO BE ADDED IN VERTICAL & HORIZONTAL PIPEWORK AS PER MANUFACTURERS RECOMMENDATIONS.
5. FIRE COLLARS SHALL BE INSTALLED INLINE WITH MANUFACTURERS REQUIREMENTS.
6. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE SUPPLIED AND INSTALLED BY THE MAIN CONTRACTORS ROOFING SPECIALIST AND SHALL BE APPROVED BY THE ARCHITECT.
7. ALL ROOF/TERRACE RAINWATER OUTLETS SHALL BE COORDINATED WITH THE STRUCTURAL ROOF BUILD UP DETAILS.
8. RWP CONNECTION TO BE CLOSE PACKED SO THAT THE SOIL AND VENT PIPES AND RAINWATER PIPES SHALL BE ENCASED IN ACCORDANCE WITH THE MINIMUM REQUIREMENTS OF APPROVED DOCUMENT E OF THE BUILDING REGULATIONS.
9. RAINWATER PIPEWORK TO BE DESIGNED AND INSTALLED TO BSEN 12056 – 3. HPDE TO BE INSTALLED AS PER MANUFACTURERS REQUIREMENTS.
10. RAINWATER PIPEWORK TO BE INSTALLED IN HDPE FUSION WELD. BRACKETS TO BE INSTALLED EVERY 1500mm HORIZONTAL AND 1500mm VERTICAL.
11. THE MAIN CONTRACTORS ROOFING SPECIALIST SHALL PROVIDE THE FINAL TERMINATION SECTION OF SOIL AND RAINWATER PIPEWORK WHICH PASSES THROUGH THE ROOF AND UNDERTAKEN WEATHERING OF THE SAME. THE MEP SERVICES CONTRACTOR SHALL MAKE THE CONNECTION WITHIN THE VOID AT THE UNDERSIDE OF THE ROOF. RAINWATER OUTLET CONNECTION TO HPDE TO BE DETERMINED BY THE MAIN CONTRACTOR ROOF SPECIALIST.
15. THE MAIN CONTRACTOR SHALL DESIGN, SUPPLY AND INSTALL ALL BELOW GROUND CONNECTION ADAPTIONS TO ACCEPT THE ABOVE GROUND DRAINAGE RAINWATER AND SOIL & VENTILATION PIPEWORK.
16. THE BELOW GROUND DRAINAGE SYSTEM IS TO BE DESIGNED SUPPLIED AND INSTALLED BY THE MAIN CONTRACTOR. RAINWATER OR SOIL CONNECTIONS WITH BELOW GROUND DRAINAGE TO BE APPROVED BY BCO.
17. THE RAINWATER SYSTEM VENTILATION PIPEWORK SYSTEM SHALL BE FULLY ACCESSIBLE FOR CLEANING ACCESS PROVIDED IN ACCORDANCE WITH THE BS, THE MAIN CONTRACTOR IS TO PROVIDE ACCESS HATCHES AS NECESSARY TO ENSURE ADEQUATE ACCESS CAN BE MAINTAINED.
18. ALL RAINWATER PIPEWORK WITHIN HABITABLE AREAS IS TO BE ACOUSTICALLY INSULATED INLINE WITH THE ACOUSTICIANS REPORT, RAINWATER IN NON-HABITABLE AREAS TO BE INSULATED AGAINST CONDENSATION ONLY.

Rev:	Date:	Status/Amendments:	By:
C2	10.05.23	DRAWING UPDATED TO SHOW BASEMENT	M.H.
C1	04.05.23	FIRST ISSUE	M.H.

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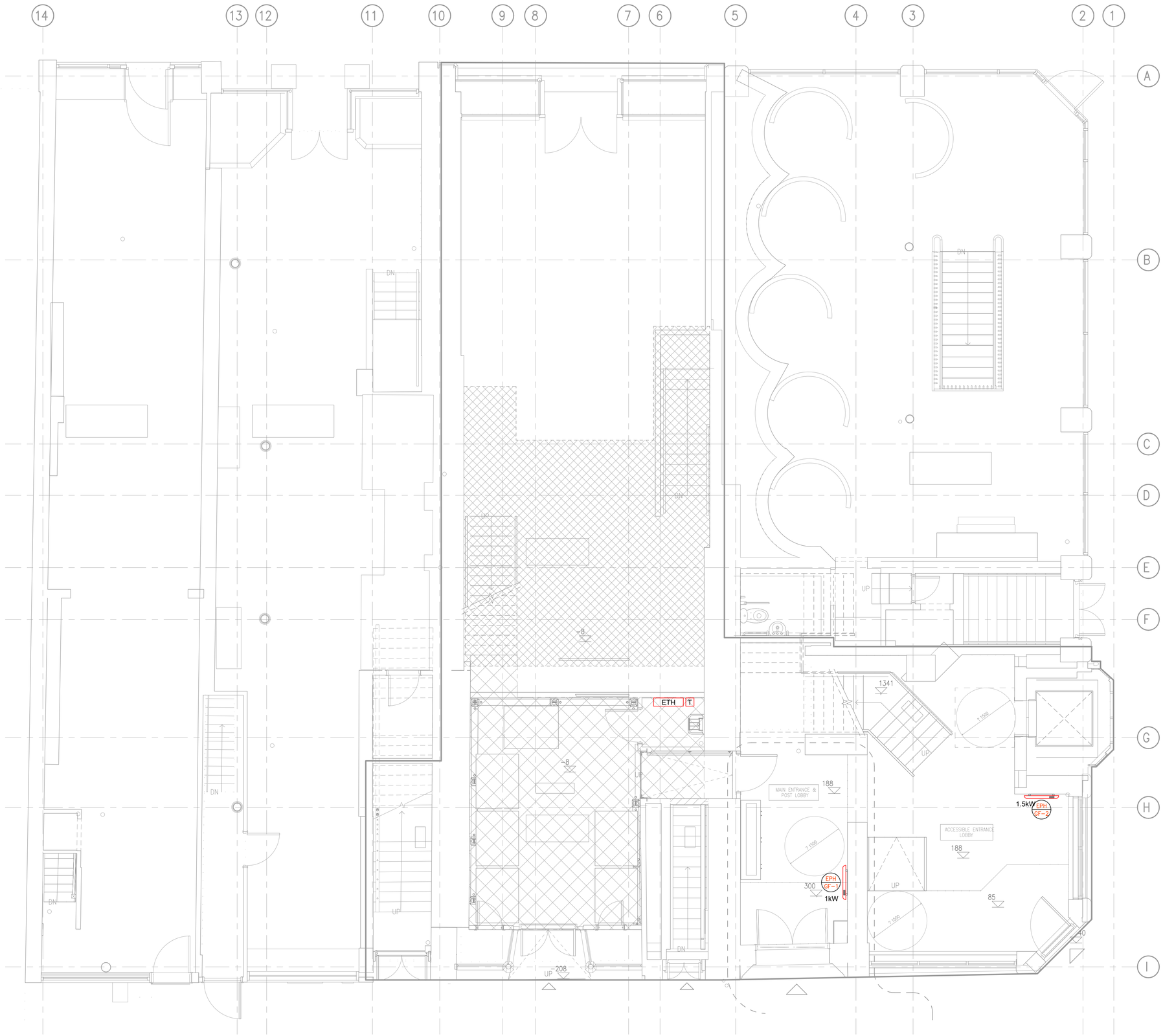
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Client:
GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:
58-64 KING STREET
MANCHESTER

Drawing Title:
MECHANICAL SERVICES
RAINWATER DRAINAGE
SCHEMATIC

Engineer:	Checked By:	Cad By:
G.M	M.H	G.M
Scale:	Paper Size:	Date Created:
N.T.S	A0	SEP 2022
Drawing Number:		Drawing Revision:
4052-KIN-XX-ZZ-SC-M-5800		C2



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HEATING LEGEND

ESH **	ELECTRIC STORAGE HEATER
EPH **	ELECTRIC PANEL HEATER
ETR **	ELECTRIC TOWEL RAIL
ETH **	ELECTRIC TUBE HEATER
ETH T	

Rev:	Date:	Status/Amendments:	By:
P2	25.11.22	PRELIMINARY ISSUE	J.D
P1	14.10.22	PRELIMINARY ISSUE	J.D

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Client:

GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

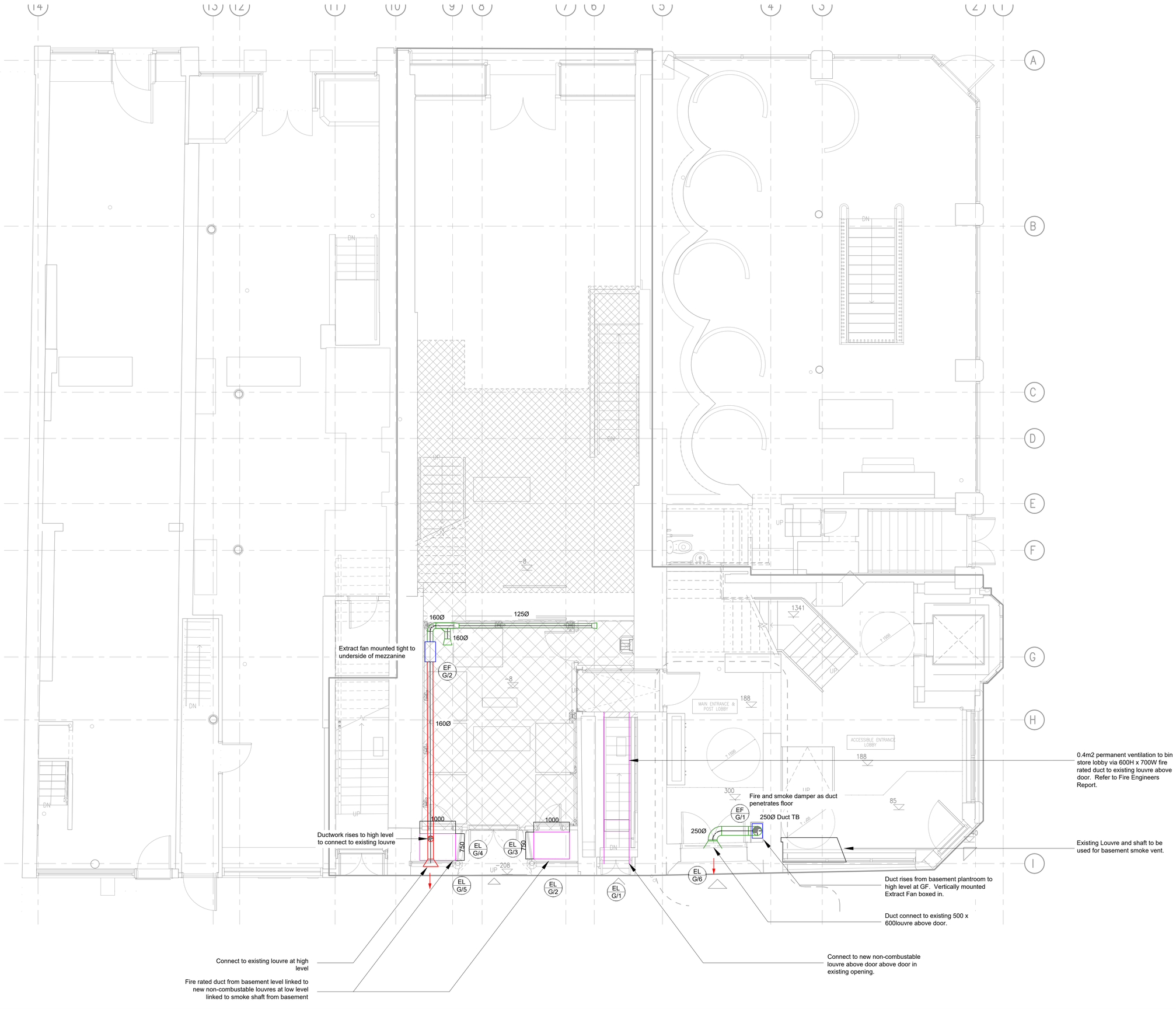
Project:

58-64 KING STREET
MANCHESTER

Drawing Title:

MECHANICAL SERVICES
GROUND FLOOR
HEATING LAYOUT

Engineer:	Checked By:	Cad By:
J.D	M.H	J.D
Scale: 1:50	Paper Size: A1	Date Created: SEP 2022
Drawing Number: 4052-KIN-ZZ-00-DR-M-5600		Drawing Revision: P2



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MVHR UNIT IN CEILING VOID

SUPPLY AIR DUCTWORK

EXTRACT AIR DUCTWORK

FRESH AIR INTAKE DUCTWORK

EXHAUST AIR DUCTWORK

FIRE RATED DUCTWORK

PURGE VENT EXTRACT DUCTWORK

ATTENUATOR

MVHR UNIT AT HIGH LEVEL IN CUPBOARD

ROOF COWL

PB — FAN CONTROLLER TO RUN PURGE FAN

FSD — FIRE AND SMOKE DAMPER

VCD — VOLUME CONTROL DAMPER

VENTILATION NOTES:-

1. ALL DUCTWORK SHALL BE MANUFACTURED & INSTALLED IN ACCORDANCE WITH BESA DW154 FOR PLASTIC DUCTWORK WITHIN APARTMENTS AND DW144 FOR DUCTWORK IN COMMUNAL AREAS.
2. ALL DUCTWORK WITHIN APARTMENTS SHALL BE 204 x 60 UNLESS OTHERWISE STATED.
3. FIRE DAMPERS/FIRE COLLARS OR WRAPS SHALL BE PROVIDED WHERE DUCTWORK PASSES THROUGH ANY FIRE RATED STRUCTURE.
4. THERMAL INSULATION SHALL BE APPLIED TO THE FOLLOWING AREAS:
   UNTREATED FRESH AIR DUCTWORK FROM EXTERNAL LOUVRE TO FAN WITHIN THE BUILDING
   EXHAUST DUCTWORK FROM EXTERNAL LOUVRE TO FAN WITHIN THE BUILDING
5. BATHROOM/WC DOORS SHALL BE UNDERCUT TO PROVIDE VENTILATION AIR PATH ROUTES.
6. WHERE APARTMENT NORMAL VENTILATION RATES (BASED ON FLOOR AREA) ARE EQUAL TO THE MINIMUM HIGH VENTILATION RATES, A 20% MARGIN IS TO BE APPLIED TO HIGH RATE FIGURES.
7. OPENABLE WINDOWS TO PROVIDE SHORT PERIODS OF PURGE VENTILATION TO REMOVE ODOURS, EXCESS HUMIDITY AND REDUCE TEMPERATURES IN HABITABLE ROOMS. WHERE THERE ARE NO EXTERNAL WINDOWS IN A HABITABLE ROOM, MVHR UNITS SHALL PROVIDE INCREASED AIR VOLUMES

Rev:	Date:	Status/Amendments:	By:
P2	13.12.22	STAGE 4 ISSUE	M.H
P1	14.10.22	PRELIMINARY ISSUE	M.H

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Client:

GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

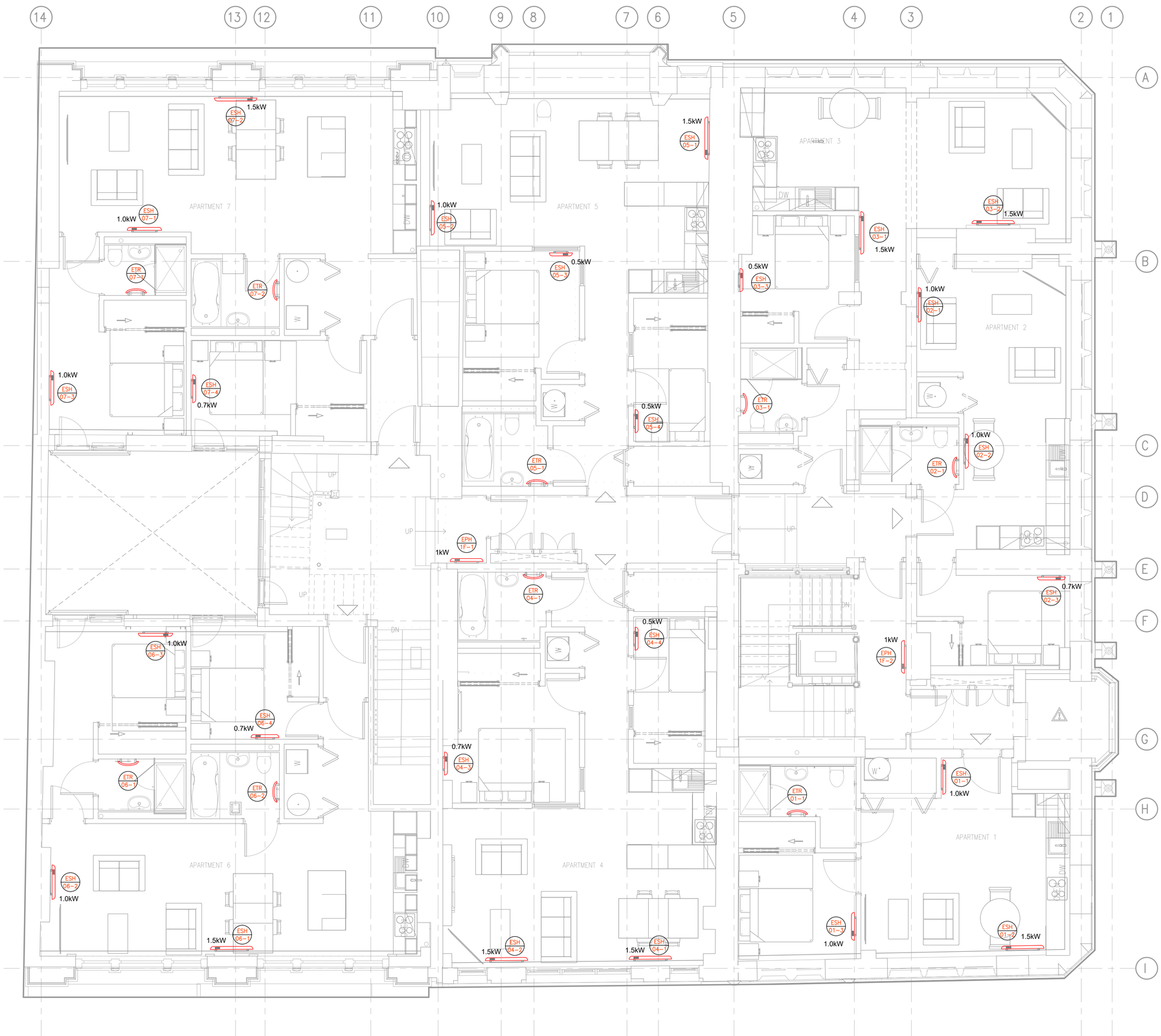
Project:

58-64 KING STREET
MANCHESTER

Drawing Title:

MECHANICAL SERVICES
GROUND FLOOR
VENTILATION LAYOUT

Engineer:	Checked By:	Cad By:
M.H	A.A	D.A
Scale: 1:50	Paper Size: A1	Date Created: JULY 2022
Drawing Number: 4052-KIN-ZZ-00-DR-M-5700		Drawing Revision: P2



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HEATING LEGEND

- ESH ** — ELECTRIC STORAGE HEATER
- EPH ** — ELECTRIC PANEL HEATER
- ETR ** — ELECTRIC TOWEL RAIL
- ETH ** — ELECTRIC TUBE HEATER
- ETH T — ELECTRIC TUBE HEATER

Rev:	Date:	Status/Amendments:	By:
P2	25.11.22	PRELIMINARY ISSUE	J.D
P1	14.10.22	PRELIMINARY ISSUE	J.D

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Client:

GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:

58-64 KING STREET
MANCHESTER

Drawing Title:

MECHANICAL SERVICES
FIRST FLOOR
HEATING LAYOUT

Engineer:	Checked By:	Cad By:
J.D	M.H	J.D
Scale: 1:50	Paper Size: A1	Date Created: SEP 2022
Drawing Number: 4052-KIN-ZZ-01-DR-M-5600		Drawing Revision: P2



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HEATING LEGEND

ESH **	ELECTRIC STORAGE HEATER
EPH **	ELECTRIC PANEL HEATER
ETR **	ELECTRIC TOWEL RAIL
ETH ** / ETH T	ELECTRIC TUBE HEATER

Rev:	Date:	Status/Amendments:	By:
P2	25.11.22	PRELIMINARY ISSUE	J.D
P1	14.10.22	PRELIMINARY ISSUE	J.D

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Client:

GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:

58-64 KING STREET
MANCHESTER

Drawing Title:

MECHANICAL SERVICES
SECOND FLOOR
HEATING LAYOUT

Engineer:	Checked By:	Cad By:
J.D	M.H	J.D
Scale: 1:50	Paper Size: A1	Date Created: SEP 2022
Drawing Number: 4052-KIN-ZZ-02-DR-M-5600		Drawing Revision: P2



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HEATING LEGEND

ESH **	ELECTRIC STORAGE HEATER
EPH **	ELECTRIC PANEL HEATER
ETR **	ELECTRIC TOWEL RAIL
ETH **	ELECTRIC TUBE HEATER
ETH T	

Rev:	Date:	Status/Amendments:	By:
P3	25.11.22	PRELIMINARY ISSUE	J.D
P2	09.11.22	PRELIMINARY ISSUE - xref updated	J.D
P1	14.10.22	PRELIMINARY ISSUE	J.D

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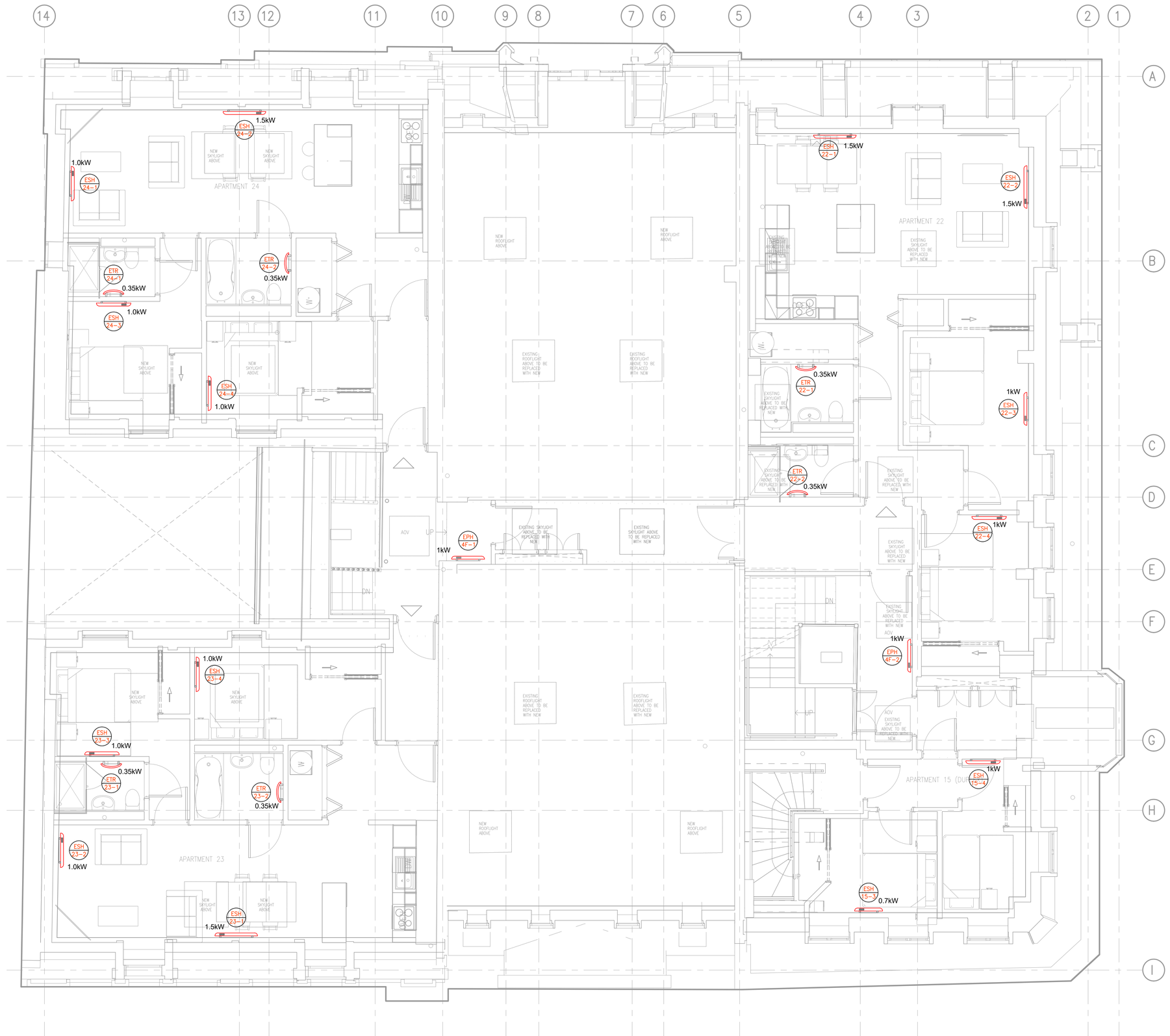
Project:

58-64 KING STREET
MANCHESTER

Drawing Title:

MECHANICAL SERVICES
THIRD FLOOR
HEATING LAYOUT

Engineer:	Checked By:	Cad By:
J.D	M.H	J.D
Scale: 1:50	Paper Size: A1	Date Created: SEP 2022
Drawing Number: 4052-KIN-ZZ-03-DR-M-5600		Drawing Revision: P3



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HEATING LEGEND

ESH **	ELECTRIC STORAGE HEATER
EPH **	ELECTRIC PANEL HEATER
ETR **	ELECTRIC TOWEL RAIL
ETH **	ELECTRIC TUBE HEATER
ETH T	

Rev:	Date:	Status/Amendments:	By:
P2	25.11.22	PRELIMINARY ISSUE	J.D
P1	14.10.22	PRELIMINARY ISSUE	J.D

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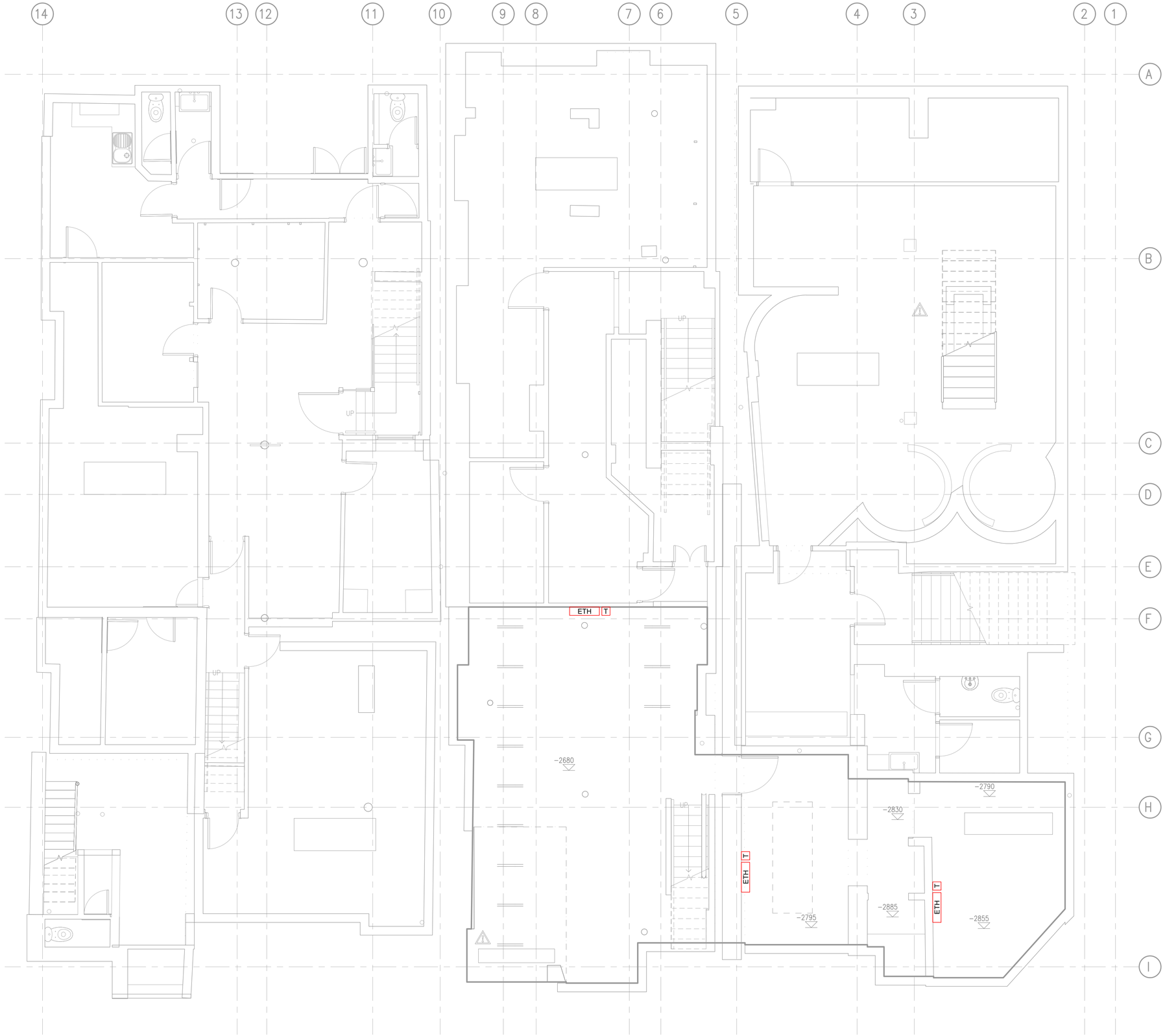
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Client:
GLASGOW CITY COUNCIL AS TRUSTEES OF STRATHCLYDE PENSION FUND

Project:
58-64 KING STREET
MANCHESTER

Drawing Title:
MECHANICAL SERVICES
FOURTH FLOOR
HEATING LAYOUT

Engineer:	Checked By:	Cad By:
J.D	M.H	J.D
Scale: 1:50	Paper Size: A1	Date Created: SEP 2022
Drawing Number: 4052-KIN-ZZ-04-DR-M-5600		Drawing Revision: P2



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HEATING LEGEND

ESH **	ELECTRIC STORAGE HEATER
EPH **	ELECTRIC PANEL HEATER
ETR **	ELECTRIC TOWEL RAIL
ETH **	ELECTRIC TUBE HEATER
ETH T	

Rev:	Date:	Status/Amendments:	By:
P2	25.11.22	PRELIMINARY ISSUE	J.D
P1	14.10.22	PRELIMINARY ISSUE	J.D

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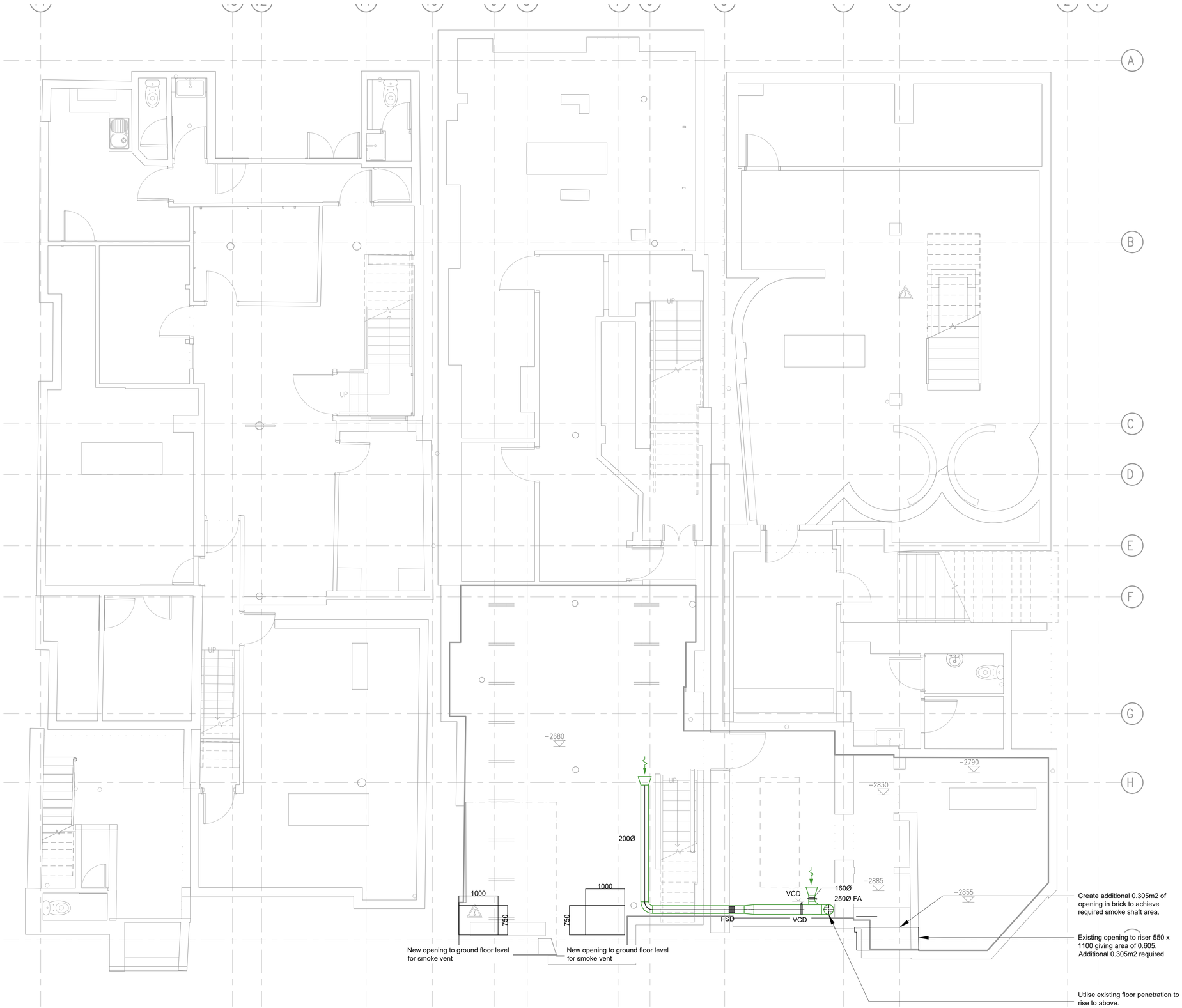
Project:

58-64 KING STREET
MANCHESTER

Drawing Title:

MECHANICAL SERVICES
FOURTH FLOOR
HEATING LAYOUT

Engineer:	Checked By:	Cad By:
J.D	M.H	J.D
Scale: 1:50	Paper Size: A1	Date Created: SEP 2022
Drawing Number: 4052-KIN-ZZ-B1-DR-M-5600		Drawing Revision: P2



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MVHR UNIT IN CEILING VOID

SUPPLY AIR DUCTWORK

EXTRACT AIR DUCTWORK

FRESH AIR INTAKE DUCTWORK

EXHAUST AIR DUCTWORK

FIRE RATED DUCTWORK

PURGE VENT EXTRACT DUCTWORK

ATTENUATOR

MVHR UNIT AT HIGH LEVEL IN CUPBOARD

ROOF COWL

PB — FAN CONTROLLER TO RUN PURGE FAN

FSD — FIRE AND SMOKE DAMPER

VCD — VOLUME CONTROL DAMPER

VENTILATION NOTES:-

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   EXHAUST DUCTWORK FROM EXTERNAL LOUVRE TO FAN WITHIN THE BUILDING
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Rev:	Date:	Status/Amendments:	By:
P2	13.12.22	STAGE 4 ISSUE	M.H
P1	14.10.22	PRELIMINARY ISSUE	M.H

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Project:
58-64 KING STREET
MANCHESTER

Drawing Title:
MECHANICAL SERVICES
BASEMENT
VENTILATION LAYOUT

Engineer:	Checked By:	Cad By:
M.H	A.A	D.A
Scale: 1:50	Paper Size: A1	Date Created: JULY 2022
Drawing Number: 4052-KIN-ZZ-B1-DR-M-5700		Drawing Revision: P2