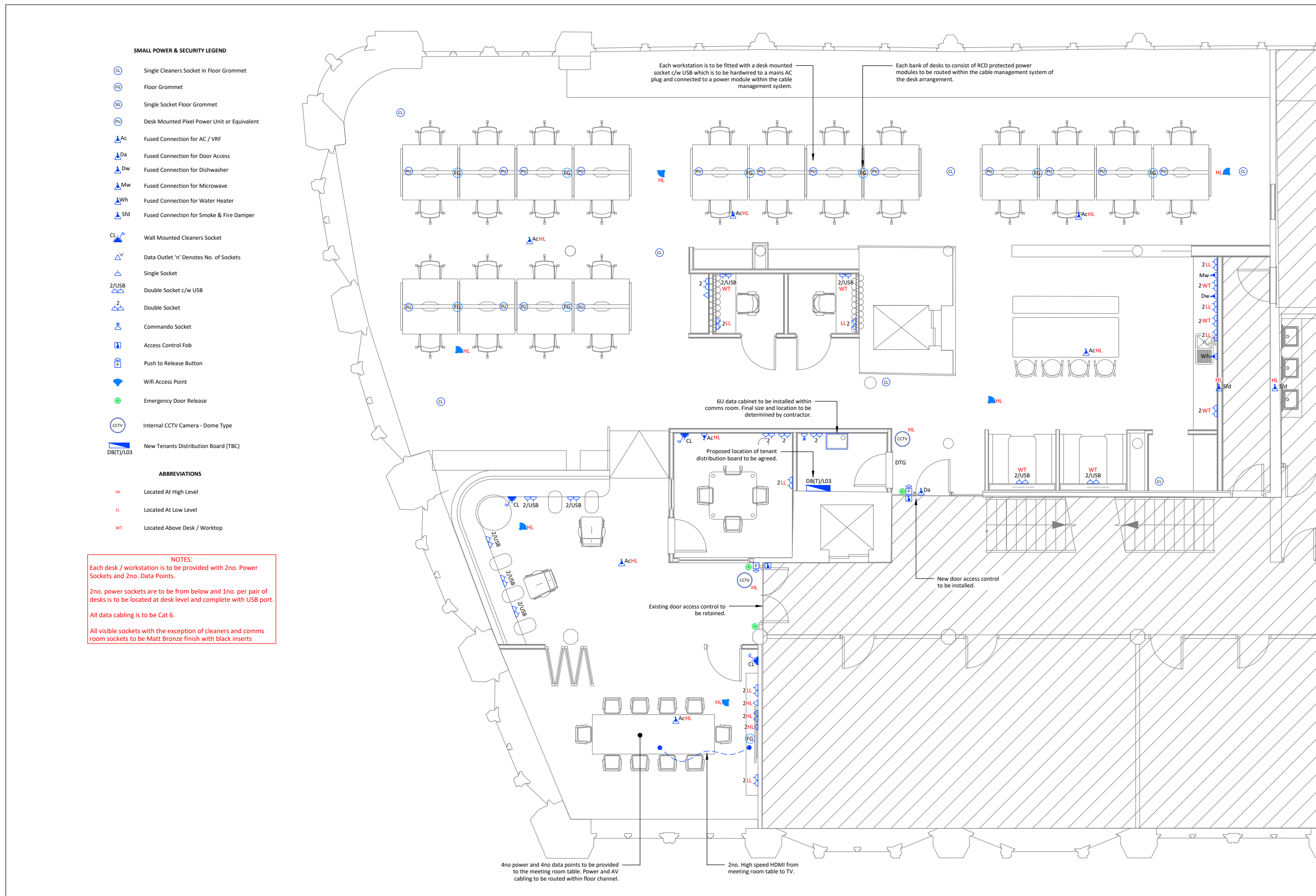
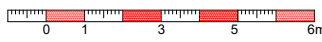




Canada House | 3rd Floor
Proposed Small Power & Security

These lines measure 100mm in length when plotted correctly.



1:100



1:50

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Example Image
Power Module Arrangement



Example Image
Power Module Arrangement

NOTES:

Each desk / workstation is to be provided with 2no. Power Sockets and 2no. Data Points.

2no. power sockets are to be from below and 1no. per pair of desks is to be located at desk level and complete with USB port.

All data cabling is to be Cat 6.

All visible sockets with the exception of cleaners and comms room sockets to be Matt Bronze finish with black inserts

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ISSUE	DESCRIPTION	DATE	DRN	CHD
P1	ISSUE FOR PLANNING APPLICATION	29.03.23	JS	JN



Marketaylor Limited
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Hyde
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STATUS

PLANNING

CLIENT

Grosvenor

CONTRACT Canada House
Manchester

TITLE Proposed Level 3 | Cat B
Small Power & Security

DATE	29.03.23	SCALE	1:50	REV
DRAWN	JS	JOB No.	DRG No.	
CHECKED	JN	C681	L3-E-62-201	P1
APPROVED	JN			

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Fitting A - Kitchen Area
Thorlux HiBar Suspended
(Direct / Indirect)



Fitting E - Kitchen Area
Lightforms Ø110 Tin Can



Fitting F - Comms Room
Thorlux Recessed G3



Fitting H - Lounge
Louis Poulsen PH 5 Mini



Fitting H - Lounge
Louis Poulsen PH 5 Mini



Fitting I - Lounge
LightForms Nova Medium 62



Fitting L - Work Pods
Tyso Lighting Wall Light



Fitting O - Kitchen
Pholc Donna Wall

These lines measure 100mm in length when plotted correctly.

0 1 3 5 6m

1:100

0 1m 2m 3m

1:50

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Fitting P - Board Room
Menu - Dancing Pendant



Fitting Q - Kitchen
Tyson Lighting Pendant



Fitting S - Meeting Room
CTO Lighting Ring Wall



Fitting T - Reception
Imperial - 6 Light Pendant

P1	ISSUE FOR PLANNING APPLICATION	29.03.23	JS	JN
ISSUE	DESCRIPTION	DATE	DRN	CHD
M MARKETAYLOR Marketaylor Limited 37 Market Street Hollingworth Hyde Greater Manchester SK14 8NE 0161 820 9479 info@marketaylor.co.uk www.marketaylor.co.uk				
STATUS PLANNING				
CLIENT Grosvenor				
CONTRACT Canada House Manchester				
TITLE Proposed Level 3 Cat B Lighting & Fire Alarm				
DATE	29.03.23	SCALE	1:50	
DRAWN	JS	JOB No.	DRG No.	REV
CHECKED	JN	C681	L3-E-63-303	P1
APPROVED	JN			
EXTERNAL REF.	Proposed Level 03 - 231122			
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LIGHTING & FIRE ALARM LEGEND

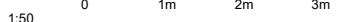
- A1
Thorlux LED 1500mm Hi-Bar Suspended Continuous Luminaire. Smart Scan (4000k Black)
- A1E
Thorlux LED 1500mm Hi-Bar Suspended Continuous Luminaire. Smart Scan Emergency (4000k Black)
- A2
Thorlux LED 3000mm Hi-Bar Suspended Continuous Luminaire. Smart Scan (4000k Black)
- A2E
Thorlux LED 3000mm Hi-Bar Suspended Continuous Luminaire. Smart Scan Emergency (4000k Black)
- A3
Thorlux Hi-Bar Suspended End Kit
- A4
Thorlux Hi-Bar Suspension Kit
- Ee
LightForms Surface/Suspended 100 Tin Can Ø110 3000k - Ral Colour TBC - or Equal & Approved 'e' Denotes Emergency Version
- Fe
Thorlux Recessed G3 Open LED Downlighter 4000k - White - or Equal & Approved 'e' Denotes Emergency Version
- H
Louis Poulsen PH 5 Mini Suspended 3000k - Monochrome Black - or Equal & Approved
- I1
LightForms Nova Medium 62 Surface Track Lighting 3000k - Black c/w Gold Baffle - or Equal & Approved 'e' Denotes Emergency Version
- I1e
Tyson Lighting Wall Light 3000k - Colour TBC by AXI
- L
Recessed Emergency Downlight
- M
LightForms ValueDown Recessed Downlight 3000k - Black - or Equal & Approved
- N
Pholc Donna Wall - 3000k - Linen
- O
Menu Space - Dancing Pendant 3000k - Black
- P
Tyson Lighting - 3000k - Black
- Q
Asteria Move Portable Table Lamp 3000k - Pearl White
- R
CTO Lighting Ring Wall 3000k - Black
- S
Imperial - 6 Light Pendant 3000k - Brass & Opal
- T
Surface Mounted LED Tape c/w Diffuser. 3000k - Dimmable.
- LED
Surface Mounted Presence Detector
- SS
Scene Setting Control
- EX1
Ceiling Mounted Maintained LED Emergency c/w Arrow Up
- EX2
Ceiling Mounted Maintained LED Emergency c/w Arrow Directional
- ⊕
Smoke Detector
- ⊕
Smoke Detector c/w Sounder
- ⊕
Smoke Detector c/w Sounder and Beacon
- ⊕
Smoke Detector c/w Beacon
- ⊕
Manual Call Point
- ⊕
Heat Detector
- FAI
Fire Alarm Interface

NOTE: CONTRACTOR TO ENSURE CORRECT LIGHTING LEVELS ARE ACHIEVED WITH ALL GENERAL AND FEATURE LIGHTING.

The Contractor shall allow for a temporary fire alarm installation which shall be present and active for the duration of the construction period.

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Key test and double switched dimmer socket finish to be matt bronze c/w black inserts.



scaled dimensions taken from this drawing shall be verified on site.

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Notes

1. This drawing shall be read in conjunction with the relevant Manufacturer/ Ltd specification(s) and all relevant Architect's and other Engineer's drawing(s).
2. Details are for design purposes only and shall be verified on site by the Engineering Contractor where accuracy is critical. The exact location of a plant items/equipment and the route of all services shall be determined on site.
3. All plant, equipment, distribution system components and ancillaries shall be installed in strict accordance with the manufacturer's guidelines.
4. The installation personnel shall allow for changes in distribution system(s) invert levels (including any sets up and down etc.) as necessary to coordinate fully with the building structure and other MBE Services.

Notes

- 2. This drawing shall be read in conjunction with the relevant Manufacturer (Layco) specifications and all relevant Architect's and other Engineer's drawings).
- 3. Details are for tender purposes only and shall be verified on site by the contractor. The contractor shall be responsible for the design of all plant items/equipment and the route of all services shall be determined on site.
- 4. All plant, equipment, distribution system components and ancillaries shall be installed in strict accordance with the manufacturer's guidelines.
- 5. The installation personnel shall allow for changes in distribution system's levels (including any set up and down etc.) as necessary to coordinate fully with the other trades.
- 6. All pipework shall be black heavyweight mild steel tube to EN10255 (re-primed finish). All fittings Ø50 and below shall be screwed to BS EN10421 and BS143. All fittings Ø65 and above shall be welded.
- 7. All pipework shall be copper tube to EN1057-R250 Table X with Yorkshire capillary integral solder ring fittings.
- 8. All general distribution pipework throughout the building shall be copper tube to EN1057-R250 Table X with Gebert Mappex copper fittings (standard Black CIB Butyl Rubber seal rings).
- 9. All low points shall be fitted with a lockshield draincock. All high points shall be fitted with an automatic air vent.
- 10. All items of plant shall be fitted with isolating valves, and effective means of draining. Drains shall be installed in accordance with the manufacturer's maintenance works to be carried out without draining the entire system.
- 11. All pipework passing through walls and floor slabs shall be sleeved. All pipework passing through fire compartment walls and floor slabs shall also be fire stopped.
- 12. All concealed pipework, pipework routed in plantrooms, service risers, cupboards, pipe boxes, IPS systems etc, and all pipework not used as a useful service shall be installed in accordance with the specifications of the Building Regulations Part 7, 2013, TMSA Guide 2006 and BS 5422: 2001. An insulated pipework shall be identified with colour bands to BS 5710.
- 13. All pipework expansion bellows shall be selected by a specialist supplier. Unless otherwise specified, the maximum flow temperature shall be 80°C and the ambient air temperature shall be 20°C. All anchor points and expansion bellows guides shall be installed as recommended by the bellows supplier. All pipework brackets shall allow for pipework movement due to expansion.
- 14. All underfloor heating systems shall be installed by a specialist contractor. Radiators and proposed installation shall be in accordance with the manufacturer's instructions.
- 15. All underfloor heating systems shall be designed by the equipment manufacturers including the selection of pipework, manifolds, thermostats and ancillaries.

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P1	ISSUE FOR PLANNING APPLICATION	29.03.23	JS	JN
ISSUE	DESCRIPTION	DATE	DRN	CHD



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STATUS

PLANNING

CLIENT

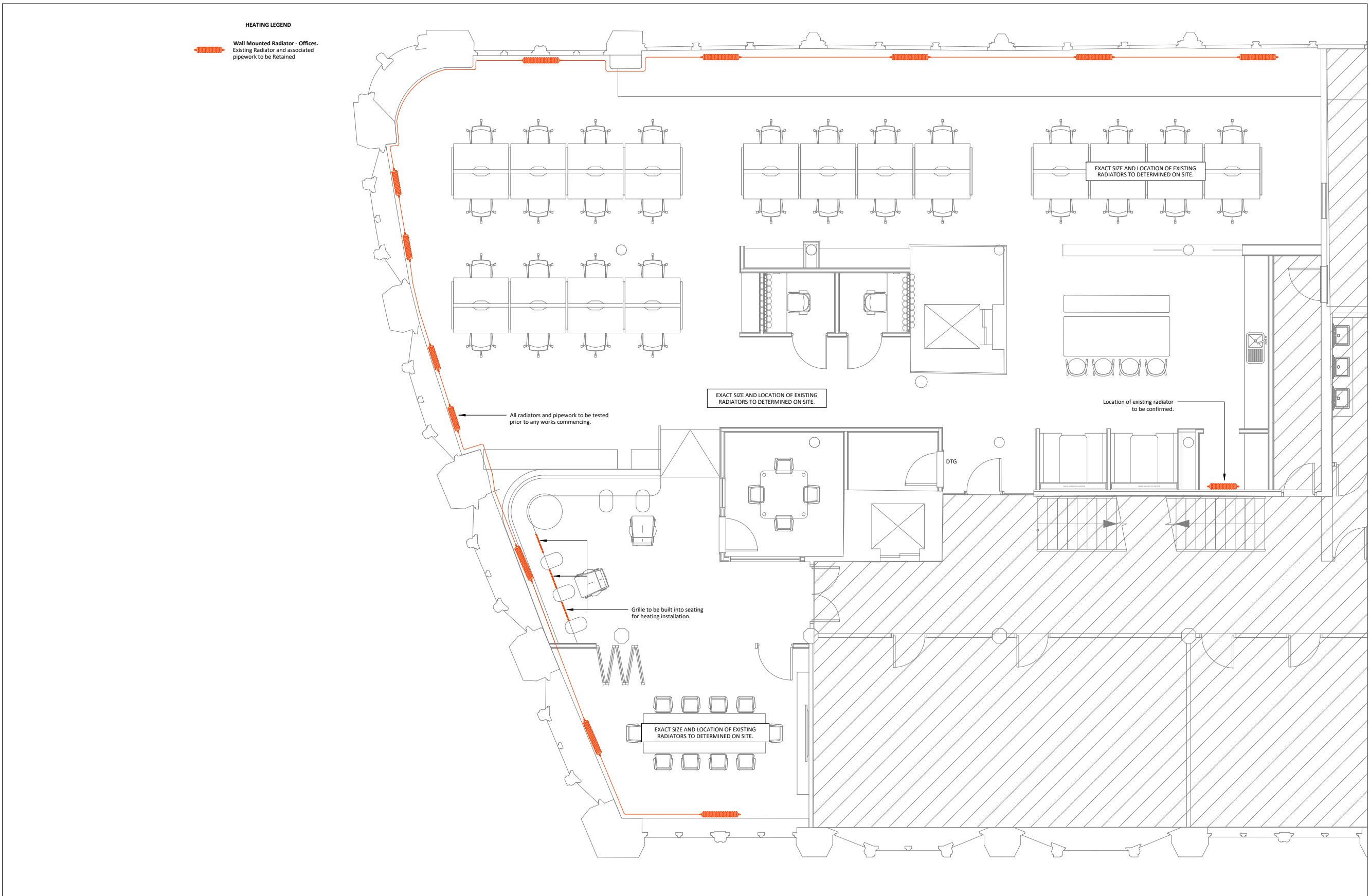
Grosvenor

CONTRACT Canada House
Manchester

TITLE	Proposed Level 3 Cat B LTHW Heating
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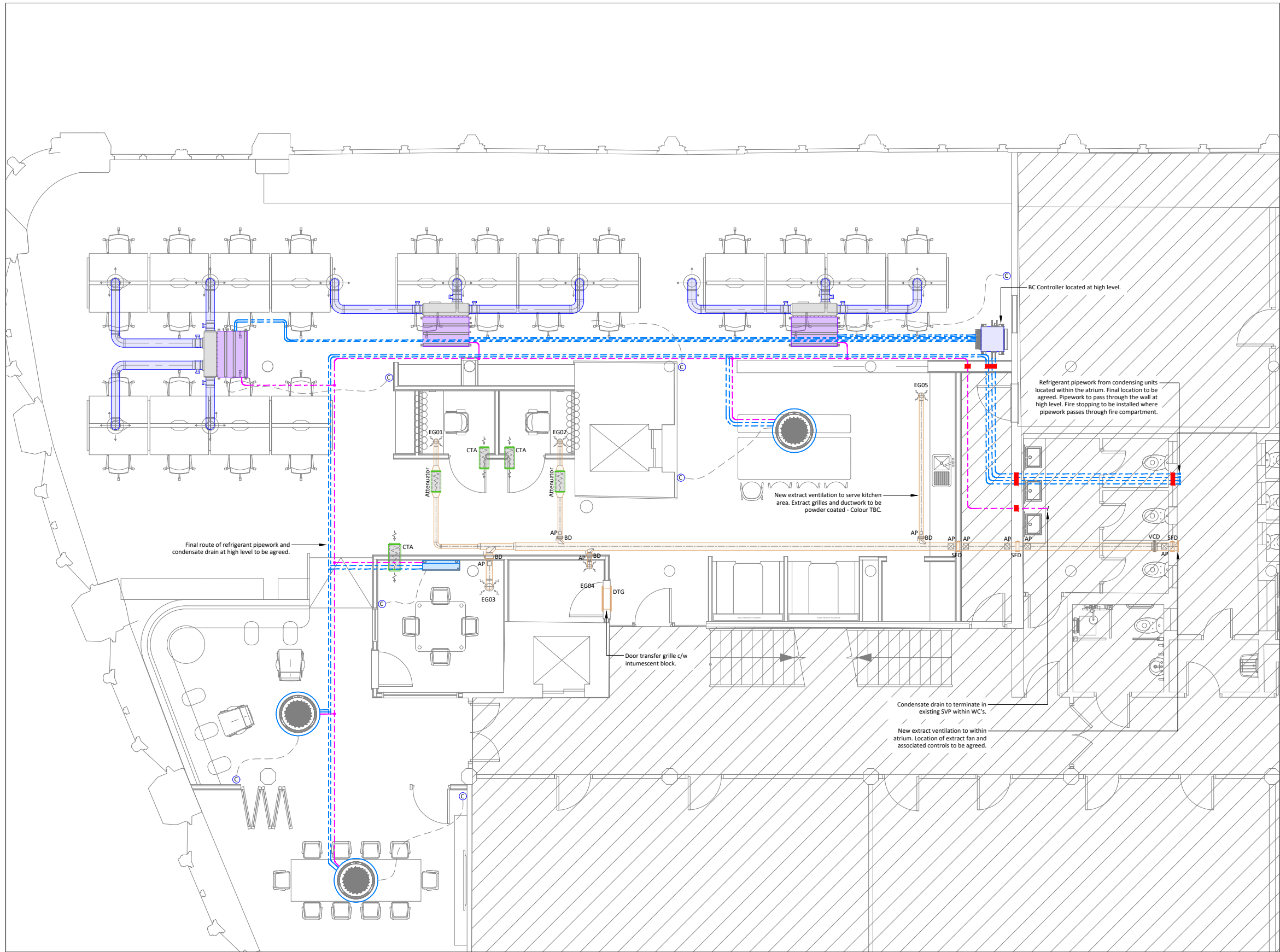
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DRAWN	JS	JOB No.	DRG No.	REV
CHECKED	JN	C681	L3-M-56-601	P1
APPROVED	JN			

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Canada House | 3rd Floor

Proposed LTHW Heating

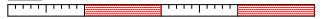


Canada House | 3rd Floor
Proposed VRF & Mechanical Ventilation

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1:100



1:50

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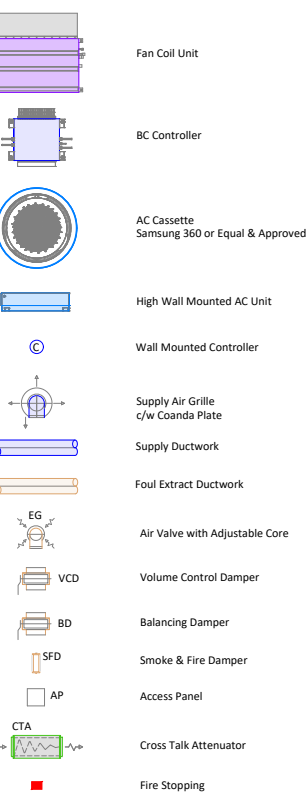
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- The installation personnel shall allow for changes in distribution system(s) invert levels (including any sets up and down etc.) as necessary to coordinate fully with the building structure and other M&E Services.

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- All general sheet-metal ductwork shall be hot-dipped galvanised mild steel, installed in accordance with HVCA Code DW/144 Class A (low pressure). All kitchen extract sheet-metal ductwork shall also comply to HVCA Code DW/172.
- Duct-mounted access doors shall be installed in accordance with HVCA Code DW/144 Appendix M Table 25 Level 1.
- All duct flexible connections shall be no more than 600mm in total length and shall be fully extended to minimise pressure drops. Each flexible connection shall not have an offset angle greater than 45°. For offset angles greater than 45°, sheet metal ductwork shall be used. All flexible ductwork shall be PVC / polyester laminate with an encapsulated steel wire helix, insulated on untempered supply systems.
- Volume control dampers shall be installed as necessary to allow full and proper balancing of each ventilation system. The MEC shall consult with his commissioning specialist at tender stage and shall allow for all dampers to suit. As a minimum, dampers shall be fitted to each air terminal, fan and main branches. All balancing dampers of size 250mm diameter and below shall be single-blade type with locking quadrant mechanism; all dampers above 250mm diameter shall be opposed-blade.
- Fusible link-operated fire dampers shall be installed wherever the ductwork passes through a fire-rated structure (wall, partition, floor slab, ceiling void barrier etc.). The MEC shall consult with the Architect / Main Contractor / Project Manager at tender stage to ascertain the location of all fire rated structures and shall allow for all fire dampers to suit.
- All duct tapers shall be concentric with an angle of no more than 22.5° wherever possible. The Consulting Engineer's written approval shall be sought in all instances where alternative installation methods are required.
- All air terminal plenum boxes (diffusers, grilles, louvres etc.) shall be site-measured and manufactured by the ductwork sub-contractor.
- Each air terminal shall be independently supported from the building structure - no weight shall be borne by the suspended ceiling.
- All ceiling-mounted air terminal pattresses to be provided by the Main Contractor.
- All wall louvre sizes are indicative. All louvres shall be measured on site prior to procurement and manufacture. Refer to the Architect's elevation drawings for further details.
- Each duct-mounted plant item, i.e. HRV units, fans, attenuators etc., shall be independently supported from the building structure. No weight shall be borne by the ceiling.
- All ductwork shall be thermally insulated in accordance with the specification, Building Regulations Part L2: 2013, TIMSA Guide 2006 and BS 5422: 2001, unless otherwise noted. All insulated ductwork shall be identified with colour bands to BS 1710.
- All tempered fresh air supply ductwork and heat recovery return air ductwork shall be thermally insulated with 25mm thick glass mineral wool with a density of 80kg/m³ and a Class 0 reinforced aluminium bright foil cover. The thermal conductivity shall be no more than 0.035W/mk at 50°C.
- All untempered fresh air supply ductwork and return air ductwork shall be thermally insulated and vapour-proofed with 50mm thick glass mineral wool with a density of 80kg/m³ and a Class 0 reinforced aluminium bright foil cover. The thermal conductivity shall be no more than 0.035W/mk at 50°C.
- All extract and exhaust ductwork shall not be insulated.

Ventilation Legend:



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ISSUE	DESCRIPTION	DATE	DRN	CHD
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P1	ISSUE FOR PLANNING APPLICATION	29.03.23	JS	JN
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STATUS

PLANNING

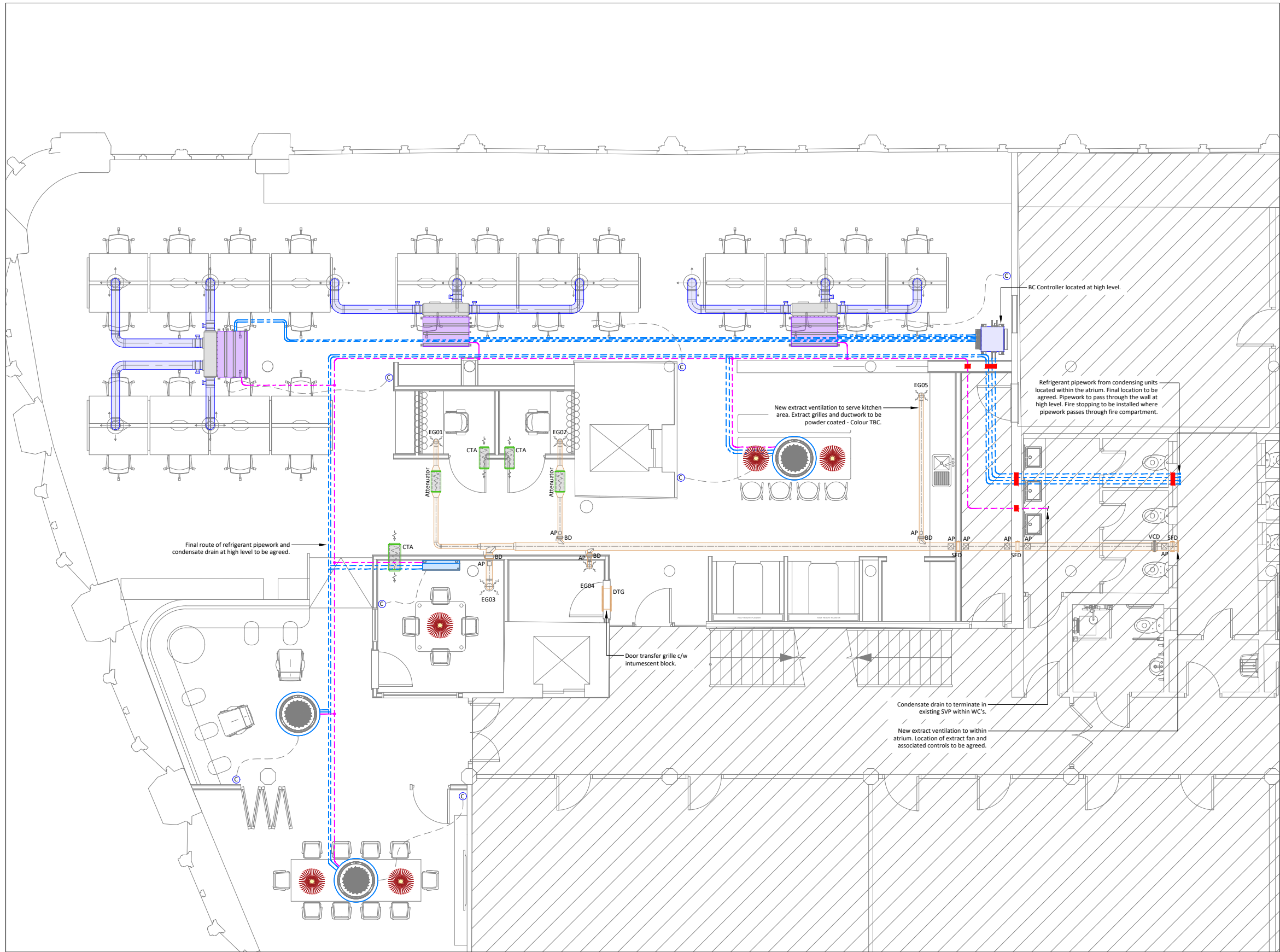
CLIENT Grosvenor

CONTRACT Canada House
Manchester

TITLE Proposed Level 3 | Cat B
VRF & Mechanical Ventilation

DATE	29.03.23	SCALE	1:50	
DRAWN	JS	JOB No.	DRG No.	REV
CHECKED	JN	C681	L3-M-57-701	P1
APPROVED	JN			

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Canada House | 3rd Floor
Proposed VRF & Mechanical Ventilation

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1:100



1:50

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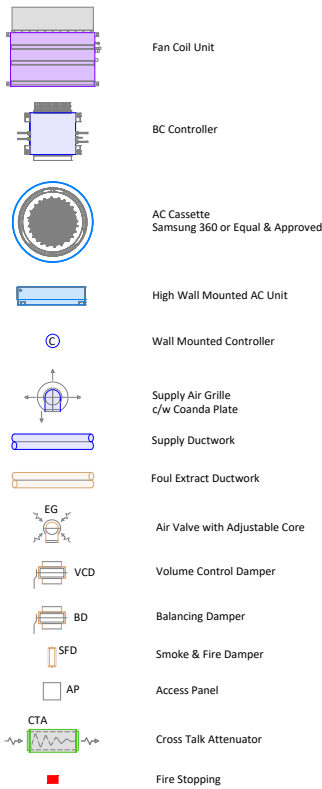
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- Duct-mounted access doors shall be installed in accordance with HVCA Code DW/144 Appendix M Table 25 Level 1.
- All duct flexible connections shall be no more than 600mm in total length and shall be fully extended to minimise pressure drops. Each flexible connection shall not have an offset angle greater than 45°. For offset angles greater than 45°, sheet metal ductwork shall be used. All flexible ductwork shall be PVC / polyester laminate with an encapsulated steel wire helix, insulated on untempered supply systems.
- Volume control dampers shall be installed as necessary to allow full and proper balancing of each ventilation system. The MEC shall consult with his commissioning specialist at tender stage and shall allow for all dampers to suit. As a minimum, dampers shall be fitted to each air terminal, fan and main branches. All balancing dampers of size 250mm diameter and below shall be single-blade type with locking quadrant mechanism; all dampers above 250mm diameter shall be opposed-blade.
- Fusible link-operated fire dampers shall be installed wherever the ductwork passes through a fire-rated structure (wall, partition, floor slab, ceiling void barrier etc.). The MEC shall consult with the Architect / Main Contractor / Project Manager at tender stage to ascertain the location of all fire rated structures and shall allow for all fire dampers to suit.
- All duct tapers shall be concentric with an angle of no more than 22.5° wherever possible. The Consulting Engineer's written approval shall be sought in all instances where alternative installation methods are required.
- All air terminal plenum boxes (diffusers, grilles, louvres etc.) shall be site-measured and manufactured by the ductwork sub-contractor.
- Each air terminal shall be independently supported from the building structure - no weight shall be borne by the suspended ceiling.
- All ceiling-mounted air terminal pattresses to be provided by the Main Contractor.
- All wall louvre sizes are indicative. All louvres shall be measured on site prior to procurement and manufacture. Refer to the Architect's elevation drawings for further details.
- Each duct-mounted plant item, i.e. HRV units, fans, attenuators etc., shall be independently supported from the building structure. No weight shall be borne by the ceiling.
- All ductwork shall be thermally insulated in accordance with the specification, Building Regulations Part L2: 2013, TIMSA Guide 2006 and BS 5422: 2001, unless otherwise noted. All insulated ductwork shall be identified with colour bands to BS 1710.
- All tempered fresh air supply ductwork and heat recovery return air ductwork shall be thermally insulated with 25mm thick glass mineral wool with a density of 80kg/m³ and a Class 0 reinforced aluminium bright foil cover. The thermal conductivity shall be no more than 0.035W/mk at 50°C.
- All untempered fresh air supply ductwork and return air ductwork shall be thermally insulated and vapour-proofed with 50mm thick glass mineral wool with a density of 80kg/m³ and a Class 0 reinforced aluminium bright foil cover. The thermal conductivity shall be no more than 0.035W/mk at 50°C.
- All extract and exhaust ductwork shall not be insulated.

Ventilation Legend:



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ISSUE	DESCRIPTION	DATE	DRN	CHD
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STATUS
PLANNING

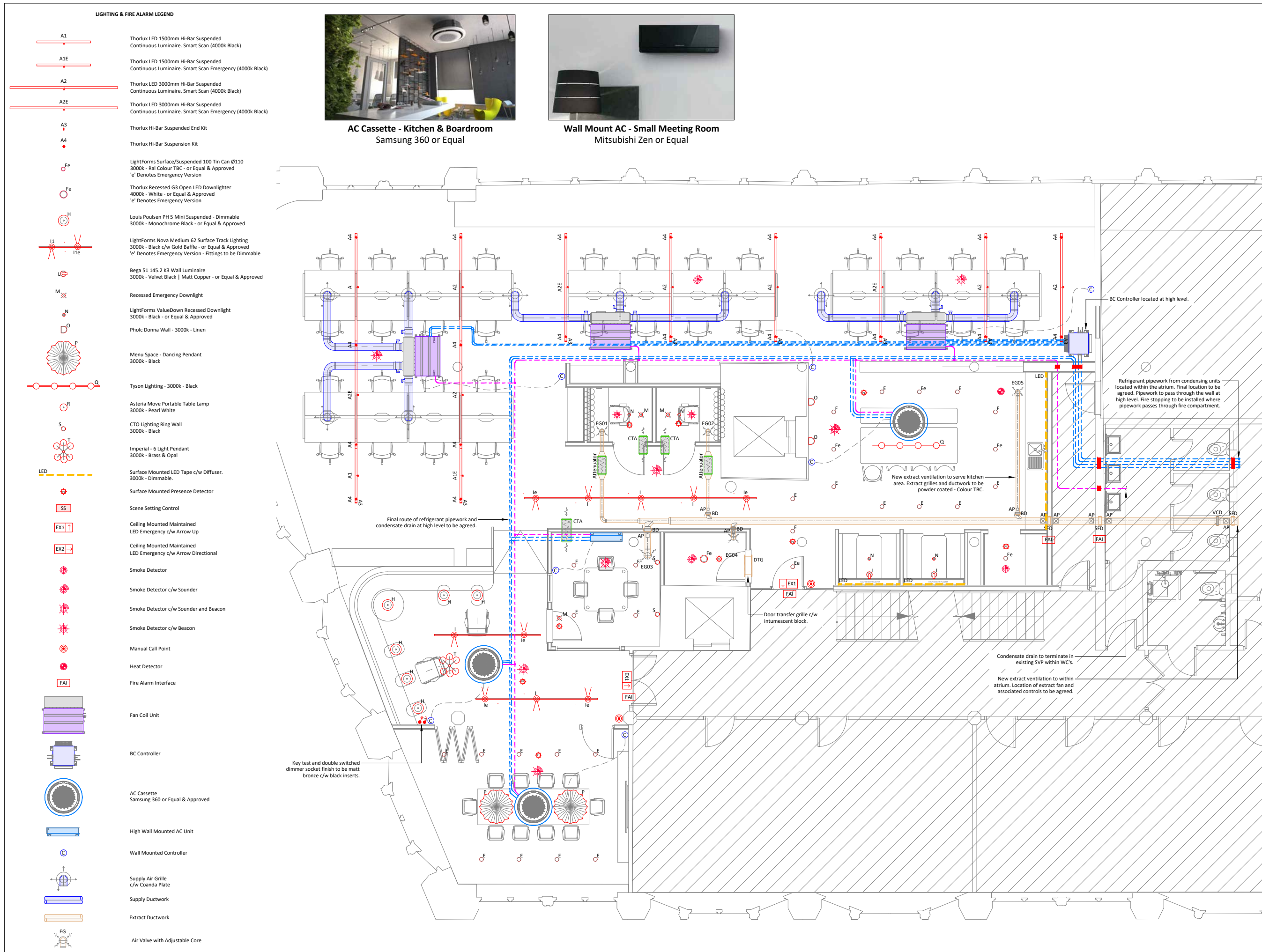
CLIENT
Grosvenor

CONTRACT
Canada House
Manchester

TITLE
Proposed Level 3 | Cat B
VRF & Mechanical Ventilation

DATE	29.03.23	SCALE	1:50
DRAWN	JS	JOB No.	DRG No.
CHECKED	JN	C681	L3-M-57-701
APPROVED	JN		P1

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0 1 3 5 6m

1:100

0 1m 2m 3m

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- All general sheet-metal ductwork shall be hot-dipped galvanised mild steel, installed in accordance with HVCA Code DW/144 Class A (low pressure). All kitchen extract sheet-metal ductwork shall also comply to HVCA Code DW/172.
- Duct-mounted access doors shall be installed in accordance with HVCA Code DW/144 Appendix M Table 25 Level 1
- All duct flexible connections shall be no more than 600mm in total length and shall be fully extended to minimise pressure drops. Each flexible connection shall not have an offset angle greater than 45°. For offset angles greater than 45°, sheet metal ductwork shall be used. All flexible ductwork shall be PVC / polyester laminate with an encapsulated steel wire helix, insulated on untempered supply systems.
- Volume control dampers shall be installed as necessary to allow full and proper balancing of each ventilation system. The MEC shall consult with his commissioning specialist at tender stage and shall allow for all dampers to suit. As a minimum, dampers shall be fitted to each air terminal, fan and main branches. All balancing dampers of size 250mm diameter and below shall be single-blade type with locking quadrant mechanism; all dampers above 250mm diameter shall be opposed-blade.
- Fusible link-operated fire dampers shall be installed wherever the ductwork passes through a fire-rated structure (wall, partition, floor slab, ceiling void barrier etc.). The MEC shall consult with the Architect / Main Contractor / Project Manager at tender stage to ascertain the location of all fire rated structures and shall allow for all fire dampers to suit.
- All duct tapers shall be concentric with an angle of no more than 22.5° wherever possible. The Consulting Engineer's written approval shall be sought in all instances where alternative installation methods are required.
- All air terminal plenum boxes (diffusers, grilles, louvres etc.) shall be site-measured and manufactured by the ductwork sub-contractor.
- Each air terminal shall be independently supported from the building structure - no weight shall be borne by the suspended ceiling.
- All ceiling-mounted air terminal pattresses to be provided by the Main Contractor.
- All wall louvre sizes are indicative. All louvres shall be measured on site prior to procurement and manufacture. Refer to the Architect's elevation drawings for further details.
- Each duct-mounted plant item, i.e. HRV units, fans, attenuators etc., shall be independently supported from the building structure. No weight shall be borne by the ceiling.
- All ductwork shall be thermally insulated in accordance with the specification, Building Regulations Part L2: 2013, TIMSA Guide 2006 and BS 5422: 2001, unless otherwise noted. All insulated ductwork shall be identified with colour bands to BS 1710.
- All tempered fresh air supply ductwork and heat recovery return air ductwork shall be thermally insulated with 25mm thick glass mineral wool with a density of 80kg/m³ and a Class 0 reinforced aluminium bright foil cover. The thermal conductivity shall be no more than 0.035W/mk at 50°C.
- All untempered fresh air supply ductwork and return air ductwork shall be thermally insulated and vapour-proofed with 50mm thick glass mineral wool with a density of 80kg/m³ and a Class 0 reinforced aluminium bright foil cover. The thermal conductivity shall be no more than 0.035W/mk at 50°C.
- All extract and exhaust ductwork shall not be insulated.

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P1	ISSUE FOR PLANNING APPLICATION	29.03.23	JS	JN
ISSUE	DESCRIPTION	DATE	DRN	CHD



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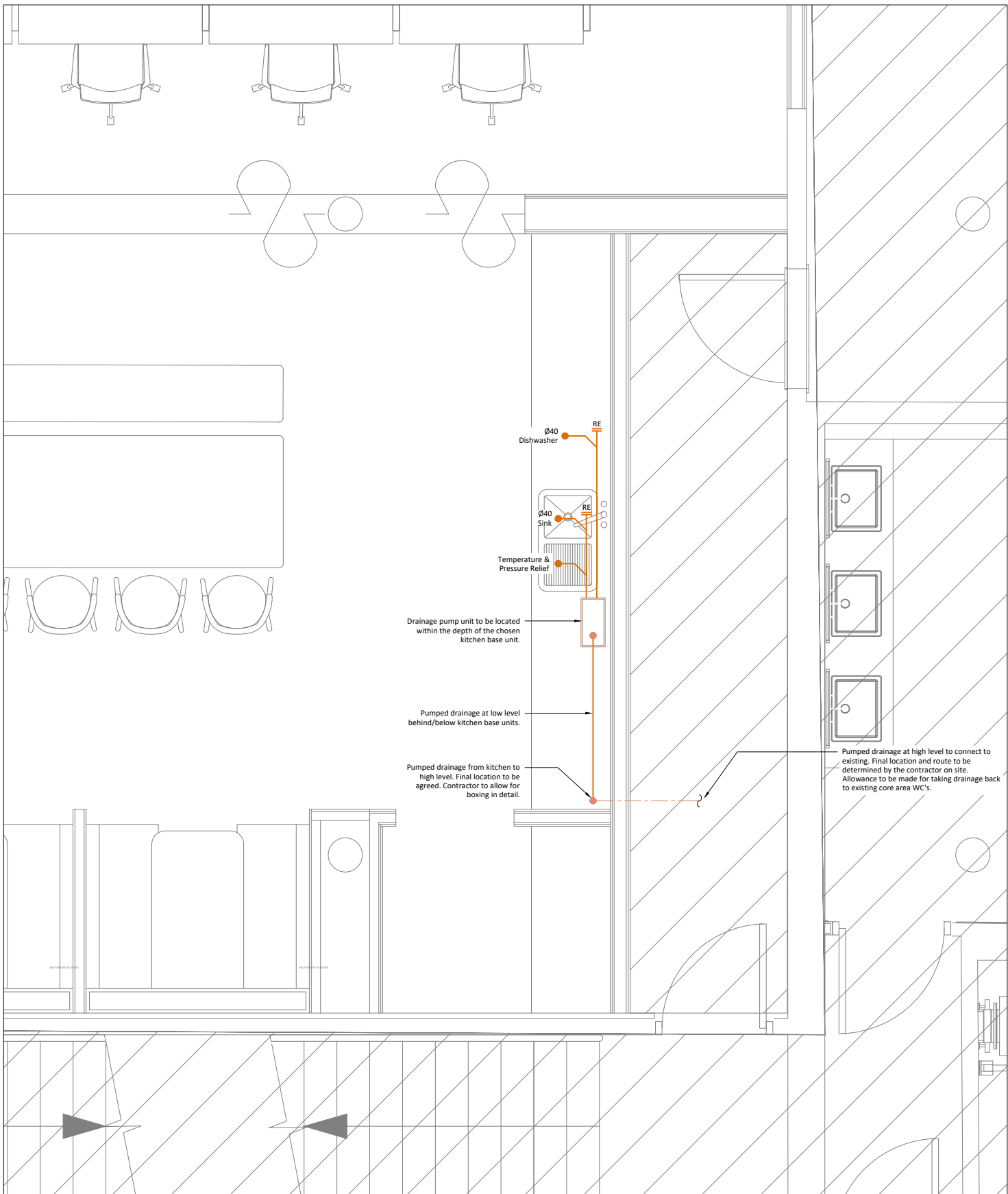
STATUS
PLANNING

CLIENT
Grosvenor

CONTRACT
Canada House Manchester

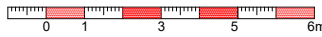
TITLE
Proposed Level 3 | Cat B Reflective Ceiling Plan

DATE	29.03.23	SCALE	1:50		
DRAWN	JS	JOB No.	DRG No.	REV	
CHECKED	JN	C681	L3-M-57-702	P1	
APPROVED	JN				
EXTERNAL REF.	Proposed Level 03 - 231122				
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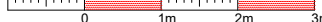


Canada House | 3rd Floor
Proposed Above Ground Drainage

These lines measure 100mm in length when plotted correctly.



1:100



1:50

All scaled dimensions taken from this drawing shall be verified on site.

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Notes

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- All plant, equipment, distribution system components and ancillaries shall be installed in strict accordance with the manufacturer's guidelines.
- The installation personnel shall allow for changes in distribution system(s) invert levels (including any sets up and down etc.) as necessary to coordinate fully with the building structure and other M&E Services.

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- All sanitary pipework and drainage installations shall satisfy the relevant requirements of Part H1 of the Building Regulations and shall also be carried out in strict accordance with BS EN 12056-2 Code of practice for sanitary pipework.
- Pipes shall be fixed in straight runs and all horizontal runs shall be laid to gradients in accordance with BS EN 12056-2:2000, and in any event not less than 18 mm/m unless otherwise instructed.
- Each appliance shall be fitted with a 75mm deep water seal trap.
- Sufficient and suitable access shall be provided to enable all pipework to be tested and maintained effectively. Access covers, plugs or caps shall be installed in positions to facilitate use of testing equipment and removal of blockages.
- Access points shall be provided on all soil stacks at each floor level, including ground floor. Access points shall be positioned at 600mm AFFL to the centre-line. Access points shall be provided where necessary either by means of an integrally moulded door or by a two-piece door, with integral clamp, fitted directly into the pipe.
- Intumescent sleeves shall be fitted to all soil and waste pipes 40mm NB and above passing through a fire-rated structure. All sleeves shall provide 4 hours fire resistance in accordance with BS 476 Part 20:1987 and shall be fixed in strict accordance with the manufacturer's instructions. All fire collars shall be intumescent type with stainless steel frame to BS 476: Part 20:1987.
- Expansion joints shall be provided at a maximum of 4.0m centres for soil, 2.0m centres for waste and between fixed points over 1.0m centres.
- All new below-ground points to be provided by others. Exact positions to be agreed on site.
- All pipe, fittings and joints shall be air pressure tested to 38mm WG for three minutes and every trap shall maintain a water seal of at least 25mm, all in accordance with the Building Regulations Part H1 (2002 edition), clause 1.38.
- All pipework 19mm NB shall be PVC-u with solvent weld fittings to BS 4514:1983 and BS EN 1329-1:2000 (Terrain Overflow System 500 or equal and approved).
- All pipework 32mm to 50mm NB shall be MuPVC with solvent weld fittings to BS 5255:1989 (Terrain Waste System 200 or equal and approved).
- All pipework 80mm to 160mm NB shall be PVC-u with solvent weld fittings to BS 4514:1983 and BS EN 1329-1:2000 (Terrain Soil System 100 or equal and approved).
- All appliance waste traps shall comply to BS 3943:1979 (Terrain System 600 or equal and approved).
- All pipe and fittings shall be colour grey to BS 5252-10.A.07. All solvent weld cement shall comply to BS 6209.
- All automatic air vents shall be covered by a current British Board of Agrément certificate. Terrain types 153.3.4 and 253W or equal and approved.

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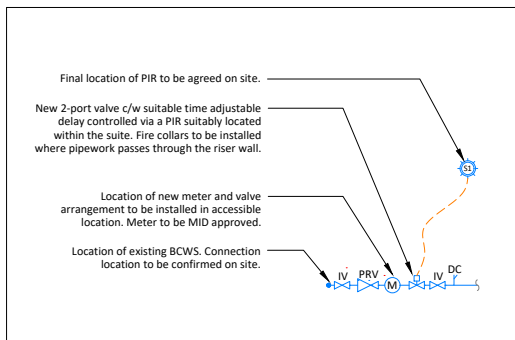
Canada House
Manchester

TITLE

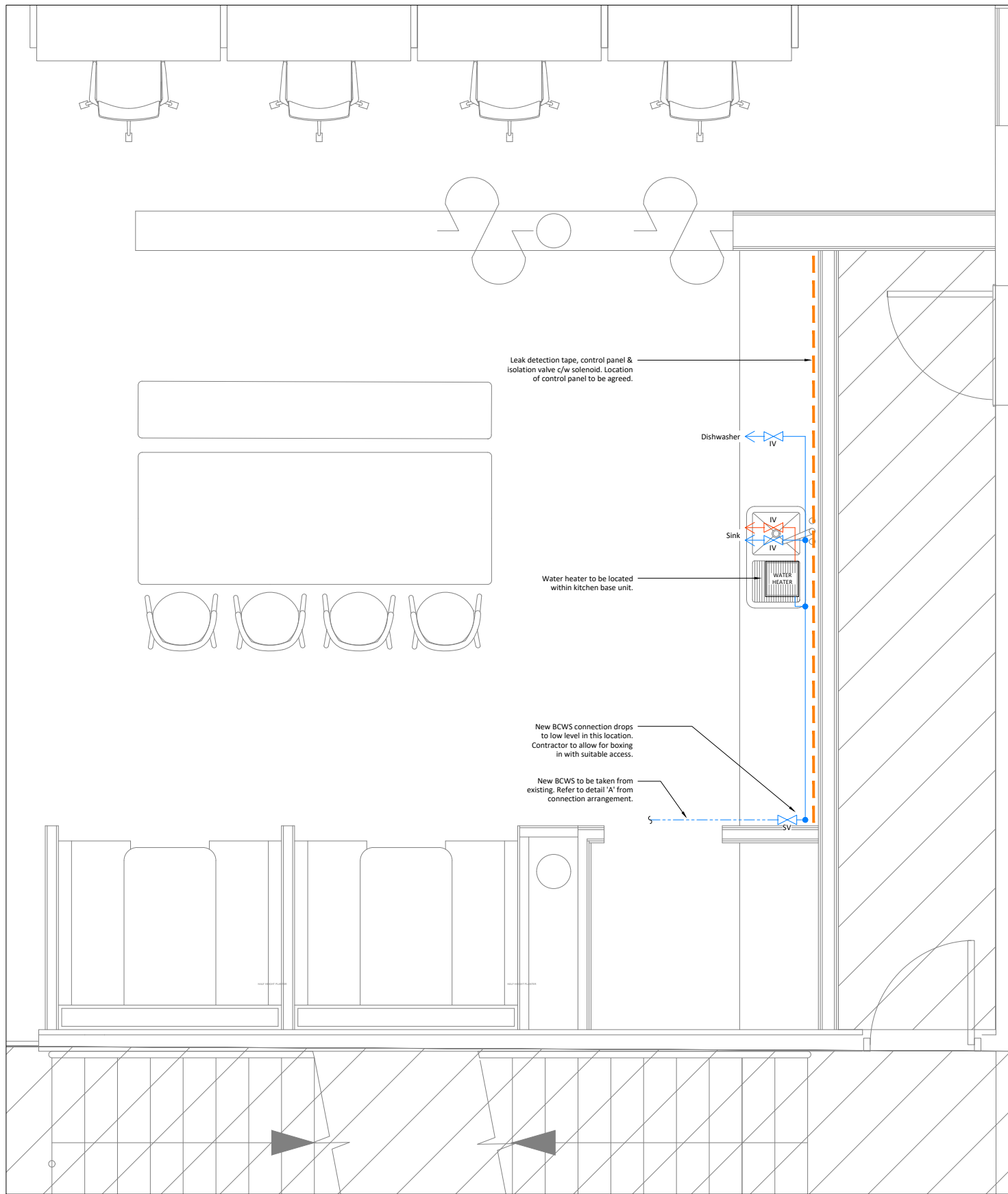
Proposed Level 3 | Cat B
Above Ground Drainage

DATE	29.03.23	SCALE	1:20	
DRAWN	JS	JOB No.	DRG No.	REV
CHECKED	JN	C681	L3-P-52-201	P1
APPROVED	JN			

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Level 3 Canada House - Detail 'A'
Typical New Connection Detail



Canada House | 3rd Floor
Proposed Domestic Water Services

These lines measure 100mm in length when plotted correctly.

0 1 3 5 6m

1:100

0 1m 2m 3m

1:50

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- The installation personnel shall allow for changes in distribution system(s) invert levels (including any sets up and down etc.) as necessary to coordinate fully with the building structure and other M&E Services.
- All plant, equipment, distribution system components and ancillaries shall be suitable for conveying wholesome (potable) water, shall be WRC / WRAS approved and shall comply with the Water Supply (Water Fittings) Regulations 1999.
- All general distribution pipework throughout the building shall be copper tube to EN1057-R250 Table X with Geberit Mapress copper fittings (standard black CIBR Buryl Rubber seal rings).
- All below-ground domestic hot water service pipework shall be pre-insulated plastic type "UPONOR AQUA SINGLE" with PE-Xa inner pipe (SDR7.4), PE-X foam insulation and HDPE jacket pipe. All fittings shall be "UPONOR WIPEX" DR brass with O-rings and matching insulation sets. All to be installed in strict accordance with the manufacturer's instructions.
- All low points shall be fitted with a lockshield draincock.
- All items of plant shall be fitted with isolating valves, and effective means of commissioning, draining and air venting, to enable inspection and/or maintenance works to be carried out without draining the entire system.
- All pipework connections to sanitary appliances shall be fitted with a local service valve (or flow limiting service valve where specified).
- For hot water systems with a secondary return, deadlegs shall be no more than 300mm. The return branch into each hot water flow pipe shall be provided with a lockshield valve to allow system balancing.
- All pipework passing through walls and floor slabs shall be sleeved. All pipes passing through fire compartment walls and floor slabs shall also be fire stopped.
- All concealed pipework, pipework routed in plantrooms, service risers, cupboards, pipe boxings, IPS systems etc., shall be thermally insulated in accordance with the specification, Building Regulations Part L2: 2013, TMSA Guide 2006 and BS 5422: 2001. All insulated pipework shall be identified with colour bands to BS 1710. All cold water pipework shall also be fully vapour sealed.
- All HWS Services pipework expansion bellows shall be selected by a specialist supplier. Unless otherwise noted, the maximum water flow temperature shall be 65°C and the ambient air temperature shall be 20°C. All anchor points and expansion bellows guides shall be installed as recommended by the bellows supplier. All pipework brackets shall allow for pipework movement due to expansion.
- All sanitaryware, brassware and showers to be supplied and installed by others. Refer to the SIN / C&A drawings and schedules for details. MEC to carry out all final pipework connections.
- The hot and cold water connections to each shower, basin and sink shall be fitted with a flow limiting valve to comply with Part G of the Building Regulations (2015 edition). All valves shall be Arrow Valves type AFI with lever-operated quarter-turn ball with matching flow limiting cartridge and compression pipe connections. All valves shall be line size. The cartridge shall be selected to ensure the following maximum flow rates:-
 - Shower - 10 litres/min. (fitted on riser pipe after TMV)
 - Basin - 6 litres/min.
 - Sink - 8 litres/min.
- In accordance with Approved Document 'G' of the Building Regulations, there is a requirement to fit a Thermostatic Mixing Valve (TMV) to any bath installed in a new dwelling. The TMV shall limit the supply of hot water to a maximum of 48°C which in effect, shall be achieved by commissioning the TMV to a temperature set-point of between 44°C and 46°C with a control tolerance of +/- 2°C.

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**Canada House
Manchester**

TITLE

**Proposed Level 3 | Cat B
Domestic Water Services**

DATE	29.03.23	SCALE	1:20
DRAWN	JS	JOB No.	DRG No.
CHECKED	JN	C681	L3-P-53-301
APPROVED	JN		P1

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