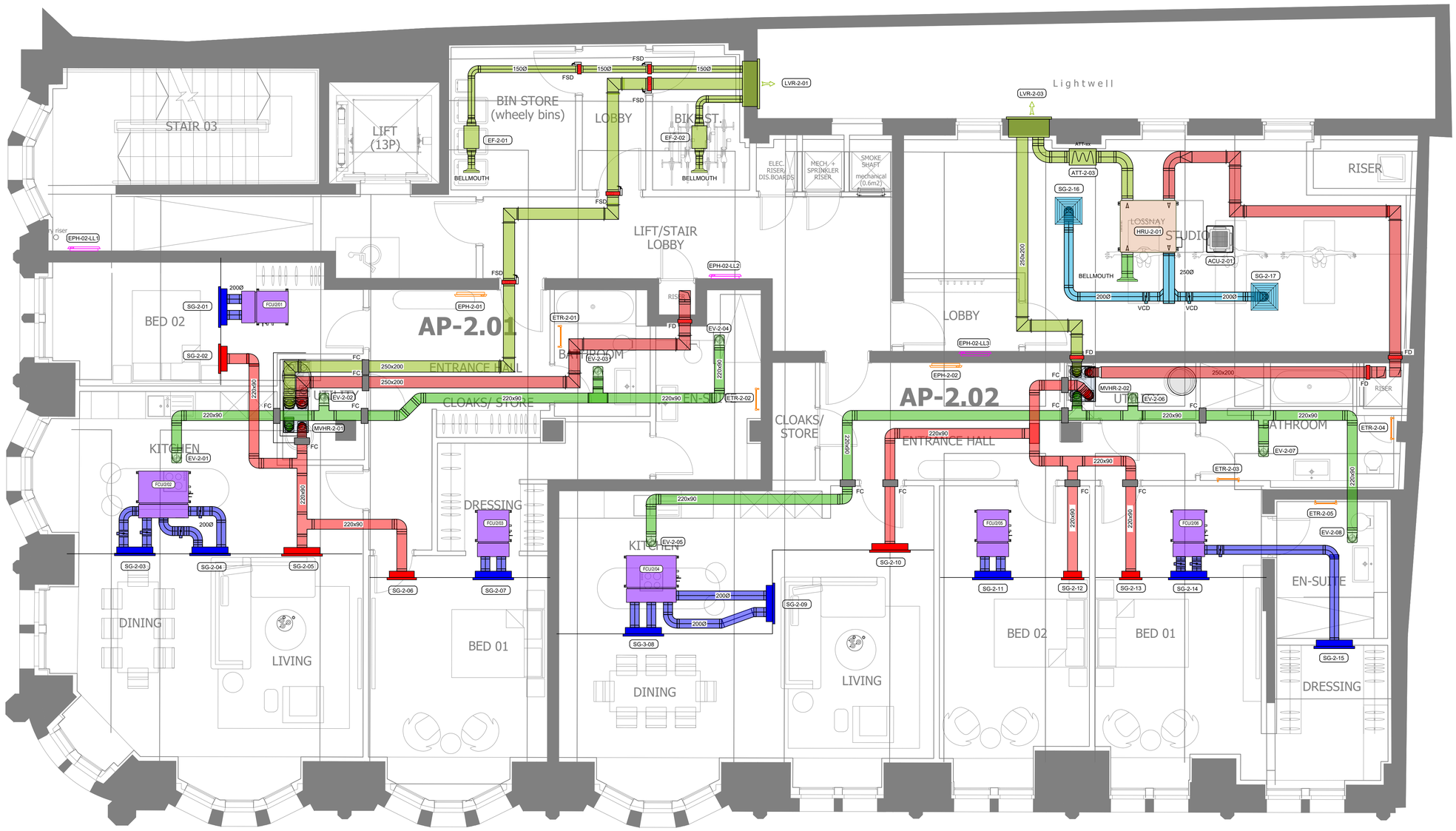
THE DESIGN INTENT FOR THE MEP INSTALLATION IS DEFINED BY THE SPECIFICATIONS AND THE CONCEPT DRAWINGS. THE DRAWINGS SHOW THE MINIMUM REQUIREMENTS FOR COMPLIANCE AND MAY CONTAIN ELEMENTS WHICH ARE NOT REFERRED TO IN THE SPECIFICATION.

THIS DRAWING IS INDICATIVE OF THE MINIMUM REQUIREMENTS TO MEET THE STAGE 4 DETAILED DESIGN PERFORMANCE SPECIFICATIONS.

CONTRACTORS RESPONSIBILITY

DUE TO THE NATURE OF THE EXISTING SITE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DESIGN ON SITE



VENTILATION NOTES

1. ALL VENTILATION INSTALLATIONS SHALL COMPLY WITH THE LATEST EDITIONS OF:
   - BUILDING REGULATIONS APPROVED DOCUMENT F (VENTILATION).
   - BUILDING REGULATIONS APPROVED DOCUMENT B (FIRE SAFETY).
   - CIBSE GUIDES.
   - BESA DW/144 AND DW/172 (WHERE APPLICABLE).
   - MANUFACTURER'S INSTALLATION INSTRUCTIONS.
2. ALL DIMENSIONS SHALL BE CHECKED ON SITE PRIOR TO MANUFACTURE OR INSTALLATION.
3. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND SITE CONDITIONS SHALL BE REPORTED TO THE ENGINEER BEFORE PROCEEDING.
4. DO NOT SCALE FROM THIS DRAWING.
5. COORDINATE THE VENTILATION INSTALLATION WITH ALL OTHER BUILDING SERVICES AND ARCHITECTURAL ELEMENTS PRIOR TO INSTALLATION.
6. MAINTAIN ADEQUATE ACCESS TO ALL EQUIPMENT REQUIRING INSPECTION, SERVICING OR REPLACEMENT.
7. SUPPORT DUCTWORK USING PROPRIETARY GALVANISED SUPPORTS SUITABLE FOR THE DUCT SIZE AND WEIGHT.
8. FLEXIBLE DUCT CONNECTIONS SHALL BE KEPT TO THE MINIMUM PRACTICAL LENGTH AND SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS.
9. FLEXIBLE DUCTWORK SHALL BE INSTALLED FULLY EXTENDED WITHOUT KINKS OR COMPRESSION.
10. SEAL ALL DUCT JOINTS TO ACHIEVE THE REQUIRED AIRTIGHTNESS CLASSIFICATION.
11. EXTERNAL DUCTWORK SHALL BE INSULATED AND WEATHERPROOFED WHERE EXPOSED.
12. INTERNAL SUPPLY AND EXTRACT DUCTWORK PASSING THROUGH UNHEATED SPACES SHALL BE INSULATED TO PREVENT CONDENSATION.
13. DUCTWORK PASSING THROUGH FIRE COMPARTMENTS SHALL INCORPORATE APPROPRIATELY RATED FIRE DAMPERS OR FIRE-RESISTANT SYSTEMS WHERE REQUIRED BY THE FIRE STRATEGY.
14. PROTECT ALL OPEN DUCT ENDS DURING CONSTRUCTION TO PREVENT CONTAMINATION.
15. INSTALL AIR VALVES CENTRALLY WITHIN THE ROOM WHERE PRACTICABLE AND AS SHOWN ON THE DRAWINGS.
16. ENSURE SUPPLY AND EXTRACT TERMINALS ARE FULLY ACCESSIBLE FOR CLEANING AND BALANCING.
17. ADJUST AND BALANCE ALL AIR VALVES TO ACHIEVE THE DESIGN AIRFLOW RATES.
18. CEILING VALVES SHALL NOT BE PAINTED AFTER COMMISSIONING.
19. INSTALL MVHR UNIT STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
20. PROVIDE SUITABLE VIBRATION ISOLATION BETWEEN THE UNIT AND THE BUILDING STRUCTURE.
21. INSTALL THE CONDENSATE DRAIN WITH A CONTINUOUS FALL TO A SUITABLE TRAPPED WASTE.
22. ENSURE EXTERNAL INTAKE AND EXHAUST TERMINALS ARE POSITIONED TO PREVENT SHORT-CIRCUITING OF AIR.
23. PROVIDE ADEQUATE ACCESS FOR FILTER REPLACEMENT AND ROUTINE MAINTENANCE.
24. MAINTAIN THE INTEGRITY OF ALL FIRE-RATED WALLS AND FLOORS WHERE PENETRATED BY DUCTWORK.
25. FIRE STOPPING SHALL BE UNDERTAKEN USING APPROVED PROPRIETARY SYSTEMS WITH FIRE RATINGS MATCHING THE COMPARTMENT CONSTRUCTION.
26. INSTALL ACOUSTIC ATTENUATORS WHERE INDICATED TO ACHIEVE THE SPECIFIED INTERNAL NOISE CRITERIA. (ACOUSTIC ENGINEER TO CONFIRM FINAL SELECTIONS ARE SUITABLE)

56_ELECTRIC HEATING REFERENCES & SYMBOLS

EPH-*-**	ELECTRIC PANEL HEATER (LANDLORD)
EPH-*-**	ELECTRIC PANEL HEATER
EPH-*-** LST	ELECTRIC PANEL HEATER (LOW SURFACE TEMP)
ETR-*-**	ELECTRIC TOWEL RAIL
TC	TIME CONTROLLER (SEE DETAIL ADJACENT)

APT-02-02 VENTILATION PART F CALCULATION

TRICKLE RATE

Trickle rate based on number of 2 bedrooms = 25 l/s

Trickle rate based on floor area (172m2 x 0.3 l/s = 51 l/s)

TRICKLE RATE TO BE USED = 51 L/S (because it's the largest figure out of the 2)

BOOST RATE

Kitchen = 13 l/s — Bathroom = 8 l/s

Utility = 8 l/s — En suite = 8 l/s

BOOST RATE TO BE USED = 55 L/S

OVERHEATING/PURGE RATE

BY WINDOWS

APT-02-01 VENTILATION PART F CALCULATION

TRICKLE RATE

Trickle rate based on number of 2 bedrooms = 25 l/s

Trickle rate based on floor area (118m2 x 0.3 l/s = 35 l/s)

TRICKLE RATE TO BE USED = 35 L/S (because it's the largest figure out of the 2)

BOOST RATE

Kitchen = 13 l/s — Bathroom = 8 l/s

Utility = 8 l/s — En suite = 8 l/s

BOOST RATE TO BE USED = 37 L/S

OVERHEATING/PURGE RATE

BY WINDOWS

VENTILATION LEGEND

SG	---	SUPPLY GRILLE	DTG	---	DOOR TRANSFER GRILLE
RA	---	RETURN AIR	GEA	---	GENERAL EXTRACT
GSA	---	GENERAL SUPPLY	EXH	---	EXHAUST AIR
FAI	---	FRESH AIR	TEA	---	WC EXTRACT
VCD	---	VOLUME DAMPER	FCU	---	FAN COIL UNIT
AD	---	ACCESS DAMPER	ATT	---	ATTENUATOR
CTA	---	CROSS TALK ATT	FFL	---	FINISH FLOOR LEVEL
IL	---	INVERT LEVEL	CL	---	CENTRE LINE
SU	---	SET UP	SD	---	SET DOWN
FA	---	FROM ABOVE	TB	---	TO BELOW
FB	---	FROM BELOW	RTA	---	RISE TO ABOVE
FA	---	FROM ABOVE	TB	---	TO BELOW
LL	---	LOW LEVEL	HL	---	HIGH LEVEL
EV	---	EXTRACT VALVE	FS	---	LOCAL FAN SWITCH

Citation ISO Certification — Quality management — ISO 9001: 2015 — REGISTERED

Certificate No:381342021

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P02	PC	27.07.26	PRELIMINARY - STAGE 4 ISSUE
P01	PC	08/07/26	STAGE 4 - PRELIMINARY ISSUE

Architectural X-Ref Drawings:

FF&E X-Ref Drawings:

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Drawn:	Chkd:	App:	
L BRIFFA	R JORDAN	P CHAMBERS	A1
Date: JAN 2026	Scale: 1:100		

Client: OGLESBY FAMILY

Project: WINTER BUILDING, MANCHESTER

Drawing Title: MECHANICAL SERVICES HVAC LAYOUT SECOND FLOOR LEVEL

Project No: C4384-HEC-ZZ-02-DR-M-5700 (Project Code — Originator — Volume — Level — Type — Role — Number)

Rev: P02

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