DUCT TAGS:

MAX AIR FLOW RATE THROUGH DUCT OF THIS SIZE

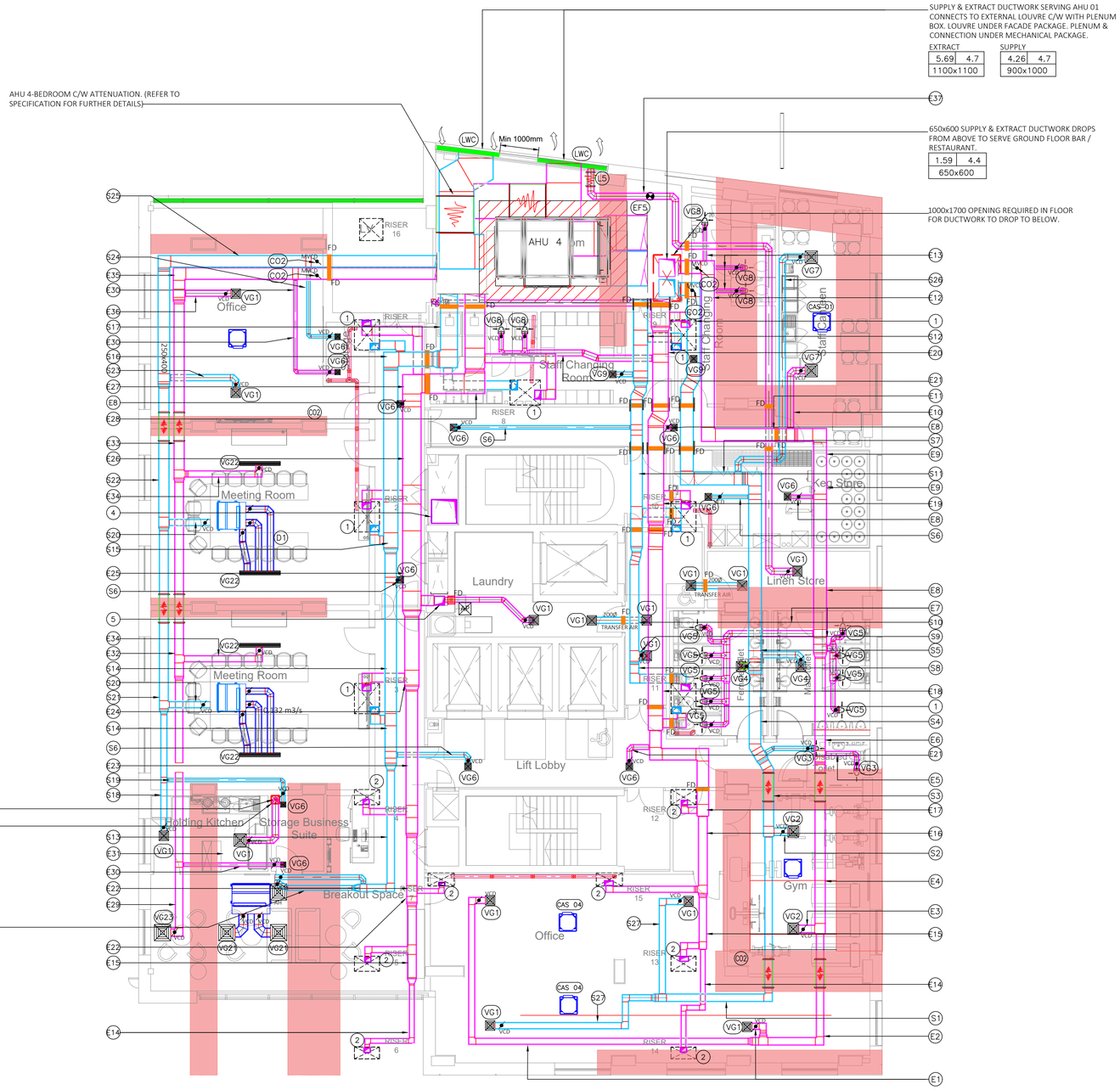
AIR VELOCITY

m3/s | m/s

mm — DUCT SIZE

S1	0.11 2.9 150x250	E1	0.05 2.7 100x200	E34	0.13 4.0 200x200	E15	0.69 4.6 300x500
S2	0.2 2.4 200x250	E2	0.11 2.9 150x250	E35	0.475 4.0 250x400	E16	0.97 4.8 400x500
S3	0.31 4.4 200x350	E3	0.2 2.4 200x250	E36	0.065 2.0 200ø	E17	1.25 4.6 450x600
S4	0.34 4.8 250x350	E4	0.31 4.4 200x350	E37	0.046 2.4 125ø	E18	0.11 3.6 150x200
S5	0.58 4.8 300x450	E5	0.03 2.4 125ø			E19	0.01 1.2 100ø
S6	0.02 3.1 100ø	E6	0.34 4.8 250x350			E20	0.13 4.0 200x200
S7	0.74 4.1 400x450	E7	0.122 3.8 200ø			E21	0.25 4.0 200x300
S8	0.28 4.6 200x300	E8	0.02 3.1 100ø			E22	0.38 4.3 250x350
S9	0.1 3.3 150x200	E9	0.60 4.4 300x450			E23	0.065 2.0 200ø
S10	0.38 4.6 300x300	E10	0.14 4.4 200ø			E24	0.01 1.2 100ø
S11	0.66 4.7 350x400	E11	0.74 4.1 400x450			E25	0.44 4.4 250x400
S12	1.01 4.4 450x500	E12	0.80 4.4 400x450			E26	0.14 4.4 200ø
S13	0.134 3.5 150x250	E13	0.80 4.4 400x450			E27	0.05 4.4 200ø
S14	0.41 4.0 250x400	E14	0.1 4.4 150x150			E28	2.14 5.0 600x700
						E29	0.134 3.5 150x250
						E30	0.01 1.2 100ø
						E31	0.144 3.8 150x250
						E32	0.27 4.5 150x250
						E33	0.4 4.5 250x350

INCLUDE ALL NECESSARY OFFSETS OF SERVICES IN CEILING VOIDS, SERVICE DUCTS AND ALL OTHER AREAS TO ACHIEVE CROSSOVERS AND CO-ORDINATION OF MECHANICAL AND ELECTRICAL SERVICES.



IT IS THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR TO ENSURE ALL SERVICES ARE FULLY COORDINATION WITH THE STRUCTURAL DOWN STAND BEAMS. BEAMS ARE SHOWN ON DRAWING FOR COORDINATION PURPOSES.

LEGEND

DENOTES DOWNSTAND BEAM.

MAIN VENTILATION DUCTWORK SIZES SHOWN ONLY. REFER TO VENTILATION SCHEMATIC FOR ALL DUCTWORK SIZES & FLOW RATES.

LEGEND (VENTILATION):

- VCD — VOLUME CONTROL DAMPER
- FD — FIRE DAMPER
- DENOTES ATTENUATOR
- DENOTES CROSS TALK ATTENUATOR
- INSULATED SUPPL DUCTWORK
- INSULATED EXTRACT DUCTWORK
- DENOTES 4 WAY BLOW DIFFUSER.
- LINEAR SLOT DIFFUSER.(REFER TO REFERENCE TAG FOR FURTHER DETAILS)
- RETURN AIR LINEAR SLOT DIFFUSER.(REFER TO REFERENCE TAG FOR FURTHER DETAILS)
- DENOTES 600x600/ 450x450 ACCESS HATCH
- CO2 — CARBON DIOXIDE SENSOR.
- MVCD — MOTORISED VOLUME CONTROL DAMPER
- LWC — LOUVRE UNDER MAIN CONTRACT.

GENERAL NOTES (VENTILATION):

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTURAL, STRUCTURAL AND INTERIOR DESIGN DRAWINGS.

THIS DRAWING SHALL BE READ IN CONJUNCTION WITH ALL RELEVANT MEP LAYOUTS, SCHEMATICS AND SPECIFICATIONS.

DO NOT SCALE. VERIFY ALL DIMENSIONS BY SITE MEASUREMENT.

ALL VENTILATION DUCTWORK PASSING THROUGH FLOOR SLABS OR INTERNAL FIRE COMPARTMENT WALLS ARE TO BE FITTED WITH A FIRE DAMPER.

MECHANICAL CONTRACTOR TO PROVIDE COORDINATED FABRICATION INSTALLATION DRAWINGS FOR COMMENT PRIOR TO INSTALLATION.

ALL PLANT, EQUIPMENT AND ANCILLARY POSITIONS ARE INDICATIVE. FINAL LOCATIONS TO BE AGREED WITH THE CONSULTING ENGINEERS FURTHER TO REVIEW OF THE CONTRACTORS COORDINATED INSTALLATION DRAWINGS.

ALL INTERNAL DUCTWORK TO BE INSULATED IN 25mm DUCTWRAP & VAPOUR SEALED TO AVOID CONDENSATION UNLESS OTHERWISE STATED.

ALL EXTERNAL DUCTWORK TO BE INSULATED WITH 40mm FLEXIBLE GLASS FIBRE MAT WITH FOIL BACKING, JOINTS TO BE FULLY TAPED AND PVC CLAMPING BANDS FITTED AT 500mm CENTRES. DENSITY 45kg/m3, THERMAL CONDUCTIVITY 0.037. EXTERNAL DUCTWORK SHALL BE FINALLY FITTED WITH VENTURE CLAD TO ENSURE WATERPROOF FINISH, A SECTION OF GALVANISED SHEET METAL SHALL BE PLACED BETWEEN THE INSULATION AND VENTURE CLAD WITH EDGE OVERLAP TO PROVIDE MECHANICAL PROTECTION.

FIRE DAMPERS ARE TO BE COMPLETE WITH FIXING FRAMES SUITABLE FOR THE FIRE COMPARTMENT PARTITION INTO WHICH THEY ARE BEING INSTALLED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THAT FIRE DAMPERS ARE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS FIXING DETAILS AND TO FULLY COMPLY WITH THE FOLLOWING EXTRACTS FROM DW 145 AND BS9999 RESPECTIVELY, NO DEVIATION WILL BE DEEMED ACCEPTABLE:

THE FIRE DAMPER SHOULD BE FIXED EITHER WITHIN OR DIRECTLY ADJACENT TO THE FIRE SEPARATING ELEMENT AND BE SUPPORTED INDEPENDENTLY OF THE CONNECTING DUCTWORK, I.E. IF THE DUCTWORK WERE TO BE REMOVED FROM BOTH SIDES OF THE DAMPER IT WOULD CONTINUE TO BE AN INTEGRAL MEMBER OF THE BARRIER IT PROTECTS.'

· 'THE DAMPER SHOULD BE MOUNTED IN THE WALL OR FLOOR AND SHOULD BE SUPPORTED/RESTRAINED INDEPENDENTLY OF THE DUCT WORK.'

ACCESS DOORS SHALL BE INSTALLED IN THE DUCT WORK ADJACENT FIRE DAMPERS IN ACCORDANCE WITH DW.144.

REFER TO FIRE STRATEGY DRAWINGS TO DETERMINE THE FIRE RATING OF SPECIFIC DAMPERS THROUGH EACH FIRE RATED RATED COMPARTMENT / WALL.

REFER TO VENT GRILLE AND LOUVRE SCHEDULE FOR FURTHER DETAILS.

MAIN VENTILATION DUCT SIZES SHOWN ONLY. FOR FURTHER DETAILS REFER TO DETAILED BEDROOM SERVICES LAYOUT.

ALL PLANT, GRILLE AND LOUVRE POSITIONS ARE INDICATIVE AND ARE TO BE CO-ORDINATED WITH THE ARCHITECT AND OTHER SERVICES TO ENSURE NO CLASHES PLUS INCORPORATION INTO THE ARCHITECT RCPs.

DRAWING NOTES:

1. INSULATED SUPPLY & EXTRACT DUCTWORK RTA TO BELOW TO SERVE DOUBLE BEDROOM RISER. FOR DUCTWORK SIZING & FLOW RATES REFER TO VENTILATION SCHEMATIC 3919/M603-1&2.
2. INSULATED EXTRACT DUCTWORK RTA TO SERVE SINGLE BEDROOM RISER. FOR DUCTWORK SIZING & FLOW RATES REFER TO VENTILATION SCHEMATIC 3919/M603-1&2.
3. BEDROOM & CORRIDOR INSULATED SUPPLY DUCT DROPS FROM ABOVE TO BELOW WITHIN RISER.DUCTWORK OFFSETS WITHIN CEILING VOID SERVING BEDROOMS & CORRIDOR. REFER TO VENTILATION SCHEMATIC 3919/M603-1&2 FOR FURTHER INFORMATION.
4. 900 X 850 INSULATED FIRE RATED KITCHEN EXTRACT RFB TO ABOVE IN RISER. CLEANING DOORS AS LISTED: ON VERTICAL DUCTWORK 2NO. PER FLOOR (ONE HIGH LEVEL & ONE LOW LEVEL). ON HORIZONTAL DUCTWORK, A CLEANING DOOR AT EVERY OFFSET & EVER 2M.
5. INSULATED EXTRACT DUCTWORK RFB TO SERVE LINEN ROOM & CORRIDORS. REFER TO VENTILATION SCHEMATIC 3919/M603-1&2 FOR FURTHER INFORMATION.

REV	DATE	DESCRIPTION	DR	CK
T1	22/01/20	ISSUED FOR TENDER	DML	GK

Caldwell

ARCHITECT
SIMPSON HAUGH

JOB
CHARLES STREET
MANCHESTER

DRAWING
MECHANICAL SERVICES INSTALLATION

VENTILATION

LEVEL 1

DRAWING No./REVISION
3919/M302

SCALE/PRINTED AT	DATE	DRAWN	CHECKED
1:100@A1	JAN'20	DML	GJK

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