VENTILATION HEAT RECOVERY UNIT SCHEDULE

REFERENCE	LOCATION	MANUFACTURER	MODEL REF	FLOWRATE (l/s)	DUTY (Pa)	HEAT RECOVERY EFFICIENCY (%)	SUPPLY FAN SFP (W/l/s)	EXTRACT FAN SFP (W/l/s)	CONTROL	COMMENTS
HRU 3F.01	CLASSROOM 1	MITSUBISHI	LGH-45RVX3-E	140	–	72.5%	1.36	1.36	CO2 SENSOR	SPEED 4
HRU 3F.02	LABORATORY 1	MITSUBISHI	LGH-45RVX3-E	300	–	72.5%	1.36	1.36	CO2 SENSOR	2No. UNITS @ SPEED 4
HRU 3F.03	LAB PREP STORE ROOM	MITSUBISHI	LGH-80RVX3-E	190	–	75.0%	1.54	1.54	CO2 SENSOR	SPEED 4
HRU 3F.04	LABORATORY 2	MITSUBISHI	LGH-80RVX3-E	405	–	75.0%	1.54	1.54	CO2 SENSOR	2No. UNITS @ SPEED 4
HRU 3F.05	CLASSROOM 5	MITSUBISHI	LGH-80RVX3-E	200	–	75.0%	1.54	1.54	CO2 SENSOR	SPEED 4
HRU 3F.06	CLASSROOM 2	MITSUBISHI	LGH-80RVX3-E	180	–	75.0%	1.54	1.54	CO2 SENSOR	SPEED 4
HRU 3F.07	CLASSROOM 3	MITSUBISHI	LGH-80RVX3-E	180	–	75.0%	1.54	1.54	CO2 SENSOR	SPEED 4
HRU 3F.08	CLASSROOM 5	MITSUBISHI	LGH-150RVX3-E	280	–	75.5%	1.58	1.58	CO2 SENSOR	SPEED 4

ALL HEAT RECOVERY UNIT REFERENCED ABOVE ARE AS MANUFACTURED BY ..... Tel: .....

EXTRACT LOUVRE SCHEDULE

REFERENCE	LOCATION	TYPE	MANUFACTURER	MODEL REF	COLOUR	GRILLE SIZE	AIR FLOW RATE (l/s)	PRESSURE DROP (Pa)	COMMENTS
EL 3F.01	CLASSROOM 1	EXTRACT LOUVRE	–	–	–	500x500	140	–	–
EL 3F.02	LABORATORY 1	EXTRACT LOUVRE	–	–	–	500x500	150	–	2No. EXTRACT LOUVRE = 150/s EACH = 300/s TOTAL
EL 3F.03	LAB PREP STORE ROOM	EXTRACT LOUVRE	–	–	–	500x500	190	–	–
EL 3F.04	LABORATORY 2	EXTRACT LOUVRE	–	–	–	500x500	203	–	2No. EXTRACT LOUVRE = 203/s EACH = 405/s TOTAL
EL 3F.05	CLASSROOM 5	EXTRACT LOUVRE	–	–	–	500x500	200	–	–
EL 3F.06	CLASSROOM 2	EXTRACT LOUVRE	–	–	–	500x500	180	–	–
EL 3F.07	CLASSROOM 3	EXTRACT LOUVRE	–	–	–	500x500	180	–	–
EL 3F.08	CLASSROOM 5	EXTRACT LOUVRE	–	–	–	500x500	280	–	–

ALL LOUVRES REFERENCED ABOVE ARE AS MANUFACTURED BY ..... Tel: .....

SUPPLY GRILLE SCHEDULE

REFERENCE	LOCATION	TYPE	MANUFACTURER	MODEL REF	GRILLE SIZE	PLENUM SIZE	CONNECTION SIZE (mm)	COLOUR (RAL CODE)	AIR FLOW RATE (l/s)	THROW (m)	PRESSURE DROP (Pa)	COMMENTS
SG 3F.01	CLASSROOM 1	4-WAY BLOW	–	–	600x600	–	200mmØ	–	70	–	–	2No. GRILLES IN ROOM
SG 3F.02	LABORATORY 1	4-WAY BLOW	–	–	600x600	–	250mmØ	–	150	–	–	2No. GRILLES IN ROOM
SG 3F.03	LAB PREP STORE ROOM	4-WAY BLOW	–	–	600x600	–	200mmØ	–	95	–	–	2No. GRILLES IN ROOM
SG 3F.04	LABORATORY 2	4-WAY BLOW	–	–	600x600	–	300mmØ	–	203	–	–	2No. GRILLES IN ROOM
SG 3F.05	CLASSROOM 5	4-WAY BLOW	–	–	600x600	–	200mmØ	–	100	–	–	2No. GRILLES IN ROOM
SG 3F.06	CLASSROOM 2	4-WAY BLOW	–	–	600x600	–	200mmØ	–	90	–	–	2No. GRILLES IN ROOM
SG 3F.07	CLASSROOM 3	4-WAY BLOW	–	–	600x600	–	200mmØ	–	90	–	–	2No. GRILLES IN ROOM
SG 3F.08	CLASSROOM 5	4-WAY BLOW	–	–	600x600	–	250mmØ	–	140	–	–	2No. GRILLES IN ROOM

ALL EXTRACT GRILLES REFERENCED ABOVE ARE AS MANUFACTURED BY ..... Tel: .....

EXTRACT GRILLE SCHEDULE

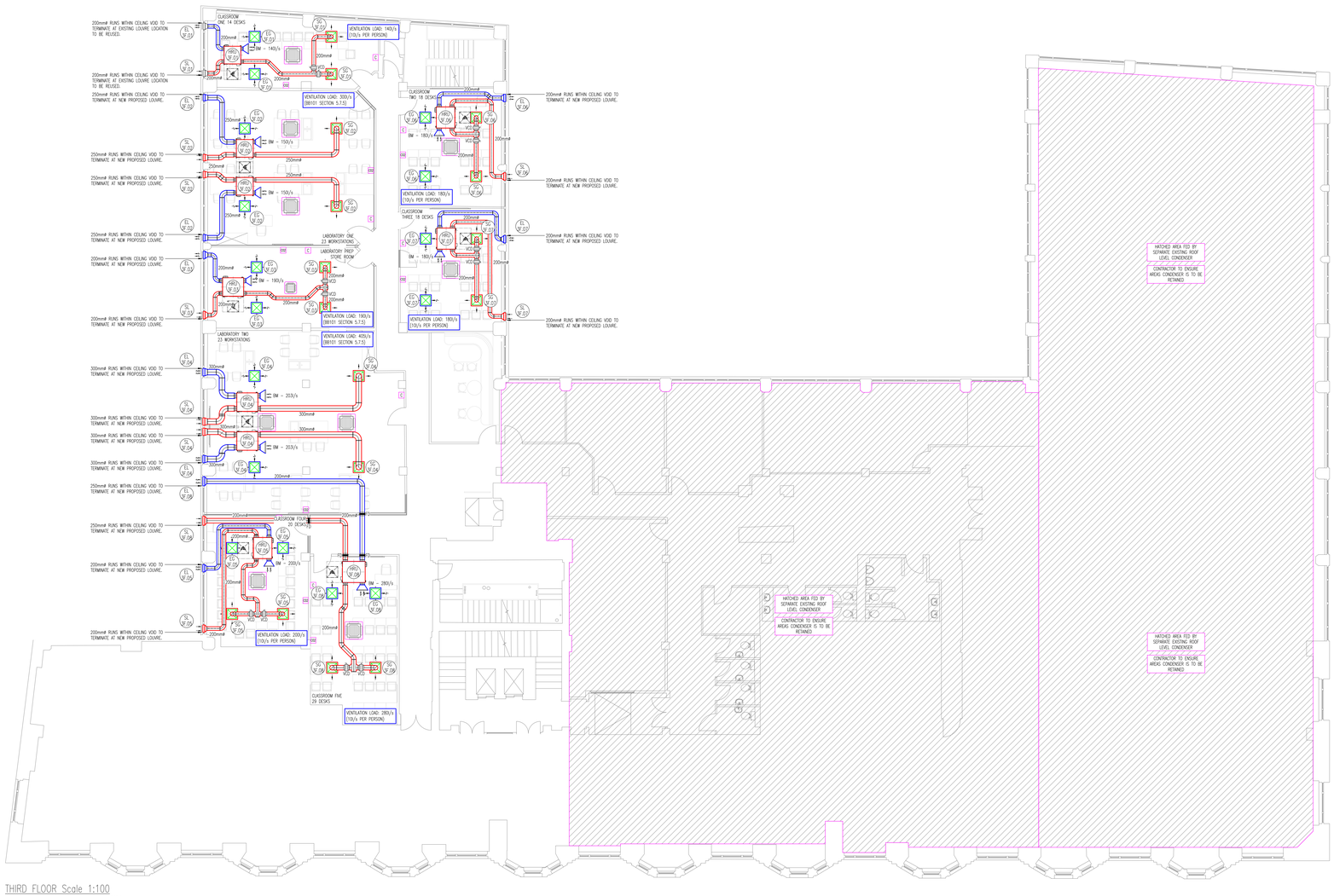
REFERENCE	LOCATION	TYPE	MANUFACTURER	MODEL REF	GRILLE SIZE	PLENUM SIZE	CONNECTION SIZE (mm)	COLOUR (RAL CODE)	AIR FLOW RATE (l/s)	THROW (m)	PRESSURE DROP (Pa)	COMMENTS
EG 3F.01	CLASSROOM 1	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 140/s
EG 3F.02	LABORATORY 1	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 300/s
EG 3F.03	LAB PREP STORE ROOM	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 190/s
EG 3F.04	LABORATORY 2	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 405/s
EG 3F.05	CLASSROOM 5	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 200/s
EG 3F.06	CLASSROOM 2	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 180/s
EG 3F.07	CLASSROOM 3	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 180/s
EG 3F.08	CLASSROOM 5	4-WAY BLOW	–	–	600x600	–	–	–	TRANSFER	–	–	2No. GRILLES IN ROOM – BELL MOUTH FLOWRATE = 280/s

ALL SUPPLY GRILLES REFERENCED ABOVE ARE AS MANUFACTURED BY ..... Tel: .....

SUPPLY LOUVRE SCHEDULE

REFERENCE	LOCATION	TYPE	MANUFACTURER	MODEL REF	COLOUR	GRILLE SIZE	AIR FLOW RATE (l/s)	PRESSURE DROP (Pa)	COMMENTS
SL 3F.01	CLASSROOM 1	SUPPLY LOUVRE	–	–	–	500x500	140	–	–
SL 3F.02	LABORATORY 1	SUPPLY LOUVRE	–	–	–	500x500	150	–	2No. EXTRACT LOUVRE = 150/s EACH = 300/s TOTAL
SL 3F.03	LAB PREP STORE ROOM	SUPPLY LOUVRE	–	–	–	500x500	190	–	–
SL 3F.04	LABORATORY 2	SUPPLY LOUVRE	–	–	–	500x500	203	–	2No. EXTRACT LOUVRE = 203/s EACH = 405/s TOTAL
SL 3F.05	CLASSROOM 5	SUPPLY LOUVRE	–	–	–	500x500	200	–	–
SL 3F.06	CLASSROOM 2	SUPPLY LOUVRE	–	–	–	500x500	180	–	–
SL 3F.07	CLASSROOM 3	SUPPLY LOUVRE	–	–	–	500x500	180	–	–
SL 3F.08	CLASSROOM 5	SUPPLY LOUVRE	–	–	–	500x500	280	–	–

ALL LOUVRES REFERENCED ABOVE ARE AS MANUFACTURED BY ..... Tel: .....



THIRD FLOOR Scale 1:100
VENTILATION SERVICES LAYOUT

Scale 1:100 [m]
0 1 2 3 4 5 6 7 8 9 10

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NOTES
1.

VENTILATION
- ALL DUCTWORK SHALL BE CLASS LEAKAGE TESTED TO HVCA STANDARDS AND MANUFACTURED TO DW144
- RECTANGULAR DUCTWORK BENDS/OFFSETS TURNING THROUGH 30° AND ABOVE SHALL BE COMPLETE WITH TURNING VANES. ALL RECTANGULAR DUCTWORK OFFSET TAPERS WITH ANGLES GREATER THAN 22.5° SHALL BE COMPLETE WITH SPLITTERS.
- FLEXIBLE DUCTWORK ON SUPPLY & RETURN SYSTEMS SHALL BE MANUFACTURED BY CCL TYPE TCFLEX INSULTECH/ON 450 BY EGAN.
- FLEXIBLE DUCTWORK ON EXTRACT ONLY SYSTEMS SHALL BE MANUFACTURED BY CCL TYPE TCFLEX 800 BY EGAN.
- ALL FLEXIBLE DUCTWORK CONNECTIONS TO SUPPLY AND EXTRACT TERMINALS SHOULD HAVE A MINIMUM LENGTH OF 450mm.
- ALL SUPPLY, RETURN AND FRESH AIR DUCTWORK TO BE THERMALLY INSULATED. INTERNAL EXHAUST DUCTWORK NEED NOT BE INSULATED IF WITHIN AMBIENT SPACE.
- ALL DUCTWORK WILL BE CERTIFIED IN LINE WITH THE DW RQUIREMENTS
- WHERE REQUIRED ALL DUCTWORK WILL BE SUPPORTED BY ANTI VIBRATION HANGERS.
- ALL HEAT RECOVERY UNITS / FANS / AIR HANDLING UNITS TO BE SUPPORTED ON EXTERNAL ANTI VIBRATION MOUNTS AND ADJACENT FLEX DUCT CONNECTIONS.
- ALL DUCT WORK, WITHIN KITCHEN COMMERCIAL KITCHEN SHALL BE MANUFACTURED AND INSTALLED TO HVCA SPECIFICATION DW172.
- FIRE DAMPERS SHALL BE PROVIDED AND INSTALLED THROUGH ALL FIRE BARRIER PENETRATIONS INCLUDING FLOOR SLABS TO SUIT FIRE STRATEGY. EXCEPT FIRE RATED KITCHEN EXTRACT DUCTWORK.
- FIRE DAMPERS TO BE INSTALLED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO.
- FIRE DAMPERS ARE TO BE FUSIBLE LINK TYPE, AND HAVE THE BLADES INSTALLED OUT OF THE AIR STREAM C/W EXTERNAL VISUAL INDICATION OF DAMPER .
- FIRE DAMPERS SHALL BE FITTED WITH AN ADJACENT ACCESS DOOR TO ENABLE RESETS, VISUAL CHECKS AND DROP TESTS TO BE PERFORMED IF REQUIRED.
- ALL VOLUME CONTROL DAMPERS SHALL BE OPPOSED BLADING PURPOSES AND SHOULD BE MULTI-BLADED UNLESS STATED OTHERWISE AND BE MANUFACTURED BY ACTIONAIR/SHIELD ADVITAL OR EQUAL SINGLE BLADE ACCEPTABLE FOR SMALL BRANCH DUCTS).
- ALL VCD HANDLES ARE TO BE POSITIONED TO ALLOW THE BEST POSSIBLE MEANS OF ACCESS FOR THE COMMISSIONING ENGINEER. VCDS SHOULD BE HANDED TO ALLOW MULTIPLE HANDLES TO BE ACCESSED FROM ONE SIDE OF THE DUCTWORK.
- ALL KITCHEN EXTRACT DUCTWORK TO BE STEEL RATED LONG ENTHANC DUCTWORK WITH BENDS TO BE RADIUS TYPE WITH ROUND THROAT AND NO TURNING VANES.
- ALL KITCHEN EXTRACT DUCTWORK SHALL BE PROVIDED WITH ACCESS DOORS TO COMPLY WITH HVCA TR/19 CLEARANCES. DIY VENTILATION SYSTEMS. KITCHEN EXTRACT ACCESS DOORS SHALL BE A MINIMUM OF 1.5m FROM ANY BEND OR CHANGE IN SIZE.
- ALL DUCTWORK SHALL BE COMMISSIONED IN ACCORDANCE WITH CIBSE COMMISSIONING CODES
- INSTALLATION TO COMPLY FULLY WITH CURRENT BUILDING REGULATIONS, BRITISH STANDARDS & IET WIRING REGULATIONS

- COLOURED LOUVRES REPRESENTS NEW PROPOSED LOCATION
- NON-COLOURED LOUVRES REPRESENTS EXISTING LOCATION TO BE REUSED.

CO2 SENSOR

THIS DRAWING IS PRODUCED IN ACCORDANCE WITH ARCHITECTS/MAIN CONTRACTORS DRAWING REFERENCE

23-186 AXI 103 Proposed Third Floor Plan

REV	DESCRIPTION	DRN	CHK	DATE
T5	SL 3F.07 LOCATION AMENDED	CC	LS	02.06.25
T4	SL 3F.08 & EL 3F.07 LOCATIONS AMENDED	CC	LS	22.05.25
T3	CLASSROOM 03 NOW INCLUDED ON DESIGN AS PER CLIENT COMMENTS	CC	LS	19.05.25
T2	AMENDED LOUVRE REFERENCE (EL 3F.01 & EL 3F.01) TO USE EXISTING LOUVRE POSITION RATHER THAN PROPOSED NEW.	CC	LS	14.05.25
T1	TENDER ISSUE	CC	LS	02.05.25

TENDER

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Project Number	Project Name
C8787	Bridgewater House Bridgewater

Drawing Title
Third Floor
Ventilation Services Layout

Engineer	Checked by	Drawn By
SF	LS	JL

Date	Scale	Size
14.05.24	1:100	A0

Drawing Number

Project	Originator	Volume	Level	Type	Role	Number	Revision
C8787 -	TLP -	00 -	3F -	DR -	M -	202	T5