

CONDENSATE DRAINAGE NOTES

- Contractor to provide all necessary bends, offsets, etc. to suit the installation and building construction and co-ordinate final routes with all other new & existing trades/services.
- New gravity condensate pipework shall be extended and connect to existing SVP's terminating via waterless trap or HepVO. Pipework routed within ceiling voids where possible.
- Where gravity drainage is not possible then condensate drainage shall be pumped via local independent lift pumps.
- Drainage pipework shall be run in durapipe abs tubes and fittings, suitably graded to falls and adequately supported throughout. Refer to landlord's specification. The contractor shall include for all necessary fittings, adaptors, etc. to connect to the above ground drainage systems.

EXISTING FCU secondary supply air ductwork and grilles / diffusers are to be retained and re-used

Refrigerant pipework drops to below to serve ODAC

EXISTING FCU's to be retained and re-used

1250 supply ductwork drops to below.
1 no. 1750 BWIC through slab. Fire damper fitted where passing through structural slab

NEW duct mounted type extract fan unit c/w smart controls. Extract fan shall operate via presence detection / PIR activation

Ceiling mounted presence detector / PIR shall activate the extract fan unit (TYPICAL THROUGHOUT EACH WC / CLEANERS ROOM AS INDICATED)

NEW mechanical ventilation heat recovery unit installed at high level within PLANT ROOM suspended via drop rods with anti-vibration mounts c/w local controls & 2 no. 3.0 kW electric heater batteries (thyristor controlled) installed (FAI & room side supply). Local controller position TBC

A NEW AE200 MITSUBISHI ELECTRIC central controller shall be fitted in place of redundant LTHW plant control panel. All NEW and EXISTING HVAC plant shall be wired, controlled and re-scheduled from this central point.

AE200 shall be fitted with a hard-wired link to the fire alarm system for shut-down of all HVAC systems

2000 general supply & extract rise to high level across HRU to serve first floor INTERVIEW ROOMS

2500 general extract rises from below.
1 no. 3000 BWIC through slab. Fire dampers fitted where passing through structural slab

2500 general supply duct drops to below
1 no. 3000 BWIC through slab. Fire dampers fitted where passing through structural slab

Supply and extract ventilation ductwork terminates via external weather louvres at high/low level. Mechanical Contractor to site measure before ordering equipment. EXISTING apertures are to be opened up to suit NEW louvres

ATTENUATOR SCHEDULE

REF.	MANUFACTURER	MODEL	VOLUME (l/s)	SIZE (mm)	PD (Pa)	QUANTITY	FINISH
CTA-0.5	ALLAWAY ACOUSTICS	SL-GN	30	900 x 250 x 150	5	1	-
CTA-0.6	ALLAWAY ACOUSTICS	SL-GN	30	900 x 250 x 150	5	1	-
CTA-0.7	ALLAWAY ACOUSTICS	SL-GN	30	900 x 250 x 150	5	1	-
ATT-0.1	ALLAWAY ACOUSTICS	PLP-G	430	900 x 3150	16	1	-
ATT-0.2	ALLAWAY ACOUSTICS	PLP-G	430	900 x 3150	16	1	-
ATT-0.3	ALLAWAY ACOUSTICS	PLP-G	177	600 x 2500	15	1	-

VENTILATION EQUIPMENT SCHEDULE

REF.	MANUFACTURER	MODEL	DUTY (l/s)	SIZE (W x D x H)	WEIGHT (KG)	NOISE (dBA)	POWER SUPPLY	RUNNING CURRENT	FUSE RATING
HRU-0.1	MITSUBISHI	LGH200RVX-E	430	1144 x 1231 x 808	110	40	1PH / 240v / 50Hz	4.8 A	10 A
EF-0.1	NUAIRE	DE3-ES	177	788 x 605 x 355	30	33	1PH / 240v / 50Hz	1.4 A	1.4 A
EF-0.2	NUAIRE	ES-OPUSDC40-M	21	367 x 320 x 184	3	24	1PH / 240v / 50Hz	0.14 A	0.18 A
EF-0.3	NUAIRE	FAITH	12	164 x 46 x 164	0.6	26	1PH / 240v / 50Hz	0.05 A	0.3 A
EF-0.4	NUAIRE	XS6WA	60	269 x 370 x 269	4.7	32	1PH / 240v / 50Hz	0.19 A	0.6 A

VENTILATION GRILLE SCHEDULE

REF.	TYPE	VOLUME (l/s)	PD (Pa)	SIZE (mm)	NOISE dB(A)	CONNECTION DETAIL	FINISH
SG-0.8	LINDAB RS-14	30	5	595 x 595	<20	1500 FLEXIBLE CONNECTION	RAL 9010
SG-0.9	LINDAB RS-14	30	5	595 x 595	<20	1500 FLEXIBLE CONNECTION	RAL 9010
SG-0.10	LINDAB RS-14	30	5	595 x 595	<20	1500 FLEXIBLE CONNECTION	RAL 9010
SG-0.11	LINDAB RS-14	30	5	595 x 595	<20	1500 FLEXIBLE CONNECTION	RAL 9010
EG-0.17	LINDAB RS-14	30	6	595 x 595	<20	OPEN TOP c/w LIGHTING BAFFLE	RAL 9010
EG-0.18	LINDAB RS-14	30	6	595 x 595	<20	OPEN TOP c/w LIGHTING BAFFLE	RAL 9010
EG-0.19	LINDAB RS-14	30	6	595 x 595	<20	OPEN TOP c/w LIGHTING BAFFLE	RAL 9010
EG-0.20	LINDAB RS-14	30	6	595 x 595	<20	OPEN TOP c/w LIGHTING BAFFLE	RAL 9010
EG-0.21	LINDAB KU-125	10	2	125	<20	1250 FLEXIBLE CONNECTION	RAL 9010
EG-0.22	LINDAB KU-125	11	3	125	<20	1250 FLEXIBLE CONNECTION	RAL 9010

EXTERNAL LOUVRE SCHEDULE

REF.	MANUFACTURER	MODEL	VOLUME (l/s)	SIZE (mm)	BUILDERS WORK SIZE (mm)	FINISH
EL-0.1	LINDAB	WLA-11-VN	177	350 x 350	360 x 360	TBC
EL-0.2	LINDAB	WLA-11-VN	430	600 x 600	610 x 610	TBC
EL-0.3	LINDAB	WLA-11-VN	430	600 x 600	610 x 610	TBC
EL-0.4	LINDAB	WLA-11-VN	21	150 x 150	160 x 160	TBC

ELECTRIC HEATER BATTERY SCHEDULE

REF.	MANUFACTURER	MODEL	VOLUME (l/s)	DUTY (kW)	DUCT SIZE (mm)	PD (Pa)	CONTROL
EHB-0.1	NEATAFAN	TC3	430	3.0	315	15	THYRISTOR
EHB-0.2	NEATAFAN	TC3	430	3.0	315	15	THYRISTOR

FIRE DAMPER NOTES

- Contractor to provide fire dampers where ventilation ductwork passes through fire walls/barriers, all fire dampers shall be fusible link type as manufactured by Lindab Ltd.
- WH25 - Circular
Circular fire damper for air duct system that penetrate fire resistance walls or floors. With 25 mm thick closing blade made from refractory material. Casing leakage performance class C according to Standard EN1751:2014 section C.3. The damper prevents fire and smoke from spreading through the air duct system. Tested and classified in accordance with EN 1366-2 and EN 13501-3 with 500 Pa negative pressure and CE marked in accordance with EN 15650.
- WK25 - Rectangular
Rectangular fire damper for air duct system that penetrate fire resistance walls or floors. With 25 mm thick closing blade made from refractory material. Casing leakage performance class C according to Standard EN1751:2014 section C.3. The damper prevents fire and smoke from spreading through the air duct system. Tested and classified in accordance with EN 1366-2 and EN 13501-3 with 500 Pa negative pressure and CE marked in accordance with EN 15650.

Legend:

REFRIGERANT HEATING/COOLING NOTES

- All indoor fan coil units shall be fed (electrically) from local distribution boards. All external condensing units shall be powered via local distribution boards. Local isolators will be provided by the contractor.
- All grouped AC units shall incorporate a grouped condensate system. Wall mounted FCUs shall have individual condensate lift pump fitted.
- Install, test and commission all plant, pipework & fittings that are necessary for a complete working system.
- Branch control box and refrigeration pipework shall be designed and supplied by the refrigeration contractor.
- All refrigerant to be R410A / R32.

VENTILATION NOTES

- The mechanical contractor is responsible for final co-ordination and installation of all mechanical services with all other services and the building structure.
- All ductwork shall be manufactured, installed, tested & commissioned in strict accordance WITH HTM03.01 DW144, DW143, DW151, DW171, DW/TM2, DW/TM3, TR/17 & CIBSE commissioning codes.
- Access doors shall be provided adjacent all fire dampers, volume control dampers and heater batteries, either side of air turns & at least 4m intervals on duct routes.
- All duct runs & diffuser positions must be checked & set out against fully detailed ceiling and floor layouts, structural engineering & electrical service drawings. All dimensions must be checked out on site prior to the installation being executed. the contractor will be expected to co-ordinate the ductwork & piped services with all other trades.
- All ductwork to be identified in accordance with BS1710.
- All supply air (and extract where on a heat recovery system) ductwork within risers and plant spaces and ceiling voids to be insulated. Intake and exhaust ductwork to be insulated and vapour sealed against condensation where located in heated / internal spaces.
- All branch connections shall be provided with VCD's to facilitate balancing in accordance with all relevant CIBSE codes and good practices.
- The contractor shall provide fire dampers, complete with built-in frames for fixing to the building structure as required, in accordance with the current architects fire strategy drawings.
- The contractor shall agree ALL penetrations through slabs etc with the structural engineer.
- The contractor shall provide all ventilation system attenuation as required in accordance with the acoustic recommendations.
- All door transfer grilles and door undercuts to be provided as necessary for ventilation return air path. The contractor will need to take in consideration of acoustic and fire strategy report to satisfy all requirements. Door undercuts shall be a minimum of 10mm and shall not exceed a maximum of 15mm.
- All ductwork to be of galvanised steel construction.
- Flexible ventilation ductwork shall only be used for the final connections to the grilles. All excess flexible ductwork shall be cut back to a minimum of 500mm when making final connections.
- All fans and ventilation units shall be installed within accessible locations with due regard to the manufacturer's maintenance space recommendations.
- All ductwork with high aspect ratio in section shall be fitted with splitters.
- The ventilation contractor is to validate and confirm all general extract / supply air volumes / flow rates throughout the floor.

GENERAL NOTES

- The contractor is to familiarise himself with the site and all services prior to commencing work and carry out site measure prior to ordering plant/equipment.
- All materials & workmanship must be carried out in accordance with the standard LBG specification.
- All new/existing services shall be adequately protected from all demolition & construction works.
- All relocated & redundant equipment shall be neatly removed.
- The mechanical contractor shall liaise with the main contractor on all BWIC works. Refer to separate BWIC drawings for collaboration with main contractor.



ELEVATION A-A
scale 1:50

CONTROLS

SYMBOL	DESCRIPTION
RAS	REMOTE AIR SENSOR
MC	MAIN CONTROLLER
C	FAN COIL UNIT / HRU CONTROLLER
PD	PRESENCE DETECTOR / PIR

AIR STATUS

SYMBOL	DESCRIPTION
N	SUPPLY VOLUME (l/s)
N	EXTRACT VOLUME (l/s)

DUCTWORK/VENTILATION

SYMBOL	DESCRIPTION
FD	FIRE DAMPER
	UNDERCUT DOOR (15mm to allow free air flow)
CTA	CROSS TALK ATTENUATOR / RETURN AIR PATH
	SUPPLY DUCT
	EXTRACT DUCT
EHB	ELECTRIC HEATER BATTERY
VCD	VOLUME CONTROL DAMPER
SG	SUPPLY GRILLE
EG	EXTRACT GRILLE

DX/REFRIGERANT

SYMBOL	DESCRIPTION
	VRV / VRF REFRIGERATION PIPE
	SPLIT SYSTEM REFRIGERATION PIPE

P02	25.11.22	UPDATED FOR CP SUBMISSION	AA	MC
P01	18.11.22	FIRST ISSUE	PJ	MC
Rev	Date	Revision Notes	BY	CH

Client:	LLOYDS BANKING GROUP
Project:	HALIFAX WREXHAM HOPE STREET 55 HOPE STREET WREXHAM LL11 1AF
Status:	PRELIMINARY
All dimensions in mm except where otherwise stated. Dimensions up to 1 metre +/- 0.5mm. Dimensions 1 metre to 5 metres +/- 1mm. Exceed where otherwise stated. © Copyright drawing.	

Drawing Title: FIRST FLOOR HVAC LAYOUT	
Drawing No. 50960570-79G-RD-01-M2-ME-2601	Revision No. P02
Drawn: PJ	Checked: MC
Scale: @A1:	Originated Date: 18.11.22