



BLOCK E - GROUND FLOOR - VRV SYSTEM
SCALE 1:100

NOTES:

- DUCTING TO BE MANUFACTURED IN ACCORDANCE TO SMACNA STANDARDS
- ALL DUCT DIMENSIONS INCLUDING DIMENSIONS FOR INSULATED DUCTS REFERS TO THE SHEET METAL SIZE.
- ALL DUCT PASSING THROUGH CONCRETE OR BRICK WALLS SHALL BE ISOLATED FROM THE WALLS BY MEANS OF A HIGH DENSITY GLOSS FIBRE COLLAR OF AT LEAST 25mm IN THICKNESS.
- GALVANISED STEEL SHALL BE USED FOR ALL AIR-CONDITIONING AND VENTILATION DUCTING
- ALL DUCTING SHALL BE PROVIDED WITH MEZZ FLANGES.
- ALL SUPPLY AND RETURN AIR DUCTING EXPOSED TO OUTDOORS SHALL BE EXTERNALLY DOUBLE CLADDED AND INSULATED AGAINST DIRECT SOLAR HEAT GAINS.
- ALL OPEN END DUCTS TO BE CAPPED OFF WITH PLASTIC PRIOR TO DELIVERY TO SITE.
- DUCT HANGERS

LONGEST DUCT DIMENSION (mm)	ROUND HANGER (mm)	GALVANISED STRIP HANGERS (mm)	SHELF ANGLES	HANGER SPACING (m)
UP TO 760	6	25x16	25x25x3	3.0
761 TO 1000	10	25x16	38x38x3	3.0
1000 TO 2100	10	25x16	50x50x3	2.4
2100 TO 2400	10	25x16	50x50x6	2.4
2401 TO ABOVE	12	25x16	50x50x6	2.4

- ALL DIFFUSER SUPPLY FLEXIBLE TO COME c/w JUBILEE CLAMPS AND SEALED WITH DUCT TAPE ON FINAL INSTALLATION.
- ALL SUPPLY AIR DUCTING TO BE INSULATED EXTERNALLY WITH 25mm FOIL FACED FIBREGLASS TYPE FRK - ONLY AC DUCT
- ALL FLEXIBLES TO BE THERMALLY INSULATED - ONLY AC DUCT

LEGEND

- WALL MOUNTED THERMOSTAT MOUNTED @ 1450mm A.F.F.L
- ABOVE CEILING CONTROL THERMOSTAT LINKED @ DIFFUSER.
- CEILING MOUNTED TEMPERATURE SENSOR LINKED TO BMS. (ALL SCREEN/CONTROL CABLES TO RUN IN P8000 UNISTRUT).
- STATIC PRESSURE SENSOR MOUNTED IN DUCT
- ZONE TEMPERATURE SENSOR @ RETURN AIR DUCT
- DOOR UNDERCUT - 40mm

ELECTRICAL LEGEND

- 1 PHASE ELECTRICAL EQUIPMENT
- 3 PHASE ELECTRICAL EQUIPMENT
- 5A PLUG COMPLETE WITH SHAVED EARTH PINS
- AC-DB
- P 8000 UNISTRUT 2 OFF

CLIENT



ARCHITECTS



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REVISIONS

REV.	DATE	BY	DESCRIPTION
A	8-07-2021	L.C.	ISSUED FOR INFORMATION
B	12-08-2024	G.S.	ISSUED FOR TENDER

ISSUED FOR

PRELIMINARY	COUNCIL SUBMISSION
<input type="checkbox"/>	<input type="checkbox"/>
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NCDOH-NURSING COLLEGE

BLOCK E-GROUND FLOOR HVAC LAYOUT



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Drawn By LC	Design By Richard Hahlane	Project Engineer Richard Hahlane	Senior Engineer Vivian Shabangu	Date
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Discipline MECHANICAL	Scale 1:100
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Drawing No 000-AC-001A	Rev B
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TOTAL TERMINALS - GROUND FLOOR-VRV						
Floor Level	Mark	Description	Size	Comments	Airflow-VRV	Count-VRV
Ground Floor - VRV	DG1-VRV	Door Grille	300x150	Natural Anodised Aluminium		
Ground Floor - VRV	DG2-VRV	Door Grille	550x550	Natural Anodised Aluminium		
Ground Floor - VRV	DV1	Extract Disc Valves c/w dia 150 neck	dia 150	Powder Coated Aluminium	84L/s	7
Ground Floor - VRV	DV1-VRV	Extract Disc Valves c/w dia 150 neck	dia 150	Powder Coated Aluminium	84L/s	7
Ground Floor - VRV	DV2-VRV	Extract Disc Valves c/w dia 150 neck	dia 150	Powder Coated Aluminium	65L/s	7
Ground Floor - VRV	RAG1	Return Air Grilles fixed blades c/w OBD - dia 250 neck	600x600	Powder Coated Aluminium to Architects Specification	120L/s	8
Ground Floor - VRV	RAG2	Return Air Grilles fixed blades c/w OBD - dia 200 neck	600x600	Powder Coated Aluminium to Architects Specification	87L/s	8
Ground Floor - VRV	SAD1-VRV	Supply Air Diffusers c/w dia 250 neck	600x600	Powder Coated Aluminium to Architects Specification	112.5L/s	16
Ground Floor - VRV	SAD2-VRV	Supply Air Diffusers c/w dia 200 neck	600x600	Powder Coated Aluminium to Architects Specification	87L/s	16

TOTAL EQUIPMENT - GROUND FLOOR-VRV											
Floor Level	Mark	Type	Cooling Total kW	Heating Total kW	Airflow	Voltage/Ph/Hz	Weight	Dimensions	Static Pressure	Refrigerant Piping	Count
Ground Floor-VRV	AC1-VRV	Heat Recovery 4 Way Blow Cassette Units (F/A = 24's each for 5 units only)	2.2 kW	-		18W/220V/1Ph/50Hz	-	-	-	-	6
Ground Floor-VRV	CX10-VRV	Extract Fan			91L/s	38W/220V/1Ph/50Hz	-	-	-	-	8
Grand total:											14

REFERRAL DRAWINGS			
DRAWING DESCRIPTION	DRAWING NO.	REV	REV DATE
GROUND FLOOR PLAN	P2A-HDG-010-030	02	04/07/2021