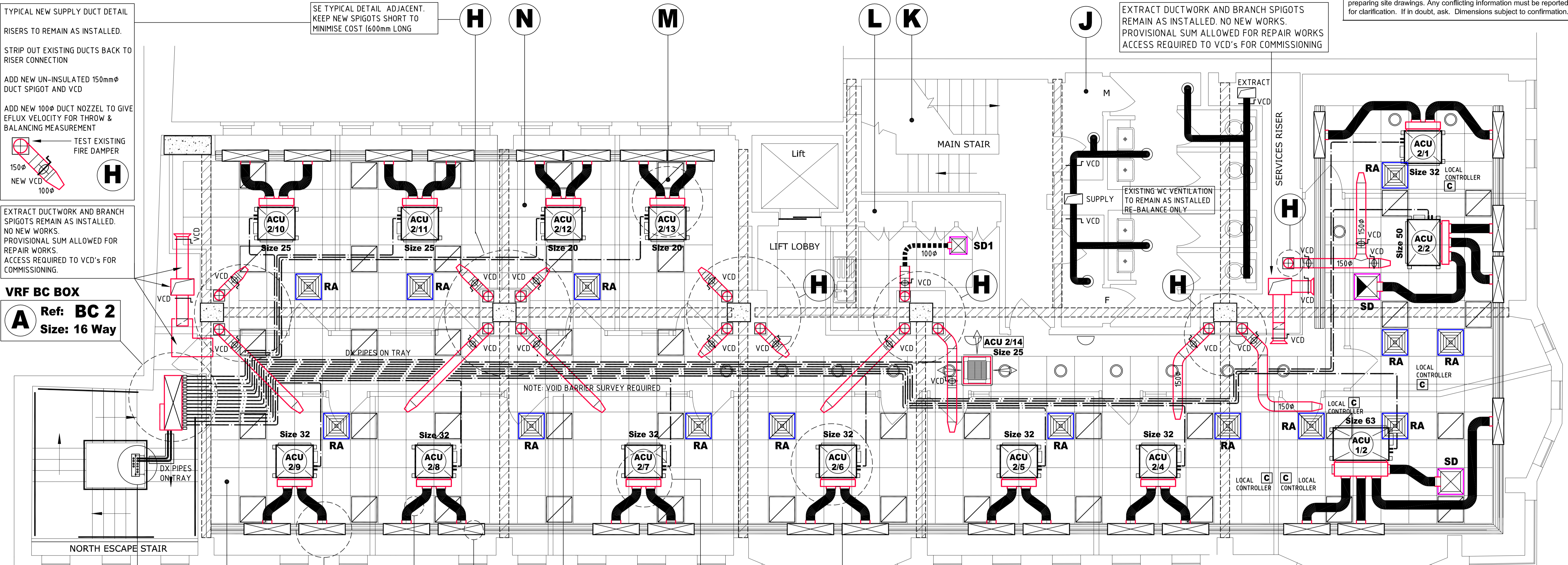


Do not scale. All dimensions and levels must be verified on site and discrepancies reported to CS2 Limited, prior to commencing works or preparing site drawings. Any conflicting information must be reported for clarification. If in doubt, ask. Dimensions subject to confirmation.



## VRF Air Conditioning Services Ventilation System Modifications

### VRF Indoor A/C Plant Schedule

REF	TYPE	SIZE	MODEL	REF	TYPE	SIZE	MODEL
AC 2/1	DUCTED	32	PEFY-P-32 VMS1 ER2	AC 2/8	DUCTED	32	PEFY-P-32 VMS1 ER2
AC 2/2	DUCTED	50	PEFY-P-50 VMS1 ER2	AC 2/9	DUCTED	32	PEFY-P-32 VMS1 ER2
AC 2/3	DUCTED	63	PEFY-P-63 VMS1 ER2	AC 2/11	DUCTED	25	PEFY-P-25 VMS1 ER2
AC 2/4	DUCTED	32	PEFY-P-32 VMS1 ER2	AC 2/12	DUCTED	20	PEFY-P-20 VMS1 ER2
AC 2/5	DUCTED	32	PEFY-P-32 VMS1 ER2	AC 2/13	DUCTED	20	PEFY-P-20 VMS1 ER2
AC 2/6	DUCTED	32	PEFY-P-32 VMS1 ER2	AC 2/14	CASSETTE	25	PLFY-P-25 VCM EZR1
AC 2/7	DUCTED	32	PEFY-P-32 VMS1 ER2				

### VRF UNIT TECHNICAL DATA

SIZE	INDOOR UNIT MODEL	DUTY Uk Cooling	DUTY Uk Heating	Wt kg	ELECTRICAL			AIR FLOW l/sec Lo-Med-Hi	STATIC (Pa) Lo-Med-Hi	DIMS (mm) W D H		
					Phase	FUSE	RC			W	D	H
SLIM DUCTED UNITS												
20	PEFY-P-20 VMS1 ER1	1.6 kW	2.5 kW	19	1ph 240V	6A	0.47 A	92-110-113	5-15-35-50	790	700	200
25	PEFY-P-25 VMS1 ER1	2.0 kW	3.2 kW	20	1ph 240V	6A	0.50 A	92-116-150	5-15-35-50	790	700	200
32	PEFY-P-32 VMS1 ER1	2.6 kW	4.0 kW	20	1ph 240V	6A	0.50 A	100-113-166	5-15-35-50	790	700	200
40	PEFY-P-40 VMS1 ER1	3.3 kW	5.0 kW	24	1ph 240V	6A	0.56 A	113-160-183	5-15-35-50	990	700	200
50	PEFY-P-50 VMS1 ER1	4.1 kW	6.3 kW	24	1ph 240V	6A	0.67 A	155-183-215	5-15-35-50	990	700	200
63	PEFY-P-63 VMS1 ER1	5.2 kW	8.0 kW	28	1ph 240V	6A	0.72 A	200-233-275	5-15-35-50	1190	700	200
CASSETTES 600x600												
20	PLFY-P-20 VCM EZ2	1.6 kW	2.5 kW	16	1ph 240V	6A	0.23 A	133-150-166	-	570	570	235
25	PLFY-P-25 VCM EZ2	2.0 kW	3.2 kW	16	1ph 240V	6A	0.23 A	133-150-166	-	570	570	235

### BC Connection Box Schedule

REF	FUNCTION	LOCATION	MODEL	ELECTRICAL DATA			DIMS (mm)						
				Conns	Spare	WT	PHASE	POWER	RC	FUSE	W	D	H
BC 2	MASTER	SECOND FLOOR	CMB P.1016 V. GA 1	16	2	62 kg	1ph	0.32 kW	1.30 A	6A	1110	520	289

### Controls

<b>Central Controller</b>	AT 50A-J PAC SC 51 KUA J	TOUCH SCREEN CENTRAL CONTROLLER + POWER SUPPLY
<b>Local Controls</b>	4 No. WALL MOUNTED CONTROLLERS AS INDICATED AS: PAR F27 MEA J	

### AC Condenser Plant Schedule

REF	OUTDOOR UNIT MODEL	ELECTRICAL DATA (Amps)			DIMS (mm)			WEIGHT kg	SOUND dBA	AIRFLOW l/s	CoP/EER	
		PH	SC	RC	L	D	H					
CU 2	PURY P 350 YM-A	3ph	8	17.5	32	1220	760	1710	270	60	MAX 3750	4.13/3.53

### ANNOTATED NOTES - SLOT PACKAGE INSTRUCTIONS

- A** BC BOX AT HIGH LEVEL - WITH EXTENDED CABLES TO ENABLE CONTROL BOX RELOCATION TO OTHER END OF BOX AS INDICATED. ALLOW TO BOX IN WITH REMOVABLE MESH FOR PROTECTION
- B** DX PIPEWORK TIED AT 600mm CENTRES ON VERTICAL 600mm WIDE SELF SUPPORTING LADDER RACK. LADDER RACK EXTENDS FROM SUPPORT FOOT AT GROUND FLOOR LEVEL AND IS TO BE SECURELY FIXED AT EACH STAIRCASE LEVEL. LADDER RACK TO BE BOXED FULL HEIGHT WITH LIGHTWEIGHT PCV SECTION FOR MECHANICAL PROTECTION AND VISUAL APPEARANCE UPON COMPLETION
- C** REMOVE ALL CEILING TILES. CLEAN ALL CEILING TILES BEFORE REPLACEMENT. CLORDINATE LOCATION OF LIGHT FITTINGS ON FINAL INSTALLATION
- D** REUSE EXISTING PLENUM BOXES. REPAIR AND REFIX TO SUPPLY SLOT DIFFUSER SEAL AT DIFFUSER CONNECTION TO PREVENT LEAKAGE
- E** NEW INSULATED FLEXIBLE DUCTWORK 200mm AND PLENUM BOX ON VRF UNIT. ADD FLAP TYPE VCD TO CENTRE PLENUM BOX SPIGOT
- F** REUSE EXISTING SUPPLY AIR SLOT DIFFUSER THOROUGHLY CLEAN DIFFUSER REPAIR AND REFIX DIFFUSER AS NECESSARY. REMOVE BLANKING PLATE SECTIONS IN VOID

### Controls Wiring & Electrical Power Supplies

- 1.00 THE MECHANICAL CONTRACTOR SHALL ALLOW FOR SUPPLY & INSTALL OF ALL AC SYSTEMS CONTROLS WIRING & INTERCONNECTING WIRING FROM EXTERNAL UNIT TO INDOOR UNITS, & WIRING TO/FROM CONTROLLERS & THE AT50 CENTRAL CONTROLLER
- 2.00 WALL MOUNTED CONTROLLERS ARE REQUIRED FOR 4 ROOMS ONLY ON THIS FLOOR, AS INDICATED ON THE DRAWING. ALL LOCAL CONTROL UNITS SHALL ALSO BE CONTROLLED CENTRALLY FROM CENTRAL CONTROLLER
- 3.00 SUPPLY, INSTALL & COMMISSION ONE MITSUBISHI DIRECT Lfd AT50 CENTRAL CONTROLLER. LOCATE IN A ROOM NEAR THE BC CONTROLLER.
- 4.00 ELECTRICAL POWER SERVICES:
  - A) REUSE EXISTING FAN COIL UNIT POWER SUPPLIES FOR NEW VRF UNITS.
  - B) INSTALL NEW POWER CIRCUIT TO BC BOXES
  - C) INSTALL NEW POWER SUPPLIES TO EXTERNAL CONDENSERS

### Legend

- G** CEILING VOID BARRIER SURVEY REQUIRED AS THE WORKS PROCEED SUPPLY AIR SPIGOTS SHALL EXTEND INTO AREAS ABOVE ISOLATED OFFICES AS REQUIRED TO ENABLE SUPPLY AIR TO ALL VRF UNITS
- H** SEE DETAIL IN TOP CORNER. SUPPLY RISERS AND EXISTING FIRE DAMPERS TO REMAIN AS INSTALLED. CUT BACK ALL EXISTING DUCT SPIGOTS AND REMOVE EXISTING VCD'S ADD NEW SHORT 150mm SPIGOTS WITH NEW VCD'S AND SUPPLY NOZZEL (100mm)
- J** EXISTING TOILET SUPPLY EXTRACT DUCTWORK AND GRILLES TO REMAIN AS INSTALLED CLEAN GRILLES COMMISSION AND BALANCE ALL BRANCHES AND GRILLES TO DESIGN AIR VOLUMES TO BE ADVISED INSTALL NEW SUPPLY UNIT AND EXTRACT TWIN FAN IN ROOF PLANTROOM
- K** EXISTING STAIR HEATING UNITS TO BE STRIPPED OUT AND WALL RECESS TO BE MADE GOOD WITH NEW MATCHING PAINTED PANEL. SEE HEATING DRAWING FOR NEW STAIR CASE HEATING
- L** STRIP OUT ALL HORIZONTAL LPHW, CH/W PIPEWORK AND FCU CONTROL VALVES ON FLOOR PLATE EXISTING GAS, LPHW AND CH/W PIPEWORK RISERS TO REMAIN AS INSTALLED. CLOSE OFF ALL VALVES AND SEAL ANY OPEN ENDED PIPEWORK REMAINING
- M** FABRICATE SLIM LINE PLENUM BOXES WITH 200mm SPIGOTS AND INSULATE EXTERNALLY WITH 20mm SELF ADHESIVE BARRAFOAM USE EXISTING POWER SUPPLIES IN VOID FOR POWER TO VRF UNITS
- N** REPLACE LUMINAIRES INTO GRID EVENLY SPACED TO ACHIEVE ENEV LIGHTING PATTERN AND AVOID FAN COIL UNITS. CONTRACTOR TO CO-ORDINATE REFLECTED CEILING PLAN

### VRF System. Specification Notes

- 1.0 SUPPLY, INSTALL, COMMISSION AND SET TO WORK, 1 No. MITSUBISHI ELECTRIC DIRECT Lfd. SIMULTANEOUS HEATING & COOLING, HEAT RECOVERY, R 410 A REFRIGERANT, INVERTER DRIVEN, AIR CONDITIONING SYSTEMS - PER FLOOR
  - 2.0 IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY REFRIGERANT PIPE SIZES WITH SUPPLIER PRIOR TO PROCUREMENT
  - 3.0 CONTRACTOR TO DESIGN AND INSTALL CONDENSATE DRAINAGE SYSTEM - AS INDICATED ON THIS DRAWING
  - 4.0 CASSETTE UNITS TO BE SUPPLIED AND INSTALLED COMPLETE WITH CONDENSATE PUMP
  - 5.0 ALL DX PIPEWORK TO BE RUN AND SUPPORTED ON TRAY WORK
  - 6.0 INSTALLED BY APPROVED MITSUBISHI INSTALLER SERVICE CROSS OVERS ARE TO BE AVOIDED. SERVICE ZONES TO BE USED
  - 7.0 PROVIDE 5 YEAR WARRANTY NO PLANT OR SERVICES SHALL PASS OVER LIGHT FITTINGS EXCEPT WHERE UNAVOIDABLE
- ADDITIONAL NOTES**
- 1.0 DO NOT INSTALL AC UNITS OR VENTILATION UNITS ABOVE LIGHT FITTINGS

### Diffuser / Grille Schedule

Symbol	Description	Symbol	Description
<b>SD</b>	SUPPLY DIFFUSER. (600x600)mm 4 WAY BLOW PATTERN. WITH BACK PLENUM BOX. AS GILBERTS OR SIMILAR	<b>RA</b>	RETURN AIR DIFFUSER. (600x600)mm 4 WAY BLOW PATTERN WITH BACK PLENUM BOX. TO MATCH SUPPLY DIFFUSER
<b>SD1</b>	SUPPLY DIFFUSER. (450x450)mm 4 WAY BLOW PATTERN. WITH BACK PLENUM BOX. AS GILBERTS OR SIMILAR	<b>RA1</b>	RETURN AIR DIFFUSER. (450x450)mm 4 WAY BLOW PATTERN WITH BACK PLENUM BOX. TO MATCH SUPPLY DIFFUSER

### Contractors Instructions / Notes :

- 1.00 THE CONTRACTOR SHALL VISIT SITE DURING TENDER & STUDY ALL EXISTING DRAWINGS, CS2 DRAWINGS, NOTES & WRITTEN DOCUMENTS.
  - 2.00 THE CONTRACTOR SHALL BE RESPONSIBLE FOR M&E SERVICES CO-ORDINATION, WORKING DRAWINGS, WORKING DETAIL, PROCUREMENT OF EQUIPMENT, ALL ASPECTS OF INSTALLATION WORKS, ON-SITE PROJECT MANAGEMENT, PROGRAM DESIGN & FABRICATION OF ALL SUPPORT WORK & ALL BUILDERS WORK DETAILS
  - 3.00 INSTALL THE WORKS IN ACCORDANCE WITH GOOD PRACTICE, HVAC INDUSTRY STANDARDS AND GUIDELINES, FGAS REGULATIONS, ALL STANDARD INDUSTRY HEALTH & SAFETY & BUILDING CONTROL REQUIREMENTS.
  - 4.00 THE CONTRACTOR SHALL SUBMIT RISK ASSESSMENTS AND METHOD STATEMENTS TO PROJECT TEAM FOR ALL ELEMENTS OF THE WORKS PRIOR TO WORKS TAKING PLACE
- Contractors' Coordination Responsibility**
- 1.00 THE INFORMATION ON THIS DRAWING IS FOR EQUIVALENT ACE ABBRIDGED DESIGN DUTY PURPOSES ONLY.
  - 2.00 THE CONTRACTOR SHALL PREPARE & SUBMIT TO CS2, FULLY COORDINATED WORKING INSTALLATION DRAWINGS FOR APPROVAL PRIOR TO PROCUREMENT AND INSTALLATION.
  - 3.00 THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION & SHALL COORDINATE MECHANICAL, ELECTRICAL, STRUCTURAL, REFLECTED CEILING PLAN & ARCHITECTURAL ELEMENTS OF THE PROJECT.
  - 4.00 THE CONTRACTOR SHALL COVER THE WHOLE OF THE WORKS WITH INSURANCES AND APPROPRIATE LEVEL PI INSURANCE COVER FOR DESIGN ELEMENTS OF THE WORKS
- Specification Note:**  
IMPORTANT NOTE: READ ALL NOTES, SCHEDULES & INSTALLATION INSTRUCTIONS ON DRAWING - THEY FORM PART OF THE SPECIFICATION, WHICH MAY NOT BE REPEATED IN THE WRITTEN DOCUMENTATION.
- Architects Layouts**  
READ WITH EXISTING DRAWINGS & ANY NEW ARCHITECTS LAYOUTS. IT IS INCUMBENT ON THE CONTRACTOR TO SITE SURVEY & SITE MEASURE PRIOR TO THE PREPARATION OF CONTRACTORS WORKING DRAWINGS.

### Coordination Notes

- SOME SERVICES ROUTES ARE WORST CASE. SHORTER ROUTES WILL BE CONSIDERED DURING THE WORKING DWG APPROVAL PROCESS

Rev	Description	Date
C	CONTRACT ISSUE	-
T	TENDER ISSUE	-

**client**  
PICTON Capital

**project manager**  
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**Drawing Title**  
MECHANICAL SERVICES  
SECOND FLOOR  
VRF SYSTEM + VENTILATION LAYOUT

Scale	1:40 @ A1	Drawn	AK
Date	-	Checked	AK

<b>Drawing Number</b>	<b>Revision</b>
MK/701/SAMPLE	C

**Drawing Status**  
CONTRACT ISSUE

## SECOND FLOOR LEVEL

**Scale 1:40 @ A1**