

MECHANICAL SERVICES EQUIPMENT SCHEDULES

Project Name:	Upper Campfield
Project No:	22_023
Revision	T02
Date	26/01/2024
Engineer	A.P.

MEP Schedule Ref.	Title	Revision	Date
1	EXTRACT FANS	T01	30/11/2023
2	HOT WATER CYLINDERS	T01	30/11/2023
3	PUMPS	T01	30/11/2023
4	MVHR UNITS	T01	30/11/2023
5	ACU	T01	30/11/2023
6	GRILLES & DIFFUSERS	T01	30/11/2023
7	DESTRATIFICATION FANS	T01	30/11/2023
8	ATTENUATORS	T01	26/01/2024

Revision Summary		
Description	Revision	Date
Tender Issue	T01	30/11/2023
Tender Issue	T02	26/01/2024

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Extract Fan Schedule
Schedule Ref:	MEP - SCH - 01
Revision	T02
Date	26/01/2024

Extract Fan Schedule	
Drawing Reference	EF 001
Location	Ground Floor Bin Store
System	Toilet / Showers Dirty Extract
Volume (m ³ /s)	0.174
External Resistance (Pa)	150
Model	KV DUO 250 AC Centrifugal Duct Fan
Power (W)	155
Voltage (V)	230
Motor	AC
Inverter	No

Extract Fan Schedule	
Drawing Reference	EF 002
Location	Ground Floor Loading Bay
System	Loading Bay Dirty Extract
Volume (m ³ /s)	0.5
External Resistance (Pa)	250
Model	MUB 400EC-A Multibox
Power (W)	565
Voltage (V)	230
Motor	EC
Inverter	No

Extract Fan Schedule	
Drawing Reference	EF 003
Location	Mezzanine Unisex WC's
System	Toilet Dirty Extract
Volume (m ³ /s)	0.076
External Resistance (Pa)	150
Model	KV DUO 200 AC Centrifugal Duct Fan
Power (W)	145
Voltage (V)	230
Motor	AC
Inverter	No

Notes:

- 1.0 Equipment based on Vent Axia or equal and approved.
- 2.0 Refer to accompanying drawings for locations.

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Calorifier Schedule
Schedule Ref.	MEP - SCH - 02
Revision	T02
Date	26/01/2024

Ref	System	Capacity (L)	Size		Manufactures Ref	Weight Full (kg)
			Dia	Height		
HWS 01	Domestic Hot water	242	580	1550	OSO VIP, VP 250L	286
HWS 02	Domestic Hot water	242	580	1550	OSO VIP, VP 250L	286

Notes:

- 1.0 Equipment based on OSO Hot Water UK or equal and approved.
- 2.0 The equipment shall be installed to the manufacturers recommendations.
- 3.0 This schedule shall be read in conjunction with the Engineering Specification.
- 4.0 Each Calorifier shall be complete with Primary f&r conns., Secondary flow and Cold Feed with spreader tee, Secondary return, Pressure/Temperature relief, Anti-vacuum valve, 4x15 thermostat boss (1 under coil bundle), 100 dia pressure gauge, 100 dia temperature gauge, 20 hose union drain cock, 300 inspection opening.
- 5.0 Each Calorifier shall be complete with a minimum of 50mm thick glass fibre insulation and metal casing.
- 6.0 Each Calorifier shall have removable copper U-tube battery with tubes expanded into RNB plate with CI or m/s header.
- 7.0 Each Calorifier shall be complete with an unvented kit comprising expansion vessel, Expansion relief valve, expansion isolating valve, isolating valve, strainer, pressure reducing valve and non return valve
- 8.0 Primary Flow 80 deg C Primary Return 60 deg C

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Pump Schedule
Schedule Ref.	MEP - SCH - 03
Revision	T02
Date	26/01/2024

Drawing Reference	Pump 01
Location	GF Bin Store
System	DHW Return
External Resistance (kPa)	100
Electrical Requirements	230V
Type	Single Head
Control	Packaged
Model	ecocirc L 25-8/130

Notes:

- 1.0 Equipment based on Xylem or equal and approved.
- 2.0 Pumps to be complete with manufacturers matching Stainless steel tied flexible connections.
- 3.0 Noise breakout from unit shall be limited to 65 db(A) at 1m.
- 4.0 Pump External resistances are Provisional and are based on Design Drawings. They shall be confirmed by the Contractor once Co-ordinated drawings are available.

The pump inverters shall be LON devices and shall 'sit on' the BMS network and be an integral part of the BMS network. All of the inverter outputs, signals, alarms, etc shall be transmitted to the BMS front end. The actual points to be displayed on the front end graphics shall be determined by the Controls Specialist and University Estates Department.
- 5.0

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	MVHR Schedule
Schedule Ref.	MEP - SCH - 04
Revision	T02
Date	26/01/2024

Drawing Reference	Room Name	Model Reference	Design Volume (m3/s)	External Resistance (Pa)	Electrical Supply (W/V/ph/hz)	Weight (kg)	FLC (A)	SFP (w/m3/s)	Dimensions mm (L x W x H)
MVHR 01	Workspace 01	Lossnay LGH100RVX-E	-	120	1000 / 230 / 1 / 50	48	2.5	1.5	1144 x 1231 x 404
MVHR 02	Workspace 01	Lossnay LGH150RVX-E	0.350	120	1000 / 230 / 1 / 50	98	2.5	1.5	1144 x 1004 x 808
MVHR 03	Workspace 03	Lossnay LGH150RVX-E	0.365	120	1000 / 230 / 1 / 50	98	2.5	1.5	1144 x 1004 x 808
MVHR 04	Workspace 03	Lossnay LGH100RVX-E	0.275	120	1000 / 230 / 1 / 50	54	2.5	1.5	1144 x 1231 x 404
MVHR 05	Workspace 02	Lossnay LGH150RVX-E	0.350	120	1000 / 230 / 1 / 50	98	2.5	1.5	1144 x 1004 x 808
MVHR 06	Studio 1	Nuaire Xboxer 25	0.200	120	1000 / 230 / 1 / 50	242	4	1.5	1713 x 1160 x 360
MVHR 07	Plant Room	Lossnay LGH100RVX-E	0.095	120	1000 / 230 / 1 / 50	54	2.5	1.5	1144 x 1231 x 404

Notes:

- 1.0 Equipment based On Mitsubishi Electric via Pacair or equal and approved. Please contact Stuart Law (stuart@pacair.co.uk / 07875 195 572)
- 2.0 The equipment shall be installed to the manufacturers recommendations.
- 3.0 Units to be Eurovent Certified Energy Efficiency Class A.
- 4.0 Units to be fitted with stepless EC motors.
- 5.0 Units to have a temperature efficiency dry of no less than 85%

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Air Conditioning Schedule
Schedule Ref.	MEP - SCH - 05
Revision	T02
Date	26/01/2024

INDOOR UNIT					
Ref	Outdoor Unit Reference	Room	Indoor Model	Total Duty (kW) Heating / Cooling (Design Values)	Air Flow (l/s) Lo - Med - Hi
VRF 001	ODU 01	Flexible Space 01	PLA-ZM35EA	xx / 0.6	183-217-250-267
VRF 002		Flexible Space 02	PLA-ZM35EA	xx / 0.6	183-217-250-267
VRF 003		Flexible Space 03	PLA-ZM35EA	xx / 0.5	183-217-250-267
VRF 004		Flexible Space 04	PLA-ZM35EA	xx / 0.5	183-217-250-267
VRF 005		Production Office	PLA-ZM35EA	xx / 1.1	183-217-250-267
VRF 006		Production Office	PLA-ZM35EA	xx / 1.1	183-217-250-267
VRF 007		Tea point	PLA-ZM35EA	0.6 / 0.5	183-217-250-267
VRF 008		Reception	PLA-ZM35EA	2.3 / 1.6	183-217-250-267
VRF M09	ODU 02	Meeting Room	PLA-ZM50EA	xx / 3.6	200-233-267-300
FCU M01		Meeting Room	PEFY-P15-VMS1-E	2.3 / 0.9	83-100-117
FCU M02		Acc. WC	PEFY-P15-VMS1-E	2.3 / 0.9	83-100-117
VRF M03		Workspace 01	PLA-ZM140EA	14.4 / 6.7	400-433-483-533
VRF M04		Workspace 01	PLA-ZM140EA	14.4 / 6.7	400-433-483-533
VRF M07		Workspace 02	PLA-ZM140EA	13.3 / 13.8	400-433-483-533
VRF M08		Workspace 02	PLA-ZM140EA	13.3 / 13.8	400-433-483-533
VRF M12		Workspace 03	PLA-ZM140EA	14.3 / 12.9	400-433-483-533
VRF M13		Workspace 03	PLA-ZM140EA	14.3 / 12.9	400-433-483-533
VRF M01	ODU 03	Void Above Studio 02	PLA-ZM125EA	10.7 / 8.8	350-400-433-483
VRF M02		Void Above Studio 02	PLA-ZM125EA	10.7 / 8.8	350-400-433-483
VRF M05	ODU 04	Void Above Studio 03	PLA-ZM100EA	8.4 / 4.8	317-367-417-467
VRF M06		Void Above Studio 03	PLA-ZM100EA	8.4 / 4.8	317-367-417-467
VRF M10	ODU 05	Void Above Studio 04	PLA-ZM125EA	10.7 / 11.0	350-400-433-483
VRF M11		Void Above Studio 04	PLA-ZM125EA	10.7 / 11.0	350-400-433-483
VRF M14	ODU 06	Void Above Studio 05	PLA-ZM125EA	10.8 / 9.8	350-400-433-483
VRF M15		Void Above Studio 05	PLA-ZM125EA	10.8 / 9.8	350-400-433-483
IDU 01	ODU 07	Studio 01	PKFY-P63-VLM-E	11.6 / 5.8	267-333
IDU 02		Studio 01	PKFY-P63-VLM-E	11.6 / 5.8	267-333

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Air Conditioning Schedule
Schedule Ref.	MEP - SCH - 05
Revision	T02
Date	26/01/2024

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Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Air Conditioning Schedule
Schedule Ref.	MEP - SCH - 05
Revision	T02
Date	26/01/2024

Notes:

- 1.0 Equipment based On Mitsubishi Electric via Pacair or equal and approved. Please contact Stuart Law (stuart@pacair.co.uk / 07875 195 572)
- 2.0 **Plant needs to be run on low power mode to meet the acoustic criteria of the project (as set out in the acoustic report by Sandy Brown). Low power mode limits the output of the unit, the contractor must be aware and take this into consideration for any equal or approved selections.**
- 3.0 All equipment to use refrigerant R410A or R32.
- 4.0 Indoor units selected to give NR 35 in the space.
- 5.0 Outdoor units selected to give 51dBA.
- 6.0 All control wiring between internal and external units by manufacturer.
- 7.0 All pipework and control wiring to be run on cable tray and/or basket.
- 8.0 Units shall operate on a timed basis to suit the occupancy profile of the individual rooms
- 9.0 Each indoor unit shall be complete with cleanable and/or washable filter.
- 10.0 Each indoor unit shall be complete with a condensate pump and level switch to alarm on high level and switch off the indoor unit.
- 11.0 Each indoor unit shall be temperature controlled by a return air sensor located at ceiling level within the space.
- 12.0 Each Fan Coil unit to be supplied with manufacturers discreet temperature sensor

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Grilles and Diffusers Schedule
Schedule Ref.	MEP - SCH - 06
Revision	T02
Date	26/01/2024

Ref	Room No.	Room Name	Volume (m ³ /s)	Throw (m)	Direction	Type	Max Pressure Drop (Pa)	Max NC Level
EG 001	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 002	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 003	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 004	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 005	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 006	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 007	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 008	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 009	UC.00.10	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG 010	UC.00.18	Showers	0.015	Note 8.0	Note 8.0	Air Valve	25	25
EG 011	UC.00.18	Showers	0.015	Note 8.0	Note 8.0	Air Valve	25	25
EG 012	UC.00.18	Showers	0.015	Note 8.0	Note 8.0	Air Valve	25	25
EG 013	UC.00.18	Showers	0.015	Note 8.0	Note 8.0	Air Valve	25	25
EG 014	UC.00.18	Showers	0.015	Note 8.0	Note 8.0	Air Valve	25	25
EG 015	UC.00.24	Restaurant Bin Store	0.083	Note 8.0	Note 8.0	Air Valve	25	25
EG 016	UC.00.25	Corridor	0.04	Note 8.0	Note 8.0	Air Valve	25	25
EG M01	UC.01.08	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG M02	UC.01.08	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG M03	UC.01.08	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG M04	UC.01.08	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG M05	UC.01.08	Unisex WC's	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG M06	-	Cleaners Cupboard	0.010	Note 8.0	Note 8.0	Air Valve	25	25

EG M07	UC.01.11	Acc. WC	0.011	Note 8.0	Note 8.0	Air Valve	25	25
EG M08	UC.00.04	Studio 01	0.15	Note 8.0	Note 8.0	Air Valve	25	25
SG M01	UC.00.04	Studio 01	0.15	Note 8.0	Note 8.0	Circular Diffuser	25	25
SG M02	UC.00.06	Studio 04	0.075	Note 8.0	Note 8.0	Sidewall Diffuser	25	25
SG M03	UC.00.29	Studio 05	0.075	Note 8.0	Note 8.0	Sidewall Diffuser	25	25
SG M04	UC.00.08	Studio 02	0.075	Note 8.0	Note 8.0	Sidewall Diffuser	25	25
SG M05	UC.00.20	Studio 03	0.075	Note 8.0	Note 8.0	Sidewall Diffuser	25	25

Notes:

- 1.0 Equipment based on Gilberts or equal and approved.
- 2.0 The equipment shall be installed in accordance with the manufacturers' recommendations.
- 3.0 All grilles and diffusers shall be complete with opposed blade volume control damper.
- 4.0 All supply diffusers shall have four way Louvre faced blanked to give actual throw required with four way appearance.
- 5.0 All extract grilles shall be four way Louvred Faced – The larger volumes must be 525x525 Active neck size to achieve the correct performance for the duty.
- 6.0 All grilles and diffusers shall be finished in polyester powder paint to colour to be advised by Interior Designer.
All grilles and diffusers shall be complete with acoustically lined plenum box to give duct connection and neck size as shown.
- 7.0 Orientation of duct spigot (side/top/angled) determined by Mechanical Contractor subject to his co-ordinated working drawings.
- 8.0 Mechanical Contractor to confirm direction and distance of throw once he has produced co-ordinated drawings and offer diffuser selections for comment.

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Destratification Fan Schedule
Schedule Ref:	MEP - SCH - 07
Revision	T01
Date	26/01/2024

Destratification Fans	
No.	4
Location	Double Height Studio Spaces
System	Air Distribution
Manufactures Reference	Airmax 400, 5 blade HVLS MegaFans
Average Air Speed (m/s)	1.12
Fan Diameter	4050mm

Notes:

- 1.0 Equipment based on MegaFan Technologies or equal and approved. Please contact Mark Oldham (Mark@megafans.co.uk / 07919 598545).
- 2.0 Refer to accompanying drawings for locations.

Project Name	Upper Campfield
Project No.	22_023
Schedule Title	Attenuators
Schedule Ref.	MEP - SCH - 8
Revision	T02
Date	26/01/2024

Drawing Reference	Location	Model Reference	Attenuator Dimensions (mm)				PD Pa	Duct Dimensions (mm)	Volume (m3/s)
			W	H	L2/ID	L			
ATT 01	GF Bin Store	PL G			250	900	5	250ø	0.174
ATT 02	GF Bin Store	PLP G			250	900	15	250ø	0.174
ATT 03	GF Loading Bay	PL G			400	900	5	400ø	0.500
ATT 04	GF Loading Bay	PLP G			400	900	15	400ø	0.500
ATT 05	SF Plantroom	PL G			200	900	5	200ø	0.095
ATT 06	SF Plantroom	PL G			200	900	5	200ø	0.095
ATT 07	SF Plantroom	SL GE	365	280	224	1200	10	200ø	0.095
ATT 08	SF Plantroom	SL GE	365	280	224	1200	10	200ø	0.095

Notes:

- 1.0 Equipment based on Allaway acoustics or equal and approved. Please contact Andy Smith on 07720290589
- 2.0 Should any of the attenuated plant selections change, the Mechanical Contractor shall reselect the attenuators.