

**Client:-
PRIVATE CLIENT**

**17 Branch Hill
Hampstead
London NW3 7NA**

Mechanical Schedules

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Inspire Ref :- IC-01016–D8

November 2016

D8 MECHANICAL SCHEDULES

Inspire Consulting UK Ltd				D8 - Mechanical Schedules					November 2016					
17 Branch Hill - (IC-01016)														
Reference	Manufacturer	Model No.	Area/ System Serves	Plant Location	Dimensions (W x D x H)	Duty	Pa Loss	SFP	Motor Input Power	Power Consum. Full Load	Elec Supply	Nominal Running Current	Starting Current	Total Weight
					(mm)	(m ³ /s)	(Pa)	W/(l/s)	(kW)	W	V/Ph/Hz	(A)	(A)	(kg)
MVHR / EXTRACT / SUPPLY UNITS														
HRU/01	Airflow Developments	Duplexvent DV80L	Lwr Ground Floor	Lwr Gnd Floor Plantroom	1026 x 626 x 293	0.056	150	0.86	1.965	-	240/1/50	-	-	59
CONDENSING UNITS														
CU/01	Mitsubishi Electric	PUHY-P250YKB-A1.TH	Building west	Garden compound	950 x 750 x 1710	n/a	n/a	n/a	-	-	415/3/50	11	8	712
CU/02	Mitsubishi Electric	PUHY-P250YKB-A1.TH	Building east	Garden compound	950 x 750 x 1710	n/a	n/a	n/a	-	-	415/3/50	11	8	712
CU/03	Deleted	-	-	-	-	-	-	-	-	-	-	-	-	-
CONDENSER VENTILATION FAN														
Deleted	-	-	-	-	-	-	-	-	-	-	-	-	-	-
BOILERS														
CHP/01	SAV	Loadtracker XRGi 6	All Areas	Lwr Gnd Floor Plantroom	Refer to Plantroom Layout 640 x 920 x 960	n/a	n/a	n/a	2.5	??	415/3/50	-	32	440
B/01	Remeha	Quinta Pro 65	All Areas	Lwr Gnd Floor Plantroom	500 x 500 x 940	n/a	n/a	n/a	-	30 - 90	230/1/50	-	-	64
B/02	Remeha	Quinta Pro 65	All Areas	Lwr Gnd Floor Plantroom	500 x 500 x 940	n/a	n/a	n/a	-	30 - 90	230/1/50	-	-	64
CALORIFIERS														
CAL/01	Heatrea Sadia	Megaflco Commercial Indirect 400i	All Areas	Lwr Gnd Floor Plantroom	872ø x 1535	n/a	n/a	n/a	6	-	-	-	-	1580
CAL/02	Heatrea Sadia	Megaflco Commercial Indirect 400i	All Areas	Lwr Gnd Floor Plantroom	872ø x 1535	n/a	n/a	n/a	6	-	-	-	-	1580
CHP BUFFER VESSELS														
BV/01	SAV	SAV 500 Litre Thermal Storage Vessel	CHP Heating	Lwr Gnd Floor Plantroom	850 Ø x 1870	n/a	n/a	n/a	-	-	-	-	-	593
BV/02	SAV	SAV 500 Litre Thermal Storage Vessel	CHP Heating	Lwr Gnd Floor Plantroom	850 Ø x 1870	n/a	n/a	n/a	-	-	-	-	-	593
EXPANSION VESSELS														
EV/01	Flamco	Airfix P 24	HWS	Lwr Gnd Floor Plantroom	260ø x 485	n/a	n/a	n/a	-	-	-	-	-	4.3
EV/02	Flamco	Airfix P 24	HWS	Lwr Gnd Floor Plantroom	260ø x 485	n/a	n/a	n/a	-	-	-	-	-	4.3
EV/03	Flamco	Flexcon M 80	Heating	Lwr Gnd Floor Plantroom	550ø x 770	n/a	n/a	n/a	-	-	-	-	-	40
BREAK TANKS														
BT/01	Braithwaite	n/a	All Areas	Lwr Gnd Floor Plantroom	1000 x 1000 x 1000	n/a	n/a	n/a	-	-	-	-	-	1500 Approx.
BOOSTER SETS														
BS/01	Aquatech	AMV – FB Series 6 - 5	All Areas	Lwr Gnd Floor Plantroom	960 x 640 x 890 (+EV)	1.7 L/s	4.2 Bar	n/a	1.5	-	415/3/50	5.6	-	148
WATER SOFTENER														
WS/01	Culligan	Simplex Softener HE40-1"	Hot Water - All Areas	Lwr Gnd Floor Plantroom	1000 x 650 Area	1.2 L/s	0	n/a	n/a	8.4 – 21.6	230/1/50	n/a	n/a	290

PRESSURISATION UNITS														
PU/01	Aquatech	AquaPress MP41	Heating	Lwr Gnd Floor Plantroom	510 x 180 x 325	n/a	n/a	n/a	0.07		240/1/50	2	2	n/a
PUMPS														
P/01	Grundfos	MAGNA3 D 32 - 40	Underfloor Heating Circuit	Lwr Gnd Floor Plantroom	n/a	0.625 L/s	41 kPa	n/a	9 .. 74	-	230/1/50	0.09 .. 0.61	-	5.27
P/02	SAV	Refer to SAV	CHP Primary	-	-	-	-	-	-	-	-	-	-	-
P/03	Grundfos	ALPHA2 25-40 180	Towel Rail Circuit	Lwr Gnd Floor Plantroom	n/a	0.120 L/s	21 kPa	n/a	3 .. 26	-	230/1/50	0.04 .. 0.24	-	2.13
P/04	Grundfos	ALPHA2 25-80 130	Pool Circuit	Lwr Gnd Floor Plantroom	n/a	0.670 L/s	25 kPa	n/a	3 .. 50	-	230/1/50	0.04 .. 0.44	-	2.0
P/05	Grundfos	ALPHA2 25-60 130	Hot Water Circuit	Lwr Gnd Floor Plantroom	n/a	0.597 L/s	35 kPa	n/a	3 .. 34	-	230/1/50	0.04 .. 0.32	-	2.6
P/06	Grundfos	UPS 25-40 130	Dom. Hot water return	Lwr Gnd Floor Plantroom	n/a	0.170 L/s	17 kPa	n/a	24 .. 45	-	230/1/50	0.12 .. 0.20	-	2.6
P/07	Grundfos	Boiler Manufacturer	Boiler 01 pump	Boiler Casing	n/a	1.28	18	n/a	-	-	240/1/50	25 .. 450	-	n/a
P/08	Grundfos	Boiler Manufacturer	Boiler 02 pump	Boiler Casing	n/a	1.28	18	n/a	-	-	240/1/50	25 .. 450	-	n/a
RADIATORS														
R/01	-	-				n/a	n/a	n/a	-	-	-	-	-	
EXTRACT FANS														
EF/01	Airflow Developments	Icon 15S Eco c/w remote switch & humidistat	Boot room	G.02	197mm dia.	6 L/s	20	0.34	-	8.8	230/1/50	-	-	0.74
EF/02	Airflow Developments	Icon 15S Eco c/w motion sensor & timer	Cloak room	G.03	197mm dia.	6 L/s	20	0.34	-	8.8	230/1/50	-	-	0.74
EF/03	Airflow Developments	Icon 15S Eco c/w motion sensor & timer	Wetroom	G.05	197mm dia.	15 L/s	20	0.34	-	8.8	230/1/50	-	-	0.74
EF/04	Airflow Developments	Aventa 125T c/w motion sensor & humidistat	Master en-suite WC & shower	1.04	246 x 167 x 136	20 L/s	58	-	-	37	230/1/50	0.27	-	1.5
EF/05	Airflow Developments	Aventa 100T c/w motion sensor & humidistat	Master en-suite Bath	1.04	246 x 167 x 136	8 L/s	70	-	-	33	230/1/50	0.21	-	1.5
EF/06	Airflow Developments	QuietAir QT 120 MST	Bedroom 4 en-suite	1.03	147 x 147 x 131	15 L/s	25	0.24	-	13	230/1/50	0.09	-	1.05
EF/07	Airflow Developments	QuietAir QT 120 MST	Bedroom 2 & 3 en-suite	1.08	147 x 147 x 131	15 L/s	25	0.24	-	13	230/1/50	0.09	-	1.05
GRILLES														

Supply air grilles

Ref	Location	Room Ref.	Building level	Type *	Length (mm)	FCU air (m3 /min)	FCU air (l/s)	Fresh air (l/s)	Total air (l/s)	Active supply length (mm)	Approx blank/return section	l/s/m	FCU plenum qty	FCU plenum length	Fresh air plenum qty ^ψ	Fresh air plenum length (mm)
SG 1	Play room/cinema	LG.02	Lower	25mm 1-slot P/1F	5400	13.5	225	0	225	3900	1500	58	6	621	1	0
SG 2	Study	LG.03	Lower	25mm 1-slot P/1F	2300	6	100	0	100	2300	0	44	3	733	1	0
SG 3	Dog room	LG.07	Lower	25mm 1-slot P/1F	800	0	0	21	21	800	0	27	0	0	1	750
SG 4	Gym	LG.15	Lower	25mm 2-slot P/2F	3800	6	100	44	144	1900	1900	77	3	409	1	548
SG 4a	Stairwell	LG.01	Lower	F15N-U8/RPF/RC/SVB 100mm Hi	3000	7.5	125	0	125	1500	1500	85	4	344	1	0
SG 5	Family lounge	G.07	Ground	25mm 1-slot P/1F	3800	14.52	242	0	242	3800	0	64	6	604	1	0
SG 6	Kitchen	G.08	Ground	25mm 1-slot P/1F	5500	10.02	167	0	167	5500	0	31	4	1344	1	0
SG 7	Formal dining	G.06	Ground	25mm 1-slot P/1F	7700	13.5	225	0	225	4500	3200	50	8	534	1	0
SG 7a	Entrance	G.01	Ground	25mm 2-slot P/2F	2500	10.02	167	0	167	2500	0	67	5	470	1	0
SG 8	Bedroom 3	1.09	First	F15N-U8/RPF/RC/SVB 100mm Hi	1200	10.02	167	0	167	1200	0	142	4	269	1	0
SG 9	Bedroom 2	1.07	First	F15N-U8/RPF/RC/SVB 100mm Hi	1200	10.02	167	0	167	1200	0	142	4	269	1	0
SG 10	Bedroom 4	1.02	First	F15N-U8/RPF/RC/SVB 100mm Hi	1200	6	100	0	100	1200	0	85	3	367	1	0
SG 11	Master bedroom	1.06	First	F15N-U8/RPF/RC/SVB 100mm Hi	1500	12	200	0	200	1500	0	136	5	270	1	0
SG 12	Stairwell	1.01	First	F15N-U8/RPF/RC/SVB 100mm Hi	1250	12	200	0	200	1250	0	163	5	220	1	0

Extract & FCU Return air via grilles

Ref	Location	Room Ref.	Building level	Type *	Length (mm)	FCU return air (m3 /min)	FCU return air (l/s)	Extr air (l/s)	Total air (l/s)	Active extract length (mm)	Approx blank/supply section	l/s/m	FCU plenum qty req.d	FCU plenum length	Extract air plenum qty ^ψ	Extr air plenum length (mm)
RG 1	Utility room	LG.10	Lower	Extract valve KS150	150	0	0	30	30	150	0	240	0	0	1	100
RG 2	Gym	LG.15	Lower	Continuation of SG4	3800	6	100	0	100	1900	1900	53	0	0	0	0
RG 2a	Stairwell	LG.01	Lower	Continuation of SG4a	3000	7.5	125	0	125	1500	1500	85	0	0	0	0
RG 3	Family lounge	G.07	Ground	25mm 1-slot P/1F	6400	14.52	242	0	242	6400	0	38	0	0	0	0
RG 4	Kitchen	G.08	Ground	25mm 1-slot P/1F	5500	10.02	167	0	167	5500	0	31	4	1344	0	0
RG 5	Boot room	G.02	Ground	Extract valve KS100	100	0	0	6	6	100	0	80	0	0	1	50
RG 6	Formal dining	G.06	Ground	25mm 1-slot P/1F	7700	13.5	225	0	225	7700	0	29	0	0	0	0
RG 7	Stairwell	1.01	First	F15N-U8/RPF/RC/ 150mm Hi	1250	12	200	0	200	1250	0	163	1	1200	0	0

Extract & FCU Return air via voids with coffer, shadow gap or furniture slot detail

Ref	Location	Room Ref.	Building level	Type *	Length (mm)	FCU return air (m3 /min)	FCU air (l/s)	Extr air (l/s)	Total air (l/s)	l / s / m
RA 1	Play room/cinema	LG.02	Lower	L/L furniture slot (75mm)	1800	13.5	225	0	225	127
RA 2	Study	LG.03	Lower	coffer/shadow gap (30mm)	2000	6	100	0	100	51
RA 3	WC	LG.06	Lower	shadow gap (20mm)	800	0	0	10	10	13
RA 4	Staff en-suite	LG.12	Lower	shadow gap (20mm)	800	0	0	10	10	13
RA 5	Pool changing Rm	LG.13	Lower	shadow gap (20mm)	750	0	0	10	10	14
RA 5a	Entrance	G.01	Ground	shadow gap (20mm)	2000	10.02	167	10	177	90
RA 6	En-suite	1.08	First	shadow gap (20mm)	800	0	0	15	15	19
RA 7	Bedroom 3	1.09	First	coffer/shadow gap (50mm)	3000	10.02	167	0	167	56
RA 8	Bedroom 2	1.07	First	coffer/shadow gap (50mm)	3000	10.02	167	6	173	58
RA 9	Bedroom 4	1.02	First	L/L furniture slot (50mm)	1500	6	100	0	100	68
RA 10	Master bedroom	1.06	First	L/L furniture slot (100mm)	1500	12	200	13	213	144
RA 11	Master WC	1.05	First	shadow gap (20mm)	800	0	0	10	10	13
RA 12	Master shower	1.05	First	shadow gap (20mm)	800	0	0	10	10	13
RA 13	Master bath	1.05	First	shadow gap (20mm)	800	0	0	8	8	10

Grilles/diffusers shall be Brooke Air Flowline linear slot or Brooke Air Linear Bar, each with plaster or recessed frame unless advised otherwise.

Grilles/diffusers shall have both their frames and tubes finished in the colour specified by the interior designer unless advised otherwise

Grille and diffuser lengths indicated are based on drawn information provided, and estimation of space (e.g. cornices) requirements. Final lengths shall be determined by contractors measurement of actual site conditions and shall be subject to approval/confirmation by the Architect/interior designer with regard to length required. Adjust plenum lengths to nearest 5mm & adjust any blank to suit

Furniture & coffer slot dimensions to be confirmed by the Architect/interior designer with regard to length or height available

*Finishes and mounting arrangement of grilles & diffusers shall be in accordance with Architect/Interior designers requirements.

*Coffer slots shall be in accordance with Architect/Interior designers requirements & details.

Room extract & FCU return air shall be by way of coffer details, shadow gap details etc as indicated by the Architect/interior designer unless indicated otherwise

Room extract & FCU return air that is not as above shall be via grilles, air valves etc in accordance with Architect/Interior designers requirements.

In the event of calculated fresh air or extract plenum lengths being smaller than minimum available size they shall be obtained at the minimum size and FCU plenums adjusted to suit. Refer to Inspire Consulting for clarification if required.

External supply & extract weather louvres

Ref	Serving	Room Ref.	Building level	Type *	Active Width (mm)	Active Height (mm)	Louvre area (m ²)	Free area (%)	Effective area (m ²)	Min free area req.d (m ²)
SL 1	Stairwell	LG.01	Lower	OL / F / IS / ** / 350 x 350 / *	350	350	0.122	30	0.037	0.013
SL 2	MVHR	LG.09	Lower	OL / F / IS / ** / TBC x TBC / *			0.000		0.000	0.064
SL 3	CHP/Boiler air	LG.09	Lower	Louvred plant room door	675	1600	1.080	30	0.324	0.158
SL 4	Pool plant	LG.09	Lower	OL / F / IS / ** / TBC x TBC / *			0.000		0.000	0.180

Note - Supply louvres SL2, & 4 may form part of one common supply louvre. For costing only, use 1000 by 800 common louvre (TBC). Refer to detail.

Louvres shall be Brooke Air OL type, C/W 32mm flange & insect screen unless advised otherwise.

Fixing method shall be type RL, SS or MT as appropriate. Type SF shall not be used without the specific approval of the Architect & Engineer

Louvre lengths & heights indicated are based on drawn information provided, and estimation of space (e.g. cornices) requirements. Final lengths shall be determined by contractors measurement of actual site conditions and shall be subject to approval/confirmation by the Architect/Engineer with regard to length required.

*Finishes and mounting arrangement of louvres shall be in accordance with Architects requirements.

External louvres, roof terminal etc shall be as indicated on the applicable drawings, with style, finish etc in accordance with Architect/Interior designers requirements.