

Client: Rothwell Plumbing
Project: 390 Princess Road
House Type: 8 Bed House
Reference No: LBD3258
Revision: A

Schedule Of Equipment

Equipment Schedule	
ASHP:	2 x 14kw Mitsubishi Ecodan
Cylinder:	500 litre
Low loss header:	sized as per ASHP requirements
System Temperature:	45°C flw, 40°C rtn, 42.5°C mean
Plastic Pipework:	Pipework & Fittings by Speedfit
GF zone Heating Pump:	Grundfos alpha 3 32-80
FF zone Heating Pump:	Grundfos alpha 3 32-60
Underfloor Heating:	
Controls:	
Heating Zone Valve:	
Hot & Cold Water Zone Valve:	
TRV's:	
Glycol/Inhibitor:	ADEY
Automatic bypass Valve:	Honeywell DU145-3/4B
Pressurisation Unit:	

U-Values	
Roof	0.16
Outside Wall	0.41
Ground Floor	0.25
Glazing	1.4
Number of Zones	2
External Temp	-2.4°C



Symbols & Notation

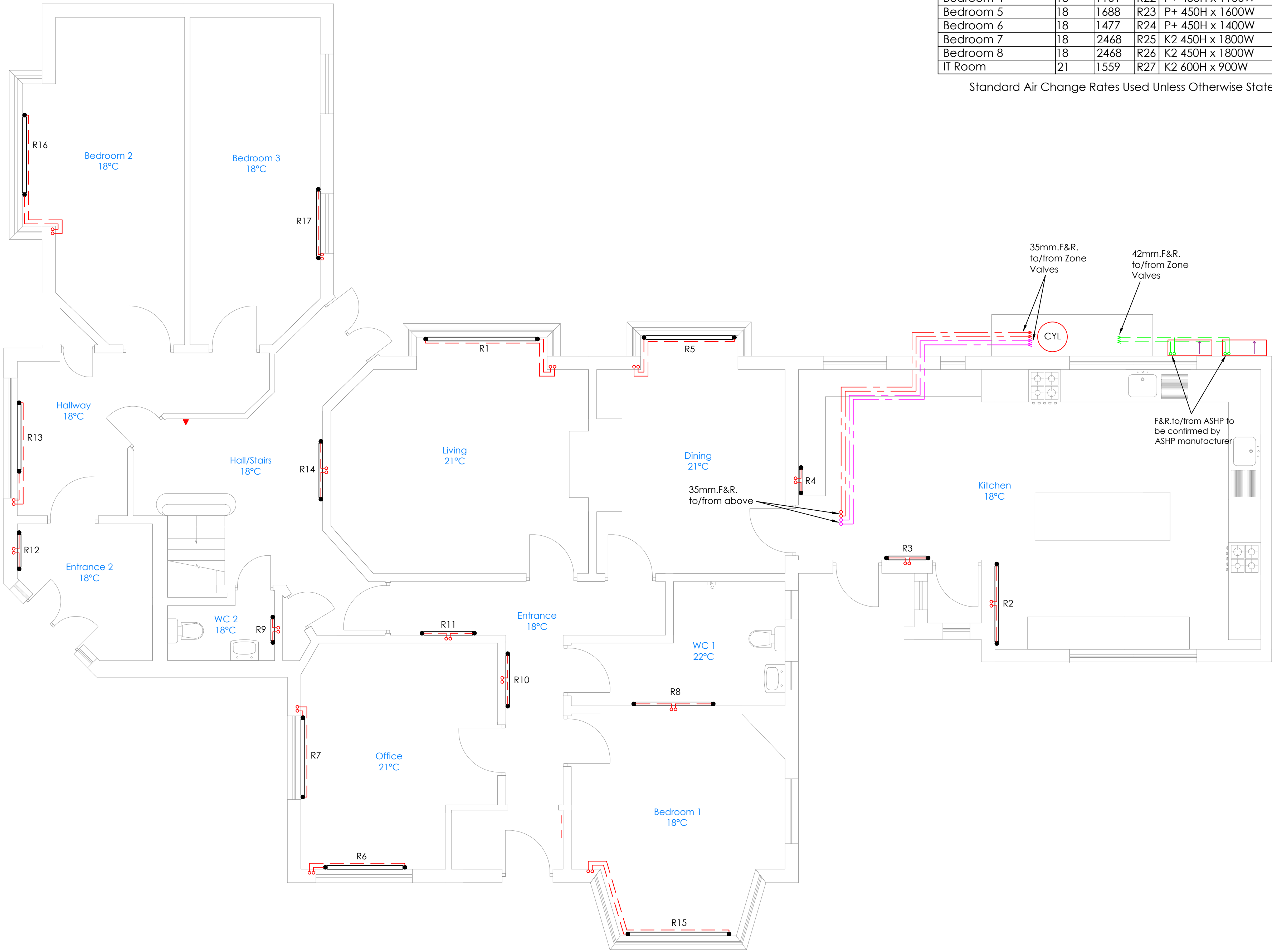
	Pipe Below Floor		HWS - Hot Water Supply
	Pipe at Low Level		MCW - Mains Cold Water
	Pipe at High Level Exposed		RTN - Hot Water Return
	Pipe at High Level Above Ceiling		BCW - Blended Cold Water
	Red = Zone 1		
	Purple = Zone 2		
	Green = Boiler Primary		Washing Machine/Dishwasher
			Incoming Main
F&R	Flow & Return		Room Stat Zone 1
TA	To Above		Room Stat Zone 2
TB	To Below		Stopcock & DOC
FA	From Above		Manifold
FB	From Below		

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1. This system has been designed in accordance with CIBSE, BS Standards, The Building Regulations, NHBC Technical Standards and the clients own specification, where applicable, at the time of design to the temperatures specified and operating under continuous operation. However, to maintain these temperatures during extreme conditions it may be necessary to provide a supplementary heat source. All Manufacturers installation instructions take precedents over this design.
2. It is the responsibility of the installer to fully complete the Installation, Commissioning and Servicing of all equipment, In accordance with all relevant regulation.
3. The installation MUST comply with the current edition of the Building Regulations, all Codes of Practice, British Standards & the manufacturer installations instructions provided by the manufacturer.
4. All radiators / towel rails to be securely fitted with the brackets provided & with a minimum clearance beneath the emitter of at least 100mm and 50mm above. All Radiators with an output exceeding 1500W MUST have a 15mm supply, this will generally be indicated on the drawing.
5. All drops behind dry lining to be 10mm pipework larger than this to drop in corner of the room closest to the radiator.
6. All pipework to be laid to fall to allow ease of draining and venting with air vents at all high points and drain cocks at all low points.
7. The design for the Hot & Cold Water is based upon sufficient mains cold water flow and pressure to enable correct operation of the system. If this is insufficient then a suitable accumulator and pressure booster pump may need to be fitted. A water softener may also need to be fitted and this needs to be checked on commissioning and installation of the system.
8. All pipework to be insulated in accordance with the Building Regulations & British Standard with specific attention being given to pipework in unheated areas such as roof spaces and garages.
9. All Plumbing fittings & outlets to be fitted in accordance with the manufacturers instruction and be fitted with isolating / regulating valves.
10. All notching & drilling of floor joists to be carried out in accordance with B.S. 12828 : 2003, Figure NA.1 - Limitations on notching and drilling in structural joists.
11. It is recommended that the heating system be cleansed and treated with a corrosion inhibitor. We recommend the use of Adey water treatment products & these should only be used in accordance with their own specific instructions.
12. The ASHP shall be commissioned all in accordance with the installation instructions provided with the ASHP. The system shall be balanced by regulating the flow rate to ensure the required temperature difference across the system. On each radiator the lockshield valve is to be adjusted to give the required temperature drop across the emitter.
13. As some of these items may be heavy, reference should be made to the installers own CDM requirements for lifting and installing of this equipment. Care should also be taken when handling the ASHP insulation panels which may cause irritation to the skin. No asbestos, mercury or CFCs are included in any part of the ASHP or its manufacture.
14. This Design is based upon drawings and information received by the client and therefore it's accuracy and performance is dependant on that information being correct. If any of the information on the drawings is altered by anyone other than LB Design Ltd or the information originally received is incorrect we will not insure any part of the design package.
15. If drawings have been converted in to CAD DWG we cannot grantee the scale to be correct.
16. Plumbing Contractor should allow for added expansion vessel on larger properties.
- 17.Areas with UFH have been assumed at 21°C throughout & 1.5 Air Changes Per Hour.

Radiator Schedule				
Stelrad Compact				
Room	Temp	Watts	No.	Size
Living	21	4112	R1	K3 500H x 2000W
Kitchen	18	3797	R2	K3 700H x 1400W
Kitchen	18	1898	R3	K3 700H x 700W
Kitchen	18	956	R4	K3 600H x 400W
Dining	21	3290	R5	K3 500H x 1600W
Office	21	1919	R6	K2 450H x 1400W
Office	21	1919	R7	K2 450H x 1400W
WC 1	22	2425	R8	K2 600H x 1400W
WC 2	18	392	R9	K1 600H x 400W
Entrance Hall	18	882	R10	K1 600H x 900W
Entrance Hall	18	882	R11	K1 600H x 900W
Entrance Hall 2	18	1039	R12	K2 600H x 600W
Hallway	18	1645	R13	K2 450H x 1200W
Hall/Stairs	18	1732	R14	K2 600H x 1000W
Bedroom 1	18	2468	R15	K2 450H x 1800W
Bedroom 2	18	1919	R16	K2 450H x 1400W
Bedroom 3	18	1645	R17	K2 450H x 1200W
Landing	18	2771	R18	K2 600H x 1600W
Landing	18	2771	R19	K2 600H x 1600W
Bathroom	22	2771	R20	K2 600H x 1600W
WC 3	22	1905	R21	K2 600H x 1100W
Bedroom 4	18	1161	R22	P+ 450H x 1100W
Bedroom 5	18	1688	R23	P+ 450H x 1600W
Bedroom 6	18	1477	R24	P+ 450H x 1400W
Bedroom 7	18	2468	R25	K2 450H x 1800W
Bedroom 8	18	2468	R26	K2 450H x 1800W
IT Room	21	1559	R27	K2 600H x 900W

Standard Air Change Rates Used Unless Otherwise Stated



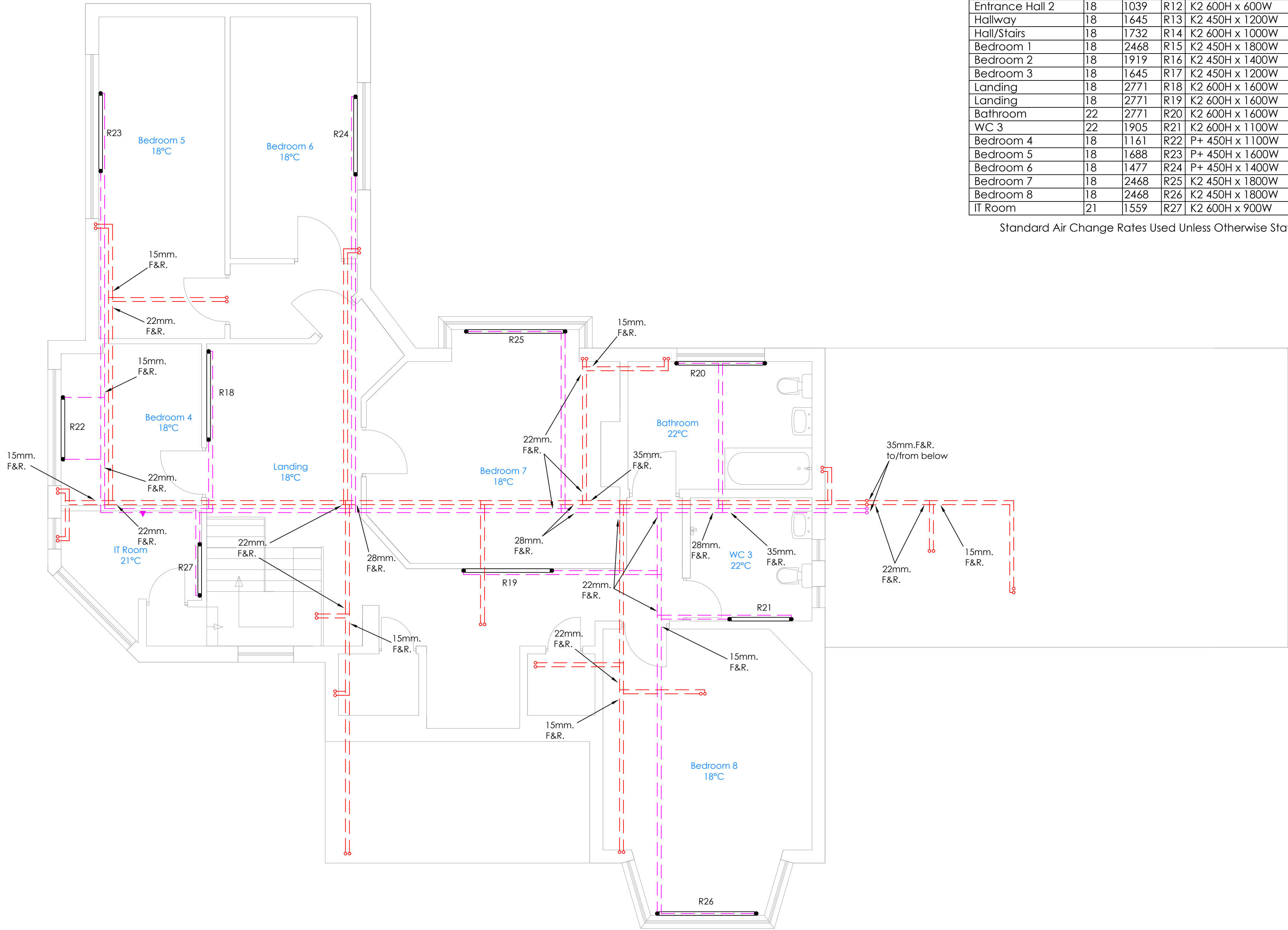
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15mm to any individual
Radiator if the output
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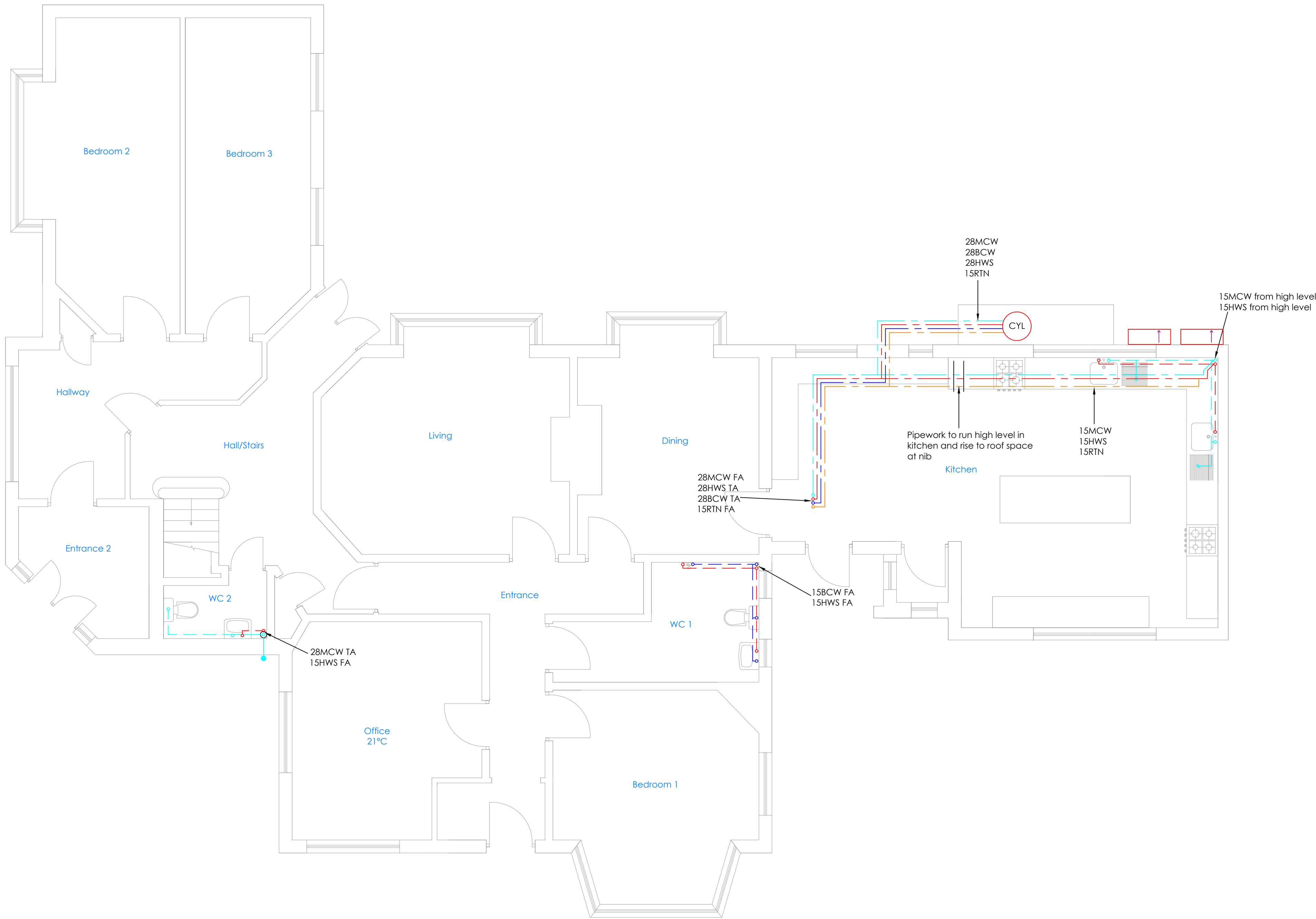
Hot water return to be 15mm and requires a bronze or stainless steel pump capable of achieving the required head.

Mains cold water to be blended at cylinder.

Incoming main to be 28mm and have required pressure.

Standard Connection
Sizing Key

- Kitchen sink/ Wash hand basin - 15mm
- W/Mc - 15mm
- D/washer - 15mm
- WC - 15mm
- Bath - 22mm
- Shower - 15mm



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