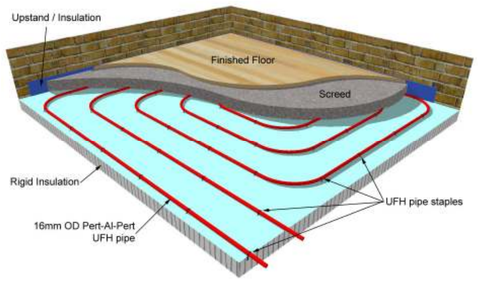
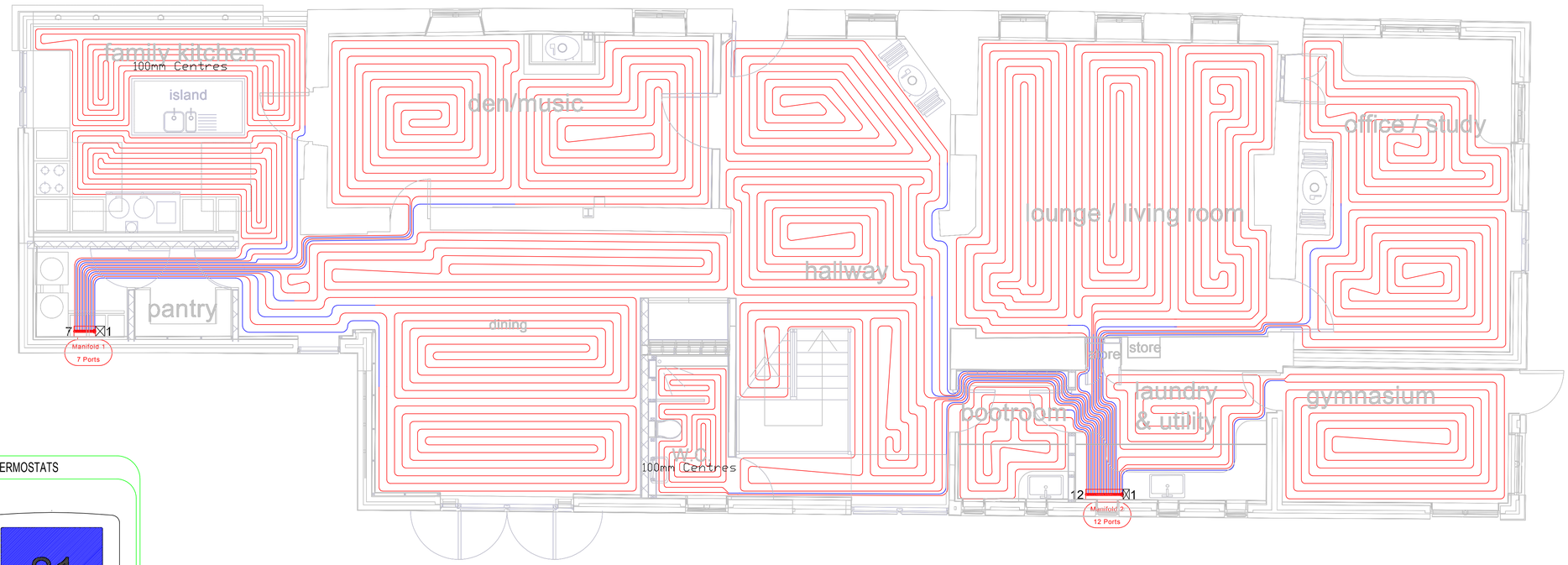
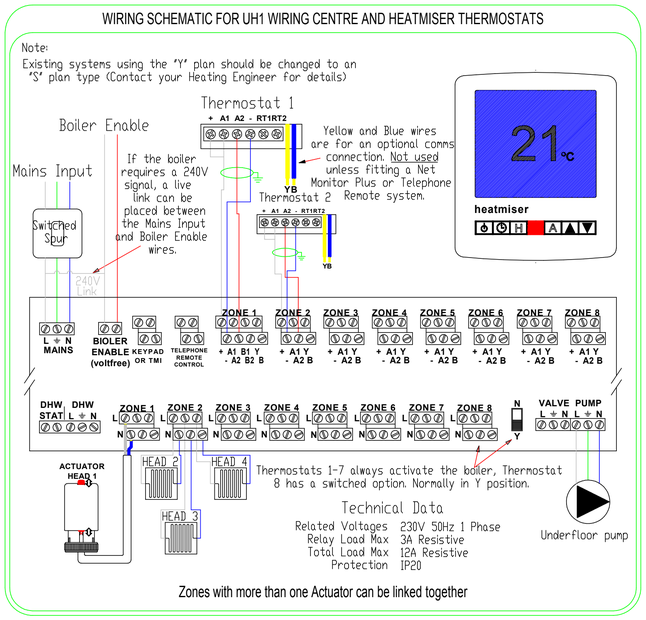


Manifold 1 Details

Loop No.	Room	Pipe Centres	Design Length	Install Length
1	Dining	150 mm	96 m	
2	Dining	150 mm	77 m	
3	Dining	150 mm	80 m	
4	Den/Music	150 mm	102 m	
5	Den/Music	150 mm	94 m	
6	Family Kitchen	100 mm	87 m	
7	Family Kitchen	100 mm	77 m	



All pipework at 150mm centres unless otherwise stated



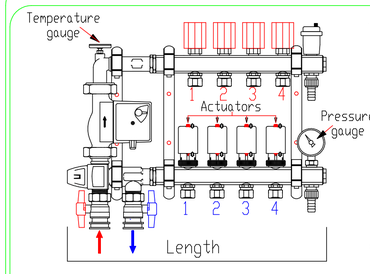
HEATLOSS DETAILS

Room	Area	Design Temp.	Air Change	Heatloss per m2	Total Heatloss	Maximum UFH Output	UFH Shortfall Against Heatloss
Family Kitchen	22.2 m²	22 °C	2.0 1/h	91 W/m²	2013 Watt	1929 Watt	
Den/Music	24.2 m²	21 °C	1.5 1/h	49 W/m²	1195 Watt	2400 Watt	
Dining	34.9 m²	21 °C	1.5 1/h	51 W/m²	1789 Watt	3490 Watt	
Hallway	38.8 m²	18 °C	1.5 1/h	38 W/m²	1460 Watt	3350 Watt	
W.C.	4.8 m²	22 °C	2.0 1/h	77 W/m²	369 Watt	411 Watt	
Lounge/Living Room	35.3 m²	21 °C	1.5 1/h	46 W/m²	1632 Watt	3530 Watt	
Bootroom	6.2 m²	18 °C	1.5 1/h	44 W/m²	276 Watt	499 Watt	
Laundry & Utility	10.6 m²	18 °C	2.0 1/h	52 W/m²	545 Watt	587 Watt	
Office/Study	25.7 m²	21 °C	1.5 1/h	57 W/m²	1468 Watt	2570 Watt	
Gymnasium	11.5 m²	21 °C	1.5 1/h	74 W/m²	852 Watt	1150 Watt	

Manifold 2 Details

Loop No.	Room	Pipe Centres	Design Length	Install Length
1	Gymnasium	150 mm	87 m	
2	Laundry & Utility	150 mm	35 m	
3	Office/Study	150 mm	89 m	
4	Office/Study	150 mm	84 m	
5	Lounge/Living Room	150 mm	87 m	
6	Lounge/Living Room	150 mm	80 m	
7	Lounge/Living Room	150 mm	87 m	
8	Hallway	150 mm	96 m	
9	Hallway	150 mm	83 m	
10	Hallway	150 mm	75 m	
11	W.C.	100 mm	61 m	
12	Bootroom	150 mm	37 m	

MANIFOLD DIMENSIONS



Portage	2 ports	3 ports	4 ports	5 ports	6 ports	7 ports	8 ports	9 ports	10 ports	11 ports	12 ports
Length mm	347mm	397mm	447mm	497mm	547mm	597mm	647mm	697mm	747mm	797mm	847mm

NOTES

1. THESE DRAWINGS ARE INTENDED FOR INSTALLATION PURPOSES ONLY AND THUS PIPEWORK MAY ALTER FROM THAT SHOWN. THESE DRAWINGS ARE NOT INTENDED FOR CONSTRUCTION USE AND SHOULD NOT BE USED AS SUCH.
2. DETAILS OF ANY ALTERATION DURING INSTALLATION SHOULD BE NOTIFIED TO THE UNDERFLOOR HEATING DESIGNER FOR DRAWINGS TO BE PRODUCED SHOWING SYSTEM AS FITTED.
3. PRESSURE TESTING:
   A PRESSURE TEST OF A MINIMUM 3 BAR & MAXIMUM OF 6 BAR MUST BE APPLIED TO ALL THE UNDERFLOOR HEATING PIPEWORK PRIOR TO & DURING FLOOR FIXING.
4. SCREED CURING:
   A CURING PERIOD OF 21 DAYS FOR CEMENT SCREEDS, OR 7 DAYS FOR ANHYDRITE SCREEDS MUST ELAPSE BEFORE HEAT CAN BE APPLIED FOR PRECONDITIONING. CEMENT SCREEDS REQUIRE CURING UNDER POLYTHENE SHEET FOR THE FIRST 7 DAYS AFTER LAYING FOR OPTIMUM STRENGTH. HEAT SHALL BE APPLIED TO THE FLOOR SCREED INITIALLY, USING WARM WATER AT 25-30 degC ON THE FIRST DAY, AFTER WHICH THE FLOW TEMPERATURE CAN BE RAISED BY 5 degC PER DAY UNTIL THE DESIGN TEMPERATURE IS REACHED.
5. AMBIENT TEMPERATURES:
   THE UNDERFLOOR HEATING PIPEWORK SHOULD NOT BE LAID WITH AMBIENT TEMPERATURES OF BELOW 0 degC. SCREEDS SHOULD NOT BE LAID WITH AMBIENT TEMPERATURES OF BELOW 5 degC.
6. WOOD FLOORS:
   BEFORE TIMBER FLOORING IS LAID UPON HEATED SCREEDS THE SCREED MUST HAVE BEEN CURED AND CONDITIONED PREVIOUSLY TO A MOISTURE CONTENT OF APPROX 0.5% (Carbide Method) BY HEATING TO THE OPERATING CONDITION FOR 5 DAYS. IT IS NOT RECOMMENDED TO LAY TIMBER FINISHES WHOSE MOISTURE CONTENT EXCEEDS 8-9% (by volume), AS THE RISK OF WARPING AND SHRINKAGE DAMAGE WILL BECOME UNACCEPTABLE. THE TIMBER MANUFACTURERS INSTRUCTIONS MUST PREVAIL. THE OPERATIONAL SURFACE TEMPERATURE OF WOOD FLOORS SHOULD NOT EXCEED 27 degC AS THIS CARRIES A RISK OF SHRINKAGE. SUBSEQUENT COOLING MAY RESULT IN SWELLING AS EXTRA MOISTURE BECOMES ABSORBED INTO THE WOOD FROM THE ATMOSPHERE.
7. CERAMIC TILES ON WOODEN FLOORS:
   BATHROOM RENOVATION PROJECTS CONTAINING CERAMIC FLOOR TILE ON TIMBER SUB-FLOORS REQUIRE EXTRA CARE. ALL FLOOR BOARD SUBSTRUCTURES REQUIRE TO BE REPLACED OR OVERLAID WITH LARGE SHEETS OF WPB PLYWOOD TO ENSURE MINIMUM FLEXURAL MOVEMENT & SECURED USING ADHESIVE OR NAILS AT 150mm SPACING. CERAMIC TILE ADHESIVE AND GROUTING MUST CONTAIN A FLEXIBLE LATEX ADMIXTURE TO PERMIT MICRO-MOVEMENT OF TILES DURING NORMAL OPERATION OF THE FLOOR HEATING SYSTEM. FAILURE TO CARRY OUT THESE INSTRUCTIONS COULD RESULT IN DAMAGE TO THE PIPEWORK, SCREED OR FLOOR COVERING.
8. CARPET
   CARE SHOULD BE TAKEN TO ENSURE THAT THE COMBINED TOGG VALUE OF BOTH THE CARPET AND THE UNDERLAY DOES NOT EXCEED 2 TOGG.

DESIGN PARAMETERS

EXTERNAL DESIGN TEMPERATURE		-3
PARTY WALL OTHERSIDE TEMP		NA
ELEMENT	CONSTRUCTION	U VALUE
EXTERNAL WALL	Solid	0.35
INTERNAL WALL	Blk/PB	1.8
PARTY WALL	NA	NA
GARAGE WALL	NA	NA
GROUND FLOOR	Ins solid	0.0 UFH
INTERNAL FLOORS	NA	NA
ROOF	Ins Pitch	0.20
WINDOWS	D Glazed	2.8
DOOR		2.0

* INDICATES AN ASSUMED VALUE

UNDERFLOOR HEATING TECHNOLOGIES
t: 01386 839 472 www.ufht.co.uk f: 01386 839 474

DRAWING TITLE: Ground Floor Large House

CLIENT: Mr A. Nonymous

Underfloor Heating Layout

DRAWN BY	DATE	SCALE @ A1	DRG No.
DCU	23/07/13	1:50	UT0106