

Radiator Schedule

Supply Temp ° C	45
Return Temp ° C	40

Radiator Ref	Room Name / Location reference	Room Temp (°C)	Heat Loss (W)	No of Radiators	Actual Output per Radiator (w)	Height	Length	Depth	Manufacturer	Range	Sub-Category	Model	Towel Rail	Standard Output (w)
01-Ground Floor	En-Suite 2	22	253	1	209	1744	600	0	Stelrad	CLASSIC TOWEL RAIL	STRAIGHT CHROME	142769	YES	667
02-Ground Floor	Cloak Room/WC	18	283	1	209	1744	600	0	Stelrad	CLASSIC TOWEL RAIL	STRAIGHT CHROME	142769	YES	667
03-Ground Floor	En-Suite 1	22	852	1	209	1744	600	0	Stelrad	CLASSIC TOWEL RAIL	STRAIGHT CHROME	142769	YES	667
04-Ground Floor	Cloak Room	18	117	1	118	1211	500	0	Stelrad	CLASSIC TOWEL RAIL	STRAIGHT CHROME	147004	YES	379
01-First Floor	Landing	18	881	2	479	600	900	0	Stelrad	Compact	P+	143769	No	1211
02-First Floor	Sitting Room	21	827	1	877	600	1100	0	Stelrad	Compact	K3	3063311	No	2628
03-First Floor	Thomasbed Room/Dressing Area	18	542	1	542	450	1000	0	Stelrad	Compact	K2	143722	No	1371
04-First Floor	Bedroom 4/Dressing Area	18	616	1	650	450	1200	0	Stelrad	Compact	K2	143724	No	1645
05-First Floor	Guest Room 1	18	417	1	417	450	1000	0	Stelrad	Compact	P+	143704	No	1055
06-First Floor	Guest Room 2	18	486	1	488	450	900	0	Stelrad	Compact	K2	143721	No	1234
07-First Floor	En-suite 3	22	356	2	209	1744	600	0	Stelrad	CLASSIC TOWEL RAIL	STRAIGHT CHROME	142769	YES	667
08-First Floor	En-suite 4	22	363	2	209	1744	600	0	Stelrad	CLASSIC TOWEL RAIL	STRAIGHT CHROME	142769	YES	667
09-First Floor	Shower Room	22	339	2	174	1744	500	0	Stelrad	CLASSIC TOWEL RAIL	STRAIGHT CHROME	142768	YES	557

SAMPLE






Revision notes:		
Rev:	Date:	Notes:

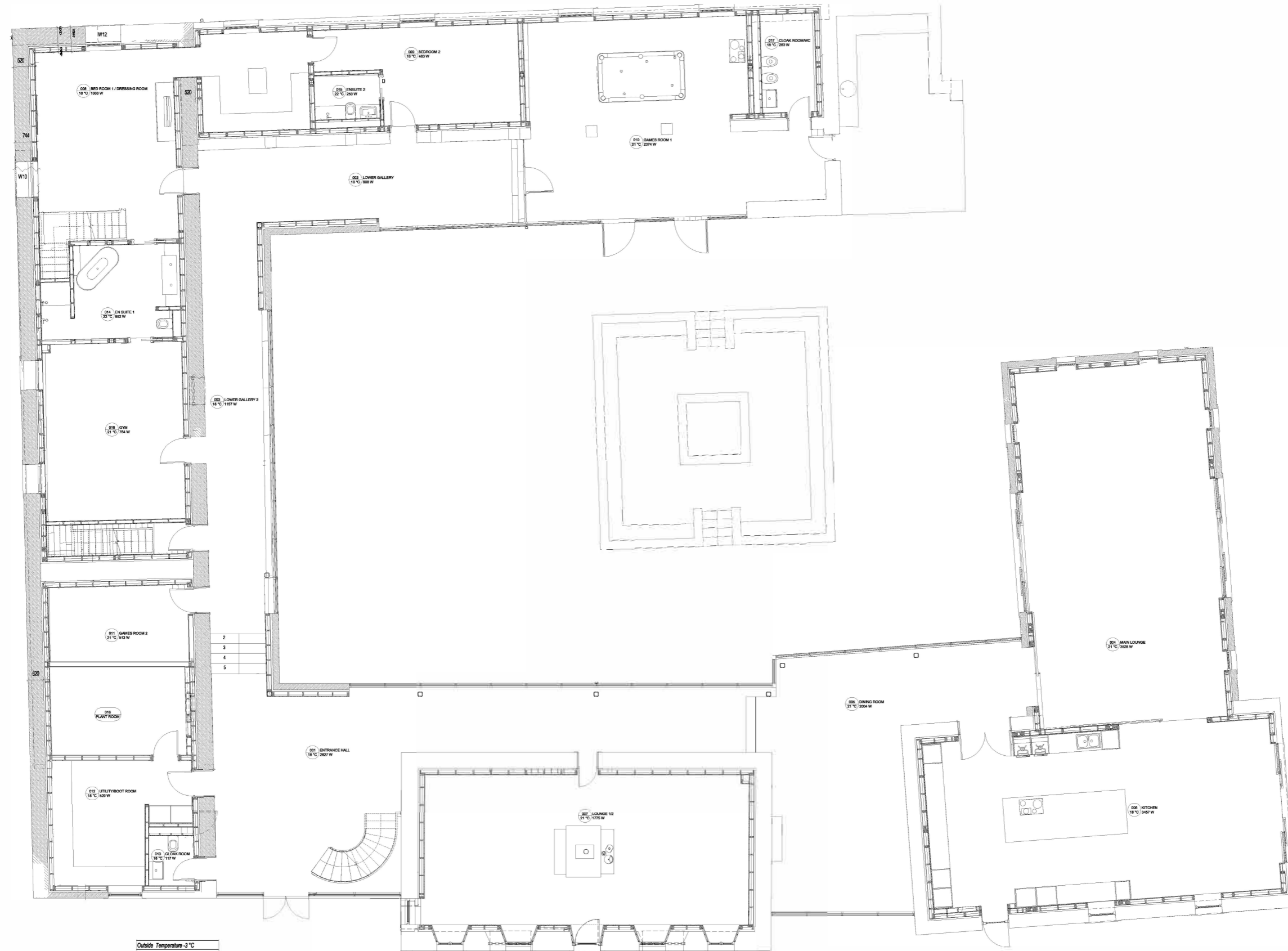
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Project:	
Project Ref. No.	Drawing Title: Radiator Schedule

Date: 23-07-2022
Scale @ A3:
Revision:

LEGEND

-  Cold Water Pipes
-  Hot Water Pipes
-  Circulation Flow
-  Hot Water Cylinder
-  Riser / Drop Location for Pipe



Outside Temperature -3 °C
 Building Heat Loss 23506 Watt
 Heat Loss for Ground floor 23078 Watt
 Area for Ground floor 604.31 m²

Room Name	ENTRANCE HALL	LOWER GALLERY 1	LOWER GALLERY 2	MAIN LOUNGE	DINING ROOM	KITCHEN	LOUNGE JR.	BED ROOM 1 / DRESSING ROOM	BED ROOM 2	GAME ROOM 1	GAME ROOM 2	UTILITY/BOOT ROOM	CLOAK ROOM	EN SUITE 1	EN SUITE 2	GM	CLOAK ROOM/C
Room No.	001	003	002	004	005	006	007	008	009	010	011	012	013	014	015	016	017
Room Design Temperature	18 °C	18 °C	18 °C	21 °C	21 °C	18 °C	21 °C	18 °C	18 °C	21 °C	21 °C	18 °C	18 °C	22 °C	22 °C	21 °C	18 °C
Air Change Rate (per hr)	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.5	1.5	1.5	0.5	1.5
Room Height (m)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Room Area (m²)	60.7	36.2	71.08	77.38	51.58	68.06	64.22	47.88	18.68	57.44	53.87	16.52	2.61	13.06	3.32	26.35	5.83
Volumetric Losses (W/m³)	597	708	288	758	503	1735	501	606	180	582	118	142	67	400	102	378	102
Fabric Losses (W/m²)	2030	888	621	2770	1917	1681	1734	862	128	1872	386	388	49	433	191	486	139
Total Heat Loss (Watts)	2627	1157	686	3268	2064	3457	1770	1689	462	2014	413	526	117	652	283	764	283
Heat Loss (w/m²)	37.7	38.3	28.6	45.6	39	50.1	31.6	35.4	24.4	41.3	42.5	32	44.6	63.3	76.1	27	47.8

SAMPLE

Revision notes:

Rev:	Date:	Notes:

Project:

Project Ref. No.






Drawing Title:
Ground Floor Heatloss

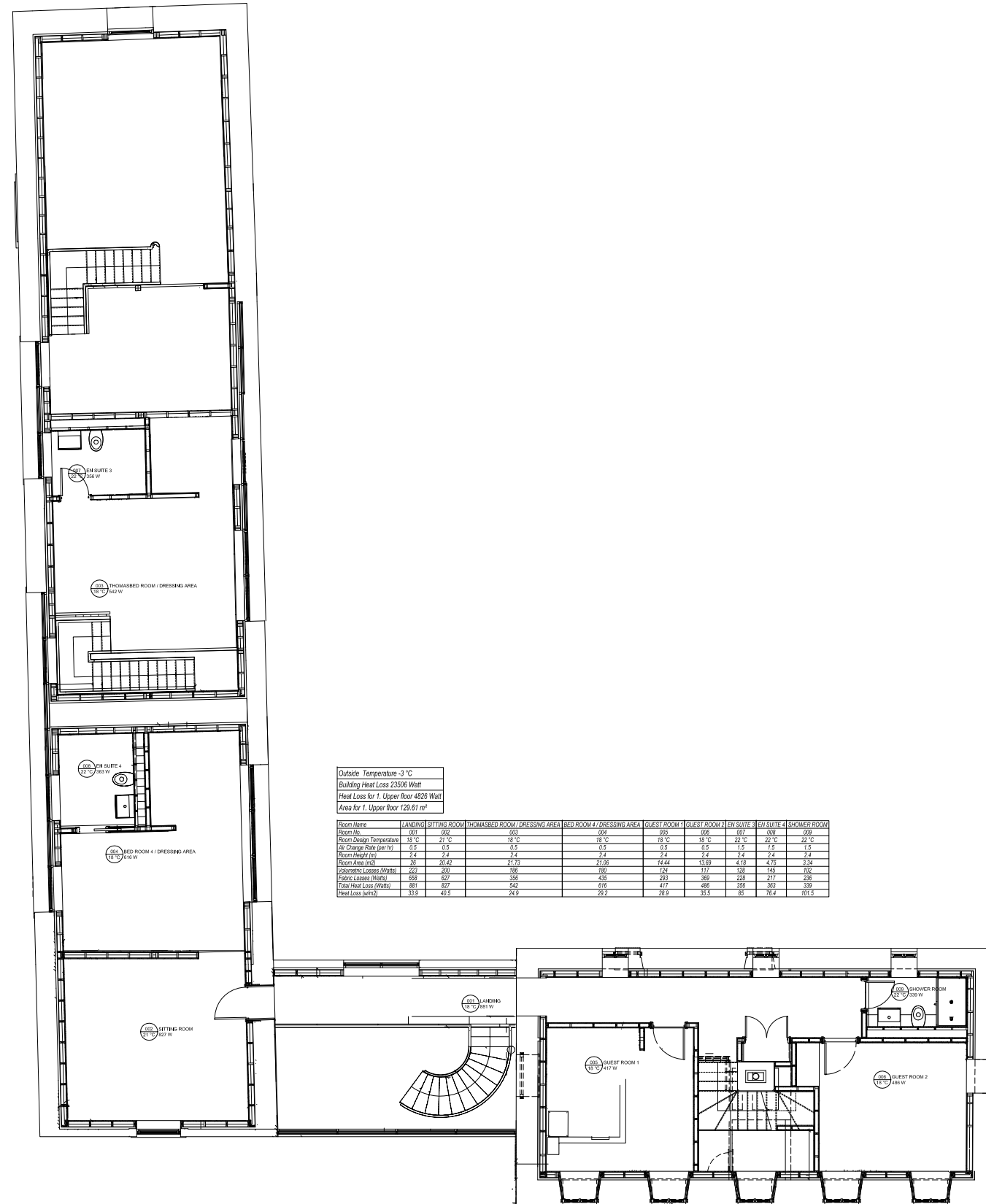
Date:
 23-07-2022

Scale @ A3:
 1:145

Revision:

LEGEND

-  Cold Water Pipes
-  Hot Water Pipes
-  Circulation Flow
-  Hot Water Cylinder
-  Riser / Drop Location for Pipe



Outside Temperature -3 °C
 Building Heat Loss 23506 Watt
 Heat Loss for 1. Upper floor 4828 Watt
 Area for 1. Upper floor 129.61 m²

Room Name	LANDING	SITTING ROOM	THOMASBED ROOM / DRESSING AREA	BED ROOM 4 / DRESSING AREA	GUEST ROOM 1	GUEST ROOM 2	EN SUITE 3	EN SUITE 4	SHOWER ROOM
Room No.	001	002	003	004	005	006	007	008	009
Room Design Temperature	19.5°	21.5°	19.5°	19.5°	19.5°	19.5°	22.5°	22.5°	22.5°
Air Change Rate (per hr)	0.5	0.5	0.5	0.5	0.5	0.5	1.5	1.5	1.5
Room Area (m ²)	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
Room Area (m ²)	26	20.42	21.73	21.06	14.44	13.68	4.18	4.75	3.74
Volumetric Losses (Watts)	223	200	188	180	124	117	128	145	102
Surface Losses (Watts)	668	612	396	438	293	369	208	217	238
Total Heat Loss (Watts)	891	812	584	618	417	486	336	363	340
Heat Loss (w/m ²)	33.9	40.5	24.9	25.7	28.9	35.5	85	76.4	101.5

SAMPLE

Revision notes:		
Rev:	Date:	Notes:

Project: _____

Project Ref. No. _____

Drawing Title:
**First Floor
 Heatloss**

Date:
 23-07-2022

Scale @ A3:
 1:145

Revision:

LEGEND

— Flow

--- Return

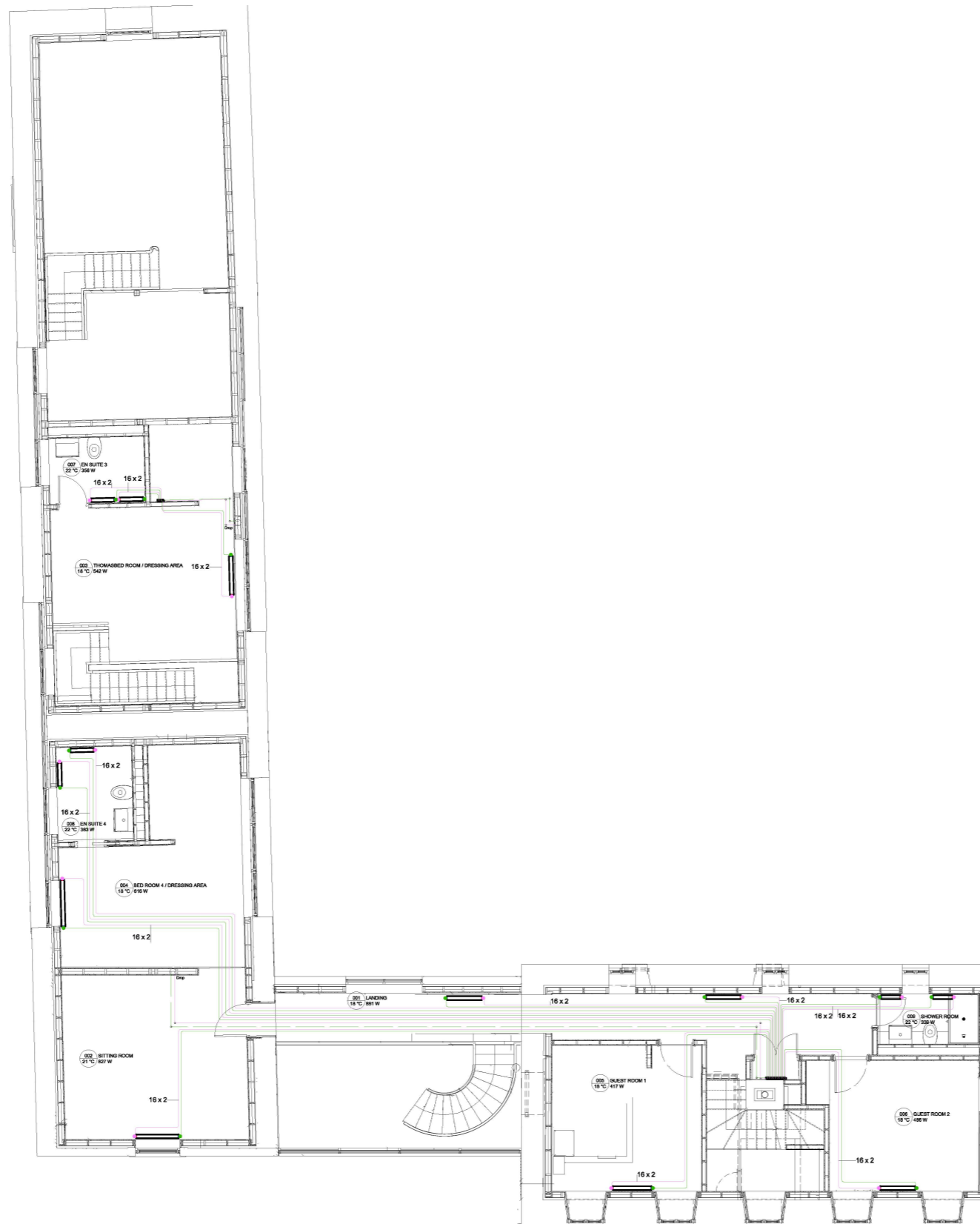
— Radiator

⊕ Hot Water Cylinder

☒ Hydrobox

☒ Integrated Hydrobox & Cylinder

Riser / Drop Location for Pipe



Revision notes:

Rev.	Date:	Notes:

Date:
18-07-2022

Scale @ A3:
1:145

Revision:

Project Ref. No

Drawing Title:
First Floor
Heating Network

LEGEND

Flow

Return

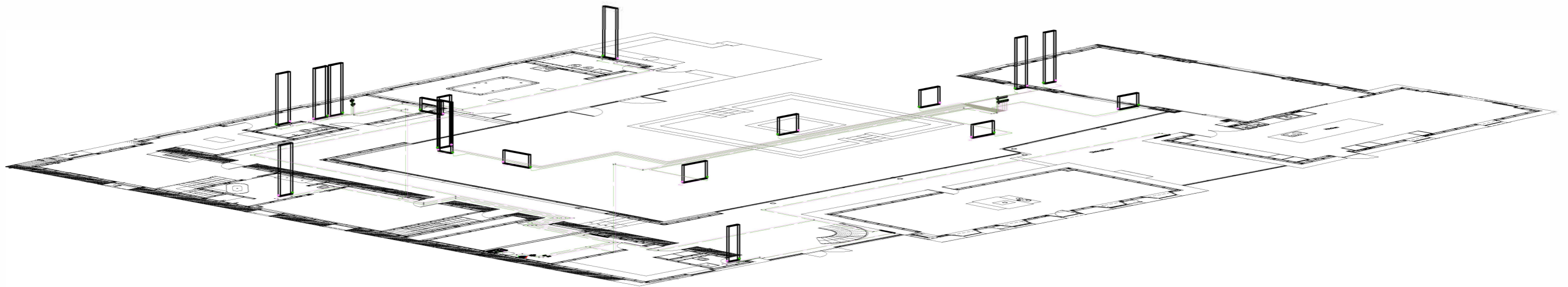
Radiator

Hot Water Cylinder

Hydrobox

Integrated Hydrobox & Cylinder

Riser / Drop Location for Pipe



Revision notes:		
Rev.	Date:	Notes:

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Project Ref. No.






Drawing Title: Isometric Heating Network

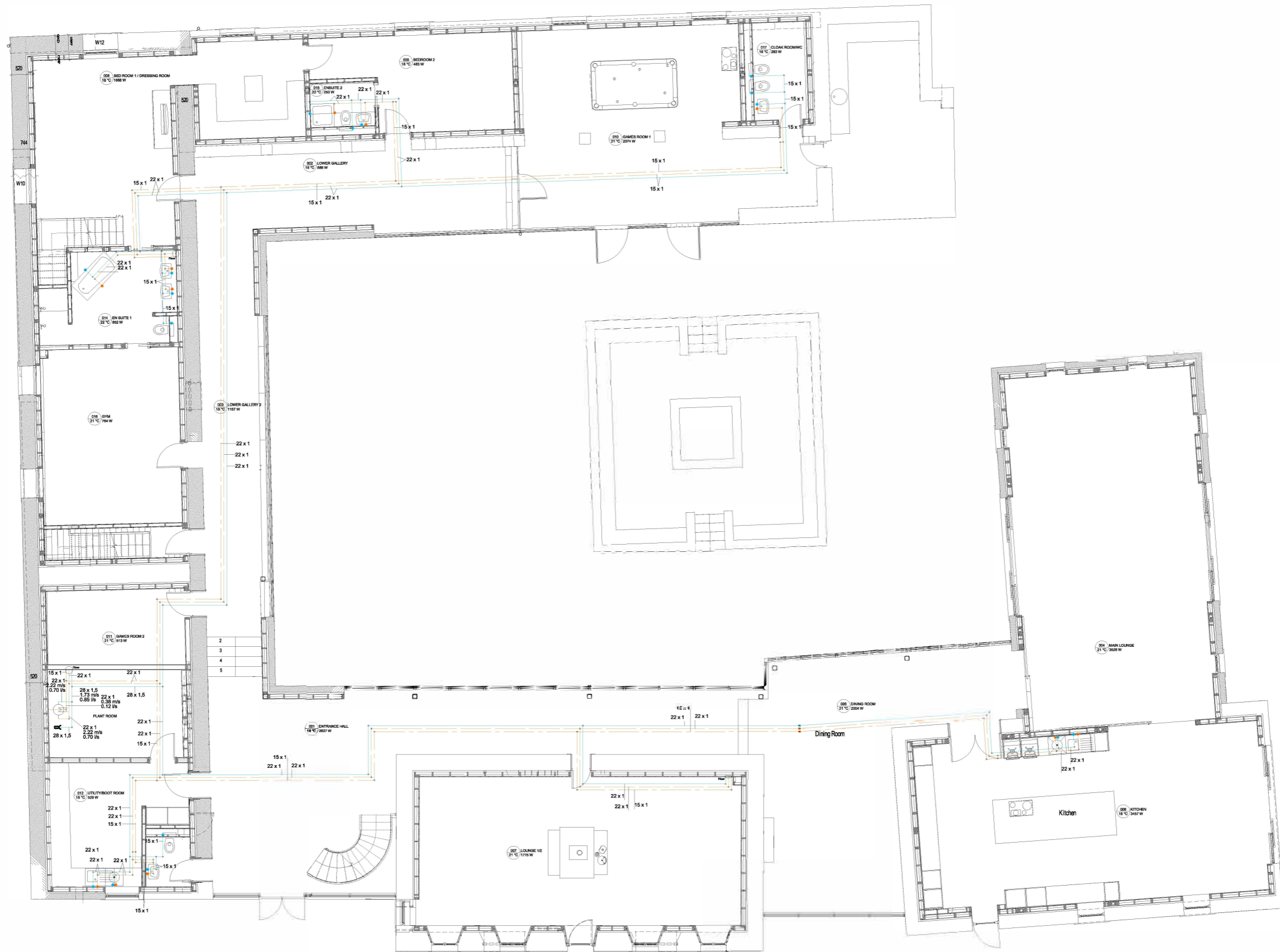
Date: 18-07-2022

Scale @ A3: N.T.S

Revision:

LEGEND

-  Cold Water Pipes
-  Hot Water Pipes
-  Circulation Flow
-  Hot Water Cylinder
-  Riser / Drop Location for Pipe



Revision notes:

Rev:	Date:	Notes:

Date:
18-07-2022






Scale @ A3:
1:145

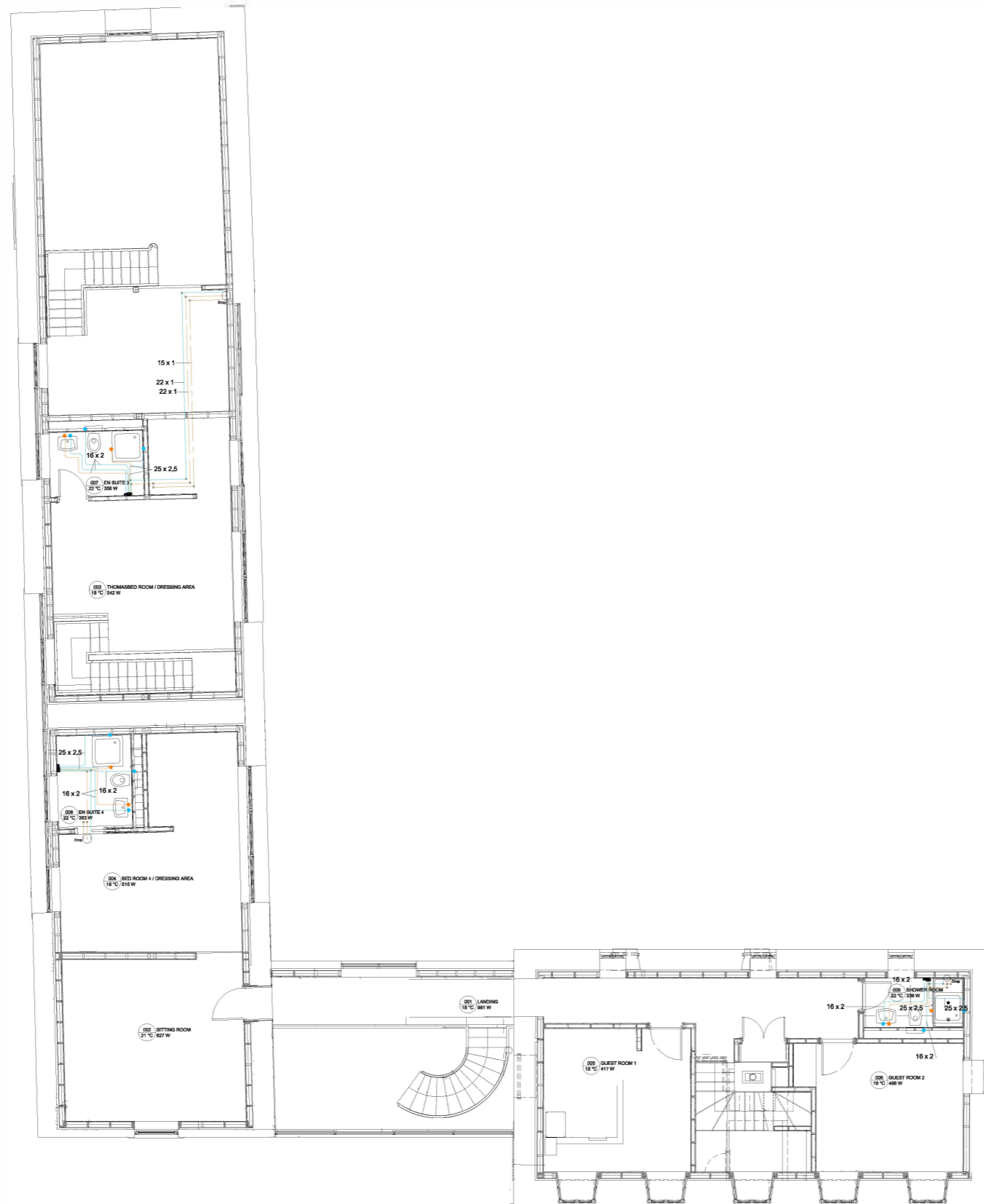
Revision:

Project Ref. No.

Drawing Title:
Ground Floor
Plumbing Network

LEGEND

-  Cold Water Pipes
-  Hot Water Pipes
-  Circulation Flow
-  Hot Water Cylinder
-  Riser / Drop Location for Pipe



Revision notes:		
Rev.	Date:	Notes:

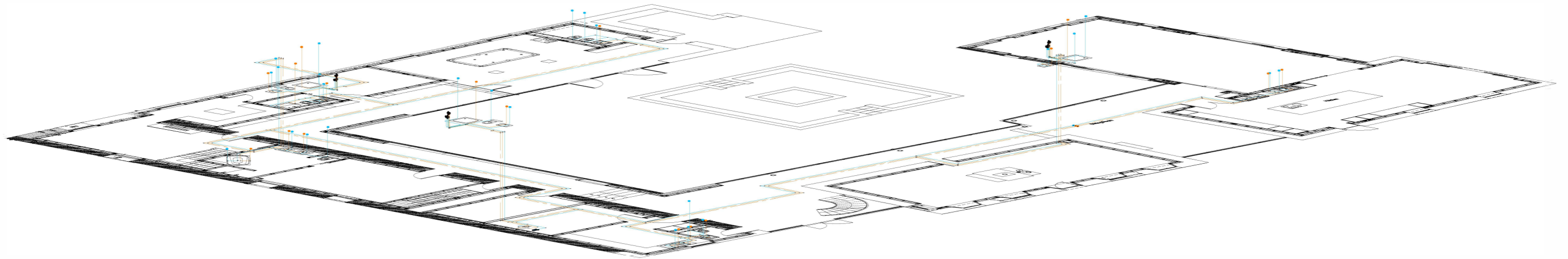
Project Ref. No.

Drawing Title:
First Floor Plumbing Network

Date:
18-07-2022
Scale @ A3:
1:145
Revision:

LEGEND

- Cold Water Pipes
- Hot Water Pipes
- Circulation Flow
- Hot Water Cylinder
- Riser / Drop Location for Pipe



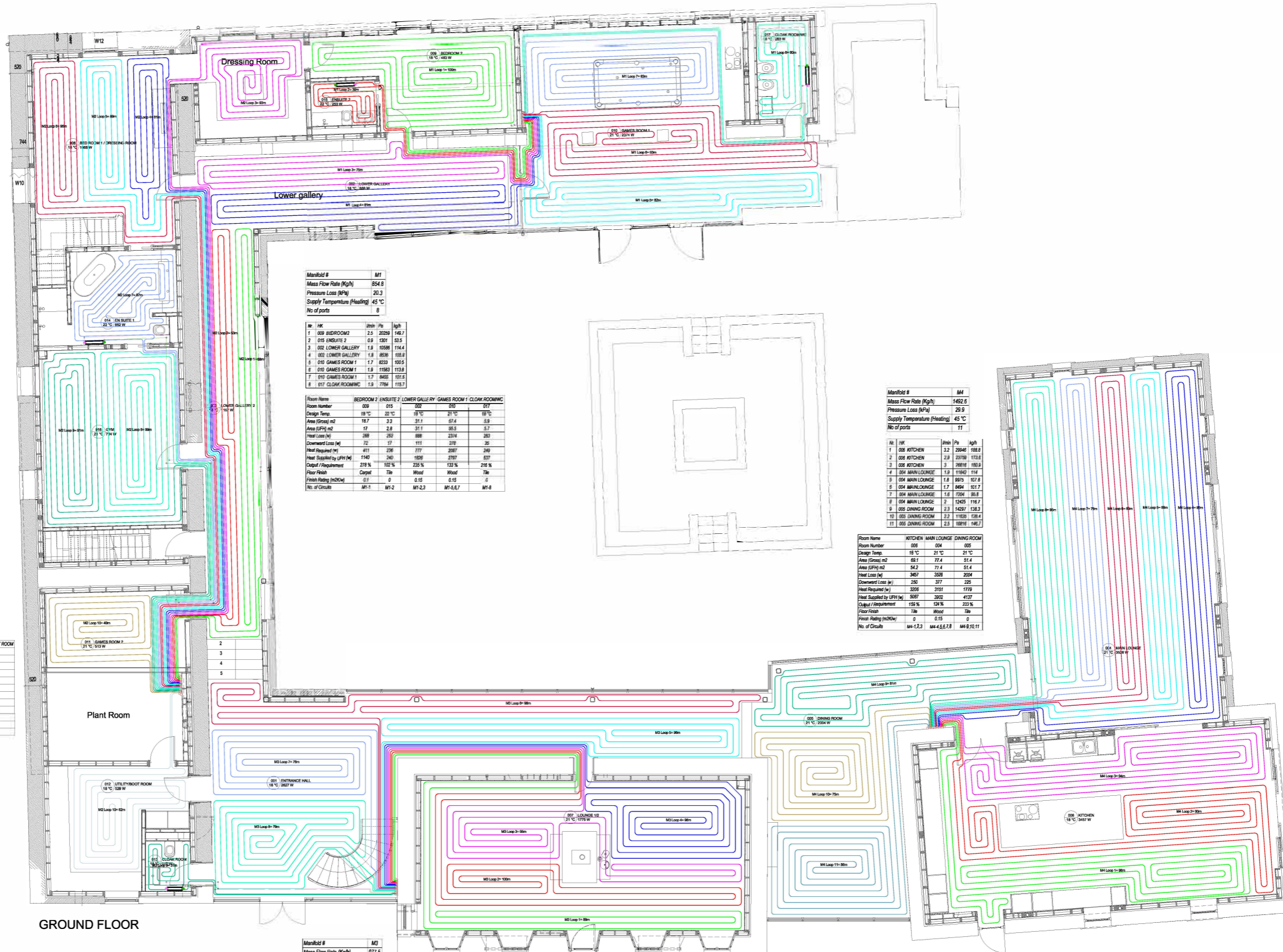
Revision notes:		
Rev.	Date:	Notes:

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Project Ref. No.

Drawing Title: Isometric Plumbing Network

Date: 18-07-2022
Scale @ A3: N.T.S
Revision:



Manifold # M1

Mass Flow Rate (Kg/h) 854.8
 Pressure Loss (kPa) 20.3
 Supply Temperature (Heating) 45 °C
 No of ports 8

No	JK	Uth	Po	lph
1	000 BEDROOM2	2.5	20259	146.7
2	015 ENSUITE 2	0.9	1301	53.5
3	002 LOWER GALLERY	1.9	10596	114.4
4	002 LOWER GALLERY	1.8	8029	108.8
5	010 GAMES ROOM 1	1.7	8233	100.5
6	010 GAMES ROOM 1	1.8	11583	113.8
7	010 GAMES ROOM 1	1.7	8465	101.9
8	011 CLOAK ROOM/INC	1.9	7796	118.7

Room Name	BEDROOM 2	ENSUITE 2	LOWER GALLERY	GAMES ROOM 1	CLOAK ROOM/INC
Room Number	000	015	002	010	011
Design Temp	18 °C	20 °C	19 °C	21 °C	19 °C
Area (Gross) m2	18.7	3.3	31.1	67.4	5.9
Area (UPH) m2	17	2.8	31.1	65.5	5.7
Heat Loss (W)	288	292	888	2376	283
Downward Loss (W)	22	17	119	329	26
Heat Required (W)	491	276	777	2697	309
Heat Supplied by UFH (W)	1140	240	1006	2787	537
Output / Requirement	278 %	102 %	235 %	133 %	218 %
Floor Finish	Carpet	Tile	Wood	Wood	Tile
Finish Rating (m2Kw)	0	0	0.15	0.15	0
No. of Circuits	M1-1	M1-2	M1-2,3	M1-5,6,7	M1-8

Manifold # M4

Mass Flow Rate (Kg/h) 1452.6
 Pressure Loss (kPa) 29.9
 Supply Temperature (Heating) 45 °C
 No of ports 11

No	JK	Uth	Po	lph
1	006 KITCHEN	3.2	25946	188.8
2	006 KITCHEN	3.8	22739	173.8
3	006 KITCHEN	3	28816	193.8
4	004 MAIN LOUNGE	1.9	11942	114
5	004 MAIN LOUNGE	1.8	9070	101.8
6	004 MAIN LOUNGE	1.7	8664	101.7
7	004 MAIN LOUNGE	1.6	7504	88.8
8	004 MAIN LOUNGE	2	12455	118.7
9	002 DINING ROOM	2.3	14287	108.2
10	002 DINING ROOM	2.2	11620	108.4
11	002 DINING ROOM	2.3	10816	146.7

Room Name	KITCHEN	MAIN LOUNGE	DINING ROOM
Room Number	006	004	002
Design Temp	18 °C	21 °C	21 °C
Area (Gross) m2	68.1	77.4	51.4
Area (UPH) m2	54.2	77.4	51.4
Heat Loss (W)	3462	3598	2054
Downward Loss (W)	250	377	225
Heat Required (W)	3308	3151	1779
Heat Supplied by UFH (W)	3087	3092	4127
Output / Requirement	159 %	124 %	232 %
Floor Finish	Tile	Wood	Tile
Finish Rating (m2Kw)	0	0.15	0
No. of Circuits	M4-1,2,3	M4-4,5,6,7,8	M4-9,10,11

Manifold # M2

Mass Flow Rate (Kg/h) 1158.8
 Pressure Loss (kPa) 18
 Supply Temperature (Heating) 45 °C
 No of ports 11

No	JK	Uth	Po	lph
1	003 LOWER GALLERY 2	1.8	3903	82.3
2	003 LOWER GALLERY 2	1.2	2964	72.1
3	008 BEDROOM 1 / DRESSING ROOM	3.3	18602	139.3
4	008 BEDROOM 1 / DRESSING ROOM	3	17432	129.7
5	008 BEDROOM 1 / DRESSING ROOM	2.2	14128	123.3
6	008 BEDROOM 1 / DRESSING ROOM	2.4	18029	143.5
7	014 ENSUITE 1	2	11788	118.1
8	016 GYM	2	13723	121
9	016 GYM	1.9	10524	115.4
10	011 GAMES ROOM 2	1	2029	80.4
11	012 UTILITY/BOOT ROOM	1.4	4591	84.5

Room Name	LOWER GALLERY 2	BED ROOM 1 / DRESSING ROOM	EN SUITE 1	GYM	GAMES ROOM 2	UTILITY/BOOT ROOM
Room Number	003	008	014	016	011	012
Design Temp	18 °C	18 °C	22 °C	21 °C	21 °C	18 °C
Area (Gross) m2	30.2	47.1	13.1	28.3	12.1	16.5
Area (UPH) m2	27.7	38.5	7.9	28.3	12.1	11.4
Heat Loss (W)	1157	1668	852	784	612	528
Downward Loss (W)	131	182	74	145	64	89
Heat Required (W)	1488	1486	778	639	448	480
Heat Supplied by UFH (W)	1925	2089	676	1429	609	671
Output / Requirement	129 %	174 %	87 %	229 %	139 %	140 %
Floor Finish	Wood	Carpet	Tile	Wood	Wood	Wood
Finish Rating (m2Kw)	0.15	0.1	0	0.15	0.15	0.15
No. of Circuits	M2-1,2	M2-3,4,5,6	M2-7	M2-8,9	M2-10	M2-11

Manifold # M3

Mass Flow Rate (Kg/h) 977.5
 Pressure Loss (kPa) 15.1
 Supply Temperature (Heating) 45 °C
 No of ports 9

No	JK	Uth	Po	lph
1	007 LOUNGE 1/2	1.8	10377	108.1
2	007 LOUNGE 1/2	2.1	14178	122.4
3	007 LOUNGE 1/2	2	12281	116.2
4	007 LOUNGE 1/2	2	12055	117.3
5	001 ENTRANCE HALL	2.2	15305	130.9
6	001 ENTRANCE HALL	2.2	16149	133.3
7	001 ENTRANCE HALL	1.9	8626	106.2
8	001 ENTRANCE HALL	1.8	8645	107.7
9	013 CLOAK ROOM	0.8	471	34.2

Room Name	LOUNGE 1/2	ENTRANCE HALL	CLOAK ROOM
Room Number	007	001	013
Design Temp	21 °C	19 °C	18 °C
Area (Gross) m2	58.2	69.7	2.8
Area (UPH) m2	53.1	68.2	2.4
Heat Loss (W)	1775	2827	117
Downward Loss (W)	205	254	12
Heat Required (W)	1450	2373	104
Heat Supplied by UFH (W)	2675	4000	154
Output / Requirement	185 %	169 %	148 %
Floor Finish	Wood	Wood	Wood
Finish Rating (m2Kw)	0.15	0.15	0.15
No. of Circuits	M3-1,2,4	M3-5,6,7,8	M3-9

Revision notes:

Rev.	Date:	Notes:

Project:	Date: 18-07-2022
Project Ref. No.	Scale @ A3: 1:145
Drawing Title: Ground Floor UFH System Design/Loop Layout	Revision: