

Date 4th Sep 2023

Project Hevacomp Upper Project no. -
 Engineer JK Checked by Date checked
 File C:\Users\joe.k\MEP Design\Projects - Documents\22_023 Upper & Lower Campfield - Design\1 Mechanical Services

Outside design temperature -3 °C
 Heat loss model Simple model
 Main system of heating Double/triple panel radiators

Room ref. G00 No. off 1
 Room name Studio 02
 Temperatures Resultant 21 Environmental 20.9
 Air 21.2 Mean radiant 20.8
 System Double/triple panel radiators

Total room heat loss	21367 W
146.2W/m ²	16.6W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	83.91	0.497	24	998
Window in wall 1	32.28	5.7	24	4402
Wall 2	73.66	0.497	24	876
Window in wall 2	28.33	5.7	24	3864
Internal floor 1	146.17	1.682	0	0
Internal ceiling 1	146.17	2.225	0	0
Partition 1	115.96	0.607	0	0
Partition 2	42.69	0.607	1	26
Partition 3	59.31	0.607	1	36

Total fabric loss				10202
Infiltration loss				10382
Height allowance				782

Total heat loss				21367

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	G01	No. off		1
Room name	Plant			
Temperatures	Resultant	20	Environmental	20.1
	Air	19.8	Mean radiant	20.2
System	Double/triple panel radiators			

Total room heat loss	1239 W
28.2W/m ²	10.1W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	2.42	0.497	23	28
Wall 2	0.52	0.497	23	6
Wall 3	17.73	0.497	23	203
Exposed floor 1	43.98	0.2	23	203
Internal ceiling 1	43.9	2.225	-1	-98
Internal ceiling 2	0.08	2.225	0	0
Partition 1	20.15	0.607	0	0
Partition 2	19.27	0.607	0	0
Partition 3	58.81	0.607	-1	-36

Total fabric loss				306
Infiltration loss				933

Total heat loss				1239

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G02	No. off	1
Room name	Unisex WC's		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.7	Mean radiant 20.3
System	Double/triple panel radiators		

Total room heat loss	601 W
22.3W/m ²	8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	26.99	0.2	23	125
Internal ceiling 1	26.85	2.225	-1	-60
Internal ceiling 2	0.15	2.225	0	0
Partition 1	42.09	0.607	-1	-26
Partition 2	12.88	0.607	-1	-8
Partition 3	5.57	0.607	0	0
Partition 4	7.26	0.607	0	0
Partition 5	8.53	0.607	0	0
Partition 6	20.15	0.607	0	0

Total fabric loss				31
Infiltration loss				570

Total heat loss				601

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G03	No. off	1
Room name	Acc WC		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	88 W
22.6W/m ²	8.1W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	3.91	0.2	23	18
Internal ceiling 1	3.82	2.225	-1	-9
Internal ceiling 2	0.09	2.225	0	0
Partition 1	6.9	0.607	-1	-4
Partition 2	5.1	0.607	0	0
Partition 3	6.91	0.607	0	0
Partition 4	5.1	0.607	0	0

Total fabric loss				5
Infiltration loss				83

Total heat loss				88

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G04	No. off	1
Room name	Services Entrance		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	597 W
26.5W/m ²	9.5W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	6	0.497	23	69
Exposed floor 1	22.57	0.2	23	104
Internal ceiling 1	22.5	2.225	-1	-50
Internal ceiling 2	0.07	2.225	0	0
Partition 1	6	0.607	-1	-4
Partition 2	16.49	0.607	0	0
Partition 3	5.85	0.607	0	0
Partition 4	11.54	0.607	0	0
Partition 5	19.51	0.607	0	0
Partition 6	8.99	0.607	0	0
Partition 7	5.33	0.607	0	0
Total fabric loss				119
Infiltration loss				478
Total heat loss				597

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G05	No. off	1
Room name	Bin Store		
Temperatures	Resultant	20	Environmental
	Air	19.9	Mean radiant
System	Double/triple panel radiators		

Total room heat loss	860 W
31.5W/m ²	11.3W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	17.89	0.497	23	205
Wall 2	0.7	0.497	23	8
Wall 3	2.12	0.497	23	24
Exposed floor 1	27.3	0.2	23	126
Internal ceiling 1	27.19	2.225	-1	-61
Internal ceiling 2	0.11	2.225	0	0
Partition 1	11.54	0.607	0	0
Partition 2	20	0.607	0	0
Partition 3	37.39	0.607	-1	-23

Total fabric loss				280
Infiltration loss				581

Total heat loss				860

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G06	No. off	1
Room name	Store		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	273 W
22.7W/m ²	8.2W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	12	0.2	23	55
Internal ceiling 1	12	2.225	-1	-27
Partition 1	5.4	0.607	0	0
Partition 2	20	0.607	0	0
Partition 3	16.2	0.607	-1	-10
Partition 4	20	0.607	0	0

Total fabric loss				19
Infiltration loss				254

Total heat loss				273

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G07	No. off	1
Room name	Showers		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.7	Mean radiant 20.3
System	Double/triple panel radiators		

Total room heat loss	796 W
22.3W/m ²	8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	35.68	0.2	23	165
Internal ceiling 1	35.44	2.225	-1	-79
Internal ceiling 2	0.24	2.225	0	0
Partition 1	16.04	0.607	0	0
Partition 2	20.01	0.607	-1	-12
Partition 3	48.18	0.607	-1	-29
Partition 4	20	0.607	0	0

Total fabric loss				44
Infiltration loss				752

Total heat loss				796

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	G08	No. off		1
Room name	Studio 02			
Temperatures	Resultant	21	Environmental	21
	Air	20.9	Mean radiant	21.1
System	Double/triple panel radiators			

Total room heat loss	16782 W
126.4W/m ²	14.4W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	48.73	0.497	24	582
Window in wall 1	18.74	5.7	24	2568
Wall 2	55.64	0.497	24	665
Window in wall 2	21.4	5.7	24	2931
Internal floor 1	132.81	1.682	0	0
Internal ceiling 1	132.81	2.225	0	0
Partition 1	37.77	0.607	1	23
Partition 2	17.55	0.607	1	11
Partition 3	48.92	0.607	1	30
Partition 4	25.73	0.607	0	0
Partition 5	22.97	0.607	0	0
Partition 6	22.92	0.607	0	0
Partition 7	22.92	0.607	0	0
Partition 8	22.33	0.607	0	0
Partition 9	39.83	0.607	1	24
Partition 10	37.8	0.607	1	23
Total fabric loss				6856
Infiltration loss				9312
Height allowance				614
Total heat loss				16782

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G09	No. off	1
Room name	Restuarant Bin Store		
Temperatures	Resultant	20	Environmental 19.6
	Air	21.1	Mean radiant 18.9
System	Double/triple panel radiators		

Total room heat loss	4604 W
270.1W/m ²	30.7W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	25.77	0.497	23	290
Window in wall 1	9.91	5.7	23	1278
Wall 2	28.03	0.497	23	315
Window in wall 2	10.78	5.7	23	1390
Internal floor 1	17.04	1.682	0	0
Internal ceiling 1	17.04	2.225	0	0
Partition 1	35.69	0.607	-1	-21
Partition 2	38.57	0.607	-1	-23

Total fabric loss				3229
Infiltration loss				1206
Height allowance				169

Total heat loss				4604

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G10	No. off	1
Room name	Edit Suite		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	389 W
27.3W/m ²	9.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	14.28	0.2	24	69
Internal ceiling 1	14.28	2.225	0	0
Partition 1	7.19	0.607	1	4
Partition 2	17.85	0.607	0	0
Partition 3	21.62	0.607	0	0
Partition 4	17.85	0.607	0	0

Total fabric loss				73
Infiltration loss				316

Total heat loss				389

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G11	No. off	1
Room name	Edit Suite		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	389 W
27.3W/m ²	9.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	14.26	0.2	24	69
Internal ceiling 1	0.53	2.225	0	0
Internal ceiling 2	13	2.225	0	0
Internal ceiling 3	0.73	2.225	0	0
Partition 1	7.19	0.607	1	4
Partition 2	17.85	0.607	0	0
Partition 3	21.57	0.607	0	0
Partition 4	17.85	0.607	0	0

Total fabric loss				73
Infiltration loss				316

Total heat loss				389

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	G12	No. off		1
Room name	Edit Suite			
Temperatures	Resultant	21	Environmental	21.1
	Air	20.8	Mean radiant	21.2
System	Double/triple panel radiators			

Total room heat loss	389 W
27.3W/m ²	9.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	14.26	0.2	24	69
Internal ceiling 1	7.54	2.225	0	0
Internal ceiling 2	5.89	2.225	0	0
Internal ceiling 3	0.84	2.225	0	0
Partition 1	7.19	0.607	1	4
Partition 2	17.84	0.607	0	0
Partition 3	21.57	0.607	0	0
Partition 4	17.85	0.607	0	0
Total fabric loss				73
Infiltration loss				316
Total heat loss				389

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G13	No. off	1
Room name	Edit Suite		
Temperatures	Resultant	21	Environmental 21
	Air	21	Mean radiant 21
System	Double/triple panel radiators		

Total room heat loss	620 W
43W/m ²	15.4W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	5.51	0.497	24	66
Wall 2	0.35	0.497	24	4
Wall 3	11.4	0.497	24	136
Wall 4	0.57	0.497	24	7
Wall 5	0.93	0.497	24	11
Exposed floor 1	14.42	0.2	24	69
Internal ceiling 1	7.84	2.225	0	0
Internal ceiling 2	6.1	2.225	0	0
Internal ceiling 3	0.48	2.225	0	0
Partition 1	7.54	0.607	1	5
Partition 2	19.91	0.607	0	0
Partition 3	17.84	0.607	0	0

Total fabric loss				297
Infiltration loss				322

Total heat loss				620

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G14	No. off	1
Room name	Secondary Entrance		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	888 W
27.2W/m ²	9.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	9.05	0.497	23	104
Exposed floor 1	32.64	0.2	23	151
Internal ceiling 1	6.15	2.225	-1	-14
Internal ceiling 2	12.72	2.225	0	0
Internal ceiling 3	11.08	2.225	0	0
Internal ceiling 4	2.69	2.225	0	0
Partition 1	7.64	0.607	-1	-5
Partition 2	7.64	0.607	-1	-5
Partition 3	7.64	0.607	-1	-5
Partition 4	7.91	0.607	-1	-5
Partition 5	0.38	0.607	0	0
Partition 6	0.49	0.607	0	0
Partition 7	7.76	0.607	-1	-5
Partition 8	7.64	0.607	-1	-5
Partition 9	7.64	0.607	-1	-5
Partition 10	7.42	0.607	-1	-5
Partition 11	9.53	0.607	-1	-6

Total fabric loss				198
Infiltration loss				690

Total heat loss				888

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G15	No. off	1
Room name	Edit Suite		
Temperatures	Resultant	21	Environmental 21
	Air	21.1	Mean radiant 20.9
System	Double/triple panel radiators		

Total room heat loss	706 W
44.5W/m ²	16W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	0.58	0.497	24	7
Wall 2	0.59	0.497	24	7
Wall 3	11.81	0.497	24	141
Wall 4	0.43	0.497	24	5
Wall 5	6.36	0.497	24	76
Exposed floor 1	15.85	0.2	24	76
Internal ceiling 1	15.61	2.225	1	35
Internal ceiling 2	0.25	2.225	0	0
Partition 1	20.67	0.607	0	0
Partition 2	7.91	0.607	1	5
Partition 3	18.74	0.607	0	0
Total fabric loss				351
Infiltration loss				355
Total heat loss				706

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G16	No. off	1
Room name	Edit Suite		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	446 W
29.8W/m ²	10.7W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	14.98	0.2	24	72
Internal ceiling 1	14.98	2.225	1	33
Partition 1	21.57	0.607	0	0
Partition 2	18.74	0.607	0	0
Partition 3	7.19	0.607	1	4
Partition 4	11.9	0.607	0	0
Partition 5	6.85	0.607	1	4
Total fabric loss				114
Infiltration loss				332
Total heat loss				446

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G17	No. off	1
Room name	Edit Suite		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	285 W
30W/m ²	10.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	9.51	0.2	24	46
Internal ceiling 1	0.5	2.225	1	1
Internal ceiling 2	8.41	2.225	1	19
Internal ceiling 3	0.6	2.225	0	0
Partition 1	7.19	0.607	1	4
Partition 2	11.9	0.607	0	0
Partition 3	7.19	0.607	1	4
Partition 4	11.9	0.607	0	0

Total fabric loss				74
Infiltration loss				211

Total heat loss				285

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G18	No. off	1
Room name	Edit Suite		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	285 W
30W/m ²	10.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	9.51	0.2	24	46
Internal ceiling 1	5.12	2.225	1	11
Internal ceiling 2	3.83	2.225	1	9
Internal ceiling 3	0.56	2.225	0	0
Partition 1	7.19	0.607	1	4
Partition 2	11.9	0.607	0	0
Partition 3	7.19	0.607	1	4
Partition 4	11.9	0.607	0	0

Total fabric loss				74
Infiltration loss				211

Total heat loss				285

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G19	No. off	1
Room name	Store		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	113 W
21.7W/m ²	7.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	5.22	0.2	23	24
Internal ceiling 1	3.23	2.225	0	0
Internal ceiling 2	1.6	2.225	0	0
Internal ceiling 3	0.4	2.225	0	0
Partition 1	6.4	0.607	-1	-4
Partition 2	7.38	0.607	-1	-4
Partition 3	6.4	0.607	0	0
Partition 4	21.92	0.607	-1	-13

Total fabric loss				2
Infiltration loss				111

Total heat loss				113

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G20	No. off	1
Room name	Lift		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	111 W
21.7W/m ²	7.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	5.12	0.2	23	24
Internal ceiling 1	5.09	2.225	0	0
Internal ceiling 2	0.03	2.225	0	0
Partition 1	6.45	0.607	-1	-4
Partition 2	21.44	0.607	-1	-13
Partition 3	6.45	0.607	0	0
Partition 4	7.15	0.607	-1	-4

Total fabric loss				2
Infiltration loss				109

Total heat loss				111

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	G21	No. off		1
Room name	Studio 05			
Temperatures	Resultant	21	Environmental	20.9
	Air	21.2	Mean radiant	20.8
System	Double/triple panel radiators			

Total room heat loss	21649 W
145.4W/m ²	16.5W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	85.61	0.497	24	1018
Window in wall 1	32.93	5.7	24	4492
Wall 2	73.45	0.497	24	874
Window in wall 2	28.25	5.7	24	3854
Internal floor 1	148.87	1.682	0	0
Internal ceiling 1	148.87	2.225	0	0
Partition 1	23.6	0.607	0	0
Partition 2	22.92	0.607	0	0
Partition 3	23.38	0.607	1	14
Partition 4	22.91	0.607	1	14
Partition 5	25.73	0.607	0	0
Partition 6	36.77	0.607	1	22
Partition 7	64.97	0.607	0	0
Total fabric loss				10288
Infiltration loss				10569
Height allowance				793
Total heat loss				21649

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	G22	No. off		1
Room name	Reception			
Temperatures	Resultant	21	Environmental	21.1
	Air	20.8	Mean radiant	21.2
System	Double/triple panel radiators			

Total room heat loss	2212 W
32.4W/m ²	11.6W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	0.18	0.497	24	2
Wall 2	0.83	0.497	24	10
Wall 3	11.19	0.497	24	134
Wall 4	0.6	0.497	24	7
Wall 5	17.59	0.497	24	210
Exposed floor 1	68.32	0.2	24	329
Internal ceiling 1	68.32	2.225	0	0
Partition 1	64.32	0.607	0	0
Partition 2	10.42	0.607	1	6
Partition 3	7.35	0.607	0	0
Partition 4	11.18	0.607	0	0
Partition 5	20.16	0.607	0	0

Total fabric loss				698
Infiltration loss				1514

Total heat loss				2212

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G23	No. off	1
Room name	Storage		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	287 W
20.5W/m ²	7.4W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	13.98	0.2	23	65
Internal ceiling 1	13.96	2.225	-1	-31
Partition 1	10.42	0.607	-1	-6
Partition 2	36.27	0.607	-1	-22
Partition 3	10.41	0.607	-1	-6
Partition 4	12.07	0.607	-1	-7

Total fabric loss				-9
Infiltration loss				296

Total heat loss				287

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G24	No. off	1
Room name	Office		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	257 W
27.8W/m ²	9.9W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	9.25	0.2	24	45
Internal ceiling 1	9.24	2.225	0	0
Partition 1	6.9	0.607	0	0
Partition 2	12.07	0.607	1	7
Partition 3	6.9	0.607	0	0
Partition 4	12.07	0.607	0	0
Total fabric loss				52
Infiltration loss				205
Total heat loss				257

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	G25	No. off		1
Room name	Breakout			
Temperatures	Resultant	21	Environmental	21.1
	Air	20.8	Mean radiant	21.2
System	Double/triple panel radiators			

Total room heat loss	1361 W
32.3W/m ²	11.6W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	17.48	0.497	24	209
Wall 2	1.29	0.497	24	15
Exposed floor 1	42.11	0.2	24	203
Internal ceiling 1	42.08	2.225	0	0
Internal ceiling 2	0.03	2.225	0	0
Partition 1	0.18	0.607	0	0
Partition 2	20.16	0.607	0	0
Partition 3	17.68	0.607	0	0
Partition 4	64.4	0.607	0	0
Total fabric loss				427
Infiltration loss				934
Total heat loss				1361

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	G26	No. off		1
Room name	Studio 04			
Temperatures	Resultant	21	Environmental	20.9
	Air	21.2	Mean radiant	20.8
System	Double/triple panel radiators			

Total room heat loss	21392 W
145.5W/m ²	16.5W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	74.32	0.497	24	884
Window in wall 1	28.58	5.7	24	3899
Wall 2	83.69	0.497	24	995
Window in wall 2	32.19	5.7	24	4391
Internal floor 1	147.04	1.682	0	0
Internal ceiling 1	147.04	2.225	0	0
Partition 1	65.73	0.607	0	0
Partition 2	37.18	0.607	0	0
Partition 3	115.61	0.607	0	0
Total fabric loss				10170
Infiltration loss				10440
Height allowance				783
Total heat loss				21392

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G27	No. off	1
Room name	Studio 01		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.6	Mean radiant 20.4
System	Double/triple panel radiators		

Total room heat loss	3879 W
25W/m ²	9W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	155.09	0.2	23	718
Internal ceiling 1	155.09	2.225	0	0
Partition 1	18	0.607	-1	-11
Partition 2	29.05	0.607	-1	-18
Partition 3	29.67	0.607	-1	-18
Partition 4	20.25	0.607	-1	-12
Partition 5	26.8	0.607	-1	-16
Partition 6	29.67	0.607	-1	-18
Total fabric loss				624
Infiltration loss				3256
Total heat loss				3879

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G28	No. off	1
Room name	Lounge (01)		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	3056 W
29.4W/m ²	10.5W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Exposed floor 1	103.89	0.2	24	500
Internal ceiling 1	14.07	2.225	0	0
Internal ceiling 2	48.24	2.225	1	108
Internal ceiling 3	3.52	2.225	1	8
Internal ceiling 4	28.47	2.225	1	64
Internal ceiling 5	9.6	2.225	0	0
Partition 1	10.58	0.607	0	0
Partition 2	12.52	0.607	0	0
Partition 3	7.58	0.607	0	0
Partition 4	10.96	0.607	1	7
Partition 5	25.72	0.607	0	0
Partition 6	6.68	0.607	1	4
Partition 7	12.35	0.607	0	0
Partition 8	9.98	0.607	1	6
Partition 9	18.07	0.607	0	0
Partition 10	26.07	0.607	0	0
Partition 11	20.55	0.607	1	13
Partition 12	8.18	0.607	0	0
Partition 13	20.85	0.607	1	13
Partition 14	30.87	0.607	1	19
Partition 15	29.65	0.607	1	18
Partition 16	20.62	0.607	0	0

Total fabric loss				758
Infiltration loss				2298

Total heat loss				3056

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	G29	No. off	1
Room name	Lounge (02)		
Temperatures	Resultant	21	Environmental 21.1
	Air	20.8	Mean radiant 21.2
System	Double/triple panel radiators		

Total room heat loss	8005 W
30W/m ²	10.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	17.56	0.497	24	210
Wall 2	1.07	0.497	24	13
Wall 3	0.65	0.497	24	8
Wall 4	0.54	0.497	24	6
Wall 5	10.52	0.497	24	126
Wall 6	0.58	0.497	24	7
Wall 7	0.81	0.497	24	10
Wall 8	1.1	0.497	24	13
Wall 9	17.54	0.497	24	210
Exposed floor 1	266.42	0.2	24	1283
Internal ceiling 1	23.07	2.225	0	0
Internal ceiling 2	155.82	2.225	0	0
Internal ceiling 3	49.37	2.225	1	110
Internal ceiling 4	27.41	2.225	1	61
Internal ceiling 5	10.75	2.225	0	0
Partition 1	20.62	0.607	0	0
Partition 2	17.85	0.607	1	11
Partition 3	30.87	0.607	1	19
Partition 4	26.65	0.607	1	16
Partition 5	8.19	0.607	0	0
Partition 6	5.6	0.607	1	3
Partition 7	7.31	0.607	1	4
Partition 8	13.37	0.607	1	8
Partition 9	117.02	0.607	0	0
Partition 10	117.87	0.607	0	0
Partition 11	37.63	0.607	0	0
Partition 12	17.53	0.607	0	0
Total fabric loss				2119
Infiltration loss				5885
Total heat loss				8005

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M00	No. off	1
Room name	Workspace 01		
Temperatures	Resultant	21	Environmental 21
	Air	21.1	Mean radiant 20.9
System	Double/triple panel radiators		

Total room heat loss	28877 W
160W/m ²	16.3W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	102.68	0.497	24	1222
Wall 2	94.4	0.497	24	1124
Window in wall 2	56.61	5.7	24	7728
Wall 3	1.16	0.497	24	14
Wall 4	3.49	0.497	24	42
Wall 5	100.94	0.497	24	1202
Roof 1	3.72	0.221	24	20
Roof 2	47.12	0.221	24	249
Roof 3	90.33	0.221	24	478
Roof 4	90.88	0.221	24	481
Roof 5	31.7	0.221	24	168
Roof 6	31.85	0.221	24	169
Internal floor 1	43.9	1.682	1	74
Internal floor 2	26.85	1.682	1	45
Internal floor 3	3.82	1.682	1	6
Internal floor 4	22.5	1.682	1	38
Internal floor 5	27.19	1.682	1	46
Internal floor 6	12	1.682	1	20
Internal floor 7	35.44	1.682	1	59
Internal floor 8	8.77	1.682	0	0
Internal ceiling 1	0.84	2.225	0	0
Partition 1	77.53	0.607	1	47
Partition 2	60.05	0.607	1	36
Partition 3	1.95	0.607	0	0
Total fabric loss				13267
Infiltration loss				14279
Height allowance				1330
Total heat loss				28877

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M01	No. off	1
Room name	Small Office		
Temperatures	Resultant	21	Environmental 21
	Air	20.9	Mean radiant 21.1
System	Double/triple panel radiators		

Total room heat loss	1026 W
119.5W/m ²	12.5W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	23.3	0.497	24	278
Roof 1	9.16	0.221	24	49
Internal floor 1	0.53	1.682	0	0
Internal floor 2	7.54	1.682	0	0
Internal floor 3	0.51	1.682	0	0
Partition 1	31.6	0.607	0	0
Partition 2	26.5	0.607	0	0
Partition 3	31.61	0.607	0	0
Total fabric loss				327
Infiltration loss				654
Height allowance				45
Total heat loss				1026

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M02	No. off	1
Room name	Small Office		
Temperatures	Resultant	21	Environmental 20.6
	Air	22.1	Mean radiant 19.9
System	Double/triple panel radiators		

Total room heat loss	2932 W
342.7W/m ²	35.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	18.51	0.497	24	217
Window in wall 1	11.59	5.7	24	1561
Wall 2	1.62	0.497	24	19
Wall 3	1.51	0.497	24	18
Wall 4	21.73	0.497	24	255
Roof 1	9.13	0.221	24	48
Internal floor 1	7.84	1.682	0	0
Internal floor 2	0.71	1.682	0	0
Partition 1	26.5	0.607	0	0
Partition 2	31.61	0.607	0	0

Total fabric loss				2118
Infiltration loss				686
Height allowance				128

Total heat loss				2932

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M03	No. off	1
Room name	Breakout Space		
Temperatures	Resultant	21	Environmental 21
	Air	20.9	Mean radiant 21.1
System	Double/triple panel radiators		

Total room heat loss	7226 W
147.7W/m ²	14.1W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	22.99	0.497	24	275
Window in wall 1	11.87	5.7	24	1626
Wall 2	41.37	0.497	24	494
Roof 1	52.23	0.221	24	277
Internal floor 1	14.28	1.682	0	0
Internal floor 2	13	1.682	0	0
Internal floor 3	5.89	1.682	0	0
Internal floor 4	6.1	1.682	0	0
Internal floor 5	6.15	1.682	1	10
Internal floor 6	3.52	1.682	0	0
Partition 1	27.72	0.607	0	0
Partition 2	29.78	0.607	0	0
Partition 3	33.65	0.607	0	0
Partition 4	68.58	0.607	1	42
Partition 5	55.55	0.607	1	34
Partition 6	61.42	0.607	1	37
Total fabric loss				2795
Infiltration loss				4072
Height allowance				359
Total heat loss				7226

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	M04	No. off		1
Room name	Plant			
Temperatures	Resultant	20	Environmental	19.8
	Air	20.5	Mean radiant	19.5
System	Double/triple panel radiators			

Total room heat loss	10270 W
205.5W/m ²	19.8W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	1.73	0.497	23	20
Wall 2	1.5	0.497	23	17
Wall 3	58.59	0.497	23	665
Window in wall 3	31.83	5.7	23	4142
Wall 4	58.91	0.497	23	668
Roof 1	49.01	0.221	23	247
Roof 2	4	0.221	23	20
Internal floor 1	12.72	1.682	0	0
Internal floor 2	15.61	1.682	-1	-26
Internal floor 3	14.98	1.682	-1	-25
Internal floor 4	0.5	1.682	-1	-1
Internal floor 5	3.23	1.682	0	0
Internal floor 6	2.93	1.682	0	0
Partition 1	61.81	0.607	-1	-37
Partition 2	72.6	0.607	0	0
Partition 3	13.77	0.607	0	0
Partition 4	19.53	0.607	0	0
Total fabric loss				5690
Infiltration loss				4072
Height allowance				508
Total heat loss				10270

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M05	No. off	1
Room name	Unisex WC's		
Temperatures	Resultant	20	Environmental 20.2
	Air	19.5	Mean radiant 20.5
System	Double/triple panel radiators		

Total room heat loss	2355 W
90.4W/m ²	8.2W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Roof 1	24.14	0.221	23	124
Roof 2	3.52	0.221	23	18
Internal floor 1	11.08	1.682	0	0
Internal floor 2	8.41	1.682	-1	-14
Internal floor 3	5.12	1.682	-1	-9
Internal floor 4	1.44	1.682	0	0
Partition 1	45.99	0.607	0	0
Partition 2	19.61	0.607	0	0
Partition 3	24.62	0.607	0	0
Partition 4	15.4	0.607	0	0
Partition 5	12.4	0.607	0	0
Partition 6	70.65	0.607	0	0
Partition 7	54.23	0.607	-1	-33

Total fabric loss				86
Infiltration loss				2146
Height allowance				123

Total heat loss				2355

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M06	No. off	1
Room name	Acc WC		
Temperatures	Resultant	20	Environmental 20.1
	Air	19.8	Mean radiant 20.2
System	Double/triple panel radiators		

Total room heat loss	332 W
84.9W/m ²	8.4W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Roof 1	4.15	0.221	23	21
Internal floor 1	3.83	1.682	-1	-6
Internal floor 2	0.08	1.682	0	0
Partition 1	16.6	0.607	0	0
Partition 2	23.37	0.607	0	0
Partition 3	17.97	0.607	0	0
Partition 4	23.37	0.607	0	0

Total fabric loss				15
Infiltration loss				302
Height allowance				16

Total heat loss				332

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M07	No. off	1
Room name	Lift		
Temperatures	Resultant	20	Environmental 20
	Air	20	Mean radiant 20
System	Double/triple panel radiators		

Total room heat loss	915 W
129.7W/m ²	13.9W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	29.34	0.497	23	335
Roof 1	7.49	0.221	23	38
Internal floor 1	1.6	1.682	0	0
Internal floor 2	5.09	1.682	0	0
Internal floor 3	0.37	1.682	0	0
Partition 1	14.58	0.607	0	0
Partition 2	17.26	0.607	0	0
Partition 3	20.06	0.607	0	0
Partition 4	20.02	0.607	0	0
Total fabric loss				374
Infiltration loss				503
Height allowance				38
Total heat loss				915

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M08	No. off	1
Room name	Workspace 03		
Temperatures	Resultant	21	Environmental 21
	Air	21.1	Mean radiant 20.9
System	Double/triple panel radiators		

Total room heat loss	28573 W
158.6W/m ²	16.1W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	94.57	0.497	24	1126
Window in wall 1	56.71	5.7	24	7744
Wall 2	1.06	0.497	24	13
Wall 3	1.85	0.497	24	22
Wall 4	101.05	0.497	24	1203
Wall 5	100.93	0.497	24	1202
Wall 6	1.54	0.497	24	18
Wall 7	1.06	0.497	24	13
Roof 1	91.14	0.221	24	483
Roof 2	90.69	0.221	24	480
Roof 3	31.78	0.221	24	168
Roof 4	31.82	0.221	24	168
Roof 5	3.32	0.221	24	18
Roof 6	47.13	0.221	24	250
Internal floor 1	68.32	1.682	0	0
Internal floor 2	13.96	1.682	1	23
Internal floor 3	9.24	1.682	0	0
Internal floor 4	42.08	1.682	0	0
Internal floor 5	14.07	1.682	0	0
Internal floor 6	23.07	1.682	0	0
Internal floor 7	9.4	1.682	0	0
Internal ceiling 1	0.28	2.225	0	0
Partition 1	62.9	0.607	1	38
Partition 2	76.45	0.607	1	46

Total fabric loss				13015
Infiltration loss				14241
Height allowance				1316

Total heat loss				28573

Project Hevacomp Upper

Outside design temperature	-3 °C		
Heat loss model	Simple model		
Main system of heating	Double/triple panel radiators		
Room ref.	M09	No. off	1
Room name	Workspace 02		
Temperatures	Resultant	21	Environmental 20.9
	Air	21.2	Mean radiant 20.8
System	Double/triple panel radiators		

Total room heat loss	26597 W
169W/m ²	16.3W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	88.66	0.497	24	1055
Wall 2	3.3	0.497	24	39
Wall 3	1.18	0.497	24	14
Wall 4	102.91	0.497	24	1225
Window in wall 4	56.75	5.7	24	7747
Wall 5	89.65	0.497	24	1067
Roof 1	85.89	0.221	24	455
Roof 2	81.55	0.221	24	432
Internal floor 1	155.82	1.682	0	0
Internal floor 2	1.57	1.682	0	0
Partition 1	162.92	0.607	1	99
Total fabric loss				12132
Infiltration loss				13153
Height allowance				1312
Total heat loss				26597

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	M10	No. off	1	
Room name	Corridor			
Temperatures	Resultant	20	Environmental	20.1
	Air	19.7	Mean radiant	20.3
System	Double/triple panel radiators			

Total room heat loss	4429 W
91.8W/m ²	9.4W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	25.85	0.497	23	297
Wall 2	25.62	0.497	23	294
Roof 1	26.22	0.221	23	134
Roof 2	25.12	0.221	23	128
Internal floor 1	48.24	1.682	-1	-81
Internal floor 2	0.03	1.682	0	0
Partition 1	77.57	0.607	0	0
Partition 2	135.07	0.607	0	0
Partition 3	80.62	0.607	0	0
Partition 4	13.86	0.607	0	0
Partition 5	63.41	0.607	-1	-39
Partition 6	20.71	0.607	0	0
Partition 7	24.72	0.607	0	0
Partition 8	47.76	0.607	0	0
Partition 9	69.74	0.607	-1	-42
Partition 10	60.55	0.607	-1	-37
Partition 11	13.95	0.607	0	0
Total fabric loss				653
Infiltration loss				3574
Height allowance				202
Total heat loss				4429

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	M11	No. off		1
Room name	Corridor			
Temperatures	Resultant	20	Environmental	20.1
	Air	19.7	Mean radiant	20.3
System	Double/triple panel radiators			

Total room heat loss	4731 W
88.7W/m ²	9.1W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Wall 1	24.63	0.497	23	283
Wall 2	25.91	0.497	23	297
Roof 1	28.32	0.221	23	145
Roof 2	28.42	0.221	23	145
Internal floor 1	3.52	1.682	-1	-6
Internal floor 2	49.37	1.682	-1	-83
Internal floor 3	0.46	1.682	0	0
Partition 1	13.94	0.607	0	0
Partition 2	75.98	0.607	-1	-46
Partition 3	3.59	0.607	0	0
Partition 4	162.88	0.607	-1	-99
Partition 5	75.01	0.607	-1	-46
Partition 6	13.81	0.607	0	0
Partition 7	92.83	0.607	0	0
Partition 8	135.16	0.607	0	0
Partition 9	96.58	0.607	0	0
Total fabric loss				589
Infiltration loss				3928
Height allowance				214
Total heat loss				4731

Project Hevacomp Upper

Outside design temperature		-3 °C		
Heat loss model		Simple model		
Main system of heating		Double/triple panel radiators		
Room ref.	M12	No. off		1
Room name	Void			
Temperatures	Resultant	20	Environmental	20.4
	Air	18.9	Mean radiant	21.1
System	Double/triple panel radiators			

Total room heat loss	19403 W
87.5W/m ²	8.2W/m ³

Surface	Area	U value	Temp. diff.	Heat loss (W)
Roof 1	122.1	0.221	23	631
Roof 2	113.91	0.221	23	588
Internal floor 1	155.09	1.682	0	0
Internal floor 2	28.47	1.682	-1	-49
Internal floor 3	27.41	1.682	-1	-47
Internal floor 4	10.89	1.682	0	0
Partition 1	130.94	0.607	0	0
Partition 2	77.29	0.607	0	0
Partition 3	96.81	0.607	0	0
Partition 4	130.93	0.607	0	0
Partition 5	92.9	0.607	0	0
Partition 6	79.91	0.607	0	0
Total fabric loss				1124
Infiltration loss				17295
Height allowance				984
Total heat loss				19403

Project Hevacomp Upper

Outside design temperature -3 °C
 Heat loss model Simple model
 Main system of heating : Double/triple panel radiators
 Rooms included All rooms selected

Project total heat losses

Total exposed wall loss	25853	W
Total exposed roof loss	6962	W
Total exposed floor loss	4650	W
Total internal floor loss	-28	W
Total internal ceiling loss	30	W
Total internal partition loss	15	W
Total window loss	66396	W
Total rooflight loss	0	W
Total infiltration loss	147716	W
Total fixed air loss	0	W
Total Heat loss	251595	W

Total floor area	2568	m ²	97.97	W/m ²
Total volume	18073.96	m ³	13.92	W/m ³

Pre-heat period (hrs)	Plant ratio	Plant boosted output (kW)
0	1.90	478.16
1	1.79	449.27
2	1.68	423.66
3	1.59	400.82
4	1.51	380.31
5	1.44	361.8
6	1.37	345.01
7	1.31	329.71
8	1.25	315.71