

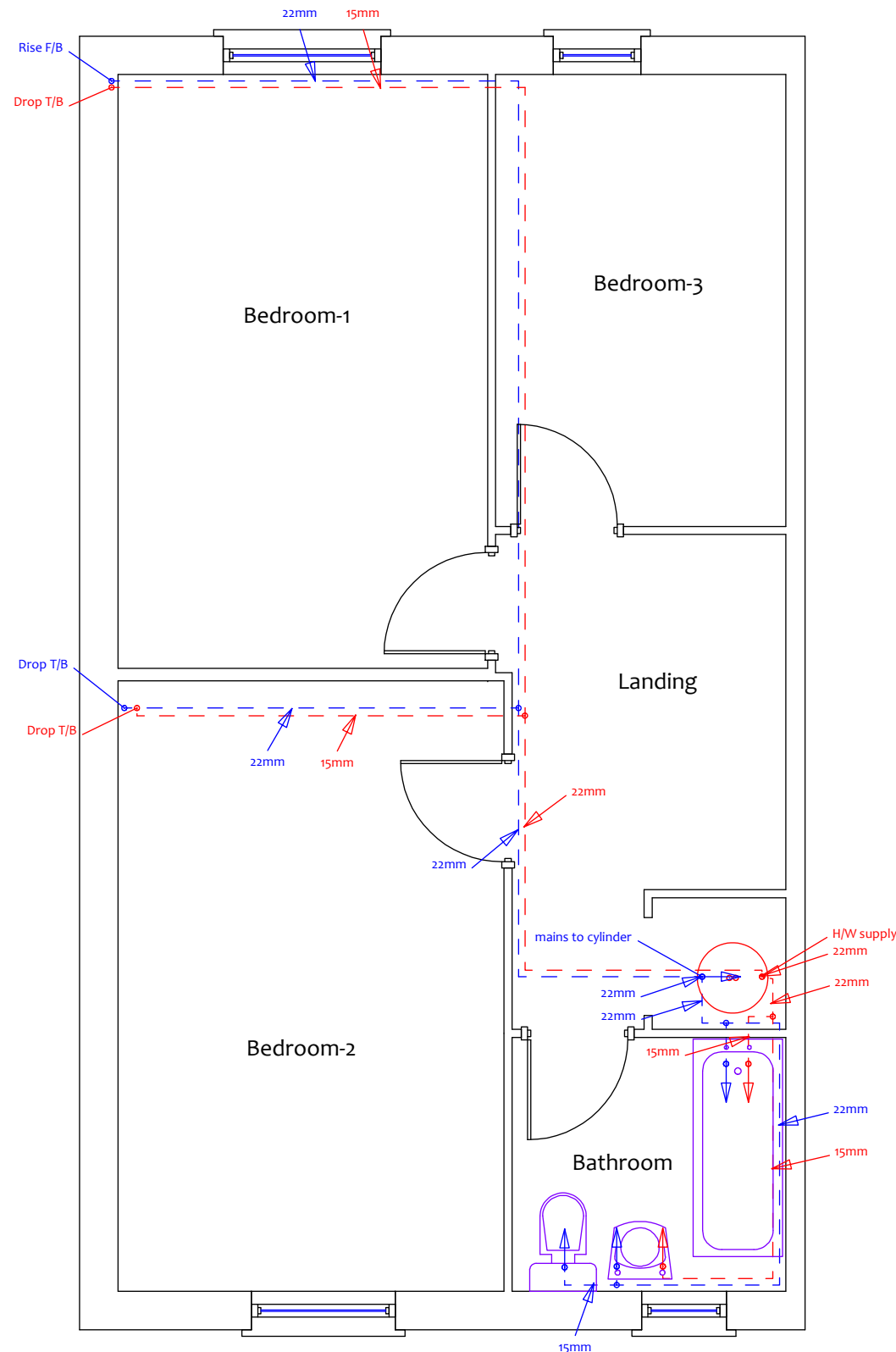
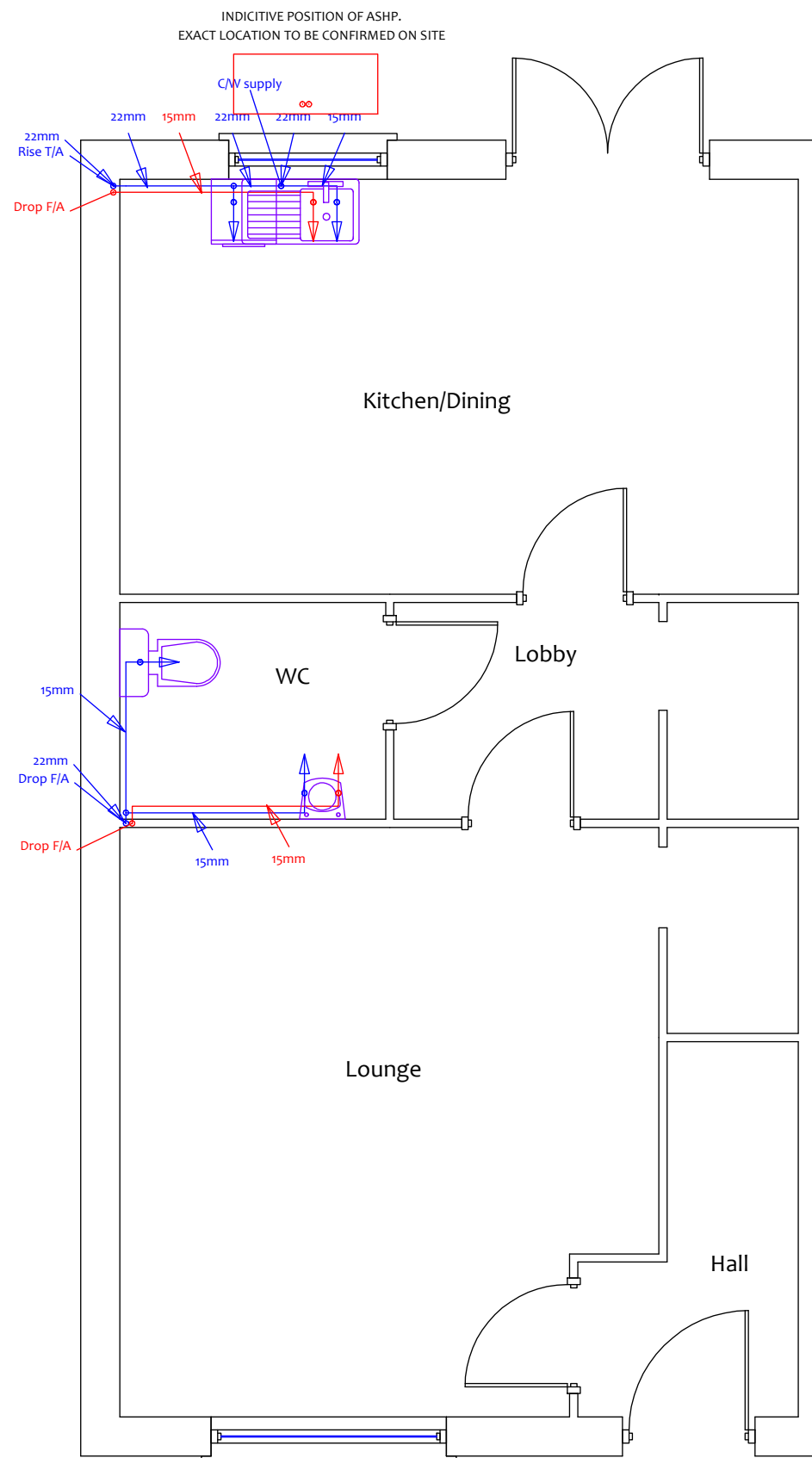
EQUIPMENT SCHEDULE



REDD Project Reference	REDD-24-335
Supplier References	DR24-0429-002
Customer / Developer	Redrow Homes
	G Series Wales
Arch Reference	WG_5P3B_EM
House Type	5P3B End

HEAT PUMP	Daikin Altherma 3 monobloc CLASS 4 type EDLAO4V3 - heat loss 3.60 kW
EXTRA EQUIPMENT	Pair of flexible hoses (K.HOSE750 – Elbow version EL if required), set of anti-vibration feet (UK.FF600H150) & K Sleeve through wall insulation
PUMP	Provided in Daikin monobloc heat pump
UNDERFLOOR HEATING	N/A
RADIATORS	Myson – as specified by Myson
TOWEL RAILS	Sizes as stated on Redrow drawings. Fitted with dual fuel element
ADDITIVES	Installer to consult heat pump manufacturer's instructions and Redrow specification for the biocide chemical to be used
THERMOSTATIC RAD VALVES	As stated on Myson designs
LOCKSHIELD RAD VALVES	As stated on Myson designs
CONTROLS PACK	N/A
CONTROL VALVES FOR RADIATORS ONLY	All control valves included on pre-plumbed cylinder
WALL MOUNTED THERMOSTATS	Daikin Madoka BRC1HHD (W/S/K) for radiator circuit
PROGRAMMER	Daikin user interface
AUTOMATIC BYPASS VALVE	N/A – bypass via buffer located in Daikin cylinder
WIRING CENTRE	Daikin UK.MONOR32/WC (optional extra – see Daikin monobloc instructions)
WEATHER COMPENSATION	Included in monobloc unit
UNVENTED CYLINDER	Daikin 180 litre / 20 litre buffer pre-plumbed heat pump cylinder UK.PPC180/R32SS
BUFFER VESSELL	Included with Daikin combined cylinder
ANTI-FREEZE VALVES	Daikin AF VALVE1 valves
PLASTIC PIPEWORK	Plastic pipework system as required. ASHP primaries assumed to be 28mm copper
FILTER	Included with & mounted on Daikin combined cylinder
AUTO AIR VENT / AIR SEPARATOR	Auto air vent included with & mounted on Daikin combined cylinder
HEATING SYSTEM EXPANSION VESSEL KIT	Provided in Daikin monobloc heat pump
HOT WATER SYSTEM EXPANSION VESSEL KIT	Included with Daikin combined cylinder
INHIBITOR & CLEANSER	Suitable type installed in accordance with manufacturers installation data
INFORMATION FROM SAPS	No
ADDITIONAL INFORMATION	Check with Daikin for any additional information or guidance on equipment required / installation data

The above specification is to be strictly adhered to and there is to be no equal or approved alternative.
This schedule to be read in conjunction with the design specification & drawings and any discrepancies reported to REDD prior to installation



NOTES Primary pipework, first & second fix pipework and all underfloor heating system pipework & fittings must be installed to sizes confirmed by Myson design department & heat pump technical department All pipework in cylinder cupboard to be copper. All final pipework to radiators to be 15mm diameter or above for all radiators, as detailed on relevant Myson heating system designs All products specified within this drawing must be fitted in accordance with all of the manufacturers installation instruction manuals. All drawings are not to scale and should be treated as diagrammatic. Any discrepancies must be reported to designer prior to installation.	REVISIONS		KEY		T1 Wall Mounted Thermostat for Zone 1 T2 Wall Mounted Thermostat for Zone 2 Flow and Return - F & R Hot Water Supply - HWS Cold Water Supply - CWS Mains Cold Water - MCW Pipework Rise To Above - T/A Pipework Drop To Below - T/B Pipework Drop From Above - F/A Pipework Rise From Below - F/B PT1 Programmable Wall Mounted Thermostat for Zone 1 PT2 Programmable Wall Mounted Thermostat for Zone 2 Zone 1 Heating System Pipework Zone 2 Heating System Pipework Domestic Hot Water Supply Domestic Cold Water Supply Pipework at Low Level Pipework in Floor Void Pipework in Roof or Ceiling Void	REDD RENEWABLE ENERGY DOMESTIC DESIGN
	Client / Region : Redrow Homes		REDD Project Ref. No. : REDD-24-335			
	Reference : G Series Wales		Supplier Project Ref. No.s (if applicable) : DR24-0429-002			
	House Type : 5P3B End		Drawing Title : Domestic Plumbing Services - Ground & First Floors			
	Arch Ref. No. : WG_5P3B_EM		DrawingNo. : DPS-5P3B-E-01	Revision :		
	Date (M/Y) : 05/24	Drawn by NDS	Checked by NDS	This drawing must be read in conjunction with latest issue of design specification & schedules © REDD Limited		

HEAT LOSS SUMMARY

ROOM	TEMP øC	AIR CHGS	ROOM VOLUME Cu. M.	HEAT REQ.
Outside Design Temp.	-3			
Lounge	21	0.5	47.89	481.5
Kitchen/Dining	21	1.5	40.75	906.0
WC	21	1.5	8.34	146.3
Hall	21	0.5	9.27	190.7
Lobby	21	0.5	12.68	98.9
Bedroom-1	21	0.5	32.97	324.7
Bedroom-2	21	0.5	35.40	338.5
Bedroom-3	21	0.5	19.62	209.6
Landing	21	0.5	20.39	165.5
Bathroom	22	1.5	10.40	263.3
Total				3125.0
CLIENT.			SITE.	
DATE.	HOUSE TYPE.			DRG No.

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Lounge
 ROOM TEMPERATURE 21
 AIR CHANGES 0.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
Internal wall		0.68	2.45	1.90	0	0.00
Internal wall		1.66	2.45	1.90	0	0.00
Internal wall		0.84	2.45	1.90	0	0.00
Internal wall		0.81	2.45	1.90	0	0.00
Internal wall		1.01	2.45	1.90	0	0.00
External wall		1.58	2.45	0.21	24	19.56
Internal wall		1.01	2.45	1.90	0	0.00
Internal wall		0.15	2.45	1.90	0	0.00
Internal wall		0.15	2.45	1.90	0	0.00
Internal wall		0.60	2.45	1.90	0	0.00
Internal door		0.91	2.10	3.00	0	0.00
+Internal wall		0.91	0.35	1.90	0	0.00
Internal wall		0.55	2.45	1.90	0	0.00
Internal wall		2.07	2.45	1.90	0	0.00
External wall		4.53	2.45	0.21	24	55.95
External wall		0.70	2.45	0.21	24	8.66
External window		1.81	1.34	1.20	24	69.79
+External wall		1.81	1.11	0.21	24	10.12
External wall		0.95	2.45	0.21	24	11.70
Internal wall		0.18	2.45	1.90	0	0.00
Internal door		0.89	2.10	3.00	0	0.00
+Internal wall		0.89	0.35	1.90	0	0.00
Internal wall		0.19	2.45	1.90	0	0.00
Floor	19.55			0.15	24	70.37
Bedroom-2	13.31			1.70	0	0.00
Landing	4.72			1.70	0	0.00
Bathroom	1.51			1.70	-1	0.00

AIR CHANGES 0.5 19.55 2.45 0.17 24 191.55

Room vol : 47.89CuM

HEATLOSS Q 437.69
 Total + 10% 481.46

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Kitchen/Dining
 ROOM TEMPERATURE 21
 AIR CHANGES 1.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
External wall		0.91	2.45	0.21	24	11.28
External Door		1.56	2.10	1.50	24	118.16
+External wall		1.56	0.35	0.21	24	2.76
External wall		0.68	2.45	0.21	24	8.45
External wall		3.19	2.45	0.21	24	39.38
Internal wall		1.07	2.45	1.90	0	0.00
Internal wall		0.20	2.45	1.90	0	0.00
Internal door		0.90	2.10	3.00	0	0.00
+Internal wall		0.90	0.35	1.90	0	0.00
Internal wall		0.97	2.45	1.90	0	0.00
Internal wall		2.07	2.45	1.90	0	0.00
External wall		3.19	2.45	0.21	24	39.38
External wall		0.84	2.45	0.21	24	10.33
External window		1.22	1.04	1.20	24	36.46
+External wall		1.22	1.41	0.21	24	8.65
Floor	16.63			0.15	24	59.87
Bedroom-1	9.25			1.70	0	0.00
Bedroom-3	7.38			1.70	0	0.00

AIR CHANGES 1.5 16.63 2.45 0.50 24 488.95

Room vol : 40.75CuM

HEATLOSS Q 823.67
 Total + 10% 906.04

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM WC
 ROOM TEMPERATURE 21
 AIR CHANGES 1.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
Internal wall		2.04	2.45	1.90	0	0.00
External wall		1.67	2.45	0.21	24	20.59
Internal wall		2.04	2.45	1.90	0	0.00
Internal wall		0.69	2.45	1.90	0	0.00
Internal door		0.88	2.10	3.00	0	0.00
+Internal wall		0.88	0.35	1.90	0	0.00
Internal wall		0.10	2.45	1.90	0	0.00
Floor	3.41			0.15	24	12.26
Bedroom-1	3.10			1.70	0	0.00
Bedroom-2	0.31			1.70	0	0.00

AIR CHANGES 1.5 3.41 2.45 0.50 24 100.13

Room vol : 8.34CuM

HEATLOSS Q 132.98
 Total + 10% 146.27

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Hall
 ROOM TEMPERATURE 21
 AIR CHANGES 0.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
Internal wall		0.68	2.45	1.90	0	0.00
Internal wall		1.69	2.45	1.90	0	0.00
Internal wall		1.01	2.45	1.90	0	0.00
External wall		2.88	2.45	0.21	24	35.61
External wall		0.33	2.45	0.21	24	4.13
External Door		1.02	2.10	1.50	24	76.92
+External wall		1.02	0.35	0.21	24	1.79
External wall		0.34	2.45	0.21	24	4.23
Internal wall		0.18	2.45	1.90	0	0.00
Internal door		0.89	2.10	3.00	0	0.00
+Internal wall		0.89	0.35	1.90	0	0.00
Internal wall		0.12	2.45	1.90	0	0.00
Floor	3.78			0.15	24	13.62
Landing	0.89			1.70	0	0.00
Bathroom	2.89			1.70	-1	0.00
AIR CHANGES 0.5	3.78		2.45	0.17	24	37.08
Room vol :	9.27CuM					
HEATLOSS Q	173.39					
Total + 10%	190.73					

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Lobby
 ROOM TEMPERATURE 21
 AIR CHANGES 0.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
Internal wall		0.94	2.45	1.90	0	0.00
Internal wall		0.10	2.45	1.90	0	0.00
Internal door		0.88	2.10	3.00	0	0.00
+Internal wall		0.88	0.35	1.90	0	0.00
Internal wall		0.69	2.45	1.90	0	0.00
Internal wall		0.52	2.45	1.90	0	0.00
Internal door		0.91	2.10	3.00	0	0.00
+Internal wall		0.91	0.35	1.90	0	0.00
Internal wall		0.60	2.45	1.90	0	0.00
Internal wall		0.84	2.45	1.90	0	0.00
Internal wall		0.84	2.45	1.90	0	0.00
Internal wall		1.01	2.45	1.90	0	0.00
External wall		1.67	2.45	0.21	24	20.59
Internal wall		1.01	2.45	1.90	0	0.00
Internal wall		0.15	2.45	1.90	0	0.00
Internal wall		0.15	2.45	1.90	0	0.00
Internal wall		0.20	2.45	1.90	0	0.00
Internal door		0.90	2.10	3.00	0	0.00
+Internal wall		0.90	0.35	1.90	0	0.00
Floor	5.18			0.15	24	18.64
Bedroom-1	1.05			1.70	0	0.00
Bedroom-2	0.24			1.70	0	0.00
Bedroom-3	0.65			1.70	0	0.00
Landing	3.24			1.70	0	0.00

AIR CHANGES 0.5 5.18 2.45 0.17 24 50.73

Room vol : 12.68CuM

HEATLOSS Q 89.95
 Total + 10% 98.95

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Bedroom-1
 ROOM TEMPERATURE 21
 AIR CHANGES 0.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
External wall		4.64	2.45	0.21	24	57.29
External wall		0.82	2.45	0.21	24	10.17
External window		1.23	1.19	1.20	24	42.23
+External wall		1.23	1.26	0.21	24	7.82
External wall		0.83	2.45	0.21	24	10.28
Internal wall		3.69	2.45	1.90	0	0.00
Internal door		0.89	2.10	3.00	0	0.00
+Internal wall		0.89	0.35	1.90	0	0.00
Internal wall		0.06	2.45	1.90	0	0.00
Internal wall		2.89	2.45	1.90	0	0.00
Kitchen/Dining	9.37			1.50	0	0.00
WC	2.98			1.50	0	0.00
Lobby	1.11			1.50	0	0.00
Roof	13.46			0.11	24	35.52
AIR CHANGES 0.5	13.46		2.45	0.17	24	131.86
Room vol :	32.97CuM					
HEATLOSS Q	295.18					
Total + 10%	324.70					

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Bedroom-2
 ROOM TEMPERATURE 21
 AIR CHANGES 0.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
Internal wall		1.29	2.45	1.90	0	0.00
Internal wall		2.02	2.45	1.90	-1	0.00
External wall		0.85	2.45	0.21	24	10.48
External window		1.13	1.19	1.20	24	38.59
+External wall		1.13	1.26	0.21	24	7.15
External wall		1.04	2.45	0.21	24	12.87
External wall		4.77	2.45	0.21	24	58.91
Internal wall		2.89	2.45	1.90	0	0.00
Internal wall		0.13	2.45	1.90	0	0.00
Internal wall		0.57	2.45	1.90	0	0.00
Internal door		0.89	2.10	3.00	0	0.00
+Internal wall		0.89	0.35	1.90	0	0.00
Lounge	13.86			1.50	0	0.00
WC	0.32			1.50	0	0.00
Lobby	0.27			1.50	0	0.00
Roof	14.45			0.11	24	38.15
AIR CHANGES 0.5	14.45		2.45	0.17	24	141.61
Room vol :	35.40CuM					
HEATLOSS Q	307.76					
Total + 10%	338.54					

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Bedroom-3
 ROOM TEMPERATURE 21
 AIR CHANGES 0.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
External wall		3.53	2.45	0.21	24	43.61
Internal wall		1.27	2.45	1.90	0	0.00
Internal door		0.88	2.10	3.00	0	0.00
+Internal wall		0.88	0.35	1.90	0	0.00
Internal wall		0.12	2.45	1.90	0	0.00
Internal wall		3.53	2.45	1.90	0	0.00
External wall		0.45	2.45	0.21	24	5.57
External window		0.68	1.19	1.20	24	23.37
+External wall		0.68	1.26	0.21	24	4.33
External wall		1.13	2.45	0.21	24	14.01
Kitchen/Dining	7.34			1.50	0	0.00
Lobby	0.67			1.50	0	0.00
Roof	8.01			0.11	24	21.15

AIR CHANGES 0.5 8.01 2.45 0.17 24 78.49

Room vol : 19.62CuM

HEATLOSS Q 190.54
 Total + 10% 209.59

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Landing
 ROOM TEMPERATURE 21
 AIR CHANGES 0.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
Internal wall		0.64	2.45	1.90	0	0.00
Internal door		0.89	2.10	3.00	0	0.00
+Internal wall		0.89	0.35	1.90	0	0.00
Internal wall		1.26	2.45	1.90	0	0.00
Internal wall		0.07	2.45	1.90	-1	0.00
Internal door		0.88	2.10	3.00	-1	0.00
+Internal wall		0.88	0.35	1.90	-1	0.00
Internal wall		0.08	2.45	1.90	-1	0.00
Internal wall		0.11	2.45	1.90	0	0.00
Internal wall		0.11	2.45	1.90	0	0.00
Internal wall		1.04	2.45	1.90	-1	0.00
External wall		1.03	2.45	0.21	24	12.69
Internal wall		1.04	2.45	1.90	0	0.00
Internal wall		0.15	2.45	1.90	0	0.00
Internal wall		0.22	2.45	1.90	0	0.00
Internal wall		1.11	2.45	1.90	0	0.00
External wall		2.78	2.45	0.21	24	34.28
Internal wall		1.27	2.45	1.90	0	0.00
Internal door		0.88	2.10	3.00	0	0.00
+Internal wall		0.88	0.35	1.90	0	0.00
Internal wall		0.12	2.45	1.90	0	0.00
Internal wall		0.09	2.45	1.90	0	0.00
Internal door		0.89	2.10	3.00	0	0.00
+Internal wall		0.89	0.35	1.90	0	0.00
Internal wall		0.10	2.45	1.90	0	0.00
Internal wall		0.13	2.45	1.90	0	0.00
Lounge	4.27			1.50	0	0.00
Hall	0.92			1.50	0	0.00
Lobby	3.13			1.50	0	0.00
Roof	8.32			0.11	24	21.97
AIR CHANGES 0.5	8.32		2.45	0.17	24	81.56
Room vol :	20.39CuM					
HEATLOSS Q	150.50					
Total + 10%	165.55					

Date : 03/05/2024
 Drwg : REDD-24-335-5P3B-WDQR
 ROOM Bathroom
 ROOM TEMPERATURE 22
 AIR CHANGES 1.5

	AREA	LENGTH	HEIGHT	U-VALUE	TEMP-DIF	WATTS
Internal wall		1.19	2.45	1.90	1	5.52
External wall		1.98	2.45	0.21	25	25.53
External wall		0.46	2.45	0.21	25	5.98
External window		0.66	1.04	1.20	25	20.69
+External wall		0.66	1.41	0.21	25	4.91
External wall		1.01	2.45	0.21	25	13.00
Internal wall		1.98	2.45	1.90	1	9.24
Internal wall		0.07	2.45	1.90	1	0.33
Internal door		0.88	2.10	3.00	1	5.55
+Internal wall		0.88	0.35	1.90	1	0.59
Lounge	1.33			1.50	1	2.00
Hall	2.91			1.50	1	4.37
Roof	4.24			0.11	25	11.67

AIR CHANGES 1.5 4.24 2.45 0.50 25 130.00

Room vol : 10.40CuM

HEATLOSS Q 239.37
 Total + 10% 263.31