

PROJECT DATA

Project number: 2024-04-15_19-26-31_510f2318	Street name & House number:
Project name: EXAMPLE REPORT	Postal code & Town: PO22 7AT Bognor Regis

DETAILS OF BUILDING OWNER

First name & Name: John Smith	Street name & House number: 1 High Street
Company name:	Postal code & Town: PO22 7AT

DETAILS OF INSTALLER

Company name: WellPlumbed	Street name & House number: 22 New Barn Lane
Company ID:	Postal code & Town: PO22 8LN Felpham

1. INTRODUCTION

This heat loss calculation was carried out in accordance with the applicable standards, with the greatest possible care and based on the information made available to us. The resulting recommendations are illustrative, without obligation and non-binding.

2. BUILDING - GENERAL

● country	United Kingdom
● minimum outdoor temperature	-1.8 °C
● average annual temperature	10 °C
● project type	residential
● building type	renovated existing build or new building (2006 - 2022)
● thermal mass	brick building
● type of heating system	radiators
● ventilation system	no ventilation system (most existing buildings)
● heating control	building cools down at night
● type of roof	single pitched roof



insulation profile

complete in detail

3. BUILDING - INSULATION & WINDOWS

Construction	Insulation type	Thickness (cm)	U-value (W/m ² K)
external wall 1	-	-	0.35
insulated floor 1	-	-	0.35
insulated floor 2	-	-	0.43
loft floor (insulated)	-	-	0.12

Construction	Material type	Uw-value (W/m ² K)
window	-	2.8
exterior door	insulated door	2.8

4. DETAILS OF HEAT LOSSES

In this section, you will find the calculated heat losses for all subfiles. The calculated losses at room level also include the losses to adjacent rooms. Adding up all losses at room level will result in a loss that is higher than the loss calculated for the total building unit.

EXISTING RADIATORS

●	Transmission loss (Qt)	4.48	kW
●	Ventilation loss (Qv)	1.04	kW
●	Warming up of thermal mass (Qhu)	0.50	kW
●	Required power	6.00	kW

Space	Level	Area (m ²)	Temp. (°C)	Qt (W)	Qv (W)	Qhu (W)	Qloss (W)	Qloss,75/65/20 (W)
Utility		5.36	21.00	308	120	54	481	495
Kitchen		20.92	21.00	636	237	210	1081	1111
Living Room		34.35	21.00	997	409	344	1749	1798
Entrance Hall		11.50	21.00	275	122	115	511	525
Cloakroom		2.84	21.00	92	39	29	158	162
Office		6.95	21.00	265	112	70	445	457
Landing		15.53	21.00	259	149	156	563	579
Bedroom 1		28.73	21.00	655	369	288	1310	1347
Bedroom 2		10.07	21.00	219	100	101	419	431
Bedroom 3		7.47	21.00	247	122	75	443	455
Bedroom 4		8.99	21.00	255	132	90	477	490
Bathroom		4.24	21.00	112	60	43	214	220
Ensuite 1		3.43	21.00	75	38	35	146	150
Ensuite 2		4.19	21.00	76	42	42	159	163
Understairs Cupboard		1.40	14.30	-	-	-	-	-
Cylinder cupboard		1.00	17.50	-	-	-	-	-

NEW RADIATORS

●	Transmission loss (Qt)	4.48	kW
●	Ventilation loss (Qv)	1.04	kW
●	Warming up of thermal mass (Qhu)	0.50	kW
●	Required power	6.00	kW

Space	Level	Area (m²)	Temp. (°C)	Qt (W)	Qv (W)	Qhu (W)	Qloss (W)	Qloss,75/65/20 (W)
Utility		5.36	21.00	308	120	54	481	495
Kitchen		20.92	21.00	636	237	210	1081	1111
Living Room		34.35	21.00	997	409	344	1749	1798
Entrance Hall		11.50	21.00	275	122	115	511	525
Cloakroom		2.84	21.00	92	39	29	158	162
Office		6.95	21.00	265	112	70	445	457
Landing		15.53	21.00	259	149	156	563	579
Bedroom 1		28.73	21.00	655	369	288	1310	1347
Bedroom 2		10.07	21.00	219	100	101	419	431
Bedroom 3		7.47	21.00	247	122	75	443	455
Bedroom 4		8.99	21.00	255	132	90	477	490
Bathroom		4.24	21.00	112	60	43	214	220
Ensuite 1		3.43	21.00	75	38	35	146	150
Ensuite 2		4.19	21.00	76	42	42	159	163
Understairs Cupboard		1.40	14.30	-	-	-	-	-
Cylinder cupboard		1.00	17.50	-	-	-	-	-

5. DETAILS OF OUTPUT ELEMENTS

This section contains the selected output elements for each subfiles.

EXISTING RADIATORS

● radiators present	yes
● supply temperature	45 °C
● return temperature	40 °C

Data room		Radiators				Total
Space	Q _{loss} (W)	Brand	Type	Comments	Q _{output, system} (W)	Q _{output} (W)
Utility	481		11	600 x 700	233	233 -248 (-51.5%)
Kitchen	1081		22	600 x 1100	625	625 -456 (-42.1%)
Living Room	1749		22	600 x 1100	625	1616 -133 (-7.6%)
			22	600 x 1100	625	
			11	600 x 1100	366	
Entrance Hall	511		22	600 x 600	340	340 -171 (-33.4%)
Cloakroom	158		11	600 x 400	133	133 -25 (-15.8%)
Office	445		11	600 x 800	266	266 -179 (-40.2%)
Landing	563		11	600 x 400	133	133 -430 (-76.3%)
Bedroom 1	1310		11	600 x 1000	332	498 -812 (-61.9%)
			11	600 x 500	166	
Bedroom 2	419		11	600 x 600	199	199 -220 (-52.5%)
Bedroom 3	443		11	600 x 600	199	199 -244 (-55.0%)
Bedroom 4	477		11	600 x 800	266	266 -211 (-44.2%)
Bathroom	214		11	1200 x 500 chrome st towel rail	114	114 -100 (-46.7%)
Ensuite 1	146		11	1200 x 500 chrome st towel rail	114	114 -32 (-21.9%)
Ensuite 2	159		11	1200 x 500 chrome st towel rail	114	114 -45 (-28.3%)
Understairs Cupboard	-					0
Cylinder cupboard	-					0

NEW RADIATORS

● radiators present	yes
● supply temperature	45 °C
● return temperature	40 °C

Data room		Radiators				Total
Space	Q _{loss} (W)	Brand	Type	Comments	Q _{output, system} (W)	Q _{output} (W)
Utility	481		22	600 x 900	511	511 +30 (+6.3%)
Kitchen	1081		22	600 x 2000	1135	1135 +54 (+5.0%)
Living Room	1749		22	600 x 1100	624	1815 +66 (+3.8%)
			22	600 x 1000	567	
			22	600 x 1100	624	
Entrance Hall	511		22	600 x 900	511	511 +0 (+0.0%)
Cloakroom	158		22	500 x 400	195	195 +37 (+23.5%)
Office	445		22	600 x 800	454	454 +9 (+2.1%)
Landing	563		22	600 x 1000	567	567 +4 (+0.8%)
Bedroom 1	1310		22	600 x 1200	681	1362 +52 (+4.0%)
			22	600 x 1200	681	
Bedroom 2	419		22	600 x 800	454	454 +35 (+8.4%)
Bedroom 3	443		22	600 x 800	454	454 +11 (+2.5%)
Bedroom 4	477		22	600 x 900	511	511 +34 (+7.2%)
Bathroom	214		11	Milano Aruba Sgl Vertical 1600 x 472	285	285 +71 (+33.2%)
Ensuite 1	146		11	Milano Aruba Sgl Vertical 1600 x 354	214	214 +68 (+46.6%)
Ensuite 2	159		11	Milano Aruba Sgl Vertical 1600 x 354	214	214 +55 (+34.6%)
Understairs Cupboard	-					0
Cylinder cupboard	-					0

6. COMMENTS

EXISTING RADIATORS - the existing radiators are not sufficient for the proposed Heat Pump.

NEW RADIATORS - the new radiators specified are required to provide the design room temperatures.

We recommend a heat pump with a power of 6 kW.