APEX
Renewable Energy Surveys

Emitter Schedule (Insulation/eco4 Measures) - Crossley PO21 4TB

Room Type / Name	Level	Heat Loss (Watts)	Current Emitter	Proposed Emitter	Qty	Rad Output(s) at Design Conditions	Notes
Entrance Hall	Single storey	449.05	350 x 1400 Electric	600 x 1400 P+	x 1	764.50	
Bathroom	Single storey	504.60	N/A	N/A			No space available
Study	Single storey	515.89	N/A	600 x 0900 K2	x 1	632.95	
Bedroom 1	Single storey	741.35	350 x 1400 Electric	700 x 1400 P+	x 1	869.65	
Bedroom 2	Single storey	586.44	450 x 850 Electric	700 x 1400 P+	x 1	869.65	
Kitchen	Single storey	618.00	N/A	700 x 0700 K2	x 1	557.44	
Living Room	Single storey	1708.10	300 x 1400 Electric	700 x 1400 P+	x 1	869.65	
"	Single storey		300 x 1400 Electric	700 x 1400 P+	x 1	869.65	

Further Information

This calc has insulation measures.

Disclaimers

1) This proposal has been designed in accordance with the guidance set out within the MIS3005-D standards, using data and information gathered by a Domestic Energy Assessor/site surveyor and sales representative(s), as well as information from the end user, prior to installation. Apex are not responsible for any alterations or deviations to this design by anyone not authorised to do so, or any alterations to this design carried out without prior consultation with a design engineer.

2) The heat ouput of any existing heat emitters that cannot be verified will be calculated based on an assumed and/or approximate kW output. This includes (but is not limited to): radiators over fifteen years old, obsolete models, designer radiators of an unknown brand/model/age, cast iron radiators, underfloor heating, non-standard towel rails, electric storage heaters and warm air systems.

3) Any variations or deviations to the above listed heat emitters must be discussed and agreed upon with the customer prior to installation of the air source heat pump. Any post-installation amendments to this agreement may be chargeable to the customer.

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Renewable Energy Surveys

Heat Loss Summary (Insulation/eco4 Measures) - Crossley PO21 4TB

Room Type / Name	Fabric Heat Loss	Vent. Heat Loss	Estimated kWh Usage	Open Flue	AC p/hr	Design Temp
Entrance Hall	204.94	244.10	1691.72	No	1.5	18
Bathroom	327.96	176.64	1101.70	No	1.5	22
Study	385.07	130.83	1361.63	No	1.0	21
Bedroom 1	469.47	271.88	2779.87	No	1.0	18
Bedroom 2	405.79	180.65	2016.61	No	1.0	18
Kitchen	444.72	173.28	2099.39	No	1.0	18
Living Room	1109.49	598.61	4096.08	No	1.5	21
"						

	(w)	(w)	(w)
Total	3347.44	1776.00	15147.01

Total Heat Loss (kW) 5.12 *(Rounded to two decimal places)*

Domestic Hot Water Calculation - Crossley PO21 4TB

Bedrooms / Occupants	2	Installation Intended For	Heating and Hot Water
Calculated Demand	135	DHW Demand from EPC	2170
Immersion Size (kW)	3	Water temp. for DHW	50 °C
Immersion Use	Once per week	Estimated SCoP for DHW	1.75
Proposed Cylinder Size	150 ltrs	Estimated Immersion Cost	£30.94
Primary Cyl. Location	Cylinder location 1 on survey	Estimated Hot Water Cost	£291.15
Secondary Cyl. Location	N/A	Total Annual DHW Est. Cost	**£322.09**

[redacted]

APEX
Renewable Energy Surveys

Proposal Summary (Insulation/eco4 Measures) - Crossley PO21 4TB

Property Information

Date Created	18/07/2024	**Outdoor Temp**	-1.8
Customer Name	Mr Gary Crossley	**Flow Temp**	50 °C
Address Line 1	109 West Fraont Road	**MAT Location**	Southern (Hurn)
Address Line 2	Bognor Regis	**Degree Days**	2224
City	West Sussex		
Postcode	PO21 4TB	**Space Heat Demand**	10343
		DHW Demand	2170
Property Type	Bungalow	**Size (m2)**	89
Age of Property	Pre 2000		
Bedrooms/Occupants	2	**Electric (p/kWh)**	23.48
		Seasoned Wood	79
Total Heat Loss (kW)	**5.12**	**Are these Average Unit Rates?**	Yes

Proposed Equipment

ASHP Manufacturer	Samsung	**Cylinder Size**	150 Ltr Slim KODIAK
ASHP Model Number	8kW / AE080RXYDEG/EU COASTAL	**Cylinder Dimensions**	1500h x 625w (mm)
ASHP Max Output	6.5 kW	**Est. SCoP - DHW**	1.75
Est. SCoP - Heating	3.4		
		Heating Designed For	Continuous Heat
Est. Space Heat Cost	£560.99	**Auxillary Space Heat?**	No
Est. Annual Cost	**£883.08**	**Auxillary DHW?**	Immersion

Equipment Location & MCS020 Sound Calculation

ASHP Location	Rear of property	**Sound power level (dB)**	63
Wall / Ground	Ground	**Sound pressure level**	Q2 - "One Reflective Surface"
		Distance from heat pump to assessment position (mtr)	3
Cylinder Location A	Cylinder location 1 on survey	**Distance reduction (dB)**	-17
Cylinder Location B	N/A	**Barriers between ASHP and assessment pos.**	Barrier (no view)
		Sound pressure level at assessment position	36
Fuse Board Location	Located in bedroom 1	**Background noise level (dB)**	40
Electricity Phase	Single Phase	**Differential between sound pressure and background noise**	4
		Decibel correction (dB)	41.5
Solar Present	N/A - No Solar Present	**Result**	**42dB, PASS**
		Permitted Development Rights	Yes

Disclaimer: Photographic and/or video evidence provided with a site survey will be used to establish the most suitable heat pump location, based on assumed habitable areas in the nearest neighbouring property. It is the responsibility of the installer to confirm the most suitable location with the customer.

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