

PREDICTED ENERGY ASSESSMENT

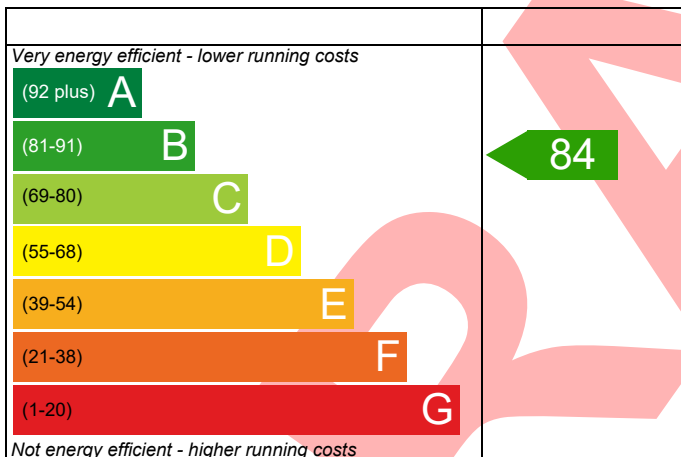
ROS, Plot 47, Sweet Hill,
Southwell,
Portland,
Dorset,
DT5

Dwelling type: House, Semi-Detached
Date of assessment: 13/03/2023
Produced by: Resi Resolve
Total floor area: 102.93 m²

This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

The energy performance has been assessed using the Government approved SAP2012 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO₂) emissions.

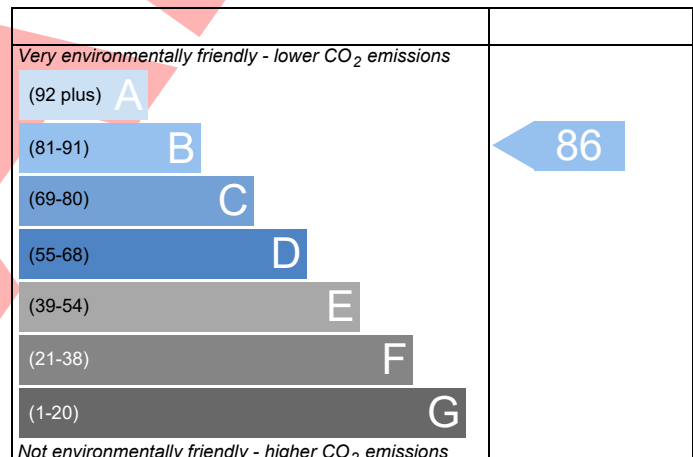
Energy Efficiency Rating



England EU Directive 2002/91/EC

The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

Environmental Impact (CO₂) Rating



England EU Directive 2002/91/EC

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.

This report has not been submitted through the Elmhurst Energy members' portal, therefore results are subject to change when the dwelling is completed.

BUILDING REGULATION COMPLIANCE

Calculation Type: New Build (As Designed)

Property Reference	KOO/0002/23 047	Issued on Date	13/03/2023
Assessment Reference	001	Prop Type Ref	ROS
Property	ROS, Plot 47, Sweet Hill, Southwell, Portland, Dorset, DT5		

SAP Rating	84 B	DER	16.66	TER	27.12
Environmental	86 B	% DER<TER	38.58		
CO ₂ Emissions (t/year)	1.39	DFEE	48.91	TFEE	59.58
General Requirements Compliance	Pass	% DFEE<TFEE	17.92		

Assessor Details	Mrs. Georgina O'Connor, Resi Resolve, Tel: 07748778047, georgie@resi-resolve.co.uk	Assessor ID	T293-0001
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Client	Koori Limited, KOO
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SUMMARY FOR INPUT DATA FOR New Build (As Designed)

Criterion 1 – Achieving the TER and TFEE rate

1a TER and DER

Fuel for main heating	Electricity		
Fuel factor	1.55 (electricity)		
Target Carbon Dioxide Emission Rate (TER)	27.12	kgCO ₂ /m ²	
Dwelling Carbon Dioxide Emission Rate (DER)	16.66	kgCO ₂ /m ²	Pass
	-10.46 (-38.6%)	kgCO ₂ /m ²	

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	59.58	kWh/m ² /yr	
Dwelling Fabric Energy Efficiency (DFEE)	48.91	kWh/m ² /yr	
	-10.7 (-18.0%)	kWh/m ² /yr	Pass

Criterion 2 – Limits on design flexibility

Limiting Fabric Standards

2 Fabric U-values

Element	Average	Highest	
External wall	0.21 (max. 0.30)	0.21 (max. 0.70)	Pass
Party wall	0.00 (max. 0.20)	-	Pass
Floor	0.11 (max. 0.25)	0.11 (max. 0.70)	Pass
Roof	0.12 (max. 0.20)	0.18 (max. 0.35)	Pass
Openings	1.28 (max. 2.00)	1.30 (max. 3.30)	Pass

2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

3 Air permeability

Air permeability at 50 pascals	4.50 (design value)	m ³ /(h.m ²) @ 50 Pa	
Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	Pass

Limiting System Efficiencies

4 Heating efficiency

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Main heating system	Heat pump with radiators or underfloor - Electric Vaillant aroTHERM 5kW VWL 55/3 A 230v	
Secondary heating system	None	
5 Cylinder insulation		
Hot water storage	Measured cylinder loss: 1.42 kWh/day Permitted by DBSCG 2.30	Pass
Primary pipework insulated	Yes	Pass
6 Controls		
Space heating controls	Time and temperature zone control	Pass
Hot water controls	Cylinderstat	Pass
	Independent timer for DHW	Pass
7 Low energy lights		
Percentage of fixed lights with low-energy fittings	100 %	
Minimum	75 %	Pass
8 Mechanical ventilation		
Not applicable		

Criterion 3 – Limiting the effects of heat gains in summer

9 Summertime temperature

Overheating risk (Southern England)	Not significant	Pass
Based on:		
Overshading	Average	
Windows facing South East	8.86 m ² , No overhang	
Windows facing North West	6.17 m ² , No overhang	
Air change rate	8.00 ach	
Blinds/curtains	None	

Criterion 4 – Building performance consistent with DER and DFEE rate

Party Walls

Type	U-value		
Filled Cavity with Edge Sealing	0.00	W/m ² K	Pass

Air permeability and pressure testing

3 Air permeability

Air permeability at 50 pascals	4.50 (design value)	m ³ /(h.m ²) @ 50 Pa	
Maximum	10.0	m ³ /(h.m ²) @ 50 Pa	Pass

10 Key features

Party wall U-value	0.00	W/m ² K
Roof U-value	0.10	W/m ² K
Floor U-value	0.11	W/m ² K
Door U-value	1.10	W/m ² K
Door U-value	1.00	W/m ² K

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RECOMMENDATIONS

	Typical cost	Typical savings per year	Energy efficiency	Environmental impact	Result
Low energy lights			0	0	Already installed
Solar water heating	£4,000 - £6,000	£205	B 87	B 88	Recommended
Photovoltaic	£3,500 - £5,500	£779	A 96	A 96	Recommended
Wind turbine			0	0	Not applicable
Totals	£7,500 - £11,500	£984	A 96	A 96	

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