

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)



Property Reference	5016-SUST-HP-ANNEX	Issued on Date	05/05/2021
Assessment Reference	additional 10%	Prop Type Ref	5016-SUST-HP-ANNEX
Property	Annex, 14 , 14 Rushmoor Lane, Backwell, Bristol, BS48 3BN		

SAP Rating	81 B	DER	22.34	TER	24.90
Environmental	81 B	% DER<TER	10.29		
CO ₂ Emissions (t/year)	1.98	DFEE	49.05	TFEE	57.65
General Requirements Compliance	Pass	% DFEE<TFEE	14.91		

Assessor Details	Mr. Michael Andrews, Energy Saving Experts Ltd, Tel: 01225 862266, mike@energy-saving-experts.com	Assessor ID	N388-0001
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Client	
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Orientation	North
Property Tenure	Owner-occupied
Transaction Type	New dwelling
Terrain Type	Suburban
1.0 Property Type	House, Detached
2.0 Number of Storeys	2
3.0 Date Built	2021
4.0 Sheltered Sides	1
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	39.25 m	69.07 m ²	2.45 m
1st Storey:	26.49 m	52.30 m ²	1.85 m

7.0 Living Area	48.85	m ²
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8.0 Thermal Mass Parameter	Simple calculation - Low	
Thermal Mass	100.00	kJ/m ² K

9.0 External Walls

Description	Type	U-Value (W/m ² K)	Gross Area (m ²)	Nett Area (m ²)
External Wall 1	Cavity Wall	0.18	128.93	98.66
External Wall 2	Timber Frame	0.18	6.55	6.55

10.0 External Roofs

Description	Type	U-Value (W/m ² K)	Gross Area (m ²)	Nett Area (m ²)
External Roof 1	External Slope Roof	0.13	83.50	83.50

11.0 Heat Loss Floors

Description	Type	Construction	U-Value (W/m ² K)	Area (m ²)
Heat Loss Floor 1	Ground Floor - Solid		0.13	69.07

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Argon Filled	G-value	Frame Type	Frame Factor	U Value (W/m ² K)
Windows and doors	Manufacturer	Window	Double Low-E Hard 0.2			0.72		0.70	1.40

13.0 Openings

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Name	Opening Type	Location	Orientation	Curtain Type	Overhang Ratio	Wide Overhang	Width (m)	Height (m)	Count	Area (m ²)	Curtain Closed
D10	Window	[1] External Wall 1	North	None	0.00					1.95	
D1	Window	[1] External Wall 1	East	None	0.00					1.95	
D3/D9	Window	[1] External Wall 1	West	None	0.00					10.50	
W5/6	Window	[1] External Wall 1	North	None	0.00					1.64	
W7	Window	[1] External Wall 1	North	None	0.00					1.62	
W9	Window	[1] External Wall 1	South	None	0.00					1.51	
W1/2/3/4	Window	[1] External Wall 1	East	None	0.00					5.17	
W10	Window	[1] External Wall 1	East	None	0.00					2.34	
W11	Window	[1] External Wall 1	West	None	0.00					2.34	
W12	Window	[1] External Wall 1	North	None	0.00					1.25	

14.0 Conservatory	<input type="text" value="None"/>	
15.0 Draught Proofing	<input type="text" value="100"/>	%
16.0 Draught Lobby	<input type="text" value="No"/>	

17.0 Thermal Bridging	<input type="text" value="Calculate Bridges"/>
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17.1 List of Bridges

Source Type	Bridge Type	Length	Psi	Imported
Table K1 - Approved	E2 Other lintels (including other steel lintels)	13.57	0.300	Yes
Table K1 - Approved	E3 Sill	17.57	0.040	No
Table K1 - Approved	E4 Jamb	40.48	0.050	No
Table K1 - Approved	E5 Ground floor (normal)	39.25	0.160	Yes
Table K1 - Approved	E6 Intermediate floor within a dwelling	26.49	0.070	Yes
Table K1 - Approved	E11 Eaves (insulation at rafter level)	26.80	0.040	No
Table K1 - Approved	E13 Gable (insulation at rafter level)	22.26	0.040	No
Table K1 - Approved	E16 Corner (normal)	16.83	0.090	No
Table K1 - Approved	E17 Corner (inverted – internal area greater than external area)	3.24	-0.090	No
Table K1 - Default	R4 Ridge (vaulted ceiling)	15.56	0.080	No
Table K1 - Default	R5 Ridge (inverted)	4.00	0.040	No
Table K1 - Default	R8 Roof to wall (rafter)	6.90	0.060	No

Y-value	<input type="text" value="0.069"/>	W/m ² K
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18.0 Pressure Testing	<input type="text" value="Yes"/>	
Designed AP ₅₀	<input type="text" value="5.00"/>	m ³ /(h.m ²) @ 50 Pa
Property Tested ?	<input type="text"/>	
As Built AP ₅₀	<input type="text"/>	m ³ /(h.m ²) @ 50 Pa

19.0 Mechanical Ventilation

Summer Overheating

Windows open in hot weather	<input type="text" value="Windows half open"/>
Cross ventilation possible	<input type="text" value="Yes"/>
Night Ventilation	<input type="text" value="No"/>
Air change rate	<input type="text" value="4.00"/>

Mechanical Ventilation

Mechanical Ventilation System Present	<input type="text" value="No"/>
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20.0 Fans, Open Fireplaces, Flues

	MHS	SHS	Other	Total
Number of Chimneys	0		0	0
Number of open flues	0		0	0
Number of intermittent fans				2
Number of passive vents				0
Number of flueless gas fires				0

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21.0 Fixed Cooling System

22.0 Lighting

Internal

Total number of light fittings

Total number of L.E.L. fittings

Percentage of L.E.L. fittings %

External

External lights fitted

Light and motion sensor

23.0 Electricity Tariff

24.0 Main Heating 1

Description

Percentage of Heat %

Main Heating

SAP Code

Efficiency (SAP Table) %

Controls

Sap Code

25.0 Main Heating 2

Community Heating

28.0 Water Heating

Water Heating

Flue Gas Heat Recovery System

Waste Water Heat Recovery Instantaneous System 1

Waste Water Heat Recovery Instantaneous System 2

Waste Water Heat Recovery Storage System

Solar Panel

Water use <= 125 litres/person/day

SAP Code

Immersion Heater

29.0 Hot Water Cylinder

Cylinder In Heated Space

Insulation Type

Insulation Thickness

Cylinder Volume L

32.0 Photovoltaic Unit

PV Cells kWp

2.80

Orientation

South

Elevation

45°

Overshading

None Or Little

Connected to Dwelling

Yes

Recommendations

Lower cost measures

None

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Further measures to achieve even higher standards

	Typical Cost	Typical savings per year	Ratings after improvement	
			SAP rating	Environmental Impact
Solar water heating	£4,000 - £6,000	£90	B 83	