

SUMMARY FOR INPUT DATA

Calculation Type: New Build (As Designed)

Property Reference	139				Issued on Date	06/03/2023
Assessment Reference	001	Prop Type Ref	Bungalow			
Property	139, Chapel Hill, Tilehurst, RG31 5DD					
SAP Rating	103 A	DER	-1.69	TER	28.24	
Environmental	103 A	% DER<TER	105.98			
CO ₂ Emissions (t/year)	-0.62	DFEE	58.02	TFEE	62.21	
General Requirements Compliance	Pass	% DFEE<TFEE	6.74			
Assessor Details	Mrs. Chitra Deshpande, Elmhurst Training Account, Tel: , chitra@philipwadge.co.uk				Assessor ID	X001-5996
Client						

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Orientation	North						
Property Tenure	Unknown						
Transaction Type	New dwelling						
Terrain Type	Urban						
1.0 Property Type	Bungalow, Detached						
2.0 Number of Storeys	1						
3.0 Date Built	2023						
4.0 Sheltered Sides	0						
5.0 Sunlight/Shade	Average or unknown						
6.0 Measurements							
Ground Floor:		Heat Loss Perimeter		Internal Floor Area		Average Storey Height	
		39.80 m		96.15 m²		2.40 m	
7.0 Living Area	40.29		m²				
8.0 Thermal Mass Parameter	Precise calculation						
Thermal Mass	144.03		kJ/m²K				
9.0 External Walls							
Description	Type	Construction		U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area (m²)	Nett Area (m²)
External Wall 1	Timber Frame	Timber framed wall (one layer of plasterboard)		0.11	9.00	95.52	67.23
9.2 Internal Walls							
Description	Construction				Kappa (kJ/m²K)	Area (m²)	
Internal Wall 1	Plasterboard on timber frame				9.00	200.16	
10.0 External Roofs							
Description	Type	Construction		U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area (m²)	Nett Area (m²)
External Roof 1	External Plane Roof	Plasterboard, insulated at ceiling level		0.11	9.00	96.15	96.15
11.0 Heat Loss Floors							
Description	Type	Construction		U-Value (W/m²K)	Kappa (kJ/m²K)	Area (m²)	
Heat Loss Floor 1	Ground Floor - Solid	Slab on ground, screed over insulation		0.12	110.00	96.15	
12.0 Opening Types							

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Description	Data Source	Type	Glazing	Glazing Gap	Argon Filled	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Window	Manufacturer	Window	Triple Low-E Soft 0.05			0.57		0.70	0.80
Front Door	Manufacturer	Solid Door							0.80
Patio door	Manufacturer	Window	Triple Low-E Soft 0.05			0.57		0.70	0.80

13.0 Openings

Name	Opening Type	Location	Orientation	Curtain Type	Overhang Ratio	Wide Overhang	Width (m)	Height (m)	Count	Area (m²)	Curtain Closed
Front Door	Solid Door	[1] External Wall 1	North							1.89	
North Windows	Window	[1] External Wall 1	North	None	0.00					7.23	
South Door	Window	[1] External Wall 1	South	None	0.00					8.64	
South Windows	Window	[1] External Wall 1	South	None	0.00					1.89	
West Windows	Window	[1] External Wall 1	West	None	0.00					6.48	
East Windows	Window	[1] External Wall 1	East	None	0.00					2.16	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

Y-value

W/m²K

18.0 Pressure Testing

Designed AP₅₀

m³/(h.m²) @ 50 Pa

Property Tested ?

As Built AP₅₀

m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Summer Overheating

Windows open in hot weather

Cross ventilation possible

Night Ventilation

Air change rate

Mechanical Ventilation

Mechanical Ventilation System Present

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				3
Number of passive vents				0
Number of flueless gas fires				0

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

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23.0 Electricity Tariff	Standard			
24.0 Main Heating 1	Database			
Percentage of Heat	100	%		
Database Ref. No.	102926			
Fuel Type	Electricity			
Main Heating	PET			
SAP Code	224			
In Winter	242.5			
In Summer	273.6			
Controls	CHD Time and temperature zone control			
PCDF Controls	0			
Sap Code	2207			
Is MHS Pumped	Pump in heated space			
Heat Emitter	Underfloor			
Underfloor Heating	Yes - Pipes in thin screed			
Flow Temperature	Normal (> 45°C)			
25.0 Main Heating 2	None			
Community Heating	None			
28.0 Water Heating	HWP From main heating 1			
Water Heating	Main Heating 1			
Flue Gas Heat Recovery System	No			
Waste Water Heat Recovery Instantaneous System 1	No			
Waste Water Heat Recovery Instantaneous System 2	No			
Waste Water Heat Recovery Storage System	No			
Solar Panel	No			
Water use <= 125 litres/person/day	Yes			
SAP Code	901			
Immersion Only Heating Hot Water	No			
29.0 Hot Water Cylinder	Hot Water Cylinder			
Cylinder Stat	Yes			
Cylinder In Heated Space	No			
Independent Time Control	Yes			
Insulation Type	Measured Loss			
Cylinder Volume	220.00	L		
Loss	2.00	kWh/day		
Pipes insulation	Fully insulated primary pipework			
31.0 Thermal Store	None			
32.0 Photovoltaic Unit	One Dwelling			
PV Cells kWp	Orientation	Elevation	Overshading	Connected to Dwelling
5.00	Horizontal	Horizontal	None Or Little	Yes

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Recommendations

Lower cost measures

None

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	£54	A 105	