

Summary for Input Data



Property Reference	24536	Issued on Date	20/11/2024
Assessment Reference	As Designed	Prop Type Ref	New Build
Property	Upper Redlands Road, Reading, RG1 5HT		

SAP Rating	81 B	DER	3.48	TER	7.24
Environmental	96 A	% DER < TER			51.93
CO ₂ Emissions (t/year)	1.05	DFEE	42.84	TFEE	43.32
Compliance Check	See BREL	% DFEE < TFEE			1.12
% DPER < TPER	8.96	DPER	35.96	TPER	39.50

Assessor Details	Mr. Lee Robbins	Assessor ID	U322-0001
Client	JosTec, -		

SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

Orientation	Northwest	
Property Tenture	ND	
Transaction Type	5	
Terrain Type	Suburban	
1.0 Property Type	House, Detached	
2.0 Number of Storeys	3	
3.0 Date Built	2024	
4.0 Sheltered Sides	0	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	180.34	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	No	

7.0 Measurements	Ground floor:	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
	1st Storey:	64.06 m	209.26 m²	2.50 m
	2nd Storey:	45.66 m	93.44 m²	2.75 m
		25.01 m	37.54 m²	2.23 m

8.0 Living Area	67.53	m²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Res	Shelter	Openings	Area Calculation Type
	Wall 1 - Cavity Wall	Cavity Wall	Cavity wall; plasterboard on dabs or battens, lightweight aggregate block, filled cavity, any outside structure	0.17	110.00	305.65	249.53	0.00	None	56.12	Enter Gross Area
	Wall 2 - Ashlar Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	17.04	17.04	0.00	None	0.00	Enter Gross Area
	Wall 3 - Dormer Wall	Timber Frame	Timber framed wall (one layer of plasterboard)	0.18	9.00	17.27	10.91	0.00	None	6.36	Enter Gross Area

9.2 Internal Walls	Description	Construction	Kappa (kJ/m²K)	Area (m²)
	Timber Internal Wall 2	Plasterboard on timber frame	9.00	366.78
		Dense block, plasterboard on dabs	75.00	121.88

10.0 External Roofs	Description	Type	Construction	U-Value (W/m²K)	Kappa (kJ/m²K)	Gross Area(m²)	Nett Area (m²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Roof 1 - Flat Roof	External Flat Roof	Plasterboard, insulated flat roof	0.11	9.00	156.06	156.06	None	0.00	Enter Gross Area	0.00
	Roof 2 - Plane Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.11	9.00	53.20	53.20	None	0.00	Enter Gross Area	0.00
	Roof 3 - Dormer Roof	External Flat Roof	Plasterboard, insulated flat roof	0.11	9.00	11.33	11.33	None	0.00	Enter Gross Area	0.00
	Roof 4 - Pitched Roof	External Slope Roof	Other	0.12	0.00	31.51	31.51	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Area (m²)
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Summary for Input Data



Internal Ceiling 1	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	93.44
Internal Ceiling 2	+1	Plasterboard ceiling, carpeted chipboard floor	37.54

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Floor 1 - Ground Floor	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	209.26

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1		Plasterboard ceiling, carpeted chipboard floor	9.00	37.54
Internal Floor 2		Plasterboard ceiling, carpeted chipboard floor	9.00	93.44

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Filling Type	G-value	Frame Type	Frame Factor	U Value (W/m²K)
Windows	Manufacturer	Window	Double Low-E Soft 0.05			0.63		0.70	1.20

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Windows NW	Windows	Wall 1 - Cavity Wall	North West	11.77	
Windows SE	Windows	Wall 1 - Cavity Wall	South East	19.44	
Windows SW	Windows	Wall 1 - Cavity Wall	South West	24.91	
Windows SE	Windows	Wall 3 - Dormer Wall	South East	6.36	

14.0 Conservatory

15.0 Draught Proofing

 %

16.0 Draught Lobby

17.0 Thermal Bridging

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E2 Other lintels (including other steel lintels)	Independently assessed	51.52	0.02	0.02 RCD	No
E2 Other lintels (including other steel lintels)	Table K1 - Default	4.16	1.00	1.00 Dormer	No
E3 Sill	Independently assessed	36.89	0.02	0.02 RCD	No
E3 Sill	Table K1 - Default	4.16	0.10	0.10 Dormer	No
E4 Jamb	Independently assessed	42.76	0.02	0.02 RCD	No
E4 Jamb	Table K1 - Default	6.12	0.10	0.10 Dormer	No
E5 Ground floor (normal)	Independently assessed	64.06	0.04	0.04 RCD	No
E6 Intermediate floor within a dwelling	Independently assessed	64.16	0.00	0.00 RCD	No
E24 Eaves (insulation at ceiling level - inverted)	Table K1 - Default	42.78	0.15	0.15	No
E13 Gable (insulation at rafter level)	Table K1 - Default	11.29	0.25	0.25	No
E14 Flat roof	Table K1 - Default	39.83	0.16	0.16	No
E16 Corner (normal)	Independently assessed	26.27	0.04	0.04 RCD	No
E16 Corner (normal)	Table K1 - Default	14.03	0.18	0.18 Dormer	No
E17 Corner (inverted - internal area greater than external area)	Independently assessed	5.25	-0.08	-0.08 RCD	No
E17 Corner (inverted - internal area greater than external area)	Table K1 - Default	2.64	0.00	0.00 Dormer	No
R4 Ridge (vaulted ceiling)	Table K1 - Default	7.00	0.12	0.12	No
R7 Flat ceiling (inverted)	Table K1 - Default	15.22	0.12	0.12	No
R8 Roof to wall (rafter)	Table K1 - Default	9.80	0.12	0.12	No
R9 Roof to wall (flat ceiling)	Table K1 - Default	14.99	0.32	0.32	No

Y-value W/m²K

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present

20.0 Fans, Open Fireplaces, Flues

Number of open chimneys	0
Number of open flues	0
Number of chimneys/flues attached to closed fire	0
Number of flues attached to solid fuel boiler	0
Number of flues attached to other heater	0
Number of blocked chimneys	0
Number of intermittent extract fans	7
Number of passive vents	0
Number of flueless gas fires	0

21.0 Fixed Cooling System

Summary for Input Data

22.0 Pressure Testing

Designed AP ₅₀	Yes	
Test Method	5.00	m³/(h.m²) @ 50 Pa
	Blower Door	

22.0 Lighting

No Fixed Lighting	No				
Name	Efficacy	Power	Capacity	Count	
Low energy Lighting	80.00	5.00	400.00	16	

24.0 Main Heating 1

Database		
Percentage of Heat	100.00	%
Database Ref. No.	105055	
Fuel Type	Electricity	
In Winter	267.53	
In Summer	168.28	
Model Name	Ecodan 14.0 kW	
Manufacturer	Mitsubishi Electric Europe B.V.	
System Type	Heat Pump	
Controls SAP Code	2207	
PCDF Controls	0	
Is MHS Pumped	Pump in heated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators	
Flow Temperature	Enter value	
Flow Temperature Value	55.00	

25.0 Main Heating 2

None

26.0 Heat Networks

None

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1	None								
Heat source 2	None								
Heat source 3	None								
Heat source 4	None								
Heat source 5	None								

27.0 Secondary Heating

None

28.0 Water Heating

Water Heating	Main Heating 1
SAP Code	901
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
Cold Water Source	From mains
Bath Count	1
Immersion Only Heating Hot Water	No

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Shower	Combi boiler or unvented hot water system	11.00		No	
Shower 2	Combi boiler or unvented hot water system	11.00		No	
Shower 3	Combi boiler or unvented hot water system	11.00		No	

28.3 Waste Water Heat Recovery System

Summary for Input Data



29.0 Hot Water Cylinder

Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	300.00	L
Loss	2.11	kWh/day
Pipes insulation	Fully insulated primary pipework	
In Airing Cupboard	No	

31.0 Thermal Store

None

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
£3,500 - £5,500	£300	B 82	A 96
		B 83	A 96
		0	0