

Summary for Input Data



Property Reference	Orchard End	Issued on Date	18/08/2023
Assessment Reference	DSv1	Prop Type Ref	
Property	Plot 1, 1, Orchard End, St Lawrence, Waltham, RG10 ONT		

SAP Rating	85 B	DER	2.97	TER	8.81
Environmental	97 A	% DER < TER			66.29
CO ₂ Emissions (t/year)	0.58	DFEE	43.67	TFEE	44.30
Compliance Check	See BREL	% DFEE < TFEE			1.41
% DPER < TPER	33.96	DPER	30.81	TPER	46.66

Assessor Details	Mr. Thomas McMahon	Assessor ID	R863-0001
Client			

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

Orientation	East
Property Tenure	ND
Transaction Type	6
Terrain Type	Suburban
1.0 Property Type	House, Detached
2.0 Number of Storeys	2
3.0 Date Built	2023
4.0 Sheltered Sides	0
5.0 Sunlight/Shade	Average or unknown
6.0 Thermal Mass Parameter	Precise calculation

7.0 Electricity Tariff	Standard
Smart electricity meter fitted	No
Smart gas meter fitted	No

7.0 Measurements	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Ground floor:	45.06 m	115.70 m ²	2.50 m
1st Storey:	40.66 m	97.20 m ²	2.76 m

8.0 Living Area	34.75	m ²
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9.0 External Walls	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Res	Shelter	Openings	Area Calculation Type
	External Wall 1	Cavity Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.19	60.00	224.87	170.27	0.00	None	54.60	Enter Gross Area

9.2 Internal Walls	Description	Construction	Kappa (kJ/m ² K)	Area (m ²)
	Internal Wall 1	Dense block, plasterboard on dabs	75.00	163.73
	Internal Wall 2	Plasterboard on timber frame	9.00	209.46

10.0 External Roofs	Description	Type	Construction	U-Value (W/m ² K)	Kappa (kJ/m ² K)	Gross Area(m ²)	Nett Area (m ²)	Shelter Code	Shelter Factor	Calculation Type	Openings
	Rafters Roof	External Slope Roof	Plasterboard, insulated slope	0.13	9.00	115.52	0.00	None	0.00	Enter Gross Area	0.00
	Flat Roof	External Flat Roof	Plasterboard, insulated flat roof	0.17	9.00	18.50	0.00	None	0.00	Enter Gross Area	0.00
	Plane Roof	External Plane Roof	Plasterboard, insulated at ceiling level	0.11	9.00	3.69	0.00	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings	Description	Storey	Construction	Area (m ²)
	Internal Ceiling 1	+1	Plasterboard ceiling, carpeted chipboard floor	97.20

11.0 Heat Loss Floors	Description	Type	Storey Index	Construction	U-Value (W/m ² K)	Shelter Code	Shelter Factor	Kappa (kJ/m ² K)	Area (m ²)
	Heat Loss Floor 1	Ground Floor - Solid	Lowest occupied	Slab on ground, screed over insulation	0.11	None	0.00	110.00	115.70

11.2 Internal Floors

Summary for Input Data



Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1		Plasterboard ceiling, carpeted chipboard floor	9.00	97.20

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
Semi glazed door	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05			0.63		0.70	1.20
Solid Door	Manufacturer	Solid Door							1.20

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
Opening 1	Semi glazed door	External Wall 1	East	4.12	
Opening 2	Windows	External Wall 1	East	16.22	
Opening 3	Solid Door	External Wall 1	North	1.89	
Opening 4	Windows	External Wall 1	North	1.24	
Opening 5	Windows	External Wall 1	West	23.82	
Opening 6	Windows	External Wall 1	South	7.31	

14.0 Conservatory

None

15.0 Draught Proofing

100 %

16.0 Draught Lobby

No

17.0 Thermal Bridging

Calculate Bridges

17.1 List of Bridges

Bridge Type	Source Type	Length	Psi	Adjusted Reference:	Imported
E1 Steel lintel with perforated steel base plate	Independently assessed	28.98	0.27	0.27 RCD (90mm in 100mm cavity)	No
E3 Sill	Independently assessed	22.29	0.08	0.08 RCD (90mm in 100mm cavity)	No
E4 Jamb	Independently assessed	90.66	0.01	0.01 RCD (90mm in 100mm cavity)	No
E5 Ground floor (normal)	Independently assessed	45.06	0.07	0.07 RCD (90mm in 100mm cavity)	No
E6 Intermediate floor within a dwelling	Independently assessed	40.66	0.00	0.00 RCD (90mm in 100mm cavity)	No
E11 Eaves (insulation at rafter level)	Independently assessed	40.66	0.02	0.02 RCD (90mm in 100mm cavity)	No
E14 Flat roof	Table K1 - Default	12.81	0.16	0.16	No
E16 Corner (normal)	Independently assessed	23.54	0.04	0.04 RCD (90mm in 100mm cavity)	No
E17 Corner (inverted – internal area greater than external area)	Independently assessed	2.50	-0.07	-0.07 RCD (90mm in 100mm cavity)	No
R4 Ridge (vaulted ceiling)	Table K1 - Default	22.35	0.12	0.12	No
R6 Flat ceiling	Table K1 - Default	12.53	0.12	0.12	No

Y-value: 0.05 W/m²K

18.0 Pressure Testing

Yes

Designed AP₅₀: 3.01 m³/(h.m²) @ 50 Pa

Test Method: Blower Door

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present: Yes

Mechanical Ventilation data Type: Data Sheet

Type: Mechanical extract ventilation - decentralised

Configuration: 0

Duct Type: Rigid

Wet Rooms: 4

Brand, Model: tbc

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.20	Through Wall Fan	4
	Other Wet Room	
0.20	Through Wall Fan	1
	Kitchen	

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System

No

22.0 Lighting

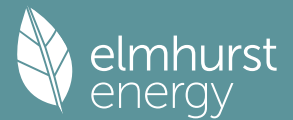
No Fixed Lighting: No

Name	Efficacy	Power	Capacity	Count
Low energy Lighting	80.00	10	800	65

24.0 Main Heating 1

Database

Summary for Input Data



Percentage of Heat	<input type="text" value="100.00"/>	%
Database Ref. No.	<input type="text" value="106746"/>	
Fuel Type	<input type="text" value="Electricity"/>	
In Winter	<input type="text" value="0.00"/>	
In Summer	<input type="text" value="0.00"/>	
Model Name	<input type="text" value="EDGE EVO 2.0 Exc"/>	
Manufacturer	<input type="text" value="GD Midea Heating & ventilating Equipment Co Ltd"/>	
System Type	<input type="text" value="Heat Pump"/>	
Controls SAP Code	<input type="text" value="2207"/>	
PCDF Controls	<input type="text" value="0"/>	
Is MHS Pumped	<input type="text" value="Pump in heated space"/>	
Heating Pump Age	<input type="text" value="2013 or later"/>	
Heat Emitter	<input type="text" value="Radiators and Underfloor"/>	
Underfloor Heating	<input type="text" value="Yes - Pipes in thin screed"/>	
Flow Temperature	<input type="text" value="Enter value"/>	
Flow Temperature Value	<input type="text" value="35.00"/>	

25.0 Main Heating 2

26.0 Heat Networks

Heat Source	Fuel Type	Heating Use	Efficiency	Percentage Of Heat	Heat	Heat Power Ratio	Electrical	Fuel Factor	Efficiency type
Heat source 1									
Heat source 2									
Heat source 3									
Heat source 4									
Heat source 5									

27.0 Secondary Heating

Secondary Heating	<input type="text" value="SAP table"/>	
SAP Code	<input type="text" value="634"/>	
SHS efficiency	<input type="text" value="65.00"/>	%
HETAS Approved System	<input type="text" value="Yes"/>	

28.0 Water Heating

Water Heating	<input type="text" value="Main Heating 1"/>
SAP Code	<input type="text" value="901"/>
Flue Gas Heat Recovery System	<input type="text" value="No"/>
Waste Water Heat Recovery Instantaneous System 1	<input type="text" value="Yes"/>
Waste Water Heat Recovery Instantaneous System 2	<input type="text" value="No"/>
Waste Water Heat Recovery Storage System	<input type="text" value="No"/>
Solar Panel	<input type="text" value="No"/>
Water use <= 125 litres/person/day	<input type="text" value="Yes"/>
Cold Water Source	<input type="text" value="From mains"/>
Bath Count	<input type="text" value="1"/>
Immersion Only Heating Hot Water	<input type="text" value="No"/>

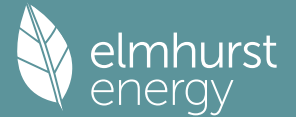
28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
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28.3 Waste Water Heat Recovery System Instantaneous System 1

Database ID	<input type="text" value="80129"/>
Brand Model	<input type="text" value="Showersave, Linear Drain J3-630-3P"/>
Details	<input type="text" value="Year: 2017 + current Efficiency: 0 Utilisation factor: 0.984"/>

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	2.86 kWh/day
Pipes insulation	Fully insulated primary pipework
In Airing Cupboard	No

31.0 Thermal Store

None

32.0 Photovoltaic Unit

One Dwelling	
Export Capable Meter?	No
Connected To Dwelling	Yes
Diverter	No
Battery Capacity [kWh]	0.00

PV Cells kWp	Orientation	Elevation	Overshading	FGHRS	MCS Certificate	Overshading Factor	MCS Certificate Reference	Panel Manufacturer
0.60	East	30°	None Or Little		No	1.00		

34.0 Small-scale Hydro

None

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
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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
£4,000 - £6,000	£81	B 86	A 97
		0	0
		0	0