Summary for Input Data

Property Reference	5832 Plot 11	**Issued on Date**	19/04/2023
Assessment Reference	As Designed	**Prop Type Ref**	
Property			

SAP Rating	83 B	**DER**	3.35	**TER**	8.40
Environmental	96 A	**% DER < TER**			60.12
CO_2 Emissions (t/year)	0.6	**DFEE**	39.31	**TFEE**	39.41
Compliance Check	See BREL	**% DFEE < TFEE**			0.26
% DPER < TPER	20.59	**DPER**	34.89	**TPER**	43.94

Assessor Details	Mr. Mark Roberts	**Assessor ID**	P471-0001
Client			

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

Orientation	North	
Property Tenture	ND	
Transaction Type	6	
Terrain Type	Suburban	
1.0 Property Type	House, Detached	
Which Floor	0	
2.0 Number of Storeys	3	
3.0 Date Built	2023	
4.0 Sheltered Sides	1	
5.0 Sunlight/Shade	Average or unknown	
6.0 Thermal Mass Parameter	Precise calculation	
Thermal Mass	N/A	kJ/m²K
7.0 Electricity Tariff	Standard	
Smart electricity meter fitted	Yes	
Smart gas meter fitted	Yes	

7.0 Measurements

	Heat Loss Perimeter	Internal Floor Area	Average Storey Height
Basement:	0.00 m	0.00 m²	0.00 m
Ground floor:	41.78 m	84.61 m²	2.42 m
1st Storey:	37.95 m	74.96 m²	2.68 m
2nd Storey:	25.66 m	29.57 m²	2.32 m
3rd Storey:	0.00 m	0.00 m²	0.00 m
4th Storey:	0.00 m	0.00 m²	0.00 m
5th Storey:	0.00 m	0.00 m²	0.00 m
6th Storey:	0.00 m	0.00 m²	0.00 m
7th Storey:	0.00 m	0.00 m²	0.00 m

8.0 Living Area	21.00	m²

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
Plinth	Timber Frame	Timber framed wall (one layer of plasterboard)	0.15	9.00	16.31	16.31	0.00	None	0.00	Enter Gross Area
Brick	Timber Frame	Timber framed wall (one layer of plasterboard)	0.15	9.00	73.82	47.83	0.00	None	25.99	Enter Gross Area
Timber	Timber Frame	Timber framed wall (one layer of plasterboard)	0.15	9.00	106.63	90.03	0.00	None	16.60	Enter Gross Area
Garage Sheltered	Timber Frame	Timber framed wall (one layer of plasterboard)	0.15	9.00	17.63	17.63	0.70	Garage Single 1 Inside	0.00	Enter Gross Area

9.2 Internal Walls

Description	Construction	Kappa (kJ/m²K)	Area (m²)
GF	Plasterboard on timber frame	9.00	103.22
FF	Plasterboard on timber frame	9.00	180.44
SF	Plasterboard on timber frame	9.00	168.77

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
Sloped	External Slope Roof	Plasterboard, insulated slope	0.15	9.00	48.40	3.82	None	0.00	Enter Gross Area	3.82

Plane	External Plane Roof	Plasterboard, insulated at ceiling level	0.09	9.00	36.21	0.00	None	0.00	Enter Gross Area	0.00

10.2 Internal Ceilings

Description	Storey	Construction	Area (m²)
GF	Lowest occupied	Plasterboard ceiling, carpeted chipboard floor	74.96
FF	+1	Plasterboard ceiling, carpeted chipboard floor	74.96

11.0 Heat Loss Floors

Description	Type	Storey Index	Construction	U-Value (W/m²K)	Shelter Code	Shelter Factor	Kappa (kJ/m²K)	Area (m²)
Heatloss Floor 1	Ground Floor - Solid	Lowest occupied	Suspended concrete floor, carpeted	0.12	None	0.00	75.00	84.61

11.2 Internal Floors

Description	Storey Index	Construction	Kappa (kJ/m²K)	Area (m²)
Internal Floor 1		Plasterboard ceiling, carpeted chipboard floor	9.00	74.96
Internal Floor 2		Plasterboard ceiling, carpeted chipboard floor	9.00	74.96

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		Air Filled	0.63	Wood	0.70	1.20
Doors	Manufacturer	Solid Door			Air Filled	0.00	Wood	0.70	1.20
Rooflight	Manufacturer	Roof Window	Double Low-E Soft 0.05		Air Filled	0.63	Wood	0.70	1.00
Half Glazed	Manufacturer	Half Glazed Door	Double Low-E Soft 0.05		Air Filled	0.63	Wood	0.70	1.20

13.0 Openings

Name	Opening Type	Location	Orientation	Area (m²)	Pitch
NE W Brick	Windows	Brick	North East	4.02	0
NE W Timber	Windows	Timber	North East	8.33	0
NE D Brick	Doors	Brick	North East	1.97	0
NE RL Slope	Rooflight	Sloped	North East	0.64	30
NW RL Slope	Rooflight	Sloped	North West	1.91	48
NW W Brick	Windows	Brick	North West	1.78	0
NW DHG Brick	Half Glazed	Brick	North West	1.91	0
SW W Brick	Windows	Brick	South West	8.07	0
SW W Timber	Windows	Timber	North West	5.77	0
SW RL Slope	Rooflight	Sloped	South West	0.64	30
SE W Brick	Windows	Brick	South East	8.24	0
SE W Timber	Windows	Timber	South East	2.51	0
SE RL Slope	Rooflight	Sloped	South East	0.64	48

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
E2 Other lintels (including other steel lintels)	Independently assessed	22.66	0.17	0.17	TRADA	Yes
E3 Sill	Independently assessed	20.81	0.03	0.03	TRADA	Yes
E4 Jamb	Independently assessed	51.31	0.04	0.04	TRADA	Yes
E5 Ground floor (normal)	Independently assessed	41.78	0.14	0.14	TRADA	Yes
E6 Intermediate floor within a dwelling	Independently assessed	63.61	0.09	0.09	TFG	Yes
R1 Head of roof window	Table K1 - Default	4.36	0.24	0.24		Yes
R2 Sill of roof window	Table K1 - Default	4.36	0.24	0.24		Yes
R3 Jamb of roof window	Table K1 - Default	10.51	0.24	0.24		Yes
E16 Corner (normal)	Independently assessed	23.99	0.05	0.05	TFG	No
E17 Corner (inverted – internal area greater than external area)	Independently assessed	4.20	-0.01	-0.01	TRADA	No
E11 Eaves (insulation at rafter level)	Independently assessed	31.80	0.05	0.05	TRADA	No
E13 Gable (insulation at rafter level)	Independently assessed	18.34	0.06	0.06	TRADA	No

Y-value	0.07	W/m²K

18.0 Pressure Testing	Yes	
Designed AP_{50}	3.75	m³/(h.m²) @ 50 Pa
Property Tested?	Yes	
Test Method	Blower Door	
As Built AP_{50}	0.10	m³/(h.m²) @ 50 Pa

19.0 Mechanical Ventilation

Mechanical Ventilation

Mechanical Ventilation System Present	Yes	
Approved Installation	No	
Mechanical Ventilation data Type	Database	

Summary for Input Data

elmhurst energy

Type	Mechanical extract ventilation - decentralised
MV Reference Number	500769
Duct Type	Flexible
MVHR Efficiency	0.00
Wet Rooms	7
SFP from Installer Commissioning Certificate	No

19.1 Mechanical extract ventilation - Decentralised

SFP	Fan/Room Type	Count
0.15	In Room Fan Kitchen	1
0.11	In Room Fan Other Wet Room	6
0.00	In Duct Fan Kitchen	0
0.00	In Duct Fan Other Wet Room	0
0.11	Through Wall Fan Kitchen	0
0.09	Through Wall Fan Other Wet Room	0

20.0 Fans, Open Fireplaces, Flues

21.0 Fixed Cooling System	No

22.0 Lighting

No Fixed Lighting	No

Name	Efficacy	Power	Capacity	Count
Lighting 1	95.71	7	670	45

24.0 Main Heating 1	Database	
Percentage of Heat	100.00	%
Database Ref. No.	105744	
Fuel Type	Electricity	
SAP Code	0	
In Winter	0.00	
In Summer	0.00	
Model Name	WH-MDC09J3E5	
Manufacturer	Panasonic HVAC UK Ltd	
System Type	Heat Pump	
Controls SAP Code	2207	
Delayed Start Stat	No	
Burner Control	Modulating	
HETAS approved System	No	
Oil Pump Inside	No	
FI Case	0.00	
Flue Type	None or Unknown	
Fan Assisted Flue	No	
Is MHS Pumped	Pump in heated space	
Heating Pump Age	2013 or later	
Heat Emitter	Radiators and Underfloor	
Underfloor Heating	Yes - Pipes in thin screed	
Flow Temperature	Enter value	
Flow Temperature Value	55.00	
Boiler Interlock	No	
Combi boiler type	No Combi	
Combi keep hot type	None	
25.0 Main Heating 2	None	

Summary for Input Data

26.0 Heat Networks	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
Summer Immersion	No
Cold Water Source	From mains
Bath Count	1
Supplementary Immersion	No
Immersion Only Heating Hot Water	Yes

28.1 Showers

Description	Shower Type	Flow Rate [l/min]	Rated Power [kW]	Connected	Connected To
Bath	Vented hot water system	7.00		No	
Ensuite 1	Vented hot water system	7.00		No	
Ens 2	Vented hot water system	7.00		No	
Shower	Vented hot water system	7.00		No	

28.3 Waste Water Heat Recovery System

29.0 Hot Water Cylinder	Hot Water Cylinder	
Cylinder Stat	Yes	
Cylinder In Heated Space	Yes	
Independent Time Control	Yes	
Insulation Type	Measured Loss	
Cylinder Volume	240.00	L
Loss	1.58	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

None