HPK/2012/0420

elmhurst energy systems

14 AUG 2012

Summary Information

Property Reference: Plot 1, The Punch Bowl
Survey Reference: Solar Water
Property: Plot One, The Punch Bowl, Manchester Road, Buxton, Derbyshire,

Issued on Date: 13.Jul.2012
Prop Type Ref:

SAP Rating: 85 B **CO2 Emissions (t/year):** 2.13 **DER:** 15.56 Pass **Reduction:** 1.0% **FEE:** 50.4 **ZC8:** 0.00
Environmental: 86 B **General Requirements Compliance:** Pass **TER:** 15.72 **HLP:** 1.14 **Energy cost:** £ 521

CfSH Results **Version:** **ENE1 Credits:** N/A **ENE2 Credits:** N/A **ENE7 Credits:** N/A **CfSH Level:** N/A

Surveyor: Neil Hazell, Tel: 01179 044476
Address: Gainsborough Road, Keynsham, Bristol, BS31 1LS
Client: Stephen Parry, Stephen Parry

Software Version: Elmhurst Energy Systems SAP2009 Calculator (Design System) version 3.06r13
SAP version: SAP 2009, Regs Region: England and Wales (Part L1A 2010), Calculation Type: New Dwelling As Designed

SUMMARY FOR INPUT DATA FOR New Build (As Designed)

1.0 Property Type	House, Semi-Detached
2.0 Number of Storeys	3
3.0 Date Built	2012
3.0 Property Age Band	
4.0 Sheltered Sides	2
5.0 Sunlight/Shade	Average or unknown

6.0 Measurements

	Internal Perimeter	Internal Floor Area	Average Storey Height
Ground Floor:	23.55	55.66	3
1st Storey:	20.9	52.7	2.5
2nd Storey:	21.5	44.09	2.5

7.0 Living Area	39
8.0 Thermal Mass Parameter	Simple calculation

9.0 External Walls

Description	Construction	U-Value	Element	Kappa	Gross Area	Nett Area
External Wall	Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure	0.25		60.00	133.95	113.06
Dormer Cheeks	Timber framed wall (one layer of plasterboard)	0.23		9.00	7.50	7.50

9.1 Party walls

Description	Construction	Element	Kappa	Area
Party Wall	Plaster on dabs and single plasterboard on both sides, dense cellular blocks, cavity		70.00	59.50

10.0 External Roofs

Description	Construction	U-Value	Element	Kappa	Gross Area	Nett Area
External Roof	Plasterboard, insulated slope	0.20		9	74.00	71.84

11.0 HeatLoss Floors

Description	Construction	U-Value	Element	Kappa	Area
Heat Loss Floor	Suspended concrete floor, carpeted	0.15		75	55.66

12.0 Opening Types

Description	Data Source	Type	Glazing	Glazing Gap	Argon Filled	Solar Trans	Frame Type	Frame Factor	U value
Window	Manufacturer	Window	Double Low-E Soft 0.05			0.63		0.70	1.20
Solid Door	Manufacturer	Solid Door							1.20
Rooflight	Manufacturer	Roof Window	Double Low-E Soft 0.05			0.63		0.70	1.20

13.0 Openings

Name	Opening Type	Location	Orientation	Curtain Type	Overhang Ratio	Wide Overhang	Width	Height	Count	Area	Curtain Closed
Window	Window - Window	External Wall	South	None	0	No	0	0	0	7.99	0
Rooflight	Roof Window - Rooflight	External Roof	South	None	0	No	0	0	0	1.62	0

Door	Solid Door - Solid Door	External Wall	South	None	0	No	0	0	0	1.90	0
Door	Solid Door - Solid Door	External Wall	North	None	0	No	0	0	0	1.90	0
Rooflight	Roof Window - Rooflight	External Roof	North	None	0	No	0	0	0	0.54	0
Window	Window - Window	External Wall	North	None	0	No	0	0	0	9.10	0

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

Source Type	Bridge Type	Length	Psi	Imported
	E1 Steel lintel with perforated steel base plate	0.00		No
Table K1 - Accredited	E2 Other lintels (including other steel lintels)	14.50	0.3	No
Table K1 - Accredited	E3 Sill	12.70	0.04	No
Table K1 - Accredited	E4 Jamb	1.80	0.05	No
Table K1 - Accredited	E5 Ground floor	23.55	0.16	No
Table K1 - Accredited	E6 Intermediate floor within a dwelling	42.40	0.07	No
	E7 Intermediate floor between dwellings (in blocks of flats)	0.00		No
	E8 Balcony within a dwelling	0.00		No
	E9 Balcony between dwellings	0.00		No
	E10 Eaves (insulation at ceiling level)	0.00		No
Table K1 - Accredited	E11 Eaves (insulation at rafter level)	12.40	0.04	No
	E12 Gable (insulation at ceiling level)	0.00		No
Table K1 - Accredited	E13 Gable (insulation at rafter level)	6.75	0.04	No
	E14 Flat roof	0.00		No
	E15 Flat roof with parapet	0.00		No
Table K1 - Accredited	E16 Corner (normal)	23.00	0.09	No
Table K1 - Accredited	E17 Corner (inverted - internal area greater than external area)	6.00	-0.09	No
Table K1 - Accredited	E18 Party wall between dwellings	16.00	0.06	No
Table K1 - Accredited	P1 Party wall - Ground floor	8.80	0.08	No
Table K1 - Accredited	P2 Party wall - Intermediate floor within a dwelling	24.30		No
	P3 Party wall - Intermediate floor between dwellings (in blocks of flats)	0.00		No
	P4 Party wall - Roof (insulation at ceiling level)	0.00		No
Table K1 - Accredited	P5 Party wall - Roof (insulation at rafter level)	6.70	0.02	No

18.0 Pressure Testing: Yes
Designed q50: 5.00
Property Tested ?
As Built q50
Same As Designed ?

19.0 Mechanical Ventilation
Mechanical Ventilation System Present: No
Approved Installation
Windows open in hot weather: Windows fully open
Cross ventilation possible: Yes
Night Ventilation: No
Air change rate: 8.00
Mechanical Ventilation data Type
Type
MV Reference Number
Configuration
MVHR Duct Insulated
Manufacturer SFP
Duct Type
MVHR Efficiency
Wet Rooms
Brand, Model

20.0 Fans, Open Fireplaces, Flues

	MHS	SHS	Other	Total
Number of Chimneys	0	0	0	0
Number of open flues	0	1	0	1
Number of intermittent fans				5
Number of passive vents				0
Number of flueless gas fires				0

21.0 Cooling System: No
22.0 Lighting
Internal

Total number of light fittings	12
Total number of L.E.L. fittings	12
Percentage of L.E.L. fittings	100.00
External	
External lights fitted	No
Light and motion sensors	
23.0 Electricity Tariff	Standard
24.0 Heating Systems	
Main Heating 1	Manufacturer
Description	Gas
Percentage of Heat	100.00
Main Heating 2	None
Description	
Percentage of Heat	
Community Heating	
Secondary Heating	Manufacturer
Water Heating	Main Heating 1
Flue Gas Heat Recovery System	No
Waste Water Heat Recovery System 1	No
Waste Water Heat Recovery System 2	No
Solar Panel	Yes
25.0 Main Heating 1	
Database Ref. No.	
Fuel Type	
Main Heating	BGB
TestMethod	
SAP Code	102
Efficiency (Sedbuk 2009) %	90
In Winter	
In Summer	
Model Name	tbc
Manufacturer	tbc
Controls	CBI
Delayed Start Stat	No
Sap Code	2110
Burner Control	OnOff
Boiler Compensator	None
HETAS approved System	
Oil Pump Inside	
FI Case	
FI Water	
Flue Type	None or Unknown
Smoke Control Area	
Fan Assisted Flue	No
Is MHS Pumped	Pump in heated space
Heat Emitter	Radiators
Underfloor Heating	
Electric CPSU Temperature	
Combi boiler type	
Combi keep hot type	
Combi store type	
27.0 Community Heating	
Space Community Heating	
Distribution Loss	
Distribution Loss Value	
Controls	
SAP Code	
Water Community Heating	
Distribution Loss	
Distribution Loss Value	
Charging Linked To Heat Use	
28.0 Secondary Heating	RDM
Description	Dual Fuel Anthracite Wood RDM Closed room heat
SHS efficiency %	65
SAP Code	633
HETAS Approved System	Yes
Smoke Control Area	Unknown
Test Method	BS EN 613
Manufacturer	tbc
Model Name	tbc
29.0 Water Heating	HWP
Water use <= 125 litres/person/day	Yes
SAP Code	901
Immersion Heater	
Summer Immersion	
Suplementary Immersion	
Immersion Only Heating Hot Water	
29.1 Flue Gas Heat Recovery System	

Database ID	
Brand Model	
Details	
29.2 Waste Water Heat Recovery System	
Total rooms with shower and/or bath	
30.0 Hot Water Cylinder	Hot Water Cylinder
Cylinder Stat	Yes
Cylinder In Heated Space	Yes
Independent Time Control	Yes
Insulation Type	Foam
Insulation Thickness	80
Cylinder Volume	210
Loss (kwh/day)	
Pipes insulation	Yes
In Airing Cupboard	
31.0 Solar Panel	
Solar Panel Area	1
Area Type	Aperture
Panel Type	Evacuated tube
n0, a1, A/G ratio	0.6, 3, 0.72
Orientation	South
Elevation	45°
Overshading	None Or Little
Solar Storage Volume	110
Pump electrically powered	Yes
Combined Cylinder	Yes
32.0 Thermal Store	None
Thermal Store Pipework	within a single casing
33.0 Photovoltaic Unit	
Apportioned KWh/Year	
34.0 Wind Turbines	
Terrain Type	Urban
Wind Turbines	
Count	
Apportioned Kwh/year	
Rotor Diameter	
Hub Height	
35.0 Small-scale Hydro	
Electricity Generated	
Description	
Apportioned kWh/Year	

Recommendations

None

Further measures to achieve even higher standards

Solar photovoltaic panels, 2.5 kWp	£222	B 91	A 92