

Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.4.14

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Project Information:

Assessed By: Jack Boxall (STRO024281)

Building Type: Detached House

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 280.63m²

Site Reference : Old Nursery Farm

Plot Reference: Plot 2

Address : Plot 2 , Old Nursery Farm, Windmill Lane, Pibsbury, TA10 9EW

Client Details:

Name:

Address :

This report covers items included within the SAP calculations.

It is not a complete report of regulations compliance.

1a TER and DER

Fuel for main heating system: Mains gas

Fuel factor: 1.00 (mains gas)

Target Carbon Dioxide Emission Rate (TER)

13.2 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

12.86 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

53.8 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

46.1 kWh/m²

OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.14 (max. 0.30)	0.16 (max. 0.70)	OK
Floor	0.14 (max. 0.25)	0.14 (max. 0.70)	OK
Roof	0.14 (max. 0.20)	0.15 (max. 0.35)	OK
Openings	1.40 (max. 2.00)	1.40 (max. 3.30)	OK

2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

3 Air permeability

Air permeability at 50 pascals

5.00 (design value)

Maximum

10.0

OK

4 Heating efficiency

Main Heating system:

Boiler systems with radiators or underfloor heating - mains gas

Data from manufacturer

Efficiency 89.0 % SEDBUK2009

Minimum 88.0 %

OK

Secondary heating system:

Room heaters - wood

Closed room heater

Efficiency 65.0 %

Minimum 65.0 %

OK

5 Cylinder insulation

Hot water Storage:

Measured cylinder loss: 2.24 kWh/day

Permitted by DBSCG: 2.24 kWh/day

OK

Regulations Compliance Report

Primary pipework insulated: Yes OK

6 Controls

Space heating controls	TTZC by plumbing and electrical services	OK
Hot water controls:	Cylinderstat	OK
	Independent timer for DHW	OK
Boiler interlock:	Yes	OK

7 Low energy lights

Percentage of fixed lights with low-energy fittings	100.0%	
Minimum	75.0%	OK

8 Mechanical ventilation

Not applicable

9 Summertime temperature

Overheating risk (Severn valley): Not significant OK

Based on:

Overshading:	Average or unknown
Windows facing: North	2.5m ²
Windows facing: North	3.78m ²
Windows facing: West	2.96m ²
Windows facing: West	4.1m ²
Windows facing: South	9.49m ²
Windows facing: South	17.83m ²
Windows facing: East	2.61m ²
Roof windows facing: North	2.71m ²
Roof windows facing: West	3m ²
Roof windows facing: South	4.82m ²
Roof windows facing: East	0.52m ²
Ventilation rate:	4.00
Blinds/curtains:	Dark-coloured curtain or roller blind Closed 100% of daylight hours

10 Key features

Roofs U-value	0.11 W/m ² K
External Walls U-value	0.11 W/m ² K
Secondary heating (wood logs)	
Secondary heating fuel	wood logs

Predicted Energy Assessment



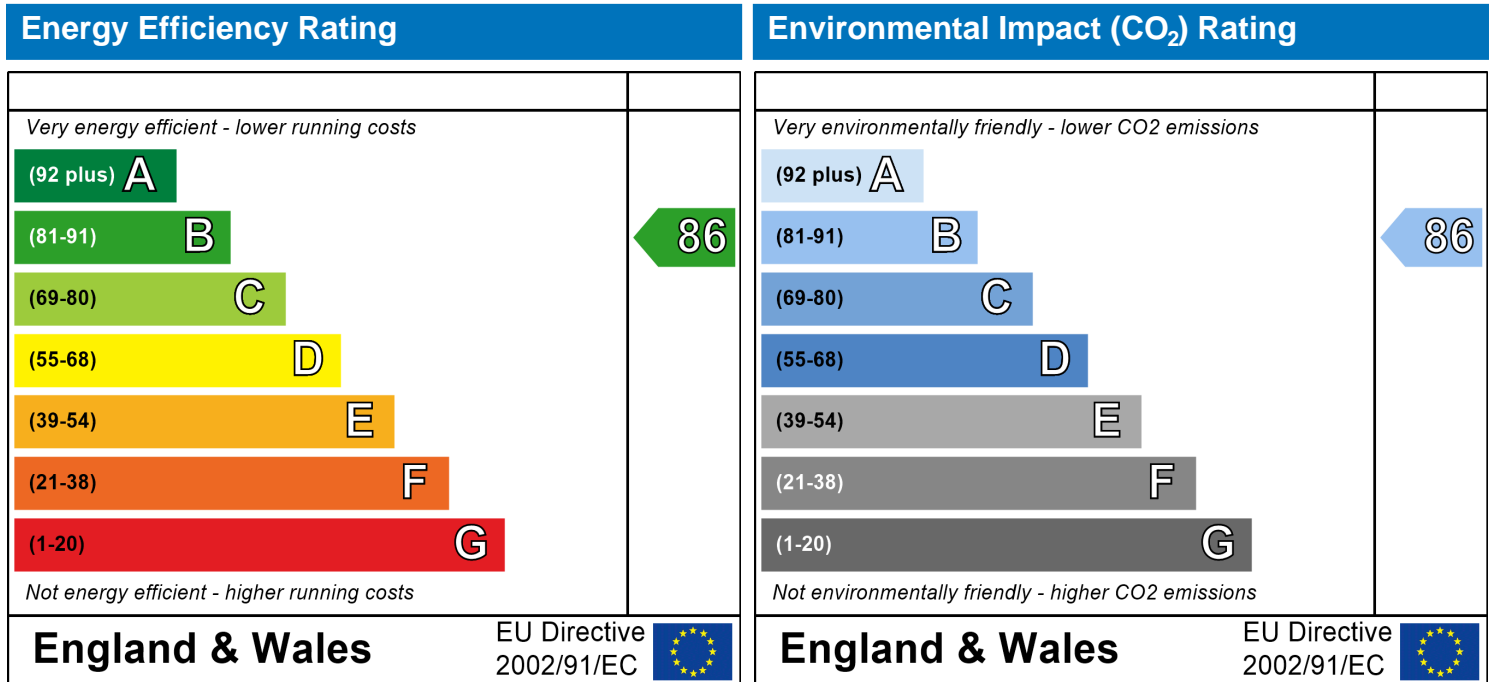
Plot 2
Old Nursery Farm
Windmill Lane
Pibsbury
TA10 9EW

Dwelling type:
Date of assessment:
Produced by:
Total floor area:

Detached House
03 May 2018
Jack Boxall
280.63 m²

This is a Predicted Energy Assessment for a property which is not yet complete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, an Energy Performance Certificate is required providing information about the energy performance of the completed property.

Energy performance has been assessed using the SAP 2012 methodology and is rated in terms of the energy use per square metre of floor area, energy efficiency based on fuel costs and environmental impact based on carbon dioxide (CO₂) emissions.



The energy efficiency rating is a measure of the overall efficiency of a home. The higher the rating the more energy efficient the home is and the lower the fuel bills are likely to be.

The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide (CO₂) emissions. The higher the rating the less impact it has on the environment.

SAP Input

Property Details: Plot 2

Address: Plot 2 , Old Nursery Farm, Windmill Lane, Pibsbury, TA10 9EW
 Located in: England
 Region: Severn valley
 UPRN:
 Date of assessment: 03 May 2018
 Date of certificate: 04 May 2018
 Assessment type: New dwelling design stage
 Transaction type: Not sale or rental
 Tenure type: Unknown
 Related party disclosure: No related party
 Thermal Mass Parameter: Indicative Value Medium
 Water use <= 125 litres/person/day: True
 PCDF Version: 427

Property description:

Dwelling type: House
 Detachment: Detached
 Year Completed: 2018
 Floor Location: Floor area: Storey height:
 Floor 0 142.24 m² 2.3 m
 Floor 1 138.39 m² 2.42 m
 Living area: 29.6 m² (fraction 0.105)
 Front of dwelling faces: North

Opening types:

Name:	Source:	Type:	Glazing:	Argon:	Frame:
Doors	Manufacturer	Solid			Metal
SD	Manufacturer	Solid			Metal
Windows- N	SAP 2012	Windows	low-E, En = 0.05, soft coat	Yes	Metal, thermal break
Window- N	SAP 2012	Windows	low-E, En = 0.05, soft coat	Yes	Metal, thermal break
Windows- W	SAP 2012	Windows	low-E, En = 0.05, soft coat	Yes	Metal, thermal break
GD- W	SAP 2012	Windows	low-E, En = 0.05, soft coat	Yes	Metal, thermal break
Windows- S	SAP 2012	Windows	low-E, En = 0.05, soft coat	Yes	Metal, thermal break
GD- S	SAP 2012	Windows	low-E, En = 0.05, soft coat	Yes	Metal, thermal break
Windows- E	SAP 2012	Windows	low-E, En = 0.05, soft coat	Yes	Metal, thermal break
RL- N	Manufacturer	Roof Windows	low-E, En = 0.05, soft coat	Yes	Wood
RL- W	Manufacturer	Roof Windows	low-E, En = 0.05, soft coat	Yes	Wood
RL- S	Manufacturer	Roof Windows	low-E, En = 0.05, soft coat	Yes	Wood
RL- E	Manufacturer	Roof Windows	low-E, En = 0.05, soft coat	Yes	Wood

Name:	Gap:	Frame Factor:	g-value:	U-value:	Area:	No. of Openings:
Doors	mm	0.8	0	1.4	3.87	1
SD	mm	0.8	0	1.4	1.97	1
Windows- N	16mm or more	0.8	0.63	1.4	2.5	1
Window- N	16mm or more	0.8	0.63	1.4	3.78	1
Windows- W	16mm or more	0.8	0.63	1.4	2.96	1
GD- W	16mm or more	0.8	0.63	1.4	4.1	1
Windows- S	16mm or more	0.8	0.63	1.4	9.49	1
GD- S	16mm or more	0.8	0.63	1.4	17.83	1
Windows- E	16mm or more	0.8	0.63	1.4	2.61	1
RL- N	16mm or more	0.7	0.63	1.4	2.71	1
RL- W	16mm or more	0.7	0.63	1.4	3	1
RL- S	16mm or more	0.7	0.63	1.4	4.82	1
RL- E	16mm or more	0.7	0.63	1.4	0.52	1

SAP Input

Name:	Type-Name:	Location:	Orient:	Width:	Height:
Doors		EW	North	0	0
SD		EW	East	0	0
Windows- N		EW	North	0	0
Window- N		EW	North	0	0
Windows- W		EW	West	0	0
GD- W		EW	West	0	0
Windows- S		EW	South	0	0
GD- S		EW	South	0	0
Windows- E		EW	East	0	0
RL- N		IRL	North	0.001	0
RL- W		IRL	West	0.001	0
RL- S		IRL	South	0.001	0
RL- E		IRL	East	0.001	0

Overshading: Average or unknown

Opaque Elements:

Type:	Gross area:	Openings:	Net area:	U-value:	Ru value:	Curtain wall:	Kappa:
<u>External Elements</u>							
EW	198.49	49.11	149.38	0.16	0	False	N/A
WIR x 0.72	84.01	0	84.01	0.11	0	False	N/A
IRL	110.17	11.05	99.12	0.15	0		N/A
ICL	60.91	0	60.91	0.13	0		N/A
FF EXP x 0.72	30.34	0	30.34	0.11	0		N/A
GF	142.24			0.14			N/A
EXP	26.91			0.13			N/A

Internal Elements

Party Elements

Thermal bridges:

Thermal bridges:	User-defined (individual PSI-values) Y-Value = 0.0669				
	Length	Psi-value			
[Approved]	21.47	0.5	E1	Steel lintel with perforated steel base plate	
[Approved]	9.35	0.04	E3	Sill	
[Approved]	50.51	0.05	E4	Jamb	
[Approved]	60.49	0.16	E5	Ground floor (normal)	
	18.92	0.32	E20	Exposed floor (normal)	
	4.84	0.32	E21	Exposed floor (inverted)	
[Approved]	14.95	0.07	E6	Intermediate floor within a dwelling	
[Approved]	43.88	0.04	E11	Eaves (insulation at rafter level)	
[Approved]	29.93	0.04	E13	Gable (insulation at rafter level)	
[Approved]	27.79	0.09	E16	Corner (normal)	
[Approved]	16.75	-0.09	E17	Corner (inverted internal area greater than external area)	
[Approved]	6.99	0.24	E12	Gable (insulation at ceiling level)	
	8.79	0.08	R1	Head	
	8.79	0.06	R2	Sill	
	18.41	0.08	R3	Jamb	
	5.18	0.08	R4	Ridge (vaulted ceiling)	
	49.91	0.06	R6	Flat ceiling	

Ventilation:

Pressure test:	Yes (As designed)
Ventilation:	Natural ventilation (extract fans)
Number of chimneys:	0
Number of open flues:	0

SAP Input

Number of fans: 8
Number of passive stacks: 0
Number of sides sheltered: 2
Pressure test: 5

Main heating system:

Main heating system: Boiler systems with radiators or underfloor heating
Gas boilers and oil boilers
Fuel: mains gas
Info Source: Manufacturer Declaration
Manufacturer's data
Efficiency: 89.0% (SEDBUK2009)
Regular condensing with automatic ignition
Fuel Burning Type: Unknown
Underfloor heating and radiators, pipes in screed above insulation
Central heating pump : 2013 or later
Design flow temperature: Unknown
Room-sealed
Boiler interlock: Yes
Delayed start

Main heating Control:

Main heating Control: Time and temperature zone control by suitable arrangement of plumbing and electrical services
Control code: 2110

Secondary heating system:

Secondary heating system: Room heaters
Solid fuel room heaters
Fuel :wood logs
Info Source: SAP Tables
Closed room heater
HETAS Approved

Water heating:

Water heating: From main heating system
Water code: 901
Fuel :mains gas
Hot water cylinder
Cylinder volume: 200 litres
Cylinder insulation: Measured loss, 2.24kWh/day
Primary pipework insulation: True
Cylinderstat: True
Cylinder in heated space: True
Solar panel: False

Others:

Electricity tariff: Standard Tariff
In Smoke Control Area: Unknown
Conservatory: No conservatory
Low energy lights: 100%
Terrain type: Low rise urban / suburban
EPC language: English
Wind turbine: No
Photovoltaics: None
Assess Zero Carbon Home: No