Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.4.0
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Project Information:

Assessed By: Amy Webb (STRO036520) **Building Type:** Maisonette

Dwelling Details:

NEW DWELLING DESIGN STAGE Total Floor Area: 130.72m²

Site Reference : Renforth **Plot Reference:** G-02

Address :

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: Electricity (c)
Fuel factor: 1.47 (electricity (c))

Target Carbon Dioxide Emission Rate (TER)	22.34 kg/m²	
Dwelling Carbon Dioxide Emission Rate (DER)	8.79 kg/m²	**OK**

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)	50.4 kWh/m²	
Dwelling Fabric Energy Efficiency (DFEE)	48.4 kWh/m²	
		OK

2 Fabric U-values

Element	Average	Highest	
External wall	0.16 (max. 0.30)	0.20 (max. 0.70)	**OK**
Party wall	0.00 (max. 0.20)	-	**OK**
Floor	0.12 (max. 0.25)	0.12 (max. 0.70)	**OK**
Roof	0.11 (max. 0.20)	0.11 (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	3.00 (design value)	
Maximum	10.0	**OK**

4 Heating efficiency

Main Heating system:	Community heating schemes - Heat pump Community heat pump	
Secondary heating system:	None	

5 Cylinder insulation

Hot water Storage:	Measured cylinder loss: 1.28 kWh/day	
	Permitted by DBSCG: 2.10 kWh/day	**OK**
Primary pipework insulated:	Yes	**OK**

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6 Controls

Space heating controls	Charging system linked to use of community heating, programmer and TRVs	OK
Hot water controls:	Cylinderstat	OK

7 Low energy lights

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

8 Mechanical ventilation

Continuous supply and extract system		
Specific fan power:	0.53	
Maximum	1.5	OK
MVHR efficiency:	90%	
Minimum	70%	OK

9 Summertime temperature

Overheating risk (South East England):	Slight	OK

Based on:

Overshading:	Average or unknown
Windows facing: South East	4.59m²
Windows facing: South East	1.47m²
Windows facing: North West	3.84m²
Windows facing: North West	2.31m²
Windows facing: South East	3.84m²
Windows facing: South East	4.59m²
Windows facing: North West	6.64m²
Ventilation rate:	2.00
Blinds/curtains:	Light-coloured venetian blind Closed 100% of daylight hours

10 Key features

Air permeablility	3.0 m³/m²h
Roofs U-value	0.11 W/m²K
Party Walls U-value	0 W/m²K
Floors U-value	0.12 W/m²K
Community heating, heat from electric heat pump	
Photovoltaic array	

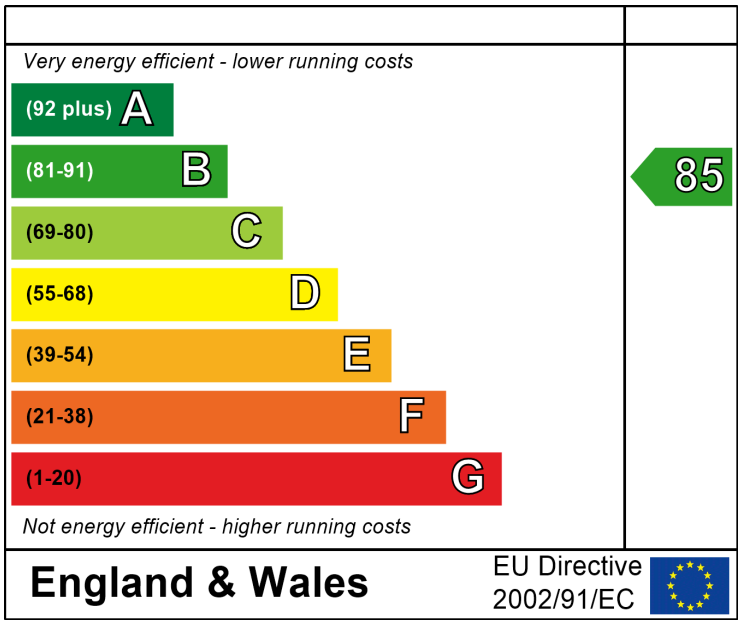
Predicted Energy Assessment

Dwelling type:	Ground floor Maisonette
Date of assessment:	15 July 2021
Produced by:	Amy Webb
Total floor area:	130.72 m²

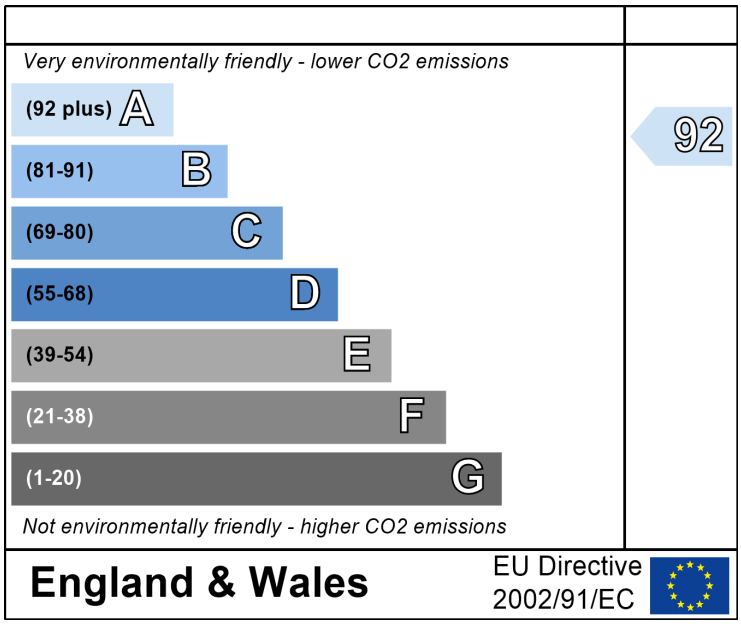
This is a Predicted Energy Assessment for a property which is not yet complete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, an Energy Performance Certificate is required providing information about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

Energy Efficiency Rating



Environmental Impact (CO_2) Rating



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 carbonn dioxide (CO2) emissions. The higher the rating the less impact it has on the environment.

SAP Input

Property Details: G-02

Address:	
Located in:	England
Region:	South East England
UPRN:	
Date of assessment:	15 July 2021
Date of certificate:	16 November 2021
Assessment type:	New dwelling design stage
Transaction type:	New dwelling
Tenure type:	Unknown
Related party disclosure:	No related party
Thermal Mass Parameter:	Indicative Value Medium
Water use <= 125 litres/person/day:	True
PCDF Version:	485

Property description:

Dwelling type:	Maisonette
Detachment:	
Year Completed:	2021

Floor Location:	Floor area:	Storey height:
Floor 0	64.25 m²	2.5 m
Floor 1	66.47 m²	2.5 m

Living area:	32.7 m² (fraction 0.25)
Front of dwelling faces:	Unspecified

Opening types:

Name:	Source:	Type:	Glazing:	Argon:	Frame:
Front Door	Manufacturer	Solid			Wood
Window 1	Manufacturer	Windows	double-glazed	Yes	
Window 2	Manufacturer	Windows	double-glazed	Yes	
Window 3	Manufacturer	Windows	double-glazed	Yes	
Window 4	Manufacturer	Windows	double-glazed	Yes	
Window 5	Manufacturer	Windows	double-glazed	Yes	
Window 6	Manufacturer	Windows	double-glazed	Yes	
Window 7	Manufacturer	Windows	double-glazed	Yes	

Name:	**Gap:**	**Frame Factor:**	**g-value:**	**U-value:**	**Area:**	**No. of Openings:**
Front Door	mm	0.7	0	1.4	2.37	1
Window 1	12mm	0.8	0.4	1.4	4.59	1
Window 2	12mm	0.8	0.4	1.4	1.47	1
Window 3	12mm	0.8	0.4	1.4	3.84	1
Window 4	12mm	0.8	0.4	1.4	2.31	1
Window 5	12mm	0.8	0.4	1.4	3.84	1
Window 6	12mm	0.8	0.4	1.4	4.59	1
Window 7	12mm	0.8	0.4	1.4	3.32	2

Name:	Type-Name:	Location:	Orient:	Width:	Height:
Front Door		External Wall 00	South East	1.05	2.26
Window 1		External Wall 00	South East	2.03	2.26
Window 2		External Wall 00	South East	0.65	2.26
Window 3		External Wall 00	North West	1.7	2.26
Window 4		External Wall 00	North West	1.02	2.26
Window 5		External Wall 01	South East	1.7	2.26
Window 6		External Wall 01	South East	2.03	2.26
Window 7		External Wall 01	North West	1.47	2.26

SAP Input

Overshading: Average or unknown

Opaque Elements:

Type:	Gross area:	Openings:	Net area:	U-value:	Ru value:	Curtain wall:	Kappa:
External Elements							
External Wall 00	49.47	14.58	34.89	0.14	0	False	N/A
Corridor Wall 00	27.31	0	27.31	0.2	0	False	N/A
External Wall 01	44.09	15.07	29.02	0.14	0	False	N/A
Corridor Wall 01	13.61	0	13.61	0.2	0	False	N/A
Roof	12.29	0	12.29	0.11	0		N/A
Ground Floor	64.25			0.12			N/A
Internal Elements							
Party Elements							
Party Wall 00	27.41						N/A
Party Wall 01	52.06						N/A

Thermal bridges:

Thermal bridges: User-defined (individual PSI-values) Y-Value = 0.1047

Length	Psi-value		
13.12	0.05	E2	Other lintels (including other steel lintels)
40.68	0.07	E4	Jamb
24.97	0.32	E5	Ground floor (normal)
10.39	0.14	E7	Party floor between dwellings (in blocks of flats)
12.3	0.18	E16	Corner (normal)
3.08	0	E17	Corner (inverted internal area greater than external area)
3.08	0.045	E18	Party wall between dwellings
0	0.12	E25	Staggered party wall between dwellings
18.82	0.14	E6	Intermediate floor within a dwelling
6.6	0.045	E18	Party wall between dwellings
6.6	0.12	E25	Staggered party wall between dwellings
4.9	0.15	E20	Exposed floor (normal)
3.7	0	E8	Balcony within a dwelling, wall insulation continuous
7.1	0.08	E14	Flat roof
8.91	0.16	P1	Ground floor
12.51	0	P3	Intermediate floor between dwellings (in blocks of flats)
14.35	0	P2	Intermediate floor within a dwelling
1.42	0.24	P4	Roof (insulation at ceiling level)
0	0.24	P8	Exposed floor (inverted)

Ventilation:

Pressure test: Yes (As designed)

Ventilation: Balanced with heat recovery
Number of wet rooms: Kitchen + 2
Ductwork: Insulation, rigid
Approved Installation Scheme: True

Number of chimneys: 0
Number of open flues: 0
Number of fans: 0
Number of passive stacks: 0
Number of sides sheltered: 0
Pressure test: 3

Main heating system:

Main heating system: Community heating schemes
Heat source: Community heat pump
heat from electric heat pump, heat fraction 1, efficiency 319

SAP Input

	Piping>=1991, pre-insulated, low temp, variable flow
Main heating Control:	
Main heating Control:	Charging system linked to use of community heating, programmer and TRVs Control code: 2306
Secondary heating system:	
Secondary heating system:	None
Water heating:	
Water heating:	From main heating system Water code: 901 Fuel :heat from electric heat pump Hot water cylinder Cylinder volume: 180 litres Cylinder insulation: Measured loss, 1.28kWh/day Primary pipework insulation: True Cylinderstat: True Cylinder in heated space: True Solar panel: False
Others:	
Electricity tariff:	Standard Tariff
In Smoke Control Area:	No
Conservatory:	No conservatory
Low energy lights:	100%
Terrain type:	Dense urban
EPC language:	English
Wind turbine:	No
Photovoltaics:	Photovoltaic 1 Installed Peak power: 0.7360242 Tilt of collector: 30° Overshading: None or very little Collector Orientation: South
Assess Zero Carbon Home:	No