

# Regulations Compliance Report

Approved Document L1A, 2013 Edition, England assessed by Stroma FSAP 2012 program, Version: 1.0.4.0  
Printed on 16 November 2021 at 16:21:08

## Project Information:

**Assessed By:** Amy Webb (STRO036520)

**Building Type:** Maisonette

## Dwelling Details:

**NEW DWELLING DESIGN STAGE**

Total Floor Area: 130.82m<sup>2</sup>

**Site Reference :** Renforth

**Plot Reference:** G-01

**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)

22.25 kg/m<sup>2</sup>

Dwelling Carbon Dioxide Emission Rate (DER)

9.39 kg/m<sup>2</sup>

OK

## 1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

50.6 kWh/m<sup>2</sup>

Dwelling Fabric Energy Efficiency (DFEE)

51.8 kWh/m<sup>2</sup>

Fail

Excess energy = 1.23 kg/m<sup>2</sup> (02.4 %)

## 2 Fabric U-values

Element	Average	Highest	
External wall	0.17 (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
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# Regulations Compliance Report

Primary pipework insulated: Yes

OK

## 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 4.59m<sup>2</sup>  
Windows facing: South East 1.47m<sup>2</sup>  
Windows facing: South West 7.68m<sup>2</sup>  
Windows facing: South East 7.39m<sup>2</sup>  
Windows facing: South West 4.61m<sup>2</sup>  
Windows facing: South West 7.68m<sup>2</sup>  
Ventilation rate: 2.00  
Blinds/curtains: Light-coloured venetian blind  
Closed 100% of daylight hours

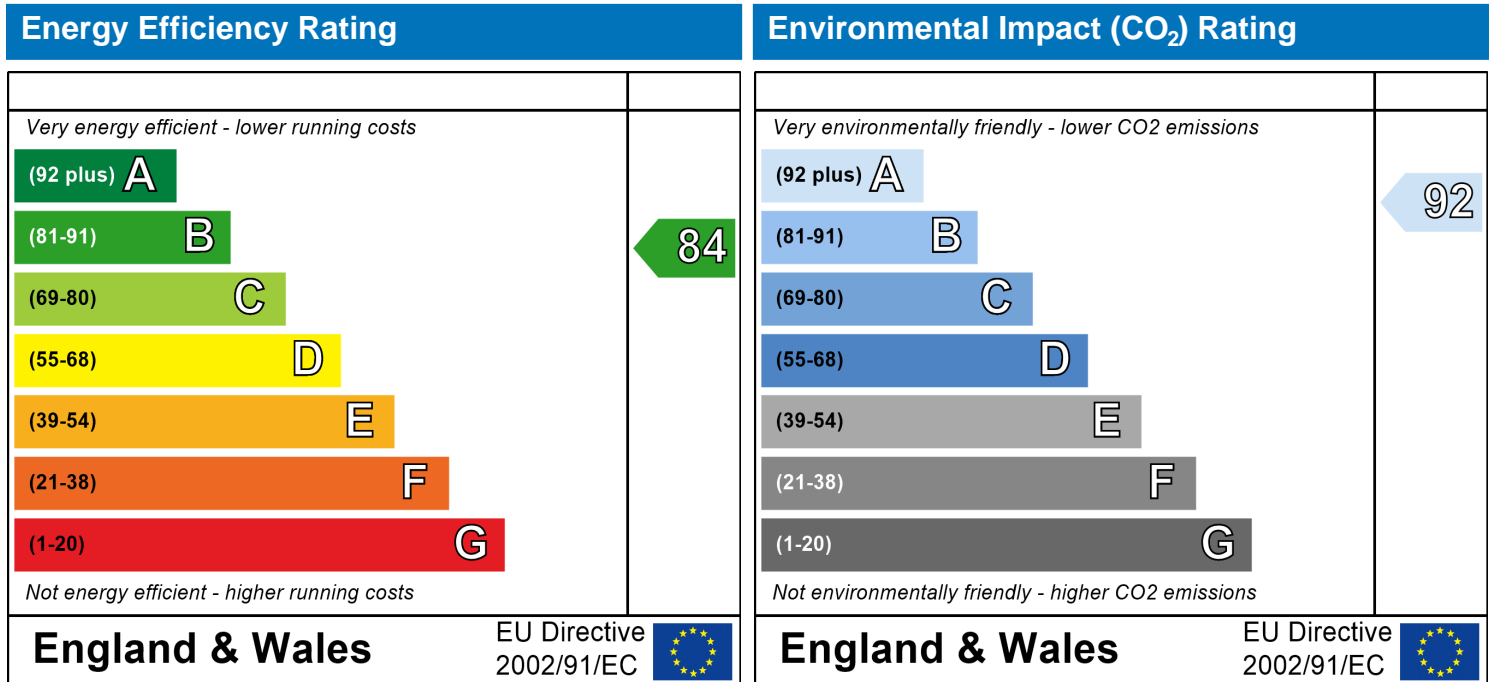
## 10 Key features

Air permeability 3.0 m<sup>3</sup>/m<sup>2</sup>h  
Roofs U-value 0.11 W/m<sup>2</sup>K  
Party Walls U-value 0 W/m<sup>2</sup>K  
Floors U-value 0.12 W/m<sup>2</sup>K  
Community heating, heat from electric heat pump  
Photovoltaic array

Dwelling type: Ground floor Maisonette  
 Date of assessment: 15 July 2021  
 Produced by: Amy Webb  
 Total floor area: 130.82 m<sup>2</sup>

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 (CO<sub>2</sub>) 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 (CO<sub>2</sub>) emissions. The higher the rating the less impact it has on the environment.

# SAP Input

## Property Details: G-01

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 68.42 m<sup>2</sup> 2.5 m  
 Floor 1 62.4 m<sup>2</sup> 2.5 m  
 Living area: 33.45 m<sup>2</sup> (fraction 0.256)  
 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	

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	2
Window 4	12mm	0.8	0.4	1.4	7.39	1
Window 5	12mm	0.8	0.4	1.4	4.61	1
Window 6	12mm	0.8	0.4	1.4	3.84	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	South West	1.7	2.26
Window 4		External Wall 01	South East	3.27	2.26
Window 5		External Wall 01	South West	2.04	2.26
Window 6		External Wall 01	South West	1.7	2.26

Overshading: Average or unknown

## Opaque Elements:

Type:	Gross area:	Openings:	Net area:	U-value:	Ru value:	Curtain wall:	Kappa:
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# SAP Input

## External Elements

External Wall 00	58.36	16.11	42.25	0.14	0	False	N/A
Corridor Wall 00	48.89	0	48.89	0.2	0	False	N/A
External Wall 01	54.98	19.68	35.3	0.14	0	False	N/A
Corridor Wall 01	8.9	0	8.9	0.2	0	False	N/A
Roof	11.49	0	11.49	0.11	0		N/A
Ground Floor 00	68.42			0.12			N/A

## Internal Elements

### Party Elements

Party Wall 01	49.8						N/A
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## Thermal bridges:

Thermal bridges:	User-defined (individual PSI-values) Y-Value = 0.1179			
	<b>Length</b>	<b>Psi-value</b>		
	15.84	0.05	E2	Other lintels (including other steel lintels)
	40.68	0.07	E4	Jamb
	34.88	0.32	E5	Ground floor (normal)
	19.37	0.14	E7	Party floor between dwellings (in blocks of flats)
	15.38	0.18	E16	Corner (normal)
	3.08	0	E17	Corner (inverted internal area greater than external area)
	34.88	0.14	E6	Intermediate floor within a dwelling
	9.9	0.18	E16	Corner (normal)
	3.3	0	E17	Corner (inverted internal area greater than external area)
	6.6	0.045	E18	Party wall between dwellings
	6.6	0.12	E25	Staggered party wall between dwellings
	6.79	0.15	E20	Exposed floor (normal)
	2.3	0.24	P8	Exposed floor (inverted)
	15.09	0	P3	Intermediate floor between dwellings (in blocks of flats)
	12.79	0	P2	Intermediate floor within a dwelling

## 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
	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
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## Water heating:

Water heating:	From main heating system
	Water code: 901

# SAP Input

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:	<u>Photovoltaic 1</u> Installed Peak power: 0.7365872 Tilt of collector: 30° Overshading: None or very little Collector Orientation: South
Assess Zero Carbon Home:	No