

# 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 16:12:18

## Project Information:

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

**Building Type:** Flat

## Dwelling Details:

**NEW DWELLING DESIGN STAGE**

Total Floor Area: 87.74m<sup>2</sup>

**Site Reference :** Renforth

**Plot Reference:** 4-09

**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)

24.08 kg/m<sup>2</sup>

Dwelling Carbon Dioxide Emission Rate (DER)

10.23 kg/m<sup>2</sup>

OK

## 1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

46.8 kWh/m<sup>2</sup>

Dwelling Fabric Energy Efficiency (DFEE)

45.2 kWh/m<sup>2</sup>

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	(no floor)		
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: 1.82 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:	0.59	
Maximum	1.5	OK
MVHR efficiency:	76%	
Minimum	70%	OK

## 9 Summertime temperature

Overheating risk (South East England):	Medium	OK
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Based on:

Overshading:	Average or unknown
Windows facing: South East	7.39m <sup>2</sup>
Windows facing: North East	4.61m <sup>2</sup>
Windows facing: North East	11.52m <sup>2</sup>
Ventilation rate:	2.00
Blinds/curtains:	Light-coloured venetian blind Closed 100% of daylight hours

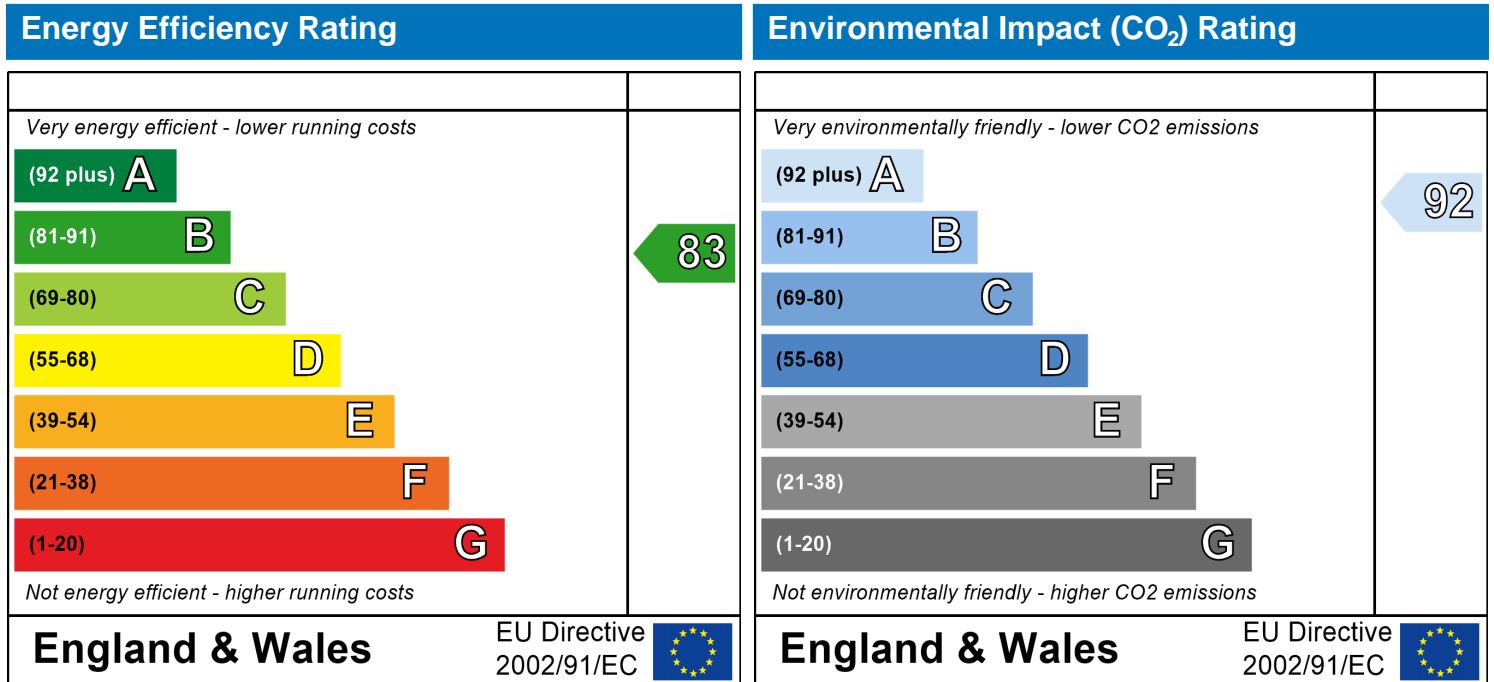
## 10 Key features

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
Community heating, heat from electric heat pump	
Photovoltaic array	

Dwelling type: Mid floor Flat  
 Date of assessment: 15 July 2021  
 Produced by: Amy Webb  
 Total floor area: 87.74 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: 4-09

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: Flat  
 Detachment:  
 Year Completed: 2021  
 Floor Location: Floor area: Storey height:  
 Floor 0 87.74 m<sup>2</sup> 2.5 m  
 Living area: 30.67 m<sup>2</sup> (fraction 0.35)  
 Front of dwelling faces: Unspecified

## Opening types:

Name:	Source:	Type:	Glazing:	Argon:	Frame:
Front Door	Manufacturer	Solid			Wood
Window 1	Manufacturer	Windows	double-glazed	No	
Window 2	Manufacturer	Windows	double-glazed	No	
Window 3	Manufacturer	Windows	double-glazed	No	

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	6mm	0.8	0.4	1.4	7.39	1
Window 2	6mm	0.8	0.4	1.4	4.61	1
Window 3	6mm	0.8	0.4	1.4	3.84	3

Name:	Type-Name:	Location:	Orient:	Width:	Height:
Front Door		Corridor Wall	North West	1.05	2.26
Window 1		External Wall	South East	3.27	2.26
Window 2		External Wall	North East	2.04	2.26
Window 3		External Wall	North East	1.7	2.26

Overshading: Average or unknown

## Opaque Elements:

Type:	Gross area:	Openings:	Net area:	U-value:	Ru value:	Curtain wall:	Kappa:
<u>External Elements</u>							
External Wall	63.2	23.52	39.68	0.14	0	False	N/A
Corridor Wall	19.87	2.37	17.5	0.2	0	False	N/A
Roof Terrace	23.2	0	23.2	0.11	0		N/A
<u>Internal Elements</u>							
<u>Party Elements</u>							
Party Wall	46.53						N/A

## Thermal bridges:

# SAP Input

## Thermal bridges:

User-defined (individual PSI-values) Y-Value = 0.1139

Length	Psi-value		
11.46	0.05	E2	Other lintels (including other steel lintels)
27.12	0.07	E4	Jamb
26.93	0.14	E7	Party floor between dwellings (in blocks of flats)
9.25	0.18	E16	Corner (normal)
6.17	0	E17	Corner (inverted internal area greater than external area)
9.25	0.045	E18	Party wall between dwellings
6.53	0.04	E9	Balcony between dwellings, wall insulation continuous
9.63	0.14	E7	Party floor between dwellings (in blocks of flats)
17.3	0.08	E14	Flat roof
0	0.32	E5	
0	0.14	E6	
0	0.12	E25	
0	0.15	E20	
15.08	0	P3	Intermediate floor between dwellings (in blocks of flats)
11.8	0	P3	Intermediate floor between dwellings (in blocks of flats)
3.28	0.24	P4	Roof (insulation at ceiling level)
0	0.24	P8	
0	0	P2	

## Ventilation:

Pressure test: Yes (As designed)  
 Ventilation: Balanced with heat recovery  
 Number of wet rooms: Kitchen + 1  
 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

## 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: Factory 80 mm  
 Primary pipework insulation: True  
 Cylinderstat: True  
 Cylinder in heated space: True  
 Solar panel: False

## Others:

Electricity tariff: Standard Tariff  
 In Smoke Control Area: No

# SAP Input

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: 0.4940236 Tilt of collector: 30° Overshading: None or very little Collector Orientation: South
Assess Zero Carbon Home:	No