

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 16:09:57

Project Information:

Assessed By: Amy Webb (STRO036520)

Building Type: Flat

Dwelling Details:

NEW DWELLING DESIGN STAGE

Total Floor Area: 63.68m²

Site Reference : Renforth

Plot Reference: 5-09

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)

27.19 kg/m²

Dwelling Carbon Dioxide Emission Rate (DER)

10.87 kg/m²

OK

1b TFEE and DFEE

Target Fabric Energy Efficiency (TFEE)

49.8 kWh/m²

Dwelling Fabric Energy Efficiency (DFEE)

47.3 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 | (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: 1.16 kWh/day

Permitted by DBSCG: 1.89 kWh/day

OK

Primary pipework insulated:

Yes

OK

Regulations Compliance Report

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: | 0.52 | |
| Maximum | 1.5 | OK |
| MVHR efficiency: | 90% | |
| Minimum | 70% | OK |

9 Summertime temperature

| | | |
|--|--|----|
| Overheating risk (South East England): | Medium | OK |
| Based on: | | |
| Overshading: | Average or unknown | |
| Windows facing: South West | 11.52m ² | |
| Windows facing: South East | 4.59m ² | |
| Ventilation rate: | 2.00 | |
| Blinds/curtains: | Light-coloured venetian blind Closed 100% of daylight hours | |

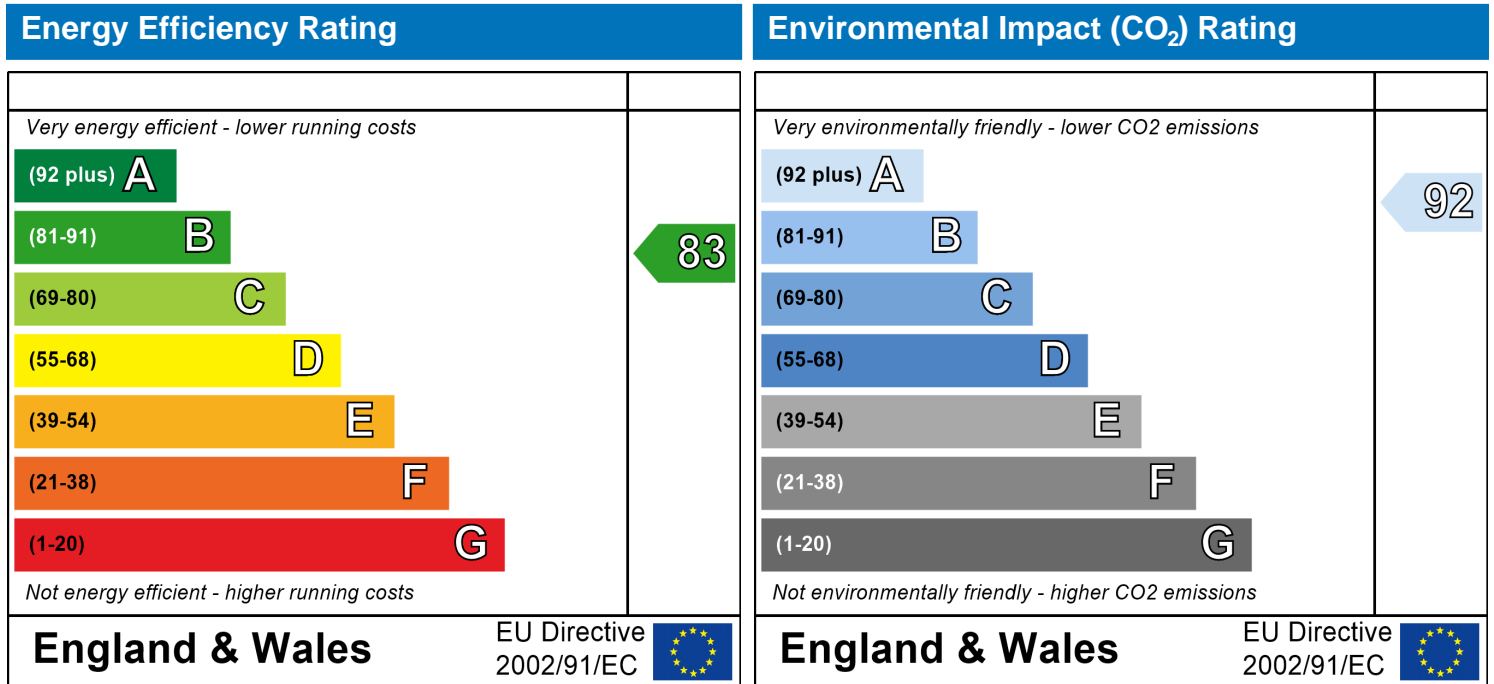
10 Key features

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

Dwelling type: Top floor Flat
 Date of assessment: 15 July 2021
 Produced by: Amy Webb
 Total floor area: 63.68 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: 5-09

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 63.68 m² 2.5 m
 Living area: 23.97 m² (fraction 0.376)
 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 | |

| 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 | 3.84 | 3 |
| Window 2 | 6mm | 0.8 | 0.4 | 1.4 | 4.59 | 1 |

| Name: | Type-Name: | Location: | Orient: | Width: | Height: |
|------------|------------|------------------|------------|--------|---------|
| Front Door | | Corridor Wall 00 | North East | 1.05 | 2.26 |
| Window 1 | | External Wall 00 | South West | 1.7 | 2.26 |
| Window 2 | | External Wall 00 | South East | 2.03 | 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 00 | 58.48 | 16.11 | 42.37 | 0.14 | 0 | False | N/A |
| Corridor Wall 00 | 19.1 | 2.37 | 16.73 | 0.2 | 0 | False | N/A |
| Roof | 63.68 | 0 | 63.68 | 0.11 | 0 | | N/A |
| <u>Internal Elements</u> | | | | | | | |
| <u>Party Elements</u> | | | | | | | |
| Party Wall 01 | 39.38 | | | | | | N/A |

Thermal bridges:

Thermal bridges: User-defined (individual PSI-values) Y-Value = 0.0773

| Length | Psi-value | |
|--------|-----------|--|
| 8.18 | 0.05 | E2 Other lintels (including other steel lintels) |

SAP Input

| | | | |
|-------|-------|-----|--|
| 22.6 | 0.07 | E4 | Jamb |
| 23.51 | 0.14 | E7 | Party floor between dwellings (in blocks of flats) |
| 3.3 | 0.18 | E16 | Corner (normal) |
| 0 | 0 | E17 | Corner (inverted internal area greater than external area) |
| 6.6 | 0.045 | E18 | Party wall between dwellings |
| 0 | 0.04 | E9 | Balcony between dwellings, wall insulation continuous |
| 23.51 | 0.08 | E14 | Flat roof |
| 0 | 0.12 | E25 | Staggered party wall between dwellings |
| 0 | 0.32 | E5 | |
| 0 | 0.14 | E6 | |
| 0 | 0.15 | E20 | |
| 11.93 | 0 | P3 | Intermediate floor between dwellings (in blocks of flats) |
| 11.93 | 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: 150 litres |
| | Cylinder insulation: Measured loss, 1.16kWh/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 |

SAP Input

Wind turbine: No
Photovoltaics: Photovoltaic 1
Installed Peak power: 0.3585528
Tilt of collector: 30°
Overshading: None or very little
Collector Orientation: South
Assess Zero Carbon Home: No