# 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 16:00:17*

## Project Information:

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

## Dwelling Details:

**NEW DWELLING DESIGN STAGE** Total Floor Area: 61.78m²

**Site Reference :** Albion **Plot Reference:** 1-02

**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) | 28.03 kg/m² | |
| Dwelling Carbon Dioxide Emission Rate (DER) | 12.00 kg/m² | **OK** |

## 1b TFEE and DFEE

| | | |
|---|---|---|
| Target Fabric Energy Efficiency (TFEE) | 51.8 kWh/m² | |
| Dwelling Fabric Energy Efficiency (DFEE) | 49.6 kWh/m² | |
| | | **OK** |

## 2 Fabric U-values

| Element | Average | Highest | |
|---|---|---|---|
| External wall | 0.18 (max. 0.30) | 0.20 (max. 0.70) | **OK** |
| Party wall | 0.00 (max. 0.20) | - | **OK** |
| Floor | 0.14 (max. 0.25) | 0.14 (max. 0.70) | **OK** |
| Roof | (no roof) | | |
| 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<br>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: | 0.63 | |
| 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 East | 16.36m² |
| Ventilation rate: | 2.00 |
| Blinds/curtains: | Light-coloured venetian blind<br>Closed 100% of daylight hours |

## 10 Key features

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

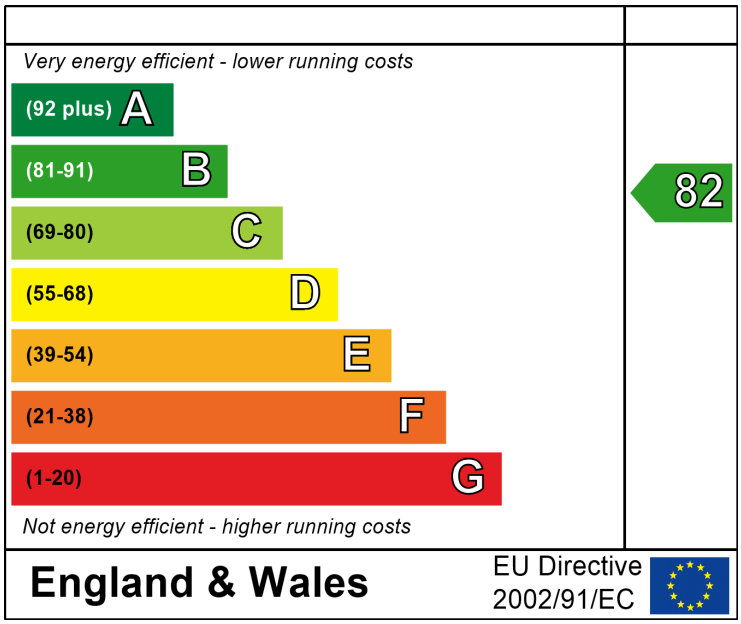
# Predicted Energy Assessment

| | |
|---|---|
| Dwelling type: | Ground floor Flat |
| Date of assessment: | 19 July 2021 |
| Produced by: | Amy Webb |
| Total floor area: | 61.78 m² |

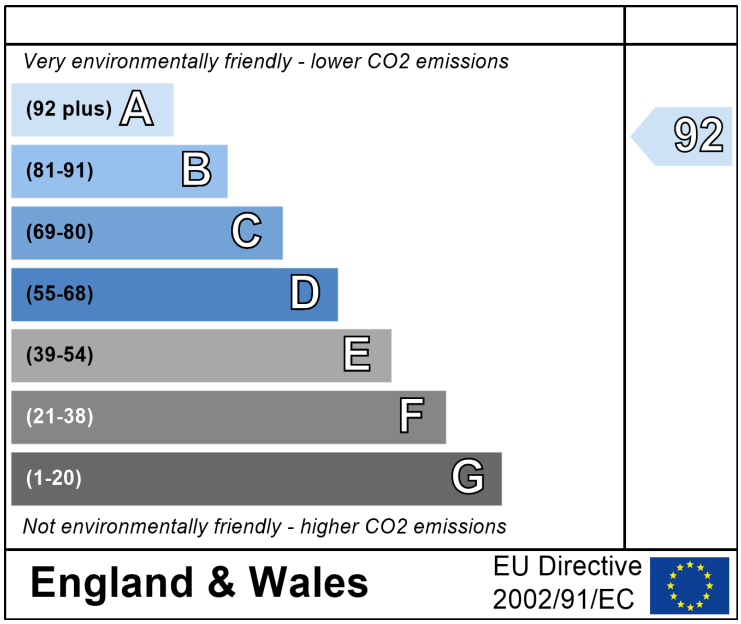
This is a Predicted Energy Assessment for a property which is not yet complete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, an Energy Performance Certificate is required providing information about 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: 1-02

| | |
|---|---|
| Address: | |
| Located in: | England |
| Region: | South East England |
| UPRN: | |
| Date of assessment: | 19 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 | 61.78 m² | 2.61 m |
| Living area: | 26.44 m² (fraction 0.428) | |
| 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 | |

| Name: | Gap: | Frame Factor: | g-value: | U-value: | Area: | No. of Openings: |
|---|---|---|---|---|---|---|
| Front Door | mm | 0.7 | 0 | 1.4 | 1.89 | 1 |
| Window 1 | 6mm | 0.7 | 0.4 | 1.4 | 4.09 | 4 |

| Name: | Type-Name: | Location: | Orient: | Width: | Height: |
|---|---|---|---|---|---|
| Front Door | | External Wall | North West | 0.9 | 2.1 |
| Window 1 | | External Wall | South East | 1.81 | 2.26 |

Overshading: Average or unknown

## Opaque Elements:

| Type: | Gross area: | Openings: | Net area: | U-value: | Ru value: | Curtain wall: | Kappa: |
|---|---|---|---|---|---|---|---|
| External Elements | | | | | | | |
| External Wall | 29.52 | 18.25 | 11.27 | 0.14 | 0 | False | N/A |
| Corridor Wall | 20.46 | 0 | 20.46 | 0.2 | 0 | False | N/A |
| Exposed Floor | 61.78 | | | 0.14 | | | N/A |
| Internal Elements | | | | | | | |
| Party Elements | | | | | | | |
| Party Wall | 44 | | | | | | N/A |

## Thermal bridges:

Thermal bridges: User-defined (individual PSI-values) Y-Value = 0.104

| Length | Psi-value | | |
|---|---|---|---|
| 8.14 | 0.05 | E2 | Other lintels (including other steel lintels) |
| 7.24 | 0.08 | E3 | Sill |

# SAP Input

| | | | |
|---|---|---|---|
| 22.28 | 0.07 | E4 | Jamb |
| 19.15 | 0.15 | E20 | Exposed floor (normal) |
| 19.15 | 0.14 | E7 | Party floor between dwellings (in blocks of flats) |
| 0 | 0.04 | E9 | Balcony between dwellings, wall insulation continuous |
| 2.61 | 0.18 | E16 | Corner (normal) |
| 0 | 0.12 | E25 | Staggered party wall between dwellings |
| 7.83 | 0.045 | E18 | Party wall between dwellings |
| 5.22 | 0 | E17 | Corner (inverted internal area greater than external area) |
| 16.86 | 0.16 | P7 | Exposed floor (normal) |
| 16.86 | 0 | P3 | Intermediate floor between dwellings (in blocks of flats) |

## Ventilation:

| | |
|---|---|
| Pressure test: | Yes (As designed) |
| Ventilation: | Balanced with heat recovery<br>Number of wet rooms: Kitchen + 1<br>Ductwork: Insulation, rigid<br>Approved Installation Scheme: False |
| 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<br>Heat source: Community heat pump<br>heat from electric heat pump, heat fraction 1, efficiency 319<br>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<br>Control code: 2306 |

## Secondary heating system:

| | |
|---|---|
| Secondary heating system: | None |

## Water heating:

| | |
|---|---|
| Water heating: | From main heating system<br>Water code: 901<br>Fuel :heat from electric heat pump<br>Hot water cylinder<br>Cylinder volume: 150 litres<br>Cylinder insulation: Measured loss, 1.16kWh/day<br>Primary pipework insulation: True<br>Cylinderstat: True<br>Cylinder in heated space: True<br>Solar panel: False |

## Others:

| | |
|---|---|
| Electricity tariff: | Standard Tariff |
| In Smoke Control Area: | Unknown |
| Conservatory: | No conservatory |
| Low energy lights: | 100% |
| Terrain type: | Dense urban |
| EPC language: | English |
| Wind turbine: | No |
| Photovoltaics: | Photovoltaic 1<br>Installed Peak power: 0.3067257<br>Tilt of collector: 30° |

# SAP Input

| | |
|---|---|
| | Overshading: None or very little<br>Collector Orientation: South |
| Assess Zero Carbon Home: | No |