# Predicted Energy Assessment

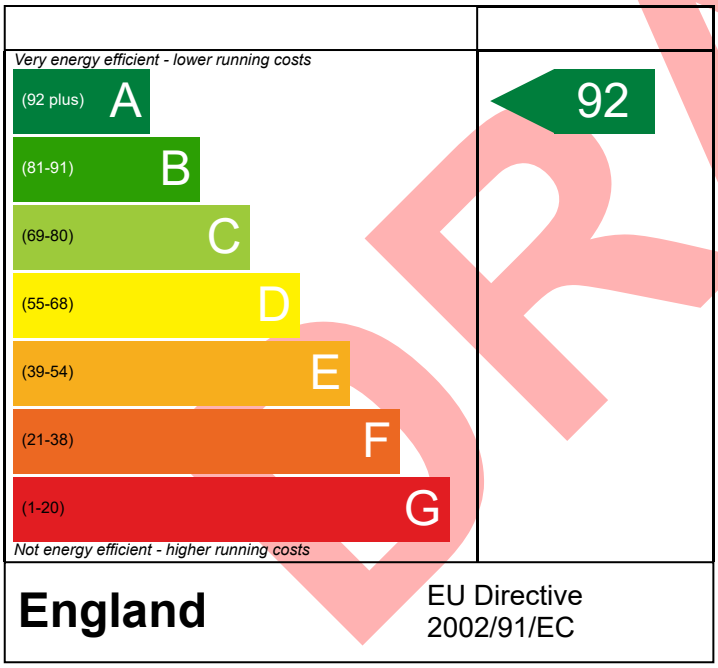
182-184, Bitterne Rd W, Southampton, Hampshire, SO18 1BH

| | |
|---|---|
| Dwelling type: | Flat, Detached |
| Date of assessment: | 04/04/2024 |
| Produced by: | Kieran Mckerr |
| Total floor area: | 44.31 m² |
| DRRN: | |

This document is a Predicted Energy Assessment for properties marketed when they are incomplete. It includes a predicted energy rating which might not represent the final energy rating of the property on completion. Once the property is completed, this rating will be updated and an official Energy Performance Certificate will be created for the property. This will include more detailed information about the energy performance of the completed property.

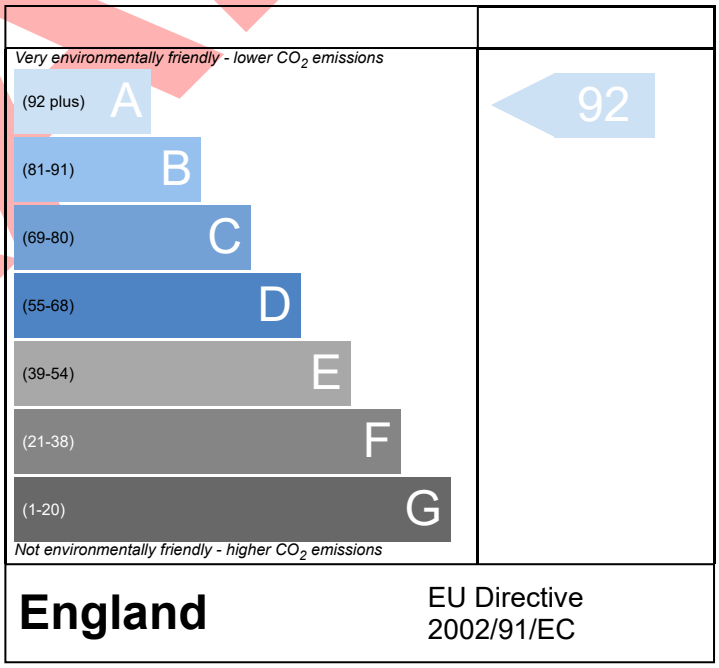
The energy performance has been assessed using the Government approved SAP 10 methodology and is rated in terms of the energy use per square meter of floor area; the energy efficiency is based on fuel costs and the environmental impact is based on carbon dioxide (CO2) emissions.

## Energy Efficiency 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.

## Environmental Impact ($CO_2$) Rating




The environmental impact rating is a measure of a home's impact on the environment in terms of carbon dioxide ($CO_2$) emissions. The higher the rating the less impact it has on the environment.

# Summary for Input Data

elmhurst energy

| | | | |
|---|---|---|---|
| **Property Reference** | 2759 | **Issued on Date** | 04/04/2024 |
| **Assessment Reference** | (Gas Boiler) Flat 1 Update | **Prop Type Ref** | |
| **Property** | 182-184, Bitterne Rd W, Southampton, Hampshire, SO18 1BH | | |

| | | | | | |
|---|---|---|---|---|---|
| **SAP Rating** | 92 A | **DER** | 13.06 | **TER** | 17.76 |
| **Environmental** | 92 A | **% DER < TER** | | | 26.46 |
| **$CO_2$ Emissions (t/year)** | 0.46 | **DFEE** | 32.78 | **TFEE** | 47.10 |
| **Compliance Check** | See BREL | **% DFEE < TFEE** | | | 30.39 |
| **% DPER < TPER** | 29.66 | **DPER** | 66.79 | **TPER** | 94.95 |

| | | | |
|---|---|---|---|
| **Assessor Details** | Mr. Kieran Mckerr | **Assessor ID** | BA75-0001 |
| **Client** | 0001, Andrew Jones | | |

## SUMMARY FOR INPUT DATA FOR: New Build (As Designed)

| | |
|---|---|
| **Orientation** | East |
| **Property Tenture** | 2 |
| **Transaction Type** | 6 |
| **Terrain Type** | Suburban |
| **1.0 Property Type** | Flat, Detached |
| Position of Flat | Mid-floor flat |
| Which Floor | 1 |
| **2.0 Number of Storeys** | 1 |
| **3.0 Date Built** | 2023 |
| **4.0 Sheltered Sides** | 2 |
| **5.0 Sunlight/Shade** | Average or unknown |
| **6.0 Thermal Mass Parameter** | Precise calculation |
| **7.0 Electricity Tariff** | 7 Hour Off Peak |
| Smart electricity meter fitted | Yes |
| Smart gas meter fitted | Yes |

**7.0 Measurements**

| | Heat Loss Perimeter | Internal Floor Area | Average Storey Height |
|---|---|---|---|
| **Ground floor:** | 28.00 m | 44.31 m² | 2.30 m |

**8.0 Living Area** 16.44 m²

**9.0 External Walls**

| Description | Type | Construction | U-Value (W/m²K) | Kappa (kJ/m²K) | Gross Area(m²) | Nett Area (m²) | Shelter Res | Shelter | Openings | Area Calculation Type |
|---|---|---|---|---|---|---|---|---|---|---|
| External Wall | Solid Wall | Solid wall : dense plaster, 210 mm brick, insulated externally | 0.14 | 135.00 | 45.19 | 35.08 | 0.00 | None | 10.11 | Enter Gross Area |
| Corridor Wall | Solid Wall | Solid wall : dense plaster, 210 mm brick, insulated externally | 0.14 | 135.00 | 19.21 | 17.11 | 1.00 | None | 2.10 | Enter Gross Area |

**9.2 Internal Walls**

| Description | Construction | Kappa (kJ/m²K) | Area (m²) |
|---|---|---|---|
| Party Wall | Dense block, plasterboard on dabs | 75.00 | 47.75 |

**10.1 Party Ceilings**

| Description | Construction | Kappa (kJ/m²K) | Area (m²) |
|---|---|---|---|
| Party Ceiling 1 | Other | 30.00 | 44.31 |

**11.0 Heat Loss Floors**

| Description | Type | Storey Index | Construction | U-Value (W/m²K) | Shelter Code | Shelter Factor | Kappa (kJ/m²K) | Area (m²) |
|---|---|---|---|---|---|---|---|---|
| Exposed Floor | Exposed Floor - Solid | Lowest occupied | Other | 0.13 | None | 1.00 | 120.00 | 44.31 |

**12.0 Opening Types**

| Description | Data Source | Type | Glazing | Glazing Gap | Filling Type | G-value | Frame Type | Frame Factor | U Value (W/m²K) |
|---|---|---|---|---|---|---|---|---|---|
| Corridor Door | Manufacturer | Door to Corridor | | | | | | | 1.00 |
| External Glazing | Manufacturer | Window | Triple Low-E Soft 0.05 | | | 0.34 | | 0.83 | 0.80 |

**13.0 Openings**

# Summary for Input Data

| Name | Opening Type | Location | Orientation | Area (m²) | Pitch |
|---|---|---|---|---|---|
| Corridor Door | Corridor Door | Corridor Wall | East | 2.10 | |
| North Windows | External Glazing | External Wall | North | 3.31 | |
| North West Windows | External Glazing | External Wall | North West | 3.40 | |
| North West Windows | External Glazing | External Wall | West | 3.40 | |

| | | |
|---|---|---|
| **14.0 Conservatory** | None | |
| **15.0 Draught Proofing** | 100 | % |
| **16.0 Draught Lobby** | No | |

| | | |
|---|---|---|
| **17.0 Thermal Bridging** | User Input | |

**17.1 List of Bridges**

| Bridge Type | Source Type | Length | Psi | Adjusted Reference: | Imported |
|---|---|---|---|---|---|
| E2 Other lintels (including other steel lintels) | | 1.00 | | | No |
| E2 Other lintels (including other steel lintels) | | 5.35 | | | No |
| E3 Sill | | 5.35 | | | No |
| E3 Sill | | 1.00 | | | No |
| E4 Jamb | | 8.40 | | | No |
| E4 Jamb | | 4.20 | | | No |
| E20 Exposed floor (normal) | | 21.85 | | | No |
| E7 Party floor between dwellings (in blocks of flats) | | 21.85 | | | No |
| P3 Party wall - Intermediate floor between dwellings (in blocks of flats) | | 5.23 | | | No |

| | | |
|---|---|---|
| Y-value | 0.04 | W/m²K |
| Description | Thermohouse | |

| | | |
|---|---|---|
| **18.0 Pressure Testing** | Yes | |
| Designed $AP_{50}$ | 3.00 | m³/(h.m²) @ 50 Pa |
| Test Method | Blower Door | |

**19.0 Mechanical Ventilation**

**Mechanical Ventilation**

| | | |
|---|---|---|
| Mechanical Ventilation System Present | Yes | |
| Mechanical Ventilation data Type | Data Sheet | |
| Type | Balanced mechanical ventilation with heat recovery | |
| MVHR Duct Insulated | Insulated Ducts | |
| Manufacturer SFP | 0.54 | |
| Duct Type | Rigid | |
| MVHR Efficiency | 89.60 | |
| Wet Rooms | 1 | |
| Brand, Model | Flakt Group | |
| SFP from Installer Commissioning Certificate | No | |
| MVHR System Location | Outside heated envelope (not installed exclusively) | |

**20.0 Fans, Open Fireplaces, Flues**

| | | |
|---|---|---|
| **21.0 Fixed Cooling System** | No | |

**22.0 Lighting**

| | | |
|---|---|---|
| No Fixed Lighting | No | |

| Name | Efficacy | Power | Capacity | Count |
|---|---|---|---|---|
| Lighting 1 | 119.90 | 100 | 12000 | 1 |

| | | |
|---|---|---|
| **24.0 Main Heating 1** | Database | |
| Percentage of Heat | 100.00 | % |
| Database Ref. No. | 18648 | |
| Fuel Type | Mains gas | |
| In Winter | 84.10 | |
| In Summer | 98.90 | |
| Model Name | IC Economiser 27 Plus | |
| Manufacturer | ATAG Verwarming Nederland | |
| System Type | Combi boiler | |

# Summary for Input Data

| | |
|---|---|
| Controls SAP Code | 2103 |
| Delayed Start Stat | No |
| Flue Type | Balanced |
| Fan Assisted Flue | Yes |
| Is MHS Pumped | Pump in unheated space |
| Heating Pump Age | 2013 or later |
| Heat Emitter | Underfloor |
| Underfloor Heating | Yes - Pipes in thin screed |
| Flow Temperature | Enter value |
| Flow Temperature Value | 55.00 |
| Boiler Interlock | No |
| Combi boiler type | Standard Combi |
| Combi keep hot type | None |

**25.0 Main Heating 2** None

**26.0 Heat Networks** None

**Space Community Heating**

| | Heat Source | Fuel Type | Heating Use | Efficiency | Percentage Of Heat | Heat | Heat Power Ratio | Electrical | Fuel Factor | Efficiency type |
|---|---|---|---|---|---|---|---|---|---|---|
| Heat source 1 | | | | | | | | | | |
| Heat source 2 | | | | | | | | | | |
| Heat source 3 | | | | | | | | | | |
| Heat source 4 | | | | | | | | | | |
| Heat source 5 | | | | | | | | | | |

**28.0 Water Heating**

| | |
|---|---|
| Water Heating | Main Heating 1 |
| SAP Code | 901 |
| Flue Gas Heat Recovery System | Yes |
| Waste Water Heat Recovery Instantaneous System 1 | No |
| Waste Water Heat Recovery Instantaneous System 2 | No |
| Waste Water Heat Recovery Storage System | No |
| Solar Panel | No |
| Water use <= 125 litres/person/day | Yes |
| Cold Water Source | From header tank |
| Bath Count | 0 |

**28.1 Showers**

| Description | Shower Type | Flow Rate [l/min] | Rated Power [kW] | Connected | Connected To |
|---|---|---|---|---|---|

**28.2 Flue Gas Heat Recovery System**

| | |
|---|---|
| Database ID | 0 |
| Brand Model | |
| Details | |

**28.3 Waste Water Heat Recovery System**

**29.0 Hot Water Cylinder** None

| | |
|---|---|
| In Airing Cupboard | No |

**32.0 Photovoltaic Unit** Multiple Dwellings – Connected

| | |
|---|---|
| Export Capable Meter? | Yes |
| Connected To Dwelling | Yes |
| Diverter | No |
| Battery Capacity [kWh] | 2.75 |

# Summary for Input Data

| PV Cells kWp | Orientation | Elevation | Overshading | FGHRS | MCS Certificate | Overshading Factor | MCS Certificate Reference | Panel Manufacturer |
|---|---|---|---|---|---|---|---|---|
| 1.01 | South | Horizontal | None Or Little | | No | 1.00 | | |
| 0.18 | South | Horizontal | None Or Little | | No | 1.00 | | |

**34.0 Small-scale Hydro** None

| Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec |
|---|---|---|---|---|---|---|---|---|---|---|---|

**Recommendations**

**Lower cost measures**

**None**

**Further measures to achieve even higher standards**

| Typical Cost | Typical savings per year | Ratings after improvement | |
|---|---|---|---|
| | | SAP rating | Environmental Impact |
| | | 0 | 0 |

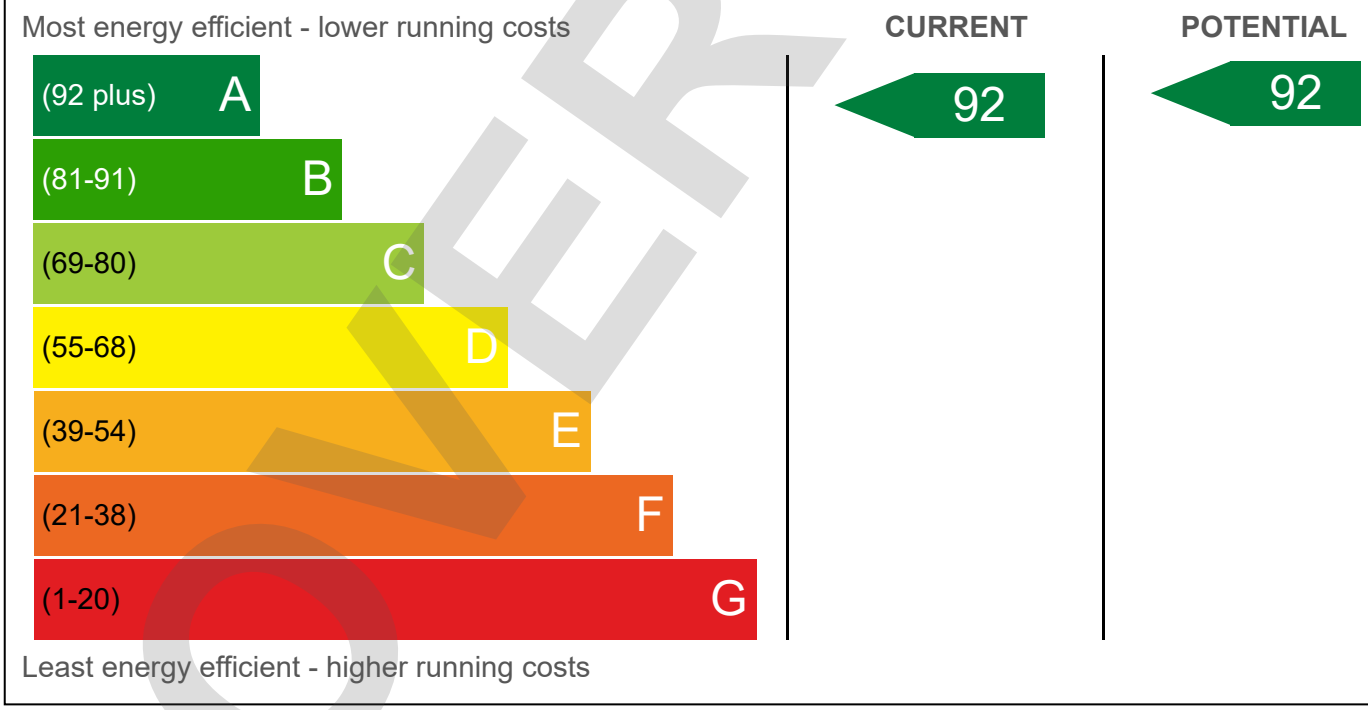
# Overview Report

| | |
|---|---|
| Dwelling Address | 182-184, Bitterne Rd W, Southampton, Hampshire, SO18 1BH |
| Report Date | 04/04/2024 |
| Property Type | Flat, Detached |
| Floor Area [$m^2$] | 44 |

This document is not an Energy Performance Certificate (EPC) as required by the Energy Performance of Buildings Regulations

## Energy Rating

The current energy rating represents the overall energy efficiency of the dwelling. The potential energy rating is the overall energy rating of the dwelling after all of the recommend measures provided on the next page have been installed. A higher score represents a more energy efficient dwelling with lower fuel bills.



# Overview Report

## Breakdown of property's energy performance

Each feature is assessed as one of the following:

Very Poor | Poor | Average | Good | Very Good

| Feature | Description | Energy Performance |
|---|---|---|
| Walls | Average thermal transmittance 0.13 W/m²K | Very Good |
| Floor | Average thermal transmittance 0.12 W/m²K | Very Good |
| Windows | High performance glazing | Very Good |
| Main heating | Boiler and underfloor heating, mains gas | Good |
| Main heating controls | Room thermostat only | Poor |
| Secondary heating | None | |
| Hot water | From main system | Very Good |
| Lighting | Excelent lighting efficiency | Very Good |
| Air tightness | Air permeability [AP50] = 3.0 m³/h.m² (assumed) | Good |

## Primary Energy use

The primary energy use for this property per year is 51 kilowatt hour (kWh) per square metre

## Estimated $CO_2$ emissions of the dwelling

The estimated CO rating provides an indication of the dwelling's impact on the environment in terms of carbon dioxide emissions; the higher the rating the less impact it has on the environment.

The estimated CO emissions for this dwellings is: **0.5** per year

With the recommended measures the potential CO emissions could be: **0** per year

# Overview Report

## Recommendations

The recommended measures provided below will help to improve the energy efficiency of the dwelling.
To reach the dwelling's potential energy rating all of the recommended measures shown below would need to be installed.
Having these measures installed individually or in any other order may give a different result when compared with the cumulative potential rating.

| Recommended measure | Typical Yearly Saving | Potential Rating after measure installed | Cumulative savings (per year) | Cumulative Potential Rating |
|---|---|---|---|---|

## Estimated energy use and potential savings

Estimated energy cost for this property over a year

**£141**

Over a year you could save

**£0**

The estimated cost and savings show how much the average household would spend in this property for heating, lighting and hot water. It is not based on how energy is used by the people living at the property.

## Contacting the assessor and the accreditation scheme

| Assessor contact details | |
|---|---|
| Assessor name | Mr. Kieran Mckerr |
| Assessor's accreditation number | |
| Email Address | |

# Overview Report

| Accreditation scheme contact details | |
|---|---|
| Accreditation scheme | |
| Telephone | |
| Email Address | |

| Assessment details | |
|---|---|
| Related party disclosure | |
| Date of assessment | 04/04/2024 |
| Date of certificate | 04/04/2024 |
| Type of assessment | SAP, new dwelling |