

# Building Regulations England Part L (BREL) Compliance Report

Approved Document L1 2021 Edition, England assessed by Array SAP 10 program, Array

Date: Thu 11 Dec 2025 17:56:50

| Project Information |            |                 |                 |
|---------------------|------------|-----------------|-----------------|
| Assessed By         | Mark Hunt  | Building Type   | House, Detached |
| OCDEA Registration  | EES/004217 | Assessment Date | 2025-12-11      |

| Dwelling Details |                                              |                  |                    |
|------------------|----------------------------------------------|------------------|--------------------|
| Assessment Type  | As designed                                  | Total Floor Area | 125 m <sup>2</sup> |
| Site Reference   | S8032                                        | Plot Reference   | As Designed 2      |
| Address          | New Dwelling West Drive, Angmering, BN16 4JF |                  |                    |

| Client Details |                                      |
|----------------|--------------------------------------|
| Name           | Not supplied due to GDPR Regulations |
| Company        | .                                    |
| Address        | .                                    |

This report covers items included within the SAP calculations. It is not a complete report of regulations compliance.

| 1a Target emission rate and dwelling emission rate                       |                                         |  |    |
|--------------------------------------------------------------------------|-----------------------------------------|--|----|
| Fuel for main heating system                                             | Electricity                             |  |    |
| Target carbon dioxide emission rate                                      | 10.28 kgCO <sub>2</sub> /m <sup>2</sup> |  |    |
| Dwelling carbon dioxide emission rate                                    | 5.03 kgCO <sub>2</sub> /m <sup>2</sup>  |  | OK |
| 1b Target primary energy rate and dwelling primary energy                |                                         |  |    |
| Target primary energy                                                    | 53.68 kWh <sub>PE</sub> /m <sup>2</sup> |  |    |
| Dwelling primary energy                                                  | 51.95 kWh <sub>PE</sub> /m <sup>2</sup> |  | OK |
| 1c Target fabric energy efficiency and dwelling fabric energy efficiency |                                         |  |    |
| Target fabric energy efficiency                                          | 43.4 kWh/m <sup>2</sup>                 |  |    |
| Dwelling fabric energy efficiency                                        | 41.5 kWh/m <sup>2</sup>                 |  | OK |

| 2a Fabric U-values               |                                                        |                                               |                                         |     |
|----------------------------------|--------------------------------------------------------|-----------------------------------------------|-----------------------------------------|-----|
| Element                          | Maximum permitted average U-Value [W/m <sup>2</sup> K] | Dwelling average U-Value [W/m <sup>2</sup> K] | Element with highest individual U-Value |     |
| External walls                   | 0.26                                                   | 0.18                                          | Walls (1) (0.18)                        | OK  |
| Party walls                      | 0.2                                                    | N/A                                           | N/A                                     | N/A |
| Curtain walls                    | 1.6                                                    | N/A                                           | N/A                                     | N/A |
| Floors                           | 0.18                                                   | 0.11                                          | Exposed (0.15)                          | OK  |
| Roofs                            | 0.16                                                   | 0.12                                          | Roof (1) (0.12)                         | OK  |
| Windows, doors, and roof windows | 1.6                                                    | 1.4                                           | Front (1.4)                             | OK  |
| Rooflights                       | 2.2                                                    | N/A                                           | N/A                                     | N/A |

| 2b Envelope elements (better than typically expected values are flagged with a subsequent (!)) |                            |                              |  |
|------------------------------------------------------------------------------------------------|----------------------------|------------------------------|--|
| Name                                                                                           | Net area [m <sup>2</sup> ] | U-Value [W/m <sup>2</sup> K] |  |
| Exposed wall: Walls (1)                                                                        | 130.0273                   | 0.18                         |  |
| Exposed wall: Walls (2)                                                                        | 15.779                     | 0.17                         |  |
| Ground floor: Ground Floor, Ground Floor                                                       | 61.84                      | 0.11                         |  |
| Upper floor: Exposed , Exposed                                                                 | 2.3                        | 0.15                         |  |
| Exposed roof: Roof (1)                                                                         | 63.29999923706055          | 0.12                         |  |

| 2c Openings (better than typically expected values are flagged with a subsequent (!)) |                        |             |              |                              |
|---------------------------------------------------------------------------------------|------------------------|-------------|--------------|------------------------------|
| Name                                                                                  | Area [m <sup>2</sup> ] | Orientation | Frame factor | U-Value [W/m <sup>2</sup> K] |
| Front, Window 1                                                                       | 4.62                   | South       | 0.7          | 1.4                          |
| Front, Window 1                                                                       | 1.66425                | South       | 0.7          | 1.4                          |
| Front, Window 1                                                                       | 2.814                  | South       | 0.7          | 1.4                          |
| Front, Window 1                                                                       | 1.44                   | South       | 0.7          | 1.4                          |
| Front, Window 1                                                                       | 0.414                  | South       | 0.7          | 1.4                          |
| Front, Window 1                                                                       | 0.567                  | South       | 0.7          | 1.4                          |
| Front, Door                                                                           | 1.89                   | South       | N/A          | 1.4                          |
| Rear, Window 1                                                                        | 1.66635                | North       | 0.7          | 1.4                          |
| Rear, Window 1                                                                        | 1.28835                | North       | 0.7          | 1.4                          |
| Rear, Window 1                                                                        | 1.07835                | North       | 0.7          | 1.4                          |
| Rear, Window 1                                                                        | 3.3285                 | North       | 0.7          | 1.4                          |

| Name           | Area [m <sup>2</sup> ] | Orientation | Frame factor | U-Value [W/m <sup>2</sup> K] |
|----------------|------------------------|-------------|--------------|------------------------------|
| Rear, Window 1 | 0.414                  | North       | 0.7          | 1.4                          |
| Rear, Window 1 | 0.414                  | North       | 0.7          | 1.4                          |
| Rear, Window 1 | 3.3285                 | North       | 0.7          | 1.4                          |
| Rear, Door     | 1.89                   | North       | N/A          | 1.4                          |
| Side, Window 1 | 0.552                  | East        | 0.7          | 1.4                          |
| Side, Window 1 | 0.552                  | East        | 0.7          | 1.4                          |
| Side, Window 1 | 1.4724                 | East        | 0.7          | 1.4                          |

## 2d Thermal bridging (better than typically expected values are flagged with a subsequent (!))

Building part 1: Thermal bridging calculated from linear thermal transmittances for each junction

| Main element  | Junction detail                                                   | Source                                       | Psi value [W/mK] | Drawing / reference |
|---------------|-------------------------------------------------------------------|----------------------------------------------|------------------|---------------------|
| External wall | E2: Other lintels (including other steel lintels)                 | Calculated by person with suitable expertise | 0.06             |                     |
| External wall | E3: Sill                                                          | Calculated by person with suitable expertise | 0.022 (!)        |                     |
| External wall | E4: Jamb                                                          | Calculated by person with suitable expertise | 0.017 (!)        |                     |
| External wall | E5: Ground floor (normal)                                         | Calculated by person with suitable expertise | 0.067            |                     |
| External wall | E6: Intermediate floor within a dwelling                          | Calculated by person with suitable expertise | 0 (!)            |                     |
| External wall | E20: Exposed floor (normal)                                       | SAP table default                            | 0.32             |                     |
| External wall | E10: Eaves (insulation at ceiling level)                          | Calculated by person with suitable expertise | 0.057            |                     |
| External wall | E16: Corner (normal)                                              | Calculated by person with suitable expertise | 0.042            |                     |
| External wall | E17: Corner (inverted - internal area greater than external area) | Calculated by person with suitable expertise | -0.085           |                     |

## 3 Air permeability (better than typically expected values are flagged with a subsequent (!))

|                                             |                                                    |    |
|---------------------------------------------|----------------------------------------------------|----|
| Maximum permitted air permeability at 50Pa  | 8 m <sup>3</sup> /hm <sup>2</sup>                  |    |
| Dwelling air permeability at 50Pa           | 4.8 m <sup>3</sup> /hm <sup>2</sup> , Design value | OK |
| Air permeability test certificate reference |                                                    |    |

## 4 Space heating

**Main heating system 1:** Heat pump with radiators or underfloor heating - Electricity

|                  |                      |
|------------------|----------------------|
| Efficiency       | 170.0%               |
| Emitter type     | Fan coil units       |
| Flow temperature |                      |
| System type      | Air source heat pump |
| Manufacturer     |                      |
| Model            |                      |
| Commissioning    |                      |

**Main heating system 2:** Heat pump with radiators or underfloor heating - Electricity

|                  |                       |
|------------------|-----------------------|
| Efficiency       | 0.0%                  |
| Emitter type     |                       |
| Flow temperature |                       |
| System type      | Heat Pump             |
| Manufacturer     | Vaillant Group UK Ltd |
| Model            | aroSTOR 270ltr        |
| Commissioning    |                       |

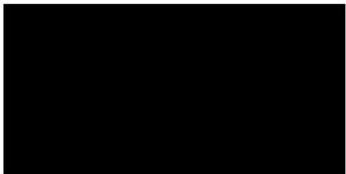
**Secondary heating system:** Water- or oil-filled radiators

|               |             |
|---------------|-------------|
| Fuel          | Electricity |
| Efficiency    | 100.0%      |
| Commissioning |             |

## 5 Hot water

**Cylinder/store** - type: N/A

|                            |     |
|----------------------------|-----|
| Capacity                   | N/A |
| Declared heat loss         | N/A |
| Primary pipework insulated | N/A |
| Manufacturer               |     |
| Model                      |     |
| Commissioning              |     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------|
| <b>Waste water heat recovery system 1 - type: N/A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |              |
| Efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |              |
| Manufacturer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |              |
| Model                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |              |
| <b>6 Controls</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |              |
| <b>Main heating 1 - type: Programmer and at least two room thermostats</b>                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                     |              |
| Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                     |              |
| Ecodesign class                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |              |
| Manufacturer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |              |
| Model                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |              |
| <b>Main heating 2 - type: Not applicable</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |              |
| Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                     |              |
| Ecodesign class                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |              |
| Manufacturer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |              |
| Model                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |              |
| <b>Water heating - type: Cylinder thermostat and HW separately timed</b>                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                     |              |
| Manufacturer                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |              |
| Model                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     |              |
| <b>7 Lighting</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                     |              |
| Minimum permitted light source efficacy                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 75 lm/W                                                                             |              |
| Lowest light source efficacy                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 119.44 lm/W                                                                         | OK           |
| External lights control                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | N/A                                                                                 |              |
| <b>8 Mechanical ventilation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                     |              |
| <b>System type: N/A</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                     |              |
| Maximum permitted specific fan power                                                                                                                                                                                                                                                                                                                                                                                                                                                             | N/A                                                                                 |              |
| Specific fan power                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | N/A                                                                                 | N/A          |
| Minimum permitted heat recovery efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                       | N/A                                                                                 |              |
| Heat recovery efficiency                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | N/A                                                                                 | N/A          |
| Manufacturer/Model                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                     |              |
| Commissioning                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                     |              |
| <b>9 Local generation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                     |              |
| N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |              |
| <b>10 Heat networks</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                     |              |
| N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |              |
| <b>11 Supporting documentary evidence</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                     |              |
| N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |              |
| <b>12 Declarations</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                     |              |
| <b>a. Assessor Declaration</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                     |              |
| This declaration by the assessor is confirmation that the contents of this BREL Compliance Report are a true and accurate reflection based upon the design information submitted for this dwelling for the purpose of carrying out the "As designed" assessment, and that the supporting documentary evidence (SAP Conventions, Appendix 1 (documentary evidence) schedules the minimum documentary evidence required) has been reviewed in the course of preparing this BREL Compliance Report. |                                                                                     |              |
| Signed:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | Assessor ID: |
| Name:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                     | Date:        |
| <b>b. Client Declaration</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                     |              |
| N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                     |              |

# Predicted Energy Assessment

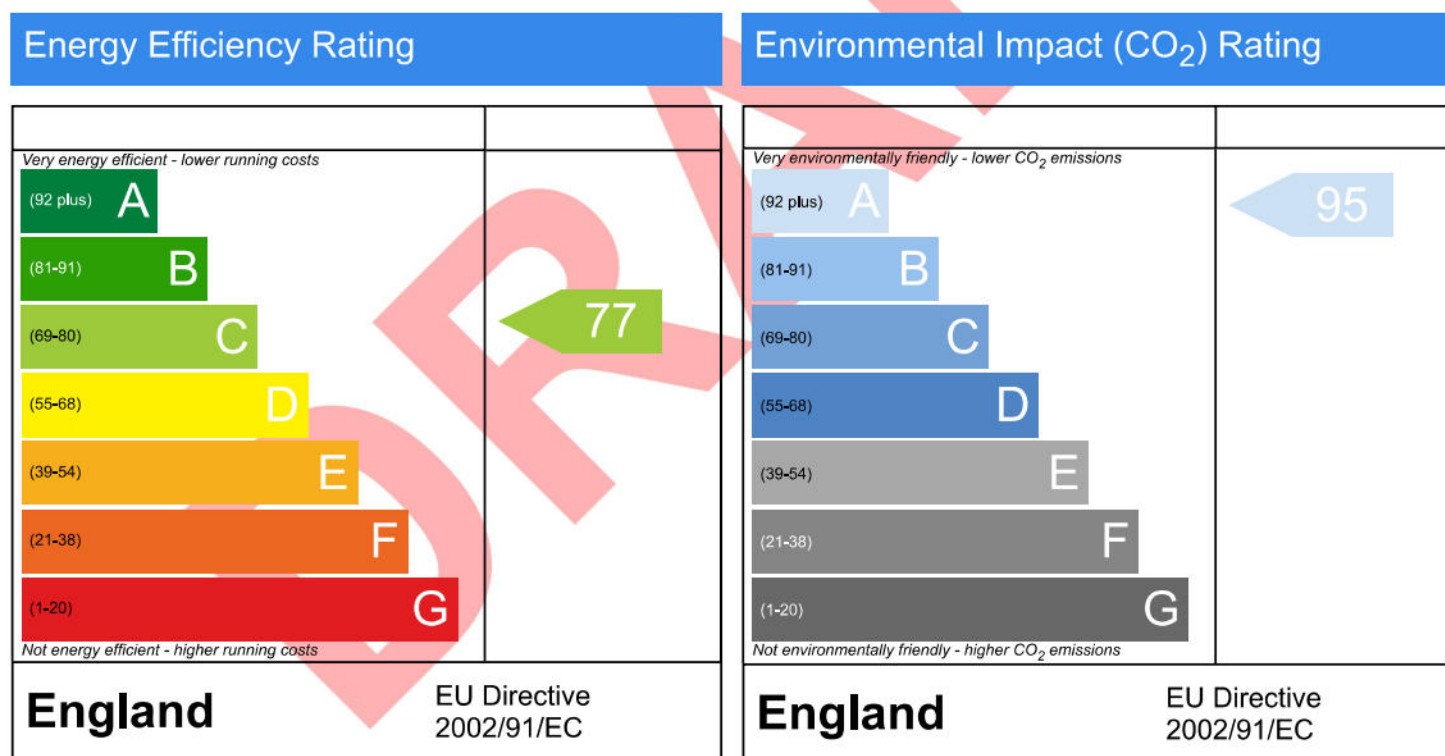


New Dwelling , West Drive, Angmering, BN16 4JF

Dwelling type: House, Detached  
 Date of assessment: 11/12/2025  
 SAP Version: 10.2  
 Produced by: Mark Hunt  
 Total floor area: 125.14 m<sup>2</sup>  
 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 (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.

# Summary for Input Data

|                      |                                                |                |            |
|----------------------|------------------------------------------------|----------------|------------|
| Plot Reference       | S8032                                          | Issued on Date | 11/12/2025 |
| Assessment Reference | As Designed 2                                  | Plot Type Ref  | New Build  |
| Plot Address         | New Dwelling , West Drive, Angmering, BN16 4JF | SAP Version    | 10.2       |

|                                    |          |               |       |      |       |
|------------------------------------|----------|---------------|-------|------|-------|
| SAP Rating                         | 77 C     | DER           | 5.03  | TER  | 10.28 |
| Environmental                      | 95 A     | % DER < TER   |       |      | 51.07 |
| CO <sub>2</sub> Emissions (t/year) | 0.53     | DFEE          | 41.45 | TFEE | 43.42 |
| Compliance Check                   | See BREL | % DFEE < TFEE |       |      | 4.53  |
| % DPER < TPER                      | 3.23     | DPER          | 51.95 | TPER | 53.68 |

|                  |                                           |             |           |
|------------------|-------------------------------------------|-------------|-----------|
| Assessor Details | Mr. Mark Hunt                             | Assessor ID | 3594-0001 |
| Client           | 001, Not supplied due to GDPR Regulations |             |           |

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

|                                |                     |
|--------------------------------|---------------------|
| Orientation                    | South               |
| Property Tenure                | 1                   |
| Transaction Type               | 6                   |
| Terrain Type                   | Suburban            |
| 1.0 Property Type              | House, Detached     |
| 2.0 Number of Storeys          | 2                   |
| 3.0 Date Built                 | 2023                |
| 4.0 Sheltered Sides            | 0                   |
| 5.0 Sunlight/Shade             | Average or unknown  |
| 6.0 Thermal Mass Parameter     | Precise calculation |
| Thermal Mass                   | 186.04 kJ/m²K       |
| 7.0 Electricity Tariff         | Standard            |
| Smart electricity meter fitted | Yes                 |
| Smart gas meter fitted         | Yes                 |

|                  |               |                     |                     |                       |
|------------------|---------------|---------------------|---------------------|-----------------------|
| 7.0 Measurements |               |                     |                     |                       |
|                  | Ground floor: | Heat Loss Perimeter | Internal Floor Area | Average Storey Height |
|                  | 1st Storey:   | 35.15 m             | 61.84 m²            | 2.40 m                |
|                  |               | 34.53 m             | 63.30 m²            | 2.65 m                |

|                 |          |
|-----------------|----------|
| 8.0 Living Area | 21.80 m² |
|-----------------|----------|

| Description | Type        | Construction                                                                        | U-Value (W/m²K) | Kappa (kJ/m²K) | Gross Area(m²) | Nett Area (m²) | Shelter Res | Shelter | Openings | Area Calculation Type |
|-------------|-------------|-------------------------------------------------------------------------------------|-----------------|----------------|----------------|----------------|-------------|---------|----------|-----------------------|
| Brick       | Cavity Wall | Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure | 0.18            | 60.00          | 155.11         | 130.03         | 0.00        | None    | 25.08    | Enter Gross Area      |
| Render      | Cavity Wall | Cavity wall : plasterboard on dabs, AAC block, filled cavity, any outside structure | 0.17            | 60.00          | 20.09          | 15.78          | 0.00        | None    | 4.31     | Enter Gross Area      |

| Description     | Construction                      | Kappa (kJ/m²K) | Area (m²) |
|-----------------|-----------------------------------|----------------|-----------|
| Internal Wall 1 | Dense block, plasterboard on dabs | 75.00          | 81.64     |
| Internal Wall 2 | Other                             | 9.00           | 98.90     |

| Description     | Type                | Construction                             | U-Value (W/m²K) | Kappa (kJ/m²K) | Gross Area(m²) | Nett Area (m²) | Shelter Code | Shelter Factor | Calculation Type    | Openings |
|-----------------|---------------------|------------------------------------------|-----------------|----------------|----------------|----------------|--------------|----------------|---------------------|----------|
| External Roof 1 | External Plane Roof | Plasterboard, insulated at ceiling level | 0.12            | 9.00           | 63.30          | 63.30          | None         | 0.00           | Calculate Wall Area | 0.00     |

| Description        | Storey          | Construction                                   | Kappa | Area (m²) |
|--------------------|-----------------|------------------------------------------------|-------|-----------|
| Internal Ceiling 1 | Lowest occupied | Plasterboard ceiling, carpeted chipboard floor | 9.00  | 61.84     |
| Internal Ceiling 2 | +1              | Plasterboard ceiling, carpeted chipboard floor | 9.00  | 63.30     |

| Description          | Type                        | Storey Index       | Construction                                                                       | U-Value (W/m²K) | Shelter Code | Shelter Factor | Kappa (kJ/m²K) | Area (m²)     |
|----------------------|-----------------------------|--------------------|------------------------------------------------------------------------------------|-----------------|--------------|----------------|----------------|---------------|
| Ground Floor Exposed | Ground Floor - Solid Timber | Lowest occupied +1 | Suspended concrete floor, carpeted Timber exposed floor, insulation between joists | 0.11<br>0.15    | None<br>None | 0.00<br>0.00   | 75.00<br>20.00 | 61.84<br>2.30 |

# Summary for Input Data

## 11.2 Internal Floors

| Description      | Storey Index | Construction                                   | Kappa (kJ/m²K) | Area (m²) |
|------------------|--------------|------------------------------------------------|----------------|-----------|
| Internal Floor 1 | +1           | Plasterboard ceiling, carpeted chipboard floor | 18.00          | 63.30     |

## 12.0 Opening Types

| Description | Data Source  | Type       | Glazing               | Glazing Gap | Filling Type | G-value | Frame Type | Frame Factor | U Value (W/m²K) |
|-------------|--------------|------------|-----------------------|-------------|--------------|---------|------------|--------------|-----------------|
| Window 1    | Manufacturer | Window     | Double Low-E Hard 0.2 |             |              | 0.72    |            | 0.70         | 1.40            |
| Door        | Manufacturer | Solid Door |                       |             |              | 0.00    |            |              | 1.40            |

## 13.0 Openings

| Name  | Opening Type | Location | Orientation | Area (m²) | Pitch |
|-------|--------------|----------|-------------|-----------|-------|
| Front | Window 1     | Brick    | South       | 9.10      |       |
| Front | Window 1     | Render   | South       | 2.42      |       |
| Front | Door         | Render   | South       | 1.89      |       |
| Rear  | Window 1     | Brick    | North       | 11.52     |       |
| Rear  | Door         | Brick    | North       | 1.89      |       |
| Side  | Window 1     | Brick    | East        | 2.58      |       |

## 14.0 Conservatory

## 15.0 Draught Proofing

 %

## 16.0 Draught Lobby

## 17.0 Thermal Bridging

## 17.1 List of Bridges

| Bridge Type                                                      | Source Type            | Length | Psi   | Adjusted Reference: | Imported |
|------------------------------------------------------------------|------------------------|--------|-------|---------------------|----------|
| E2 Other lintels (including other steel lintels)                 | Independently assessed | 19.60  | 0.06  | 0.06                | Yes      |
| E3 Sill                                                          | Independently assessed | 17.80  | 0.02  | 0.02                | Yes      |
| E4 Jamb                                                          | Independently assessed | 51.40  | 0.02  | 0.02                | Yes      |
| E5 Ground floor (normal)                                         | Independently assessed | 35.15  | 0.07  | 0.07                | Yes      |
| E6 Intermediate floor within a dwelling                          | Independently assessed | 34.53  | 0.00  | 0.00                | Yes      |
| E20 Exposed floor (normal)                                       | Table K1 - Default     | 5.00   | 0.32  | 0.32                | No       |
| E10 Eaves (insulation at ceiling level)                          | Independently assessed | 35.00  | 0.06  | 0.06                | No       |
| E16 Corner (normal)                                              | Independently assessed | 28.00  | 0.04  | 0.04                | No       |
| E17 Corner (inverted – internal area greater than external area) | Independently assessed | 5.00   | -0.09 | -0.09               | No       |

Y-value  W/m²K

## 19.0 Mechanical Ventilation

| Mechanical Ventilation                                                |
|-----------------------------------------------------------------------|
| Mechanical Ventilation System Present <input type="text" value="No"/> |

## 20.0 Fans, Open Fireplaces, Flues

|                                                  |                                |
|--------------------------------------------------|--------------------------------|
| Number of open chimneys                          | <input type="text" value="0"/> |
| Number of open flues                             | <input type="text" value="0"/> |
| Number of chimneys/flues attached to closed fire | <input type="text" value="0"/> |
| Number of flues attached to solid fuel boiler    | <input type="text" value="0"/> |
| Number of flues attached to other heater         | <input type="text" value="0"/> |
| Number of blocked chimneys                       | <input type="text" value="0"/> |
| Number of intermittent extract fans              | <input type="text" value="5"/> |
| Number of passive vents                          | <input type="text" value="0"/> |
| Number of flueless gas fires                     | <input type="text" value="0"/> |

## 21.0 Fixed Cooling System

## 22.0 Pressure Testing

|                           |                                          |                   |
|---------------------------|------------------------------------------|-------------------|
| Designed AP <sub>50</sub> | <input type="text" value="4.80"/>        | m³/(h.m²) @ 50 Pa |
| Test Method               | <input type="text" value="Blower Door"/> |                   |

## 22.0 Lighting

| No Fixed Lighting | <input type="text" value="No"/> |       |          |       |
|-------------------|---------------------------------|-------|----------|-------|
| Name              | Efficacy                        | Power | Capacity | Count |
| Downlights        | 119.44                          | 3.60  | 430.00   | 62    |

## 24.0 Main Heating 1

|                    |                                          |   |
|--------------------|------------------------------------------|---|
| SAP table          | <input type="text" value="100.00"/>      | % |
| Percentage of Heat |                                          |   |
| Fuel Type          | <input type="text" value="Electricity"/> |   |

# Summary for Input Data

|                      |                                              |  |  |  |  |  |
|----------------------|----------------------------------------------|--|--|--|--|--|
| SAP Code             | 224                                          |  |  |  |  |  |
| In Winter            | 170.00                                       |  |  |  |  |  |
| In Summer            | 266.47                                       |  |  |  |  |  |
| Controls SAP Code    | 2205                                         |  |  |  |  |  |
| Controls description | Programmer and at least two room thermostats |  |  |  |  |  |
| Is MHS Pumped        | Pump in heated space                         |  |  |  |  |  |
| Heating Pump Age     | 2013 or later                                |  |  |  |  |  |
| Heat Emitter         | Fan Coil Units                               |  |  |  |  |  |
| Flow Temperature     | Unknown                                      |  |  |  |  |  |

---

|                            |                                            |  |  |  |  |   |
|----------------------------|--------------------------------------------|--|--|--|--|---|
| <b>25.0 Main Heating 2</b> | Database                                   |  |  |  |  |   |
| Percentage of Heat         | 0.00                                       |  |  |  |  | % |
| Database Ref. No.          | 104015                                     |  |  |  |  |   |
| Fuel Type                  | Electricity                                |  |  |  |  |   |
| In Winter                  | 0.00                                       |  |  |  |  |   |
| In Summer                  | 266.47                                     |  |  |  |  |   |
| Model Name                 | aroSTOR 270ltr                             |  |  |  |  |   |
| Manufacturer               | Vaillant Group UK Ltd                      |  |  |  |  |   |
| Controls                   | 2100                                       |  |  |  |  |   |
| Controls description       | Not applicable (heating provides DHW only) |  |  |  |  |   |

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|                           |      |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|
| <b>26.0 Heat Networks</b> | None |  |  |  |  |  |
|---------------------------|------|--|--|--|--|--|

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|                               |                                         |  |  |  |  |   |
|-------------------------------|-----------------------------------------|--|--|--|--|---|
| <b>27.0 Secondary Heating</b> | SAP table                               |  |  |  |  |   |
| SAP Code                      | 694                                     |  |  |  |  |   |
| Heating System Description    | Electric Water- or oil-filled radiators |  |  |  |  |   |
| Fuel Type                     | Electricity                             |  |  |  |  |   |
| SHS efficiency                | 100.00                                  |  |  |  |  | % |

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|                                                  |                |  |  |  |  |  |
|--------------------------------------------------|----------------|--|--|--|--|--|
| <b>28.0 Water Heating</b>                        | Main Heating 2 |  |  |  |  |  |
| SAP Code                                         | 914            |  |  |  |  |  |
| Flue Gas Heat Recovery System                    | No             |  |  |  |  |  |
| 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 mains     |  |  |  |  |  |
| Bath Count                                       | 0              |  |  |  |  |  |
| Immersion Only Heating Hot Water                 | No             |  |  |  |  |  |

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|                     |                                           |                          |                         |                  |                     |  |
|---------------------|-------------------------------------------|--------------------------|-------------------------|------------------|---------------------|--|
| <b>28.1 Showers</b> |                                           |                          |                         |                  |                     |  |
| <b>Description</b>  | <b>Shower Type</b>                        | <b>Flow Rate [l/min]</b> | <b>Rated Power [kW]</b> | <b>Connected</b> | <b>Connected To</b> |  |
| Shower 1            | Combi boiler or unvented hot water system | 11.00                    |                         | Yes              | Storage System      |  |
| Shower 2            | Combi boiler or unvented hot water system | 11.00                    |                         | Yes              | Storage System      |  |

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|                                              |  |  |  |  |  |  |
|----------------------------------------------|--|--|--|--|--|--|
| <b>28.3 Waste Water Heat Recovery System</b> |  |  |  |  |  |  |
|----------------------------------------------|--|--|--|--|--|--|

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|                                |                |  |  |  |  |         |
|--------------------------------|----------------|--|--|--|--|---------|
| <b>29.0 Hot Water Cylinder</b> | Internal Store |  |  |  |  |         |
| Insulation Type                | Measured Loss  |  |  |  |  |         |
| Cylinder Volume                | 270.00         |  |  |  |  | L       |
| Loss                           | 1.77           |  |  |  |  | kWh/day |

# Summary for Input Data



## 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 |
| Solar water heating |                  |                          | C 78                      | A 95                 |
| Photovoltaic        | £8,000 - £10,000 | £355                     | B 84                      | A 97                 |
| Wind turbine        |                  |                          | 0                         | 0                    |