

# BASIC COMPLIANCE REPORT

## Calculation Type: New Build (As Built)

|                                    |                                                                                          |                |             |
|------------------------------------|------------------------------------------------------------------------------------------|----------------|-------------|
| Property Reference                 | Z37241                                                                                   | Issued on Date | 21/12/2022  |
| Assessment Reference               | Z37241.1                                                                                 | Prop Type Ref  | Type 4      |
| Property                           | 22a Dob Brook Close, MANCHESTER, M40 1DB                                                 |                |             |
| SAP Rating                         | 87 B                                                                                     | DER            | 12.14       |
| Environmental                      | 90 B                                                                                     | TER            | 15.93       |
| CO <sub>2</sub> Emissions (t/year) | 0.93                                                                                     | % DER<TER      | 23.78       |
| General Requirements Compliance    | Pass                                                                                     | DfEE           | 28.04       |
|                                    |                                                                                          | TfEE           | 41.31       |
|                                    |                                                                                          | % DfEE<TfEE    | 32.11       |
| Assessor Details                   | Mr. Matthew Gibson, Energy Council, Tel: 01617621055, matthew.gibson@energycouncil.co.uk |                | Assessor ID |
|                                    |                                                                                          |                | H176-0001   |
| Client                             |                                                                                          |                |             |

### SUMMARY FOR INPUT DATA FOR New Build (As Built)

#### Criterion 1 – Achieving the TER and TfEE rate

##### 1a TER and DER

|                                             |                  |                                   |      |
|---------------------------------------------|------------------|-----------------------------------|------|
| Fuel for main heating                       | Mains gas        |                                   |      |
| Fuel factor                                 | 1.00 (mains gas) |                                   |      |
| Target Carbon Dioxide Emission Rate (TER)   | 15.93            | kgCO <sub>2</sub> /m <sup>2</sup> |      |
| Dwelling Carbon Dioxide Emission Rate (DER) | 12.14            | kgCO <sub>2</sub> /m <sup>2</sup> | Pass |
|                                             | -3.79 (-23.8%)   | kgCO <sub>2</sub> /m <sup>2</sup> |      |

##### 1b TfEE and DfEE

|                                          |                |                        |      |
|------------------------------------------|----------------|------------------------|------|
| Target Fabric Energy Efficiency (TfEE)   | 41.31          | kWh/m <sup>2</sup> /yr |      |
| Dwelling Fabric Energy Efficiency (DfEE) | 28.04          | kWh/m <sup>2</sup> /yr |      |
|                                          | -13.3 (-32.2%) | kWh/m <sup>2</sup> /yr | Pass |

#### Criterion 2 – Limits on design flexibility

##### Limiting Fabric Standards

##### 2 Fabric U-values

| Element       | Average          | Highest          |      |
|---------------|------------------|------------------|------|
| External wall | 0.19 (max. 0.30) | 0.19 (max. 0.70) | Pass |
| Party wall    | 0.00 (max. 0.20) | -                | Pass |
| Floor         | 0.15 (max. 0.25) | 0.15 (max. 0.70) | Pass |
| Roof          | 0.10 (max. 0.20) | 0.18 (max. 0.35) | Pass |
| Openings      | 1.31 (max. 2.00) | 1.34 (max. 3.30) | Pass |

##### 2a Thermal bridging

Thermal bridging calculated from linear thermal transmittances for each junction

##### 3 Air permeability

|                                |                                  |      |
|--------------------------------|----------------------------------|------|
| Air permeability at 50 pascals | 4.69 (measured in this dwelling) |      |
| Maximum                        | 10.0                             | Pass |

##### Limiting System Efficiencies

##### 4 Heating efficiency

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Main heating system

Boiler system with radiators or underfloor - Mains gas  
Data from database  
Vaillant ecoTEC sustain 24 VUW 246/7-2 (H-GB)  
Combi boiler  
Efficiency: 89.2% SEDBUK2009  
Minimum: 88.0%

Pass

Secondary heating system

None

### 5 Cylinder insulation

Hot water storage

No cylinder

### 6 Controls

Space heating controls

Programmer, room thermostat and TRVs

Pass

Hot water controls

No cylinder

Boiler interlock

Yes

Pass

### 7 Low energy lights

Percentage of fixed lights with low-energy fittings

100 %

Minimum

75 %

Pass

### 8 Mechanical ventilation

Continuous extract system (decentralised)

Specific fan power

0.1600 0.1200

Maximum

0.7

Pass

## Criterion 3 – Limiting the effects of heat gains in summer

### 9 Summertime temperature

Overheating risk (West Pennines (England))

Slight

Pass

Based on:

Overshading

Average

Windows facing North

6.97 m<sup>2</sup>, No overhang

Windows facing South

10.14 m<sup>2</sup>, Overhang width less than twice window, ratio 0.01

Air change rate

4.00 ach

Blinds/curtains

None

## Criterion 4 – Building performance consistent with DER and DFEE rate

### Party Walls

Type

U-value

Filled Cavity with Edge Sealing

0.00

W/m<sup>2</sup>K

Pass

### Air permeability and pressure testing

#### 3 Air permeability

Air permeability at 50 pascals

4.69 (measured in this dwelling)

Maximum

10.0

Pass

### 10 Key features

Party wall U-value

0.00

W/m<sup>2</sup>K

Roof U-value

0.09

W/m<sup>2</sup>K

Roof U-value

0.09

W/m<sup>2</sup>K

Roof U-value

0.09

W/m<sup>2</sup>K

Door U-value

1.10

W/m<sup>2</sup>K

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*This report has not been submitted through the Elmhurst Energy members' portal, therefore results are subject to change when the dwelling is completed.*