

# BASIC COMPLIANCE REPORT

## Calculation Type: New Build (As Built)

|                                    |                                                                        |               |       |                |            |
|------------------------------------|------------------------------------------------------------------------|---------------|-------|----------------|------------|
| Property Reference                 | HIGH-STON-2024-08                                                      |               |       | Issued on Date | 18/06/2021 |
| Assessment Reference               | ABF & EPC                                                              | Prop Type Ref | FF    |                |            |
| Property                           | 8 Whieldon Way, North Stoneham Park, Eastleigh, SO50 9SB               |               |       |                |            |
|                                    |                                                                        |               |       |                |            |
| SAP Rating                         | 85 B                                                                   | DER           | 11.08 | TER            | 14.74      |
| Environmental                      | 92 A                                                                   | % DER<TER     | 24.85 |                |            |
| CO <sub>2</sub> Emissions (t/year) | 0.57                                                                   | DFEE          | 22.52 | TFEE           | 25.38      |
| General Requirements Compliance    | Pass                                                                   | % DFEE<TFEE   | 11.29 |                |            |
|                                    |                                                                        |               |       |                |            |
| Assessor Details                   | Mr. Malcolm Maclean, SRE Limited, Tel: 01730 710044, malcolm@sre.co.uk |               |       | Assessor ID    | V497-0002  |
| Client                             | Highwood Construction Ltd, HIGH                                        |               |       |                |            |

### 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)   | 14.74            | kgCO <sub>2</sub> /m <sup>2</sup> |      |
| Dwelling Carbon Dioxide Emission Rate (DER) | 11.08            | kgCO <sub>2</sub> /m <sup>2</sup> | Pass |
|                                             | -3.66 (-24.8%)   | kgCO <sub>2</sub> /m <sup>2</sup> |      |

##### 1b TFEE and DFEE

|                                          |               |                        |      |
|------------------------------------------|---------------|------------------------|------|
| Target Fabric Energy Efficiency (TFEE)   | 25.38         | kWh/m <sup>2</sup> /yr |      |
| Dwelling Fabric Energy Efficiency (DFEE) | 22.52         | kWh/m <sup>2</sup> /yr |      |
|                                          | -2.9 (-11.4%) | 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 | 0.21 (max. 0.30) | 0.21 (max. 0.70) | Pass |
| Party wall    | 0.00 (max. 0.20) | -                | Pass |
| Floor         | 0.20 (max. 0.25) | 0.20 (max. 0.70) | Pass |
| Openings      | 1.20 (max. 2.00) | 1.20 (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 | 3.77 (measured in this dwelling) |      |
| Maximum                        | 10.0                             | Pass |

##### Limiting System Efficiencies

##### 4 Heating efficiency

|                          |                                                                                                                                                                      |      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|
| Main heating system      | Boiler system with radiators or underfloor - Mains gas<br>Data from database<br>Baxi 200 224 COMBI<br>Combi boiler<br>Efficiency: 89.0% SEDBUK2009<br>Minimum: 88.0% | Pass |
| Secondary heating system | None                                                                                                                                                                 |      |

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### 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 supply and extract system

Specific fan power

0.70

Maximum

1.5

Pass

MVHR efficiency

91

%

Minimum

70

%

Pass

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

### 9 Summertime temperature

Overheating risk (Southern England)

Medium

Pass

Based on:

Overshading

Average

Windows facing South

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

Air change rate

2.00 ach

Blinds/curtains

Light-coloured curtain or roller blind, closed 100% of daylight hours

## 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

3.77 (measured in this dwelling)

Maximum

10.0

Pass

### 10 Key features

Party wall U-value

0.00

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

Air permeability

3.8

m<sup>3</sup>/m<sup>2</sup>h

Photovoltaic array

0.45

kW

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