

# BASIC COMPLIANCE REPORT

## Calculation Type: New Build (As Built)



Property and Energy  
Services Ltd.

|                                    |                                                                                                     |                |             |
|------------------------------------|-----------------------------------------------------------------------------------------------------|----------------|-------------|
| Property Reference                 | 3260-2                                                                                              | Issued on Date | 10/05/2019  |
| Assessment Reference               | 3260-2                                                                                              | Prop Type Ref  |             |
| Property                           | 2, Aldworth Rise, READING, RG1 7NA                                                                  |                |             |
| SAP Rating                         | 84 B                                                                                                | DER            | 16.94       |
| Environmental                      | 87 B                                                                                                | TER            | 17.17       |
| CO <sub>2</sub> Emissions (t/year) | 1.13                                                                                                | % DER<TER      | 1.33        |
| General Requirements Compliance    | Pass                                                                                                | DFEE           | 39.09       |
|                                    |                                                                                                     | TFEE           | 49.08       |
|                                    |                                                                                                     | % DFEE<TFEE    | 20.36       |
| Assessor Details                   | Mr. Ian Lloyd, Property and Energy Services Limited, Tel: 01367240212, ianl@propertyandenergy.co.uk |                | Assessor ID |
|                                    |                                                                                                     |                | H044-0001   |
| Client                             | Keen Partnership, Keen                                                                              |                |             |

### 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)   | 17.17            | kgCO <sub>2</sub> /m <sup>2</sup> |      |
| Dwelling Carbon Dioxide Emission Rate (DER) | 16.94            | kgCO <sub>2</sub> /m <sup>2</sup> | Pass |
|                                             | -0.23 (-1.3%)    | kgCO <sub>2</sub> /m <sup>2</sup> |      |

##### 1b TFEE and DFEE

|                                          |                |                        |      |
|------------------------------------------|----------------|------------------------|------|
| Target Fabric Energy Efficiency (TFEE)   | 49.08          | kWh/m <sup>2</sup> /yr |      |
| Dwelling Fabric Energy Efficiency (DFEE) | 39.09          | kWh/m <sup>2</sup> /yr |      |
|                                          | -10.0 (-20.4%) | 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 | 0.22 (max. 0.30) | 0.22 (max. 0.70) | Pass |
| Party wall    | 0.00 (max. 0.20) | -                | Pass |
| Floor         | 0.09 (max. 0.25) | 0.09 (max. 0.70) | Pass |
| Roof          | 0.14 (max. 0.20) | 0.16 (max. 0.35) | Pass |
| Openings      | 1.36 (max. 2.00) | 1.50 (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 | 4.88 (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  
Worcester Greenstar 18Ri ErP  
  
Efficiency: 88.8% SEDBUK2009  
Minimum: 88.0%

Pass

Secondary heating system

None

### 5 Cylinder insulation

Hot water storage

Measured cylinder loss: 1.53 kWh/day  
Permitted by DBSCG 2.10

Pass

Primary pipework insulated

Yes

Pass

### 6 Controls

Space heating controls

Time and temperature zone control

Pass

Hot water controls

Cylinderstat

Pass

Independent timer for DHW

Pass

Boiler interlock

Yes

Pass

### 7 Low energy lights

Percentage of fixed lights with low-energy fittings

100 %

Minimum

75 %

Pass

### 8 Mechanical ventilation

Not applicable

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

### 9 Summertime temperature

Overheating risk (Thames Valley)

Slight

Pass

Based on:

Overshading

Average

Windows facing East

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

Windows facing West

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

Air change rate

4.00 ach

Blinds/curtains

Dark-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

4.88 (measured in this dwelling)

Maximum

10.0

Pass

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### 10 Key features

|                          |       |                    |
|--------------------------|-------|--------------------|
| Party wall U-value       | 0.00  | W/m <sup>2</sup> K |
| Roof U-value             | 0.11  | W/m <sup>2</sup> K |
| Floor U-value            | 0.09  | W/m <sup>2</sup> K |
| Door U-value             | 1.00  | W/m <sup>2</sup> K |
| Thermal bridging y-value | 0.039 | W/m <sup>2</sup> K |

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