



104 Berkeley Avenue - Reading

RG1 6HY

SAP New Build Report

Date 09.05.2025

Project no. 21454





| REVISION | DATE       | PREPARED BY | REVIEWED BY | COMMENTS  |
|----------|------------|-------------|-------------|-----------|
| 1        | 09.05.2025 | MC          | HH          | For Issue |

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## Contents

### 1.0 Introduction to the Development

Enevo have been instructed to prepare SAP calculations by JCPI Lettings for the proposed development at 104 Berkeley Avenue – Reading, RG1 6HY.



## 2.0 SAP Calculation Results

### 2.1 Specification

Initial SAP 10 calculations were prepared based on the construction specification provided to us and shown in table 1 below. This specification is as per the provided by the design team;

| Aspect |                          | New Elements                                                                                                                                                                                                                                                                                                      |
|--------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fabric | Proposed External Walls  | Build Up:<br>Complete cavity fill to be 150mm thick Knauf Earthwool DriTherm 32 Ultimate Cavity Slab (or equivalent) insulation with wall ties<br><br>U-Value Achieved: 0.19 W/m²K                                                                                                                                |
|        | Proposed Insulated Roofs | Build Up:<br>165mm Celotex XR4000 or similar PIR insulation<br><br>60+12.5mm Kingspan Kooltherm K118 insulated plasterboard or similar or traditional<br><br>U-Value Achieved: 0.11 W/m²K                                                                                                                         |
|        | Proposed Ground floors   | Build Up:<br>175mm thick (min) Celotex GA4000 insulation board (or equal) on 1200 gauge (300 micron) polythene DPM all lapped and taped over thin layer of sand blinding (to ensure that the insulation boards are continuously supported) on 150mm beam & block floor system<br><br>U-Value Achieved: 0.11 W/m²K |
|        | Proposed Windows (All)   | 1.4 W/m²K                                                                                                                                                                                                                                                                                                         |
|        | Proposed External Doors  | 1.4 W/m²K                                                                                                                                                                                                                                                                                                         |



|                         |                          |                                                             |
|-------------------------|--------------------------|-------------------------------------------------------------|
| <b>Services</b>         | <b>Heating</b>           | Air Source Heat Pump As indicated by floorplans – Model TBC |
|                         | <b>Air Pressure Test</b> | 5.0                                                         |
|                         | <b>Hot Water</b>         | From Main Heating System                                    |
|                         | <b>Controls</b>          | TTZC                                                        |
| <b>Lighting</b>         | <b>Efficacy (lm/cw)</b>  | 100                                                         |
| <b>Ventilation</b>      |                          | Natural Ventilation                                         |
| <b>Renewables / LZC</b> |                          | N/A                                                         |

**Table 1: Proposed Specification**

Section 2.2 of this report on the following page shows the results of the initial SAP calculations.

## 2.2 Initial Calculation Results

Based on using the specification outlined in table 1 above, below are the results of the SAP calculations produced. Copies of both the BREL document and full SAP calculations will also be provided alongside this report:

|                                          | Target                                           | Result                            | Pass/Fail                      |
|------------------------------------------|--------------------------------------------------|-----------------------------------|--------------------------------|
| Dwelling Emission Rating (DER)           | - 10.63<br>kgCO <sub>2</sub> /m <sup>2</sup> /yr | - 4.15 kgCO <sub>2</sub> /yr      | <b>Pass</b><br><b>(62.03%)</b> |
| Dwelling Primary Energy Rating (DPER)    | - 57.36<br>kWh/m <sup>2</sup> /yr                | - 43.45<br>kWh/m <sup>2</sup> /yr | <b>Pass</b><br><b>(24.25%)</b> |
| Dwelling Fabric Energy Efficiency (DFEE) | - 44<br>kWh/m <sup>2</sup> /yr                   | - 43.88<br>kWh/m <sup>2</sup> /yr | <b>Pass</b><br><b>(0.28%)</b>  |

Table 2: Initial SAP Calculation Results

As can be seen from the calculation results in table 2, the proposed dwelling(s) achieves Part L compliance using the provided specifications for building fabric and services. No further additions or improvements are required to any part of the proposed materials or building services.

These calculations have been produced using the specification provided to us by the design team, and assumptions have been used where information is not available. Any assumptions that we have used are identified in table 1 above.

### 2.3 Recommendations to Achieve Part L Compliance

The following recommendations have been made to improve the specification of the dwelling(s), to ensure compliance with Part L. These recommendations have been recognised as the most technically appropriate, and cost-effective measures of achieving compliance:

#### *Recommended Improvements-*

- *Full compliance achieved, no further recommendations.*

### **3.0 EPC Grades**

Table 4 below outlines the EPC grades that have been achieved;

| Plot                | EPC Grade   |
|---------------------|-------------|
| 104 Berkeley Avenue | <b>81 B</b> |

**Table 6: Draft EPC Grades**