

ENERGY AND SUSTAINABILITY STATEMENT

Land to the Rear of 70–72 Whitley Street, Reading RG2 0EQ

Proposed Development: Erection of 2no. single-storey one-bedroom dwellings

1.0 Introduction

This Energy and Sustainability Statement has been prepared in support of a full planning application for the erection of 2no. single-storey one-bedroom dwellings on land to the rear of 70–72 Whitley Street, Reading.

The statement has been prepared having regard to:

- Policies CC2 (Sustainable Design and Construction) and CC3 (Adaptation to Climate Change) of the Reading Borough Local Plan; and
- Reading Borough Council's Sustainable Design and Construction SPD.

The purpose of this statement is to demonstrate that the proposed development incorporates appropriate energy efficiency and sustainability measures proportionate to the scale of the scheme.

2.0 Proposed Development

The application proposes the construction of:

- 2no. one-bedroom single-storey dwellings;
- in a semi-detached bungalow form;
- on previously developed land within the urban area of Reading.

The development has been designed as a modest and efficient form of infill housing within a highly sustainable location close to local services, public transport and cycle routes.

3.0 Sustainable Design Principles

The proposal adopts a fabric-first approach to minimise operational energy demand and improve overall building efficiency.

The proposed dwellings are intended to incorporate:

- High levels of thermal insulation;
- Energy-efficient glazing;
- Airtight construction methods;
- Low-energy internal lighting;

- Water-efficient fixtures and fittings;
- Integrated solar photovoltaic (PV) panels within the pitched roof slopes; and
- Energy-efficient gas-fired central heating and hot water systems.

The compact form of the dwellings and simple building geometry also assists in reducing heat loss and improving energy efficiency.

4.0 Renewable and Low Carbon Measures

Integrated solar photovoltaic (PV) panels are proposed within the pitched roof slopes in order to generate renewable electricity on site and reduce operational carbon emissions associated with the development.

The PV panels have been integrated into the roof design to ensure that renewable technologies form part of the overall architectural approach to the development rather than appearing as bolt-on additions.

The development will also utilise energy-efficient heating and hot water systems together with enhanced fabric performance measures to minimise energy demand.

5.0 Energy Performance and Carbon Reduction

The development is intended to achieve an improvement in energy performance over baseline Building Regulations requirements through the incorporation of:

- Renewable energy generation;
- Enhanced insulation standards;
- Efficient heating systems; and
- Reduced operational energy demand through good building design.
-

The proposal is designed to achieve, where technically feasible, at least a 19% reduction in regulated carbon emissions over the Target Emission Rate required under Building Regulations, through a combination of integrated solar photovoltaic panels, enhanced fabric performance, energy-efficient glazing, airtight construction, low-energy lighting and efficient gas-fired heating and hot water systems.

6.0 Climate Change Adaptation

The proposal has also been designed to assist in adapting to climate change through:

- Energy-efficient construction;
- Reduced operational energy demand;
- Sustainable urban infill development within a highly accessible location;
- Provision for cycle storage to encourage sustainable transport choices; and
- Opportunities for soft landscaping and biodiversity enhancement within the site.

The modest scale and efficient design of the proposed dwellings ensures that the development represents a proportionate and sustainable form of residential development.

7.0 Conclusion

The proposed development incorporates a range of sustainable design and energy efficiency measures proportionate to the scale of the scheme and consistent with the objectives of Policies CC2 and CC3 of the Reading Borough Local Plan.

The proposal adopts a fabric-first approach supported by integrated solar photovoltaic panels, energy-efficient building systems and enhanced construction standards in order to reduce operational energy demand and carbon emissions.

It is therefore considered that the development demonstrates an appropriate and policy-compliant approach to energy efficiency and sustainable construction for a small-scale residential infill development within the urban area of Reading.