Sustainability Statement

Proposed Replacement Dwelling

11 Old Bath Road, Sonning, Wokingham, RG4 6SZ

Planning Application: _____
262592

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1. Introduction

This Sustainability Statement has been prepared in support of the planning application for the demolition of the existing dwelling and construction of a new detached residential dwelling at 11 Old Bath Road, Sonning.

The proposed development has been designed with sustainability and energy efficiency as key considerations. The replacement dwelling will incorporate measures intended to reduce energy consumption and carbon emissions, utilise renewable and low-carbon technologies, conserve water and provide infrastructure to support more sustainable forms of transport.

The detailed energy performance of the dwelling will be developed and confirmed through the Building Regulations process, including the required SAP calculations.

2. Energy Efficiency and Building Fabric

The proposed dwelling will be constructed to meet the current Building Regulations requirements applicable to new residential development.

The external walls, roof, floors, windows and doors will incorporate appropriate levels of thermal insulation and high-performance construction to minimise heat loss and reduce the overall energy demand of the dwelling.

Air permeability and thermal bridging will also be considered as part of the detailed construction design, with the final specification informed by the SAP assessment.

3. Renewable and Low-Carbon Energy

The development will incorporate an **air source heat pump** as the principal low-carbon heating system for the dwelling, reducing reliance on fossil-fuel-based heating.

Photovoltaic (PV) solar panels are proposed to the flat upper area of the roof. Their location has been incorporated into the architectural design to minimise visual impact whilst providing on-site renewable electricity generation.

The PV installation will be complemented by **two battery storage units**, allowing electricity generated during periods of higher solar production to be stored for use within the property when required. This will help maximise the proportion of renewable energy generated and consumed on site.

The final size and specification of the PV array, battery storage and associated equipment will be determined as part of the detailed technical design.

4. Sustainable Transport

The proposed development will include **two electric vehicle charging points**, providing dedicated charging facilities for electric vehicles within the property.

The provision of EV charging infrastructure will support the transition towards lower-emission private transport and will allow renewable electricity generated by the property's PV installation to contribute towards vehicle charging.

5. Lighting and Electrical Energy

Low-energy **LED lighting will be installed throughout the dwelling**.

Energy-efficient fittings, controls and appliances will be specified wherever practicable to further reduce the property's operational electricity consumption.

6. Solar Gain and Overheating

Consideration has been given to solar gain and internal comfort as part of the design of the dwelling.

Solar reflective glazing is proposed to all south-facing glazing and rooflights to help limit excessive solar heat gain during warmer periods and reduce the potential for overheating.

The glazing strategy will be considered alongside the overall thermal performance and ventilation strategy for the dwelling as part of the detailed Building Regulations design.

7. Water Efficiency and Rainwater Management

Water-efficient sanitary fittings and appliances will be specified where practicable to reduce potable water consumption within the dwelling.

Rainwater harvesting and storage will be provided, with rainwater from suitable roof areas collected via the rainwater goods and directed to water storage butts. The collected rainwater will be available for reuse for external purposes, including garden irrigation, thereby reducing demand for mains water.

The proposed rainwater storage will also assist in managing roof water run-off by temporarily retaining a proportion of rainfall before its reuse.

The detailed water efficiency measures and rainwater drainage arrangements will be developed further as part of the detailed Building Regulations design.

8. Materials and Construction

Where practicable, construction materials will be selected with consideration given to durability, responsible sourcing, longevity and environmental impact.

Construction waste will be managed responsibly, with materials reused or recycled where reasonably practicable and waste to landfill minimised.

9. Conclusion

The proposed replacement dwelling has been designed to provide a high-quality, energy-efficient family home incorporating improved building fabric, renewable energy generation, low-carbon technology, water conservation measures and infrastructure for electric vehicles.

The measures proposed will reduce the operational energy requirements and associated carbon emissions of the dwelling and provide a sustainable, energy-efficient replacement for the existing property.

Key Sustainability Measures

• Air source heat pump

• Roof-mounted photovoltaic (PV) panels

• Two battery storage units

• Two electric vehicle charging points

• High levels of thermal insulation in accordance with current Building Regulations

• Energy performance to be confirmed through SAP calculations

• Low-energy LED lighting throughout

• Solar reflective glazing to south-facing glazing and rooflights

• Water-efficient fixtures and fittings

• Rainwater collection and storage for reuse within the garden

• Consideration of responsibly sourced and durable construction materials

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