

Sustainability & Energy Strategy

Land at Whitlocks, Bishopstone – 9 New Dwellings

Summary Statement

This Sustainability and Energy Strategy has been prepared in support of the proposed development of nine new dwellings at Whitlocks, Bishopstone, as illustrated on the submitted Location, Block and Proposed Site Plans (Drawing Nos. PL01–PL02, Rev B) and described within the Planning Support Document

The proposed development has been designed to respond positively to climate change objectives through a proportionate and flexible sustainability strategy. The layout, building form and fabric standards establish a strong basis for reduced energy demand, with the capacity to incorporate low-carbon and renewable technologies in line with Wiltshire Core Policies SCR6 and SCR5, the National Planning Policy Framework, and current Building Regulations.

The approach is intentionally not over-prescriptive at this stage, allowing detailed specifications to be finalised through the technical design and Building Regulations process, while ensuring the development is capable of achieving policy compliance.

Passive Design

The site layout and arrangement of dwellings have been informed by the site's topography, landscape structure and surrounding context. The development has been planned to make effective use of orientation, spacing and massing to support energy efficiency through passive design measures.

Dwellings are positioned to allow good access to daylight and beneficial solar gain to principal habitable rooms, assisting in reducing space-heating demand during cooler months. Building form, roof profiles and window proportions provide inherent shading, helping to limit solar gain during warmer periods.

Opportunities for natural ventilation have been incorporated through openable windows and internal layouts that allow for air movement, supporting occupant comfort without reliance on mechanical cooling.

Renewable and Low Carbon Energy

The development is capable of accommodating low-carbon heating systems, such as air source heat pumps, serving individual dwellings. These systems would provide space heating and domestic hot water in an energy-efficient manner, subject to detailed design and procurement.

Roof forms and orientations have been designed to allow the future installation of solar photovoltaic panels on suitable roof slopes. The scale and distribution of such installations will be informed by SAP calculations, detailed design development and viability considerations.

This flexible approach ensures the scheme can respond to evolving technology and guidance while remaining policy compliant.

Total Renewable Energy on the Whole Proposal

On-site renewable energy generation is proposed in principle across the development, with capacity to contribute meaningfully to regulated energy demand when assessed on a site-wide basis. Final outputs will be confirmed through SAP assessments undertaken as part of the Building Regulations process.

Energy Efficiency

Energy efficiency is prioritised through a fabric-first strategy. The dwellings are designed to achieve insulation standards that are at least equivalent to those required by Approved Document Part L (2021), reducing heat loss and overall energy demand.

High-performance glazing, careful detailing and good construction practice will further support efficient building performance. Low-energy lighting will be provided throughout.

Heating, Cooling and Hot Water

Space heating and hot water will be provided by efficient systems designed to operate at low flow temperatures. Internal distribution systems and controls will allow occupants to manage energy use effectively and avoid unnecessary consumption.

No active cooling systems are proposed. Thermal comfort will be achieved through passive design measures, ventilation and building fabric performance.

Ventilation and Indoor Air Quality

An appropriate ventilation strategy will be provided to ensure good indoor air quality and occupant comfort. This is anticipated to include mechanical or hybrid ventilation solutions where required to meet regulatory standards, informed by airtightness performance and detailed design.

All ventilation provision will comply with Approved Document Part F.

Thermal Bridging Reduction

Thermal bridging will be limited through continuity of insulation and good detailing at junctions. SAP assessments will reflect appropriate junction performance in line with design development.

Energy Performance Gap

The risk of a performance gap will be mitigated through standard construction quality controls, commissioning of installed systems and provision of clear user information at handover. No ongoing monitoring commitments are proposed beyond normal industry practice.

Smart Infrastructure

The development will incorporate smart metering and electrical infrastructure in accordance with current Building Regulations. Electric vehicle charging provision will be made in line with statutory requirements, with capacity for future adaptation.

Waste

Adequate facilities will be provided for the storage and segregation of household waste and recycling in accordance with local authority requirements.

Water

The development is capable of achieving the optional water efficiency standard of 110 litres per person per day through the selection of efficient fittings.

Rainwater collection for garden use is proposed in principle to reduce potable water demand. Surface water will be managed through permeable surfaces and landscape-led drainage solutions, subject to detailed design.

DMW Architects