



## **Energy and Sustainability Statement**

Site Address: Hillcrest, Black Lane. ST10 4HB

Application Type: Conversion of Existing Agricultural Building to One Three-Bedroom Dwelling

Date: 04/10/2025

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### **1. Introduction**

This Energy and Sustainability Statement has been prepared in support of the proposed conversion of an existing steel-framed agricultural building into a single three-bedroom dwelling. The purpose of this statement is to demonstrate how the proposed development will contribute towards sustainable design and construction principles, energy efficiency, and reduced environmental impact in accordance with the National Planning Policy Framework (NPPF) and relevant Local Plan sustainability policies.

### **2. Sustainable Design Approach**

The proposed conversion represents a sustainable form of development, as it seeks to reuse an existing building rather than construct a new one. This inherently reduces the demand for new materials, energy, and resources, and minimises construction waste.

Key sustainability benefits include:

- Reuse of an existing structure, reducing embodied carbon compared with new build development.

- Retention of the existing building footprint, with no new land take or additional hardstanding required.
- Efficient use of existing access and services, minimising disturbance to the surrounding environment.

### **3. Building Fabric and Energy Efficiency**

The design aims to achieve a high level of thermal performance and energy efficiency. Measures will include:

- High-performance insulation to walls, roof, and floor to meet or exceed current Building Regulations Part L standards.
- High-efficiency double or triple glazed windows and doors, ensuring low U-values and good airtightness.
- Air-tight construction with appropriate ventilation to balance energy conservation with healthy indoor air quality.
- Use of thermally efficient materials, reducing heat loss and improving long-term energy performance.

### **4. Heating, Hot Water and Renewable Energy**

The dwelling will incorporate low-carbon heating and energy-efficient systems. Proposed features include:

- Air Source Heat Pump (ASHP) or high-efficiency electric heating system to provide low-carbon space and water heating.
- Mechanical Ventilation with Heat Recovery (MVHR) (where appropriate) to recover heat from extracted air and reduce energy demand.
- Low-energy lighting and appliances to minimise operational energy consumption.

### **5. Water Efficiency**

The scheme will incorporate measures to reduce water consumption, including:

- Dual-flush WCs and aerated taps.
- Water-efficient showers and appliances.
- Provision for rainwater harvesting or water butt systems for garden irrigation where feasible.
- Compliance with Building Regulations Part G, ensuring total water usage does not exceed recommended limits.

### **6. Waste and Materials Management**

The conversion will reuse existing structural materials wherever possible, significantly reducing waste.

- Construction waste will be segregated and recycled on-site or through approved waste management facilities.
- Preference will be given to locally sourced and sustainable building materials, reducing

transportation emissions.

- Timber products will be FSC or PEFC certified to ensure responsible sourcing.

## **7. Sustainable Transport and Location**

The site benefits from existing road access and is located within reasonable distance of nearby villages and services. The proposal will include:

- Provision for electric vehicle (EV) charging point(s) within the curtilage of the dwelling.
- Secure cycle storage to encourage sustainable modes of transport.
- Retention of existing access tracks and infrastructure, avoiding unnecessary ground disturbance.

## **8. Biodiversity and Landscape Integration**

Although a separate Biodiversity Survey confirms negligible ecological impact, the scheme will enhance local biodiversity by:

- Incorporating native planting within any landscaping scheme.
- Installing bat and bird boxes on nearby trees or suitable structures.
- Minimising external lighting to reduce impact on nocturnal wildlife.

## **9. Conclusion**

The proposed conversion represents a sustainable reuse of an existing building, minimising embodied carbon, supporting energy efficiency, and promoting long-term environmental responsibility.

Through a combination of fabric-first energy efficiency, low-carbon technologies, and sustainable material choices, the dwelling will deliver a comfortable, efficient, and environmentally responsible home that aligns with both national and local sustainability objectives.