

SUSTAINABILITY STATEMENT

Site: Summer Lodge, Copyhold Lane, Cuckfield, Haywards Heath, RH17 5EB

Proposal: Erection of a self-build replacement, detached dwelling following demolition of the existing dwelling

1. Introduction

This Sustainability Statement supports the planning application for a self-build, high-performance family home on a 0.36-hectare site at Summer Lodge, Copyhold Lane. The proposal is designed to achieve operational **net-zero carbon**, align with **Mid Sussex District Council's Local Plan and Climate Emergency declaration**, and exceed the latest **2021 Building Regulations** and guidance within the **2024 National Planning Policy Framework (NPPF)**.

2. Climate Change and Sustainability

The proposed replacement dwelling has been meticulously designed with **sustainability, carbon neutrality**, and **environmental stewardship** at its core. It aligns with key planning policies:

- **Mid Sussex District Plan (2014–2031):** Policies **DP26 (Character & Design)**, **DP39 (Renewable Energy)**, **DP42 (Water Infrastructure and Water Environment)**
- **National Planning Policy Framework (2024):** Chapters 2 (Achieving Sustainable Development), 14 (Climate Change), and 15 (Natural Environment)

This development aspires not only to meet, but to significantly **exceed statutory and policy requirements** relating to energy performance, climate resilience, and ecological impact.

3. Policy Context and Objectives

The development delivers against MSDC's District Plan sustainability goals by:

- Minimising energy use through layout, orientation, and passive design
- Integrating **renewable technologies** and **low-carbon systems**
- Reducing potable water consumption through efficient fittings and rainwater harvesting
- Demonstrating **future-proofing and adaptability** to climate change
- Promoting sustainable materials, construction methods, and minimal waste

Aligned with the **NPPF's presumption in favour of sustainable development**, the proposal contributes positively across **environmental, social**, and **economic** dimensions, and supports the UK's transition to **net-zero carbon homes**.

4. Sustainable Design and Fabric Efficiency

The proposed dwelling is to be delivered using **HUF Haus** construction — a highly engineered, prefabricated system with outstanding thermal performance:

- **Airtight wall and roof construction**, eliminating drafts and heat loss
- High-performance insulation, significantly exceeding **Part L** requirements
- **Triple-glazed low-E windows** with integrated shading
- **Draught-free, thermal bridge-minimised environment**, enhancing comfort

These fabric-first principles reduce heating demand and enable the home to **surpass the 30% TER uplift** mandated in the 2021 Building Regulations by a wide margin.

5. Operational Net-Zero Carbon Performance

The house has been designed in order to be **verified as an operational net-zero carbon development** using SAP and GLA-compliant metrics:

- The house design will be capable of achieving **in excess of a 100% improvement over the Target Emission Rate (TER)**
 - The house design, with the array of roof-mounted photovoltaic panels, will be capable of its **EPC being rated at 100 (A)** – the maximum score achievable
 - The house design will also be capable of providing **in excess of a 100% reduction in CO₂ emissions** compared to 2021 standards
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6. Energy Generation and Systems Integration

The following technologies will ensure that the dwelling's **entire operational energy demand is met on-site**:

- A **photovoltaic (PV) array in excess of 22 kWp** will be mounted discreetly on both side roof slopes
 - **Air Source Heat Pump (ASHP)** for space and water heating
 - **Mechanical Ventilation with Heat Recovery (MVHR)**
 - **100% LED lighting** and energy-efficient controls
 - Smart energy management systems
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7. Water Efficiency and Climate Adaptation

The proposal targets **<110 litres per person per day** in water use, achieved via:

- **Aerated taps**, low-flow showers, and dual-flush toilets
- **Dual-flush WC systems**
- **Rainwater harvesting system** for garden irrigation and non-potable uses

Deep overhanging eaves to prevent overheating in summer months, while southeast-facing glazing maximises solar gain in winter, providing passive heating

These strategies promote thermal comfort, lower utility demand, and reduce climate vulnerability.

8. Biodiversity and Environmental Enhancement

The proposal responds to **District Plan Policy DP37 (Biodiversity)** and the **NPPF (2024) Chapter 15** by delivering measurable habitat improvements:

Measure	Detail	Benefit
Compensatory tree planting	Replacement trees in a 2 : 1 ratio using local provenance species	Increases canopy cover, improves carbon sequestration
Native, wildlife-friendly landscaping	Mixed hedgerows (hawthorn, field maple, hazel) and flowering understory (landscaping scheme to be controlled by way of planning condition)	Supports pollinators and provides year-round foraging
Integrated bird & bat boxes	Freestanding bat roosts in quiet dark corners of the site and swift towers/poles installed in open areas	Enhances nesting/roosting opportunities on site
Low-spill external lighting	Warm-white LED fittings < 2,700 K, downward facing task lighting, set on timers and PIR sensors (lighting scheme to be controlled by way of planning condition)	Maintains dark corridors for nocturnal species

Together these measures ensure a **net gain in biodiversity** and long-term ecological resilience.

9. Construction Sustainability and Lifecycle Impact

The proposed HUF Haus system offers significant sustainability and lifecycle benefits:

- **Offsite prefabrication**, reducing waste, emissions, and site disturbance
- A **short build time (~16 weeks)**
- Use of **sustainably sourced materials** with low embodied carbon
- Managed demolition of the existing building to maximise **recycling and material recovery**

10. Commitment to Long-Term Carbon Reduction

To guarantee benefits beyond construction, the applicant will, if required by the Local Planning Authority, enter into a Unilateral Undertaking securing:

1. **Carbon-offset contributions** for any residual regulated emissions
2. A **Low-Carbon Lifestyle Plan**, including:

- Ongoing monitoring of energy generation and use
- Maintenance of all renewable systems
- Support for sustainable transport such as EV charging and secure cycle storage

This commitment locks in the project's **net-zero trajectory** and aligns with MSDC's 2030 climate objectives.

11. Mid Sussex Policy Alignment

This development contributes to the ambitions of the **Mid Sussex Sustainability Strategy (2023–2030)** and the District Council's **Climate Emergency commitment** by:

- Promoting net-zero carbon living
 - Using on-site renewable generation
 - Incorporating water and flood management strategies
 - Minimising transport emissions through efficient construction
 - Enhances local biodiversity through native planting, habitat boxes and dark-sky compliant lighting.
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12. Conclusion

This application proposes an **exemplary model of self-build, climate-positive development** in Mid Sussex. With a projected **EPC A rating, net-zero operational carbon, over 100% reduction in regulated emissions**, and best-in-class sustainable design, the project not only complies with but significantly **exceeds aspirations and MSDC's sustainability policies**. The integrated biodiversity net-gain measures and legally secured long-term carbon commitments further reinforce the scheme's position as an exemplar **low-carbon, nature-positive** home for Mid Sussex.
