

SUSTAINABILITY & ENERGY REPORT

Land Adjacent to Dawes Cottage

1. Introduction

This Sustainability and Energy Report accompanies the planning application for a replacement dwelling at land adjacent to Dawes Cottage.

The report outlines the environmental performance measures integrated into the design and demonstrates alignment with:

- NPPF Section 14 – Climate Change and Low Carbon Development;
 - Gravesham Core Strategy Policy CS02 (Greener Borough);
 - Policy CS12 (Environmental Enhancement).
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2. Energy Strategy – Fabric First

The dwelling adopts a fabric-first strategy to reduce energy demand before renewable technologies are applied.

Measures include:

- Enhanced insulation performance exceeding minimum Building Regulations standards;
- Robust airtightness detailing;
- High-performance glazing;
- Careful construction detailing to reduce thermal bridging.

This approach minimises baseline operational energy demand.

3. Low-Carbon Heating

An air source heat pump (ASHP) will provide space heating and hot water.

This system:

- Eliminates reliance on fossil fuel heating;
- Significantly reduces operational carbon emissions;
- Supports the transition toward low-carbon domestic heating.

4. On-Site Renewable Energy

Solar photovoltaic panels will be installed on suitable roof slopes.

Panels will be:

- Positioned discreetly to preserve agricultural character;
- Integrated within the overall roof form;
- Designed to generate renewable electricity on-site.

This reduces grid reliance and operational emissions.

5. Water Efficiency & Resource Use

The dwelling incorporates:

- Rainwater harvesting;
- Grey water recycling;
- Water-efficient fixtures and appliances.

These measures reduce potable demand and support sustainable water management.

6. Embodied & Social Sustainability

The proposal:

- Replaces an existing structure within a developed parcel;
- Utilises durable materials;
- Supports long-term family-based care;
- Reduces reliance on institutional accommodation.

The development delivers both environmental and social sustainability benefits.

7. Conclusion

Through fabric-first design, renewable integration, low-carbon heating, water efficiency and biodiversity enhancement, the proposal represents a sustainable and responsible form of development consistent with national and local policy objectives.
