

Energy and Sustainability Statement.

Proposed Replacement Dwelling @ 11 Kingswood Avenue, Hitchin, SG4 0PA
January 2026

Introduction

This Energy and Sustainability Statement accompanies a Full Planning Application for the erection of one self-build detached dwelling, following demolition of the existing semi-detached dwelling at 11 Kingswood Avenue, Hitchin.

The proposal responds directly to pre-application advice issued by North Hertfordshire District Council and demonstrates how the development will achieve a high standard of energy efficiency, reduced carbon emissions and sustainable design in accordance with national and local planning policy.

Existing Situation

The existing dwelling is of non-standard construction and performs poorly in terms of energy efficiency. As a result:

- The property is difficult to mortgage
- Thermal performance is significantly below modern standards
- The building fabric limits opportunities for meaningful retrofit

The proposed replacement dwelling provides an opportunity to deliver a substantial improvement in energy performance, comfort and long-term sustainability.

Policy Context

The proposal has been designed with regard to the following:

- National Planning Policy Framework (NPPF) – promoting sustainable development and climate change mitigation
- Building Regulations Part L (2021) – conservation of fuel and power
- Building Regulations Part G – water efficiency
- North Hertfordshire Local Plan policies relating to climate change, sustainable construction and energy efficiency
- Self-Build and Custom Housebuilding Act 2015

Energy Efficiency – Fabric First Approach

The dwelling adopts a fabric-first strategy, prioritising improvements to the building envelope to reduce energy demand before reliance on renewable technologies.

Building Fabric

The proposed dwelling will incorporate:

- Highly insulated external walls, roof and ground floor
- Improved airtightness detailing
- High-performance double or triple glazed windows and doors

- Reduced thermal bridging through careful detailing

This approach significantly lowers space-heating demand and improves year-round comfort.

Low Carbon Heating and Energy Systems

Heating

The dwelling is designed to accommodate a low-carbon heating system, such as:

- An air source heat pump (ASHP)

This provides efficient space heating and hot water with reduced carbon emissions when compared to traditional gas boilers.

Renewable Energy

Provision will be made for roof-mounted photovoltaic (PV) panels, subject to final detailed design and orientation, to:

- Generate on-site renewable electricity
- Reduce reliance on grid energy
- Lower operational carbon emissions

Electric Vehicle Charging

In accordance with pre-application advice and emerging standards:

- An electric vehicle charging point will be installed within the curtilage of the dwelling
- This supports the transition to low-emission transport and future-proofs the development

Water Efficiency and Drainage

Water Efficiency

The dwelling will be designed to meet Building Regulations Part G, with water consumption limited to no more than 125 litres per person per day, through:

- Water-efficient sanitaryware
- Low-flow taps and showers

Sustainable Drainage

Surface water will be managed using sustainable drainage principles, including:

- On-site soakaway provision (location indicative and to be confirmed on site following ground conditions)
- Reduction of surface water runoff to the public sewer network

Materials and Construction

Where practicable, the development will utilise:

- Durable, long-life materials
- Responsibly sourced construction products
- Efficient construction techniques to reduce waste

Construction waste will be managed in accordance with best practice, and opportunities for recycling will be maximised.

Biodiversity and Landscaping

Although the proposal is exempt from mandatory Biodiversity Net Gain due to its self-build status, the scheme includes:

- Retention and enhancement of garden space
- New planting and soft landscaping
- Opportunities for biodiversity improvement through planting and habitat creation

Summary and Conclusion

The proposed development represents a significant improvement over the existing dwelling in terms of:

- Energy efficiency
- Carbon reduction
- Thermal comfort
- Long-term sustainability

By adopting a fabric-first approach, low-carbon heating, renewable energy generation, sustainable drainage, and EV charging provision, the scheme fully accords with national and local planning objectives and responds positively to pre-application advice.

The proposal therefore delivers a high-quality, sustainable self-build home suitable for long-term occupation.