

26/00741/FP

Sustainability and Energy Statement

Proposed New Build Dwelling

Prepared for: North Herts Council

Date: 1 APR 2026

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09 APR 2026

NORTHGATE

1. Introduction

This Sustainability and Energy Statement has been prepared in support of the proposed new build dwelling document is to demonstrate how the proposed development incorporates sustainable design principles and complies with relevant national and local planning policies relating to energy efficiency, carbon reduction, sustainable transport, and biodiversity enhancement.

The development has been designed in accordance with the **Building Regulations Part L (2021)** energy efficiency standards and has been assessed using the **Standard Assessment Procedure (SAP)**. The results demonstrate compliance with the required carbon emission and primary energy targets.

The design adopts a **fabric-first approach**, supported by low-carbon heating technology and sustainable site measures.

2. Energy Strategy

The proposed development follows a hierarchical energy strategy consistent with UK planning policy:

1. Reduce Energy Demand

High performance building fabric and efficient design reduce heating demand.

2. Use Efficient Building Services

Efficient heating and hot water systems minimise operational energy consumption.

3. Use Low Carbon Technologies

An air source heat pump is proposed to significantly reduce carbon emissions.

3. Fabric First Approach

The dwelling has been designed to minimise heat loss through the building envelope by incorporating high levels of insulation and efficient glazing.

Measures include:

- Installation of **high-performance rigid insulation** within the walls, floors and roof structure.
- Energy efficient **double glazed windows and doors**.
- Improved **airtightness detailing** to minimise uncontrolled air leakage.

- Careful construction detailing to **reduce thermal bridging**.

Indicative U-values include:

Building Element Indicative U-Value

External Walls ~0.18 W/m²K or better

Roof ~0.13 W/m²K or better

Ground Floor ~0.13–0.15 W/m²K

Windows/Doors ~1.20 W/m²K

These values meet or exceed the requirements set out in **Approved Document Part L**.

4. Heating and Hot Water

The dwelling will utilise an **Air Source Heat Pump (ASHP)** to provide space heating and domestic hot water.

Air source heat pumps extract renewable heat from the outside air and operate at significantly higher efficiencies than traditional fossil fuel systems.

Key benefits include:

- Reduced carbon emissions compared to gas boilers
- High efficiency performance
- Compatibility with our new low-temperature underfloor heating system
- Contribution toward national net-zero carbon objectives

This low-carbon heating solution significantly reduces the operational carbon footprint of the dwelling.

5. SAP Assessment

A SAP assessment has been undertaken for the proposed dwelling.

The results confirm that:

- The **Dwelling Emission Rate (DER)** is lower than the **Target Emission Rate (TER)**.
- The **Dwelling Primary Energy Rate** meets regulatory requirements.
- Fabric energy efficiency standards have been achieved.

The development therefore complies with the energy performance requirements of **Building Regulations Part L (2021)**.

A copy of the SAP summary will be submitted at the bottom of this statement.

6. Electric Vehicle Charging

In support of sustainable transport and the transition to low-emission vehicles, the development will incorporate **electric vehicle (EV) charging infrastructure**.

The proposal includes:

- Installation of **dedicated EV charging point(s)** for our residential use.
- Infrastructure designed in accordance with **Building Regulations Part S** requirements.

Providing EV charging facilities supports the adoption of low-carbon transport and reduces transport-related emissions associated with the dwelling.

7. Biodiversity Enhancement

Although the proposal relates to a single residential dwelling, opportunities have been taken to provide biodiversity improvements within the site.

Proposed measures include:

- Provision of **new planting within the garden areas** to enhance habitat diversity.
- Installation of **native or pollinator-friendly planting species**.
- Installation of **bird boxes** integrated within the building or landscaping.
- Retention or enhancement of existing vegetation where feasible.

These measures contribute positively to local biodiversity and align with the objectives of the **Environment Act 2021** and national planning policy encouraging ecological enhancement within development sites.

8. Sustainable Construction Measures

The development incorporates additional sustainability considerations including:

- Energy efficient lighting and appliances throughout the dwelling.
- Water efficient fixtures and fittings to reduce water consumption.
- High quality building materials designed to improve long-term durability and performance.

These measures contribute to a dwelling that is both environmentally responsible and energy efficient.

9. Conclusion

The proposed development demonstrates a clear commitment to sustainable design and energy efficiency through the following key measures:

- Fabric-first construction approach with high levels of insulation

- Compliance with **SAP and Building Regulations Part L (2021)**
- Installation of an **air source heat pump** providing low-carbon heating
- Provision of **electric vehicle charging infrastructure**
- Inclusion of **biodiversity enhancement measures**
- Energy efficient building services and lighting

Collectively, these measures ensure that the proposed dwelling delivers a sustainable, energy efficient development consistent with national planning policy and local authority sustainability objectives.

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