

Energy and Sustainability Statement

Project Address: Rear of 159 Park Lane, London N17 0HN

Applicant: Sebastian Hicks

Date: 21.01.26

1. Executive Summary

This statement accompanies the planning application for the conversion of a former stable/garage into a residential dwelling at the above address. The energy strategy for the development adopts a **"Fabric First"** approach, prioritizing the reduction of energy demand through high levels of thermal insulation and air tightness.

A critical component of this proposal is the decision to **retain, retrofit, and repurpose** the existing building fabric. By preserving the existing structure, the project significantly mitigates the high embodied carbon emissions typically associated with demolition and new construction.

2. Planning Policy Context

This proposal has been designed with regard to the Haringey Local Plan and the London Plan's energy policies. While the scale of the development (a minor conversion) precludes the viable integration of complex on-site generation technologies, the proposal meets the intent of sustainable development by:

- Minimizing energy demand (Be Lean).
- Eliminating on-site fossil fuel combustion (Be Clean).
- Prioritizing the retention of embodied energy (Circular Economy).
- Ensuring efficient water usage.

3. The Energy Hierarchy

Step 1: Be Lean (Use Less Energy)

The primary strategy for this conversion is to reduce the demand for energy at the source. This is achieved through a robust "Fabric First" methodology and passive design principles:

- **Multi-Aspect Design & Natural Light:** The project benefits from a multi-aspect layout, ensuring natural light reaches all primary active spaces throughout the day. This significantly reduces the reliance on artificial lighting during daylight hours.
- **Cross Ventilation:** The multi-aspect nature of the conversion allows for effective cross ventilation. This passive cooling strategy helps regulate internal temperatures during warmer months without the need for energy-intensive mechanical cooling or air conditioning, mitigating the risk of overheating.

- **High-Performance Insulation:** The existing solid walls, floors, and roof will be retrofitted with high-grade insulation to meet or exceed current Part L Building Regulation standards (U-values).
- **Glazing:** High-performance glazing will be utilized to maximize solar gain in winter while minimizing heat loss.
- **Lighting:** 100% energy-efficient LED lighting will be installed throughout the dwelling.

Step 2: Be Clean (Supply Energy Efficiently)

The development will be **fossil-fuel free**.

- There will be no gas connection to the property.
- Heating and hot water will be provided via a direct electric system.
- By removing gas from the site, the development contributes to the improvement of local air quality in Haringey (reducing NOx emissions).

Step 3: Be Green (Renewable Energy Source)

Due to the constraints of the existing building envelope and the modest scale of the conversion, on-site active renewable technologies (such as PV arrays or Air Source Heat Pumps) were deemed technically or aesthetically unsuitable for this specific heritage/retrofit context.

However, the operational energy strategy is **100% renewable**:

- The applicant is committed to procuring electricity solely from a **100% renewable energy provider**.
- As the UK National Grid continues to decarbonize, the carbon footprint of this all-electric dwelling will naturally decrease over time, unlike a gas-heated home.

4. Water Efficiency

In accordance with Haringey Council and London Plan requirements, the dwelling is designed to achieve a water consumption target of no more than **105 litres per person per day** (plus 5 litres for external water use). This will be achieved through the specification of water-efficient fixtures and fittings, including flow restrictors, dual-flush toilets, and low-flow taps and showers.

5. Embodied Carbon and Retrofit Strategy

Perhaps the most significant contribution to sustainability in this project is the preservation of the existing building.

- **Retention vs. Demolition:** Demolition and new construction are carbon-intensive processes. By retaining the stable/garage walls and structure, we are preserving the **embodied carbon** already locked into the building materials.

- **Life Cycle Assessment:** This retrofit extends the useful life of an existing building, preventing the waste generation and material manufacturing emissions associated with a new build.
- **Sustainable Materials:** The use of natural materials further lowers the embodied carbon of the fit-out compared to synthetic, high-carbon alternatives.

6. Conclusion

The proposed conversion at Rear of 159 Park Lane, London N17 OHN represents a sustainable approach to housing delivery in Haringey. By prioritizing the retention of the existing building fabric, utilizing natural materials, and implementing a high standard of insulation and water efficiency, the project minimizes both embodied and operational carbon.

The move to a fully electric heating system ensures the dwelling is "zero-carbon ready" and contributes to local air quality improvements, aligning with the council's broader environmental goals.

A handwritten signature in black ink, appearing to read 'Hicks'.

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