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Energy Statement

171 Tudor Road, Hayes, UB3 2QG

Proposed two-Storey side extension to facilitate the creation of a new three-bedroom dwelling, following the demolition of the existing single-Storey side extension



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1. Introduction

This Energy Statement supports a planning application for the erection of a two-storey side extension to create a new three-bedroom dwelling, following demolition of the existing single-storey side extension.

The statement demonstrates compliance with:

London Plan SI2 – Minimising Greenhouse Gas Emissions

London Plan SI3 – Energy Infrastructure

Hillingdon Local Plan Part 2 Policy DMEI 2 – Reducing Carbon Emissions & Energy Efficiency

Hillingdon Local Plan Part 2 Policy DMEI 10 – Water Management & Sustainable Drainage Building Regulations Part L (2021)

The development follows the London Energy Hierarchy:

Be Lean – reduce energy demand

Be Clean – supply energy efficiently

Be Green – use renewable energy

2. Existing Building

The existing property is a two-storey semi-detached dwelling in residential use. The proposal introduces a new self-contained three-bedroom dwelling through a two-storey side extension.

3. Energy Strategy

The energy strategy adopts a fabric-first approach, supported by efficient heating systems and renewable energy technology.

4. Be Lean – Energy Demand Reduction

The building fabric has been designed to exceed Part L 2021 minimum standards.

Proposed U-Values

Element	U-Value (W/m ² K)
External Walls	0.18
Roof	0.13
Ground Floor	0.15
Windows/Doors	1.2

Energy Efficiency Measures

High-performance double-glazed windows

Enhanced airtightness detailing

Low-energy LED lighting throughout

Thermostatic and zoned heating controls

Low-flow taps, showers and dual-flush WCs

These measures significantly reduce regulated energy demand and support compliance with Hillingdon Policy DMEI 2, which requires developments to minimise carbon emissions through energy-efficient design.

5. Be Clean – Efficient Energy Supply

Due to the scale of development, connection to a district heating network is not feasible, consistent with London Plan SI3.

Heating & Hot Water Strategy

Air Source Heat Pump (ASHP) – full specification in Appendix
High-efficiency hot water cylinder
Time and temperature zone controls
Programmable room thermostats

The ASHP provides a low-carbon alternative to gas boilers, reducing operational emissions and supporting compliance with Part L 2021 uplift requirements.

6. Be Green – Renewable Energy

Air Source Heat Pump (ASHP)

The ASHP provides:
Low-carbon space heating
Low-carbon hot water
Reduced operational carbon emissions

Compliance with London Plan SI2 carbon reduction targets

This is the most appropriate renewable technology for a single dwelling of this scale.

7. Overheating & Ventilation

The development incorporates overheating mitigation measures consistent with Approved Document O (2021) and London Plan SI4.

Overheating Mitigation

Opening windows for purge ventilation
High-performance glazing
Cross-ventilation through dual-aspect layout
Insulated building envelope to reduce heat gain

Ventilation Strategy (Part F 2021)

Background ventilation in accordance with Approved Document F
Mechanical extract ventilation (MEV) to kitchens and wet rooms
Natural cross-ventilation through window placement

8. Water Efficiency & Sustainable Drainage (Hillingdon DMEI 10)

Although primarily an energy statement, water efficiency is required under Hillingdon Policy DMEI 10 and London Plan SI5.

Water Efficiency Measures

Low-flow taps and showers
Dual-flush WC systems
Water-efficient appliances
Sustainable Drainage (SuDS)
Permeable paving
Retention of soft landscaping
Reduced impermeable area

These measures reduce water consumption and surface water runoff.

9. Compliance with Hillingdon Energy-Related Policies

DMEI 2 – Reducing Carbon Emissions & Energy Efficiency

The proposal exceeds Part L requirements, uses an ASHP, and adopts a fabric-first approach.

DMEI 10 – Water Management & Sustainable Drainage

Low-flow fittings and permeable paving ensure compliance.

DMHB 11 – Design of New Development (Sustainability Component)

Energy-efficient design contributes to high-quality, sustainable development.

DMHB 12 – Streets & Public Realm (Environmental Performance)

Supports sustainable, well-designed buildings.

10. Conclusion

The proposed development at 171 Tudor Road delivers a low-carbon, energy-efficient new dwelling that:

- Minimises energy demand through a fabric-first approach
- Utilises low-carbon heating via an ASHP
- Incorporates renewable energy
- Reduces water consumption
- Improves drainage and reduces runoff

Meets or exceeds all relevant London Plan and Hillingdon Local Plan energy-related policies
Fully complies with Building Regulations Part L, F and O (2021)