

## Planning-Level Energy Statement

**Site Address:** Land at Site of Former N and P Windows, Bury Mead Road, Hitchin, Hertfordshire

**Proposed Development:** Change of use to a mixed-use car sales premises (Sui Generis) with open air vehicle storage, erection of ancillary office/workshop building.

**Floor Area:** Approximately 136 m<sup>2</sup> (internal)

---

### 1. Policy Context

The development has been assessed against the relevant sustainability and energy policies within:

- The North Hertfordshire Local Plan
- The National Planning Policy Framework (NPPF)
- Building Regulations Part L (2021 edition assumed)

These policies encourage energy efficiency, a reduction in carbon emissions, and the incorporation of low or zero carbon (LZC) technologies into new developments.

---

### 2. Building Fabric and Design

The proposed construction materials and fabric are designed to achieve high levels of thermal efficiency:

- **External Walls:** 80mm composite insulated box profile wall cladding (plastisol-coated steel), estimated U-value ~0.26 W/m<sup>2</sup>K
- **Roof:** 100mm composite insulated box profile roof cladding, estimated U-value ~0.18 W/m<sup>2</sup>K
- **Windows and Doors:** Grey UPVC or Aluminium with low-emissivity glazing, estimated U-value ~1.6 W/m<sup>2</sup>K
- **Air Permeability:** Design air permeability target of 5 m<sup>3</sup>/hr/m<sup>2</sup> at 50 Pa

These values are in line with, or exceed, the minimum requirements of Approved Document Part L (2021).

---

### 3. Energy Efficiency Measures

The following passive and active measures will be implemented to reduce energy demand:

- Compact building form to reduce surface area heat loss
- High-efficiency LED lighting throughout
- Motion/occupancy detection lighting controls in WCs and workshop
- Time and zone controls for heating

---

#### **4. Building Services Strategy**

##### **Heating and Cooling:**

- Office and reception areas to be heated/cooled via air source heat pump (ASHP) providing efficient, electrically-driven climate control
- Workshop to be heated via electric radiant panels or similar low-maintenance system

##### **Hot Water:**

- Small-scale electric point-of-use water heaters for WC facilities

##### **Ventilation:**

- Natural ventilation with trickle vents and extract fans in toilets
- 

#### **5. Renewable and Low/Zero Carbon (LZC) Technologies**

The feasibility of on-site renewable energy has been considered. A roof-mounted photovoltaic (PV) system is considered appropriate and feasible.

##### **Indicative Proposal:**

- A small-scale solar PV array (~3 kWp) located on the south-facing roof slope
- Estimated to offset approximately 2,400 kWh/year of electrical demand, reducing operational CO2 emissions by approx. 0.5 tonnes/year

Alternative LZC measures (e.g. solar thermal) were considered less appropriate due to minimal domestic hot water demand.

---

#### **6. Carbon Emissions and Part L Compliance**

A full compliance check will be undertaken at Building Regulations stage using SBEM calculations. However, based on the proposed specification:

- The building is expected to comply with, or exceed, current Part L (2021) requirements
  - Proposed renewables will further reduce the residual emissions
- 

#### **7. Summary and Conclusions**

The proposed development demonstrates a clear commitment to sustainable design and energy efficiency, through:

- A well-insulated and airtight building envelope
- Use of low-energy lighting and controls
- Inclusion of an efficient heating system with renewable energy generation (PV)

The development is expected to meet relevant energy performance requirements and local planning policy. It is therefore considered acceptable from an energy and sustainability perspective.

---

**Prepared By:** Harry Dibden

Date: 21/05/2025