

Energy Statement

Proposed Residential Development of 21no. 1, 2, 3 and 4 Bedroom Dwellings (Houses, Flats and Bungalows) — Land South of Athelstan Way, Horsham

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1 · Executive Summary

This Energy Statement has been prepared in support of a planning application for the erection of 21no. dwellings comprising 1 and 2 bedroom flats, 2 bedroom houses and bungalows, and 3 and 4 bedroom houses. It demonstrates how the proposed development responds to the Energy Hierarchy set out in Policy 36 (Appropriate Energy Use) and Policy 37 (Sustainable Design and Construction) of the Horsham District Planning Framework.

Through a combination of fabric-first energy efficiency measures, low and zero-carbon heating, and on-site renewable electricity generation, the development is designed to achieve a **reduction in regulated CO2 emissions of approximately 32.5%** against the Part L 2013 baseline — comfortably exceeding the minimum **31% improvement** required by the 2021 uplift to Part L of the Building Regulations and moving the scheme substantially towards the net zero carbon ambitions of the Local Plan.

The figures presented in this statement are based on the dwelling mix shown in the below table and typical/benchmark performance assumptions appropriate to this stage of design. They establish the energy strategy and the level of performance the scheme is committed to achieving; they will be superseded by dwelling-specific SAP calculations prepared by an accredited Energy Assessor once detailed design is finalised, as set out in Section 10.

2 • Introduction

This statement has been prepared to accompany a planning application to Horsham District Council and should be read alongside the submitted drawings, Design and Access Statement, and other supporting documents. Its purpose is to:

- Set out the energy and carbon policy framework applicable to the site;
- Explain the energy strategy adopted for the development, following the Be Lean / Be Clean / Be Green / Be Seen hierarchy;
- Quantify the anticipated reduction in regulated carbon emissions at each stage of the hierarchy; and
- Demonstrate compliance with Policy 36 and Policy 37 of the Horsham District Planning Framework.

3 • The Proposed Development

The application proposes 21no. new dwellings. The following unit mix have been used and are subject to change during the planning application process:

Unit Type	No. of Units	Indicative PV Provision (kWp/unit)
1-bedroom flat	4	0.9
2-bedroom flat	4	1.1
2-bedroom house	3	1.6
2-bedroom bungalow	2	1.9
3-bedroom house	7	2.0
4-bedroom house	1	2.6

Total: 21 dwellings

The development has a total internal floor area of approximately **1,588 m²**, against which the energy and carbon performance of the scheme is benchmarked below.

4 • Policy and Legislative Context

4.1 National Context

The National Planning Policy Framework requires the planning system to support the transition to a low carbon future and to take full account of climate change mitigation. The Planning and Energy Act 2008 empowers local planning authorities to set requirements, over and above Building Regulations, for the proportion of energy used in new development to come from renewable and low-carbon sources and for enhanced energy efficiency standards. Building Regulations Approved Document Part L (2021 edition) currently requires a minimum 31% reduction in regulated CO₂ emissions for new dwellings compared with the 2013 standard; this is intended as an interim step towards the Future Homes and Buildings Standards, published in March 2026 and coming into force from 2027 (subject to transitional arrangements), which will remove fossil-fuel heating from new homes and require further uplifts in fabric and heating efficiency.

4.2 Policy 36 – Appropriate Energy Use

Policy 36 requires development to contribute to clean, efficient energy use based on an Energy Hierarchy cascade: Be Lean (minimise energy demand through energy efficiency and passive design), Be Clean (supply energy efficiently and exploit local low-carbon resources), Be Green (maximise renewable energy generation), and Be Seen (monitor, verify and report on energy performance). The policy sets out a hierarchy for zero and low-carbon heating — requiring evidence that opportunities to connect to an existing or planned heat network have been exhausted before other heat sources are considered — and requires residential development to be supported by an Energy Statement demonstrating compliance.

4.3 Policy 37 – Sustainable Design and Construction

Policy 37 requires new-build homes to deliver, as a minimum, the carbon emissions reduction set out in the prevailing edition of Part L of the Building Regulations, exceeded where practicable, and to be delivered through a combination of energy efficiency measures and on-site renewable energy generation. The policy also expects a Fabric First approach — maximising the performance of the building fabric before reliance on mechanical or electrical building services — together with appropriate measures to manage overheating (Part O), provision for electric vehicle charging (Part S), and sustainable use of materials and resources.

5 • Energy Strategy Methodology

The energy strategy for the development has been developed by working through each stage of the Energy Hierarchy in turn, so that demand is minimised before supply is decarbonised and only the residual demand is met from renewable generation. Each stage is quantified in Sections 6–9 below, with a cumulative compliance summary in Section 9.

6 • Be Lean — Energy Efficiency and Passive Design

Energy demand is minimised through a Fabric First approach, with building fabric specified to exceed the notional dwelling standards of Part L 2013 across all key elements. Indicative target specifications are set out below and will be confirmed by SAP calculations at detailed design stage:

Element	Part L 2013 Notional Baseline	Proposed Target
External walls (U-value)	0.18 W/m ² K	0.15 W/m ² K or better
Ground floor (U-value)	0.13 W/m ² K	0.11 W/m ² K or better
Roof (U-value)	0.13 W/m ² K	0.11 W/m ² K or better
Windows and doors (U-value)	1.4 W/m ² K	1.2 W/m ² K or better
Air permeability	5 m ³ /(h·m ²) @ 50Pa	≤4 m ³ /(h·m ²) @ 50Pa
Thermal bridging	Default Psi values	Accredited details / enhanced Psi values

These measures are complemented by passive design: dwelling orientation and layout to maximise beneficial solar gain in winter while limiting overheating risk, dual-aspect layouts and openable windows to support natural ventilation and night purge cooling, and mechanical ventilation with heat recovery (MVHR) or continuous mechanical extract ventilation (MEV) specified in line with airtightness levels achieved. Based on the above, fabric efficiency measures alone are estimated to reduce regulated emissions by approximately **10.0%** against the Part L 2013 baseline, before any low-carbon heat or renewable generation is applied.

7 • Be Clean — Efficient and Low-Carbon Supply

In accordance with Policy 36, the availability of an existing or planned heat network has been considered as the first step in the zero and low-carbon heating hierarchy. There is no existing or planned heat network within a viable connection distance of the site [to be confirmed against Horsham District Council's heat network mapping / zoning at the time of application]. On this basis, the next step of the hierarchy has been applied: the development is proposed to be heated by individual air source heat pumps (ASHPs) providing space heating and domestic hot water to each dwelling, avoiding fossil fuel combustion on site.

Should a communal or district heat network become viable during design development (for example through coordination with adjoining sites or a Local Area Energy Plan), the scheme layout retains the flexibility to accommodate plant and distribution infrastructure. Combined with the fabric efficiency measures in Section 6, the switch to heat pump heating is estimated to increase the cumulative reduction in regulated emissions to approximately **20.0%** against the Part L 2013 baseline.

8 • Be Green — Renewable Energy Generation

Residual energy demand, after efficiency and low-carbon heat measures, is met through on-site renewable electricity generation. Roof-mounted photovoltaic (PV) panels are proposed to all dwellings, sized according to unit type and available roof area:

Unit Type	No. of Units	Indicative PV/unit (kWp)	Total PV (kWp)
1-bedroom flat	4	0.9	3.6
2-bedroom flat	4	1.1	4.4
2-bedroom house	3	1.6	4.8
2-bedroom bungalow	2	1.9	3.8
3-bedroom house	7	2.0	14.0
4-bedroom house	1	2.6	2.6

This provides an indicative total installed capacity of approximately **33.2 kWp** across the development, generating in the order of **28,220 kWh/year** (based on a typical UK unshaded south-facing yield of 850 kWh/kWp/year), saving a further **3.8 tCO₂/year** (using the SAP 10.2 grid electricity carbon factor of 0.136 kgCO₂/kWh).

Final PV array sizing will be confirmed at detailed design stage having regard to roof orientation, pitch, overshadowing and structural capacity, with the aim of maximising generation on all suitable roof slopes. PV provision is differentiated by dwelling typology: flats are assumed to draw on a shared roof array apportioned per unit, reflecting more limited individual roof access; bungalows and houses benefit from a larger roof area relative to floor area (particularly the single-storey bungalows) and are therefore assumed to accommodate proportionally greater capacity.

9 • Be Seen — Monitoring, Verification and Reporting

In accordance with the fourth stage of the Energy Hierarchy, the development will incorporate smart electricity meters and in-home energy displays to all dwellings, enabling occupiers to monitor consumption and generation in real time. Dwelling emission rate (DER) calculations will be submitted at Building Regulations stage to confirm compliance against the Target Emission Rate (TER), and as-built SAP calculations and Energy Performance Certificates will be provided prior to occupation. Home User Guides will be issued to occupiers explaining the low-carbon heating and PV systems and how to operate them efficiently, supporting long-term in-use performance in line with the design intent.

10 • Quantified Compliance Summary

The table below summarises the cumulative effect of each stage of the Energy Hierarchy on regulated CO2 emissions across the development, against the Part L 2013 notional baseline. Figures are illustrative, based on the indicative unit mix and typical performance assumptions set out above; they will be confirmed by dwelling-specific SAP calculations as design progresses.

Stage	Estimated Regulated CO2 (tonnes/year)	Cumulative Reduction vs. Part L 2013 Baseline
Baseline (Part L 2013 notional)	30.6	—
After Be Lean (fabric & passive design)	27.5	10.0%
After Be Clean (heat pump heating)	24.5	20.0%
After Be Green (on-site PV)	20.6	32.5%

The resulting cumulative reduction of approximately **32.5%** exceeds the minimum 31% improvement required under the 2021 uplift to Part L of the Building Regulations, and represents a positive response to the Council's expectation, set out in Policy 36, that standards will be exceeded where practicable to work towards net zero carbon development.

11 • Compliance with Policy 37 — Sustainable Design and Construction

Requirement	How the Scheme Responds
Minimum Part L carbon reduction	Achieved and exceeded — approximately 32.5% reduction against a 31% minimum requirement.
Fabric First approach	Enhanced fabric U-values, airtightness and thermal bridging detailing specified ahead of mechanical/electrical services (Section 6).
Overheating (Part O)	Managed through orientation, glazing ratios, shading and ventilation strategy; to be confirmed by dynamic overheating assessment at technical design stage.
Electric vehicle charging (Part S)	Active EV charge points provided to dwellings with dedicated parking, with passive (ducting) provision to communal parking areas.

Requirement	How the Scheme Responds
Materials and resource efficiency	Responsibly sourced, durable materials and construction methods to be specified, with consideration of embodied carbon alongside operational performance.
Water efficiency	Dwellings designed to achieve the tighter Building Regulations optional water efficiency standard (110 litres/person/day); addressed in detail in the accompanying Water Neutrality Statement.

12 • Conclusion

This Energy Statement demonstrates that the proposed development of 21no. dwellings has been designed to respond positively to the Energy Hierarchy set out in Policy 36 of the Horsham District Planning Framework, and to meet the sustainable design and construction requirements of Policy 37. Through fabric-first energy efficiency, low-carbon heat pump heating, on-site solar PV generation, and a commitment to monitoring and reporting, the scheme is anticipated to achieve a reduction in regulated CO2 emissions of approximately 32.5% against the Part L 2013 baseline — well in excess of current minimum Building Regulations requirements — and represents a robust, policy-compliant energy strategy capable of being carried forward and confirmed through detailed design.

It is recommended that compliance with this strategy be secured by planning condition, requiring submission of as-built SAP calculations and confirmation of the installed renewable and low-carbon technologies prior to first occupation of each dwelling.