

Sustainability Statement

Project

Rollys Lane, Ashwell

Client

Urbanspace Planning

Dated

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Proposed development: Two new dwellings (Plot 01 Type 02 and Plot 02 Type 01) – Tennis Courts, Rollys Lane, Baldock, SG7 (minor residential development)

1.0 Purpose and policy context

1.1 This statement has been prepared to demonstrate that the proposed development responds positively to North Hertfordshire District Council's Sustainability Supplementary Planning Document (SPD, 02 September 2024), and to summarise the sustainability measures incorporated within the scheme.

1.2 The proposal is a minor residential scheme (less than 10 dwellings). The SPD requires, as a minimum, an EPC of C or above and submission of a Sustainability Statement including Energy Use Intensity (EUI) and Space Heating Demand (SHD) calculations, alongside recommendations toward the Council's targets.

1.3 The design meets the SPD Bronze requirements and also aligns with key elements of the SPD Silver expectations under Checklist 1 (passive design / fabric performance), including high energy performance, low-carbon heating, and a substantial improvement over Part L targets (see Section 2).

2.0 Checklist 1: Optimising passive design and fabric performance (SAP-led evidence)

2.1 Site layout, orientation and glazing approach

2.1.1 The submitted site plans include a north point; the dwellings are arranged to provide good daylight and solar access where practicable while maintaining residential amenity.

2.1.2 SAP opening schedules confirm glazing is distributed across north/east/south aspects, with south-facing openings included to support useful solar gain, balanced against heat-loss control via high-performance glazing.

2.1.3 Overheating risk will be managed through a balanced glazing strategy, controllable ventilation (including purge ventilation via openable windows), and compliance with Building Regulations Part O at detailed design stage (with assessment provided if required).

2.2 High-performance fabric (fabric-first)

2.2.1 The SAP/BREL outputs and SAP summary confirm a strong fabric specification, with (typical averages):

- External walls: 0.18 W/m²K
- Ground floor: 0.12 W/m²K
- Roofs: SAP includes multiple roof constructions (joisted roof 0.11 W/m²K; rafted roof 0.14 W/m²K; eaves void 0.10 W/m²K), with an average roof U-value reported around 0.12 W/m²K.
- Windows: typically, 1.0 W/m²K (openings listed in SAP)

2.2.2 Airtightness is specified at 3.2 m³/h·m² @50Pa (design value) for both plots, supporting reduced heat loss and improved comfort.

2.2.3 Mechanical Ventilation with Heat Recovery (MVHR) is specified, with heat recovery efficiency 85% (and SFP 1.3 W/(l/s)), improving indoor air quality while limiting ventilation heat losses.

2.3 Low-carbon heating and hot water (no fossil fuel heating)

2.3.1 Both dwellings use an electric air source heat pump system with low temperature operation (45°C flow) and stated efficiency in the SAP compliance report (approx. 285%).

2.3.2 No on-site fossil fuel (e.g. gas boiler) heating is proposed, supporting the SPD's direction toward lower-carbon alternatives.

2.4 SAP results: EPC/SAP rating, carbon compliance, EUI and SHD

2.4.1 SAP rating and EPC banding

- Plot 01: SAP rating 81 (Band B); Environmental Impact 96 (Band A).
- Plot 02: SAP rating 81 (Band B); Environmental Impact 96 (Band A).

This exceeds the SPD Bronze requirement of EPC C or above and supports the SPD Silver aim for the majority of homes to achieve EPC B.

2.4.2 Building Regulations Part L performance (carbon reduction over TER)

- Plot 01: DER 3.95 vs TER 11.31 kgCO₂/m²/yr (approx. 65% better than TER).
- Plot 02: DER 3.89 vs TER 11.05 kgCO₂/m²/yr (approx. 65% better than TER).

This exceeds the SPD Silver expectation for significant on-site CO₂ reductions beyond Part L (the SPD references 35% as a Silver benchmark for Checklist 1).

2.4.3 Energy Use Intensity (EUI) – derived from SAP delivered energy (regulated uses)

In line with the SPD requirement to report EUI, the SAP outputs show total delivered energy for regulated uses of:

- Plot 01: 3,544 kWh/year over 134.94 m² = approx. 26.3 kWh/m²/year.
- Plot 02: 3,777 kWh/year over 142.92 m² = approx. 26.4 kWh/m²/year.

The SPD's EUI benchmark is expressed as operational energy and includes an allowance for unregulated energy. The regulated EUI reported above demonstrates very low regulated energy demand; a total operational EUI (including the SPD/RIBA unregulated allowance) can be confirmed at technical design stage if required by condition.

2.4.4 Space Heating Demand (SHD)

The SAP outputs indicate:

- Plot 01 SHD: 28.49 kWh/m²/year.
- Plot 02 SHD: 28.69 kWh/m²/year.

This aligns with the SPD's stated SHD benchmark of 30 kWh/m²/year (where referenced as a target).

3.0 Checklist 2: Achieving low carbon energy (renewables)

3.1 The scheme delivers low operational carbon through a fabric-first building envelope, MVHR, and all-electric air source heat pumps, as evidenced in the SAP/BREL outputs.

3.2 The SAP compliance reports record "Local generation: N/A" for both plots (i.e. no on-site electricity generation/PV is included within the current SAP model).

3.3 Solar PV has been considered, but is not proposed at this stage due to the site's heritage sensitivity (nearby listed buildings / Conservation Area) and the potential visual impact on the roofscape in key views. The scheme achieves strong energy and carbon performance without PV (EPC B and Part L compliance demonstrated through SAP).

4.0 Water efficiency (SPD and Part G)

4.1 NHDC is within an area of serious water stress and the SPD requires a 110 litres/person/day target and evidence (Part G2 water calculator) prior to occupation.

4.2 The dwellings will be specified with water-efficient fittings (low-flow taps and showers, dual-flush WCs, efficient appliances) and the Part G water calculation will be provided to demonstrate compliance with the 110 l/p/d requirement.

5.0 Sustainable drainage and flood risk (SuDS)

5.1 A site-specific Flood Risk Assessment (FRA) and SuDS Strategy has been prepared for the development (EAS, January 2026). This confirms the site is located in Flood Zone 1 (low probability of flooding) and sets out an infiltration-led surface water strategy for the two dwellings.

5.2 In line with the SuDS hierarchy and subject to confirmation by infiltration testing at detailed design stage, surface water will be managed on-site via infiltration features (including permeable paving/drive areas, rain garden planters and soakaways), with exceedance routing and a maintenance approach identified within the SuDS Strategy.

6.0 Biodiversity and landscape (BNG)

6.1 The SPD expects biodiversity enhancement and, where applicable, a measurable Biodiversity Net Gain approach.

6.2 A landscape strategy will prioritise native, wildlife-supporting planting and opportunities for habitat features (e.g. bird/bat boxes where appropriate). A BNG calculation (and Habitat Management and Monitoring Plan if required) will be prepared and submitted in line with current BNG requirements.

7.0 Sustainable travel and EV charging

7.1 The SPD requires EV charging to comply with Building Regulations Part S, and references 7kW provision for dwellings.

7.2 Each dwelling will be provided with EV charging infrastructure (minimum Part S compliant provision, with 7kW capability) and secure cycle storage can be accommodated within the plots to support active travel.

8.0 Construction, materials, waste and pollution (proportionate to scale)

8.1 A fabric-first approach inherently reduces whole-life impacts by lowering operational energy demand. Materials will be selected to be durable and responsibly sourced where practicable, with preference for locally available products to reduce transport emissions.

8.2 During construction, good practice measures will be adopted to minimise waste and pollution (segregation and recycling of waste, responsible storage of materials, and dust/noise control).

8.3 Adequate on-plot storage will be provided for refuse and recycling, aligned with local collection requirements.

9.0 Summary of compliance and items to be confirmed by separate submissions

9.1 Confirmed by SAP evidence:

- EPC/SAP: both dwellings achieve SAP 81 (Band B) and Environmental Impact 96 (Band A).
- Part L: approx. 65% better than TER on DER for both plots; ASHP + MVHR specified; airtightness 3.2 m³/h·m² @50Pa.
- SHD: 28.49 and 28.69 kWh/m²/year.

9.2 To be provided/confirmed (typical planning conditions or supporting documents):

- Part G2 water calculation demonstrating 110 l/p/d.

Conclusion

The proposed two-dwelling development is designed around a fabric-first approach and all-electric, low-carbon heating. The SAP evidence demonstrates EPC B performance, strong airtightness, MVHR, low SHD, and a substantial improvement over Part L targets. This satisfies the NHDC Sustainability SPD Bronze requirements for minor residential development and supports many of the SPD's Silver aspirations under Checklist 1, while transparently identifying the further supporting documents to be submitted/secured by condition where applicable.