As of 19/10/2026 Energy and Sustainability Statement Summary

Padnell Grange

Summary of the Energy & Sustainability Statement | March 2026

Scheme and purpose

The statement supports a full planning application by Stonebond Properties (Guildford) Ltd and the Borrow Foundation to demolish existing buildings and construct 90 homes at Padnell Grange, Padnell Road, Waterlooville, Hampshire. The proposal also includes upgraded access from Padnell Road, landscaping and associated works. Prepared by Abbey Consultants (Southern) Ltd, the report sets out the proposed energy, carbon and sustainability approach for the scheme (pp. 5–9).

Planning and assessment basis

The strategy considers the National Planning Policy Framework (2024), Havant Borough Council's adopted Core Strategy (2011), and the Council's emerging Local Plan. The emerging policies address low-carbon development, overheating, construction waste and water efficiency, but the report notes that they have limited weight until adopted. Energy and carbon projections were modelled using SAP 10.2 against the 2021 Building Regulations Part L baseline; they are design-stage estimates rather than measured in-use performance (pp. 10–16).

Proposed energy strategy

The approach follows the "Be Lean, Be Clean, Be Green" energy hierarchy (pp. 17–26):

• **Be Lean — reduce demand.** Improved insulation and airtightness, careful daylight and solar-gain design, reduced thermal bridging, low-energy LED lighting, mechanical extract ventilation, and programmable controls/smart metering. Proposed air-permeability targets are 4.5 $m^3/h/m^2$ for houses and 4.0 $m^3/h/m^2$ for apartments, against a Part L limiting value of 8.0.

• **Be Clean — supply efficiently.** A communal district-heating/combined heat-and-power arrangement was considered unsuitable because of the scheme's scale, demand profile and likely running costs. Individual heating systems are proposed instead.

• **Be Green — use low-carbon heating.** Houses would have individual air-source heat pumps providing space heating and hot water. Apartments would use direct electric panel heaters for space heating and Vaillant aroSTOR heat pumps for domestic hot water. Other options, including solar PV, were assessed but are not included in the current strategy.

Estimated regulated carbon performance

The report estimates the following site-wide annual emissions from regulated uses (heating, hot water, fixed lighting, fans and pumps). Household appliances are excluded (pp. 14, 20, 26–29).

Assessment stage	Regulated CO_2 (tonnes/year)
Part L 2021 baseline	93.13
After demand-reduction measures ("Be Lean")	92.09
After low-carbon measures ("Be Green")	31.13

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Headline finding: 62.00 tonnes CO_2 saved annually, a 67% reduction against the Part L 2021 baseline. The fabric-energy-efficiency metric is also estimated to improve by 6%, although the "Be Lean" regulated-carbon saving alone is approximately 1%.

Wider sustainability measures

Materials, embodied carbon and waste

The specification will prioritise materials with BRE Green Guide ratings of A+, A or B; local, recycled and renewable materials where viable; certified sustainable timber; and insulation with zero ozone-depletion potential. The report advocates designing for longevity and adaptability, and reducing embodied carbon through structural and material choices. These are proposed design principles rather than a quantified, completed whole-life carbon assessment.

A Site Waste Management Plan is proposed to set targets and record waste arising during construction. Priority will be given to preventing waste, reusing and segregating materials, recycling, and avoiding landfill. Where practical, demolition concrete would be crushed and reused on site. A separate operational waste strategy would address waste storage, separation and collections when homes are occupied (pp. 30–33).

Water efficiency

The homes are designed to meet the emerging local policy target of no more than 110 litres of water per person per day. Measures include dual-flush toilets, efficient taps and showers, flow restrictors, water-saving appliances and water meters. The example Part G calculation estimates 104.20 litres per person per day of internal use, rising to 109.20 litres including the external allowance. Construction measures include metering and water-efficient cleaning methods (pp. 34–35).

Overheating and summer comfort

To reduce summer overheating risk, the report proposes managing solar gains through orientation, glazing and possible shading, and dispersing heat through natural and enhanced mechanical ventilation where needed. Building layout, vegetation and thermal mass are also identified as potential measures. Air conditioning is intended as a last resort. A full overheating assessment demonstrating compliance with Building Regulations Part O is still to be undertaken during detailed design; CIBSE TM59 modelling may be needed where the simplified approach is not suitable (pp. 36–37).

Regulatory and design-stage matters

The report concludes that the proposed design strategy is aligned with Part L 2021 and adopted planning policy. It also identifies items that are not yet final: detailed heating-system selection, the overheating strategy and the construction programme. The consultant states that the strategy must be reviewed as the Future Homes Standard and associated requirements come into effect; additional measures, potentially including solar PV, may be required depending on the delivery timetable (pp. 27, 39–40).

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Overall conclusion

The principal sustainability benefit is the proposed move away from fossil-fuel heating, combined with stronger building fabric and efficient building services. On the report's SAP-based assumptions, the development would reduce annual regulated carbon emissions by 67% relative to the Part L 2021 baseline while targeting 110 litres of water per person per day. Final compliance and performance will depend on the detailed design, approved specifications, assessments and construction delivery.

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