

SUSTAINABILITY & ENERGY STATEMENT

CROSS HOMES LEWES LTD

Land at Hammonds Ridge, Burgess Hill

July 2026

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Contents

1. INTRODUCTION	3
2. POLICY CONTEXT	4
3. CONSTRUCTION METHODS AND MATERIALS	7
4. ENERGY AND CO2 REDUCTION	9
5. ENERGY EFFICIENCY & LOW CARBON RENEWABLE ENERGY TECHNOLOGIES 11	
6. WATER CONSUMPTION	13
7. OTHER CONSIDERATIONS	14
8. CONCLUSIONS	15

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1. INTRODUCTION

1.1 This statement supports the planning application for the development of nine new dwellings at Land at Hammonds Ridge, Burgess Hill. The scheme comprises nine 4-bed houses on a brownfield site allocated for development.

1.2 The statement demonstrates how environmental sustainability has been factored into the design and how the high environmental performance can be delivered in accordance with planning policy. This statement covers:

- Construction Methods and Materials
- Energy and CO2 Reduction
- Energy Efficiency
- Low Carbon & Renewable Technologies
- Water Consumption
- Flood Risk Management and Drainage
- Biodiversity
- Sustainable Travel

1.3 The statement provides an insight into the type of specification, technologies and steps which can be implemented to deliver high standards of environmental performance, support efficiency, and deliver environmental benefits to flooding and biodiversity. The final specification will be delivered as the scheme develops and once relevant assessments (e.g SAP calculations) have been undertaken. It is envisaged that the final measures can be delivered through appropriate planning conditions.

2. POLICY CONTEXT

National

National Planning Policy

- 2.1 The National Planning Policy Framework (NPPF) (2024) sets a presumption in favour of sustainable development (para 10). This includes an environmental dimension which includes “making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change including moving to a low carbon economy”.
- 2.2 Chapter 14 of the Framework sets out an overarching aim that the planning system should support a transition to a low carbon future, contribute to reductions in greenhouse gas emissions and encourage the reuse of existing resources. Specifically, at paragraph 164, it identifies that development should be planned for in ways that help to reduce greenhouse gas emissions, such as through location, orientation and design.
- 2.3 The Planning Practice Guidance supplements the NPPF with a section on climate change which explains the national approach to building performance, particularly in respect of energy efficiency standards. Guidance in respect of water efficiency is set out in the Housing: Optional Technical Standards section; this sets out that – through Local Plans – Councils can require new developments to meet the higher water efficiency standards set out in Building Regulations.

National Standards

- 2.4 Standards regarding environmental performance of buildings are primarily enshrined in Building Regulations.
- 2.5 Energy performance calculations are enshrined in the Building Regulations (Part L) which mandate minimum levels of regulated carbon emissions. Recent revisions to Part L in 2021, further increase the reductions in regulated CO2 emissions levels along with also tightening limiting fabric parameters (u-values) for key building elements, along with an element of renewables now being the baseline assumption for meeting the notional Target Emission Rates.

- 2.6 Recently introduced Building Regulations Part O includes new requirements relating to reducing the occurrence of high indoor temperatures, known as “overheating”. The Regulations set out measures to limit unwanted solar gains in the summer and providing an adequate means of removing excess heat from the indoor environment.
- 2.7 Under the Planning & Energy Act 2008, local planning authorities can also set requirements for a proportion of energy used in a development to be derived from renewable/low carbon energy sources.
- 2.8 In relation to water, Building Regulations (Part G) sets out the national requirements in relation to water use and efficiency in new dwellings. This mandates a maximum water consumption of 125 litres per person per day, but also includes provisions for a tighter standard of 110 litres per person per day to be met where the relevant planning permission dictates. Maximum consumption standards for individual fittings are set out.

Local

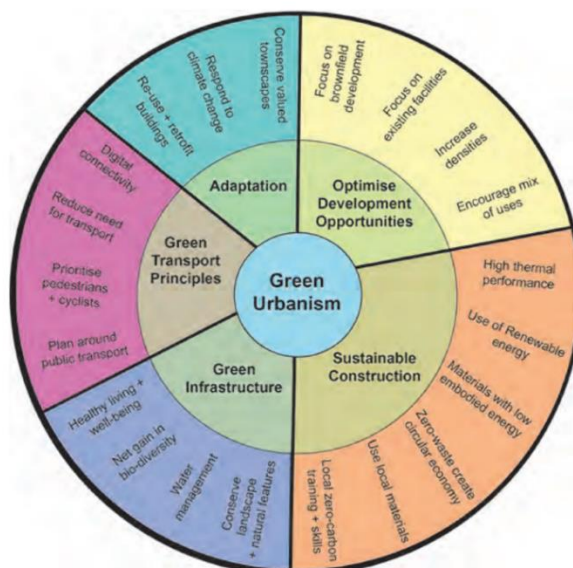
Mid Sussex District Plan

- 2.9 The main local policies relevant to this development, are Mid Sussex District Plan Policies DP39 (Sustainable Design and Construction) and DP42 (Water Infrastructure and the Water Environment).
- 2.10 Policy DP39 sets out that development proposals should seek to improve sustainability and where feasible, should incorporate the following:
- Minimise energy use through design and layout, including natural light and ventilation; Explore opportunities for efficient energy supply through communal heating networks
 - Use renewable sources of energy
 - Maximise efficient use of resources, including minimising waste
 - Limit water use to 110 litres per person per day
 - Climate change resilient design
- 2.11 The policy does not set any specific requirements/standards in relation to energy efficiency or renewable energy.

- 2.12 Policy DP42 carries forward the provisions in DP39 that residential developments should meet a water consumption standard of 110 litres per person per day.

Mid Sussex Design Guide

- 2.13 The Mid Sussex Design Guide amplifies the design policies in the Mid Sussex District Plan, and includes guidance and advice relating to minimising the environmental impact of buildings and developments.
- 2.14 Principle DG37 sets out that sustainable approaches to building design are fundamental if the challenges associated with climate change, resource depletion and pollution are to be addressed. This includes taking account of issues such as orientation, daylight/sunlight and solar gain; green roofs to refuse water run-off; the use of sustainable materials; incorporating high levels of insulation and air tightness; using renewable energy including photovoltaics and heat pumps; and reducing water consumption.



- 2.15. The above diagram has been taken from the MSDC design guide. The sustainability of the proposed development seeks to align where possible with the segments of the above chart.

3.CONSTRUCTION METHODS AND MATERIALS

Ground Preparation

- 3.1 Topsoil will be reclaimed where possible and re-used for landscaping subject to the necessary tests. Any inert or contaminated waste (not expected in this case) will be segregated and disposed of appropriately in line with the relevant Regulations.

Intended Construction Method

- 3.2 Subject to final design and feasibility assessments, pre-fabricated timber frame construction is likely to be the method of construction for this development. The building would be finished with an external face of brickwork.
- 3.3 The use of pre-fabricated timber frames provides demonstrable sustainability benefits over traditional construction methods:
- Timber has the lowest embodied carbon of any commercially available material and can deliver overall energy reduction of up to 33% compared to more traditional construction materials and methods. Sustainably sourced timber (e.g. FSC/PEFC) can also be used.
 - Manufacture of the frames within a controlled factory environment ensures consistent quality. Frames can be planned and designed in detail in advance, enabling them to be manufactured and constructed in the most efficient way. This significantly reduces material and resource waste compared to traditional construction and on-site manufacture.
 - Off-site manufactured timber frame solutions enable superior thermal performance and low air infiltration rates, helping to improve energy efficiency of buildings.
 - This construction method also enables a faster build, reducing the overall construction period, reducing weather dependency and therefore minimising time on site. This reduces the overall resource use associated with the construction process (materials, water, energy) and associated travel to and from

the site by trades/contractors. In addition, the number of HGV deliveries associated with a timber frame construction can be significantly lower than traditional construction, helping to minimise road transport and associated pollution.

Sourcing Materials

- 3.4 A “just-in-time” approach will be used to sourcing and calling off materials from suppliers, to avoid excessive stockpiling of materials on site. This will encourage more efficient use of materials by on-site trades, reduce the risk of over-ordering and reduce the risk of materials being damaged during storage on site, all of which could result in excess levels of material wastage. Where possible and available, size specific materials will be ordered from suppliers to avoid the need for cutting on site which also leads to additional wastage. Return arrangements will be negotiated where possible with suppliers to take back leftover materials which cannot be re-used on site (or on future developments).

Minimising Waste

- 3.5 The “Reduce, Re-Use, Recycle” waste hierarchy will be followed as far as possible to help minimise waste arising from the development being diverted to landfill.
- 3.6 As above, the construction methods and approach to material sourcing will support waste minimisation as encouraged by Policy DP39 (as well as delivering other sustainability benefits).
- 3.7 Ensuring effective waste management practices on site, including facilities for segregation of waste to facilitate recycling (with appropriate signage). Established recycling schemes run by product manufacturers will be used where available/eligible.
- 3.8 On-site segregation of packaging waste, including pallets, thin film plastics and cardboard.

4. ENERGY AND CO₂ REDUCTION

- 4.1 It is proposed that the new development will take a fabric first approach, seeking to maximise the performance of components and materials to provide dwellings of a high standard.
- 4.2 This approach will aim to maximise air tightness, provide high levels of insulation and optimise solar gains and good levels of ventilation to reduce energy consumption and CO₂ emissions across the lifetime of the development.
- 4.3 In recent years Building Regulations updated Part L1 to seek a reduction in carbon dioxide emissions.
- 4.4 The benefits of a fabric first approach compared to “bolt-on” renewables technologies, both environmentally and to future homeowners, is that energy savings/fuel cost reductions are applied evenly across all dwellings, performance is “built-in” for the life of the homes, it increases thermal comfort and minimises ongoing maintenance/replacement costs.

Conductive Loss

- 4.5 To ensure that energy demand is reduced, the dwellings will be designed to minimise heat loss through the fabric wherever possible. The target U-values for the building elements in comparison with the Approved document in L1A (2021) limiting values and notional dwelling fabric energy efficiency, will seek to be lower (more efficient) than the mandated limited values.
- 4.6 The proposed dwellings are apartments and have a simple footprint which both contribute to a low surface area/volume ratio. This is beneficial in heat loss through the floors where the U-value is governed by the ratio of perimeter length to floor area.
- 4.7 Construction specific and details will be used to minimise unnecessary bridging of the insulation layers, thus helping to reduce avoidable heat loss where possible. Such losses are a main factor in the SAP calculations which will be prepared at the design and construction stages, following the grant of a planning permission.

Convective Loss

- 4.8 After conductive heat loss through building fabric, convective heat loss through movement of air (such as air leakage) is the second major source of wasted energy. The design specification will seek to adopt a greater air tightness standard compared with Part L1A minimum requirements ($8.0\text{m}^3/\text{h}/\text{m}^2$) in order to improve performance further.

Passive Design

- 4.9 Window glazing will be specified where possible to hold appropriate solar transmittance values to ensure a greater than adequate summer/winter balance is provided and to ensure appropriate thermal comfort through the seasons.

5. ENERGY EFFICIENCY & LOW CARBON RENEWABLE ENERGY TECHNOLOGIES

Solar Photovoltaic (PV) Panels

- 5.1 The intention is to install Solar PV on the rooves of the houses, which is a renewable technology which will provide clean energy to the homes.
- 5.2 Solar PV is a mature and well proven technology which can be easily integrated into building fabric and design. PV systems require relatively little ongoing maintenance or cost. The technology offsets other higher carbon sources of grid supplied electricity.
- 5.3 The layout and nature of the scheme at Land at Hammonds Ridge would be suited to installation of solar PVs due to the orientation of buildings and with sufficient space on the roof to install the required panels.

Air Source Heat Pumps

- 5.4 It is the intention for each of the four houses to have their own Air Source Heat Pumps for providing heating and domestic hot water.
- 5.5 Air Source Heat Pumps together with a hot water cylinder heated by the air source heat pump with back-up electric immersion heating. Heat pump to have a heating efficiency of 250% according to SAP10, in line with Table D1 of the Building Regulations Part L.

Other Energy Efficient elements

- 5.6 The heating systems will be installed with the ability to give occupants a high level of control over their use, which will facilitate energy efficient behaviour compared to other less flexible systems.
- 5.7 The heating system will work with Under Floor Heating which is more energy efficient than radiators as it operates at lower temperatures, distributes heat more evenly and can be paired with smart thermostats for zoned control.
- 5.8 All internal and external lighting will be installed with energy efficient LED fittings and bulbs.

- 5.9 Smart energy meters will be installed for the properties. This will provide greater information to future residents regarding consumption to support energy efficient behaviours.
- 5.10 As the above demonstrates, the design and subsequent detailed specification of proposed development will support energy efficient use of energy resources, as required by Policy DP39.

6. WATER CONSUMPTION

- 6.1 In line with Building Regulations and policy requirements in the District Plan, water consumption will be managed effectively throughout the development by incorporating efficiency measures.
- 6.2 A water efficiency calculation will be required for Building Regulations Part G2 compliance. In line with Policies DP39 and DP42, this scheme will be specified to meet the more stringent efficiency of 110 litres per person per day.
- 6.3 The proposed water and sanitary fittings will be specified and installed to reduce the consumption of water to assist with tackling water stress. This will include for example, water efficient taps, shower heads and toilets.

7. OTHER CONSIDERATIONS

Sustainable Drainage

- 7.1 The proposed drainage strategy utilises sustainable drainage techniques to ensure that the site can accommodate all storm events up to and including the 1 in 100-year storm event with allowances for future climate change.
- 7.2 See work provided by Ardent titled Drainage Strategy and Floor Risk Assessment

Promoting Active and Sustainable Travel

- 7.3 Ample secure cycle storage has been proposed in a prominent and practical location.

8. CONCLUSIONS

- 8.1 This Sustainability Statement has been prepared to address national and local policy requirements relation to the proposed development of nine new dwellings on Land at Hammonds Ridge, Burgess Hill. This statement particularly responds to the requirements of the Mid Sussex District Plan policies DP39, DP41 and DP42 and the relevant provision of the Design Guide SPD.
- 8.2 In regards to building energy and emissions performance, the Statement promotes a fabric first approach, which demonstrates the improved insulation design, reduced thermal bridging and enhanced air tightness performance. Which would be targeted to deliver reductions in CO2 emissions over above Building Regulations standards.
- 8.3 This Statement also identifies the preferred renewable technologies to be implemented, notably Solar PV Panels and Air Source Heat Pumps. This will be explored further and implemented to achieve a reduction of CO2 emissions in line with the latest Building Regulations Part L.
- 8.4 Improving water efficiency opportunities has been identified, with initial targets of consumption of less than 110 litres/person/day which is realistically achievable through the use of efficient appliances and fittings.
- 8.5 This Statement has also outlined that the development has the capability of achieving greater sustainability through design, while also supporting more sustainable travel choices.