



ELEMENT
SUSTAINABILITY

SHERMANBURY ROAD, PARTRIDGE GREEN

OUTLINE ENERGY STATEMENT

JUNE 2026

REF: 2025.242



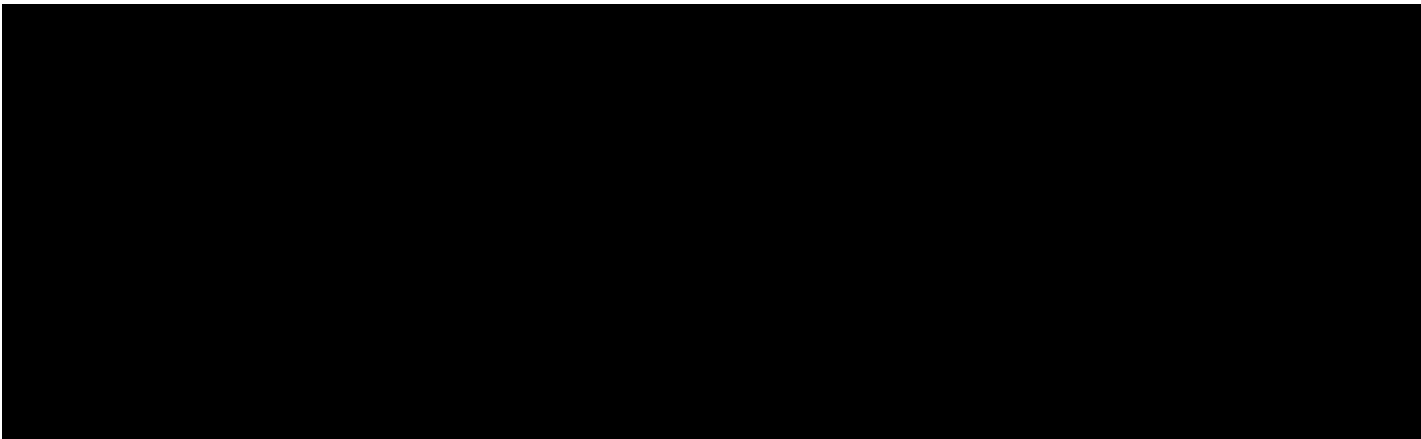
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1. INTRODUCTION

Element Sustainability has been commissioned by Wain Estates (Land) Limited to review the energy performance of the proposed residential development for up to seventy-five dwellings off Shermanbury Road in Partridge Green, Horsham.

This report is intended to support the outline planning application for this development and therefore, establish an approach to the delivery of this scheme which meets the criteria required by the council and which the developer commits to implement at the site once further design details are more fully resolved within the reserved matters application.

The purpose of this statement is to summarise the relevant policy background and requirements of Horsham District Council and to demonstrate the ways in which the developer has addressed these aims through their proposals, ensuring all practicable measures have been taken to deliver a sustainable development at this site.

Details of the design attributes, specifications and characteristics of the scheme are appraised in order to demonstrate how the proposals contribute to an energy efficient development in Horsham and seek to minimise the carbon emissions associated with the regulated energy performance of the scheme.



2. DEVELOPMENT PROPOSALS

2.1 Development Site Description

The site is located to the east of the village of Partridge Green, in Horsham and currently consists of greenfield and agricultural land, with the presence of trees and hedgerows and some existing buildings and structures to the south.

Shermanbury Road borders the southernmost part of the site boundary where principle means of vehicular access will be provided, and Greentree Lane borders the eastern boundary of the site. The site is predominantly surrounded by green fields and agricultural land. There are a number of properties situated near the site's boundaries such as Keepers Mead to the northeast and Camomile Cottage to the south.

The pre-development site is presented Figure 2.1 below:

Figure 2.1 – Development Site Location



Source: Google Earth

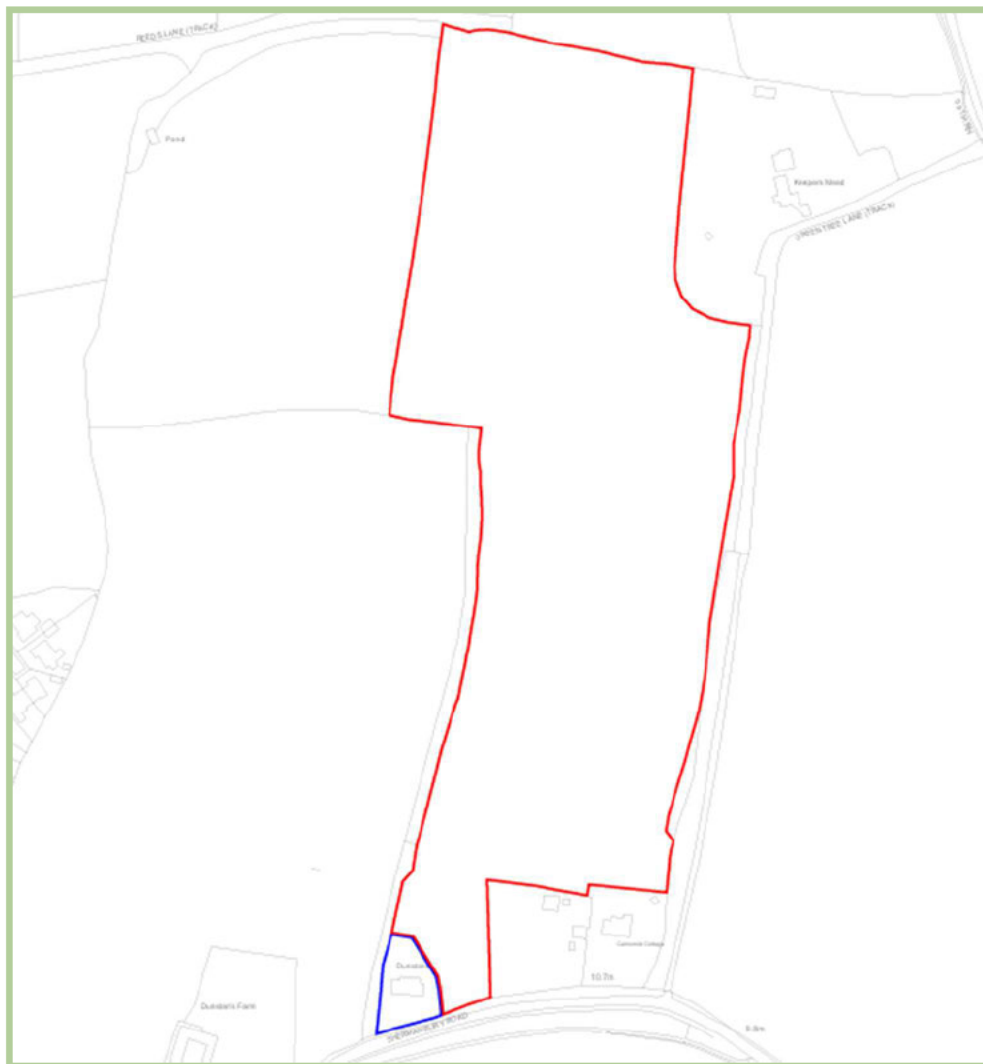
2.2 Development Proposals

Outline planning application for the demolition of existing buildings and structures and the erection of up to 75 dwellings with public open space, landscaping, sustainable urban drainage system (SuDs) and vehicular access point from Shermanbury Road. All matters to be reserved except for access.

Proposed site location is shown in figure 2.2 below.



Figure 2.2 – Proposed Site Location



3. POLICY REVIEW

3.1 National Planning Policy

The National Planning Policy Framework was revised on 12th December 2024 and sets out the government's planning policies for England and how these are expected to be applied.

The purpose of the planning system is to contribute to the achievement of sustainable development. The planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways, as set out below:

An economic role – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;

A social role – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations, and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and

An environmental role – to protect and enhance our natural, built and historic environment, including 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.

These objectives should be delivered through the preparation and implementation of plans and the application of the policies in this framework. Planning policies and decisions should play an active role in guiding development towards sustainable solutions, but in doing so should take local circumstances into account, to reflect the character, needs and opportunities of each area.

3.2 Horsham District Planning Framework 2015

The Horsham District Planning Framework (HDPF) is currently being replaced by a new Horsham District Local Plan 2023-2040. The 2015 framework remains in place until the new local plan is formally adopted. A review has been ongoing to update policies to meet housing needs and environmental standards, with the new plan undergoing examination.

The Horsham District Planning Framework (HDPF) is the overarching planning document for Horsham district and replaces the Core Strategy and General Development Control Policies documents which were adopted in 2007. The document sets out the planning strategy for the years up to 2031 to deliver social, economic and environmental needs of the HDPF plan area. The following policies have been considered here:

Policy 1 – Sustainable Development: When considering development proposals, the Council will take a positive approach which reflects the presumption in favour of sustainable development contained in the NPPF.



Policy 2 – Strategic Development: To maintain the district’s unique rural character whilst ensuring the needs of the community are met through sustainable growth. This includes supporting development which is safe, well design, and adapts to climate change and helps reduce the district’s carbon emissions.

Policy 33 – Development Principles: In order to conserve and enhance the natural and built environment developments shall be required to, along with other requirements, ensure buildings are oriented to gain maximum benefit from sunlight and passive solar energy, unless this conflicts with the character of the surrounding townscape, landscape or topography where it is of good quality.

Policy 35 – Climate Change: Development will be supported where it makes a clear contribution to mitigating and adapting to the impacts of climate change and to meeting the districts carbon reduction targets as set out in the Council’s Acting Together on Climate Change Strategy, 2009 (since updated to the Horsham District’s Climate Action Strategy 2024). Measures to mitigate the effects of climate change include:

- Reduced energy use in construction;
- Improved efficiency in new developments, including influencing the behaviour of occupants to reduce energy use; and,
- The use of decentralised, renewable and low carbon energy supply systems.

Policy 36 – Appropriate Energy Use: All development will be required to contribute to clean, efficient energy in Horsham based on the following hierarchy:

1. **Lean** – use less energy – e.g. through demand reduction
2. **Clean** – supply energy efficiently – e.g. through heat networks
3. **Green** – use renewable energy sources

Residential developments in Heat Priority Areas or the strategic development locations will be expected to connect to district heat networks where they exist using the following hierarchy or incorporate the necessary infrastructure for connection to future network. Development should demonstrate that the heating and cooling systems have been selected in accordance with the following heating and cooling hierarchy:

1. Connection to existing (C)CHP distribution networks
2. Site wide renewable (C)CHP
3. Site wide gas-fired (C)CHP
4. Site wide renewable community heating/cooling
5. Site wide gas fired community heating/cooling
6. Individual building renewable heating
7. Individual building heating, with the exception of electric heating



Policy 37 – Sustainable Construction: Proposals must seek to improve the sustainability of development. To deliver sustainable design, development should incorporate the following measures where appropriate according to development type and location:

- Maximise energy efficiency and integrate the use of decentralised, renewable and low carbon energy;
- Limit water use to 110 litres/person/day; and,
- Be designed to encourage the use of natural lighting and ventilation.

A new Horsham Local Plan is being developed and there are several policies in the Plan that give further detail on these issues. Although the Plan has not yet been adopted, it marks a step change in the reduction of carbon emissions from new development and adapting to climate change. The Local Plan contains policies that strengthen low carbon requirements for new development which is an action in the Horsham District's Climate Action Strategy 2024. It is expected that future iterations of the Local Plan and its supporting documents will continue to tighten these requirements for new development. This will depend on relevant changes to the Land Use Planning system, and also to relevant building regulations (for example, relating to the proposed Future Homes standard).

3.3 Horsham District's Climate Action Strategy 2024

Horsham District Council has produced a Climate Action Strategy for the entire Horsham District to inform the district's transition to a low carbon and climate resilient future.

With regard to energy, significant carbon savings can be made through the decarbonisation of Horsham District's energy mix. Currently, the carbon intensity of Horsham District's grid is higher than the national average; this is because it relies on electricity from imports and gas, while the proportion of the grid electricity met through renewables lags behind the national average. Supporting new renewable energy schemes at all scales will take pressure of the national grid and support decarbonisation.

Overarching Goals:

- Low Carbon Energy Generation and Storage: To decarbonise Horsham District's energy consumption by maximising local low carbon and renewable energy generation, as well as enabling communities and businesses to take ownership over the energy they use.

With over half of Horsham District's carbon emissions coming from the operation of buildings, this area presents a significant opportunity to reduce carbon emissions, reduce water consumption for the Horsham District, and improve health and wellbeing in interior spaces.



3.4 Regulatory Framework

Building Regulations, Part L - Conservation of Fuel and Power sets the compliance standards for energy demand and carbon dioxide emissions from buildings. Guidance on how to meet the requirements of this regulation is provided within a number of approved documents. The relevant document is referenced below:

Approved Document Volume 1: Dwellings: Gives guidance on how to comply with Part L of Schedule 1 to the Building Regulations and the energy efficiency requirements for dwellings.

The minimum energy performance requirements shall be approved and expressed in accordance with the methodology for:

- New dwellings, in the form of target CO₂ emission rates;
- New dwellings, in the form of target fabric efficiency rates; and,
- New dwellings, in the form of target primary energy rates.

3.5 Applicable Targets

Based upon a review of relevant planning policy requirements, legislative drivers, and client priorities, the following list provides a brief precis of the key energy performance related criteria that will be targeted for this development:

Horsham District Planning Framework

- Policy 1 – Sustainable Development
- Policy 2 – Strategic development
- Policy 33 – Development Principles
- Policy 35 – Climate Change
- Policy 36 – Appropriate Energy Use
- Policy 37 Sustainable Construction

Horsham District's Climate Action Strategy

Building Regulation, Part L

- Approved Document L, Volume 1: Dwellings



4. ENERGY STRATEGY

The energy strategy for the proposed scheme outlined within Section 4 and 5 of this report, identifies how high-quality design, and construction has been embedded throughout the proposed dwellings. Details of the preferred the energy strategy will be refined further at the reserved matters application stage.

As per Horsham District Council's local planning policies outlined in section 3 of this report, the proposals will prioritise the use of energy efficiency measures and renewable energy technology, in line with efforts to adapt to the expected impacts of climate change.

4.1 The Energy Hierarchy

The energy strategy for the outline proposals will prioritise an enhanced 'fabric led' solution coupled with building regulation compliant servicing provision. An enhanced building fabric specification throughout the scheme allied to efficient servicing and controls will achieve compliance with the new build carbon dioxide emission reduction and fabric energy efficiency targets stipulated by Building Regulation, Part L, and the Horsham District Planning Framework.

Policy 36 of the Horsham District Planning Framework prioritises the approach established within the London Plan Energy Hierarchy (see Figure 4.1) which provides a framework to guide energy policy and decision making to achieve practical and cost-effective carbon emission reductions. The hierarchy prioritises demand-side activities to reduce wastage and improve efficiency.

The energy hierarchy is built upon five principles:

i. **Be Lean**

- o Use less energy.

ii. **Be Clean**

- o Supply energy efficiently.

iii. **Be Green**

- o Use renewable energy.

iv. **Offset**

- o Offset and shortfall in CO₂ emissions reduction through a financial contribution.

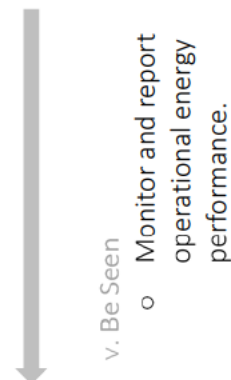
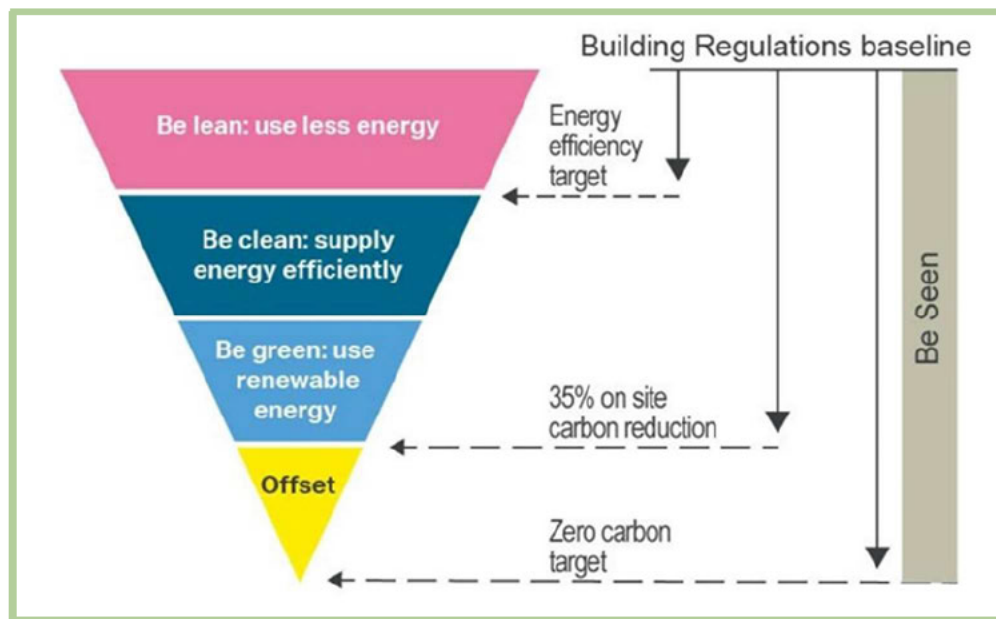


Figure 4.1 – The London Plan Energy Hierarchy



The London Plan Energy Hierarchy will be used as a framework to guide this energy strategy, as per Policy 36, to achieve practical and cost-effective carbon emission reductions. It is intended that the construction, design and specification proposed for this scheme will deliver dwellings that are inherently efficient and cost-effective during occupation.

4.2 Be Lean

In line with the Be Lean stage of the energy hierarchy, all development will be designed to reduce energy demand. This reduction will be achieved through a fabric first approach where the building and materials are specified to be as efficient as possible, and through optimising the building layout to reduce the need for heating, cooling and lighting.

4.2.1 Build Fabric and Thermal Performance

The standard measurement of heat transfer through a given building material or construction type is the U-value (W/m^2K). The lower the U-value, the more slowly heat transfers and is lost out of a building. In buildings, heat loss generally occurs through the following main areas and elements of the construction:

- Ground floor;
- External walls;
- Roofs;
- Doors and windows;
- Thermal bridging; and,
- Uncontrolled ventilation.

This development will benefit from a material and design specification that is aligned with Building Regulation standards and will include numerous efficiency measures designed to reduce heat losses and minimise energy demand in accordance with the first principle of the energy hierarchy, including:

- ✓ High performance U - values;
- ✓ Reduced thermal bridge heat losses;
- ✓ Efficient form of construction; and,
- ✓ Low design air permeability target.



This 'fabric led' approach to minimising energy demand and associated carbon dioxide emissions through the performance of the thermal envelope is aligned with the first principle of the energy hierarchy, which states that reduction in energy demand should be achieved initially by energy efficiency. The proposed fabric specification and window design will also help to limit the overheating risk of the proposed dwellings, and provide sufficient natural lighting, which will positively contribute to the health and wellbeing of future residents in line with Policy 37.

This enhanced fabric specification will ensure an **inherently energy efficient development**, focussing upon limiting demand side reductions in accordance with the energy hierarchy.

4.2.2 Building Services and Water Efficiency

In accordance with the Be Lean stage of the energy hierarchy, the operational efficiency of the development will be optimised via the use efficient mechanical and electrical systems. The operational efficiency of the dwellings will be optimised, and may incorporate measures such as:

- Specification of efficient mechanical and electrical systems;
- 100% LED lighting provision;
- Low energy ventilation strategy;
- Incorporation of sophisticated and zoned control systems for the space and water heating; and,
- Smart metering.

The dwellings will be designed to reduce mains/potable water consumption and will include water efficient devices and equipment as per policy 37:

- A water efficiency strategy will be determined for the site and will include for the provision of 'A' rated appliances as a minimum (the energy rating scale runs from A to G, with A being the most energy efficient, and G the least energy efficient);
- The proposed scheme will also seek to achieve a water consumption rate of no more than 110 litres per person per day; and,
- A water meter on the mains water supply will be specified to monitor and manage consumption and to inform occupants of their usage.

This will have a corresponding reduction in energy use associated with water heating and hot water use.

This development will provide an **efficient energy strategy**, and the dwellings will be designed to reduce mains/potable water consumption to achieve a **water consumption rate of no more than 110 litres per person per day** to have a corresponding reduction in energy use associated with water heating and hot water use.



5. PROPOSED RENEWABLE ENERGY AND LOW CARBON SOLUTIONS

In accordance with the Horsham District Planning Framework, and in addition to the prevailing building regulation compliance criteria, the enhanced fabric specification will be supplemented by renewable energy technology as part of the site wide energy strategy to optimise the on-site dwelling emission rate reductions and to help mitigate the adverse impacts of climate change.

5.1 Be Clean

In line with the Be Clean stage of the energy hierarchy, all developments must follow the decentralised energy hierarchy when deciding on a heat source and should focus on supply energy efficiently using low-carbon energy sources. This includes prioritising decentralised energy systems and district heating networks. These systems provide multiple buildings or dwellings with heat and hot water from a central boiler house, or 'energy centre'. These systems can provide heating or cooling which is transferred from the energy centre through a network of highly insulated pipes carrying the heated water to each dwelling.

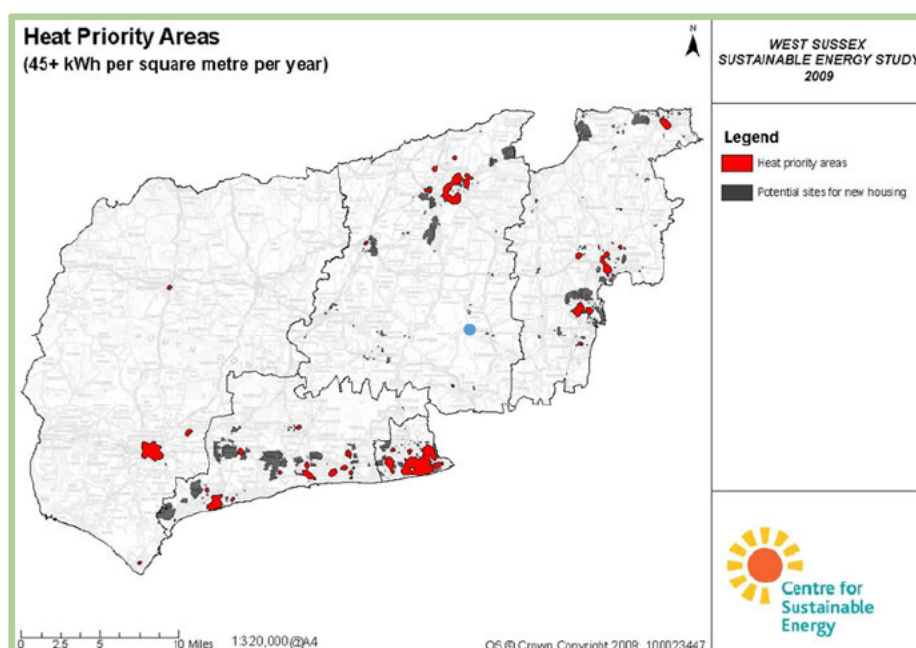
This stage of the energy hierarchy encourages connects buildings to existing or planned heat networks to ensure a more efficient and sustainable energy supply.

5.1.1 District Heat Networks

With reference to the West Sussex Sustainable Energy Study (see Figure 5.1 – application site location is denoted by the blue spot) it has been determined that there are no existing or proposed heat networks/energy centres within a moderate radius from the development and there are no existing networks local to the site.

Consequently, connection to a DHN is not considered technically feasible for this development.

Figure 5.1 – West Sussex Sustainable Energy Study



5.2 Be Green

In line with the Be Green stage of the energy hierarchy, all development must assess options for the use of renewable energy generation onsite in order to reduce carbon emissions. This involves consideration of on-site renewable energy technologies such as solar hot water, photovoltaics, or heat pumps. The aim is to maximise the use of clean, sustainable energy sources to power buildings, helping to reduce reliance on fossil fuels and contribute to a zero-carbon future.

This stage of the energy hierarchy is considered after implementing energy efficiency and low-carbon supply measures.

5.2.1 Renewable Technology Feasibility

An analysis of the most appropriate renewable energy options will be undertaken, and a number of renewable energy technologies will be considered for this site, including:

- Solar hot water;
- Photovoltaics (PV);
- Wind;
- Air source heat pumps;
- Ground source heat pumps; and,
- Biomass heating.

In accordance with Policy 36 and 37, the proposals will prioritise the use of energy efficiency measures and renewable energy technology.

To align with **Policy 36 and 37** the development will favour the use of **renewable energy technology** where they are appropriate to the scale of the development.

5.3 Grid Mix Electricity

The proposed building services that will consume grid mix electricity which is, in part sourced from a mix of fossil fuels (albeit diminishing) along with low and zero carbon, and nuclear power generation, will be efficient systems and will ensure that fossil fuels are consumed efficiently.

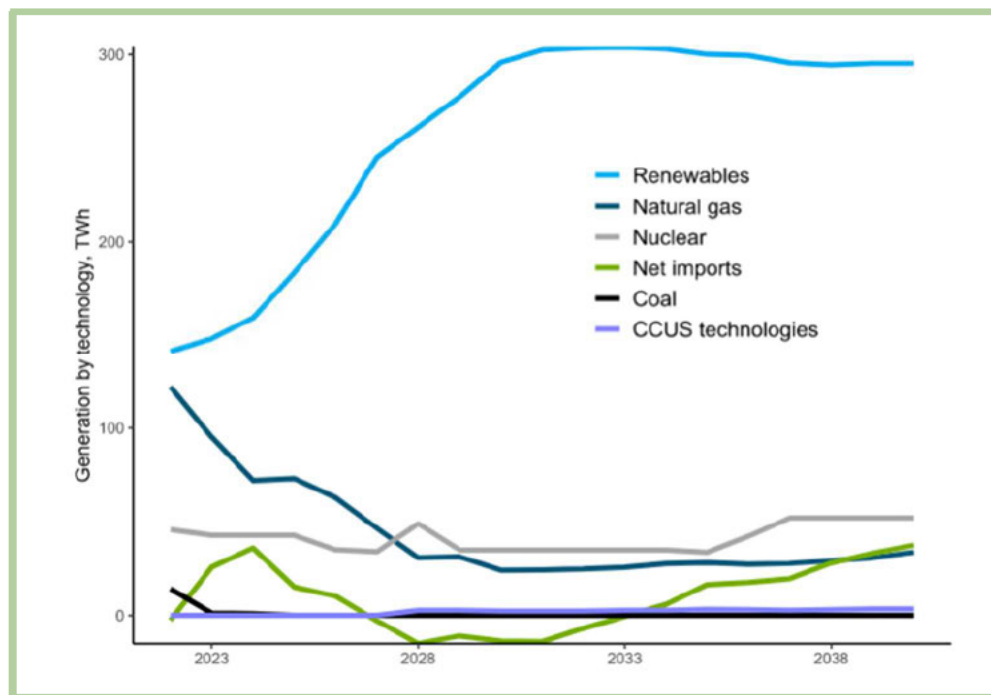
5.4 Decarbonisation

The proposed scheme will benefit from a 'full electric' energy strategy to secure building regulation Part L compliance.

As the UK electricity grid's carbon dioxide emissions (CO₂) footprint continues to improve, so too would the CO₂ associated with the operational phase of the proposed scheme.

The UK grid mix electricity carbon emissions will decrease significantly by 2035, with the carbon intensity of electricity generation falling by 93% between 2020 and 2035. This is due to the progressive shift away from fossil fuels as demonstrated in Figure 5.2 below.



Figure 5.2 - Electricity generation by Fuel Source, TWh

Source – BEIS, Energy and Emissions Projections (2022)

Electricity is a less carbon-intensive fuel source than mains gas and other fossil fuels, which is expected to improve as the percentage of electricity generation from renewable and low carbon (that is, nuclear) technologies increases.

5.5 Air Quality

This scheme will incorporate a high efficiency, full electric energy strategy that will integrate various low and zero carbon technologies to provide a comfortable and healthy living environment. Therefore, there will be no local combustion of fossil fuels which reduces particulate and NO_x emissions from the proposed residential development in operation.



6. CLIMATE CHANGE EMERGENCY

In 2023, Horsham District Council declared a climate emergency which prompted the Climate Action Strategy which outlines a recommended pathway to become a net zero and climate resilient District by 2050. In support of this, the developer wishes to highlight the following measures that will form part of the specification of this development:

- An energy strategy that aligns with the Council's local planning policies, as well as Part L of the Building Regulations, in relation to carbon emissions and minimising energy consumption:
 - In securing compliance with the current, Building Regulation Part L targets, a commitment is made to minimise demand side energy loads – in accordance with the Bean Lean, Be Clean, Be Green principles of the Energy Hierarchy.
 - An analysis of the most appropriate renewable energy options will be undertaken, and a number of renewable energy technologies will be considered for this site, including:
 - Solar hot water;
 - Photovoltaics (PV);
 - Wind;
 - Air source heat pumps;
 - Ground source heat pumps; and,
 - Biomass heating.
 - The proposed building services that will consume grid mix electricity which will be efficient systems and will ensure that fossil fuels are consumed efficiently.
- Proposals will prioritise the use of energy efficiency measures and renewable energy technology, in line with efforts to adapt to the expected impacts of climate change.
- The proposed scheme will also seek to achieve a water consumption rate of no more than 110 litres per person per day through the use of highly efficient fixtures to have a corresponding reduction in energy use associated with water heating and hot water use.



7. CONCLUSION

This statement has reviewed the energy performance of the outline residential development proposals against Horsham District Council's local planning policies and the declared climate emergency. The following are conclusions that may be drawn from the review:

- The scheme will be designed and specified in accordance with the Be Lean, Be Clean, Be Green principles of the London Plan energy hierarchy and improves upon the carbon dioxide (CO₂) reduction targets and guidance set by Part L Approved Document Volume 1 compliance standards.
- The proposed material and mechanical specification will provide various benefits including; upgraded thermal insulation, efficient mechanical servicing, and low energy lighting.
- An analysis of the most appropriate renewable energy options will be undertaken, and a number of renewable energy technologies will be considered for this site in line with Horsham District Planning Framework (HDPF) Policy 36.
- The proposed building services that will consume grid mix electricity will be efficient systems and will ensure that remaining fossil fuels are consumed efficiently.
- The proposed fabric specification and window design will help to limit the overheating risk of the proposed dwellings, and provide sufficient natural lighting, which will positively contribute to the health and wellbeing of future residents in line with HDPF Policy 37.
- In line with HDPF Policies 36 and 37, the proposals will prioritise the use of energy efficiency measures and renewable energy technology, in line with efforts to adapt to the expected impacts of climate change.
- The proposed scheme will also seek to achieve a water consumption rate of no more than 110 litres per person per day, as per HDPF Policy 37, through the use of highly efficient fixtures to have a corresponding reduction in energy use associated with water heating and hot water use.
- There will be no local combustion of fossil fuels which reduces particulate and NOx emissions from the proposed residential development in operation.

Furthermore, the proposals accord with the aims of the National Planning Policy Framework, as follows:

- Improving upon the regulatory Part L compliance criteria will assist in lessening the impact of this development on the environment by way of reducing carbon emissions.

In conclusion, the proposed development will deliver a high-quality development that accords with the guidance provided within local, regional and national planning policy guidance and regulatory standards.

