
Energy and Sustainability Statement

Uplands, West Ashton Road, Trowbridge

Prepared On behalf of Hills Homes Developments Limited

July 2026

Energy and Sustainability and Water Management Statement

Uplands, West Ashton Road, Trowbridge

“Full planning application for the demolition of existing dwelling (‘Uplands’) and erection of 40 dwellings with associated public open space, landscaping and sustainable urban drainage system. Removal of existing access and provision of new replacement vehicular access to West Ashton Road.”

Prepared

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Reference: OGP 108 ENERGY

Date: July 2026

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1. Introduction

- 1.1 This Energy and Sustainability Statement relates to the proposed development of 40 new homes on Land off West Ashton Road, Trowbridge.
- 1.2 The development is subject to the planning requirements of Wiltshire Council. This report addresses policies relevant to the energy and sustainability strategy as set out in National and Local planning policy and demonstrates the sustainability of the proposal in accordance with Core Policy 41 within the Wiltshire Core Strategy.
- 1.3 This report addresses policies relevant to the energy strategy as set out in both national and local policy and has been prepared in accordance with the requirements of the national planning practice guidance in relation to climate change, as well as the Climate Change Act 2008.
- 1.4 This report also provides detail on the proposed approach to meet specific targets relating to those policies, Building Regulations and energy and water use on site.
- 1.5 Matters relating to flood risk and the site drainage strategy are not dealt with in this report but can be found within other reports included with this planning application submission.

2. Planning Policy and Guidance

Background

- 2.1 The energy and sustainability strategy for the proposed development on land off West Ashton Road, Trowbridge has been developed in line with the following relevant planning policies.

National Policy

- 2.2 The revised National Planning Policy Framework (NPPF), updated in December 24, promotes sustainable development (comprising three pillars: economic; social; and environmental) and has a section specifically regarding sustainability in relation to energy and water consumption.
- Section 14: **Meeting the challenge of climate change, flooding and coastal change** places emphasis on, and sets out guidelines for local planning authorities, for local mitigation and adaptation measures for current and future climate change and for the support of the delivery of renewable and low carbon energy and associated infrastructure where viable.
- 2.3 The NPPF also promotes biodiversity provision and air quality protection in relation to development proposals.

Local Policy

- 2.4 Wiltshire Council acknowledged a climate emergency in February 2019 and committed to becoming carbon neutral as an organisation by 2030. The Wiltshire Council Climate Strategy was adopted by full council in February 2022, this sets out objectives and '*areas of focus*' to decrease greenhouse gas emissions and increase resilience to climate change for the county of Wiltshire for the period 2022-2027.

The Climate Strategy sets out the next five years of the council's journey to becoming a carbon neutral county, covering seven delivery themes:

- **Transport** Achieving zero emissions surface transport in Wiltshire is a challenge which will require action across all areas, with a significant role played by zero emissions vehicles, in conjunction with reducing trips and shifting modes. Zero emissions transport is a necessary priority, since transport produces the largest proportion of emissions in the county.
- **Homes and the Built Environment** New buildings need to be net zero carbon as soon as possible, using less energy and running on low carbon sources of electricity and heat. Existing buildings need to be retrofitted along the same principles. All buildings also need to be able to cope with the impacts of climate change.
- **Natural Environment, food and farming** A healthy natural environment is crucial to achieving net zero, and providing ways for people and wildlife to adapt to the stresses of climate change. Central to our challenge is the efficient and sensitive use of land for all our needs – local food production, preserving habitats, generating energy, absorbing carbon dioxide and providing homes.

- **Energy** We need to reduce the energy we use, as well as using low carbon forms of energy, including from microgeneration. There are also opportunities to explore in terms of 'smart' and digital solutions that help to smooth demand and ensure fair distribution of energy and new technologies.
- **Green Economy** We want to grow a net zero, climate resilient economy in Wiltshire. This includes opportunities for training and more jobs in green sectors, as well as building up supply chains to enable objectives in our other delivery themes.
- **Resources and waste** Using the waste hierarchy 'reduce, reuse, recycle, recover energy' helps reduce the energy and emissions associated with extracting, manufacturing, transporting and storing all the products we use.
- **Carbon Neutral Council** This section sets out the areas of work that will help Wiltshire Council become a carbon neutral organisation. The Council role also extends to providing leadership and opportunities to share knowledge and learn from one another.

2.5 The Wiltshire Core Strategy contains several policies that relate to sustainable design and construction. These include policies on sustainable construction and low-carbon energy (Core Policy 41), green infrastructure (Core Policy 52), high quality design (Core Policy 57), sustainable transport (Core Policy 60), flood risk (Core Policy 67), and water resources (Core Policy 68).

Building Regulations

- 2.6 Increased air tightness in dwellings has resulted in a requirement for Improved air quality measures by increased minimum whole house ventilation rate. Approved Document F 'Ventilation' comes into effect on 24 March 2027.
- 2.7 Water Efficiency to reduce water demand usage in new homes is covered under UK Building Regulations Part G 'Sanitation, hot water safety and water efficiency'. Part G requires that new dwellings must not exceed a maximum water consumption limit. The standard baseline is 125 litres per person per day (l/p/d). However, some planning authorities may enforce stricter targets, such as 110 litres per person per day (l/p/d).
- 2.8 Future Homes Standard (FHS) is the 2026 update to Building Regulations Part L 'Conservation of Fuel and Power', published in March 2026 and to take effect from 24 March 2027. It requires all new homes to produce at least 75% lower carbon emissions than homes built to the 2013 standards, effectively mandating heat pumps, solar PV, and significantly improved building fabric.
- 2.9 The aim is that new homes complying with the uplifted 2026 requirements will reduce carbon emissions by 31% compared with those built to current standards. This will be achieved through a combination of low-carbon heating, energy performance and increased fabric standards.

Conclusions

- 2.10 Following consideration of the National and Local policies that relate to the proposed scheme, the targets for the development on land off West Ashton Road, Trowbridge are to:
- Meet Building Regulations Part F, Part G and Part L requirements in terms of ventilation, water consumption and reduction in CO₂ emissions; and
 - Incorporate Electric Vehicle Charging Point (EVCP) facilities for each property.

3. Energy & Water Strategy

Proposals

- 3.1 The proposed scheme will follow the latest guidance in support of low carbon heating in residential buildings. The following techniques will be considered;
- Increase insulation
 - Reduce the effects of thermal bridging
 - Effective air tightness
 - Mechanical controlled ventilation with the consideration to heat recovery input ventilation.
- 3.2 To achieve the additional 31% reduction in CO₂ emissions to meet the 2026 Part L Regulations, further improvements in fabric first insulation performances, window and door U values, and increased air tightness can achieve this requirement.

Thermal Elements

- 3.3 The ‘fabric first’ approach is in line with the requirements of Core Policy 41 of the Wiltshire Core Strategy. To achieve a reduction in CO₂ emissions the following techniques will be used.
- Enhanced U Values to be achieved by increasing the size of the cavity walls and increasing the insulation thickness or alternatively using timber framed construction with the use of high levels of insulation with the timber stud work.
 - Enhanced U Values to the roof to be achieved through increasing the thickness of the insulation.
 - Installation of high-performance insulated ground floors will provide enhanced U values.
 - Utilisation of high-performance glazing will provide improved U values.
- 3.4 Thermal bridging will be minimised by employing enhanced construction details and products that provide continuous insulation, such as insulated lintels.

Air Tightness and Controlled Ventilation

- 3.5 To reduce heat loss and minimise draughts, it is vital that dwellings have sufficient levels of air tightness. Air tightness is also an important factor in managing interstitial condensation and reducing sound transmission through structures.
- 3.6 With modern air tightness principles adopted, appropriate ventilation will need to be installed in line with the requirements of Approved Document F, to provide fresh tempered air. All of the dwellings will also benefit from natural cross ventilation via openable windows which will enable rapid purges of air and will contribute to maintaining internal air quality.

Energy Demand & Energy Generation

- 3.7 The final strategy for the site will be based on a combination of fabric first techniques and the installation of renewable energy technologies and will be required to be amended slightly to suit individual building design. This would involve the inclusion or exclusion of energy efficient measures, or an increased or decreased capacity of renewable energy technologies, as applicable.

Low and zero carbon technologies

- 3.8 In the UK, new-build homes will effectively be banned from connecting to the natural gas grid, beginning 24th March 2027, under the Future Homes Standard. This section reviews the feasibility of a range of Low and Zero Carbon (LZC) technologies that could be used to achieve alternative options for energy supply and heating provision.
- 3.9 The LZC technologies that could be considered for use at Trowbridge are:
- Air source heat pumps
 - Solar photovoltaics

Air Source Heat Pump

- 3.10 Air source heat pumps reclaim the heat available in ambient air and convert it to higher temperatures to heat the home, they use electricity to distribute heat. Air source systems do not require ground works and are therefore less costly than ground source systems; however, this also means they are less efficient as the temperature of the air varies significantly more than the temperature of the ground throughout the year. Although this system is an efficient way of providing heating and hot water using electricity, the carbon emissions will still be significantly higher than if gas were used.
- 3.11 It is anticipated that air source heat pumps would be installed to provide space and water heating to all properties at this development, subject to detailed design and compliance with the required standards.

Solar Photovoltaic

- 3.12 Photovoltaic (PV) panels use sunlight to produce electricity; the cells convert the sunlight into electricity which can be used to run household appliances and lighting. PV cells don't need direct sunlight to function and some electricity will be generated on a cloudy day. Further advantages of PV systems are in their low maintenance requirements and reliability.
- 3.13 This type of technology would be suitable to assist in providing 15% of the estimated energy required across the site and will be incorporated within this scheme.
- 3.14 Where the Future Homes and Buildings Standards apply, it is expected that the sizing of the PV system will be equivalent to around 40% of the ground floor area of the property, unless specified exemptions apply.

- 3.15 The PV panels will be roof integrated to minimise visual impact, whilst maximising solar PV potential.

Summary of Low and Zero Carbon Feasibility

- 3.16 The most suitable option for achieving the 10 - 15% renewables requirement at this stage would appear to be the installation of air source heat pumps within each property.

4. Water Efficiency

- 4.1 Water efficiency becomes increasingly important in a changing climate with diminishing water resources.
- 4.2 In the UK, the national average for water consumption is around 143 litres per person per day (l/p/d) which includes potable water being used for flushing the toilet, washing the car and irrigating gardens.
- 4.3 Policy 41 of the Core Strategy refers to the Code for Sustainable Homes Level 4 which required all new residential developments to achieve a water efficiency equivalent of 105 litres per person per day (l/p/d). When the Code for Sustainable Homes was withdrawn, this water efficiency target was replaced by the enhanced standard set out in Approved Document G, which requires the optional water use of 110 l/p/d.
- 4.4 Water efficient fixtures, fittings and appliances plus rainwater recycling (water butts) are proposed to achieve a consumption target of 125 litres per person per day. Below is an example of typical items to achieve this standard;
- Showers fitted with 9 litre/sec flow limiters
 - Aerated flow control fitted to all taps (3 litres/min)
 - Kitchen and utility sink taps (4 litres/min)
 - 140 litre capacity baths
 - WC's fitted with dual flush (4/2.6 litre)
 - Washing machines (7 litres per kg dry load)
 - Dishwashers (1.08 litres per place setting)
- 4.5 The options for rainwater and grey water harvesting will also be considered to ensure the sustainable use of water is maximised where possible together with measures to promote water conservation by residents.
- 4.6 Water conservation during construction will be based on WRAP (Waste and Resources Action Programme) principals. A number of areas can be considered and outlined below.
- Fixing leaks quickly
 - Turning off taps
 - Considering options for more efficient dust suppression
 - Controlled urinal flushing devices & low flush cisterns in WC's
 - Plan for commissioning activities considering water recirculation and minimisation
 - Fit trigger guns to hoses
 - Consider more efficient wheel washing systems
 - Use high pressure low volume washout sprays for concrete lorries
- 4.7 WRAP principals will also be employed to reduce energy consumption on site where possible.

5. Conclusions

- 5.1 The application proposes residential development at 'Uplands', West Ashton Road, Trowbridge. This report has addressed National and Local policies relevant to the energy, sustainability and water use strategy for the proposed development.
- 5.2 The proposed strategy is based on an improvement in standard energy efficiency to meet Building Regulations Part F, Part G and Part L requirements in terms of ventilation, water consumption and reduction in CO₂ emissions. The scheme will fully achieve low carbon heating and Part L Building Regulation targets through the following techniques;
- Increase insulation
 - Reduce the effects of thermal bridging
 - Effective air tightness
 - Improved controlled ventilation
 - Energy efficient lighting
- 5.3 Additional renewable energy generation technology will be installed within the development, in this case the provision of air source heat pumps for each property, to provide some of the development's energy requirements from decentralised and renewable or low-carbon energy generation technology.
- 5.4 The development will incorporate measures to limit water use, as outlined in chapter 4 above. The developer can consider several options to ensure that the average water consumption level meets the Building Regulations target.
- 5.5 During construction, WRAP principals will be employed to reduce energy and water consumption levels.
- 5.6 The proposed site layout incorporates the installation of electric vehicle charging points (EVCP) in safe, convenient locations.