

Sustainable Construction, Energy, Water and Carbon Reduction Statement

Site: Little Ravenscourt, Amwell Hill, Great Amwell, SG12 9RA - new dwelling

The proposal has been designed to reduce the energy demand of the new dwelling and the carbon emissions created by the development in accordance with national planning policy set out in section 14 of the NPPF 2021 and policies CC2, CC3 and DES4 of the adopted District Plan.

The following statement sets out the sustainable construction, energy and water consumption measures that will reduce energy demand; promote energy efficiency and lower carbon emissions:

1.0	Construction	<p>The proposal has been designed in accordance with the Energy Hierarchy as set out in the District Plan: via passive design and orientation; fabric performance and energy efficiency. This ensures that its construction includes measures to reduce carbon emissions through thermal performance and high levels of insulation. Its simple external form also minimises surface area and thereby heat loss.</p> <p>The external walls, roof, floor, windows and doors of the dwelling will be super insulated, and U-Values will meet the requirements for Building Regulations compliance to reduce heating demand in winter and overheating in summer.</p> <p>Materials of construction and building contractors will be locally sourced wherever possible – this will reduce the need for long delivery or work trips and thereby reduce CO² emissions and air pollution in transportation.</p> <p>High performance double-glazed windows and doors are proposed which will result in increased thermal energy in-use.</p>
2.0	Energy & Carbon Reduction	<p>The layout of the proposed dwelling maximises passive solar gain as much as possible given the context of the site. The design will ensure that the property benefits from good natural daylighting and sunshine in all its main habitable rooms.</p> <p><u>Heating & Hot Water</u></p>

		<p>Heating and hot water will be provided using an air source heat pump as shown on the submitted Site Plans and associated ASHP specification.</p> <p><u>Electricity</u> The site is well located for exiting utilities and services through a Renewable Energy Source Company (RESC).</p> <p><u>Fittings</u> All white goods installed will be A+++ rated and lighting installation will be specified to Energy Star qualified CFL and LED to reduce energy-in use. Temperature and energy consumption monitors will also be fitted.</p> <p><u>Waste/recycling</u> There is ample space within the site to provide recycling and composting facilities as shown on the Site and Block Plans.</p> <p>SAP calculations will be provided at the Building Regulations stage, but this ScEW Statement sets out the general approach to meeting policy requirements as set out in the SPD.</p>
3.0	Climate Change Adaptation	<p><u>Design</u> As mentioned above, the building has been designed with energy demand reduction in mind throughout the design process and the construction of the house will include 'future-proofing' measures such as the flexible use of space and inclusion of a study to enable efficient homeworking. Broadband facilities will also be designed into the dwelling from the outset to enable teleworking, homeworking and video conferencing. This facilitates a reduction in vehicle movements and contributes to better air quality management.</p> <p><u>Daylighting & Ventilation</u> There is generous glazing to the principal living spaces of the dwelling and good opportunities for cross ventilation. This will provide good natural daylight to the property and reduces the need for electric lighting.</p> <p>Good natural ventilation is provided across the dwelling and there will therefore be no need for future occupiers to rely on mechanical ventilation. All fenestration will be thermally efficient to reduce the need for heating in the winter and cooling in the summer.</p>
4.0	Water Efficiency	<p>The applicant is keen to ensure the minimum use of water wherever possible and the proposal will include the use of low flow taps, water efficient shower heads, efficient dual-flush WC's and the development will comply with the</p>

		water consumption target in Policy WAT4 of 110 litres or less per head per day. It will also comply with Building Regulations Part G2.
5.0	Pollution	Air Quality pollution in the construction of the development will be mitigated through the use of locally sourced materials wherever possible. This will reduce the need for travel to and from the site by private vehicle and minimise air pollution and the use of energy.
6.0	Waste management	<p>Waste prevention measures will be incorporated into the construction of the dwelling such as using recycled aggregates and locally source materials with a longer lifespan.</p> <p>Kerbside waste and recycling facilities are available through the Local Authority household refuse scheme, as with the existing home and there is ample space for a bin storage on site. Composting facilities will also be used.</p> <p>Further refuse details can also be secured by condition if considered necessary and reasonable within the CIL tests.</p>

Overall, the energy strategy for the site will be consistent with the NPPF and policies CC1, CC2 and CC3 of the adopted District Plan. It also meets the aims and objectives of the Council's Sustainability SPD.