

## **SUSTAINABLE CONSTRUCTION, ENERGY, WATER AND CARBON REDUCTION STATEMENT**

Site: 10-12 Potter Street CM23 3UL, Bishops Stortford

24.04.09



**KENNEDYTWADDLE ARCHITECTURAL DESIGN**  
**24 TOTTENHAM ROAD**  
**LONDON N1 4BZ**

## Introduction

The proposal has been designed to reduce the energy demand of the new dwellings and the carbon emissions created by the development in accordance with national planning policy set out in section 14 of the NPPF 2021 and Sustainability Supplementary Planning Document (March 2021).

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

The proposal has been designed in accordance with the Energy Hierarchy as set out in the Sustainability Supplementary Planning Document: 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.

The external walls, roof, floor, windows and doors of the dwelling will be super insulated and U Values will be above and beyond the minimum requirements for Building Regulations compliance to reduce heating demand in winter and overheating in summer.

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

High performance double-glazed, and sustainably sourced timber windows and doors are proposed which will result in increase thermal energy in-use whilst being constructed from low embodied carbon materials.

### 2.0 Energy & Carbon Reduction

The layout of the proposed dwelling maximises passive solar gain as much as possible given the context of the site. The dwelling will benefit from good natural daylighting and sunshine in all its main habitable rooms. The eaves design will allow shading for cooling as necessary.

#### Heating

The details/specification of the proposed heating of the dwelling will be finalised at the Building Regulations stage, but the applicant is keen to use renewable energy wherever possible and the proposal allows for the provision of an air source heat pump to provide heating and domestic hot water, and this would be subject to specialist technical design.

#### Electricity

The site is well located for exiting utilities and services and mains electricity through a Renewable Energy Source Company (RESC).

#### Fittings

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.

#### Waste/recycling

There is ample space within the site to provide recycling and composting facilities. 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

### 3.0 Climate Change Adaptation

#### Design

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. 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.

#### Daylighting & Ventilation

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.

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.

### 4.0 Water Efficiency

The applicant is keen to ensure the minimum use of mains 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 water consumption target 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. All these factors will ensure that future occupiers are able to minimise the use of energy and air pollution .

The applicant is keen to ensure that the development does not have any adverse impact on lighting in this location and there are no proposals for significant elements of external lighting. Where access or security lighting is required, it will be via timer to reduce both energy use and light pollution.

### 6.0 Biodiversity

A biodiversity checklist accompanies the application and the local planning authority is referred to that document.

### 7.0 Waste management

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.

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.

Further refuse details can also be secured by condition if considered necessary and reasonable within the CIL tests.

Overall, the energy strategy for the site will be consistent with the NPPF and the relevant policies of the East Herts Sustainability SPD (adopted March 2021).