

SUSTAINABILITY & ENERGY STRATEGY STATEMENT

FOR FULL PLANNING PERMISSION FOR 1No. NEW DETACHED DWELLING

at

Land to the rear of  
Stileways  
Wraxhall  
Bristol  
BS48 1PH



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On behalf of Space Plus Architectural Design

## 1.0 INTRODUCTION

1.1 This Statement has been prepared to accompany a full planning application for the erection of 1No. new dwelling on the land to the rear of Stileways, Wraxall, North Somerset.

1.2 The following statement seeks to outline how the proposed development on the existing rear garden to Stileways will comply with the requirements and objectives of policies of the North Somerset Development Framework Core Strategy and Development Management Policies.

- CS1 - Addressing Climate Change and Carbon Reduction
- CS2: Delivering sustainable design and construction
- DM2: Renewable and low carbon energy

1.3 The statement below will assess how these issues will be addressed as a result of the proposed development.

### **Climate Change**

1.4 Planning policy CS1: Addressing Climate Change and Carbon Reduction and CS2: Delivering sustainable design and construction. DM2: Renewable and low carbon energy

1.5 The resultant plot allows for the construction of a 2-bedroom 1.5 storey dwelling.

1.6 In order to mitigate and adapt to climate change it is proposed that the new house will be constructed to the highest standards, with energy saving materials, methods of construction and heating/ventilating equipment.

### **CS1: Addressing Climate Change and Carbon Reduction**

1.7 CS1: development should demonstrate a commitment to reducing carbon emissions, including reducing energy demand through good design, and utilising renewable energy where feasible and viable.

1.8 Although this application is for just one new modest dwelling, the proposed development features the following key energy efficient design measures. High levels of insulation in the building fabric and high specification energy efficient measures including:

1. Walls U-value of 0.18 w/m<sup>2</sup>k;
2. Ground floor U-value of 0.12 w/m<sup>2</sup>k;
3. Roof U-value of 0.10w/m<sup>2</sup>k;
4. Glazing U-value of 1.3 w/m<sup>2</sup>k;
5. Air source heat pump;
6. Load/weather compensator;
7. Design air permeability of 5m<sup>3</sup>/hm<sup>2</sup>
8. Natural Ventilation;
9. Time and temperature zone control;
10. 100% low energy lighting

### **High Standards of Energy Efficiency**

1.9 Insulation in the thermal elements will exceed that which is required by Approved Document L1A.

### **Minimising Energy Requirements**

- 1.10 The proposed development will provide 100% dedicated low energy internal lighting.

### **Energy Strategy**

- 1.11 Due to the location, size and type of development most renewable technologies are appropriate for this site.
- 1.12 An air source heat pump would be the best solution for this development.
- 1.13 The energy calculations can be found on the accompanying Energy Statement from Oakland Energy.

### **CS2: Delivering sustainable design and construction**

- 1.14 New development should demonstrate a commitment to sustainable design and construction, increasing energy efficiency through design, and prioritising the use of sustainable low or zero carbon forms of renewable energy generation in order to increase the sustainability of the building stock across North Somerset.
- 1.15 The scale of this proposal does not warrant either BREEAM or CfSH assessment and rating, however, the following points reflect the level of commitment to sustainable design and construction;
- 1.16 The proposed development will embrace all aspects of energy saving by design and opportunity to economically integrate new technologies including:
- Use of levels of insulation in excess of Building Regulations Part L requirements for New Dwellings.
  - Taking advantage of site orientation which enables limited openings on the north elevations and a southerly window aspect thereby limiting heat loss and exploiting passive solar gain.
  - Good levels of air-tightness of the building to limit heat leakage.
  - Windows which are easily opened to provide ventilation and cooling for building users, but using solar control glass to control excessive heat gain.

### **Waste Management**

- 1.17 For waste and recycling collection, the current arrangement is for all residents to place their rubbish and recycling at the top of the lane, on the junction with Clevedon Road, where there is a designated area for black bins and recycling. It is proposed that this arrangement would also accommodate the black bins and recycling for the new dwelling.
- 1.18 As far as is practicable all materials will be sourced locally to limit travel miles for products, and materials will be selected as far as possible with reference to the BRE Green Guide ratings A or B. It is intended to reuse as many materials on site as possible including surface finishes and boundary treatments.

### **Encouraging more environmentally friendly transport**

- 1.19 The proposed development is situated on the outskirts of Nailsea and in close proximity to a major of bus routes on Clevedon Road B3128, with good access to Bristol City Centre which is situated 8 miles away.
- 1.20 There will be more than sufficient space to provide a secure cycle store for bicycles so that residents can cycle rather than using a car or bus.

### **Flood Risk and Water Management**

- 1.21 The Flood Zone mapping shows that the site is in Flood Zone 1 and confirms the site is well above any known flood levels, with a very low risk of flooding from rivers and seas, reservoirs and groundwater.

### **Water Strategy**

- 1.22 The scheme will incorporate measures to provide zero rainwater run-off from the site including:
- Use of permeable hard surface paving on pedestrian approaches to the building, parking area and gravel in private areas.
  - Installation of storage tank for rainwater harvesting for re use to flush WCs.
  - Specification of low water consumption appliances including spray taps in building.

### **Summary and Conclusions**

- 1.23 This Sustainability and Energy Statement has been prepared and is being submitted in support of the Full Planning Application for a detached two bedroom dwelling at land to the rear of Stileways, Wraxhall.
- 1.24 Overall it is considered that this application is in accordance with the relevant National and Local policies for sustainability and request that North Somerset Council support this application.