



Code
Consultancy
Services

Sustainability Statement

For

Barrett Lloyd Davis Associates Ltd.

Project:

1 Norfolk Road, Camden, NW8

September 2012 V3.1

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1 Executive Summary - Sustainability Statement

The Code pre-assessment report demonstrates that the proposed development:

- Meets Code Level 5 — gains 87.45 points (84 points required for Code 5)
- Energy Credits - gains more than 50% of (as per Development Policy DP22)
- Materials — achieves green guide ratings of A+ to B and greater than 50%
- Water — meets the highest water saving target of 80 litres/person/day

Materials Efficiency statement

- This demonstrates compliance with policies CS13 and DP22.
- All requirements of the CPG Sustainable use of materials will be complied with.
- At least 10% of the total value of materials used will be derived from recycled and reused sources.
- The demolition, design and construction of this new build dwelling will be done with reference to the waste hierarchy and aim for the highest possible materials score in the Code materials section.
- The green guide will be used as a reference to specifying materials with recycled content such as concrete with recycled aggregate. The aim will be to achieve A+ to B area weighted average for all major building elements.

Energy statement

The energy statement shows compliance and exceedance of the Camden Policy Guidance.

The baseline CO₂ emissions for this dwelling are 23560.41 kgCO₂/year, which are reduced to 7,054.69 kgCO₂/year once the improvements have been made.

The energy hierarchy has been followed with the fabric first being enhanced to the highest practical performance level for this type of dwelling, then all means of heat recovery implemented, then renewables added to the maximum available roof space.

Fabric enhancement

External walls: U value = 0.14 W/m²K

Ground Floor: U value = 0.10 W/m²K

Roof: U value = 0.10 W/m²K

Windows double glazed U value = 1.2 W/m²K

This fabric enhancement, exceeds the minimum required in policy CPG 3.21/2. Over 50% of the credits are achieved in the energy category of the Code. (96% achieved)

Air permeability q50 (M3/hour/m2) = 3.0

Heating systems

Biomass Boiler, Air source Heat Pump, Gas Boiler, secondary wood burner

Heat recovery Technology

Mechanical Ventilation Heat recovery

Shower Heat recovery —Waste Water Heat recovery (2no. Units)

Renewable Energy

Solar PV panels will be installed on the roof (approx 95 m2 of panels) giving a peak power of 19.5 kwp.

Water efficiency statement

This dwelling will meet all the requirements for water efficiency, as defined in the policy guidance and as the dwelling is being designed to meet Code level 5, it will only use a maximum of 80 l/p/day.

This is achieved using both Rainwater Harvesting and Grey water re-use systems.

Mechanical and Electrical Design Overview

This overview gives further details of the proposed systems and performance.

Systems analysed but not incorporated

In order to meet the sustainability requirements of this development, detailed modelling was undertaken, especially looking at energy systems which could meet Code level 5.

This involved discussions with NHER and BRE regarding the current limitations of the SAP 2009 methodology. During the energy and fabric modelling phase, we considered the following systems/specifications:

- Triple glazing
- Increased airtightness
- Biomass CHP
- Micro- gas CHP
- Solar thermal panels
- Ground source heat pumps

These were not all included, in part due to the current SAP methodology not being capable of reliably modelling more than 1 main system - appendix N is currently limited to one system.

For example, there are some good communal biomass CHP systems, but none for individual properties.

After extensive modelling and the requirement to use SAP 2009, we therefore proposed the specification detailed above.

2 Background to the Sustainability Statement

2.1 Background to statement

There is a requirement for a Sustainability Statement to be submitted with planning documents for the following project:

Development of a detached house at 1 Norfolk Road, Camden, London, NW8 6AX.

This Sustainability Statement has been prepared, according to the guidelines published by the London Borough of Camden.

2.2 About this document

This report has been written by Steven Knight of Code Consultancy Services Ltd, who is a licenced BRE Code and Ecohomes Assessor, an NHER registered SAP Assessor, and Civil Engineer specialising in Sustainable Building.

This report incorporates work done by TASC Building Services Engineering Ltd on M&E elements.

The brief and guidance was provided by Neil Carr of Barrett Lloyd Davis Associates.

For further clarification of any details in this proposal or to discuss any related issues, please contact:

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2.3 Report Sections

This sustainability report incorporates the following statements as appendices:

Code for sustainable homes pre-assessment
Materials Efficiency statement

Energy statement, including detailed SAP modelling
Water efficiency statement

Mechanical and Electrical Design Overview

3 Appendices:

3.1 Code for sustainable homes pre-assessment

3.2 Materials Efficiency statement

3.3 Energy statement, including detailed SAP modelling

3.4 Water efficiency statement

3.5 Mechanical and Electrical Design Overview