

THE CHARLTON BROWN PARTNERSHIP, ARCHITECTS
THE OLD CHAPEL, 4A SHEPHERDS WALK, HAMPSTEAD, LONDON NW3 5UE
T 020 7794 1234 F 020 7435 5085 E office@charltonbrown.com W www.charltonbrown.com

CODE FOR SUSTAINABLE HOMES

OUTLINE DESIGN STAGE ASSESSMENT of
PROPOSED REFURBISHED HOUSE at
25 BRACKNELL GARDENS, HAMPSTEAD, NW3
Accompanying Planning Application

May 2010

1.0 Introduction

The London Borough of Camden wishes to encourage the building of sustainable homes and requested that the applicant should demonstrate the environmental credentials of the planning application currently under consideration. The architects and the owners of this site share the council's environmental concerns and the architects have prepared this assessment accordingly.

This report is an outline initial design stage assessment, which shows specific measures which targets an assessment of **Code Level 3**.

2.0 Summary

This initial design stage assessment involved considering the design in relation to the Code's nine categories that each contain numerous issues, and thus rating the 'whole home' as a complete package.

A summary of the category in which points awarded are awarded as follows:

- Category 1 – Energy/CO2
- Category 2 – Water
- Category 3 – Materials
- Category 4 – Surface Water Run-off
- Category 5 – Waste
- Category 6 – Pollution
- Category 7 – Health and well-being
- Category 8 – Management
- Category 9 – Ecology

3.0 The Code for Sustainable Homes assessment system

Points are awarded for performance in each category, together with minimum standards for energy and water efficiency at every level of the Code, therefore requiring high levels of sustainability performance in these areas for achievement of a high Code rating.

A home can achieve a sustainability rating from 1 to 6 depending on the extent to which it has achieved Code standards. 1 is the entry level – above the level of the Building Regulations; and 6 is the highest level – reflecting exemplar development in sustainability terms.

Therefore, to achieve Code Level 1 a minimum of 1.2 points are required under the Target Emission Rate section of the energy category, a minimum of 1.5 points are required under the internal potable water consumption section of the water category, and at least 33.3 points must be achieved between the other categories. To achieve Code Level 6 a minimum of 17.6 points are required under the Target Emission Rate section of the energy category, a minimum of 7.5 points are required under the internal potable water consumption section of the water category, and at least 64.9 points must be achieved between the other categories.

This scheme will target Code Level 3

4.0 The Code for Sustainable Homes outline design stage assessment

4.1 Detailed points scoring system and the proposals the scheme will target

4.2 **Category 1, Energy/CO2:**

Issue: Target Emission Rate (TER) as defined by 2006 Building Regulations Standards

Points for percentage improvement over Building Regulations Approved Document L (2006) – Conservation of Fuel & Power; calculated using SAP:2005

Target = 25% improvement

Issue: Building fabric

Heat Loss Parameter

Target = Heat Loss Parameter ≤ 1.1

Issue: Internal lighting

Percentage of fixed fittings that are dedicated energy efficient fittings

Target $\geq 75\%$ of fittings

Issue: Drying space

The proposal will provide space and posts, footings and fixings for drying clothes in a secure environment

Issue: Ecolabelled white goods

Fridges, and fridge/freezers will have an A+ rating under EU Energy Efficiency Labelling Scheme and washing machines and dishwashers will have an A rating under EU Energy Efficiency Labelling Scheme

Issue: External lighting

All space lighting provided will be dedicated energy efficient fittings, taking into account the needs of people who have visual impairments and all burglar security lighting will be a maximum of 150W, fitted with movement detecting and daylight shut-off devices and where all other security lighting is provided with energy efficient fittings and daylight shut-off devices.

Issue: Low or Zero Carbon Energy Technologies

The aim will be to source at least 10% of total energy demand from low carbon energy sources.

Issue: Cycle storage

Provision has been made for the safe, weather-proof and secure storage 4 cycles within the garage.

Issue: Home office

Provision has made for a space and services which allows the occupants to set up a home office in a quiet room

4.3 Category 2, Water:

Issue: Internal potable water consumption

The proposal will aim to achieve a water consumption (calculated using the Code water calculator) of ≤ 105 l/p/d

Issue: External potable water consumption

Provision will be made for a system to collect rain water for use in external irrigation/watering e.g. water butts

4.4 Category 3, Materials:

Issue: Environmental impact of materials

The total building points achieved under the CSH materials calculator will aim to achieve A+ or A rating for the following elements:

- Roof
- External Walls
- Internal Walls (incl. party walls and partitions)
- Floors – upper and ground floors
- Windows

Scores achieved for each of these elements are added to give the total building score.

Issue: Responsible sourcing of materials – basic elements

Materials used in key building elements will be responsibly sourced, e.g. timber certification, EMS etc.

Issue: Responsible sourcing of materials – finishing elements

Materials used in secondary building and finishing elements will be responsibly sourced, e.g. timber certification, EMS etc.

4.5 Category 4, Surface Water Run-off:

Issue: Reduction of surface water run-off from site

The scheme will include rainwater holding facilities/sustainable drainage (SUD) is used to provide attenuation of water run-off to municipal systems by 50% as this is a low flooding risk area.

4.6 Category 5, Waste:

Issue: Household recycling facilities

3 internal storage bins with min total capacity of 30ltr; no individual bin smaller than 7ltr; all bins in a dedicated position that is accessible to disabled people and a Local Authority collection scheme for recyclable materials covering at least three streams of waste with sufficient space for the storage of the bins provided without stacking (within 10m of an external door) and which is accessible to disabled people. These bins will be located in the garage.

Issue: Construction waste

A site waste management plan will be drawn up which includes procedures and commitments that minimise waste generated on site in accordance with WRAP/Envirowise guidance. The plan includes procedures and commitments to sort, reuse and recycle construction waste either on site or through a licensed external contractor.

Issue: Composting facilities

Home composting facilities will be provided in the garden suitable for normal domestic non-woody garden, food and other compostable household wastes.

4.7 Category 6, Pollution:

Issue: Global warming potential (GWP) of insulant

The scheme will only use insulating materials which avoid the use of substances that have a global warming potential (GWP) of 5 or more (and an Ozone Depleting Potential of zero) in either their manufacture or composition for the following elements

- Roof (including loft access)
- Walls internal and external (including doors, lintels and all acoustics insulation)
- Floor (including foundations)
- Hot water cylinder, pipe insulation and other thermal stores

Issue: Nitrous Oxide (NOx) emissions

The proposal will seek to minimise Nitrous Oxide (NOx) emissions from any space heating and hot water systems in accordance with EITHER dry NOx level $\leq 100\text{mg/KWh}$ OR boiler class 4 under BS EN 297:1994

4.8 Category 7, Health and well-being:

Issue: Daylight

Within the proposal the Kitchen will aim to achieve a minimum average daylight factor of at least 2%; Living rooms, dining rooms and studies to achieve a minimum average daylight factor of at least 1.5%; Kitchens,

living rooms, dining rooms and studies have been designed to have a view of the sky

Issue: Sound insulation

The proposal will achieve higher standards of sound insulation than required by Part E of the Building Regulations, and demonstrating it by either using post-completion testing or Robust Details

Issue: Private space

Provision of outside space that is at least partially private, and that is accessible to disabled people has been made in the form of the ground floor terrace

Issue: Lifetime Homes

All the standards of Lifetime Homes have been complied with, that is: access to the dwelling (Standards 1-5); general standards of accessibility within the dwelling (Standards 6-7, 11, 14, 15 and 16); potential future adaptability of the dwelling (Standards 8, 9, 10, 12 and 13) – see separate information.

4.9 Category 8, Management:

Issue: Home user guide

A simple user guide will be provided. This will cover information relevant to the 'non-technical' tenant/occupant on the operation and environmental performance of their home, together with information that the user guide is available in alternative accessible formats and the guide will also cover information relating to the site and its surroundings

Issue: Considerate Constructors Scheme

Best practice site management principles will be employed during construction with a commitment is to go significantly beyond best practice including a regular audit under a nationally or locally recognised independent certification scheme such as, or comparable to, the Considerate Contractors Scheme .

Issue: Construction site impacts

There will be a strategy to operate site management procedures on site that cover 2 or more of the following items: CO2 or energy arising from site activities; CO2 arising from transport to and from site; Water consumption arising from site activities; Best practice air pollution controls; Best practice water pollution controls; 80% of site timber is reclaimed, reused or responsibly.

Issue: Security

The scheme will comply with 'Secured by Design – New Homes' (Section 2: Physical Security). This will include working closely with an Architectural Liaison Officer or Crime Prevention Design Advisor from the local Police Force.

4.10 Category 9, Ecology:

Issue: Change in ecological value of the site

The proposal will target a minor enhancement in ecological value is as follows calculated using the Code Change in Ecological Value Calculator.