PROPOSED DEVELOPMENT AT

KENTISH TOWN ROAD

Code for Sustainable Homes Pre-Assessment

Prepared by Prime Meridian Ltd
on behalf of Kenny Properties

Contents

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Assessment: Pre-Application CSH for Planning Application

1. Introduction

This report has been developed by Prime Meridian on behalf of Kenny Properties and relates to the proposed development at 218 – 228 Kentish Town Road, London in respect of achieving Code for Sustainable Homes Level 3. The proposals are for a 100% residential scheme to include 4 new build apartments. The conversion of 5 apartments whilst not assessed under the Code for Sustainable Homes assessment process will however follow the CSH design and construction parameters to ensure the sustainability criteria are met.

The Code for Sustainable Homes is an environmental assessment method for rating and certifying the performance of new homes. It is a national standard for use in the design and construction of new homes with a view to encouraging continuous improvement in sustainable home building. It was launched in December 2006, and became operational in April 2007.

National, regional and local planning policy requires that any new residential development should be shown to be “sustainable”, and this is specifically addressed in The London Plan, Policy 4A3 : Sustainable design and construction. With the launch of the Code for Sustainable Homes Assessment methodology in 2007 to provide environmental and sustainability ratings for new build dwellings, many local authorities and London Borough’s have adopted the requirement to achieve Level 3 of the Code for Sustainable Homes within Planning Policies.

The following summery includes key elements of the development contributing to achieving the required level of The Code. The Conclusion section of this reports will identify the achievable credits sought within the pre-application assessment to predict a final rating.

2. Summary

To ensure that the development is built to a high environmental standard, advise has been sought from an early stage of the development process providing opportunities to design the dwellings in terms of layout, spaces, materials, construction methods, fittings, appliances, etc. with sustainability in mind.

Key elements of the development which contribute to the desired environmental rating include:

- Protecting and enhancing the ecological features of the site with the addition of a Sedum roof to the development.
- The use of significantly higher levels of insulation within the construction elements, use of Accredited Construction Details (ACD), and joinery with low U-Values, will not only achieve the requirements of the Code for Sustainable Homes, but surpass the requirements, and provide dwellings with lower than expected carbon dioxide emissions.
- The installation of low energy appliances and light fittings.
- Through the careful selection of construction materials - employing the use of the Green Guide to Specification will ensure only those with the highest environmental credentials will be selected.
- The provision of a secure cycle store will be available to all dwellings assessed under the Code for Sustainable Homes and the 5 conversions.
- A full assessment of the consumption of potable water for each dwelling will be carried out to ensure a reduction from 125l/person/day as set out in the current Building Regulations to below 105l/person/day.

Whilst this is not an exhaustive list of requirements and design considerations for the development, the contributions detailed above will provide a significant contribution to achieving sustainable construction and sustainable homes.

3. Conclusions

The Code for Sustainable Homes covers nine categories of Sustainable Design, divided further into sub-categories as listed below. Each issue is a source of environmental impact which is assessed against a performance target and then awarded one or more credits. Each credit carries an individual percentage weighting to then deliver a number of points for each element. To achieve Code Level 4, the total number of percentage points required are equal to or greater than 68 Points.

The Score predictions are as follows.

Ene 1	Dwelling emissions rate	6 credits	7.530%
Ene 2	Building Fabric	5 credits	6.275%
Ene 3	Energy display devices	2 credits	2.510%
Ene 4	Drying space	1 credit	1.255%
Ene 5	Energy labelled white goods	2 credits	2.510%
Ene 6	External lighting	2 credits	2.510%
Ene 7	Zero or low carbon energy technologies	2 credits	2.510%
Ene 8	Cycle storage	2 credits	2.510%
Ene 9	Home office	1 credit	1.255%
Wat 1	Internal potable water use	3 credits	4.500%
Wat 2	External potable water use	1 credit	1.500%
Mat 1	Environmental impact of materials	9 credits	2.700%
Mat 2	Sourcing : basic building elements	4 credits	1.200%
Mat 3	Sourcing : finishing elements	0 credits	0.000%
Sur 1	Reduction of surface run off	1 credit	0.550%
Sur 2	Flood risk	2 credits	1.100%
Was 1	Household waste storage and recycling	4 credits	3.657%
Was 2	Construction site waste management	2 credits	1.828%
Was 3	Composting	0 credits	0.000%
Pol 1	Insulant GWP	1 credit	0.700%
Pol 2	NOx emissions	2 credits	1.400%
Hea 1	Daylighting	0 credits	0.000%

Hea 2	Sound insulation	3 credits	3.501%
Hea 3	Private space	0 credits	0.000%
Hea 4	Lifetime homes	4 credits	4.668%
Man 1	Home user guide	3 credits	3.333%
Man 2	Considerate Constructors	1 credit	1.111%
Man 3	Construction site impacts	2 credits	2.222%
Man 4	Security	2 credits	2.222%
Eco 1	Ecological value of site	1 credit	1.333%
Eco 2	Ecological enhancement	1 credit	1.333%
Eco 3	Protection of ecological features	1 credit	1.333%
Eco 4	Change of ecological value of site	3 credits	4.000%
Eco 5	Building footprint	0 credits	0.000%
Total anticipated score:			68.27%

If the development is constructed and implemented as described within this report, a total score of 68.27% is achievable. In excess of 68.00%, a Code for Sustainable Homes Rating of “Level 4” will be awarded.

4. Detailed Review

The detailed review of the pre-assessment will cover all nine categories and subsequent sub-categories. All cases and elements have been assessed by a licenced Code for Sustainable Homes Assessor, with relevant scores applied as required for a formally design stage assessment.

Ene 1	Dwelling emissions rate	6 credits	7.530%

A detailed Energy Statement has be compile and submitted as part of this planning application, therefore information to achieve the required CSH Level 4 criteria has not been duplicated here. A summary of the design considerations are detailed below.

- High levels of insulation to be building fabric far in excess of current Building Regulations minimum standards, providing low U-Values.
- The inclusion of a heating system utilizing a renewable energy source. Systems considered include Gas central heating combined with a solar hot water system, Solar PV system, and air to water air source heat pump.
- Constructing the building to accredited construction details will improve the air permeability of the building.

The results from the SAP calculation will prove a significant improvement of the dwelling emission rate (DER) over the target emission rate (TER), in turn resulting in a minimum CSH score of

Ene 2	Building Fabric	5 credits	6.275%

The SAP calculation will identify the heat loss parameter (HLP) of each dwelling, and will be optimised through higher insulation values, and low air permeability as discussed in Ene 1.

Ene 3	Energy display devices	2 credits	2.510%

Devices to display electricity and primary heating fuel consumption are to be installed in each dwelling, achieving a maximum of 2 credits.

Ene 4	Drying space	1 credit	1.255%

Internal drying spaces are to be provided for each dwelling of suitable line length.

Ene 5	Energy labelled white goods	2 credits	2.510%

All appliances installed are to be rated under the EU Energy Efficiency Labelling Scheme, and will achieve the minimum required levels as set out in the CSH. This includes the installation of A+ rated fridge freezers, A rated washing machines and dishwashers, and a B rated tumble dryer.

Ene 6	External lighting	2 credits	2.510%

All external space and security lighting is to be installed in private and common areas with appropriate controls. All lighting to be provided with energy efficient fittings.

Ene 7	Zero or low carbon energy technologies	2 credits	2.510%

Through the installation of air source heat pumps to each dwelling, a 15% reduction in CO2 as calculated through a SAP calculation will be provided.

Ene 8	Cycle storage	2 credits	2.510%

The cycle storage as indicated on the application drawing will provide secure and safe storage for 2 cycles per dwelling.

Ene 9	Home office	1 credit	1.255%

Sufficient space and services are to be installed in an appropriate location within each dwelling to allow occupants to set up a home office.

Wat 1	Internal potable water use	3 credits	4.500%

Current building regulations require a maximum daily consumption of 125l per person. Through the selection of low capacity baths, taps and showers with low flow rates, and low dual flush toilets, a consumption of 105l per person per day is achievable.

Wat 2	External potable water use	1 credit	1.500%

Rainwater butts are to be provided within the communal external areas of the development.

Mat 1	Environmental impact of materials	9 credits	2.700%

BRE has published life cycle analysis of many common construction materials in the Green Guide to Specification. The Green Guide rates building construction elements from A+ to E, and applies to 5 major construction elements – floors, roofs, internal walls, external walls, and windows. The mandatory requirement is for 3 of the 5 elements to achieve at least D ratings.

Initial calculations indicate a minimum of 9 credits are available, with the possibility of increasing when further construction drawings and specifications are created.

Mat 2	Sourcing : basic building elements	4 credits	1.200%

4 credits are to be sought through considerate selection and monitoring of material use.

Mat 3	Sourcing : finishing elements	0 credits	0.000%

Currently no credits sought under Mat 3

Sur 1	Reduction of surface run off	1 credit	0.550%

This mandatory element of the code is achieved through the attenuation of rainwater through the green roof construction prior to the discharge into the drainage system. Due to the nature of the site, and the installation of a green roof, the surface water run-off from the site will not increase, though the attenuation will improve the run off flow into the drainage system.

Sur 2	Flood risk	2 credits	1.100%

The application site is not located within a flood risk area as identified on map 2, and also noted within the design and access statement. Located outside of a flood risk area will achieve the maximum 2 credits.

Was 1	Household waste storage and recycling	4 credits	3.657%

Sufficient internal and external waste and recycling storage is to be provided for each dwelling (communal storage externally). The provision of suitable recycling and waste storage will achieve the maximum of 4 credits.

Was 2	Construction site waste management	2 credits	1.828%

A site waste management plan is to be provided prior to commencement on site to ensure target benchmarks for efficiency are met, procedures and commitments are actioned, and all monitoring and measuring of waste is carried out.

Was 3	Composting	0 credits	0.000%

Currently no credits are sought for Was 3

Pol 1	Insulant GWP	1 credit	0.700%

All insulants are to assessed and to achieve a global warming potential (GWP) of less than 5.

Pol 2	NOx emissions	2 credits	1.400%

The installed heating systems are to emit nitrogen oxide (NOx) emissions of no more than 70mg/kWh. Also achieved by installing a Class 5 boiler.

Hea 1	Daylighting	0 credits	0.000%

Currently no credits are sought for Hea 1.

Hea 2	Sound insulation	3 credit	3.501%

Robust details are to be followed to achieve airborne sound insulation values of at least 5dB higher than the performance set out in the building regulations, and to achieve impact sound insulation values at least 5dB lower than the performance set out in the building regulations.

Hea 3	Private space	0 credits	0.000%

Currently no credits are sought for Hea 3

Hea 4	Lifetime homes	4 credits	4.668%

New dwellings designed to Life Time Homes (LTH) criteria

Man 1	Home user guide	3 credits	3.333%

Each home is to be provided with a home user guide in a format appropriate to the user. This will provide a guide to the occupants that contains necessary details about the every day use of the home in a form that is easy to understand. The guide will also include additional information relating to the site and its surroundings, and is compiled in accordance with the CSH checklists.

Man 2	Considerate Constructors	1 credit	1.111%

A commitment for the contractor to meet best practice under a nationally or locally recognised certification scheme (such as Considerate Constructors Scheme) is to be implemented. Registration to a scheme is to have taken place prior to commencement on site. Achieving best practice will achieve 1 credit.

Man 3	Construction site impacts	2 credits	2.222%

Procedures and targets are to be set prior to commencement on site to manage and mitigate environmental impacts on site. CO2 production or energy use arising from site activity, transportation to and from site, water consumption from site activities are to be reported throughout the construction process and set against target figures. Best practice is to be adopted for the minimisation of air (dust) pollution from site activities, and the management of water pollution on site. Checklists are to be completed onsite to ensure best practice throughout the construction process.

Man 4	Security	0 credits	0.000%

Currently no credits sought for Man 4.

Eco 1	Ecological value of site	1 credit	1.333%

Due to the current nature of the site, it is deemed to have low ecological value.

Eco 2	Ecological enhancement	1 credit	1.333%

Prior to commencement on site, a suitably qualified ecologist will provide key recommendations to improve the ecological value of the site. A minimum of 30% of additional recommendations are to be adopted, achieving 1 credit.

Eco 3	Protection of ecological features	1 credit	1.333%

Due to the low ecological value of the existing site, there are no ecological features to protect, therefore achieving the credit by default.

Eco 4	Change of ecological value of site	3 credits	4.000%

With the installation of a green roof, the increase in ecological value can achieve a credit score of 3.

Eco 5	Building footprint	0 credits	0.000%

Currently no credits are sought for Eco 5.