# 141-145 KENTISH TOWN ROAD
# LONDON
# NW1 8PB

## ECOHOMES
## PRE-ASSESSMENT

## DECEMBER 2011

## ISSUE FOR PLANNING

| | Name | Date |
|---|---|---|
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## 1. INTRODUCTION

1.1 NRG Consulting have been commissioned by Bellis Cooley Architects to perform an EcoHomes pre-assessment for 141-145 Kentish Town Road in order to ascertain the likely EcoHomes rating the dwelling will achieve on completion.

### The Development

1.1a The site is at present is a mixed use development with an unaffected retail unit on the ground floor with the upper floors being converted and refurbished to form 6 residential dwellings.

Four 2-bed and two 1-bed flats are proposed.

1.2 For full details, see the D&A Statement.

### Pre-assessment

1.3 This pre-assessment is based on evidence obtained from the architect together with associated drawings and reports.

*1.4* The assessment is performed in accordance with Local Planning policy. The development is located in the borough of Camden. Planning *Policy DP22 - Promoting sustainable design and construction states:*

*1.4.1 We expect developments (except new build) of 500 sq m of residential floorspace or above or 5 or more dwellings to achieve "very good" in EcoHomes assessments prior to 2013.*

1.5 EcoHomes assesses a dwelling's performance against eight categories, with credits available from 33 indicators located within each (Table 2.1):

**Table 2.1: Environmental indicators assessed under EcoHomes**

| Category | Indicators |
|---|---|
| Energy & $CO_2$ Emissions | Dwelling Emission Rate (DER); Building Envelope Performance; Drying Space; Eco-labelled White Goods; Internal Lighting; and External Lighting. |
| Transport | Public Transport; Cycle Storage; Local Amenities; and Home Office. |
| Pollution | Insulation Ozone Depletion Potential (ODP) and Global Warming Potential (GWP); NOx Emissions; Reduction of Surface run-off; Renewable and Low Emissions energy source; and Flood Risk Mitigation. |
| Materials | Environmental Impact of Materials; Responsible Sourcing of Materials (basic and finishing elements); and Recycling Facilities. |
| Water | Internal Potable Water Use; and External Potable Water Use. |
| Land Use and Ecology | Ecological Value of Site; Ecological Enhancement; Protection of Ecological Features; Changes in Ecological value of the site; and Building Footprint. |
| Health & Wellbeing | Daylighting; Sound Insulation; and Private Space. |
| Management | Home User Guide; Considerate Constructors Scheme; Construction Site Impacts; and Security. |

1.6 A dwelling must gain a total number of credits across the eight categories to achieve one of the four EcoHomes ratings (Table 2.2):

**Table 2.2: Threshold of scores to obtain Code Levels**

| Percentage Score | Code Level |
|---|---|
| 36 | Pass (★) |
| 48 | Good (★★) |
| 58 | Very Good (★★★) |
| 70 | Excellent (★★★★) |

1.7 A licensed EcoHomes assessor should be introduced into the project as early as possible and preferably on inception to ensure the development achieves the target EcoHomes rating, as many credits are obtained by 'designing in' their requirements.

1.8 Once a pre-assessment is completed, design changed to achieve targeted credits and methods implemented to obtain others, the development may be registered with the BRE and an optional design stage assessment carried out. An assessment will also be carried out post-construction to ascertain the EcoHomes rating of the development on completion, after which certificates can be awarded. Both the design stage and post-construction stage assessments require the collection of evidence providing proof of compliance with each indicator. Evidence requirements for each category can be found in the EcoHomes Guidance 2006, Issue 1.2, available for free from http://www.breeam.org/filelibrary/EcoHomes_2006_Guidance_v1.2_-_April_2006.pdf.

1.9 It is wise to be conservative when predicting credits to be obtained at the design stage, as excess ambition may result in an unlikely target. While this report predicts the EcoHomes rating that may be obtained, it cannot ensure that the completed dwelling will obtain it.

## 2. RESULTS AND RECOMMENDATIONS

2.1 Following evidence gathered from sources outlined in 1.4, it is predicted that the development at 141-145 Kentish Town Road will score a total of **59.59%** in assessment, achieving an EcoHomes rating of **'Very Good'**.

2.2 The above will be achieved through attainment of the following credits (outlined using the EcoHomes 2006 Pre Assessment Estimator, shown in Appendix A):

### Energy

2.3 A SAP (Standard Assessment Procedure) assessment of the dwelling has not been undertaken at this stage but estimated based on previous Part L1b calculations completed on similar dwellings. A conservative DER to be used for this assessment is 25kg$CO_2$/$m^2$/year. The SAP assessment also calculates the Heat Loss Parameter (HLP) of the building, which is estimated in this instance at 1.80.

2.4 Drying space will be provided in the bathrooms in the form of Tidy Driers.

2.5 At least 75% of light bulbs will be energy efficient and external lighting dedicated Compact Fluorescent Lamps (CFLs) with daylight and person sensor.

### Transport

2.6 The dwelling benefits from its urban location (150m from Kentish Town Tube) achieving maximum credits due to its proximity to transport links and local amenities.

2.7 Provision will be made for one cycle space per dwelling in a dedicated proprietary store and a home office in the lounge of each property.

### Pollution

2.8 All new insulation will avoid the use of Ozone Depleting Substances and have a Global Warming Potential of less than 5.

2.9 The boiler will be gas, at least 88% energy efficient as per SEDBUK 2010 with NOx emissions of less than 40mg/kWh.

2.10 The development is in Flood Risk Zone 1.

2.11 Neither Renewable Energy nor SUDs systems are being installed due to lack of space.

**Materials**

2.12 All existing elements that are being retained will achieve an 'A rating' under the Green Guide for Specification.

2.13 All new basic and finishing materials will be responsibly sourced, with proof gained either through compliance with an accredited scheme (E.g. FSC [Forest Stewardship Council] timber), or supplemented with an Environmental Management System for production.

2.14 Provision will be made for internal recycling facilities to complement the Green Bag Recycling Scheme that Camden Council provide.

**Water**

2.15 All toilets will be 6/3 litre dual flush.

2.15.1 Wash hand basins will incorporate aerating taps.

2.15.2 Showers will have a flow rate of less than or equal to 9 litres.

2.15.3 Baths will be standard size.

2.15.4 Total internal water use will therefore be 40.24$m^3$/bed space/year, using the EcoHomes calculator tool.

**Land Use and Ecology**

2.16 As the development is a brownfield site, it is anticipated that the number of species will remain the same. No ecological features are being affected as none are present on the site.

2.17 The building footprint is greater than 2.5:1.

### Health and Wellbeing

2.18 Preliminary Daylight Calculations show that for the lounge, credits could possibly be achieved, due to incorporation of large windows, with a view of the sky from all habitable rooms (excluding the basement).

2.19 Sound Testing will be undertaken to the requirements of Part E of the Building regulations (2003)

### Management

2.20 A Home User Guide will be provided upon handover outlining the environmental performance of the home.

2.21 The Considerate Constructors Scheme will be followed by the Contractor with a pass score of 24 to be achieved.

2.22 A Site Waste Management Plan will be written to provide a strategy to monitor, sort and recycle construction waste. Further, best practice policies will be adopted in respect of dust pollution occurring on site.

### Recommendations

2.23 Although EcoHomes 'Very Good' will be achieved through inclusion of the above measures, it is useful to plan in contingency credits if some are missed. It is possible the developer could achieve extra credits through:

- Provide Fridge/Freezer and Washing Machine.
- enhancing the ecological value of the site through consultation with an accredited expert; and,
- Refurbish Party Walls and Floors and Sound Test to 3db better than AD:E Requirements.

# Appendix A

## Detailed Breakdown of EcoHomes Pre-Assessment

**141-145 Kentish Town Road**

**Doc Ref: NRG/RT/KTR/PA**

| Section | | Credits A | *Potential* | How to Achieve |
|---|---|---|---|---|
| | | | | |
| ENE 1 | DER | **6** | *15* | Average DER estimated to be in the region of **25**kg/CO2/m2/yr based on previous experience. 2006 Part L required for EcoHomes |
| ENE 2 | BUILDING FABRIC | **2** | *2* | Under 1.9 on the Fabric and Ventilation Heat Loss. **HLP - <1.9** |
| ENE 3 | DRYING SPACE | **1** | *1* | Provide a Tidy Drier of minimum 4m line length to each bathroom with humidistat controlled fan present. |
| ENE 4 | ECO GOODS | **1** | *2* | Provide an EU Energy Leaflet to each dwelling. Not enough space for full White Goods package. |
| ENE 5 | INTERNAL LIGHTS | **2** | *2* | A min. 75% of all internal light bulbs to be low energy. (In-line with mandatory requirement of Part L 2010) |
| ENE 6 | EXTERNAL LIGHTS | **2** | *2* | Space lighting to be low energy & security lighting max 150W w/ PIR & daylight sensors |
| TRA 1 | PUBLIC TRANSPORT | **2** | *2* | Within 500m of regular transport links - Kentish Town Tube and Train |
| TRA 2 | CYCLE STORAGE | **2** | *2* | 1 cycle storage space provided to each dwelling. Cycle storage to be weatherproof with a secure fixing i.e. Sheffield Frame. |
| TRA 3 | LOCAL AMENITIES | **3** | *3* | Based on Proximity to Local Amenities - All 5 amenities within 350m. |
| TRA 4 | HOME OFFICE | **1** | *1* | 1.8m free wall space. 1 BT socket and 2 double sockets in dedicated space. (Lounge to be used) |
| POL1 | ODP / GWP | **1** | *1* | All insulation to be ODP = 0, GWP < 5 |
| POL2 | NOX OUTPUT FROM BOILER | **3** | *3* | The Gas Boiler is to have a NOx output of under 40mg/Kwh. |
| POL3 | SURFACE RUNOFF | **0** | *2* | No SUDS system to be installed. |
| POL4 | RENEWABLE & LOW ENERGY | **0** | *3* | No renewable energy being provided to the development. |
| POL 5 | FLOOD RISK | **2** | *2* | Site is of low flood risk according to Environment Agency Website |
| MAT 1 | ENV IMPACT OF MATERIALS | **13** | *16* | Gain appropriate ratings from the Green Guide. (www.thegreenguide.org.uk). Retained materials gain credits by default. |
| MAT 2 | RESPONSIBLE SOURCING: BASICS | **2** | *6* | Any new material to have an EMS Certificate i.e. Brick/Block/Stone/Glass/Concrete, Timber Elements = FSC/PEFC. |
| MAT 3 | RESPONSIBLE SOURCING: FINISHES | **2** | *3* | Any new material to be used for Panelling/Skirting/Window/Ext. Int. Door/Furniture/Fascias to be FSC/PEFC certified timber. |
| MAT 4 | RECYCLING FACILITIES | **6** | *6* | 1 30ltr recycling bin required in addition to external waste bin - Camden use Green Box Scheme for Recycling. |
| WAT 1 | INTERNAL WATER | **3** | *5* | 6/3ltr toilet, aerated taps, standard (1700mm x 800mm) bath, 9ltr per minute shower = 3 credits |
| WAT 2 | EXTERNAL WATER | **0** | *1* | No Water Butts to be provided. |
| ECO 1 | ECO VALUE | **1** | *1* | Low ecological value - Footprint not changing. |
| ECO 2 | ECO ENHANCEMENT | **0** | *1* | Credit not sought (Ecological Report required) |
| ECO 3 | PROTECTION OF ECO | **1** | *1* | No ecological features = none to be protected. |
| ECO 4 | CHANGE OF ECO VALUE | **2** | *4* | Species change pre and post development site - No differences = neutral change. |
| ECO 5 | BUILDING FOOTPRINT | **1** | *2* | Based on Footprint to Floor Area Ratio. Ground Floor to Floor Ratio = >2.5:1 |
| HEA 1 | DAYLIGHT | **1** | *3* | Based on BRE Daylight factors. Preliminary Calculations estimate 1 credit should be achieved. |
| HEA 2 | SOUND INSULATION | **2** | *4* | Sound Testing to be undertaken to meet the requirements of Part E of the Building Regulations. 4 tests required. |
| HEA 3 | PRIVATE SPACE | **0** | *1* | Not all flats have private space. |
| MAN 1 | HOME USER GUIDE | **3** | *3* | Provide simple non-technical info on operation of house and info. on site and surround in the form of a Home User Guide |
| MAN 2 | CONSIDERATE CONSTRUCTORS | **1** | *2* | Contractor to achieve a minimum score of 24 Considerate Constructors Scheme. |
| MAN 3 | CONSTRUCTORS SITE IMPACTS | **2** | *3* | Monitor, Sort and Recycle Construction Waste through a SWMP. Provide Air & Water Pollution Policy . |
| MAN 4 | SECURITY | **0** | *2* | Windows being retained will not meet BS7950 and doors PAS24. No Secure by Design certificate to be achieved. |

**SCORE** **59.59**

| Rating | Score |
|---|---|
| Good | 48 |
| Very Good | 58 |
| Excellent | 70 |

NRG CONSULTING