

**APPENDIX (i)**  
**BRE CODE FOR SUSTAINABLE**  
**HOMES LEVEL 4**  
**DESIGN STAGE REPORT/ASSESSMENT**



**1 Radlett Place  
St Johns Wood  
London NW8 6BT**

**Report Demonstrating Compliance  
Code for Sustainable Homes Assessment  
Code Level 4**

**DESIGN STAGE REPORT/ASSESSMENT**

**DMW/JB/507:October 2012**

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M&E Consultants

Energy Consultants



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## Executive Summary

- The proposed development at 1 Radlett Place achieves CSH Level 4, based on the requirements of the Code for Sustainable Homes, November 2010 Version.
- The development satisfies all the mandatory sections within the Energy, Water & Materials Categories and achieves Code Level 4 status with an overall score of **70.18%** at design stage.
- From the following Design Stage/Assessment report, it can be seen that the development is a good example of sustainable homes with additional renewable energy sources.
- The Pre-Assessment is based on the information provided by the design team. The Final Construction Phase Certificate will be verified by BREEAM following accepted independent documentation, calculations and reports.

## The Proposals

The proposed development at Radlett Place comprises a considerable property containing 5 family bedrooms plus 3 further bedrooms and facilities housing domestic staff. Two storeys above ground plus loft area provides the majority of the domestic accommodation while a double undercroft provides social, leisure and storage facilities at lower ground floor with services housed in the basement.

**The purpose of this report is to demonstrate compliance with the Code for Sustainable Homes to achieve Level 4 in support of the Planning Application for the site.**

**The Code for Sustainable Homes Level 4 BREEAM Design Stage Certificate is attached in Appendix (i).**

## **The Code for Sustainable Homes is divided into nine main elements;**

- Energy
- Water
- Materials
- Surface Water
- Waste
- Pollution
- Health and Wellbeing
- Management
- Ecology

The following sections, overleaf, show how in each Category the proposed development at Radlett Place achieves Level 4 under the November 2010 version of the Code.

## Code for Sustainable Homes Level 4 Assessment Summary

### Category 1: Energy

- Ene 1: Dwelling Emission Rate** - The mandatory element of this category to achieve Code Level 4 requires a 25% improvement of Dwelling Emission Rate (DER) over the Target Emission Rate (TER) as defined in Approved Document Part L1A 2010. Design Stage SAP calculations reveal that as a result of the fabric/windows and renewable technology specified for the development this minimum requirement is met by achieving a 25.6% improvement of DER/TER. This level of improvement achieves **Code Level 4** and contributes **3.1 Credits** to the overall score.
- Ene 2: Fabric Energy Efficiency** - Design Stage SAP calculations reveal the specification for the proposed development achieves a FEE rating of 56.95 Wh/m2/year contributing **3.6 Credits** to the overall score.
- Ene 3: Energy Display Devices** - Will be provided to allow dwelling occupants to monitor fuel consumption related to primary heating and current electricity empowering them to reduce energy use contributing **2 Credits** to the overall score.
- Ene 4: Drying Space** – Externally secure drying facilities to be provided comprising 6m+ line length in accordance with a 3+ bedroomed dwelling contributing **1 Credit** to the overall score.
- Ene 5: Energy Labelled White Goods** – A+ Fridge/Freezers and A rated Wash Machines/Dishwashers to be supplied together with EU Efficiency Labelling advice to be provided contributing **2 Credits** to the overall score.
- Ene 6: External and Security Lighting** - Low energy fittings to be provided with PIR or DtD controls in line with Code requirements contributing **2 Credits** to the overall score.
- Ene 7: Low or Zero Carbon (LZC) Technologies** – Through the use of LZC technologies, in the form of CHP, PV and other energy saving elements, to supply a significant proportion of energy demand it is targeted to reduce CO2 emissions as a result to at least 15% contributing **2 Credits** to the overall score.
- Ene 8: Cycle Storage** - Space for the storage of minimum 4 No. cycles will be provided contributing **2 Credits** to the overall score.
- Ene 9: Home Office** – A specific space with all necessary services is to be provided to allow occupants to set up a Home Office having adequate ventilation and achieving an average daylight factor of 1.5% contributing **1 Credit** to the overall score.

### Category 2: Water

- Wat 1: Internal Potable Water Use** - Dual flush WC's, reduced bath size and restricted flow to showers, basins and the kitchen taps will ensure that water consumption will be restricted to 105 litres/person/day achieving the mandatory requirement for **Code Level 4** and contributing **3 Credits** to the overall score.
- Wat 2: External Potable Water Use** - Water storage for external irrigation purposes is to be provided within the overall drainage strategy for the site contributing **1 Credit** to the overall score. It is also a requirement of this category that the proposed swimming pool and water feature at ground floor level is provided with 100% rainwater.

### Category 3: Materials

**Mat 1: Environmental Impact of Materials** - The mandatory requirement of the Code that specifies at least three of the five key building elements have to achieve BRE Green Guide 2008 ratings of A+ to D will be met. It is assumed at this stage that a minimum **8 Credits** (of the 15 available) will be contributed to the overall score.

**Mat 2: Responsible Sourcing of Basic Building Materials** - It will be a requirement that suppliers of basic building materials will need to have compliant certified Environmental Management Systems in place in respect of the Key Process and Supply Chain, and that Timber will need to be sourced through FSC or similar schemes in order to be compliant with the Code and achieve **4 Credits** assumed in this Category at Design Stage.

**Mat 3: Responsible Sourcing of Finishing Materials** - Similar to Mat 2 it will be a requirement that suppliers of finishing materials will need to have compliant certified Environmental Management Systems in place in respect of the Key Process and Supply Chain and, that Timber will need to be sourced through FSC or similar schemes in order to be compliant with the Code and achieve **3 Credits** assumed in this Category at Design Stage.

### Category 4: Surface Water Run-Off

**Sur 1: Reduction of Surface Water Run-Off** - An engineer's report will confirm that peak rate run off will be no worse at the post development stage compared to pre-development and that any additional volume as a result of the proposed design will be retained and dealt with on site. SUDS techniques will be used to accommodate any additional volume and ensure an appropriate level of treatment of the discharged water in order to avoid the risk of pollution of the receiving waters contributing **1 Credit** to the overall score.

**Sur 2: Flood Risk** - A Flood Risk Assessment prepared in accordance to PPS25 confirms that the development is in a low flood risk area contributing **2 Credits** to the overall score.

### Category 5: Waste

**Was 1: Household Waste Storage** - Mandatory requirements will be met and maximum credits will be obtained for waste storage provision for the end user. Internal storage will be provided with minimum 30 litre capacity to be located in the kitchens. Dedicated external space will be provided for waste bins with min 620 litre capacity in compliance with minimum Code requirements. LB Camden operate weekly collections and a pre-collection sorting scheme related to recyclable materials. Waste Storage provisions as described will contribute **4 Credits** to the overall score.

**Was 2: Site Waste Management** - A mandatory Site Waste Management Plan is to be prepared which will include procedures for monitoring and minimising site waste, recycling and sorting ensuring 85% of waste generated will be diverted from landfill contributing **3 Credits** to the overall score.

**Was 3: Composting** – LB Camden provides a green and kitchen waste collection that satisfies this Category contributing **1 Credit** to the overall score.

## Category 6: Pollution

**Pol 1: Global Warming Potential of Insulants** - All insulation materials to be used in the Development will have a Global Warming Potential (GWP) of less than 5 contributing **1 Credit** to the overall score.

**Pol 2: Nox Emissions** – Primary space and hot water energy will be provided by a Class 5 Boiler providing dry NOx emissions  $\leq 40\text{mg/kWh}$  contributing **3 Credits** to the overall score.

## Category 7: Health and Wellbeing

**Hea 1: Daylighting** - The design of the development achieves better than the minimum 1.5% daylight factor, over min 80% of the working plane required in the Living, Dining and Study areas and better than the daylight factor of 2% required in the Kitchen over 80% of the working plane contributing **3 Credits** to the overall score.

**Hea 2: Sound Insulation.** A detached dwelling is proposed for the development of the site satisfying The Code default case in this Category contributing **4 Credits** to the overall score.

**Hea 3: Private Space** - The ample garden area and inclusive access and usable patio areas adjacent to the proposed property is well in excess of the Code requirement related to this Category contributing **1 Credit** to the overall score.

**Hea 4: Lifetime Homes** - All the principles of Lifetime Homes that are applicable to the dwelling are to be included within the design contributing **4 Credits** to the overall score.

## Category 8: Management

**Man 1: Home User Guide** - Maximum credits will be achieved by provision of a home user guide incorporating information relating to the site and its surroundings contributing **3 Credits** to the overall score.

**Man 2: Considerate Constructors Scheme** – It is proposed that the constructor employed for the Development will be registered with the Considerate Constructors Scheme and will meet Best Practice standards by achieving at least 3 in every section contributing **1 Credit** to the overall score.

**Man 3: Construction Site Impacts** - Procedures that cover 4 or more best practice policies in respect of Energy use, CO2 production, water consumption, water pollution and air(dust) pollution are to be adopted contributing **2 Credits** to the overall score.

**Man 4: Security** - An ALO/CPDA from local Police Force is to be consulted with recommendations incorporated into the design to comply with *Section 2 – Physical Security from ‘Secured by Design – New Homes’* contributing **2 Credits** to the overall score.

## Category 9: Ecology

**Eco 3: Protection of Ecological Features** – An arboricultural report and recommendations have been prepared advising on appropriate measures related to the trees on and adjacent to the construction area that are likely to be affected otherwise by the works contributing **1 Credit** to the overall score.

**Eco 4: Change in Ecological Value of Site** – It can be calculated that the proposed development will provide a neutral change in the ecological value of the site with a species change within the range -3 to +3 contributing **2 Credits** to the overall score.

# THE CODE FOR SUSTAINABLE HOMES

## INTERIM CERTIFICATE

(Issued at Design Stage)



### ISSUED TO:

**Plot 1 1 Radlett Place,  
St John's Wood, London,  
Greater London, NW8**

The sustainability of this home has been independently assessed at the Design Stage and has achieved a Code rating of 4 out of 6 stars under the November 2010 version.



The next page sets out how this home achieved its rating in the nine categories.

Licensed Assessor  
**Dudley Walker**

Assessor Organisation  
**ME7 LTD**

Client  
**Radlett Holdings Ltd**

Developer  
**Radlett Holdings Ltd**

Architect  
**SHH Architects**

Certificate Number  
**BRE-00018004-DS-001-00-0001**

Date  
**25 October 2012**

Signed for and on behalf of BRE Global Ltd



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# THE CODE FOR SUSTAINABLE HOMES



## INTERIM CERTIFICATE

(Issued at Design Stage)

Certificate Number: BRE-00018004-DS-001-00-0001

Score: 70

### What Your Code Star Rating Means

Combined Score	36-47	48-56	57-67	68-83	84-89	90-100
Stars	1	2	3	4	5	6

The Code for Sustainable Homes considers the effects on the environment caused by the development and occupation of a home. To achieve a star rating, a home must perform better than a new home built to the minimum legal standards, and much better than an average existing home.

How this home scored												
Category		Percentage of Category Score attained										What is covered in the category
		10	20	30	40	50	60	70	80	90	100	
Energy	60											Energy efficiency and CO <sub>2</sub> saving measures
Water	66											Internal and external water saving measures
Materials	62											The sourcing and environmental impact of materials used to build the home
Surface Water Run-off	75											Measures to reduce the risk of flooding and surface water run-off which can pollute rivers
Waste	100											Storage for recyclable waste and compost, and care taken to reduce, reuse and recycle construction materials
Pollution	100											The use of insulation materials and heating systems that do not add to global warming
Health & Wellbeing	100											Provision of good daylight quality, sound insulation, private space, accessibility, and adaptability
Management	88											A Home User Guide, designing in security, and reducing the impact of construction
Ecology	33											Protection and enhancement of the ecology of the area and efficient use of building land

Further detailed information regarding The Code for Sustainable Homes can be found at [www.communities.gov.uk/thecode](http://www.communities.gov.uk/thecode)



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