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Preliminary Assessment

6 Erskine Road

Code for Sustainable Homes

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Introduction

Eight Associates have been appointed, as registered Code for Sustainable Homes assessors, to undertake a preliminary assessment of the Erskine Road development.

This report is based on the documents provided in June 2013, and subsequent email / telephone exchanges.

Code for Sustainable Homes

The Code for Sustainable Homes is an environmental rating for homes. It forms part of the Building Research Establishment's (BRE) suite of environmental tools.

This assessment has been undertaken under the Code for Sustainable Homes version November 2010. This is the updated version of Code for Sustainable Homes version May 2009 and is used only for new build developments.

Planning Requirement

The development is required under the London Camden Council Planning Policy to achieve at least a Code for Sustainable Homes Level 4.

Score Summary

This preliminary assessment outlines the likely rating for the site at present specification, including details of why the site scores certain credits and not others.

The site under assessment currently scores 72.75% and results in the development achieving a CODE LEVEL 4 under the scheme (minimum score required 68%). All mandatory requirements are met within the assessment including the Code Level 4 requirements under the Energy and Water sections.

Rating Summary
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Minimum Score Required

Code Level 1	36 points
Code Level 2	48 points
Code Level 3	57 points
Code Level 4	68 points
Code Level 5	84 points
Code Level 6	90 points

Rating Summary

Credit allocation	Available	Awarded	% Achieved	Score
Energy	31	16	52	18.79
Water	6	4	67	6.00
Materials	24	21	87	6.30
Surface Water Run-Off	4	2	50	1.10
Waste	8	7	87	5.60
Pollution	4	4	100	2.80
Health and Wellbeing	12	11	92	12.83
Management	9	9	100	10.00
Ecology	9	7	78	9.33
			Total	**72.75%**
			Rating (also see below)	**Level 4**

Mandatory requirements

The Code for Sustainable Homes also has certain mandatory requirements that must be met to allow the development to be certified. Compliance with these is detailed below. Further information on the mandatory credits can be found in Appendix 1.

Mandatory credits	Mandatory requirements achieved?	Code level achieved					
Carbon emissions (Ene1)	Yes	1	2	3	4	5	6
Indoor water use (Wat1)	Yes	1	2	3	4	5	6
Materials used (Mat1)	Yes	1	2	3	4	5	6
Surface water run off (Sur1)	Yes	1	2	3	4	5	6
Non-recycle waste storage (Was1)	Yes	1	2	3	4	5	6
Site waste management (Was2)	Yes	1	2	3	4	5	6

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		Likely Credits
ENERGY		
Ene 1 – Dwelling Emission Rate	The energy strategy is initially focused on implementing passive design measures to minimise energy demand for heating. Individual gas boilers will provide space heating and direct hot water. This scheme will target a 25% reduction in carbon emissions calculated in $kgCO_2/m^2/yr$, over Part LA 2010 minimum requirements.	4 of 10
Ene 2 – Fabric Energy Efficiency	The fabric energy efficiency of the whole scheme is approximately 61 $kWh/m^2/yr$, therefore no credits can be awarded.	0 of 10
Ene 3 – Energy Display Devices	Energy display devices will be provided to allow for real-time monitoring of heating and electricity usage.	2 of 2
Ene 4 – Drying Space	The dwellings will benefit from a minimum of 6m+ of drying line in a ventilated area, such as the utility room or a bathroom.	1 of 1
Ene 5 – Eco-labelled Goods	White goods will be provided. The fridges and freezers will be A+ rated and washing machines and dishwashers will be A rated and washer/dryer and tumble dryers are B rated under the EU Energy Efficiency Labelling Scheme.	2 of 2
Ene 6 – External Lighting	All space lighting within the external areas will be dedicated energy efficient, having a luminous efficacy greater than 40 lumens per circuit watt. Lighting will be controlled either through a time switch and/or movement detectors.	2 of 2
Ene 7 – LZC Energy Sources	The design team has confirmed that renewable technologies will be installed. Currently the photovoltaic system will achieve at least 15% carbon reduction to allow the dwellings to achieve two credits against this issue.	2 of 2

		Likely Credits
Ene 8 – Cycle Storage	Cycle spaces will be provided in line with the Code for Sustainable Homes requirements of storage for 2 cycles for each dwelling. The location will also be easily accessible from a public right of way and will have a secure doorset.	2 of 2
Ene 9 – Home Office	Home office facilities will be provided in a non-master bedroom to allow residents to work from home. This will include double power sockets and two telephone points along a wall of at least 1.8m in length in a room with adequate ventilation.	1 of 1
WATER		
Wat 1 – Internal Water Use	Mains water usage shall be significantly reduced through water efficient products in line with the mandatory requirements. An indicative specification for the development is: Shower of 9 litres/minute Bath sizes to be 140 litres to overflow Washbasin taps to be flow limited to 3 litres/minute Kitchen taps to be flow limited to 4 litres/minute Dual Flush WC 6/3 litre Low water use white goods Three of the available five credits are targeted for this issue based on the above specification with a reduction of the internal water consumption below 105 litres/person/day which meets the mandatory requirement for a CSH Level 3/4.	3 of 5
Wat 2 – External Water Use	The design team has confirmed that the ground floor and top floor flats will have a 200 litre water butt. The design team has also confirmed that units 2 and 3 do not have external private space; therefore the credit is awarded by default.	1 of 1

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		Likely Credits
MATERIALS		
Mat 1 – Environmental Impact of Materials	The design team has confirmed that at least 5 build-up elements will be A-C rated on the Green Guide. The materials calculation results in at least 12 points likely to be achieved.	12 of 15
Mat 2 – Responsible Sourcing: Basic Building Elements	All concrete will be sourced from a supplier with a BES 6001 certificate. All timber will be either PEFC or FSC certified.	6 of 6
Mat 3 – Responsible Sourcing: Finishing Building Elements	The current design is likely to source skirting, doors, architrave, fixed furniture, panelling and other finishing elements from FSC or PEFC certified suppliers. Therefore, three credits are likely to be achieved.	3 of 3
SURFACE WATER		
SW 1 – Reduction of Surface Water Run-off	The development is located in a zone defined as having a low annual probability of flooding. The development will meet mandatory requirements. The development does not offer the possibility to attenuate surface water drainage using SUDS techniques.	0 of 2
SW 2 – Flood Risk	The development is located in a zone defined as having a low annual probability of flooding. A site-specific flood risk assessment has been undertaken to ensure there are no site-specific risks.	2 of 2

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		Likely Credits
WASTE		
Was 1 – Recycling Facilities	Recycling storage will comply with theLondon Camden Council requirements for recycling externally and internally. External storage areas will be in compliance with disabled access BS 5906:2005 and the minimum requirements of the code for Sustainable Homes. A turning circle within the storage area will be provided. Camden Council operate a recycling service where recyclable waste is sorted before collection and collected onsite. The separation for recyclables will be provided in a fixed position in the kitchens with 30 litres to be provided for waste and a total of 30 litres for recyclables, in line with Camden collections for non-segregated waste.	4 of 4
Was 2 – Site Waste Management Plan	The contractor will develop a Site Waste Management Plan (SWMP) in line with statutory guidance and BRE requirements to reduce waste throughout the construction phases. This SWMP will include procedures and commitments to sort and divert waste from landfill, with a minimum target of 85% of non-hazardous construction waste to be diverted from landfill and either re-used, recycled or down-cycled.	3 of 3
Was 3 – Composting	The design team has confirmed that composting facilities will not be included.	0 of 1

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POLLUTION		
Pol 1 – Insulant GWP	The dwelling will be insulated with materials that will have a Global Warming Potential (GWP) of less than 5 and an Ozone Depletion Potential (ODP) of zero. This will include all insulation specified within the building elements, hot water stores and piping.	1 of 1
Pol 2 – NO_x Emissions	The design team has confirmed that efforts will be made to reduce the emission of nitrogen dioxides into the atmosphere, arising from the operation of space heating and hot water systems, where these emissions are likely to be equal to or lower than 40mg/kWh.	3 of 3
HEALTH AND WELLBEING		
Hea 1 – Daylighting	Daylighting levels will meet the minimum planning requirements and will target an average daylight factor of 2% within the kitchen and 1.5% for the living/dining rooms and studies. It is likely that 80% of the working plane in each kitchen, living room, dining room and study will receive direct light from he sky.	3 of 3
Hea 2 – Sound Insulation	Airborne sound insulation values are likely to be 5db higher and impact sound insulation values 5db lower than the performance standards set out in Approved Document E (2003 Edition, with 2004 amendments) for the dwellings. A programme of pre-completion testing will be conducted to confirm compliance.	3 of 4
Hea 3 – Private Space	The dwellings benefits from a private amenity space in line with the compliance requirements of Code for Sustainable Homes.	1 of 1
Hea 4 – Lifetime Homes	The current design of the scheme will comply with all of the relevant 16 principles of Lifetime Homes.	4 of 4

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		Likely Credits
MANAGEMENT		
Man 1- Home User Guide	A Home User Guide will be provided to all residents with information on how to operate their home efficiently and how to make the best use of local facilities. The guide will meet all Code for Sustainable Homes requirements.	3 of 3
Man 2 – Considerate Constructors Scheme	The contractor will be required to register the site under the Considerate Constructors Scheme and to achieve a score of at least 35 out of 50, including at least 7 within each section of the scheme.	2 of 2
Man 3 – Construction Site Impacts	The contractor will implement the following on site practices: • Monitor, report and set targets for CO_2 production or energy use arising from site activities; • Monitor, report and set targets for water consumption from site activities; • Adopt best practice policies in respect of air (dust) pollution arising from site activities; • Adopt best practice policies in respect of water (ground and surface) pollution occurring on the site; • 80% of site timber is reclaimed, re-used or responsibly sourced.	2 of 2
Man 4 – Security	The design team has confirmed that the an Architectural Liaison Officer (ALO) or a Crime Prevention Design Advisor (CPDA) will be consulted at design stages to incorporate the principles of 'Secure by Design (SBD)' within the development's design and layout.	2 of 2

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		Likely Credits
ECOLOGY		
Eco 1 – Ecological Value of Site	The design team has confirmed that, as the site is of low ecological value, a site survey to establish the presence of ecological features will be carried out by a member of the project team.	1 of 1
Eco 2 – Ecological Enhancement	A Suitably Qualified Ecologist (SQE) will be appointed to advise on enhancements. All key recommendations and at least 30% of additional recommendations will be adopted.	1 of 1
Eco 3 – Protection of Ecological Features	The existing site is expected to have no features that are of ecological value.	1 of 1
Eco 4 – Change in Ecological Value of Site	The change in ecological value of the site from pre-development to post-development is expected to be neutral (between -3 and +3 species per hectare).	2 of 4
Eco 5 – Building Footprint	The net internal floor area: net internal ground floor area ratio is likely to be greater than or equal to 4:1.	2 of 2

Appendix 1

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Information about the Code for Sustainable Homes

Background

The Code for Sustainable Homes was launched in December 2006 with the publication of 'Code for Sustainable Homes: A step change in sustainable home building practice' (Department of Communities and Local Government 2006).

This introduced a single national standard to be used in design and construction of new homes in England, based on the BRE's EcoHomes scheme. Adoption of the Code is intended to encourage continuous improvements in sustainable home building.

Issues

The Code for Sustainable Homes is a set of sustainable design principles covering performance in nine key areas listed below:

Energy	Surface water run-off	Health & wellbeing
Water	Waste	Management
Materials	Pollution	Ecology

In each of these categories, performance targets are proposed which are in excess of the minimum needed to satisfy Building Regulations, but are considered to be best practice, technically feasible, and within the capability of the building industry to supply.

Mandatory Requirements

The Code for Sustainable Homes includes several mandatory requirements. Four of these consist of a single mandatory requirement that must be met regardless of the Code level aimed for. These are as follows:

Credit reference / title	Mandatory Requirement
Mat1: Environmental Impact of Materials	At least three of the following five elements must achieve a rating of D or better in the 2008 Green Guide: *Roof, external walls, internal walls, upper & ground floors and windows.*
Sur1: Management of Surface Water Run-off	Ensure that the peak rate of run off is no greater for the developed site than it was for the pre-developed site.
Was1: Storage of Non-recyclable Waste	Provide sufficient space for waste storage to comply with BS5906 (2005); i.e. a volume of 100 litres for a single bedroom dwelling and another 70 litres for each additional bedroom.

Appendix 1 (cont.)

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So long as these are achieved, two further issues have mandatory requirements. The minimum standards for these vary for each level of the Code, with more stringent benchmarks the higher the Code level sought. These are as follows:

Code level	1	2	3	4	5	6
Ene1: CO2 Emission rate % improvement in DER over TER				25	100	'True zero'
Wat1: Indoor water use Maximum litres/person/day	120	120	105	105	80	80

The final credits for which a mandatory requirement applies for Level 6 only are Ene 2, where a Fabric Energy Efficiency of maximum 39 (for apartment block and Mid-terrace) and 46 for end terrace, semi-detached and detached) must be achieved and Hea 4, Lifetime Homes, for which all of the credit requirements must be complied with.

Scoring System

The Code uses a rating system of one to six stars and it differs from EcoHomes in several key regards outlined below:

- It is assessed at the level of an individual 'Dwelling'.
- It contains minimum mandatory standards for energy, water, materials, waste and surface water run-off, which must be met before even the lowest of the Code levels can be achieved.
- It demands higher minimum standards for energy and water to be met before the higher levels of the Code can be achieved.
- It is performed in two stages with 'Final' Code certification taking place after the Post Construction Review has been carried out.

In addition to the mandatory requirements, each design category scores a number of percentage points. The total number of percentage points establishes a 'star rating' for the dwelling.

Code Levels	Total Points Score (equal to or greater than)
Level 1 (★)	36 Points
Level 2 (★★)	48 Points
Level 3 (★★★)	57 Points
Level 4 (★★★★)	68 Points
Level 5 (★★★★★)	84 Points
Level 6 (★★★★★★)	90 Points

Appendix 2
Score Sheet

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Code for Sustainable Homes Score Summary June 2013			Score	Credits available	Weighted score	Score assessment Sub-total	Credits available	% achieved	Weighting factor	Credits Score
Energy	Ene 1	Carbon Dioxide	4	10	4.68	16	31	51.61	0.36	18.79
	Ene 2	Building fabric	0	9	0					
	Ene 3	Energy display devices	2	2	2.34					
	Ene 4	Drying space	1	1	1.17					
	Ene 5	EcoLabelled goods	2	2	2.34					
	Ene 6	External lighting	2	2	2.34					
	Ene 7	Zero/Low Carbon Energy Source	2	2	2.34					
	Ene 8	Cycle Storage	2	2	2.34					
	Ene 9	Home office	1	1	1.17					
Water	Wat 1	Internal Water Use	3	5	4.5	4	6	66.67	0.09	6.00
	Wat 2	External Water Use	1	1	1.5					
Materials	Mat 1	Environmental Impact of Materials	12	15	3.6	21	24	87.50	0.07	6.30
	Mat 2	Responsible materials: Basic elements	6	6	1.8					
	Mat 3	Responsible materials: Finishes	3	3	0.9					
Surface Water	SW 1	Reduction of Surface Runoff	0	2	0	2	4	50.00	0.02	1.10
	SW 2	Flood Risk	2	2	1.1					
Waste	Was 1	Recycling facilities	4	4	3.2	7	8	87.50	0.06	5.60
	Was 2	Site Waste Management Plan	3	3	2.4					
	Was 3	Composting	0	1	0					
Pollution	Pol 1	Insulant GWP	1	1	0.7	4	4	100.00	0.03	2.80
	Pol 2	NO_x Emissions	3	3	2.1					
Health and Wellbeing	Hea 1	Daylighting	3	3	3.51	11	12	91.67	0.14	12.83
	Hea 2	Sound Insulation	3	4	3.51					
	Hea 3	Private space	1	1	1.17					
	Hea 4	Lifetime Homes	4	4	4.68					
Management	Man 1	Home user guide	3	3	3.33	9	9	100.00	0.1	10.00
	Man 2	Considerate Constructors Scheme	2	2	2.22					
	Man 3	Construction Site Impacts	2	2	2.22					
	Man 4	Security - ALO	2	2	2.22					
Land Use and Ecology	Eco 1	Ecological Value of Site	1	1	1.33	7	9	77.78	0.12	9.33
	Eco 2	Ecological Enhancement	1	1	1.33					
	Eco 3	Protection of Ecological Features	1	1	1.33					
	Eco 4	Change of Ecological Value of Site	2	4	2.66					
	Eco 5	Buidling Footprint	2	2	2.66					
			Score:		72.75			Score:		72.75
			Rating:		Level 4			Rating:		Level 4