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# 23 Anglers Lane

## Code for Sustainable Homes

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# Issue Status

eight  
associates

23 Anglers Lane

Code for Sustainable  
Homes

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# Executive Summary

## 23 Anglers Lane

### 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 likely score for the development at 23 Anglers Lane.

This report is based on the outcome of a project team meeting held in March 2013, and subsequent email / telephone exchanges.

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#### 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.

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#### Planning Requirement

As part of the planning requirement the scheme will achieve at least Code Level 4.

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#### 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 **70.21%** 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.

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# 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	19	61	22.31
Water	6	3	50	4.50
Materials	24	19	79	5.70
Surface Water Run-Off	4	0	0	0.00
Waste	8	8	100	6.40
Pollution	4	4	100	2.80
Health and Wellbeing	12	9	75	10.50
Management	9	9	100.00	10.00
Ecology	9	6	67	8.00
Total				70.21%
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

# Preliminary Assessment

## 23 Anglers Lane

### Code for Sustainable Homes

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Likely Credits

#### ENERGY

<b>Ene 1 – Dwelling Emission Rate</b>	<p>The energy strategy is initially focused on implementing passive design measures to minimise energy demand for heating. Following this, heating and direct hot water will be provided by a condensing gas boiler and a PV array will also be installed on the main roof.</p> <p>This scheme will target a 36% reduction in carbon emissions calculated in kgCO<sub>2</sub>/m<sup>2</sup>/yr, over Part LA 2010 minimum requirements.</p>	4 of 10
<b>Ene 2 – Fabric Energy Efficiency</b>	The fabric energy efficiency of the whole scheme is approximately 58 kWh/m <sup>2</sup> /yr.	3 of 10
<b>Ene 3 – Energy Display Devices</b>	Energy display devices will be provided to allow for real-time monitoring of heating and electricity usage.	2 of 2
<b>Ene 4 – Drying Space</b>	The dwellings will benefit from a minimum of 4m+ of drying line in a ventilated area, such as the utility room or a bathroom.	1 of 1
<b>Ene 5 – Eco-labelled Goods</b>	White goods will be provided. The fridges and freezers will be A+ rated and washing machines and dishwashers will be A rated under the EU Energy Efficiency Labelling Scheme.	2 of 2
<b>Ene 6 – External Lighting</b>	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
<b>Ene 7 – LZC Energy Sources</b>	The PV array will achieve a minimum 15% reduction in CO <sub>2</sub> emissions from low and zero carbon energy sources.	2 of 2
<b>Ene 8 – Cycle Storage</b>	A total of 2 cycles storage will be provided that is easily accessible from a public right of way, has a secure entrance lock, and is undercover and well lit.	2 of 2
<b>Ene 9 – Home Office</b>	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

# Preliminary Assessment

## 23 Anglers Lane

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USCC Plans

Likely Credits

#### 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:

3 of 5

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.

##### Wat 2 – External Water Use

The current design does not include a water butt to reduce water consumption.

0 of 1

# Preliminary Assessment

## 23 Anglers Lane

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Likely Credits

#### MATERIALS

<b>Mat 1 – Environmental Impact of Materials</b>	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 10 points likely to be achieved.	10 of 15
<b>Mat 2 – Responsible Sourcing: Basic Building Elements</b>	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
<b>Mat 3 – Responsible Sourcing: Finishing Building Elements</b>	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

<b>SW 1 – Reduction of Surface Water Run-off</b>	The development will meet mandatory requirements. The development does not offer the possibility to attenuate surface water drainage using SUDS techniques.	0 of 2
<b>SW 2 – Flood Risk</b>	The development is located in a zone defined as having a low annual probability of flooding. A site-specific flood risk assessment will not be undertaken to ensure there are no site-specific risks.	0 of 2



# Preliminary Assessment

## 23 Anglers Lane

### Code for Sustainable Homes

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credits

Likely Credits

WASTE		
Was 1 – Recycling Facilities	<p>Recycling storage will comply with the London Borough of Camden requirements for recycling externally and internally. External storage areas will be in compliance with disabled access and volumes will be in line with BS5906.</p> <p>The separation for recyclables will be provided in a fixed position in the kitchens with 30 litres to be provided for waste and 30 litres for recyclables, in line with the London Borough of Camden collections for non-segregated waste.</p>	4 of 4
Was 2 – Site Waste Management Plan	<p>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.</p> <p>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.</p>	3 of 3
Was 3 – Composting	<p>The design team has confirmed that composting facilities will be provided inline with the Code for sustainable Homes requirements. This will include an internal compost bins and a dedicated external composting bin.</p>	1 of 1

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Sustainable Homes

eight

Likely Credits

## 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 <sub>x</sub> Emissions	A gas boiler will provided space heating and domestic hot water, the design team has confirmed that the boiler will have a dry NO <sub>x</sub> emission rate of less 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 1.5% for the living/dining rooms and studies	1 of 3
Hea 2 – Sound Insulation	<p>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 houses.</p> <p>The apartments will achieve 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).</p> <p>A programme of pre-completion testing will be conducted to confirm this.</p>	3 of 4
Hea 3 – Private Space	The development will provide private space in the form of a terrace for the residents of the house, in line with Code requirements.	1 of 1
Hea 4 – Lifetime Homes	The current design will enable all of the Lifetime Homes standards to be met.	4 of 4

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3350 Credits

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	<p>The contractor will implement the following on site practices:</p> <ul style="list-style-type: none"> <li>• Monitor, report and set targets for CO<sub>2</sub> production or energy use arising from site activities;</li> <li>• Monitor, report and set targets for water consumption from site activities;</li> <li>• Adopt best practice policies in respect of air (dust) pollution arising from site activities;</li> <li>• Adopt best practice policies in respect of water (ground and surface) pollution occurring on the site;</li> <li>• 80% of site timber is reclaimed, re-used or responsibly sourced.</li> </ul>	2 of 2
Man 4 – Security	The design team have confirmed that the London Borough of Camden 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

# Preliminary Assessment

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Likely Credits

ECOLOGY		
Eco 1 – Ecological Value of Site	The existing site is expected to be of low ecological value.	1 of 1
Eco 2 – Ecological Enhancement	The design team has confirmed that a suitably qualified ecologist will be consulted for appropriate planting of native and wildlife attracting plant species for the green roof. The design team has also confirmed that all key recommendations and 30% of additional recommendations will be implemented	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	A suitably qualified ecologist will be appointed to assess the change in ecological value of the site. The design team is committed to increase the ecological value of the site up to 3 to 6 species per hectare.	3 of 4
Eco 5 – Building Footprint	The current design does not allow this credit to be targeted.	0 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: <i>Roof, external walls, internal walls, upper &amp; ground floors and windows.</i>
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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## Information about the Code for Sustainable Homes

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				25	100	'True zero'
% 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 assessment						
Score Summary March 2013					Score	Credits available	Weighted score	Sub-total	Credits available	% achieved	Weighting factor	Credits Score
Energy	Ene 1	Carbon Dioxide	4	10	4.68	19	31	61.29	0.36	22.31		
	Ene 2	Building fabric	3	9	3.51							
	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	3	6	50.00	0.09	4.50		
	Wat 2	External Water Use	0	1	0							
Materials	Mat 1	Environmental Impact of Materials	10	15	3	19	24	79.17	0.07	5.70		
	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	0	4	0.00	0.02	0.00		
	SW 2	Flood Risk	0	2	0							
Waste	Was 1	Recycling facilities	4	4	3.2	8	8	100.00	0.06	6.40		
	Was 2	Site Waste Management Plan	3	3	2.4							
	Was 3	Composting	1	1	0.8							
Pollution	Pol 1	Insulant GWP	1	1	0.7	4	4	100.00	0.03	2.80		
	Pol 2	NO <sub>x</sub> Emissions	3	3	2.1							
Health and Wellbeing	Hea 1	Daylighting	1	3	1.17	9	12	75.00	0.14	10.50		
	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	6	9	66.67	0.12	8.00		
	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	3	4	3.99							
	Eco 5	Buidling Footprint	0	2	0							
					Score:	70.21	Score: 70.21					
					Rating:	Level 4	Rating: Level 4					

