

St Augustines Road, London. NW1 Code for Sustainable Homes Planning Statement

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Issue Status

Prepared for:
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Planning Ref:TBC

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Date: January 2013

Reference: 01/aug/Cal rev 0

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Credentials: Callao Housing Consultancy is licensed through the Building Research Establishment to assess the Code for Sustainable Homes, and has been appointed by the developer to administer the process of Code certification and to satisfy the planning department's requirements.

BRE Global Reference for this Consultancy: BREEAM-87

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Code for Sustainable Homes

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Executive Summary

Scope of Report	Callao Housing Consultancy has been appointed to undertake a Code for Sustainable Homes Pre-Assessment for the proposed development located at St Augustines Road, London. NW1 in support of planning application for the scheme detailed below.
Scheme Description	The proposed scheme comprises the construction of 9 No two and three bedroom flats
Purpose of Report	The purpose of this report is to assess the potential of the scheme to meet Level 4 of the Code for Sustainable Homes November 2010. This is targeted to achieve the minimum sustainability requirements of the Lord mayors Plan
Methodology	<p>The methodology followed in this report follows guidance set out in The Code for Sustainable Homes Technical Guide-November 2010.</p> <p>It should be noted that any assumptions are based upon early design drawings and are likely to be subject to adjustment once full design drawings are available and construction methods selected.</p>
Planning Requirements	<p>The Council will promote and measure sustainable design and construction by:</p> <p>c) expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016.;</p> <p>d) expecting 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 and encouraging “excellent” from 2013;</p> <p>e) expecting non-domestic developments of 500sqm of floorspace or above to achieve “very good” in BREEAM assessments and “excellent” from 2016 and encouraging zero carbon from 2019.</p>
Conclusion	<p>The proposed development can achieve the following:</p> <ul style="list-style-type: none">• Code Level 4.• Projected score- 70.94 points.• All Mandatory criteria met.

Introduction



The Code for Sustainable Homes (the Code) 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 with the publication of *Code for Sustainable Homes: A step-change in sustainable home building practice* (Communities and Local Government, 2006) and became operational in April 2007. Where Building Regulations apply, compliance is necessary at all times.

Callao Housing Consultancy Ltd has been appointed by Zen Developments to carry out a pre assessment / planning report 'Code for Sustainable Homes' report (Level 4).

Subsequent to the planner's approval and in conjunction with the drawings and documents a full report will be submitted to the BRE for formal approval / certification under the Code for Sustainable Homes, to achieve a level 4 rating for each unit.

The proposed development, with undecided tenure at this stage, will provide 9 No two and three-bedroom dwellings.

The development is situated at St Augustines Road and is ideally located to amenities.

The pre-assessment has been based upon the drawings produced by WZWG Architects.

Attached in the appendices to this document is the Internal Water Use Pre-Assessment Estimator.

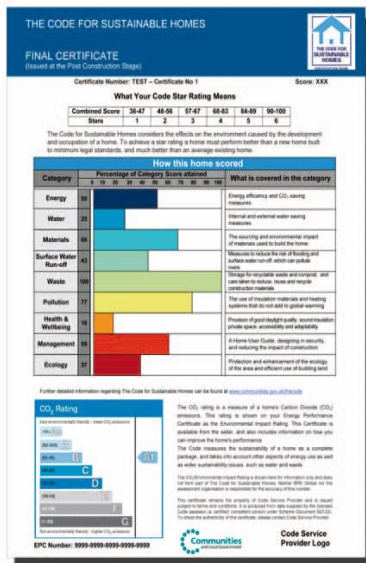
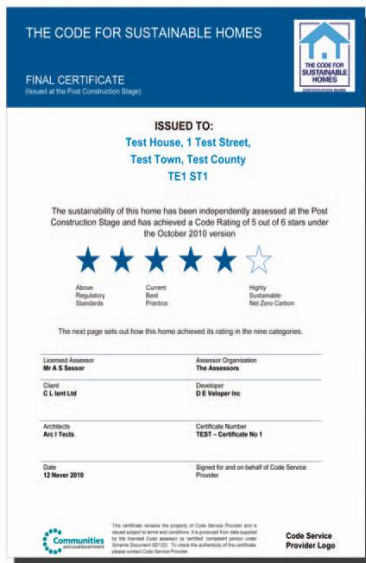
This pre assessment is based on achieving a Code for Sustainable Homes level 4 rating and is generic covering all unit types.

Code Score Sheet

Code for Sustainable Homes- Summary Score Sheet.

Section		Heading	Mandatory	Max Score	Actual Score	Weighted
Energy	Ene 1	Carbon Dioxide	Yes (Code 4+)	10	3.7	21.37
	Ene 2	FEE	Yes	9	3.5	
	Ene 3	Energy Display		2	2	
	Ene 4	Drying Space		1	1	
	Ene 5	Energy Labelled White Goods		2	2	
	Ene 6	External Lighting		2	2	
	Ene 7	Zero or Low Carbon Energy Techs		2	1	
	Ene 8	Cycle Storage		2	2	
	Ene 9	Home Office		1	1	
					18.2	
Water	Wat 1	Internal Potable Water use	Yes	5	4	7.50
	Wat 2	External Potable Water use		1	1	
					5	
Materials	Mat 1	Environmental Impact of Materials	Yes	15	9	2.70
	Mat 2	Responsible Sourcing of Materials		6	0	
	Mat 3	Responsible Sourcing of Materials- fin		3	0	
					9	
Surface Water	Sur 1	Reduction of Surface Water Runoff	Yes	2	0	1.10
	Sur 2	Flood Risk		2	2	
					2	
Waste	Was 1	Household Waste and storage	Yes	4	4	5.60
	Was 2	Construction Waste		3	2	
	Was 3	Composting		1	1	
					7	
Pollution	Pol 1	GWP		1	1	2.80
	Pol 2	NOx Emissions		3	3	
					4	
Health and Wellbeing	Hea 1	Daylighting		3	2	11.66
	Hea 2	Sound Insulation		4	3	
	Hea 3	Private space		1	1	
	Hea 4	Lifetime Homes	Code 6	4	4	
					10	
Management	Man 1	Home User guide		3	3	8.88
	Man 2	Considerate Constructors Scheme		2	1	
	Man 3	Construction site impacts		2	2	
	Man 4	Security		2	2	
					8	
Land Use and Ecology	Eco 1	Ecological Value of Site		1	1	9.33
	Eco 2	Ecological Enhancement		1	1	
	Eco 3	Protection of Ecological Features		1	1	
	Eco 4	Change of Ecological Value of Site		4	2	
	Eco 5	Building footprint		2	2	
					7	9.33
Total					70.94	
Code					4	

The scheme is set to achieve a Code 4 rating based on an overall weighted points score of 70.94. This is against a requirement of 68 points.



It is difficult to assess fully all aspects of the Code for Sustainable Homes at such an early stage in the design process. Without the benefit of detailed information including electrical layouts, engineering drawings and calculations, full design final SAP calculations, Surface water runoff calculations/proposals and an updated Ecology Assessment.

This report will act as a prescriptive method of achieving the Code requirements at the new development.

The report is prepared based on the information provided at the time of writing.

Flexibility remains a key requirement during the design process and inevitably, there may be revisions to the way in which the developer eventually achieves the necessary credits in order to meet the Code requirements.

It should be noted that the Assessor has already discussed the implications of the assessment with the developer's Architect and made them fully aware of the particular requirements and already de-selected those credits that are clearly not achievable.

Energy



Recent Changes

Changes to the Code for Sustainable Homes in November 2010 include aligning credits Ene 1 & Ene 2 with the new Part L Building Regulations 2010 which now reflect the 25% improvement DER/TER and primarily this will incentivise a 'fabric first approach' which emphasises the Government's priority to reduce energy use with long-term, durable measures, rather than installing more and more energy producing technology.

This is mirrored within the Code under Ene 2: Fabric Energy Efficiency Standards (FEES) whereby credits are considered for Building Fabric U-values, Thermal bridging, Air permeability, Lighting solar and appliance gains, Heating and Cooling appliances, Mechanical ventilation, Active controls, fixed lighting and LZC technologies.

There is therefore no longer a mandatory minimum CO₂ emission reduction for Code levels 1, 2 and 3 in other words for Code levels 1, 2 and 3 the unit/s will only have to meet the requirements of the Building Regulations 2010.

ENE 1– Energy and Carbon Dioxide Emissions – Mandatory CfSH L4 upwards

As stated above, there is no longer a mandatory minimum CO₂ emission reduction for Code levels 1, 2 and 3. To achieve Code 3 mandatory requirements, the actual carbon emission level (DER) must meet the target set under Part L1A (TER). The developer intends to improve on this by the introduction of Photovoltaic technology. The local authority outlines a preference to reduce levels of carbon within new build developments. It is assumed that the requirement to achieve an improvement over Part L1A Nov 2010 by 25% meets this aspiration. The likelihood is that low carbon technologies will be required to meet this requirement. The incorporation of PV has been applied as outlined in the SRS Partnership Energy Statement.

3.7 credits have been awarded.

ENE 2 – Fabric Energy Efficiency Standards (FEES) – Mandatory

The following is considered:

- Building Fabric U-values
- Thermal bridging
- Air permeability
- Lighting solar and appliance gains
- Heating and Cooling appliances
- Mechanical ventilation
- Active controls
- Fixed lighting and
- LZC technologies.

The SRS Partnership Energy Statement confirms a worst-case score of 3.5 credits.

3.5 credits have been awarded.

ENE 3 – Energy Display Devices – Not Mandatory



1 credit is available where current electricity OR primary fuel consumption data is displayed to occupants by an Energy Display Device or

Two credits are available where current electricity AND primary fuel consumption data is displayed to occupants by an Energy Display Device.

It is assumed that electricity consumption and primary fuel- data will be displayed to occupants by an Energy Display Device. There are very few of these devices available which can meet the full Code conditions. A recent alternative is the EON Smart meter which does meet the Code requirements

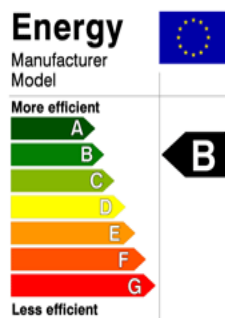
Two credits are awarded.

ENE 4 – Drying space - Not Mandatory

An external line of minimum length 6m will be supplied with all necessary fittings.

One credit is awarded.

ENE 5 – Energy Labelled White Goods - Not Mandatory



1 credit for providing -

a leaflet outlining information on EU Energy Efficiency Labelling, which will be distributed to the occupants of the new dwellings.

An additional credit is available if white goods are provided to the ratings shown below.

A+ (AAA) rating, for fridge & freezers

A rating for washing machine / dishwasher and **either**

B rating for washer dryers, throughout the development **or**

where washer dryers or tumble dryers are not provided, information on EU Energy Efficiency Labelling must be distributed to the new occupants.

It is assumed at this stage that the new units will be supplied with the full contingent of white goods; an EU information leaflet will be issued to all new residents offering advice for future purchase of low energy white goods.

Two credits are awarded.

ENE 6 – External Lighting - Not Mandatory

All external lighting will be fitted with PIR sensors and a Dawn to dusk cut offs. The external lighting will have space lighting fitted with CFL bulbs. All external security lighting must have a maximum wattage of 150W.

Electrical layouts to show the dedicated energy light fittings cross-referenced to the electrical legend.



Two credits are awarded.

ENE 7 – Zero or Low Carbon Energy Technologies - Not Mandatory

It has been confirmed that a minimum 10% reduction in carbon by use of Renewables will be achieved under CfSH calculation methodology, these results are outlined in the SRS Partnership energy Statement.

One credit is awarded.

ENE 8 – Cycle Storage - Not Mandatory

Cycle storage based on an allowance of 2 cycles per dwelling will be provided in a secure and weather-tight store.

Two credits are awarded.

ENE 9 – Home office - Not Mandatory

The assessor has carried out preliminary Daylight Factor observations for the development and can confirm that all of the dedicated Home Office area will be as outlined on the drawings will meet the minimum DF of 1.5% required therefore the credit can be awarded. Two number double electric sockets and phone point located adjacent to each other to be provided on a 1.8m wall.

One credit is awarded.

Water Use



WAT 1 – Internal Potable Water Use – Mandatory

The dwelling will have to be designed to use no more than 105 litres of water per person per day. However, a specification has been set reducing this further to below 90l/person/day. This merits an additional credit.

This will be achieved by fitting a number of appliances such as:

4/2.6 Litre dual flush WC

Flow reducing / aerating taps throughout, i.e. kitchen taps to have maximum flow rate of 5.00 L/min and Bathroom whb taps to have maximum flow rate of 4 L/min.

6 litre/minute showers

In addition, a standard bath with a maximum of 130 litres to the overflow.

Please note that if white goods are specified, these must comply with the maximum capacities as follows –

Dishwasher – 1.2 Litres per place setting and

Washing machine – 9 Litres per kilogram of dry load.

The Water Calculation tool is shown Appendix A. The mandatory requirements will be met to enter at CSH level 3/4 and also in compliance with Part G of the Building Regulations.

Four credits are awarded.

WAT 2 – External Potable Water Use – Not Mandatory

A 200l water butt to be provided in the communal garden area will be attached to a roof down pipe and have a lid and a tap, including also an automatic overflow back into the conventional rain water system. The butt will also be able to be detached from the rainwater downpipe with a removable lid to allow for cleaning the interior. We are advised this will be met by storage within planter beds on the terraces.

One credit is awarded.

Materials



MAT 1 – Environmental Impact of Materials - Mandatory

Under the Code, it is stipulated that at least three of the key elements of construction must achieve a rating of between A+ and D.

With reference to the Green Guide ratings the assessor can confirm that the criteria can be met for the

- Roof
- External walls
- Internal walls

- Windows

It is not possible to assess fully this credit at this stage, so therefore until finalised design specification is provided a conservative score has been applied at this stage.

Nine credits are awarded.

MAT 2 – Basic Building Elements – Not Mandatory

This credit is not sought

No credits have been awarded.

MAT 3 – Finishing Building Elements – Not Mandatory

This credit is not sought

No credits have been awarded.

Surface Water Runoff



SUR 1 – Reduction of Surface Water from the site – Mandatory

Must meet the following criteria –

The annual run off rate and annual volumes of runoff post development will be no greater than the previous conditions of the site. Calculations will need to verify that this requirement can be met.

Details of where the surface water will flow have not been finalised, however to achieve the high score requirement associated with Code 4 it is assumed at this stage no suitable soakaway system will be specified. Calculations and approvals required from engineer.

A mini Flood Risk Assessment (FRA) is a **mandatory** requirement of the CSH guidance.

Zero credits are awarded. Mandatory element is met by default.

SUR 2 - Flood Risk – Mandatory

The site has been assessed to predict the annual probability of flooding likelihood.

Explanation of Assessment

With reference to the Environment Agencies web site, www.environment-agency.gov.uk it has been assessed that the risk of flooding each year from rivers or sea within the area of the site is 0.1% (1 in 1000) or less. As above, a mini Flood Risk Assessment (FRA) is a mandatory requirement of the CSH guidance. A suitably qualified person should produce this. It is not sufficient to refer to the EA website. The assessor has used the EA website to establish the likelihood of the credits that may be awarded.

At this stage, the likelihood is that two credits will be awarded, as there appears to be no element of risk above the 1 in 1000 minimum requirement.

Waste



WAS 1 – Household waste and recycling – Mandatory

The Council operates a substantive kerb side collection bins to service the recyclable material.

As the council does not require the sorting of the recyclables the contractor will also be providing an internal storage bin, clearly labelled for recycling with a minimum total capacity of 30L. The bin will be attached in a dedicated location within the kitchen area and will be in addition to the main waste bin.

The recycle bins to be shown on the GA floor plan with noted capacity all in accordance with the CSH guidance. Refuse storage must comply with local authority standards, but is assumed at no less than 100l for the first bedroom and an additional 70l for the second.

All refuse stores will have disabled access compliant with BS8300. A store will be required as the recycling containers have no lid.

The refuse and recycling bin stores must have disabled adapted access, with appropriate falls, lighting, signage and textured paving. Applicable path widths and turning circles must be specified.

Four credits have been awarded.

WAS 2 – Construction Site Waste – Not Mandatory

A full site waste management plan will be applied during construction, following Code Guidance; this plan will incorporate recording and monitoring records under BRE SmartWaste software, to outline performance under the waste hierarchy and the adoption of KPI Benchmark targets. 50% of accrued waste will be diverted from landfill, by use of offsite recycling companies.

Two credits have been awarded.

WAS 3 – Composting – Not Mandatory

A communal composter is to be provided in the garden area. The access to the compost bin must comply with BS8300. A suitable management agreement will be implemented. Further detail is required however it is likely this credit will be met by default due to a suitable local authority collection service.

One credit can be awarded.

Pollution



Pol 1 – Globing Warming Potential (GWP) of Insulates – Not Mandatory

All specified insulation materials will have a Global warming Potential less than 5.

One credit is awarded.

Pol 2 - NOx Emissions – Not Mandatory

Gas condensing boilers with dry NOx levels <40mg/kWh will be specified in each unit.

Three credits are awarded.

Health and Wellbeing



HEA 1 – Daylighting – Not Mandatory

One credit is awarded for each unit having a satisfactory view of the sky from the kitchen, living room, dining room and study.

Though full daylight calculations are not available at this early stage, the assessor has carried out a cursory Daylight Factor check for the kitchen, study, living room and dining room and can confirm that –

- The study meets the minimum DF of 1.5%
- The living room meets the minimum DF of 1.5%
- The kitchen does not meet the minimum DF requirements of 2.0%.

An additional credit is awarded for a viable view of the sky.

Two credits are awarded in total.
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HEA 2 – Sound Insulation – Not Mandatory

The developer will aim to achieve a sound test performance for all units in excess of 5B better than Approved Document E.

Three credits are awarded.

HEA 3 – Private Space – Not Mandatory

The units will be provided with a communal garden area.

Disabled access will be provided compliant to BS8300.

One credit is awarded.

HEA 4 – Lifetime Homes – Not Mandatory

The units are constructed to comply with the Lifetime Homes Criteria. All 16 criteria must be met.

<http://www.lifetimehomes.org.uk/pages/revised-design-criteria.html>

Four credits are awarded.

Management



Man 1 – Home User Guide – Not Mandatory

A simple Home user guide is to be produced for the dwelling that covers information relevant to the non-technical occupant concerning the operation and environmental performance of their home, all in accordance with CSH methodology.

Three credits have been awarded.

Man 2 – Considerate Constructors Scheme – Not Mandatory

The contractor shall register and fully comply with the requirements of the Considerate Constructors scheme and achieve a score of between 25 and 34 points. Final certification under the scheme will also have to be achieved.

One credit is awarded.

Man 3 – Construction Site Impacts – Not Mandatory

The contractor shall adopt best practice policies on site committing to meeting the requirement of at least 4 of the six items (water and dust pollution/Recording and monitoring water and fuel use policies) as laid down in MAN 3 of the Code.

Two credits have been awarded.

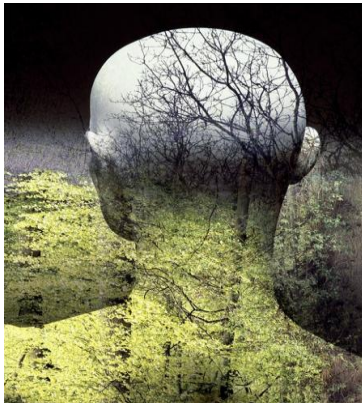
Man 4 – Security – Not Mandatory

The contractor shall register with and fully comply with the requirements of the 'Secured by Design' scheme and will achieve a formal award under the scheme.

Please note concerning the CfSH this only applies to Section 2 – Physical Security of SBD – New Homes.

Two credits are awarded.

Ecology



ECO 1 – Ecology value of the site – Not Mandatory

An Ecology Report will be completed by a suitably qualified Ecologist. It is likely that the site will be determined as low significance.

One credit is awarded.

ECO 2 – Ecological Enhancement – Not Mandatory

All Ecologist's recommendations to comply with the Code will be fully implemented.

One credit is awarded.

ECO 3 – Protection of Ecological Features – Not Mandatory

The site is likely to achieve the requirements of the Code.

One credit is awarded.

ECO 4 – Change of Ecological Value of the Site – Not Mandatory

Ecologist's recommendations to be followed meet no species change.

Two credits are awarded.

ECO 5 – Building Fabric – Not Mandatory

The development will meet the minimum Code requirements of a Habitable space to Building Footprint ratio >4:1 (including outside stores).

Two credits are awarded.

Appendix A
CfSH Water Calculator

WATER EFFICIENCY CALCULATOR FOR NEW DWELLINGS - (BASIC CALCULATOR)									
House Type:		Type 1		Type 2		Type 3		Type 4	
Description:		All							
Installation Type	Unit of measure	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day
Is a dual or single flush WC specified?		Select option:		Select option:		Select option:		Select option:	
WC	Full flush volume	4	5.84		0.00		0.00		0.00
	Part flush volume	2.6	7.70		0.00		0.00		0.00
Taps (excluding kitchen and external taps)	Flow rate (litres / minute)	4	7.90		0.00		0.00		0.00
Are both a Bath & Shower Present?		Bath & Shower		Select option:		Select option:		Select option:	
Bath	Capacity to overflow	130	14.30		0.00		0.00		0.00
Shower	Flow rate (litres / minute)	6	26.22		0.00		0.00		0.00
Kitchen sink taps	Flow rate (litres / minute)	5	12.58		0.00		0.00		0.00
Has a washing machine been specified?		No		Select option:		Select option:		Select option:	
Washing Machine	Litres / kg		17.16		0.00		0.00		0.00
Has a dishwasher been specified?		No		Select option:		Select option:		Select option:	
Dishwasher	Litres / place setting		4.50		0.00		0.00		0.00
Has a waste disposal unit been specified?		No		Select option:		Select option:		Select option:	
Water Softener	Litres / person / day		0.00		0.00		0.00		0.00
Calculated Use		96.2		0.0		0.0		0.0	
Normalisation factor		0.91		0.91		0.91		0.91	
Code for Sustainable Homes	Total Consumption	87.5		0.0		0.0		0.0	
	Mandatory level	Level 3/4		-		-		-	