



Appendix B: Code for Sustainable Homes Pre-Assessment

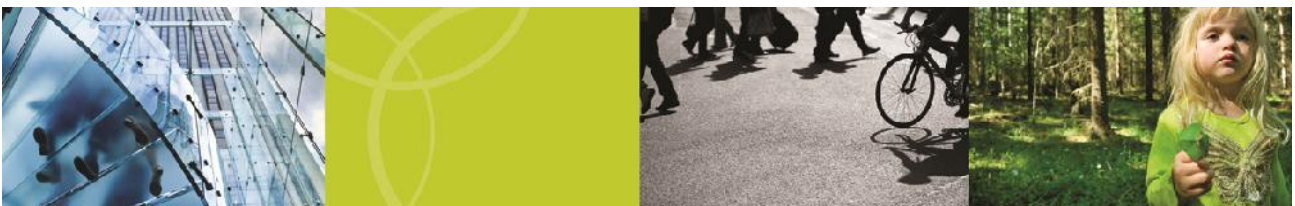
Code for Sustainable Homes 2010 Assessment

2562 / Gondar Gardens, London Borough of Camden

For

Linden Wates West Hampstead Ltd

November 2013



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Executive Summary

This document sets out the scores predicted during a Code for Sustainable Homes (CSH / the Code) estimate for the site previously occupied by a former reservoir located in West Hampstead within the London Borough of Camden. It outlines a strategy by which the proposed development can achieve code level 4 as required for planning approval.

This document represents Linden Wates West Hampstead Ltd commitment to meeting the specified Code level and to submitting evidence for formal certifications at Design Stage and Post Construction Review stage, conducted by a licensed Code for Sustainable Homes assessor.

The proposal is for the redevelopment of the reservoir street frontage to provide 28 residential units (Class C3 use) in two blocks from lower ground to third floors with basement parking, following substantial demolition of the roof and internal structure of the reservoir and its subsequent re-landscaping.

All dwellings, including affordable and private sale housing, will achieve a minimum of Code Level 4 under the Code for Sustainable Homes (Nov 2010) scheme.

A score of 68% points are needed to achieve Code Level 4.

The Estimator has found that the development can achieve the following Code ratings:

- Flats will score 77 points = 68.22% = CSH Level 4
- Houses and duplexes will score 77 points = 68.22 % = CSH Level 4

Further to the progression of this proposal and before the Design Stage assessment can be completed, the client will finalise a strategy to ensure that Code requirements are met. The strategy will be communicated to the project design team in order that it is successfully integrated in the development of the project.



1. Introduction

The proposed site is a residential development created by the partial redevelopment of a former reservoir in West Hampstead, in the London Borough of Camden. The proposed building line of the development follows that of the terrace housing to the left and right of the site and addresses the street. All the dwellings will achieve a minimum of Code Level 4 under the Code for Sustainable Homes (Nov 2010) scheme.

The proposal is for a total of 28 residential units. Units will vary from one to four bedroom flats, and from one to two bedroom duplexes and two 4 bedroom houses.

There will be total of 10 affordable units. All residential units will have private outside space: a balcony, terrace or garden.

Preliminary studies conducted by James Blake Associates have deemed the land to be of ecological value and therefore credits will not be gained under Eco 1. At this stage we have assumed that Linden will be enhancing the ecological features of the site as well as improve its biodiversity. In order to claim credits in the Ecology category of the code Linden Wates are working with a suitably qualified ecologist to make the appropriated recommendations. The landscape architect will then use the recommendations to decide on the species to be specified for the site. It is predicted that at least a minor enhancement of the biodiversity of the site will be achieved.

The site is not in a Flood Risk Area and confirmation of this can be found in the Flood Risk Assessment however appropriate measures will be designed to deal with the run-off of the new development. It will therefore conform to the mandatory requirements under Sur 1. The use of appropriated SUDs techniques to deal with the extra run-off water caused by the development will reduce peak and total volume of run-off to values lower than the existing site.

At all times it must be remembered that CSH is an evidence-based methodology, and the credits cannot be awarded if the evidence is not provided in the format set out within the CSH guidance.



2. CSH Strategy: Achieving Level 4

2.1 Mandatory Credits

Within CSH 2010, mandatory minimum performance standards have been set for a number of categories as shown in the table below. These mandatory credits must be gained in accordance with Table 1 for a development to achieve the relevant CSH Level.

The mandatory credits must be achieved in accordance with Table 1 to achieve the required CSH rating. The remaining score is made up of tradable credits from the range of criteria listed in the guidance.

The proposed development at Gondar Gardens will meet all mandatory credits to achieve Level 4.

Table 1 – Mandatory credit level requirements

Credit Description	Level 3	Level 4	Level 5
Ene 1 Dwelling Emission Rate	None	3 credits	9 credits
Ene 2 Fabric Energy Efficiency	None	None	7 credits
Wat 1 Indoor Water Use	3 credits	3 credits	5 credits
Sur 1 Management of Surface Water Run-off from Developments	Criteria 1, 2, 3 & water quality	Criteria 1, 2, 3 & water quality	Criteria 1, 2, 3 & water quality
Was 1 Storage of Non-recyclable Waste and Recyclable Household Waste	Storage of household waste	Storage of household waste	Storage of household waste
Hea 4 Lifetime Homes	None	None	None

2.2 Assumptions Made

CarbonPlan has provided an analysis of the proposed scheme based on drawings/reports received and experience within the assessment schemes. The resultant strategy provides a holistic overview of the scheme and makes assumptions where required, given the outline detail of the information received to-date.

Details of any assumptions and information on criteria needed to meet the credits are included in the Comments and Notes section of this report.



It is important at this stage that the design team examine our assumptions and give feedback to ensure that the appropriate credits are used for this assessment.

2.3 Indicative Strategy

Tables 3 to 13 below outline which Code credits have been included in estimating the Code ratings for the development. Credits have been allocated based on discussions with the developer about their preferred strategy. Details of any assumptions and information on criteria needed to meet the credits are included in the 'Comments and assumptions' column of the tables. Table 10 shows the total credits achieved and resulting Code ratings.



Table 3 Energy and CO₂ Emissions section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Ene 1 Dwelling Emission Rate	10	3	3	3	A 25% improvement of DER/TER is required to achieve Code level 4. This can be attained using enhance building fabric specifications, energy efficient services and with the use of Photovoltaic Panels (PV).
Ene 2 Fabric Energy Efficiency	9	5	4	4	Linden Wates aim to achieve a Fabric Energy Efficiency of ≤ 43 kWh/m ² /yr for apartments and ≤ 55 kWh/m ² /yr for end terrace and semi detached dwellings to achieve 4 credits. SAPS will be required for confirmation. The use of Enhanced Construction Details to be considered in achieving this target.
Ene 3 Energy Display Devices	2	2	2	2	Visible energy display devices to be fitted to each unit showing the electricity and primary heating fuel consumption.
Ene 4 Drying Space	1	1	1	1	For the 1 & 2 bed dwellings, the drying equipment must be capable of holding 4m+ of drying line; for 3+ bedroom dwellings 6m+. Fixings and fittings to be a permanent feature of the room or space and internal drying areas to have an approved means of ventilation.
Ene 5 Energy Labelled White Goods	2	1	1	1	Energy leaflet to be supplied to all dwellings in the Home User Guide

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Ene 6 External Lighting	2	2	2	2	All external space lighting provided by dedicated energy efficient fittings. Burglar security lighting to have a max wattage of 150W, PIR devices or daylight cut off sensors. All other security lighting to have dedicated energy efficient fittings and daylight cut off sensors or timers.
Ene 7 Renewable Technologies	2	1	2	1	This credit will have to be reviewed when actual SAP calculations are conducted.
Ene 8 Cycle Storage	2	1	1	1	Storage for cycles to be provided within the basement level for all units. The London Plan requires: 1 cycle storage space for 1 and 2 bed units. 2 cycle storage spaces for 3 or more bed units. Storage facility to be fitted with steel fixing (D frame or equivalent) set in concrete.
Ene 9 Home Office	1	1	1	1	1.5 Daylight Factor to be achieved in the room allocated as the home office as well as provision of 2 double sockets, 2 telephone points, a window for ventilation and a 1.8m wall length to allow a desk, chair and filing cabinet or bookshelf to be installed, with space to move around the front and side of the desk. <i>(Please note: LG floor units likely to need careful planning to maximise daylight to qualify for HO)</i>

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Section Credit Total	31	17.0	17.0	17.0	Credit Value = 1.17
Weighted Section Total	36.4%	19.96%	19.96%	19.96%	

Table 4 Water section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Wat 1 Indoor Water Use	5	4	4	3	<p>Mandatory requirement to achieve 105 l/p/d for Code level 4,</p> <p>For 3 credits, flow rate of 105 l/p/d is required.</p> <p>For 4 credits, flow rate of 90 l/p/d is required.</p> <p>This will be achieved by using dual flush cisterns, restricted flow rates for basin, kitchen taps and showers and low capacity baths.</p>
Wat 2 External Water Use	1	1	1	1	100l minimum storage volume to be provided to the units with terraces. This can be halved if there is no planting provided and the whole of the external space is covered by hard surface. Units with balconies will achieve the credit by default.
Section Credit Total	6.0	5.0	5.0	4.0	Credit value = 1.50
Weighted Section Total	9.00%	7.50%	7.50%	6.00%	

Table 5 Materials section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Mat 1 Environmental Impact of Materials	15	10	10	10	Predictive scores are based on previous Linden builds. Linden Homes will ensure the materials specification complies with the requirements of the Green Guide. At least 3 of following 5 key elements of the building envelope need to be rated A+ to D within the BRE Green Guide: Roof, External Walls, Internal Walls, Upper and Ground Floors, Windows.
Mat 2 Responsible Sourcing/Basic Building Elements	6	6	6	6	80% or more basic building elements must be from sustainable forestry schemes or sources with Environmental Management Systems in place and all timber must be from legal sources.
Mat 3 Responsible Sourcing/Finishing Elements	3	3	3	3	
Section Credit Total	24	19.0	19.0	19.0	Credit value = 0.30
Weighted Section Total	7.20%	5.70%	5.70%	5.70%	

Table 1 Surface Water Run-off section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Sur 1 Management of Surface Water Run-off	2	2	2	2	A number of Sustainable Urban Drainage systems (SUDs) will be utilised throughout the site. As such the site will benefit from the award of additional credits for Sur 1, using an approved strategy that meets the long term maintenance and ownership of any SUD system.
Sur 2 Flood Risk	2	2	2	2	The EA website confirms the site as being in a low risk area as does the FRA produced by RSK.
Section Credit Total	4.0	4.0	4.0	4.0	Credit value = 0.55
Weighted Section Total	2.20%	2.20%	2.20%	2.20%	

Table 2 Waste section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Was 1 Storage of Household Waste	4	4	4	4	Credit is dependent on the arrangements with the LA regarding recyclable collections. A minimum of waste storage as per BS5906 or the LA's requirements whichever is the greater must be met. Sufficient space must be provided for storage. Camden Borough Council to be contacted with regards to requirements for flats/communal storage areas. Code compliant internal recyclable waste storage to be fixed in low level kitchen cupboard. Collections are weekly. The following guidance will be used when designing the access route from the dwelling to the storage area: BS8300:2009, BS5709:2006, BS1703:2005, Approved Document Part M and H.
Was 2 Construction Site Waste Management	3	3	3	3	Linden has developed a SWMP which includes procedures and commitments to divert from landfill at least 85% by weight or by volume of non-hazardous construction waste generated by the project.

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Was 3 Composting	1	1	1	1	Camden Borough Council provides a kitchen caddy service for both flats and houses. Space for caddies to be provided in the units. Again the following guidance will be used when designing the access route from the dwelling to the storage area: BS8300:2009, BS5709:2006, BS1703:2005, Approved Document Part M and H
Section Credit Total	8.0	8.0	8.0	8.0	Credit value = 0.8
Weighted Section Total	6.40%	6.40%	6.40%	6.40%	

Table 3 Pollution section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Pol 1 GWP of Insulants	1	1	1	1	Global warming potential of all insulating materials to be <5.
Pol 2 NO _x Emissions	3	3	3	3	All space heating and hot water systems to produce Dry NO _x levels less than 40 mg/kWh
Section Credit Total	4.0	4.0	4.0	4.0	Credit value = 0.7
Weighted Section Total	2.80%	2.80%	2.80%	2.80%	

Table 4 Health and Well-being section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Hea1 Daylighting	3	2	2	1	At least two credits to be achieved for the daylight factor and/or the View of Sky. Calculations required to prove compliance. <i>(Please note: LG floors will require careful planning to maximise credits here)</i>
Hea 2 Sound Insulation	4	3	3	3	Airborne & Impact sound insulation values to be at least a 5dB improvement over Building Regulations.
Hea 3 Private Space	1	1	1	1	Terraces/balconies to be provided to each unit, the outdoor space will meet the minimum size requirements of 1.5m ² /bedroom. The space will be accessible to wheelchair users with level thresholds in accordance with BS8300.
Hea 4 Lifetime Homes	4	0	0	4	Credit not sought for the flats and duplexes. LTH 16 criteria will only be met for the applicable units.
Section Credit Total	12	6.0	6.0	9.0	Credit value = 1.17
Weighted Section Total	14%	7.00%	7.00%	10.50%	

Table 5 Management section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Man 1 Home User Guide	3	3	3	3	Home User Guide (HUG) to be compiled in accordance with Man 1 Checklist Part 1&2. The Guide is to be provided in an appropriate format for users. This might include translation into foreign languages, braille, large print or audio cassette/CD.
Man 2 Considerate Constructors	2	2	2	2	Site to meet formal certification against Considerate Constructors Scheme with scoring of minimum 35 'Beyond Best Practice'.
Man 3 Construction Site Impacts	2	2	2	2	Linden Homes commit to monitor, report and set targets for energy and water use from site activities, adopt best practice policies in respect of air (dust) and Water (ground and surface) pollution and ensure that 80% of site timber is responsibly sourced.
Man 4 Security	2	2	2	2	ALO or CPDA to be consulted at design stage and recommendations are incorporated into layout design. Physical security to be met in accordance with Section 2 of Secured by Design scheme
Section Credit Total	9.0	9.0	9.0	9.0	Credit value =1.11
Weighted Section Total	10%	10.00%	10.00%	10.00%	

Table 6 Ecology section credits

Credit	Total available	Flats	Duplexes /Houses	LTH	Comments and assumptions
Eco 1 Ecological Value of Site	1	0	0	0	James Blake Associates have deemed the land to be of ecological value and as such no credit can be achieved in this issue.
Eco 2 Ecological Enhancement	1	1	1	1	A suitably Qualified Ecologist (SQE) to be appointed. Developer to adopt all key recommendations and 30% of additional recommendations on the site
Eco 3 Protection of Ecological Features	1	1	1	1	Features of ecological value to be retained and protected where possible and where it is not possible provision of appropriate compensation will be made.
Eco 4 Change in Ecological Value of Site	4	2	2	2	Credits could be achieved for a neutral change in species per hectare post development vs pre-development but must be calculated and confirmed by a Suitably Qualified Ecologist.
Eco 5 Building Footprint	2	1	1	1	For houses, the net internal floor area (NIFA): net internal ground floor area (NIGFA) must be $\geq 2.5:1$ For flats, NIFA:NIGFA must be $\geq 3:1$ Ratio of total net internal floor area: total net internal ground floor area of all houses and flats must be greater than the area weighted average of the above two targeted ratios.
Section Credit Total	9	5.0	5.0	5.0	Credit value = 1.33
Weighted Section Total	12%	6.66%	6.66%	6.66%	

Table 7 Total credits and ratings

	Total available	Flats	Duplexes/ Houses	Units with LTH requirement
Score	107	77	77	78
% / 100%	100	68.22%	68.22%	70.15%
CSH Rating	Level 6	Level 4	Level 4	Level 4



3. Conclusion

The CSH Pre-Assessment for the proposed development at Gondar Gardens, London was conducted on 8th November 2013.

The estimate and strategy are based on information provided by Linden Wates West Hampstead Ltd. The strategy demonstrates how the development can meet the specified rating under CSH 2010 however the specific non mandatory credits may change during detailed design and have been presented to showcase how the scheme could achieve CSH Level 4.

The residential units at Gondar Gardens can achieve a minimum of Level 4 under the CSH 2010 scheme.

Indicative Building Score: 68.22% = Indicative CSH rating: Level 4

All mandatory credits can and will be met. A strategy for achieving the required CSH ratings should be finalised by the CSH assessor and design team prior to the detailed design stage. This will ensure that the strategy is embedded from an early stage which will help to ensure that the Design Stage and Post Construction Review stage CSH certifications are achieved.

