Ms R Lord & Mr J Weston

92 Fitzjohn's Avenue
Hampstead
London Borough of Camden
London
NW3 6NP

Code for Sustainable Homes Pre-Assessment Estimate

Code Level 6
Code Level 5
Code Level 4
Code Level 3
Code Level 2
Code Level 1

Author	V	Rev	Date
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1	A	24.02.15	Projekt Plus, Ms R Lord and Mr J Weston		✓

Code for Sustainable Homes Pre-Assessment Estimate on Proposed Development at:

92 Fitzjohn's Avenue, Camden, London

This Pre-Assessment Estimate indicates how a rating of Code Level 4 could be achieved.

Code Level:	**4**
Predicted Score:	**71.40%**
Predicted Code Level Threshold:	68.00%
Mandatory Requirements:	All Met
Assessed Version:	Nov 2010 (with 2014 Addendum)
Registered Version:	To be registered with BRE at Design Stage

This Code for Sustainable Homes Pre-Assessment Estimate has been prepared by SRE for Ms R Lord & Mr J Weston (Client) and the Design Team as part of the Planning requirements for the 1 no. proposed residential unit at 92 Fitzjohn's Avenue, Camden, London. The estimate has been based on details supplied by The House Designers (The Architect), a desktop study and certain credits have been assessed on best practice and historical data.

This Pre-Assessment Estimate outlines the Proposed schemes assumed specification to meet the required Code for Sustainable Homes Level, and is to be signed by the Client and Contractor (if not the same organisation) in order to confirm that this specification will be implemented on site.

Overview

The Proposed Development at 92 Fitzjohn's Avenue, Camden consists of 1 no. unit with 4 bedrooms, over a maximum of 3 floors. The unit will achieve a minimum of Code for Sustainable Homes Level 4 in line with local Planning Policy. Efficient water fittings such as low flow showers and flow restricted taps will be required to meet the minimum standards for CSH Level 4, as well as the provision of correctly sized water butts, refuse stores and bike store. Other considerations have been taken into account, and certain assumptions of specified items have been made, please see pre-assessment below for indicative specification.

The report below confirms compliance with the Camden SPD, CPG 3 (Sustainability), section 6 requirements for a 50% credit total for the Water and Energy Sections. 19.3 out of a total of 31 Energy Credits have been achieved, and 4 out of the 6 water credits have been achieved.

Summary Score Sheet

Section	Description	Credits Available	Target Score	92 Fitzjohns Avenue
Energy				
Ene 1	DER improvement over TER	10	**5**	5.1
Ene 2	Fabric Energy Efficiency (FEE)	9	**4**	4.2
Ene 3	Energy Display Device	2	**1**	1
Ene 4	Drying Space	1	**1**	1
Ene 5	White Goods	2	**2**	2
Ene 6	External Lighting	2	**2**	2
Ene 7	Low Zero Carbon Technologies	2	**2**	2
Ene 8	Cycle Storage	2	**1**	1
Ene 9	Home Office	1	**1**	1
		31	**19**	**19.3**
Water				
Wat 1	Internal Water Use	5	**3**	3
Wat 2	External water use/water butts	1	**1**	1
		6	**4**	**4**
Materials				
Mat 1	Materials Specification/Green Guide	15	**10**	10
Mat 2	Responsible sourcing (basic construction)	6	**4**	4
Mat 3	Responsible sourcing (finishing)	3	**1**	1
		24	**15**	**15**
Surface Water				
Sur 1	Surface water runoff	2	**2**	2
Sur 2	Flood Risk	2	**2**	2
		4	**4**	**4**
Waste				
Was 1	Internal and external waste storage and access	4	**4**	4
Was 2	Site Waste Management Plan	3	**3**	3
Was 3	Composting	1	**1**	1
		8	**8**	**8**
Pollution				
Pol 1	Global Warming Potential (GWP) of insulation	1	**1**	1
Pol 2	NOx emissions from boilers	3	**3**	3
		4	**4**	**4**
Health & Wellbeing				
Hea 1	Daylighting	3	**2**	2
Hea 2	Sound insulation	4	**4**	4
Hea 3	Private/communal secure + accessible open space	1	**1**	1
Hea 4	Lifetime Homes	4	**4**	4
		12	**11**	**11**
Management				
Man 1	Home User Guide	3	**3**	3
Man 2	Considerate Constructors Scheme	2	**2**	2
Man 3	Monitoring of Site Impacts	2	**2**	2
Man 4	Secured By Design (Section 2) compliance	2	**2**	2
		9	**9**	**9**
Ecology and Land-Use				
Eco 1	Ecological Value of Pre-Existing Site	1	**0**	0
Eco 2	Addoption of Ecological Recommendations	1	**0**	0
Eco 3	Protection of Ecological Features	1	**1**	1
Eco 4	Change in Ecological Value	4	**2**	2
Eco 5	Footprint to Floor Area Ratio	2	**0**	0
		9	**3**	**3**
Weighted Total (%)		**100.0**	**71.0**	**71.4**
CSH Level			**4**	**4**

Key Assumptions/Notes

The following key assumptions/notes have been made by SRE in calculating the pre-assessment estimate – **they show what will need to be included in the design specification to meet the Code for Sustainable Homes requirements to achieve the required credits**.

Credits Ene 1 and Ene 2 will need to be confirmed as the site progresses as these may change as the design progresses. Therefore SRE kindly request that we are informed of any plan and/or specification changes, and any revisions are passed on to SRE as soon as possible.

Credits Ene 9 and Hea 1 are contingent on daylight factors of 1.5% being achieved in the living/dining rooms, and the Home Office function being assigned to a room with a daylight factor over 1.5%. Please see the relevant sections below for further details.

Energy

Issue	Credits Available	Credits Achieved
Ene 1: Dwelling Emission Rate	10	5.1

Credits are awarded here for the limitation of CO_2 emissions arising from the operation of a dwelling and its services.

(MANDATORY) SAP calculations currently show a 45.8% improvement in Dwelling Emission Rate (DER) over Target Emission Rate (TER) exceeding the 19% required as a mandatory target for CSH Level 4. Please see the supporting Sustainability and Energy Statement for full details of the specification required to achieved this target.

Evidence Required	
Design Stage	*Post Construction Stage*
Design stage SAP outputs: • *Design Final SAP DER worksheet* • *Design Final Building Regulations checklist* • *Design Final SAP (2009) worksheet* • *Design Final FEE worksheet* • *SAP CSH Report (NHER)*	*As Built SAP outputs:* • *As Built Final SAP DER worksheet* • *As Built Final Building Regulations checklist* • *As Built Final SAP (2009) worksheet* • *As Built Final FEE worksheet* • *SAP CSH Report (NHER)*

Issue	Credits Available	Credits Achieved
Ene 2: Fabric Energy Efficiency	9	4.2

Credits are awarded here for the improvement of energy efficiency performance which will reduce lifetime CO_2 emissions of the dwelling.

SAP calculations show that the Fabric Energy Efficiency (FEE) of the dwelling will be <54.3 kWh/m^2/year, therefore allowing 4.2 credits to be awarded. Please see the supporting Sustainability and Energy Statement for full details of the specification required to achieve this target.

Evidence Required	
Design Stage	*Post Construction Stage*
Design stage SAP outputs: • *Design Final SAP DER worksheet* • *Design Final Building Regulations checklist* • *Design Final SAP (2009) worksheet* • *Design Final FEE worksheet* • *SAP CSH Report (NHER)*	*As Built SAP outputs:* • *As Built Final SAP DER worksheet* • *As Built Final Building Regulations checklist* • *As Built Final SAP (2009) worksheet* • *As Built Final FEE worksheet* • *SAP CSH Report (NHER)*

Issue	Credits Available	Credits Achieved
Ene 3: Energy Display Devices	2	1

Credits are awarded here for use of equipment that displays energy consumption data, encouraging occupants to reduce energy use.

An Energy Display Device will be installed within the dwelling to monitor, measure and display electricity usage. It must be situated in a visible place within the dwelling and include the following functions to comply:

- Local time
- Current mains energy consumption (Kilowatts and kilowatt hours)
- Current emissions (g/kg CO_2)
- Current Tariff
- Current Cost (in pounds and pence). For pre-payment customers this should be 'real-time' data and for 'credit' customers cost should be displayed on a monthly basis.
- Display accurate account balance information (amount in credit/debit)
- Visual presentation of data (i.e. non numerical) to allow easy identification of usage
- Historical consumption data so that consumers can compare their current and previous usage in a meaningful way. This should include cumulative consumption data in any of the following forms: day/week/month/billing period

Evidence Required	
Design Stage	*Post Construction Stage*
• *Proof the Energy Display Device is dedicated to the dwelling* ***AND*** • *Consumption data from the Device*	• *Written confirmation from the developer that the site has been constructed as designed.*
• *A specification of intent to meet specific requirements* ***OR*** • *Signed pre-assessment estimate*	

Issue	Credits Available	Credits Achieved
Ene 4: Drying Space	1	1

Credits are awarded here for reducing the energy needed to dry clothes.

An individual drying space will be provided to the dwelling to reduce reliance on tumble dryers. The line will be provided by one of the following options:

- A rotary dryer (of min. 6m total line length) in the private garden of the dwelling fitted within a permanent base/foundation.
- The posts, footings and fixings capable of holding min. 6m of drying line within the private garden space.
- An internal drying line of min 6m total line length within a heated internal space where ventilation is installed to meet Part F of the Building Regulations - minimum intermittent extract rate of 30 litres/second.

Evidence Required	
Design Stage	*Post Construction Stage*
Internal drying space: • *Location of drying fixings* • *Details/location of ventilation* • *Length of drying line* • *Lock details (communal space only)*	• *Written confirmation from the developer that the site has been constructed as designed* ***AND*** • *Manufacturers details on the installed equipment*
External drying space: • *Location of fixings/footings/posts* • *Length of drying line* • *Lock details (communal space only)*	
OR • *Signed pre-assessment estimate*	

Issue	Credits Available	Credits Achieved
Ene 5: Energy Labelled White Goods	2	2

Credits are awarded here for the use of energy efficient white goods which will reduce CO_2 emissions from appliance use.

It has been assumed at this stage that white goods will be provided within the dwelling as part of the overall fit-out of the kitchen and utility spaces. These will meet the following specification:

- Fridge and Freezer: A+ rated for Energy Efficiency
- Washing Machine: A rated for Energy Efficiency (water use <8.17 litre/Kg of load)
- Dishwasher: A rated for Energy Efficiency (water use <1.25 litre/place setting)
- Tumble/Washer Dryers: B Rated for Energy Efficiency (water use <8.17 litre/Kg)

Evidence Required	
Design Stage	*Post Construction Stage*
Any white goods: • *Energy efficiency ratings*	• *Site inspection report (SRE)* ***AND*** • *Manufacturers details on the installed equipment*
Where relevant: • *EU Energy Efficiency Labelling Scheme Information* • *Confirmation that the information will be provided to all dwellings* • *Confirmation that all appliances available for purchase with the dwelling are compliant*	
• *Signed pre-assessment estimate*	

Issue	Credits Available	Credits Achieved
Ene 6: External Lighting	2	2

Credits are awarded here for the use of energy efficient external lighting which reduces the CO_2 emissions of the dwelling.

Space lighting will be energy efficient and have simple internal switching. Space lighting must be controlled with one or more of the following controls: PIR, daylight cut-off sensors or timer switches.

Burglar security lighting must be PIR and daylight sensor controlled, with no fitting of more than 150 watts. Specification will need to state details and plans will show location of all luminary devices.

Evidence Required	
Design Stage	*Post Construction Stage*
• Drawings showing the location of all external light fittings • Evidence of types of light fitting and efficacy for all lamps • Control systems for all fittings	• *As built drawings and evidence (as listed for the design stage)* ***OR*** • *Written confirmation of installation from the developer* ***OR*** • *As built calculations and evidence (as listed for the design stage)* ***OR*** • *Site inspection report*
• Signed pre-assessment estimate	

Issue	Credits Available	Credits Achieved
Ene 7: Low and Zero Carbon Technologies	2	2

Credits are awarded here for the use of low and zero carbon energy sources which will limit the CO_2 emissions and running costs of a dwelling and its services.

Renewable technologies will be specified, and at present drawings show that both $9m^2$ (gross) Solar Water Heating and 4.25kWp Solar PV is to be specified. At present calculations show that these reduce CO_2 emissions by the 15% required to gain 2 credits. All renewable technologies are required to be certified under the Microgeneration Certification scheme (MCS) or assured under the Combined Heat and Power Quality Assurance standard (CHPQA).

Evidence Required	
Design Stage	*Post Construction Stage*
• *Design stage SAP outputs* • *Evidence that technologies meet requirements in Directive 2009/28/EC and are Certified under the Microgeneration Certification Scheme (as applicable)* ***OR*** • *Certified under the CHPQA standard (as applicable)*	• *As built SAP outputs* • *Evidence that technologies meet requirements in Directive 2009/28/EC and are Certified under the Microgeneration Certification Scheme (as applicable)* ***OR*** • *Certified under the CHPQA standard (as applicable)*

Issue	Credits Available	Credits Achieved
Ene 8: Cycle Storage	2	1

Credits are awarded here for the provision of adequate and secure cycle storage facilities in order to encourage the use of bicycles, which reduces the CO_2 emissions associated with short car journeys.

Drawings show that storage for 2 cycles is provided within the garage space. Drawings also show that sufficient space for the cycles to be removed and replaced individually and manoeuvred around the vehicle in the garage.

The garage will be required to be secured/locked.

Please note access to a public right of way must be available without the need to take the bicycle through the dwelling.

Storage for 2 cycles allows 1 credit to be awarded within this section. For an additional credit, storage for 4 cycles must be provided.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Number of bedrooms and cycle storage spaces per dwelling* • *Location, type and size of storage* • *Convenient access to cycle storage* • *Security measures* • *Propriety system details (if applicable)* • *How the requirements of claus 35 of Secured by Design – New Homes 2010 will be met (if applicable)* ***OR*** • *Signed pre-assessment estimate*	• *Written confirmation that the site has been constructed in accordance with the information provided at design stage* *OR* • *Site inspection report (SRE)*

Issue	Credits Available	Credits Achieved
Ene 9: Home Office	1	1

Credits are awarded here for encouraging occupants to work from home by providing the necessary space and services, which reduces the need to commute.

The drawings provided show that the dwelling is to have 2 no. study areas. Initial calculations show that both of these will meet the 1.5% daylight factor required under the CSH. The specification needs to state in which room the Home Office will be situated. It has been assumed that the following will be provided within one (or both) of the Study areas indicated:

- Sufficient space – 1.8m of free wall space to fit a desk and filing cabinet/bookshelf without interfering with the intended use of that room.
- Two double power sockets
- Two telephone points (one where the dwelling is connected to cable or broadband internet)
- Window (Openable)

Evidence Required	
Design Stage	*Post Construction Stage*
• *Location and sufficient space for the home office* • *Location and number of sockets and telephone points* • *Adequate ventilation* • *Achievement of an average daylight factor of >1.5%* • *Confirmation of either the cable connection, that broadband is available at the site level or two telephone points (or double telephone point)* ***AND*** • *Signed pre-assessment estimate*	• *Written confirmation of provision from the developer* ***OR*** • *Site inspection report (SRE)*

Water

Issue	Credits Available	Credits Achieved
Wat 1: Indoor water use	5	3

Credits are awarded here for the use of water efficient fittings, appliances and water recycling systems in order to reduce the consumption of potable water in the home.

(MANDATORY) Internal water use needs to be <105 litres/person/day to achieve Code Level 3 – to meet this requirement the following fittings will be installed:

- Kitchen sink taps have a flow rate of 5 litres/min or less
- Bathroom basin taps have a flow rate of 4 litres/min or less
- Low Flow Showers (not more than 8 litres/min)
- Dual Flush WC's (4/2.6 Litre)
- Bath: maximum 200 litre
- Washing Machine (<8.17 litre/Kg of load water use)
- Dishwasher (water use <1.25 litre/place setting)

It has been assumed at this stage that rainwater harvesting will not be used on site due the use of sedum roofing.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Water Efficiency Calculator for New Dwellings internal potable water use* • *Location, details and type of appliances/fittings, including water reduction equipment and its capacity/flow rate.* • *Location, size and details of any rainwater and greywater systems* • *Signed pre-assessment estimate*	• *Written confirmation of installation from the developer* ***AND*** • *Manufacturers sanitary ware information*

Issue	Credits Available	Credits Achieved
Wat 2: External Water Use	1	1

Credits are awarded here for the recycling of rainwater and reducing the amount of mains potable water used for external water uses.

A water butt for the collection of rainwater will be installed to supply non-potable water for external use. This will be of 200 litres capacity, with a tap, lid and automatic overflow to the rain water downpipe.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Type, size and location of any rainwater collection systems*	• *Written confirmation of installation from the developer* ***OR*** • *Site inspection report*
• *Signed pre-assessment estimate*	

Materials

Issue	Credits Available	Credits Achieved
Mat 1: Environmental Impact of Materials	15	10

Credits are awarded here for the use of materials with lower environmental impact over their life-cycle in accordance with the Green Guide to Specification.

(MANDATORY) As many as practical of the 5 key elements must achieve a rating of A+ to D from The Green Guide to Specification.

The table below gives an indicative specification which would meet these requirements – final specification to be confirmed:

Building element	Green Guide Element Description	Green Guide Rating
Roofs	Vapour control layer, insulation, timber joists, OSB/3, PVC single ply roofing membrane (or sedum roofing) 812520032	A+ Rated
External Walls	Pre-treated softwood weatherboarding OR render, breather membrane, OSB/3 sheathing, timber frame with insulation, vapour control layer, plasterboard on battens, paint 806210051	A+ Rated
Internal Partitions	Timber stud, plasterboard, paint 809760003	A+ Rated
Ground Floors	Screed on insulation laid on in situ concrete floor on polyethylene DPM on blinded virgin aggregate sub-base 820100009	E Rated
Upper Floors	Chipboard/Plywood decking on timber joists 807280081	A+ Rated
Windows	Powder coated aluminium window with softwood internal frame, double glazed, water based stain internally 1213100002	C Rated

Evidence Required	
Design Stage	*Post Construction Stage*
• *Completed Code Mat Calculator Tool, showing building elements at design with the relevant Green Guide element numbers (SRE)* ***AND*** • *Signed pre-assessment estimate* ***AND*** • *General building specification*	• *The Code Mat 1 Calculator Tool, showing building elements as built with the relevant Green Guide element numbers (SRE)* • *References of data source* ***OR*** • *Confirmation of construction from the developer nothing any changes from design stage*

Issue	Credits Available	Credits Achieved
Mat 2: Responsible Sourcing of Materials – Basic Building Elements	6	4

Credits are awarded here for the environmentally, socially considerate and accountable management of construction sites.

It is assumed that as many as practical of the basic elements in the development will be responsibly sourced – Medium/high credits have been assumed here until full material sourcing details are confirmed.

Here, it has been assumed that all structural timber will be FSC/PEFC certified, and as much as practicable of the concrete to be used on site will be sourced from ISO14001 certified suppliers/manufacturers.

Elements assessed under this credit are:

- Frame
- Upper Floors
- External Wall
- Foundation/substructure
- Ground Floor
- Roof
- Internal Walls
- Staircase

Additionally, 100% of all timber for these elements will be legally sourced

Evidence Required	
Design Stage	*Post Construction Stage*
• *Completed Code Mat 2 Calculator Tool (SRE)* ***AND*** • *Specified materials in each element* ***OR*** • *Materials schedule giving materials manufacturers (suppliers for timber) and any certification if known*	• *Code Mat 2 Calculator Tool and as built documentary evidence (as listed for design stage) (SRE)* ***AND*** • *Developer confirmation that materials have been used as specified at design stage* ***OR*** • *Materials schedule giving materials manufacturers/suppliers if not provided at design stage*

Issue	Credits Available	Credits Achieved
Mat 3: Responsible Sourcing of Materials – Basic Finishing Elements	3	2

Credits are awarded here for the use of responsibly sourced materials for the finishing elements.

It is assumed that as many as practical of the finishing elements in the development will be responsibly sourced – Medium/high Credits have been assumed here until full material sourcing details are confirmed.

At present it has been assumed that all finishing timbers (skirting boards, architraves, framing, kitchen units, stair cases etc.) will be FSC/PEFC certified.

Elements assessed under this credit are:

- Staircase
- External & internal doors
- Panelling
- Fascias
- Windows
- Skirting
- Furniture
- Any other significant use

Additionally, 100% of all timber for these elements will be legally sourced

Chain of Custody certification will be needed as part of the CSH assessment for credits to be gained under both Mat 2 and Mat 3 issues. Some examples of these are as follows:

- Forestry Stewardship Council Certification (FSC)
- Programme for the Endorsement of Forest Certification (PEFC)
- International Organisation for Standardisation (ISO) 14001
- BRE Standard: BES 6001

The BRE SmartER tool (an add-on to the SmartWaste tool) can assist in procuring sustainable timber for temporary and permanent use.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Completed Code Mat 2 Calculator Tool (SRE)* ***AND*** • *Specified materials in each element* ***OR*** • *Materials schedule giving materials manufacturers (suppliers for timber) and any certification if known*	• *Code Mat 2 Calculator Tool and as built documentary evidence (as listed for design stage) (SRE)* ***AND*** • *Developer confirmation that materials have been used as specified at design stage* ***OR*** • *Materials schedule giving materials manufacturers/suppliers if not provided at design stage*

Surface Water Runoff

Issue	Credits Available	Credits Achieved
Sur 1: Management of Surface Water Run-off from Developments	2	2

Credits are awarded here for designing surface water drainage for housing developments so that it avoids, reduces and delays the discharge of rainfall run-off to watercourses and public sewers using SuDS techniques.

(MANDATORY) Peak runoff rates and annual runoff post development must be no greater than the previous conditions for the site.

Additional credits will be required within this section therefore SuDS must be used to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters by:

1. Ensuring no discharge to the watercourse for rainfall depths up to 5mm (follow guidance in the Interim Code of Practice for Sustainable Drainage systems (SUDS) (CIRIA, 2004).

AND

2. The run-off from all hard surfaces shall receive an appropriate level of treatment in accordance with the SUDS Manual to minimise the risk of pollution.

Any drainage scheme implemented will be required to ensure they are sized appropriately to withstand a 1 in 100 year rainfall event plus 30% increase for climate change.

A completed SUR 1 template report will be needed to confirm for certification purposes, as well as a NPPF compliant flood risk assessment.

It has been noted that Permeable Paving and sedum roofing has been specified to achieve the above requirements.

Evidence Required	
Design Stage	*Post Construction Stage*
• *A PPS 25 Compliant Flood Risk Assessment (FRA)* ***AND*** • *BRE SUR 1 Template Report*	• *Confirmation letter from the developer confirming that the site has been constructed in accordance with the design stage information provided*

Issue	Credits Available	Credits Achieved
Sur 2: Flood Risk	2	2

Credits are awarded here for locating housing developments in low flood risk areas, or by taking measures to reduce the impact of flooding on houses built in areas with a medium or high risk of flooding.

Two credits are assumed because the development is situated in Zone 1, with a low annual probability of flooding. A FRA will be undertaken to confirm the risk from all sources of flooding in line with the National Planning Policy Framework (NPPF).

Evidence Required	
Design Stage	*Post Construction Stage*
Zone 1 developments: • *Flood Risk Assessment*	• *Confirmation letter from the developer confirming that the site has been constructed in accordance with the design stage information provided and that the basis for the flood risk assessment has not changed*

Waste

Issue	Credits Available	Credits Achieved
Was 1: Storage of Non-recyclable Waste and Recyclable Household Waste	4	4

Credits are awarded here for the provision of adequate internal and external storage space for non-recyclable waste and recyclable household waste.

(MANDATORY) To achieve credits the space allowed for waste storage will be as follows:

- Internal storage of a minimum of 30 litres, in a dedicated position (i.e. a cupboard or similar), marked as for recycling in each unit and not to be free-standing. This will be provided in addition to conventional waste storage.
- External containers provided by, and in compliance with, local authority regulations, with a dedicated storage position (enclosed bins), or store (non-enclosed bins).
- The minimum capacity of waste storage as calculated from the BS 5906 (Code of Practice for Storage and On-Site Treatment of Solid waste from buildings (2005))
- All containers must be accessible to disabled people, particularly wheelchair users and sited on a hard, level surface within 30m level walking route of the main (level threshold) access to the dwellings.
- All waste storage should be stored in line with the Inclusive Design Principles checklist (IDP) to meet the requirements of this section.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Completed Inclusive Design Protocol (IDP) Checklist* • *Building layout plans and site plans* • *Published information from the Local Authority/waste scheme provider describing details of waste collection* ***AND*** • *Signed pre-assessment*	• *Checklist IDP (as listed for design stage) representing the dwellings as built* ***OR*** • *Post construction confirmation letter* • *Site inspection report*

Issue	Credits Available	Credits Achieved
Was 2: Construction Site Waste Management	3	3

Credits are awarded here for the effective and appropriate management of construction site waste, which will promote resource efficiency.

The developer/contractor will produce and implement a compliant Site Waste Management Plan (SWMP) with the following requirements:

Minimising Construction Waste

- Targets for resource efficiency
- Procedures and commitments to minimise non-hazardous waste
- Minimising hazardous waste from site
- Monitoring, measuring and reporting of hazardous and non-hazardous site waste

Diverting Waste from Landfill

Where there is a compliant SWMP including procedures and commitments to sort and divert waste from landfill through either;

- Re-use on site
- Re-use on other sites
- Salvage/reclaim for re-use
- Return to the supplier via a 'take-back scheme'
- Recovery and recycling using an approved waste management contractor
- Compost
- According to defined waste groups.

AND

- At least 85% by weight or by volume of non-hazardous construction waste generated by the project has been diverted from landfill.

Evidence Required	
Design Stage	*Post Construction Stage*
• *The compliant SWMP* ***OR*** • *Signed pre-assessment estimate*	• *Summary SWMP including recycling, reuse and reclamation rates*

Issue	Credits Available	Credits Achieved
Was 3: Composting	1	1

Credits are awarded here for the provision of compost facilities which will reduce the amount of household waste send to landfill.

A Local Authority food waste collection scheme will be available for the dwelling occupants to use in line with information provided by the London Borough of Camden. In order to comply, the following will be provided:

- Space for the internal 'caddy' bin to be placed within a suitable location within the kitchen cupboards.
- Corresponding external bin and dedicated location in line with the WAS 1 requirements above.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Signed pre-assessment estimate* • *Confirmation that the composting OR food waste store meets the IDP checklist requirements*	• *Copy of the food waste collection OR home composting leaflet to be given to occupants* • *Post construction confirmation letter*

Pollution

Issue	Credits Available	Credits Achieved
Pol 1: Global Warming Potential (GWP) of Insulants	1	1

Credits are awarded here for the reduction of emissions of gases with high GWP associated with the manufacture, installation, use and disposal of foamed thermal and acoustic insulating materials.

All insulation will have a GWP of less than 5 (in manufacture AND installation):

- Roofs: including loft access
- Walls: internal and external including lintels and all acoustic insulation
- Floors: including ground and upper floors
- Hot water cylinder: pipe insulation and other thermal stores
- Cold water storage tanks: where provided
- External doors.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Completed Checklist Pol 1*	• *Completed Checklist Pol 1* • *Post construction confirmation letter*

Issue	Credits Available	Credits Achieved
Pol 2: NO_x Emissions	3	3

Credits are awarded here for the reduction of nitrogen oxide (NO_x) emissions into the atmosphere.

The dwelling will have space and hot water heating provided through high efficiency gas boilers with a NOx emission rate of less than 40mg/kWh.

Evidence Required	
Design Stage	*Post Construction Stage*

• *Signed pre-assessment estimate*
AND
• *Design stage SAP outputs*
OR
• *Documentary evidence describing:*
  ○ *Primary/secondary heating systems and flue type*
  ○ *Dry NO_x levels and/or boiler class of primary/secondary heating systems*
	• *Confirmation that the site has been constructed in accordance with design stage information provided*
	OR
	• *If not provided at design stage, make and model of boiler/CHP system*

Health & Well Being

Issue	Credits Available	Credits Achieved
Hea 1: Daylighting	3	2

Credits are awarded here for the use of good daylighting which improves occupants' quality of life and reduces the need for energy to light the home.

Indicative daylight calculations have been undertaken on the applicable rooms for the dwelling and these show the following:

- The Kitchen area will achieve a daylight factor of >2%
- Living, dining, lounge and Home Office/Study areas will achieve a minimum daylight factor of 1.5%
- Due to the site location and the surrounding buildings/trees, the View of Sky credits have also NOT been assumed for the dwelling at present. Full calculations will be undertaken at Design Stage to confirm.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Up-to-date plans and elevations*	• *Post construction confirmation letter confirming site constructed as per design info*

Issue	Credits Available	Credits Achieved
Hea 2: Sound Insulation	4	4

Credits are awarded here for the use of improved sound insulation which will reduce the likelihood of noise complaints from neighbours.

The dwelling is detached, and therefore full (4) credits can be awarded within this section by default.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Signed pre-assessment estimate* ***OR*** *If Robust Details used:* • *Confirmation of required performance standard* • *Confirmation of registration with RDL*	• *Sound test certificates for each group and subgroup of units (as per Part E)* ***OR*** *If Robust Details used:* • *Completed Robust Details Ltd Compliance Certificate*

Issue	Credits Available	Credits Achieved
Hea 3: Private Space	1	1

Credits are awarded here for the provision of an inclusive outdoor space which is at least partially private, which will help improve occupants' quality of life.

Drawings show that a private garden is to be provided and that this will be of an appropriate size to meet the requirements of this issue.

It has been assumed that access to this space will be available through a level access entrance/exit to the dwelling in order to allow the credits to be awarded (see Checklist IDP for full details of access requirements)

Evidence Required	
Design Stage	*Post Construction Stage*
• *Site plan* • *Completed Checklist IDP* • *Signed pre-assessment estimate*	• *Documentary evidence (as listed for the design stage) representing the dwelling as built* • *Post construction confirmation letter* • *Site inspection report*

Issue	Credits Available	Credits Achieved
Hea 4: Lifetime Homes	4	4

Credits are awarded here for the construction of homes that are accessible and easily adaptable to meet the changes needs of current and future occupants.

Drawings show that the dwelling may have potential to achieve all aspects of Lifetime Homes compliance. Credits for this have been assumed at present, however this will be confirmed prior to Design Stage Certification.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Signed pre-assessment estimate* • *Site plan* • *Completed Hea4 checklist*	• *Evidence (as listed for the design stage) representing the dwelling as built* • *Site inspection report*

Management

Issue	Credits Available	Credits Achieved
Man 1: Home User Guide	3	3

Credits are awarded here for the provision of guidance enabling occupants to understand and operate their home efficiently and make the best use of local facilities.

A Home User Guide will be produced and issued to the dwelling which provides details on the following:

Non-technical information on the developments operational issues:

- Environmental Strategy/Design & Features
- Energy Use & Efficiency
- Water Use
- Recycling & Waste
- Sustainable DIY
- Emergency Information
- Links, References & Further Information
- Provision of Information in Alternative Formats

Information on the site and its surroundings:

- Recycling & Waste
- Public Transport
- Local Amenities
- Responsible Purchasing
- Emergency Information
- Links, References & Further Information

Please see Checklist MAN 1 for a comprehensive list of the requirements of the Home User Guide.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Signed pre-assessment estimate* *AND* • *Completed Man 1 checklist*	• *Copy of the Home User Guide* • *Confirmation that the it has been supplied to all home(s)*

Issue	Credits Available	Credits Achieved
Man 2: Considerate Constructors Scheme	2	2

Credits are awarded here for environmentally and socially considerate, and accountable management of the construction sites.

The developer will commit to comply with the principles of the Considerate Constructors Scheme, achieving a score of at least 35, with a minimum of 7 points scored in each section.

Please note: The main contractor must register with the Considerate Constructors Scheme prior to starting construction on site, in order to qualify for credits within this section.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Signed pre-assessment estimate* • *Confirmation of registration with the Considerate Constructors Scheme*	• *Copy of the Considerate Constructors Certificate* • *Final Considerate Constructors Monitor's report*

Issue	Credits Available	Credits Achieved
Man 3: Construction Site Impacts	2	2

Credits are awarded here if the construction site is managed in a manner that mitigates environmental impacts.

The developer will limit Construction Site Impacts through the following:

- Monitoring, reporting and setting targets for CO_2 and energy use on site.
- Monitoring, reporting and setting targets for Water consumption on site.
- Adopting Best Practice for air (dust) pollution from site activities.
- Adopting Best Practice for water (ground and surface) pollution from site activities.

Please see Checklist MAN 3 for the information required to be recorded and displayed on site.

The BRE SmartER tool can be used to monitor and report:

- Energy consumption from commercial transport.
- Energy consumption from fuel used onsite.
- Water consumption
- Procuring sustainable timber

Evidence Required	
Design Stage	*Post Construction Stage*
• *Completed , signed and dated Checklist Man 3* • *Signed pre-assessment estimate*	• *Evidence demonstrating that Checklist Man 3 procedures have been achieved*

Issue	Credits Available	Credits Achieved
Man 4: Security	2	2

Credits are awarded here for the design of developments where people feel safe and secure- where crime and disorder, or the fear of crime, does not undermine quality of life or community cohesion.

The Proposed Development will seek consultation with an ALO or CPDA, and will follow any recommendations made in order to achieve Secured by Design Section 2 Compliance.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Evidence an ALO/CPDA has been consulted* • *A commitment to follow the ALO/CPDA advice* • *Signed pre-assessment estimate*	• *Post construction confirmation letter*
	• *Assessor Site Inspection Report* ***OR*** • *As built drawings showing security features*
	• *Secured by Design certificate*

Ecology

Issue	Credits Available	Credits Achieved
Eco 1: Ecological Value of Site	1	0

Credits are awarded here if the development is located on land that already has a limited value to wildlife and avoids ecologically valuable sites.

The development site cannot be deemed of Low or Insignificant Ecological value due to the presence of mature trees on the site, therefore credits cannot be awarded here.

It has been assumed at this stage that an Ecology Report will not be undertaken for the site, and therefore credits within this section cannot be confirmed by a suitably qualified ecologist.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Signed pre-assessment estimate* ***OR*** • *CSH compliant Ecology Report*	• *Site inspection report* • *Post construction confirmation letter*

Issue	Credits Available	Credits Achieved
Eco 2: Ecological Enhancement	1	0

Credits are awarded here for enhancing the ecological value of the site.

As an Ecology Report is not anticipated for this site, credits within this section cannot be awarded. Should a CSH compliant Ecology Report be undertaken, it will be required to adopt all key, and min 30% of the additional recommendations within that report to gained credits here.

Evidence Required	
Design Stage	*Post Construction Stage*
• *CSH compliant Ecology Report* • *Signed pre-assessment estimate*	• *Post construction confirmation letter*

Issue	Credits Available	Credits Achieved
Eco 3: Protection of Ecological Features	1	1

Credits are awarded here for the protection of existing ecological features from substantial damage during the clearing of the site and the completion of construction works.

The site has not been deemed to be of low ecological value however, it has been assumed that all features of ecological value will be protected in line with EU and UK law and a suitable plan for this will be provided to confirm – allowing 1 credit to be awarded within this section.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Documentary evidence of ecological features and how they will be protected*	• *Documentary evidence of the protection of ecological features*
• *Confirmation of the requirement to remove any features*	• *Post construction confirmation letter*
• *Ecologist's report based on 'Code for Sustainable Homes Ecology Report Template'*	• *Post construction confirmation letter*
• *Site visit report – Checklist Eco 1*	• *As at design stage*

Issue	Credits Available	Credits Achieved
Eco 4: Change in Ecological Value of the Site	4	2

Credits are awarded here for minimising reductions and promoting an improvement in ecological value.

As the site is currently a dwelling and private garden with associated hard-standing and this arrangement is to remain unchanged throughout the development, 2 credits can be assumed here for a 'neutral' change in ecological value. Should an Ecology Report be provided, this will be used to confirm.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Proposed site layout* • *Pre-development site survey* • *Planting schedule*	• *Evidence (as listed for the design stage) representing the dwelling as built* • *Site inspection report* ***OR*** • *Post construction confirmation letter*
• *Completed Code for Sustainable Homes Ecology Report Template* • *Signed pre-assessment estimate*	

Issue	Credits Available	Credits Achieved
Eco 5: Building Footprint	2	0

Credits are awarded here for ensuring that land and material use is optimised across the development in order to maximise the efficient use of a building's footprint.

The Total Ground Floor Area: Total Net Internal Floor Area ratio will not be sufficient to gain credits within this section.

Evidence Required	
Design Stage	*Post Construction Stage*
• *Calculation of the building footprint ratio (stating NIFA and NIGFA)*	• *Calculations of the building footprint ratio (stating NIFA and NIGFA)* ***OR*** • *Post construction confirmation letter*

Declaration

We the undersigned agree that the above specification (as stated in: 24.02.2015 - CSH Pre-Assessment Estimate - 92 FItzjohns Avenue, Camden, London V1 RevA) in relation to the Code for Sustainable Homes credit requirements for this site will be implemented, and that any deviation from the requirements listed will be agreed with SRE Ltd prior to implementation.

On behalf of the Developer/Contractor:	On behalf of the Client:
Name:……	Name:……
Organisation:……	Organisation:……
Signature:……	Signature:……
Date:……	Date:……