CODE FOR SUSTAINABLE HOMES PRE-ASSESSMENT

51 – 53 Agar Grove

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Prepared by:	Fiona Hagan	**Date:** 22/11/13
Edited by:	Fiona Hagan	**Date:** 22/04/14
Authorised by:	Paul Scriven	**Date:** 22/04/14
Issuing office:	London West End	

Client:
Rlf3pm

hurleypalmerflatt
building sustainability

DOCUMENT CONTROL

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3	16/04/14	Final	16/04/14_FH	16/04/14_PS	Revised with design changes
4	22/04/14	Final	22/04/14_FH	22/04/14_PS	Updated name

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APPENDICES

1.0 EXECUTIVE SUMMARY

A Code for Sustainable Homes (CfSH) pre-assessment has been carried out on the proposed seven apartments and one mews at 51 – 53 Agar Grove.

One encompassing assessment has been undertaken, using the criteria in The Code for Sustainable Homes, Technical Guide Nov 2010.

Camden London Borough Council (CLBC) has requested a CfSH Pre-assessment, in line with criteria highlighted in Camden Planning Guidance 3 (CPG3): Sustainability, as seen below;

> The Code for Sustainable Homes has a clear timetable for the delivery of sustainable buildings up to 2016 when new housing will be expected to be zero carbon.
>
> You are strongly encouraged to meet the following standards in accordance with Development Policy DP22 - *Promoting sustainable design and construction*:

Time period	Minimum rating	Minimum standard for categories (% of un-weighted credits)
2010-2012	Level 3	Energy 50%
2013 -2015	Level 4	Water 50%
2016+	Level 6 'zero carbon'	Materials 50%

A minimum of Code Level 4 is the requirement imposed by local Planning Authorities.

This report summarises the findings of the CfSH pre-assessment workshop undertaken with Mr Gori (Client), rlf3pm (Project manager), dmfk (Architects), Webbyates (Structural Engineers), cooperhomewood (Engineers) and nlpplanning (Planners) on the 18th November 2013 and further discussions with the design team.

To achieve a CfSH rating a minimum percentage score of 68% must be achieved and pre-requisites applicable to a Code Level 4 rating complied with.

All of the mandatory requirements for Code Level 4 were confirmed as achievable by the design team during the pre-assessment meeting. A route to achieving Code Level 4 has been identified, with a potential score of **72.54%.**
A minimum of 50% can be achieved in each of the categories; Energy, Water and Materials. A total of 4 out of 6 water credits available (66%) have been deemed as achievable in line with current council requirements.

2.0 CODE FOR SUSTAINABLE HOMES 2010 METHODOLOGY

The CSH is an environmental assessment rating methodology for new homes which assesses environmental performance in a two stage process (Design stage and Post-construction stage) using objective criteria and verification developed by the Department for Communities and Local Government and the BRE. The results of the CSH assessment are recorded on a certificate assigned to the dwelling.

The environmental categories assessed and associated credits are listed in the table below. Mandatory requirements (M) required for Code Level 4 are annotated in Table 3 below:

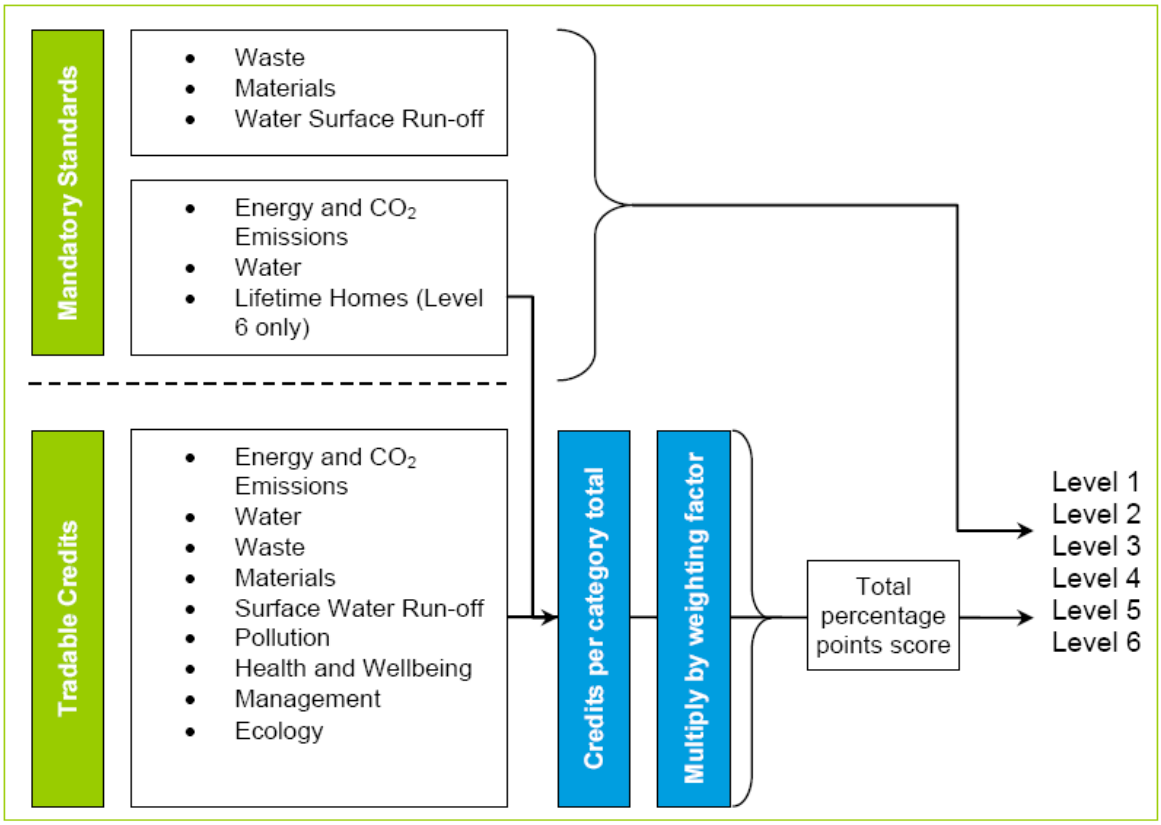
Categories	Available Credits	Credit Names
Management (10% weighting)	3	Home Users Guide
	2	Responsible Construction Practices
	2	Construction Site Impacts
	2	Security
Health and Well Being (14% weighting)	3	Daylighting
	4	Sound insulation
	1	Private Space
	4	Lifetime Homes (M)
Energy (36.4% weighting)	10	Dwelling Emission Rate (M)
	9	Fabric Energy Efficiency
	2	Energy Display devices
	1	Drying Space
	2	Energy Labelled White Goods
	2	External Lighting
	2	Low Zero Carbon Technologies
	2	Cycle Storage
	1	Home Office
Water (9% weighting)	5	Internal Water Use (M)
	1	External Water Use
Materials (7.2% weighting)	15	Environmental Impact of Materials
	6	Responsible Sourcing of materials: basic building elements
	3	Responsible Sourcing of materials: basic finishing elements
Pollution (2.8% weighting)	1	Global Warming Potential
	3	Nitrogen Oxide Emissions
Waste (6.4% weighting)	4	Storage of non-recyclable waste and recyclable household waste
	3	Construction Site Waste Management
	1	Composting
Surface Water Run-off (2.2% weighting)	2	Management of Surface Water Run-off from developments (M)
	2	Flood Risk
Ecology (12% weighting)	1	Ecological value of site
	1	Ecological enhancement
	1	Protection of Ecological features
	4	Change in ecological value of the site
	2	Building Footprint

2.1 CfSH Assessment Process

The assessment process follows the following steps:

- Confirm that the three mandatory issues, for which no credits are awarded, have been achieved.
- Confirm that the minimum values required to meet the target Code Level for the mandatory credits for CO_2 emissions and internal water use can be achieved through the design.
- Check the remaining tradable credits and additional credits targeted to achieve the overall rating and Code Level required.

This process is described in the diagram below:



2.2 CfSH Minimum Standards

As mentioned previously, to achieve a CfSH rating a minimum percentage score must be achieved and pre-requisites applicable to that rating level complied with.

2.3 CfSH Minimum Scores required for each Code Level

The minimum percentage score for each Code Level is listed in Table 1 below:

Table 1: Relationship between Total Percentage Points Score and Code Level

Total percentage points score	Code Levels
36 %	Level 1 (★)
48 %	Level 2 (★★)
57 %	Level 3 (★★★)
68 %	Level 4 (★★★★)
84 %	Level 5 (★★★★★)
90 %	Level 6 (★★★★★★)

The required Code Level 4 rating needs a minimum score of **68%** to be achieved.

2.4 CfSH Stages

Design Stage Assessment

The aim of the Design Stage (DS) assessment is:

- To assess the design specifications (i.e. before construction begins) for each individual dwelling / commercial building to determine the DS or Interim rating.
- To award (subject to quality assurance) a DS or Interim certificate.

The DS assessment is carried out on the detailed design in the period up to the issue of tender documents, RIBA Stages A-G.

The assessor will work closely with the design team to:

- Demonstrate that performance requirements set for each of the mandatory issues of environmental impact are met for each dwelling / commercial building.
- Choose the remaining tradable issues which will be needed to achieve the overall desired rating.
- Evaluate the performance of each dwelling / commercial building against the requirements set for each of the chosen issues to confirm that the required standards are met for the desired rating.
- Assemble and check the evidence required for the developer, design team and other consultants to show that the intended performance will be met.

When the assessor is satisfied with the anticipated CSH rating, the assessment report will be submitted to the BRE for quality assurance and to receive DS or Interim Code certification.

Post Construction Stage Assessment

The aim of the Post Construction Stage (PCS) assessment is to assess each individual dwelling 'As Built' to determine the final score and rating Code Level.

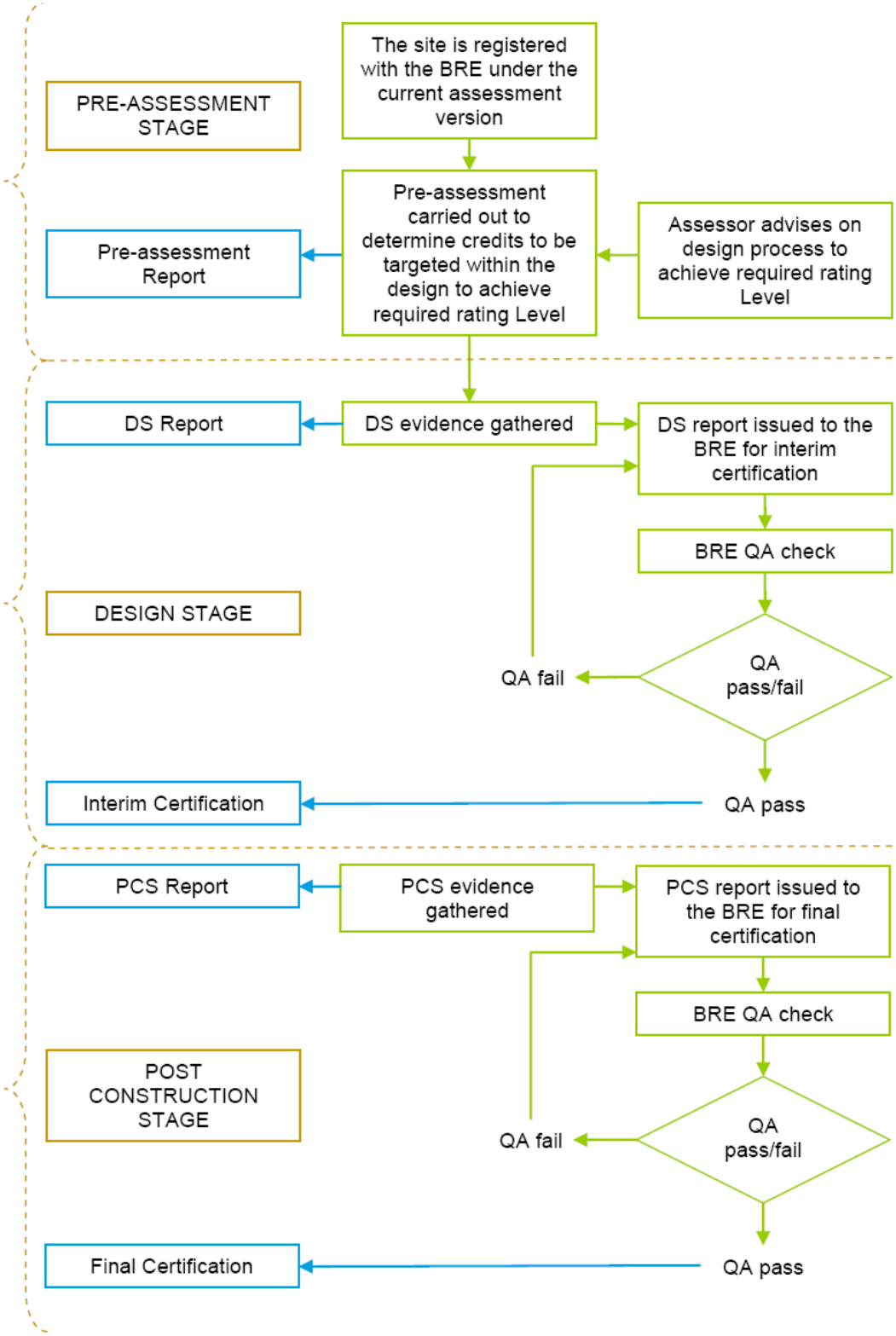
The DS assessment can be used as the starting point for the PCS assessment. The PCS assessment is carried out to confirm that dwellings are either built to the DS specifications, or if there are variances from the DS, these are documented, re-assessed, and a new score and rating Level calculated. The process for this stage of work is as follows:

- Undertake a site visit to the development site to view and document, through photographic evidence the final construction.

- Every different specification for each issue shall be reviewed and evidence recorded to confirm that it complies with the requirements for PCS assessment.

As with the DS submission, a PCS report will be produced and submitted to the BRE for QA check and final certification.

A summary of the whole CSH process is described in the figure below;



3.0 ACHIEVING CfSH LEVEL 4 AT 51 – 53 Agar Grove

This section summarises the results of the CfSH pre-assessment at 51 – 53 Agar Grove and evaluates the achievability of the targeted CfSH Level 4.

3.1 CfSH Mandatory Performance

The mandatory minimum performance standards required for all Code Levels, and the pre-requisites associated with a Level 4 rating are listed in the table below. All of the mandatory requirements for Code Level 4 have been confirmed as achievable by the design team during the pre-assessment meeting.

Table 2: CfSH Minimum Standards

Mandatory minimum performance standards (applicable to all Code Levels)		
Environmental impact of materials	Targeted	✓
Management of surface water run-off from developments	Targeted	✓
Storage of non-recyclable waste and recyclable household waste	Targeted	✓
Code Level 4 mandatory pre-requisites		
Minimum 25% improvement in DER over TER	Targeted	✓
Maximum indoor water consumption of 105 litres/person/day	Targeted	✓

3.2 CfSH Pre-assessment Target Rating

Based on the discussions at the pre-assessment meeting, it was determined that the following rating is achievable for the project based upon the current design;

Table 3: Summary of the Predicted Rating and Score

Predicted Rating = **Code Level 4**		
Mandatory Requirements:	Achieved for all levels	
% Points Breakdown:	**72.54%**	Code Level 4
	Energy	Code Level 4
	Water	Code Level 4

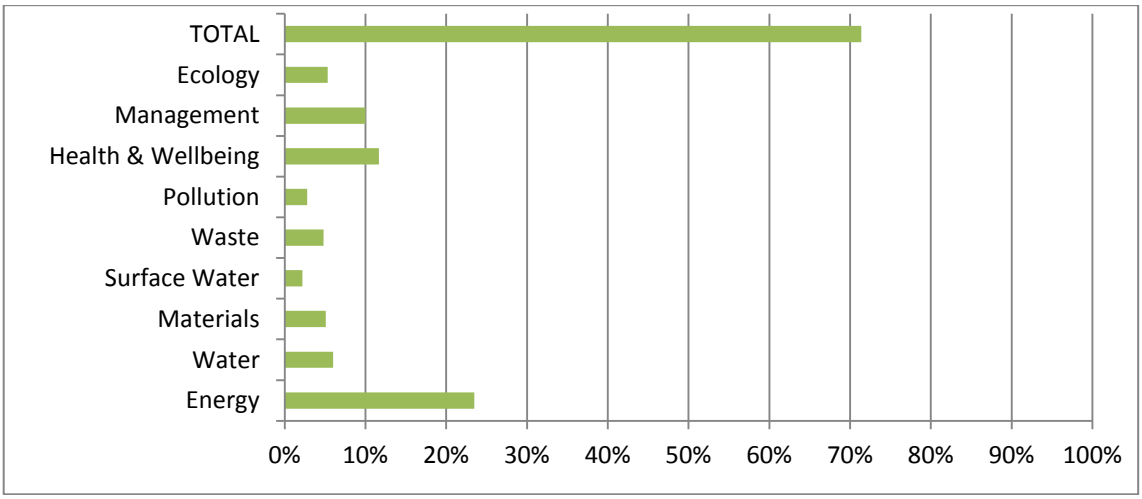
It is anticipated that a Code Level 4 will be achieved with a score of **72.54%.**

A breakdown of the credits targeted is included within Appendix A.
It is strongly recommended that the design team review this thoroughly to ensure all credits targeted are achievable.

3.3 CfSH Results – By Category

The Graph below illustrates the total number of points achievable and how this is broken down by section.

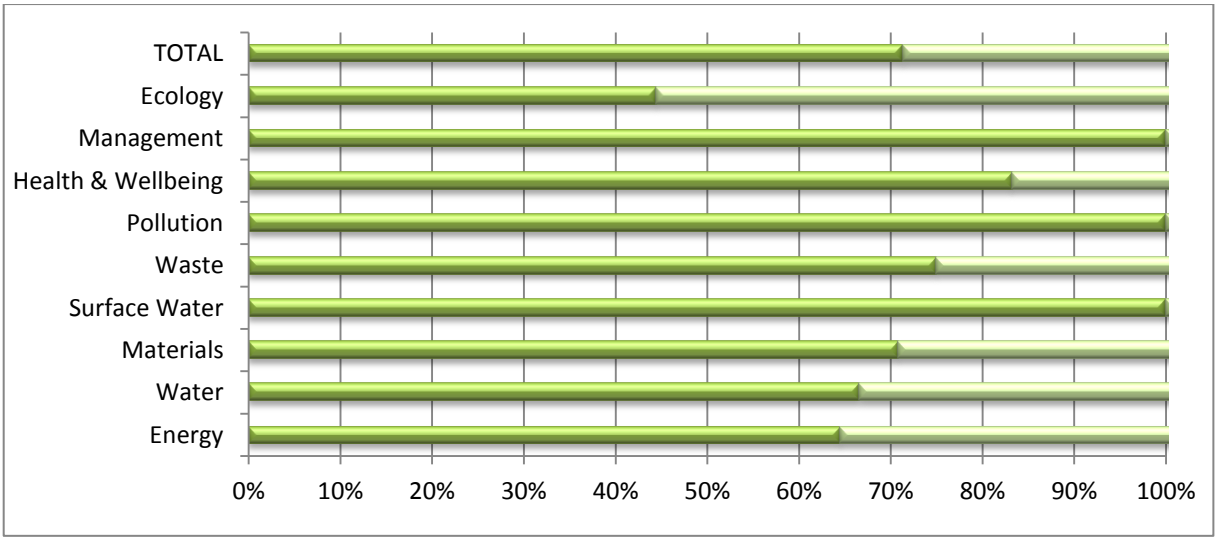
Graph 1: Predicted Contribution of Individual Sections to the Total Score and Percentage of Total Achievable Score



3.4 CfSH Results - Overall Performance

The Graph below demonstrates the project team's assessment of credit achievability for each category, based on the current design.

Graph 2: Predicted Percentage of Credits Achievable: Total and by Category



APPENDIX A

PRE-ASSESSMENT MATRIX

CATEGORY 1 ENERGY	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted: 67.74		Credits	Level		
Contribution to Overall % Score: 24.65 points		21.0 of 31 Credits	Level 4		
Ene 1 Dwelling Emission Rate	Credits are awarded based on the percentage improvement of the Dwelling Emission Rate (DER) over the Target Emission Rate (TER) as calculated using SAP 2009. Minimum standards for each Code level apply. The Code energy calculator can be used to calculate a predicted score. Enter the predicted score What is the predicted number of credits? 5.0 OR Are zero net CO_2 emissions achieved? ☐	5.0 of 10 Credits	Level 4	LEVEL 4 MANDATORY: 3 CREDITS A minimum of 25% improvement 2010 DER/TER SAP calcs have been completed by the services engineer and reductions of 48% can be achieved with ASHP. This equates to 5 credits.	RESPONSIBILITY: ENERGY MODELLER Detailed documentary evidence confirming the TER, DER and percentage improvement of DER over TER based on design stage SAP outputs* AND Confirmation of FEE performance where SAP section 16 allowances have been included in the calculation
Ene 2 Fabric Energy Efficiency	Credits are awarded based on the Fabric Energy Efficiency ($kWh/m^2/yr$) of the dwelling. Minimum standards apply at Code levels 5 and 6. The Code energy calculator can be used to calculate a predicted score. Enter the predicted score Apartments, Mid-terrace ◉ OR End terrace, Semi and Detached ○ OR Staggered Mid terrace ○ What is the predicted number of credits? 4.0	4.0 of 9 Credits	Level 4	4 CREDITS TARGETED Current sap spreadsheet gives a fabric efficiency of 54.3kWh/m2/yr. This equates to 4 credits.	RESPONSIBILITY: ENERGY MODELLER Detailed documentary evidence confirming fabric energy efficiency based on Design Stage SAP outputs
Ene 3 Energy Display Devices	Credits are awarded where a correctly specified Energy Display Device is installed monitoring electricity and/or primary heating fuel consumption. Select whether the EDD monitors electricity and/or fuel None Specified ○ Primary Heating only ○ OR Electricity only ○ OR Electricity and primary heating fuel ◉	2 of 2 Credits	-	2 CREDITS TARGETED. Electricity and Primary heating fuel monitoring devices are to be installed. These should be self-charging sensor(s) fixed to the incoming mains supply/supplies, and should measure and transmit energy consumption data to a visual display unit. Info should be as a min. Local time, Current mains energy consumption , Current emissions (g/kg CO2), Current tariff , Current cost (in pounds and pence).	RESPONSIBILITY: SERVICES Detailed documentary evidence confirming: That the correctly specified energy display device is dedicated to the dwelling AND The consumption data displayed by the correctly specified energy display device

Issue		Credits	Level	Assumptions Made	Evidence Required
Ene 4 Drying Space	One credit is awarded for the provision of either internal or external secure drying space with posts and footings or fixings capable of holding 4m+ of drying line for 1-2 bed dwellings and 6m+ for dwellings with 3 bedrooms or greater. Will drying space meeting the criteria be provided? Yes ◉ OR No ○	**1 of 1 Credits**	-	1 CREDIT TARGETED Internal drying spaces are NOT allowed in living rooms, kitchens, dining rooms, main halls or bedrooms. This could be achieved with a retractable clothes line contained within the bathroom eg. Over the bath. Credit is assumed achievable.	RESPONSIBILITY: ARCHITECT Detailed documentary evidence confirming: The location of drying fixings Details/location of ventilation provided (if internal) The length of drying line Details of the lock provided (for communal drying space only)
Ene 5 Energy Labelled White Goods	Credits are awarded where each dwelling is provided with either information about the EU Energy Labelling Scheme, White Goods with ratings ranging from A+ to B or a combination of the previous according to the technical guide. Select the appropriate option below EU Energy labelling information only ☐ A+ rated appliances ☑ A+, A and B rated appliances ☑ Combination of compliant rated white goods with EU Energy Labelling Scheme ☐	**2 of 2 Credits**	-	2 CREDITS TARGETED 1 credit All fridges & freezers - A+ rated 2 credit All washing machines & dishwashers - A rated AND Tumble dryers - B rated OR EU energy efficiency labelling scheme information provided to each dwelling in place of tumble dryer To be included within the Appliance Specification document.	RESPONSIBILITY: PM / CLIENT / ARCHITECT Detailed documentary evidence confirming: The appliances to be provided with their applicable ratings under the EU Energy Efficiency Labelling Scheme
Ene 6 External Lighting	Credits are awarded based on the provision of space lighting* with dedicated energy efficient fittings and security lighting fittings with appropriate control gear.. Space Lighting None provided ○ OR Non Code compliant lighting ○ OR Code compliant lighting ◉ Security Lighting None provided ◉ OR Non Code compliant lighting ○ OR Code compliant lighting and controls ○ Dual lamp luminaires Compliant with both above criteria ☐ * Statutory safety lighting is not covered by this requirement	**2 of 2 Credits**	-	2 CREDITS TARGETED All new energy efficient lighting is to be provided and should be included within the specification documentation. Space lighting - dedicated energy efificient fittings with appropriate control systems Security Lighting - is designed for energy efficiency & adequately controlled such that - burglar security lights - 150W - Movement detecting control devices (PIR) - Daylight cut off sensors	RESPONSIBILITY: ELECTRICAL ENGINEER Relevant drawings clearly showing the location of all external light fittings AND Detailed documentary evidence confirming: • The types of light fitting and efficacy, in lumens per circuit watt, for all lamps • The control systems applicable to each light fitting or group of fittingsRelevant drawings clearly showing the location of all external light fittings AND Detailed documentary evidence confirming: • The types of light fitting and efficacy, in lumens per circuit watt, for all lamps • The control systems applicable to each light fitting or group of fittings

Issue		Credits	Level	Assumptions Made	Evidence Required
Ene 7 Low or Zero Carbon Technologies	Credits are awarded where there is a 10% or 15% reduction in CO_2 emissions resulting from the use of low or zero carbon technologies. Select % contribution made by low or zero carbon technologies Less than 10% of demand ○ OR 10% of demand or greater ○ OR 15% of demand or greater ◉	**2 of 2 Credits**	-	2 CREDITS TARGETED. The current scheme includes for ASHP which gives a 49% carbon reduction.	RESPONSIBILITY: ENERGY MODELLER A copy of calculations as detailed in the assessment methodology based on design stage SAP outputs AND Detailed documentary evidence confirming that the specified low or zero carbon technologies: • Meet any additional requirements defined in Directive 2009/28/EC as applicable.
Ene 8 Cycle Storage	Credits are awarded where adequate, safe, secure and weather proof cycle storage is provided according to the Code requirements. Fill in the development details below Number of bedrooms: 3 Number of cycles stored per dwelling* 2.0 * if you have storage for 1 cycle per two dwellings insert 0.5 in number of cycles stored per dwelling	**2 of 2 Credits**	-	2 CREDIT TARGETED There is currently an allowance for 15 cycle racks in total. 3 for the 3x 1 beds (1 per dwelling) 6 for the 3x 2 bed (2 racks per dwelling) 2 for the 1x 3 bed (2 per dwelling) 2 for the 1x 3 bed mews (2 per dwelling) Total = 13	RESPONSIBILITY: ARCHITECT Detailed documentary evidence showing: • no. of bedrooms and no. of cycle racks/ dwelling • Location, type and size of storage • Convenient access to cycle storage • Any security measures • Details of the proprietary system (if applicable) • Secured by Design req. - New Homes 2010 will be met
Ene 9 Home Office	A credit is awarded for the provision of a home office. The location, space and services provided must meet the Code requirements. Will there be provision for a Home Office? Yes ◉ OR No ○	**1 of 1 Credits**	-	1 CREDIT TARGETED A home office area (approx. 1.8m free wall) has been allowed for in each of the dwellings. The Home office area should have adequate ventilation and a Daylighting Factor of 1.5%. There should also be an allowance for 2 double sockets & 2 phone points	RESPONSIBILITY: ARCHITECT / SERVICES Detailed documentary evidence showing: • Location of and sufficient space for the home office • Location and number of sockets • Location of telephone points • That adequate ventilation will be provided • That an average daylight factor of at least 1.5% is achieved

CATEGORY 2 WATER	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted: 66.66		Credits	Level		
Contribution to Overall Score: 6.00 points		4 of 6 Credits	Level 4		
Wat 1 Indoor Water Use	Credits are awarded based on the predicted average household water consumption, calculated using the Code Water Calculator Tool. Minimum standards for each code level apply. Select the predicted water use / Mandatory Requirement greater than 120 litres/ person/ day ○ OR ≤ less than 120 litres/ person/ day ○ OR ≤ less than 110 litres/ person/ day ○ OR ≤ less than 105 litres/ person/ day ◉ OR ≤ less than 90 litres/ person/ day ○ OR ≤ less than 80 litres/ person/ day ○	3 of 5 Credits	Level 3 AND Level 4	LEVEL 4 MANDATORY: 3 CREDITS 3 CREDITS TARGETED Water Efficiency Calculator to be completed Current proposals of rainwater harvesting and grey water harvesting will help achieve the minimum requirement of 105l/p/day. Low water consuming fittings to be specified were possible.	RESPONSIBILITY: PUBLIC HEALTH ENGINEER Completed Water Efficiency Calculator AND Detailed documentary evidence showing: • Location, details and type of appliances/ fittings that use water in the dwelling including any specific water reduction equipment with the capacity / flow rate of equipment. • Location, size and details of any rainwater and greywater collection systems provided for use in the dwelling
Wat 2 External Water Use	A credit is awarded where a compliant system is specified for collecting rainwater for external irrigation purposes. Where no outdoor space is provided the credit can be achieved by default. Select the scenario that applies No internal or communal outdoor space ◉ OR Outdoor space with collection system ○ OR Outdoor space without collection system ○	1 of 1 Credits	-	1 CREDIT TARGETED The aim of the credit is to reduce the use of main potable water used for external use. Credit assumed achievable on the assumption that rainwater harvesting could be incorporated into the design.	RESPONSIBILITY: PUBLIC HEALTH ENGINEER Confirmation that there is no potaable water used for external use.

CATEGORY 3 MATERIALS	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted: 70.83		Credits	Level		
Contribution to Overall Score: 5.10 points		17 of 24 Credits	All Levels		
Mat 1 Environm-ental Impact of Materials	Mandatory Requirement: At least three of the five key building elements must achieve a Green Guide 2008 Rating of A+ to D. Tradable Credits: Points are awarded on a scale based on the Green Guide Rating of the specifications. The Code Materials Calculator can be used to predict a potential score. Mandatory Requirement Will the mandatory requirement be met? ☑ Enter the predicted score What is the predicted number of credits? 8	8 of 15 Credits	All Levels	MANDATORY REQUIREMENTS: 3 CREDITS at least 3 of the following achieve a rating of A+ - D as per Green Guide; - roof, external walls, internal walls, upper/ground floors, windows 8 CREDITS TARGETED All new materials are to be specified to score highly No. Of credits is determined using the Code Mat1 Calculator Tool and	RESPONSIBILITY: ARCHITECT Completed Code Mat 1 Calculator Tool, showing building elements at the design stage with the relevant Green Guide element numbers AND References stating the design or specification documentation used to complete the tool
Mat 2 Responsible Sourcing of Materials - Basic Building Elements	Credits are awarded where materials used in the basic building elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Enter the predicted Score What is the predicted number of credits? 6	6 of 6 Credits	-	6 CREDITS TARGETED All materials are to be sourced from suppliers capable of providing responsible sourcing certification. All new timber used in the project is to be responsibly sourced. This requirement should be documented within the Tender Preliminaries. Mat2 Calculator Tool to be completed	RESPONSIBILITY: CONTRACTOR Completed Code Mat 2 Calculator Tool, showing building elements at the design stage AND Detailed documentary evidence stating the materials specified in each element
Mat 3 Responsible Sourcing of Materials - Finishing Elements	Credits are awarded where materials used in the finishing elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score. Enter the predicted Score What is the predicted number of credits? 3	3 of 3 Credits	-	3 CREDIT TARGETED All materials are to be sourced from suppliers capable of providing responsible sourcing certification. All new timber used in the project is to be responsibly sourced. This requirement should be documented within the Tender Preliminaries.	RESPONSIBILITY: CONTRACTOR Completed Code Mat 3 Calculator Tool, showing building elements at the design stage AND Detailed documentary evidence stating the materials specified in each element

CATEGORY 4 SURFACE WATER RUN-OFF	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted:	100.00%	Credits	Level		
Contribution to Overall Score:	2.20 points	4 of 4 Credits	All Levels		
Sur 1 Management of Surface Water Run-off from developments	Mandatory Requirement: Peak rate of run-off into watercourses is no greater for the developed site than it was for the pre-development site and that the additional predicted volume of rainwater discharge caused by the new development is entirely reduced as far as possible in accordance with the assessment criteria. Desiging the drainage system to be able to cope with local drainage system failure. Tradable Credits: Where SUDS are used to improve water quality of the rainwater discharged or for protecting the quality of the receiving waters. Mandatory Requirement Will the mandatory requirement be met? ☑ Select the appropriate option No SUDS ☐ No runoff into watercourses for the first 5 mm of rainfall ☑ Runoff from hard surfaces will receive an appropriate level of treatment ☑	2 of 2 Credits	All Levels	MANDATORY REQUIREMENTS + 2 CREDITS TARGETED. Mandatory; - peak rate of run off no greater - volume of rainwater discharge no greater - drainage system able to cope with local system failure Additional; - no run-off into watercourses for the first 5mm of rainfall - run-off from hard surafces will receive an appropriate level of treatment.	RESPONSIBILITY: DRAINAGE ENGINEER Mandatory Elements: Statement from the appropriately qualified professional confirming that they are qualified in line with the Code definition. AND The appropriately qualified professional's report containing all information necessary to demonstrate compliance with the peak rate of run-off and volume of run-off requirements.
Sur 2 Flood Risk	Credits are awarded where developments are located in areas of low flood risk or where in areas of medium or high flood risk appropriate measures are taken to prevent damage to the property and its contents in accordance with the Code criteria in the technical guide. Select the annual probability of flooding (from PPS25*) Zone 1 - Low ◉ OR Zone 2 - Medium ○ OR Zone 3 - High ○ Select the apropriate option(s) Low risk of flooding from FRA** ☑ All measures of protection are demonstrated in FRA ☐ Ground floor level and access routes are 600 mm above design flood level ☐ * Planning Policy Statement 25 - Planning and Flood Risk ** FRA - Flood Risk Assessment	2 of 2 Credits	-	2 CREDITS TARGETED It has been assumed that the area is at low risk of flooding. A full FRA will be required to confirm compliance.	RESPONSIBILITY: DRAINAGE ENGINEER A Flood Risk Assessment (prepared according to good practice guidance as outlined in PPS25 Development and Flood Risk) which shows that there is a low risk of flooding from all sources.

CATEGORY 5 WASTE	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted:	75.00%	Credits	Level		
Contribution to Overall Score:	4.80 points	6 of 8 Credits	All Levels		
Was 1 Storage of non-recyclable waste and recyclable household waste	Mandatory Requirement: The space provided for waste storage should be sized to hold the larger of either all external containers provided by the Local Authority or the min capacity calculated from BS 5906. Tradable Credits are awarded for adequate internal and/ or external recycling facilities. **Mandatory Requirement** Will the minimum space be provided and be accessible to disabled people? ☑ **Internal Recyclable household waste storage** Where there is no external recyclable waste storage and no Local Authority collection scheme Internal storage (capacity 60 litres) ☐	0 of 2 Credits		MANDATORY REQUIREMENTS 4 CREDITS TARGETED internal and external bins are required. External bin storage space must be compliant with IDP checklist. There is a total of 11m2 dedicated waste storage area for the 7 apartments and 1 mews house.	RESPONSIBILITY: ARCHITECT Mandatory element: Provide table: Cat 5.1 – Supplementary Information Sheet for Was 1 and Checklist IDP Detailed documentary evidence stating: • the location of internal and external storage • the number, types and sizes of internal and external storage AND A letter, leaflet, website or other published information from the Local Authority/waste scheme provider* describing; • the types of waste collected • the frequency of collection • if there will be pre or post collection sorting
	Local Authority collection Scheme Post Collection sorting Internal storage (capacity 30 litres) ☑ Pre-collection sorting Internal storage (3 separate bins, capacity 30 litres) ☐	4 of 4 Credits	All Levels		
	External Storage, no Local Authority collection scheme 3 separate internal storage bins (capacity 30 litres) ☐ **AND** Houses External Storage(capacity 180 litres) ☐ Flats Private recycling operator ☐ 3 or greater types of waste collected ☐	0 of 4 Credits			

Issue		Credits	Level	Assumptions Made	Evidence Required
Was 2 Construction Site Waste Management	A credit is awarded where a compliant SWMP is provided with targets and procedures to minimise construction waste. Credits are available where the SWMP include procedures and commitments for diverting either 50% or 85% of waste generated from landfill. SWMP details Does the SWMP include: + No SWMP ○ + SWMP with targets and procedures to minimise waste? ○ + SWMP with procedures to divert 50% of waste ◉ + SWMP with procedures to divert 85% of waste ○	**2 of 3 Credits**		2CREDITS TARGETED & 1 POTENTIAL The appointed Contractor will be required to provide a compliant SWMP and aim to achieve the targets set within BREEAM . Further credit may be achievable. This requirement should be documented within the Tender Preliminaries. A copy of the compliant SWMP containing the appropriate benchmarks, commitments and procedures for waste minimisation and diversion from landfill will be required.	RESPONSIBILTY: CONTRACTOR (tbc) A copy of the compliant SWMP containing the appropriate benchmarks, commitments and procedures for waste minimisation and diversion from landfill in line with the criteria and with Checklists Was 2a, Was 2b and Was 2c
Was 3 Composting	A credit is awarded where individual home composting facilities are provided, or where a community/ communal composting service, either run by the Local Authority or overseen by a management plan is in operation. Select the facilities available No composting facilities ◉ Individual composting facilities ○ OR Communal/ community composting*? ○ Local Authority ☑ OR Private with management plan ☐ * including if an automated waste collection system is in place	**0 of 1 Credit**	-	CREDIT NOT TARGETED Architect confirms that credit unlikely to be achieved.	

CATEGORY 6 POLLUTION	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted: 100.00%		Credits	Level		
Contribution to Overall Score: 2.80 points		4 of 4 Credits	All Levels		
Pol 1 Global Warming Potential (GWP) of Insulants	A credit is awarded where <u>all</u> insulating materials only use substances (in manufacture AND installation) that have a GWP of less than 5. Select the most appropriate option All insulants have a GWP less than 5 ◉ OR Some insulants have a GWP of less than 5 ○ OR No insulants have a GWP of less than 5 ○	1 of 1 Credits	-	1 CREDIT TARGETED All insulating materials specified in the elements of listed below should only use substances that have a GWP < 5 (in manufacture AND installation): • Roofs, Walls, Floors, Hot water cylinder, Cold water storage tanks,External doors. To be included within the specification documents.	RESPONSIBILITY: ARCHITECT / SERVICES (Completed Checklist Pol 1 showing the proposed insulation materials (or none) for each element and whether they are foamed using blowing agents or are unfoamed (from table Cat 6.1)
Pol 2 NOx Emissions	Credits are awarded on the basis of NOx emissions arising from the operation of the space and water heating system within the dwelling. Select the most appropriate option Greater than 100 mg/kWh ○ OR Less than 100 mg/kWh ○ OR Less than 70 mg/kWh ○ OR Less than 40 mg/kWh ◉ OR Class 4 boiler ○ OR Class 5 boiler ○ OR All space and hot water energy requirements are met by systems who do not produce NOx emissions ○	3 of 3 Credits	-	3 CREDITS TARGETED Service Engineers to ensure the specifications reference that the NOX emissions must be less than or equal to 40mg/kWh@0% excess O2.	RESPONSIBILITY: SERVICES Detailed documentary evidence describing: • The primary and any secondary heating systems and flue type • Dry NOX levels and/or boiler class of the primary and any secondary heating systems

CATEGORY 7 HEALTH & WELLBEING	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted: 83.00%		Credits	Level		
Contribution to Overall Score: 11.66 points		10 of 12 Credits	No level		
Hea 1 Daylighting	Credits are awarded for ensuring key rooms in the dwelling have high daylight factors (DF) and a view of the sky. Select the compliant areas Room Kitchen: Avg DF of at least 2% ☐ Living Room*: Avg DF of at least 1.5% ☑ Dining Room*: Avg DF of at least 1.5% ☑ Study*: Avg DF of at least 1.5% ☑ 80% of working plane in all above rooms receive direct light from the sky? ☑ Any room used for Ene 9 Home Office must also achieve a min DF of 1.5%.	2 of 3 Credits	-	2 CREDIT TARGETED Daylighting calculations to be completed for the different room types.	RESPONSIBILITY: SERVICES Copy of calculations as detailed in the methodology to demonstrate: • Average daylight factor using the formula described in the definitions section (method described in Littlefair (1998) as set out in BS 8206-2) or computer simulation or scale model measurements • Position of the no-sky line and percentage of area of the working plane that receives direct light from the sky Confirmation from the developer that the calculations accurately reflect the dwelling as designed.
Hea 2 Sound Insulation	Credits are awarded where performance standards exceed those required in Building Regulations Part E. This can be demonstrated by carrying out pre-completion testing or through the use of Robust Details Limited. Select a type of property Detached Property ○ Attached Properties: - Separating walls and floors only exist between non habitable spaces ○ - Separating walls and floors exist between habitable spaces ◉ Select a performance standard Performance standard not sought ○ Airborne: 3db higher; Impact: 3dB lower ○ OR Airborne: 5db higher; Impact: 5dB lower ◉ OR Airborne: 8db higher; Impact: 8dB lower ○	3 of 4 Credits	-	3 CREDITS TARGETED +/- 5Db has been assumed for impact and airborne sound insulation values.	RESPONSIBILITY: ACOUSTICIAN Where pre-completion testing will be carried out; A letter from the developer confirming the intent to: • Meet the relevant sound insulation performance levels • Use a Compliant Test Body to complete testing

Issue		Credits	Level	Assumptions Made	Evidence Required
Hea 3 Private Space	A credit is awarded for the provision of an outdoor space that is at least partially private. The space must allow easy access to all occupants. Will a private/ semi-private space be provided? Yes, private/semi-private space will be provided ◉ OR No private/semi-private space ○	**1 of 1 Credits**	-	1 CREDIT POTENTIAL Architect confirms that all dwellings haveprivate space in compliance with 1.5m2 per bedroom for private space and 1m2 per bedroom for communal space.	RESPONSIBILITY: ARCHITECT Detailed documentary evidence confirming: • The No. of bedrooms served by the outdoor space • That the outdoor space meets the minimum size requirements AND Completed Checklist IDP
Hea 4 Lifetime Homes	Mandatory Requirement: Lifetime Homes is mandatory when a dwelling is to achieve Code Level 6. Tradable credits: Credits are awarded where the developer has implemented all of the principles of the Lifetime Homes scheme. Mandatory Requirement Dwelling to achieve Code Level 6? ☐ Lifetime Homes Compliance All Lifetime Homes criteria will be met ◉ OR Exemption from LTH criteria 2/3 applied ○ Credit not sought ○	**4 of 4 Credits**	**No level**	4 CREDITS TARGETED Architect confirms that design will comply with Life Time Homes scheme.	RESPONSIBILITY: ARCHITECT Confirmation from the developer that all 16 of the Lifetime Homes design criteria are met OR Where an exemption from Lifetime Homes criteria 2 and/or 3 is sought: • Confirmation from the developer that all other design criteria are met AND Detailed documentary evidence demonstrating access routes subject to steeply sloping gradients at pre development and completion

CATEGORY 8 MANAGEMENT	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted: 100.00%		Credits	Level		
Contribution to Overall Score: 10.00 points		9 of 9 Credits	All Levels		
Man 1 Home User Guide	Credits are awarded where a simple guide is provided to each dwelling covering information relevant to the 'non-technical' home occupier, in accordance with the Code requirements. Tick the topics covered by the Home User Guide Operational Issues? ☑ Site and Surroundings? ☑ Is available in alternative formats? ☑	3 of 3 Credits	-	3 CREDITS TARGETED Home User Guide to be provided to each of the dwellings. As a minimum this must include all of the issues listed within the 'User Guide Contents List' in the Checklist Man 1, Part 2.	RESPONSIBILITY: CLIENT Confirmation in the form of a letter from the developer or in the specification that the guide will be: • Supplied to all dwellings within the development • Be developed to the required standards as per Checklist Man 1 Part 1
Man 2 Considerate Constructors Scheme	Credits are awarded where there is a commitment to comply with best practice site management principles using either the Considerate Constructors Scheme or an alternative locally/ nationally recognised scheme. Select the appropriate scheme and score No scheme used ○ Considerate Constructors OR Best Practice: Score between 24 and 31.5 ○ OR Best Practice+: Score between 32 and 40 ◉ Alternative Scheme* OR Mandatory + 50% optional requirements ○ OR Mandatory + 80% optional requirements ○ * In the first instance, contact a Code Service Provider if you are considering to use an alternative scheme.	2 of 2 Credits	-	2 CREDITS TARGETED The Contractor will be required to register the site with the Considerate Constructors Scheme and obtain formal certification. The final score achieved will be dependent upon the results from a site inspection. This requirement should be included within the Tender Preliminaries.	RESPONSIBILITY: CONTRACTOR (tbc) For Considerate Constructors Scheme: Specification clause or other confirmation of commitment from the contractor or developer to comply with the Considerate Constructors Scheme and achieve formal certification under the scheme with either a pass score or a score of 32 points and above AND Confirmation that registration with the Considerate Constructor Scheme has taken place no later than the commencement of the construction phase
Man 3 Construction Site Impacts	Credits are awarded where there is a commitment and strategy to operate site management procedures on site as following: Tick the impacts that will be addressed Monitor, report and set targets, where applicable, for: - CO_2/ energy use from site activities ☑ - CO_2/ energy use from site related transport ☑ - water consumption from site activities ☑ Adopt best practice policies in respect of: - air (dust) pollution from site activities ☑ - water (ground and surface) pollution on site ☑ 80% of site timber is reclaimed, re-used or responsibly sourced ☑	2 of 2 Credits	-	2 CREDITS TARGETED The Contractor will be required to meet all of the requirements within Checklist man3. This requirement should be included within the Tender Preliminaries and a copy of Checklist Man3 provided to the Contractor upon appointment.	RESPONSIBILITY: CONTRACTOR (tbc) Completed copy of Checklist Man 3 (signed and dated) detailing the procedures that will be employed to minimise construction site impacts.

Issue		Credits	Level	Assumptions Made	Evidence Required
Man 4 Security	Credits are awarded for complying with Section 2 - Physical Security from Secured by Design - New Homes. An Architectural Liaison Officer (ALO), or alternative, needs to be appointed early in the design process and their recommendations incorporated. Secured by Design Compliance Credit not sought ○ OR Secured by Design Section 2 Compliance ◉	**2 of 2 Credits**	-	2 CREDITS TARGETED A security consultant will be consulted at the design stage and their recommendations incorporated into the design of the dwelling. Section 2 – Physical Security from 'Secured by Design – New Homes' should be complied with (Secured by Design certification is not required).	RESPONSIBILITY: ARCHITECT Detailed documentary evidence showing: • That an ALO/CPDA has been consulted with to ensure that the requirements of Section 2 – Physical Security from 'Secured by Design – New Homes' are met • A commitment to follow the advice provided by the ALO/CPDA

CATEGORY 9 ECOLOGY	Overall Level: 4	Overall Score	72.54	Assumptions Made	Evidence Required
% of Section Credits Predicted: 44.00%		Credits	Level		
Contribution to Overall Score: 5.33 points		4 of 9 Credits	All Levels		
Eco 1 Ecological Value of Site	One credit is awarded for developing land of inherently low value. Select the appropriate option Credit not sought ◉ OR Land has ecological value ○ OR Land has low/ insignificant ecological value* ○ * Low ecological value is determined either a) by using Checklist Eco 1 across the whole development site; or b) where an suitably qualified ecologist is appointed and can confirm or c) produces an independent ecological report of the site, that the construction zone is of low/ insignificant value; AND the rest of the development site will remain undisturbed by the works.	0 of 1 Credits	-	CREDIT POTENTIAL Trees are to be removed from the site, however there are to be replanted after construction, where possible. It has been agreed that those trees with ecological value would be replanted and those passed ecological value/dead would be replaced. Ecol 1 Checklist to be completed.	RESPONSIBILITY: ECOLOGIST (tbc) Where a suitably qualified ecologist is appointed; A copy of a report or letter from the ecologist highlighting the information required as set out in the 'Code for Sustainable Homes Ecology Report Template' AND Detailed documentary evidence identifying the construction zone and how any areas of ecological value outside the construction zone will remain undisturbed in accordance with the ecologist's recommendations.
Eco 2 Ecological Enhancement	A credit is awarded where there is a commitment to enhance the ecological value of the development site. Tick the appropriate boxes Will a *Suitably Qualified Ecologist* be appointed to recommend appropriate ecological features? ☑ AND Will all key recommendations be adopted? ☑ AND 30% of other recommendations be adopted? ☑	1 of 1 Credits	-	1 CREDIT TARGETED It has been assumed that a suitably qualified ecologist will be appointed and all key recommendations + 30% of the additional recommendations will be implemented.	RESPONSIBILITY: ECOLOGIST (tbc) A copy of the ecologist's report AND Detailed documentary evidence stating: • How the key recommendations and 30% of additional recommendations will be incorporated into the design • The planting schedule
Eco 3 Protection of Ecological Features	A credit is awarded where there is a commitment to maintain and adequately protect features of ecological value. Type and protection of existing features Site with features of ecological value? ◉ OR Site of low ecological value (as Eco 1)? ○ AND All* existing features potentially affected by site works are maintained and adequately protected? ☐ *If a suitably qualified ecologist has confirmed that a feature can be removed due to insignificant ecological value or poor health conditions, as long all the rest have been protected, then this box can be ticked.	0 of 1 Credits	-	CREDIT NOT ACHIEVABLE Trees were removed from the site therefore credit not achievable.	RESPONSIBILITY: ECOLOGIST (tbc) Detailed documentary evidence* confirming ecological features present and how they will be protected *Where compliance with the criteria is demonstrated by the relevant documents submitted to the Planning Authority which gained planning approval, these can be used as evidence

Issue		Credits	Level	Assumptions Made	Evidence Required
Eco 4 Change of Ecological Value of Site	Credits are awarded where the change in ecological value has been calculated in accordance with the Code requirements and is calculated to be: Change in Ecological Value Major negative change: fewer than -9 ○ Minor negative change: between -9 and -3 ○ OR Neutral: between -3 and +3 ◉ Minor enhancement: between +3 and +9 ○ Major enhancement: greater than 9 ○	**2 of 4 Credits**	-	2 CREDITS TARGETED Credit has been assumed achievable on the basis that there will be neutral negative impact on the site. Input is required from the suitably qualified ecologist.	RESPONSIBILITY: ECOLOGIST (tbc) Code for Sustainable Homes Ecology Report Template completed by the ecologist AND Written confirmation from the developer confirming how the ecologist's recommendations will be implemented including a planting schedule.
Eco 5 Building Footprint	Credits are awarded where the ratio of combined floor area of all dwellings on the site to their footprint is: Ratio of Net Internal Floor Area: Net Internal Ground Floor Area Credit Not Sought ○ OR Houses: 2.5:1 OR Flats: 3:1 ○ OR Houses: 3:1 OR Flats: 4:1 ○ OR Houses & Flats Weighted (2.5:1 & 3:1) ◉ OR Houses & Flats Weighted (3:1 & 4:1) ○	**1 of 2 Credits**		1 CREDIT TARGETED 1 credit assumed achievable on the basis that the development is a spread over 3 storeys.	RESPONSIBILITY: ARCHITECT Calculation of the building footprint ratio, stating the Net Internal Floor Area (NIFA) and the Net Internal Ground Floor Area (NIGFA)