Code for Sustainable Homes
November 2010
Pre Assessment Report

39 Nightingale Avenue
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Hampshire

On behalf of

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CODE GENERAL INFORMATION

The Code for sustainable homes covers nine categories of sustainable design, and within each category there are a number of sections which the dwelling(s) are assessed against, including:

			1 Credit Weighting	Mandatory Sections (Level Applicability)	
Cat 1	(Ene 1-9)	Energy & CO2 Emissions	1.17 %	Ene 1 Ene 2	DER/TER improvement (Code 4-6) FEES (Code 5- 6)
Cat 2	(Wat 1-2)	Water	1.50 %	Wat 1	Internal Water Usage (Code 1-6)
Cat 3	(Mat 1-3)	Materials	0.30 %	Mat 1	Green Guide Ratings
Cat 4	(Sur 1-2)	Surface Water Run-off	0.55 %	Sur 1	Surface Water Drainage
Cat 5	(Was 1-3)	Waste	0.80 %	Was 1	Storage of Waste & Recycling
Cat 6	(Pol 1-2)	Pollution	0.70 %		
Cat 7	(Hea 1-4)	Health & Wellbeing	1.17 %	Hea 4	LifeTime Homes (Code 6)
Cat 8	(Man 1-4)	Management	1.11 %		
Cat 9	(Eco 1-5)	Ecology.	1.33 %		

As noted in the table above there are 7 sections with mandatory requirements to be met. Where the section is indicated with a Code Level there is an increasing target the higher the Code Level Certification required. For the sections where no Code Level is indicated there is a fixed target to be met for any Code Level Certificate to be issued. Regardless of the overall score if any Mandatory requirements are not met a zero rated or lower level certificate can be issued.

Code Level		Min. Total % points
Level 1	★	36 Points
Level 2	★★	48 points
Level 3	★★★	57 points
Level 4	★★★★	68 points
Level 5	★★★★★	84 points
Level 6	★★★★★★	90 points

The Code assessment is designed to be flexible so that once the 'mandatory' requirements have been incorporated into the design the remaining credits required to achieve the desired Level Rating can be made up from the remaining optional credits.

For all sections where credit is sought **compliant** evidence as detailed within the Code for Sustainable Homes Technical Guide must be provided to the appointed Code Assessor for both Design Stage and Post Construction Stage report and certification.

The Code for Sustainable Homes Technical Guide can be downloaded at:

http://www.planningportal.gov.uk/uploads/code_for_sustainable_homes_techguide.pdf

Rund Partnership Ltd is licensed with the Building Research Establishment (BRE), to provide Code for Sustainable Homes assessments via a team of trained and accredited Code for Sustainable Homes Assessors.

Instruction

Rund Partnership Ltd has been instructed by Mr Jenman to produce a Code for Sustainable Homes Pre-Assessment report for the proposed development which should take into account the requirements of the Local Authority.

Eastleigh Borough Council's current policy, Environmentally Sustainable Development Supplementary Planning Document and Appendix 4 Residential Development Pro-forma, currently requires Code Level 4 certification for new build residential units. Details of the requirements of this policy are outline below and noted within each related Code section in this report.

Summary

At this early stage only outline design information is available, therefore the following assumptions have been made.

CH & HW System	Individual mains gas boilers
Construction	Traditional brick and block construction

The following report details the requirements for each section and whether there are any technical constraints which could hinder achieving the predicted credits indicated for each section.

A score sheet for the scheme has also been produced. This shows two score columns, the '*estimated*' column indicates credits which are predicted within this report, and the '*additional*' column indicates where additional or alternative credits can be gained in order to reach the desired Code Level Rating.

Development	Nightingale Avenue, Eastleigh
Code Registration No	TBC
Licensed Code Assessor/Ref	Clare Alsop / BREEAM-Assessor-393
Current Assumed Rating(s):	**Code Level 4**
Pre-Assessment **Predicted** Score(s)	69.61%
Required Rating	Level 4
Required Rating % score	68%
Shortfall	n/a
Additional Credit Identified	3.66%

Assessed Units

2 units

Plots No	No. Bedrooms	No. Bed Spaces
1	1	2
2	1	2

Information Received

The following lists documentation, drawings etc received which the following assessment is based on:

Drawing By	Drawing No.	File Name
PDP Architecture	17799-SK101B	Site Layout and Lower Ground Floor Plan.pdf
	17799-SK102B	Upper Ground, 1st and 2nd Floor Plans.pdf
	17799-SK103B	3rd and 4th Floor and Roof Plans.pdf
	17799-SK104B	Indicative Streetscene and Sections.pdf

EASTLEIGH BOROUGH COUNCIL SUSTAINABILITY STATEMENT

The scope of this CSH Pre-Assessment report is also to include reference to the Eastleigh Borough Council Environmentally Sustainable Development Supplementary Planning Document and Appendix 4 Residential Development Pro-forma.

For ease of reference the table below is a summary of the relevant Code for Sustainable Homes section in relation to the Essential and Non Essential Requirements as identified within these two documents.

ESD 1 General Sustainability	What overall Code rating will the development achieve	All sections, but referenced within mandatory sections Ene 1, Wat 1, Mat 1, Sur 1 & Was 1 for Code 3.
ESD 2 Rainwater Harvesting / Greywater Recycling	What % of the developments predicted water needs be served by RWH or greywater recycling	Wat 1
ESD 3 External Water Consumption	How will landscaping be watered	Wat 2
ESD 4 Reducing Surface Water Runoff	What Sustainable Drainage Systems (SUDS) will be used to mitigate any additional runoff/volume arising from the new development	Sur 1
ESD 5 Passive Solar Heat Gain	How have developers maximised the potential for passive solar heat gain	Not a specific detail reviewed within the Code assessment.
ESD 6 Carbon Dioxide Reduction	What percent will carbon emissions from proposed dwellings be reduced by means of renewable/low emission technologies	Ene 7
ESD 7 Green Roofs	What % of the development's total roof area will consist of green roofs	Not applicable. As a flatted development ESD 2 is applicable.
ESD 8 Trees	How many trees will be provided for new streets and communal parking	Not a specific detail reviewed within the Code assessment.
2.1 Water Consumption	What measures will be taken to maximise water efficiency in buildings	Wat 1
3.1 Natural Daylight	How have developers maximised the potential for natural daylight in their buildings	Hea 1
3.3 CO2 Reduction (Improved Energy Efficiency)	What % improvement over max. carbon emissions within Building Regulations is proposed for development	Ene 1

3.4 CO2 Exterior Lighting	EBC E4a: What measures are proposed to minimise the carbon emission from external space and security lighting EBC E4b: How will the development minimise light pollution from lights	a) Ene 6 b) Not a specific detail reviewed within the Code assessment.
3.6 Zero Carbon Residential Developments	What % of building will be designed to emit net zero carbon emissions annually	Ene 1
3.7 Natural Ventilation	How will buildings be ventilated	Ene 1
3.8 Drying	What non-mechanical clothes drying facilities will be provided	Ene 4
4.1 Construction Waste	What measures will be taken to minimise construction waste	Was 2
4.2 Construction Materials	How many Code credits will the development aim to achieve	Mat 1
4.3 Waste Recycling	What measures will be taken to facilitate waste recycling from the finished development	Was 1
4.4 Composting	What provision is being made to encourage composting in the residential development	Was 3
5.1 Green Infrastructure	What elements of green infrastructure are proposed with the development and how will they be managed	Ene 7, Sur 1, Wat 1
6.1 Biodiversity	How many Code Ecology credits is the development designed to achieve	Eco section 1-5
6.2 Noise	What measures is the developer proposing to quantify and mitigate the noise impact on the development's occupants	Hea 2
6.3 Private Space	What provision for private or shared space will be made for the development	Hea 3
6.4 LifeTime Homes (LTH)	Is the residential development being designed to comply with all of the LTH standards	Hea 4
6.5 Pollution	What measures will be taken to minimise the pollution impacts from: a) Road pollution b) Nitrogen oxides c) Materials with GWP	 a) Not a specific detail reviewed within the Code assessment. b) Pol 2 c) Pol 1

7.1 Construction Site Impacts	What measures will be taken to minimise the site impacts during construction	Man 3
7.2 Home User Guides	What provision will be made for HUG	Man 1
7.3 Considerate Constructors Scheme	What level of certification for CCS is the development aiming to achieve	Man 2
8.1 Major Developments	What further sustainable measures are being proposed if the development is above 500 dwellings in size	Not applicable – Scheme of 2 No. units.

ASSESSMENT

Ene 1: DER

***Mandatory Requirement*: All assessed units to meet EBC requirement to achieve Code Level 4 within SAP 2010.**

Please also refer to section Ene 7 Low and Zero Carbon Technologies (LZCs) which relates to this section.

ESD 1 requires that Code level 4 is achieved. Appendix 4 pre-application sustainability checklist (no essential requirement) 3.3 asks what percent improvement over maximum carbon emissions within Building Regulations is proposed for the development, 3.6 asks what percent of buildings will be designed to emit net zero carbon emissions annually and 3.7 asks how buildings will be ventilated.

At present SAP worksheets have not been received, therefore calculations cannot be conducted to verify present ratings of the scheme.

As this is a requirement of EBC it is assumed that compliance will be achieved.

Technical Constraints: Advise early consultation with SAP assessor to ensure assumed targets are met.

Predicted credits: 3

Ene 2: Fabric Energy Efficiency (FEE)

***Mandatory Requirement*: Only applicable where Code Level 5 & 6 rating sought.**

Mandatory not applicable as only Code Level 4 sought.

As per Ene 1, SAP worksheets have not been received at this time. It is presently assumed that the following will be achieved:

Type of Units	FEE (kWh/m^2/year) No Greater Than
Apartment Blocks & Mid Terrace	45

Technical Constraints: Advise early consultation with SAP assessor to ensure assumed targets are met.

Predicted credits: **4**

Ene 3: Energy Display Device (EDD)

Provide each unit with a correctly specified Energy Display Device which measures and displays electricity AND the primary fuel (gas) usage consumption.

The device must comprise of self-charging sensor(s) fixed to the incoming mains and dedicated for the assessed dwelling. The visual display unit must be capable of displaying the following:

- Local time
- Current mains energy consumption (kilowatts & kilowatt hours)
- Current emissions (g/kg CO_2)
- Current tariff
- Current cost (in pounds & pence)
- Display accurate account balance information (amount in credit or debit)
- Visual representation of data (non numeric, graph display)
- Historical consumption data for comparison purposes, and should include cumulative consumption data in any of the following forms day/week/month/billing period

Technical Constraints: None at present.

Predicted credits: **2**

Ene 4: Drying Space

Appendix 4 pre-application sustainability checklist (no essential requirement) 3.8 asks what non-mechanical clothes drying facilities will be provided.

Provide compliant internal OR external natural drying facilities.

External Drying Facility
Rotary line or post and line system (with secure footings) which provides 4m of useable line for 1 & 2 bed units or 6m of useable line for 3+ bed units and is within secure enclosed garden so drying facility is only accessible to residents of the unit. Any garden gates must have a permanent BS 3621:2007 mortice/sash lock.

Internal
Fixed retractable drying line over bath which provides 4m of useable line for 1 & 2 bed units or 6m of useable line for 3+ bed units. Adequate ventilation must be provided, as a minimum intermittent extract ventilation in accordance with Approved Document F.

Technical Constraints: None at present. Assume internal drying facilities to be provided.

Predicted credits: **1**

Ene 5: Energy Labelled White Goods

Provide Energy Efficiency literature which has an example of the EU Energy Label within Home User Guide, see Man 1. Note if any white goods are supplied by the developer for use within the units, each appliance must meet energy and water efficiency requirements noted below to still achieve this credit.

Technical Constraints: None at present.

Predicted credits: **1**

Additional Credit
Provide Energy Efficiency literature as detailed above AND also provide the 3 No. white goods (as detailed in table below) which have the required energy efficiency rating and also ensuring the maximum water usage is not exceeded. **If maximum water usage limits are exceeded this will reduce credits achieved under section Wat 1 and may not met mandatory requirement for Wat 1.**

Appliance	Energy Rating	Max Water Usage
Fridge/Freezer	A+	-
Washing machine	A	8.17 litres/kg
Dishwasher	A	1.25 litres/place setting

Ene 6: External Lighting

Appendix 4 pre-application sustainability checklist (no essential requirement) 3.4 asks what measures are proposed to minimise the carbon emission from external space and security lighting.

Provide energy efficient external lighting (includes flat block communal areas) with automatic controls which ensure the lighting is only activated when the area is in use and there is insufficient natural daylight.

Space Lighting (1 credit)
Fitting with 40 lumens per circuit watt or better lamp controlled by PIR + 'dusk to dawn' daylight sensors *OR* time switches.

Security Lighting (1 credit)
Maximum 150w controlled by PIR + daylight sensors
Fitting with 40 lumens per circuit watt or better lamp controlled by daylight sensor *OR* time switch

Assessed areas include:

- external doors
- front porch
- patio/balcony
- steps/pathways
- garden
- carports
- garage
- any other outbuildings/stores
- communal areas

Note that a minimum of 1 No. space light fitting must be provided per dwelling where there are no internal communal areas associated with the unit.

Where no security lighting is necessary the 2nd credit for security (burglar) lighting is awarded by default if compliant space lighting is provided for the unit.

Technical Constraints: None at present.

Predicted credits: **2**

Ene 7: Low and Zero Carbon (LZC) Technologies

ESD 6 requires that 2 credits are achieved for this section or to agree a contribution to 'carbon free' fund if not technically feasible. Appendix 4 pre-application sustainability checklist (no essential requirement) 5.1 asks what green infrastructure are proposed and how will they be managed.

Provide renewable energy technology (such as PV) which reduces the CO2 emissions by at least 15% as confirmed with SAP 2009 worksheets. Both the technology product and installers must be MCS (Microgeneration Certification Scheme) accredited and it must meet any additional requirements defined in Directive 2009/28/EC as applicable.

Technical Constraints: Roof design will limit the area which will be suitable for the location of solar panels. Again early consultation with SAP assessor is recommended.

Predicted credits: **2**

Ene 8: Cycle Storage

Provide either individual or communal cycle storage which provides sufficient space and is secure, weather-proof (at least 3 walls & roof) and convenient.

Allowable cycle storage options are:
1) Garage or shed
2) External or internal communal store
3) Proprietary store

Provide cycle storage which complies with the following:

Storage Option	**Communal Storage for Flats *(2 credit requirement)***
No. of cycles to be stored	1 bed unit – storage for 1 No. cycle per unit 2 & 3 bed unit – storage for 2 No. cycles per unit
Sufficient space	Provide sufficient 'secure cycle locking points' for all units with allocated use of the store. Locking points to be spaced to allow easy access, ie cycles can be wheeled in and secured, or removed without the need to more any other cycles.
Secure entrance	Out Of Block Store: Permanent mortice deadlock that conforms to BS 3621:2007 on a door at least 44mm thick which is locked to the door frame Within Block Store: Secure doorset which meets requirements 21.1-21.6 and 21.8-21.13 of SBD 2010 and store must NOT have any windows.
Secure cycle locking points	Provide for each cycle to be stored a locking point (cycle stand) which supports the cycle and allows the wheel and frame to be locked, which is made of galvanised steel with welded anchor T-bar set in concrete base.

Technical Constraints: None at present.

Predicted credits: **2**

Ene 9: Home Office

Provide Home Office area to each dwelling which complies with all of the following requirements:

- Suitable Room – **For 1 or 2 bed dwelling**: living room, or one of the bedrooms or any other suitable area in the home such as large hall or dining area. **For 3+ bed dwelling**: any room other than kitchen, living room, master bedroom or bathroom which is large enough to accommodate typical furniture for that type of room and Home Office furniture
- Sufficient Space – 1.8m wall length (to allow provision of desk, chair and filing cabinet / bookshelf, with space to move around and use chair & cabinet/bookshelf safely and appropriately)
- Sufficient Services –
    - Two double power sockets
    - Two or double telephone point, or one telephone point where cable or broadband is available
- A Window – room **must** have daylight factor of at least 1.5%
- Adequate Ventilation – an openable window casement of at least 0.5m^2 OR other ventilation such as passive stack

Technical Constraints: None at present, assume bedrooms have sufficient space for home office.

Predicted credits: **1**

Wat 1: Internal Potable Water Use

***Mandatory Requirement*: All assessed units to have water consumption no greater than 105 litres/person/day for Code Level 3.**

ESD 1 requires that Code level 4 is achieved. ESD 2 notes rainwater harvesting (RWH) or grey water harvesting will be required as there are limited opportunities to incorporate green roofs, so will not meet the 80% of new roof area to be green as noted for ESD 7. Appendix 4 pre-application sustainability checklist (no essential requirement) 2.1 asks what measures will be taken to maximise water efficiency in buildings and 5.1 asks what green infrastructure are proposed and how will they be managed.

Provide sanitary ware, water using internal fittings and rainwater harvesting (RWH) system which is confirmed within the Water Efficiency Calculator for New Dwellings as not exceeding 80 l/p/d.

A typical specification which meets this target is as follows.

- 4/2.6 litre dual flush cisterns
- Shower flow - maximum 7 litres per minute
- Smaller sized bath - maximum 130 litre capacity to overflow
- WHB taps - maximum flow of 3 litres per minute
- Kitchen taps - maximum flow of 3 litres per minute
- No white goods supplied and default usage figures included in calculation (ie washing machine 17.16 litres/kg & dishwasher 4.5 litres/place setting)
- No bidets, water softeners or waste disposal units
- RWH system recycling rainwater for flushing wc's of both units

Specific shower and tap flows should be at a water pressure and temperature as described within 'Water Efficiency Calculator for New Dwellings' guide. See website:

www.communities.gov.uk/publications/planningandbuilding/watercalculator

NB: Confirmation is required that a risk assessment of microbial contamination (ie Legionella) has been carried out on the hot and cold water system and appropriate action is undertaken where identified.

Technical Constraints: A) Sufficient space for RWH system could be an issue, recommend early consultation with drainage consultant.
B) Note that if white goods which use water, are to be supplied (also refer to section Ene 5) this will increase the overall internal water usage and units may not meet the predicted target.

Predicted credits: **5**

Wat 2: External Water

ESD 3 requires 1 credit is achieved for this section.

Provide suitably sized and specified water butt to each private and communal garden which comply with all the following requirements:

- water butt of sufficient capacity (as below)
- with lid & draw off tap
- connection via detachable automatic overflow to rwp (with onward connection to surface drainage system)
- placed so that it is stable and adequately supported

Private Gardens

- 1 & 2 bedroom dwelling with private garden Minimum 150 litres capacity

Communal garden

- 1 litre/m2 of land allocated to the block with a minimum of 200 litres.

Technical Constraints: None at present.

Predicted credits: **1**

Mat 1: Environmental Impacts of Materials

***Mandatory Requirement for any Code Certificate to be issued*: At least 3 of the 5 elements (roof, external walls, internal walls, floors & windows) must achieve a minimum of a 'D' rating for 100% of the element according to the 2008 "Green Guide".**

ESD 1 requires that Code level 4 is achieved. Appendix 4 pre-application sustainability checklist (no essential requirement) asks how many Code credits will the development aim to achieve.

Design/specify units/blocks which meet mandatory requirement and where possible with the best possible Green Guide rating for all assessed elements (as noted above).

The following are typical brick & block Green Guide Ratings.

Elements	Element Materials and Build-up
Roof	Timber trussed rafters and joists with insulation, roofing underlay, counter battens, battens and concrete interlocking tiles. **Element Number 812410007, Summary Rating A+.**
External Walls	Brickwork outer leaf, insulation, aircrete blockwork inner leaf, cement mortar, plasterboard on battens, paint. **Element Number 806170615, Summary Rating A+.**
Internal Walls	Timber stud, plasterboard, paint **Element Number 809760003, Summary Rating A+.**
Floors 1	Ground floor: Screed on insulation laid on grouted beam and aircrete block flooring. **Element Number 820140014, Summary Rating B.**
Floors 2	Upper floor: Chipboard decking on metal web joists **Element Number 807280005, Summary Rating A+**
Windows	PVC-U window with steel reinforcement, double glazed. **Element Number 813100009, Summary Rating A.**

* For alternative options please visit the Green Guide Ratings website (www.thegreenguide.org.uk), registration is free and available to everyone.

Technical Constraints: Green Guide Ratings are very specific, advise early consultation with Code Assessor once construction is known to ensure mandatory & target requirement is met.

Predicted credits: **10**

Mat 2 & Mat 3: Responsibly Sourcing Materials (RSM) Basic & Finishing

Source at least 80% of materials for each assessed element (see lists below) which is documented as being responsibly sourced with appropriate certification such as FSC or PEFC for timber or ISO 14001 or BES 6001 (Very Good or Good rated) for other materials ie bricks, blocks, tiles etc.

Assessed elements are as follows:

Mat 2 Basic Building Elements

- Frame
- Ground Floor
- Upper Floors (including separating floors)
- Roof (structure and cladding, including any loft boarding)
- External walls (including external cladding)
- Internal walls (including partition and separating walls)
- Foundation/substructure (excluding sub-base materials)
- Staircase (includes the tread, risers and stringers)

Mat 3 Finishing Elements

- Stair (including handrails, balustrades, banisters, other guarding/rails)
- Window (including sub-frames, boards & sills)
- External and internal doors (including sub-frames, frames, linings, door)
- Skirting (including architrave, skirting board and rails)
- Panelling (including any other trim)
- Furniture (including kitchen, bedroom & bathrooms units)
- Fascias (soffit boards, bargeboards, gutter boards, others)
- Any other significant use

Technical Constraints: None, but it is recommended that further consultation with your Code assessor is undertaken prior to purchasing any of the building materials, as listed above, to ensure compliance with the requirements and targeted credits are achieved which is based on a matrix system (see CSH 2010 Technical Guide 107).

Predicted credits: **Mat 2: 2 credits** **Mat 3: 2 credits**

Sur 1: Reduction of Surface Water Run-off from Site

Mandatory Requirement (no credit allocation) for any Code Certificate to be issued: The drainage calculations, produced by Appropriately Qualified Professional (AQP), for the development as proposed MUST NOT be greater than the previous/existing conditions for the site. Calculations must demonstrate compliance for the site peak run-off rates (1 year and 100 year return periods) and annual volume of run-off (for a 1 in 100 year, 6 hour storm), only the post development calculations MUST include the climate change factor.

It must also be demonstrated that existing and proposed dwellings will not flood in the event of local drainage system failure/blockage.

IMPORTANT: If infiltration systems cannot be used to achieve this mandatory level rainwater harvesting systems MUST be installed so water is made available for use in the dwellings and detailed guidance provided in Code Technical Guide must be adhered to.

Credit Requirement: 1 credit is available for each of the following requirements, ie 2 credits in total:

1) Ensuring no discharge from the development site for rainfall depths up to 5mm (see Technical Guidance calculation procedures)

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

ESD 1 requires that Code level 4 is achieved. ESD 4 asks what Sustainable Drainage Systems (SUDs) will be used to mitigate any additional runoff/volume arising from the new development. Appendix 4 pre-application sustainability checklist (no essential requirement) 5.1 asks what green infrastructure are proposed and how will they be managed.

ESD 4 requirement is in accordance with the mandatory requirement of the Code in that the new development run off peak rates and volume must be no greater than the previous conditions for the

development site. This section is also be impacted by ESD 2 which requires rainwater harvesting or grey water recycling system.

Install drainage system which complies with the mandatory and both credit requirements utilising RWH system.

Technical Constraints: Soil conditions are unknown at present. It is recommended that consultation is undertaken with the drainage consultant at the earliest opportunity to ensure a compliant system is incorporated into the scheme which complies with the mandatory and credit requirements as detailed in the CSH Sur 1 template, and EBC requirements.

Predicted credits: **2**

Sur 2: Flood Risk

The Environment Agency flood map for the area has been viewed which indicates the development site is within Flood Zone 1, low annual probability of flooding.

Provide Flood Risk Assessment report produced by Appropriately Qualified Person (AQP) which confirms the entire site is within Flood Zone 1 (low risk zone) along with confirmation that there is a low risk of flooding from all other sources, as listed below:

Sources of flooding & flood risk

- Streams and rivers
- Coastal or estuarine
- Groundwater
- Sewers and highway drains
- Surface water
- Infrastructure failure

Technical Constraints: Advise early consultation with AQP to confirm flood risks.

Predicted credits: **2**

Was 1: Household Waste Storage & Recycling Facilities

Mandatory Requirement for any Code Certificate to be issued: Provide adequate household waste storage in accordance with Local Authority collection scheme with a minimum of 100 litres for single bedroom dwelling with further 70 litres volume for each additional bedroom (BS5906 requirement). Storage is to be easily accessible and compliant with Checklist IDP (Inclusive Design Principles).

ESD 1 requires that Code level 4 is achieved. Appendix 4 pre-application sustainability checklist (no essential requirement) 4.3 asks what measures will be taken to facilitate waste recycling from the finished development.

Eastleigh Borough Council operate an alternate weekly collection service of household waste, collecting residual waste and food waste one week and recycling and food waste the next. Bin provisions are as follows:

Number of Occupants within a domestic premise (including houses of multiple occupation).	Waste Container provision
1 or 2	• 1 x 140 litre black wheeled bin (residual waste) • 1 x 140 litre green wheeled bin (recyclable waste) • 1 x 7 litre indoor kitchen caddy • 1 x 23 litre external kitchen bin • 1x 38 litre glass box
Flats (per six units):	• 1100 litre black wheeled bin (residual waste) • 1100 litre green wheeled bin (recyclable waste) Mini glass recycling facility (subject to site assessment) Kitchen waste container available on request

Eastleigh Borough Council -Domestic Waste and Recycling Policy January 2013

Provide (mandatory) compliant external waste store or hard standing for all units which provides sufficient space for required number of bins to be stored (in accordance with Local Authority requirements) and turning area (to be adjacent to hard standing or within store if enclosed) and is easily accessible in accordance with all requirements of Checklist IDP.

Also provide each dwelling with 1 No. 30 litre internal recycling bin or multiple bins providing 30 litres overall capacity with no individual bin being less than 7 litres, which is in a fixed, dedicated, non-obstructive position, where possible within kitchen/utility room cupboard close to non-recyclable waste bin.

For reference a summary of Checklist IDP is as follows:

1) The distance between the **closest** external door and the amenity (ie waste store for Was 1, compost bin for Was 3 & garden for Hea 3) must be kept to a minimum and be level or gently sloping
2) Distance should not be greater than 30m as required by Building Regulations Part H
3) Paths should be of suitable surface (firm, slip-resistant and reasonably smooth) and must contrast visually against adjacent surfaces
4) Waste containers should be sited on suitable surface (as 3 above)
5) Space for turning a wheelchair at the amenity (if enclosed store is provided the turning area must be inside the store). The minimum is a 1500mm circle or 1400x1700mm ellipse.
6) The **closest** external entrance door from dwelling to amenity must have
    a. level threshold
    b. clear opening width of 800mm for private entrance or 875mm for communal entrances
    c. fitted with door opening furniture in accordance with section 6.4 of BS 8300:2009.
7) Gates along access route must have
    a. level threshold
    b. clear opening width of 900mm
8) N/A - Only applicable to 'walk up' or basement flats
9) Communal waste storage must have

a. signs & information in accordance with section 9.2 of BS8300:2009
b. lighting specified in accordance with section 9.2 of BS8300:200 and be dedicated energy efficient fittings with adequate controls (see Code section Ene 6)

10) Switches, sockets and services controls at a height between 450mm and 1200mm from the floor

Technical Constraints: A) Individual household provisions presently assumed applicable.
B) Ensure site levels allow for level threshold and level/gently sloping path access to comply with this mandatory requirement.

Predicted credits: **4**

Was 2: Construction Site Waste Management Plan

Appendix 4 pre-application sustainability checklist (no essential requirement) 4.1 asks what measures will be taken to minimise construction waste.

Produce and implement a SWMP which details procedures to:

1) Minimise construction waste generated (by design and material selection decisions)
2) Divert from landfill the actual waste generated on site (by reuse on/off site, recycling, etc)
3) At least 85% of site waste will be diverted from landfill

The SWMP must detail/record:

Waste minimising (reducing)

- Set target benchmarks for resource efficiency according to best practice
- Procedures/actions to minimise at least 3 non-hazardous construction waste groups
- Procedures/actions to minimise hazardous waste
- Procedures/actions for monitoring, measuring and reporting of hazardous and non-hazardous site waste throughout the development

Procedures/actions to sort and divert waste from landfill by recording all waste generated on site and identifying how the waste is disposed of, ie:

- Re-use on site
- Re-use on other sites
- Salvage/reclaim for re-use
- Return to supplier via a 'take-back' scheme
- Recovery and recycling using an approved waste management contractor
- Compost
- Landfill (only where all other avenues of disposal have been exhausted)

Technical Constraints: None at present. Note that at PCS the credit awarded will be based on actual data collected.

Predicted credits: **3**

Was 3: Composting

Appendix 4 pre-application sustainability checklist (no essential requirement) 4.4 asks if provision is being made to encourage composting in the residential development.

Eastleigh Borough Council operate a weekly food waste kerbside collection scheme.

Provide a dedicated external hard standing area for Local Authority food waste collection bin (also see Was 1) which is compliant with Checklist IDP and is positioned so as not to be near openable windows or other ventilation intake areas. Also ensure sufficient space for internal food scraps collection caddy and provide information about the Local Authority collection scheme within Home User Guide (also see Man 1).

Technical Constraints: Ensure site levels allow for level threshold and level/gently sloping path access to external food waste collection bin storage.

Predicted credits: **1**

Pol 1: GWP (Global Warming Potential)

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.5 asks what measures will be taken to minimise the pollution impacts from materials with GWP.

Source all insulation with a Global Warming Potential (GWP) of less than 5. This is applicable to both manufacture of and installation of insulation (where blown) and includes the following elements:

- Roofs including loft hatches
- Walls including external & internal walls, doors, lintels and all thermal and acoustic insulation
- Floors including ground floor, basements & foundations
- Hot water cylinder, pipe insulation and any other thermal stores

Technical Constraints: None at present.

Predicted credits: **1**

Pol 2: NOx

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.5 asks what measures will be taken to minimise the pollution impacts from nitrogen oxides.

Provide all units with gas CH & HW boilers which have dry NOx emissions of no more than 40 mg/kWh.

Technical Constraints: None, however it is recommended that prior to purchasing boilers insist on provision of written evidence of dry NOx emissions from the manufacturer for the system to ensure compliance with this requirement

Predicted credits: **3**

Hea 1: Daylighting

Requirements for each of the 3 credits available for this section:
1 credit for: Kitchen having daylighting factor of 2%
1 credit for: Living room, dining room and Home Office (study) room having daylighting factor of 1.5%
1 credit for: All assessed rooms having a View of the Sky for 80% of the room depth

Appendix 4 pre-application sustainability checklist (no essential requirement) 3.1 asks how have developers maximised the potential for natural daylight in their buildings.

Daylighting calculations are not within the scope of the Pre-Assessment instruction, however a basic daylighting report calculating room daylighting factors (not view of the sky) can be produced. If required, please request a quote for this service.

Where possible ensure glazing areas to room surfaces ratio is maximised to improve daylighting factor.

Technical Constraints: Advise daylighting report undertaken at earliest opportunity to ensure compliance, however double aspect rooms should have sufficient daylight.

Predicted credits: **2**

Hea 2: Sound Insulation

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.2 asks what measures is the developer proposing to quantify and mitigate the noise impact on the development's occupants.

Undertake pre-completion sound testing by UKAS or ANC accredited acoustic consultant *OR* register with and use approved Robust Details. Result of sound tests or Robust Details used must confirm a minimum **5db** improvement on Document E requirements for all tests/RD's.

Technical Constraints: None at present, however ensuring good quality detailing/workmanship at junctions, openings and penetrations will help minimise sound transmission and reduce air leakage.

Predicted credits: **3**

Hea 3: Private Space

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.3 asks what provision for private or shared space will be made for the development.

Provide private garden for each unit or communal garden for both units which is of sufficient size and is completely sealed off by buildings and/or boundary fencing. The gardens must also be easily accessible (nearest dwelling entrance must be level), compliant with all Checklist IDP requirements (see IDP Summary in Was 1) and only accessible to designated tenants.

Minimum garden size for **private** gardens: 1.5m^2 per bedroom
Minimum garden size for **communal** gardens: 1m^2 per bedroom for all dwellings with designated use

Technical Constraints: None at present, assume layout can be developed to provide area for both units.

Predicted credits: **1**

Hea 4: Lifetime Homes (LTH)

***Mandatory Requirement*: Only applicable where Code Level 6 rating sought.**

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.4 asks is the residential development being designed to comply with all of the LTH standards.

Technical Constraints: None, no credit assumed.

Predicted credits: **0**

Additional Credit
Design units and site layout in compliance with all 16 requirements of LifeTime Homes.

Man 1: Home User Guide (HUG)

Appendix 4 pre-application sustainability checklist (no essential requirement) 7.2 asks what provision will be made for HUG.

Provide all units with a detailed Home User Guide, which covers all requirements as listed in Man 1 Checklist Parts 1 & 2.

Technical Constraints: None at present.

Predicted credits: **3**

Man 2: Considerate Constructors Scheme

Appendix 4 pre-application sustainability checklist (no essential requirement) 7.3 asks what level of certification for CCS is the development aiming to achieve.

Register with the Code of Considerate Practice (CCP) scheme, formerly known as Considerate Constructors Scheme (CCS) prior to commencement of the construction phase, audits undertaken in accordance with the Scheme confirming an overall final score of at least 25, with a minimum of 5 points for each of the 5 No. sections.

Technical Constraints: None, however to ensure compliance for this section a contractor with experience of this certification scheme is desirable or early consultation with the CCS monitor is advised to ensure target is achieved.

Predicted credits: **1**

Additional Credit
A final overall score of at least 35, with a minimum of 7 points for each of the 5 No. sections.

Man 3: Construction Site Impacts

Appendix 4 pre-application sustainability checklist (no essential requirement) 7.1 asks what measures will be taken to minimise the site impact during construction.

Undertake at least 4 of the site management procedures listed A-F below. These will need to be implemented, documented and displayed on site all in accordance with Man 3 Checklist requirements.

a) Monitor, report and set targets for CO_2 production or energy use arising from site activities
b) Monitor and report CO_2 or energy use arising from commercial transport to and from site
c) Monitor, report and set targets for water consumption from site activities
d) Adopt best practice policies in respect of air (dust) pollution arising from site activities
e) Adopt best practice policies in respect of water (ground and surface) pollution occurring on the site
f) 80% of site timber is reclaimed, re-used or responsibly sourced

Technical Constraints: None at present.

Predicted credits: **2**

Man 4: Security

All dwellings to comply with **SBD Part 2 ONLY** which includes front door, side and back door, sliding patio doors, communal entrance doors, flat entrance doors served off a shared corridor or stairway, French windows, garages, windows, dwelling security lighting, conservatories, intruder alarms & utilities.

Technical Constraints: None, however it is recommended that consultation with SBD/ALO Officer is undertaken at the earliest opportunity.

Predicted credits: **2**

Eco 1: Ecological Value of Site

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.1 asks how many Code 'Ecology' (Eco section) credits is the development designed to achieve.

The new units are to adjoin an existing residential building on an area of undeveloped garden/grassed area. It is unclear from the information provided whether any ecological features (trees, hedges, etc) will need to be removed in order to build out the scheme.

Instruct SQE (suitably qualified ecologist, refer to CSH Technical Guide 236) to visit the site **prior to any works commencing** and confirm within the CSH Ecology report template the site is of low ecological value *OR* the construction zone is of low ecological value and ecological features of value will be retained and protected for the duration of the build.

Technical Constraints: Instruct SQE to verify credits at earliest opportunity.

Predicted credits: **1**

Eco 2: Ecological Enhancement

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.1 asks how many Code 'Ecology' (Eco section) credits is the development designed to achieve.

Instruct SQE to visit the site **prior to any works commencing** and list within the CSH Ecology report template 'key' and 'additional' enhancement recommendations and confirm compliance with or detail other surveys required to comply with all UK & EU protected species legislation. Provide all 'key' recommendations and at least 30% of the 'additional' recommendations within the scheme design and undertake any further surveys/works to comply with all UK & EU protected species legislation.

Technical Constraints: None at present.

Predicted credits: **1**

Eco 3: Protection of Ecological Features

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.1 asks how many Code 'Ecology' (Eco section) credits is the development designed to achieve.

As per Eco 1, the new units are to adjoin an existing residential building on an area of undeveloped garden/grassed area. It is unclear from the information provided whether any ecological features (trees, hedges, etc) will need to be removed in order to build out the scheme.

Instruct SQE to visit the site **prior to any works commencing** and confirm within the CSH Ecology report template the site is of low ecological value *OR* the construction zone is of low ecological value and ecological features of value will be retained and protected for the duration of the build, also undertake any further surveys/works to comply with all UK & EU protected species legislation.

Technical Constraints: Instruct SQE to verify credits at earliest opportunity.

Predicted credits: **1**

Eco 4: Change of Ecological Value of Site

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.1 asks how many Code 'Ecology' (Eco section) credits is the development designed to achieve.

As per Eco 1, the site is an undeveloped garden/grassed area adjacent to an existing residential building.

Instruct SQE to visit the site **prior to any works commencing** and confirm within the CSH Ecology report template the number of plant species for the existing site and as proposed according to landscaping drawing and planting schedule in order to calculate the ecological change.

Where necessary consult with SQE in order to achieve an enhancement greater than 3 by incorporating the required number of different native/wildlife attracting plant species on the proposed landscaping drawing and plant schedule.

On recent projects the number of different native/wildlife attracting species can be significantly increased with the use of wildlife seeded turf and/or wildlife seed mixes which can be sown over grass and other areas. See www.wildflowerturf.co.uk and www.wildseed.co.uk.

Technical Constraints: Instruct SQE to verify credits at earliest opportunity.

Predicted credits: **3**

Eco 5: Building Footprint

Appendix 4 pre-application sustainability checklist (no essential requirement) 6.1 asks how many Code 'Ecology' (Eco section) credits is the development designed to achieve.

This section is now assessed on a site wide basis, which for the minimum 1 credit requires all houses to have a 2.5:1 ratio and flats to have a 3:1 ratio.

The drawings provided show that the flat block is of a 2 storey design. Therefore the 3:1 ratio will not be met and no credit can be achieved for this section.

ESTIMATED SCORE SHEETS

Code for Sustainable Homes November 2010	
Site	39 Nightingale Avenue, Chandlers Ford (2x new build 1 bed flats)
Client	Mr Jenman
Target	Code Level 4 (68%)
Stage	Pre Assessment
Ref/Date	28th May 2013

Unit Types			1				
Section / Max Score			Est		Add		
	Section	Max	credit	*%	credit	*%	Summary of Requirements
Ene 1 (m)	DER	10	3.0	3.52		0.00	25% improvement over Building Regulations
Ene 2 (m)	FEE	9	4.0	4.70		0.00	FEE no greater than 45
Ene 3	Energy Dis.	2	2	2.35		0.00	E.on free gas & elec monitor
Ene 4	Drying	1	1	1.17		0.00	Internal tidy line + ventilation - 1&2 bed 4m
Ene 5	W. goods	2	1	1.17	1	1.17	Energy efficiency literature provided to tenants / 3 No. white goods all with required energy ratings and water efficiency
Ene 6	Ext Light	2	2	2.35		0.00	All external lighting 40 l/watt efficiency with automatic controls
Ene 7	LZC's	2	2	2.35		0.00	EBC ESD6 2 credit requirement (15% reduction of CO2 emissions via renewables)
Ene 8	Cycles	2	2	2.35		0.00	1 cycle per flat in secure (entrance & rack) weath-proof store
Ene 9	H. Office	1	1	1.17		0.00	Grouped power & tel sockets in appropriate room with sufficient space, 1.5% daylight & ventilation
Wat 1 (m)	Int Water	5	5	7.50		0.00	EBC ESD 2 RWH for flatted developments, max 80 lpd
Wat 2	Ext Water	1	1	1.50		0.00	200 litre water butts to communal & private gardens
Mat 1 (m)	Roof	3	3.00				GG ratings to be confirmed
	Ext wall	3	3.00				
	Int wall	3	3.00				
	Floors	3	1.00				
	Windows	3					
	GG Total	15	10	3.00	0	0.00	
Mat 2	RSM Basic	6	2	0.60		0.00	Responsibly source materials (Chain of Custody timber/ ISO14001/BES 6001)
Mat 3	RSM Finish	3	2	0.60		0.00	Responsibly source materials (Chain of Custody timber/ ISO14001/BES 6001)
Sur 1 (m)	Runoff	2	2	1.10		0.00	Ensure run-off and volume for all rainfall events are no greater than present conditions AND ensure there is no discharge from the developed site for rainfall depths up to 5mm + run-off from all hard surfaces shall receive an appropriate level of treatment
Sur 2	Flood Risk	2	2	1.10		0.00	FRA to confirm low risk of flooding from all sources
Was 1 (m)	Recycling	4	4	3.20		0.00	External storage of sufficient size & IDP Checklist compliant + 30 litre internal recycling bin(s)
Was 2	SWMP	3	3	2.40		0.00	SWMP minising 3 types of waste & 85% of site generated waste diverted from landfill
Was 3	Compost	1	1	0.80		0.00	EBC food waste collection - internal caddy and external brown bin
Pol 1	GWP	1	1	0.70		0.00	All insulation to have GWP less than 5
Pol 2	NOx	3	3	2.10		0.00	Main heating & hot water system to have dry NOx figure less than 40 mg/kWh
Hea 1	Daylight	3	2	2.33	1	1.17	Daylighting report required to confirm credit(s)
Hea 2	Sound	4	3	3.50		0.00	5db improvement on Doc E via sound testing or RD's
Hea 3	Gardens	1	1	1.17		0.00	Private/communal gardens of sufficient size & IDP Checklist compliant for both units
Hea 4 (m)	LTH	4	0	0.00		0.00	Assume no credit
Man 1	HUG	3	3	3.33		0.00	Detailed HUG, Checklist parts 1 & 2 compliant
Man 2	CCS	2	1	1.11		0.00	CCS/CCP 'pass', 25 points overall, with minimum of 5 points for all 5 sections
Man 3	S. Impacts	2	2	2.22		0.00	Set targets, record data & report on 4 site management procedures
Man 4	SBD	2	2	2.22		0.00	Achieve SBD part 2 compliance
Eco 1	Eco Value	1	1	1.33		0.00	SQE to confirm in report the site is of low value
Eco 2	Enhance	1	1	1.33		0.00	Provide all key recommendations & 30% additional recommendations as per SQE report
Eco 3	Protection	1	1	1.33		0.00	SQE to confirm in report the site is of low value
Eco 4	Change	4	3	4.00	1	1.33	SQE to confirm in report change of ecological value greater than 3 / greater than 9
Eco 5	Footprint	2	0	0.00		0.00	Design does not meet minimum credit requirement
Sub Total Scores %			69.61		3.66		**NOTES**
Code Level Req'd (Code 4)			68.00				
Est +/- Req'd Code Level			1.61				
Est+Add Total %			73.27				
Est+Add +/- Req'd Code Level			5.27				

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Key: (m) = Mandatory sections Est = Estimated/predicted Ach = Achieved Add = Additional *% = Approx weighted %

NEXT STAGE

The Client needs to instruct a Code Assessor to undertake the full Design Stage (DS) and Post Construction Stage (PCS) assessment, reporting and certification service.

Once instructed the client needs to supply information/evidence pack to appointed Assessor in order for full assessment process to commence.