



Code for Sustainable Homes

Pre-Assessment Report

1-5 Portpool Lane, London



June 2014

**Future Energy Surveys Ltd
Clifford Chambers
4 Clifford Street
York
YO1 9RD
www.consultfes.co.uk**

Pre-assessment Report
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Contents:

1 Introduction	3
2 Code Assessment	4
2.1 Assessor Notes	4
2.2 Code Commitments	5
2.2.1 - Energy	5
2.2.2 - Water	9
2.2.3 - Materials	10
2.2.4 - Surface Water Run Off	11
2.2.5 - Waste	12
2.2.6 - Pollution	14
2.2.7 - Health & Wellbeing	15
2.2.8 - Management	16
2.2.9 - Ecology	18
2.3 Summary Score	19
2.4 Notes	20

Report Written by:	P.Bainbridge	Report Checked by:	Andrew Parry
Signature:		Signature:	
Date:	June 2014	Date:	July 2014

1 Introduction

This Code for Sustainable Homes Pre-assessment has been prepared by Future Energy Surveys Ltd on behalf of Meinhardt for the residential development at 1-5 Portpool Lane, London. The development will see the construction of 6 new 1, 2 & 3 bedroom apartments which will require Code for Sustainable Homes certification.

The report will consider and assess the commitments made by the developer to achieve Code for Sustainable Homes Level Three certification.

1.1 Assessor Declaration

I, Paul Bainbridge have compiled this report to the best of my ability and have based all findings on the information that is referenced within this report. To the best of my knowledge all the information contained within this report is correct and accurate.

I have within my possession all the reference material that is named within this report, which is available for Inspection by the Client, the client's representative or STROMA Accreditation for Quality Assurance monitoring.

Signed



P. Bainbridge

STRO 006208



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2 Code Assessment

The Code for Sustainable Homes assesses each dwelling against nine categories, many of which complement the National Planning Policy Framework, such as; Protecting Green Belt Land, meeting the challenge of climate change, flooding and coastal change, Conserving and enhancing the natural environment, Facilitating the sustainable use of minerals etc. The nine categories assessed are:

- Energy and Carbon Dioxide Emissions
- Water Consumption
- Environmental Impact of Materials
- Surface Water Run-off
- Waste Management
- Pollution
- Health and Wellbeing
- Management
- Ecology

The Code sets mandatory requirements at each level. To obtain Code for Sustainable Homes Level 4 certification the assessed dwellings must achieve a 25% reduction over DER/TER comparison in SAP2009 over Part L 2010, achieve a maximum internal water consumption of 105 litres per person per day and a total assessment score of 68 points.

This report details the proposed route from the client for the development and confirms that the development has the capability to achieve **68.77 Credits** and **Code Level 4 Certification**.

2.1 Assessor Notes

This report is based on the information provided by the client and best practice/standard Code for Sustainable Homes commitments.

The information shaded in **red** is to be provided by Meinhardt. The information shaded **blue** will be provided by *FES*. Comments are made in **Grey**.

2.2 Code Commitments

Energy

ENE 1 – Dwelling Emission Rates.....10 Credits

SAP calculations have been undertaken on the site and confirm that the block compliance calculations exceed the mandatory requirements of Code level 4. The development will achieve a reduction in line with the planning department's condition to achieve a minimum 34% Reduction over Building Regulations Part L 2013.

Four credits can be awarded.

The following information is needed at the detailed design stage.

- House type working drawings.
- Specification.
- SAP 2012 Calculations.

Actions required to achieve the credit are:

- Architects to provide full working drawings and specification, the SAP assessor produces the SAP calculation from the drawings and specification provided.

ENE 2 – Fabric Energy Efficiency.....9 Credits

SAP calculations have been undertaken on the site and area weighted calculations across the block of flats achieve a minimum fabric efficiency of 48kWh/m²/yr.

Three credits should be anticipated.

The following information is needed at the detailed design stage.

- House type working drawings.
- Specification.
- SAP 2012 Calculations.

Actions required to achieve the credit are:

- Architects to provide full working drawings and specification, the SAP assessor produces the SAP calculation from the drawings and specification provided.

ENE 3 – Display Energy Device.....2 Credits

The dwellings will be provided with an energy display device capable of monitoring primary fuel consumption and current electricity usage data. Early enquiries with power supply companies are recommended as a number of providers will fit these items for free at the first fix stage of the build.

Two credits can be awarded.

The following information is needed at the detailed design stage

- Letter of intent.

Actions required to achieve the credit are:

- Contractor to install an energy display device that displays the current energy consumption and primary heating fuel consumption data.

ENE 4 – Drying Space.....1 Credit

It is recommended that dedicated drying facilities will be provided to each dwelling. These facilities will have a minimum length of 4m for all dwellings. The extendable washing line will be located in the bathroom, usually fitted over the bath in each dwelling.

One credit can be awarded.

The following information is needed at the detailed design stage

- Floor plan drawings showing the location of the extendable dryer.
- Letter of intent.

Actions required to achieve the credit are:

- Contractor to install a 4m length extendable washing line in the dwelling, the architect is required to provide drawings clearly showing the proposed location of the line.

ENE 5 – Energy Labelled White Goods.....2 Credits

If appliances are provided they will meet with the code requirement to be A+ rated Fridges and freezers with A rated Washing machines and either a B rated washer dryer/tumble dryers or an EU Energy Efficient Labelling scheme Leaflet.

Alternatively the EU Energy Efficient Labelling scheme Leaflet can be included in the home user guide to gain a single credit.

One credit can be awarded.

The following information is needed at the detailed design stage

- Letter of intent.

Actions required to achieve the credit are:

- Where the following appliances are to be provided each appliance must have an A+ rating, Fridge and Freezer, or fridge-freezers.
- Where the following appliances are to be provided each appliance must have an A rating, Washing machines and dishwashers.
- Where the following appliances are to be provided each appliance must have a B rating, Tumble dryers or washer dryers. Or, alternatively EU energy Efficient Labelling Scheme Information in the form of a booklet to be included in the home user guide, where tumble dryers or washer dryers are not provided.

ENE 6 – External Lighting.....2 Credits

All external space lighting will be provided by dedicated energy efficient fittings. These will be accompanied with daylight sensors and motion controls.

Two credits can be awarded.

The following information is needed.

- House type drawings showing the location of all external light fittings and the accompanying controls.
- Letter of intent.

Actions required to achieve the credit are:

- Installation of dedicated energy efficient fittings to all external space lighting.
- Installation of dedicated energy efficient fittings to all security lighting fitted with a maximum wattage of 150W, movement detection controls and daylight cut off sensors.

ENE 7 – Low or Zero Carbon Technologies.....2 Credits

The design team have confirmed that a PV array will be fitted to the flat roof of the flats. The PV array will be capable of generating a 15% reduction in CO₂ emissions.

Two credits can be awarded.

The following information is needed at the detailed design stage.

- House type working drawings.

- **Specification.**
- SAP 2010 Calculations.

Actions required to achieve the credit are:

- Architects to provide full working drawings and specification, the SAP assessor produces the SAP calculation from the drawings and specification provided.

ENE 8 – Cycle Storage.....2 Credits

Sufficiently sized and secure storage will be provided with dedicated storage for 2 cycles for each flat. This will be located in a secure location on site with adequate fixings and locks to the entrance door of the cycle store or shed.

2 Credits Anticipated.

The following information is needed.

- **Drawings showing the proposed location of the communal cycle store and text detailing the key features.**
- Letter of intent.

Actions required to achieve the credit are:

- Installation of cycle storage adequately sized, secure and in a convenient location, details of its type and location on the site will be required from the Architect.

ENE 9 – Home Office.....1 Credit

The dwellings will have a room capable of being operated as a home office this will be located in the second bedroom, for single bedroom dwellings the home office can be located in the living room. The location of the home office will satisfy the following specification;

- Achieve an average daylight factor of 1.5%.
- Have a 1.8m stretch of wall allowing the provision of a desk.
- Two double power sockets and a telephone point.
- The room will be large enough to continue to operate as its intended purpose.

Home office credits cannot be claimed if the office is located in the master bedroom.

One credit can be awarded.

The following information is needed.

- **House type drawings showing the home office location & the necessary facilities.**
- Average daylight calculations.

Actions required to achieve the credit are:

- Location of space for the home office to be confirmed on a drawing to be provided by the architect.
- Installation of the following services into the home office at a minimum, 2 number double power sockets, Two telephone points, or one telephone point where cable or broadband are proposed.
- Unobstructed length of wall to a minimum length of 1.8m
- Daylight calculations to be provided by the CODE assessor to confirm average day lighting within the home office achieves 1.5%.

WATER

WAT 1 – Internal Water Consumption.....5 Credits

A commitment has been made to achieve an internal water consumption of less than 90 litres per person per day, it is a mandatory requirement of Code Level 4 to achieve 105 litres per person per day however we advise exceeding this and targeting 90 litres per person per day.

Four credits can be awarded.

Suggested flow rates are as follows.

- Due Flush Toilet - 2.6/4 Litres.
- Kitchen - Taps 6 litres/min.
- All other - Taps 4 litres/min.
- Shower - 6 litres/min.
- Bath - 140 litres.

The following information is needed.

- Confirmation of flow rates, either in the specification or on the drawings.
- WAT 1 Calculation.

Actions required to achieve the credit are:

- Water Efficiency Calculator to be undertaken by the CODE assessor. Advice on flow rates for each fitting will be provided upon completion of the WAT1 calculation.

WAT 2 – Outdoor Water.....1 Credit

The flats are provided with balconies only and as a result gain the credit by default.

One Credit Anticipated.

MATERIALS

MAT 1 – Environmental Impact of Materials.....15 Credits

A detailed specification has yet to be provided. However a conservative score of **ten** credits can be assumed at this stage.

The following information is needed.

- **House type drawings.**
- **Specification.**
- **MAT 1 Calculation**

Actions required to achieve the credit are:

- Completion of the MAT1 calculation tool to be undertaken by the CODE assessor.

MAT 2 & 3 Responsible Sourcing of Materials.....9 Credits

Credits cannot be sought.

SURFACE WATER RUN OFF

SUR 1 – Management of Surface Water Run-off.....2 Credits

The inclusion of a drainage design would be required for the development to achieve the mandatory SUR 1 requirement; however the drainage engineer must complete the SUR 1 Report to ascertain the credit level.

Mandatory element achieved,

No credits awarded at this stage, to be reviewed at design stage.

The following information is needed.

- **SUR 1 Report – signed by a suitably qualified consultant.**
- **Drainage Plans.**
- **Supporting calculations.**

Actions required to achieve the credit are:

- The appointment of a drainage consultant will be required to undertake the mandatory parts of SUR1.

SUR 2 – Flood Risk Assessment.....2 Credits

A flood risk assessment is required; at present a conservative score of **Two** credits can be awarded.

- **Flood Risk Assessment – signed by a suitably qualified consultant.**

Actions required to achieve the credit are:

- The appointment of a drainage consultant will be required to undertake the flood risk assessment.

WASTE

WAS 1 – Storage of Waste.....4 Credits

WAS 1 is a mandatory subsection of the Code. Plans must be produced to show there is sufficient space for the storage of LA waste bins. These bins must be accessible and satisfy the requirements of the Checklist IDP.

It has been confirmed that the dwellings will have dedicated and fixed recycling facilities in the form of three recycling bins within the dwelling.

Four credits can be awarded.

The following information is needed.

- House type drawings showing the level threshold.
- Drawings showing the location of bin storage and sufficient details to show it is accessible.
- Letter of Intent.

Actions required to achieve the credit are:

- An adequate external space should be allocated for waste storage, the volume of bins should be in accordance with British Standards 5906, equal to 100ltrs for the first bedroom within the dwelling followed by an additional 70ltrs per bedroom.
- An adequate external space should be allocated for recyclable waste storage for at least three bins, the volume of bins should be in equal to 180ltrs in total, with each bin being a minimum of 40ltrs.
- Adequate internal recyclable waste storage for at least three bins, the total volume of bins should be in equal to 30ltrs in total, with each bin being a minimum of 7ltrs.

WAS 2 – Site Waste Management.....3 Credits

A SWMP will be implemented. This will adhere to the principles of the Waste Hierarchy. In addition to this 85% of all non-hazardous waste will be diverted from landfill.

Three credits can be awarded.

The following information is needed.

- Letter of intent.

Actions required to achieve the credit are:

- The contractor will be required to undertake and implement a site waste management plan containing the appropriate benchmarks commitments and procedures for waste minimisation and diversion from landfill in line with the criteria and checklists WAS2a, WAS2b, WAS2C.

WAS 3 – Composting.....1 Credit

Dedicated and accessible (compliant with Checklist IDP) composting facilities will be provided to the rear communal garden of block of flats. A management plan will need to be implemented by the landlord to include the communal compost bin.

One credit can be awarded.

The following information is needed.

- External works drawings showing the proposed location of the composter and details sufficient to show it is accessible.
- Letter of intent.

Actions required to achieve the credit are:

- The contractor will be required to install individual home composting facilities.
- Drawings clearly showing the location of the composting facilities are required from the Architect.

POLUTION

POL 1 – GWP of Insulants.....1 Credit

A full schedule of insulating products must be provided. However it is reasonable to assume that the **one** credit can be awarded.

The following information is needed.

- **Specification.**

Actions required to achieve the credit are:

- Completion of the POL1 calculation tool to be undertaken by the CODE assessor.

POL 2 – NOx Emissions.....3 Credits

(We are assuming the main heating system will be a gas fired combi boiler to each flat).

The client has made a commitment to install a gas condensing boiler with confirmed NOx emissions of less than 40mg/kWh.

Three credits can be awarded.

The following information is needed.

- **Letter of intent.**

Actions required to achieve the credit are:

- Written confirmation on the drawings or specification of the heating system proposed for the dwelling.

HEALTH & WELLBEING

HEA 1 – Daylighting.....3 Credits

Initial designs aim to achieve the required day lighting in all kitchens, living rooms / dining rooms and studies, it is reasonable to assume that **Three** credit can be awarded.

The following information is needed.

- House type drawings.
- Daylight calculations.

Actions required to achieve the credit are:

- Completion of the Average day lighting calculation tool to be undertaken by the CODE assessor.

HEA 2 – Sound Insulation.....4 Credits

Initial designs aim to achieve the required sound insulation to meet with the requirements of airborne sound of at least 5dB higher than building regulations and Impact sounds of at least 5dB lower than specified in the building regulations. Either through post completion sound testing or with the use of Robust details.

Detached dwellings achieve the credits by default.

Three credits Anticipated.

The following information is needed.

- Letter of intent.

Actions required to achieve the credit are:

- The contractor will be required to undertake post construction sound testing.
- Or alternatively register with Robust details and provide final certification equal to or better than the standards specified.

HEA 3 – Private Space.....1 Credit

The flats are all provided with private balconies equal to a minimum of 4.5 m².

One credit can be awarded.

The following information is needed.

- Floor plan drawings.
- Site plan drawings.

Actions required to achieve the credit are:

- Drawings to be provided by the Architect showing the external private space.
- Floor plan drawings.
- Site plan drawings.

Actions required to achieve the credit are:

- Drawings to be provided by the Architect showing the external private space.

HEA 4 – Lifetime Homes.....4 Credits

It is recommended that the design team undertake Lifetime Homes compliance. The design of the building will be required to meet with all 16 criteria as listed in the HEA 4 Checklist, **Four** credits can be awarded.

- The following information is needed. Floor plan drawings.
- HEA 4 Checklist

Actions required to achieve the credit are:

- Drawings to be provided by the Architect showing the external private space.
- Lifetime homes compliance checklist.

MANAGEMENT

MAN 1 – Home User Guide.....3 Credits

A home user guide will be provided to each dwelling. This will be compliant with Checklist Man 1a & 1b.

Three credits can be awarded.

The following information is needed.

- Letter of intent.

Actions required to achieve the credit are:

- The contractor will be required to provide a home user guide in accordance with the MAN1 checklist.

MAN 2 – Considerate Construction Scheme.....2 Credits

The site will be registered with the Considerate Constructors Scheme, and a commitment will be made to go significantly beyond best practice.

Two credits can be awarded.

The following information is needed.

- Letter of intent.

Actions required to achieve the credit are:

- The contractor will be required to register the site under the considerate constructor's scheme or similar approved certifications scheme and to adopt the principals to go significantly beyond best practice.

MAN 3 – Construction Site Impacts.....2 Credits

The following four site activities will be monitored;

- Monitor energy consumption on site – take regular electricity meter readings
- Monitor water consumption on site – take regular water meter readings.
- Adopt best practice with respect to air pollution.
- Adopt best practice with respect to water pollution.

Two credits can be awarded.

The following information is needed.

- Letter of intent.

Actions required to achieve the credit are:

- The contractor will be required to complete the MAN3 checklist detailing the four procedures that will be employed to minimise construction site impacts.

MAN 4 – Security.....2 Credits

Section 2 of Secured by Design will be achieved.

Two credits can be awarded.

The following information is needed.

- **A communication or response from the ALO.**
- Letter of intent.

Actions required to achieve the credit are:

- The appointment of an Architectural Liaison Office (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force to liaise with the design team and recommendations be incorporated and Section 2 – Physical Security from ‘secured by design’ is adhered to.

ECOLOGY

ECO 1-3 – Ecological Value of the Site.....3 Credits

The Eco 1 Checklist will be used for the site due to its landlocked nature. No external space exists on site currently and none is proposed in the development of the site.

2 credits Anticipated

The following information is needed.

- Eco 1 Checklist.
- Landscaping Plan
- Letter of Intent.

Actions required to achieve the credit are:

- The appointment of an Ecologist to undertake an ecological report for the site.

ECO 4 – Change in Ecological Value of the Site.....4 Credits

The design team have confirmed that these credits cannot be sought.

ECO 5 – Building Footprint.....2 Credits

Initial drawing show that a ratio of 3:1 will be achieved on the block of apartments.

One credits can be awarded.

The following information is needed at the detailed design stage.

- House type working drawings.

2.3 Summary Score

The tables below details the point scores thought achievable for the development.

CATEGORY	ISSUE ID	ISSUE	CREDITS AVAILABLE	POINTS AVAILABLE	TARGET CREDITS
Energy & CO2 Emissions	ENE1*	Dwelling Emission Rate	10	11.74	4
	ENE2	Fabric Energy Efficiency	9	10.57	3
	ENE3	Energy Display Devices	2	2.35	2
	ENE4	Drying Space	1	1.17	1
	ENE5	Energy Labelled White Goods	2	2.35	1
	ENE6	External Lighting	2	2.35	2
	ENE7	LZC Technologies	2	2.35	2
	ENE8	Cycle Storage	2	2.35	2
	ENE9	Home Office	1	1.17	1
		Section Total	31	36.40	18
WATER	WAT 1*	Indoor Water Use	5	7.50	4
	WAT 2	External Water Use	1	1.50	1
		Section Total	6	9.00	5
MATERIALS	MAT 1*	Environmental Impact of Materials	15	4.50	10
	MAT 2	Responsible Sourcing of Materials Basic Building Elements	6	1.80	0
	MAT 3	Responsible Sourcing of Materials Finishing Elements	3	0.90	0
		Section Total	24	7.20	10
SURFACE WATER	SUR 1*	Surface Water Runoff from Developments	2	1.10	0
	SUR 2	Flood Risk	2	1.10	2
		Section Total	4	2.20	2
WASTE	WAS1*	Storage of Non-recyclable Waste and Recyclable Household Waste	4	3.20	4
	WAS2*	Construction Site Waste Management	3	2.40	3
	WAS3	Composting	1	0.80	1
		Section Total	8	6.40	8
POLLUTION	POL 1	GWP of Insulants	1	0.70	1
	POL 2	NOx Emissions	3	2.10	3
		Section Total	4	2.80	4
HEALTH & WELLBEING	HEA 1	Daylighting	3	3.50	3
	HEA 2	Sound Insulation	4	4.67	3
	HEA 3	Private Space	1	1.17	1
	HEA 4*	Lifetime Homes	4	4.67	4
		Section Total	12	14.00	11
MANAGEMENT	MAN 1	Home User Guide	3	3.33	3
	MAN 2	Considerate Constructors Scheme	2	2.22	2
	MAN 3	Construction Site Impacts	2	2.22	2
	MAN 4	Security	2	2.22	2
		Section Total	9	10.00	9
ECOLOGY	ECO 1	Ecological Value of Site	1	1.33	1
	ECO 2	Ecological Enhancement	1	1.33	0
	ECO 3	Protection of Ecological Features	1	1.33	1
	ECO 4	Change in Ecological Value of Site	4	1.33	0
	ECO 5	Building Footprint	2	1.33	1
		Section Total	9	12.00	3
		Total Points			68.77

2.4 Notes

The estimated point scores achieved all equate to a Code Level 4. This score is based on realistic recommendations made in each section, which you must review to ensure achievement for a final Code assessment.

Mandatory

Note that the following commitments are mandatory and therefore crucial to the current assessment:

- ***ENE 1 – Dwelling Emission Rates***
- ***ENE 2 – Fabric Energy Efficiency***
- ***WAT 1 – Internal Water Consumption***
- ***MAT 1 – Environmental Impact of Materials***
- ***SUR 1 – Management of Surface Water Run-off - Flood Risk Assessment***
- ***WAS 1 – Storage of Waste***

Third Party Assumptions

There are a number of sections where assumptions have been made dependent on third parties, please see list below.

- ***SUR 2 – Flood Risk Assessment - flood risk assessment is undertaken **Mandatory**.***