

Code for Sustainable Homes

Pre Assessment Report

77 Avenue Road, London, SW16 4HJ

Prepared by:

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1. Introduction

This pre assessment report has been prepared by QED Planning and Environmental Consulting for Giles Lovegrove of Coup DeVille Architects, Unit 1A, Woodstock Studios, 36 Woodstock Grove, London W12 8LE, for the construction of a six bedrooomed family home at 77 Avenue Road, London, SW16 4HJ.

The report aims to show that the proposed dwelling will meet the requirements of the stated aims to create a Code 4 home. Please note that this is a pre assessment report and does not constitute a Design Stage Certificate as recognised by the BRE. In order to obtain a Design Stage Certificate the actions set out in the body of the report would have to have been completed and the Design Stage Assessment completed and submitted by a licensed Code Assessor for verification by the BRE.

The information provided in this report is an accurate interpretation of the available information provided to me at this time.

Yours sincerely

Aaron Curtis

2. Code Assessment

The Code for Sustainable Homes assesses each dwelling against nine categories, many of which compliment national and local planning policies such as PPS9 – Biodiversity and Geological Conservation, PPS10 – Planning for Sustainable Waste Management, PPS22 – Renewable Energy and PPS25 – Development and Flood Risk.

The nine categories assessed are:

1 - Energy and Carbon Dioxide Emissions

2 - Water Consumption

3 - Environmental Impact of Materials

4 - Surface Water Run-off

5 - Waste Management

6 - Pollution

7 - Health and Wellbeing

8 - Management

9 - Ecology

The Code sets mandatory requirements at each level. To obtain Code for Sustainable Homes Level 4 certification the assessed dwellings must achieve a minimum percentage improvement in dwelling emission rate over target emission rate (DER/TER) of 25% , achieve a maximum internal water consumption of 105 litres per person per day and a total assessment score of 68 points.

Code Commitments

ENERGY

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

The proposed fabric specification and the provision of a Solar Photovoltaic array will achieve a greater than 25% reduction over Part L 2010. The calculations are based on 2 x Vaillant Ecotec 42cdi gas condensing system boilers with a 600 litre cylinder, and 10kWp PV array on the roof.

3.6 credits can be awarded.

The following information is needed at the detailed design stage.

- House type working drawings.
- Primary heating system 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.

Information gained from SAP calculations provided by Compass Energy

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

Initial calculations confirm that a minimum fabric efficiency of 58.4 kWh/m²/yr is achievable.

3.3 credits can be awarded.

The following information is needed at the detailed design stage.

- SAP 2010 Calculations as provided by Compass Energy

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 available

Each dwelling will be provide with an energy display device capable of monitoring primary fuel consumption and current electricity.

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 available

It has been assumed that dedicated drying facilities will be provided to each dwelling. These facilities will have a minimum length 6m for three plus bedroom dwellings. In all cases the extendable washing line will be located in the garden.

1 credit can be awarded.

The following information is needed at the detailed design stage

- External works drawing showing the location of the rotary dryer.
- Letter of intent.

• Actions required to achieve the credit are:

- Contractor to install a 6m length extendable washing line in the rear gardens, the architect is required to provide drawings clearly showing the proposed location of the line.

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

The developer has confirmed that information on the EU Energy Labelling Scheme will be made available for the dwelling. This will be included in the Home User Guide.

2 credits 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 an 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 available

All external space lighting will be provided by dedicated energy efficient fittings. These will be accompanied with daylight and motion controls. In addition security lighting must be designed for energy efficiency and be adequately controlled.

2 credits can be awarded.

The following information is needed. FES Version 2 March 2011

- 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.

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

Based on SAP calculations attached a 30% reduction in CO2 can be achieved

2 credits awarded

ENE 8 – Cycle Storage.....2 Credits available

Sufficiently sized and secure storage will be provided with a minimum of two spaces per 4 bedroom dwelling.

2 credits can be awarded.

The following information is needed.

- External works drawings showing the proposed location of each shed 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 it's type and location on the site will be required from the Architect.

ENE 9 – Home Office.....1 Credit

1 credit can be awarded

WATER

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

A commitment has been made to achieve an internal water consumption of less than 105 litres per person per day.

3 credits can be awarded.

The following information is needed.

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

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. Due to the size of the property it is assumed that provision will be made for a suitably sized rainwater harvesting facility, in relation to WAT 1 calculation.

• WAT 2 – Outdoor Water.....1 Credit available

Correctly specified and sized system to collect rainwater.

1 credit awarded.

- External works drawings or house type drawings showing the proposed location of the rainwater harvesting system.
- Letter of intent.

Actions required to achieve the credit are:

- Contractor required to install rainwater harvesting system to dwelling, confirmation of location of system to be shown on a drawing to be provided by the Architect.

MATERIALS

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

- A detailed specification has yet to be provided, however a potential score of eight 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 available

• To support credit claims, suppliers must provide Chain of Custody certificates and prove they have Environmental Management Systems in place. The client has made a commitment to responsibly source materials and obtain the necessary certificates from suppliers. At this stage a potential score of six can be awarded.

• The following information is needed at the detailed design stage

• Letter of intent.

• Actions required to achieve the credit are:

• Completion of the MAT2 and MAT 3 calculation tool to be undertaken by the CODE assessor.

• Where materials are to be reused documentation stating specific materials that are to be reused. Receipt or letters from the suppliers are acceptable.

• Where materials are to be recycled documentation stating specific materials that are to be sourced from recycled material. Relevant certificates from suppliers are acceptable.

SURFACE WATER RUN-OFF

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

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.

• Assumed score of 2 credits at this stage

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

A flood risk assessment is required.

1 credit can be awarded (assumed)

• Flood Risk Assessment – signed by a suitably qualified consultant.

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• Actions required to achieve the credit are:

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

WASTE

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

- 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 Checklist IDP.
- It has been confirmed that each dwelling will have dedicated and fixed recycling facilities in the form of three recycling bins in a kitchen cupboard.

- 4 credits can be awarded.

- The following information is needed.

- House type drawings showing the level threshold.
- External works 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 available

- 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.

- 1 credit can be awarded. (assumption)

- 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 available

- Dedicated and accessible (compliant with Checklist IDP) composting facilities will be provided.

- 1 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.
- POLLUTION
- POL 1 – GWP of Insulants.....1 Credit available
- A full schedule of insulating products must be provided. However it is reasonable to assume that the one credit can be awarded
- 1 credit 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 available
- Assumptions as to the make and model of boiler(s) to be installed.
- 2 credits can be assumed at this stage.
- 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 AND WELLBEING
- HEA 1 – Daylighting.....3 Credits available
- 2 credits can be awarded.(assumed)
- The following information is needed.
- House type drawings.

- Daylight calculations.
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- Actions required to achieve the credit are:
- Completion of the Average daylighting calculation tool to be undertaken by qualified assessor.
- HEA 2 – Sound Insulation.....4 Credits available
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- A commitment must be made to better ADE by 5dB. A series of pre-completion sound tests will confirm compliance.
- 3 credits can be awarded at this stage.
- Letter of intent.
- Actions required to achieve the credit are:
- The contractor will be required to undertake sound testing upon completion of the development.
- HEA 3 – Private Space.....1 Credit available
- Each dwelling will have sufficient and accessible private space.
- 1 credit can be awarded
- The following information is needed.
- Site plan.
- Actions required to achieve the credit are:
- Drawings to be provided by the Architect showing the external secure private space to each dwelling.
- HEA 4 – Lifetime Homes.....4 Credits available
- Assumed that confirmation of all relevant Lifetime Home principles have been incorporated into the design of each dwelling.
- 4 credits can be awarded.
- House type working drawings.
- Actions required to achieve the credit are:
- Architects to provide full working drawings showing the requirements as outlined by Life Time Homes

MAN 4 – Security.....2 Credits available

2 credits awarded

Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force is consulted at the design stage and that their recommendations are incorporated into the design of the dwelling

ECOLOGY

ECO 1-4 – Ecological Value of the Site.....7 Credits available

An ecological will be carried out a score of 5 credits can be awarded at this stage. The following information is needed.

- Ecological Report.
- Landscaping Plan
- Letter of Intent.
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Actions required to achieve the credit are:

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

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

1credit

Net internal area floor area/net internal ground floor area ratio is greater than or equal to 2.5:1 to be confirmed by architect

Summary Score

Energy and CO2 Emissions

ENE 1 - Dwelling Emission Rate	3.6
ENE 2 – Fabric Energy Efficiency	3.3
ENE 3 – Display Energy Device	2.0
ENE 4 - Drying Space	1.0
ENE 5 - Energy Labelled White Goods	2.0
ENE 6 - External Lighting	2.0
ENE 7 - LZC Technology	2.0
ENE 8 - Cycle Storage	2.0
ENE 9 - Home Office	1.0
Credits	18.9
Weighting factor	1.17
Points	22.11

Water

WAT 1 - Indoor Water Use	3.0
WAT 2 - External Water Use	1.0

Credits	4.0
Weighting factor	1.5

Points	6.0
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Materials

MAT 1 - Environmental Impact of Materials	8.0
MAT 2 - Responsible Sourcing of Materials	6.0
MAT 3 - Responsible Sourcing of Materials	(inc)

Credits	14.0
Weighting factor	0.3

Points	4.2
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Surface Water Run-off

SUR 1 - Management of SWROff	2.0
SUR 2 - Flood Risk	1.0

Credits	3.0
Weighting factor	0.55

Points	1.65
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Waste

WAS 1 - Storage of Recyclable Waste	4.0
WAS 2 - Construction Site Waste Mgmt	1.0
WAS 3 - Composting	1.0

Credits	6.0
Weighting factor	0.8

Points	4.8
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Pollution

POL 1 - GWP of Insulants	1.0
POL 2 - NOx Emissions	2.0

Credits	3.0
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Weighting factor	0.7
Points	2.1
Health and Wellbeing	
HEA 1 - Daylighting	2.0
HEA 2 - Sound Insulation	3.0
HEA 3 - Private Space	1.0
HEA 4 - Lifetime Homes	4.0
Credits	10.0
Weighting factor	1.17
Points	11.7
Management	
MAN 1 - Home User Guide	3.0
MAN 2 - Considerate Construction Scheme	1.0
MAN 3 - Construction Site Impacts	1.0
MAN 4 - Security	2.0
Credits	7.0
Weighting factor	1.11
Points	7.77
Ecology	
ECO 1 - Ecological Value of Site	5.0
ECO 2 - Ecological Enhancement	
ECO 3 - Protection of Ecological Features	
ECO 4 - Change in Ecological Value of Site	
ECO 5 - Building Footprint	1.0
Credits	6.0
Weighting factor	1.33
Points	7.98
Total points score:	68.31 (Code Level 4)

Notes:

Note: QED Planning and Environmental Consulting will always to the best of its abilities work and in collaboration with clients to help them achieve their sustainability targets. However, QED Planning and Environmental Consulting cannot be held responsible for the failure of any development, building or dwelling to meet the targeted Code for Sustainable Homes.

MANAGEMENT

MAN 1 – Home User Guide.....3 Credits available

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

3 credits can be awarded.

The following information is needed.

- Letter of intent.

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Actions required to achieve the credit are:

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

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

The site will be registered with the Considerate Construction Scheme. A target performance of beyond best practice will be achieved.

1 credits can be awarded.

- Letter of intent.

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Actions required to achieve the credit are:

- The contractor will be require to register the site with the considerate constructors scheme, copies of the registration should be passed to the Code assessor as evidence.

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

The following four site activities will be monitored;

- Energy use arising from site activities.
- Water use arising from site activities.
- Best practice policies will be adopted with respect to dust.
- 80% of all site timber will be responsibly sourced.

1 credits can be awarded.

The following information is needed.

- Letter of intent.

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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..