

REPORT

in relation to

**OVERVIEW OF
REQUIREMENT FOR
ECOHOMES**

**PRE-ASSESSMENT
ESTIMATOR FOR ALL
DWELLINGS TO
ACHIEVE VERY GOOD
RATING**

for

**235 – 269 MAKEPEACE
MANSIONS, CAMDEN**

for

**LONDON BOROUGH OF
CAMDEN**

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1.0 INTRODUCTION

The Client London Borough of Camden has asked for this project to be assessed for EcoHomes certification. The development comprises of the renovation of a 4 storey apartment block to provide 15no 1 & 2 bed units, which is required to achieve an Ecohomes 'Very Good' rating.

The project is now at detail design stage and at this point the project may obtain an EcoHomes certificate. This may be achieved by incorporating the various requirements of EcoHomes into the specification documents, with enough information to complete the assessment. After the tender stage it is the responsibility of the contractor to co-ordinate with their suppliers in order to provide the correct information required to complete the developer's sheets. If this task is not undertaken correctly it can result in points being lost due to lack of information. However, the overall responsibility to provide the correct information for EcoHomes lies with the developer.

2.0 EXECUTIVE SUMMARY

We have established from the pre-assessment that all dwellings will achieve a 'Very good' rating with a minimum score of 62.1. A score of 58 is required to achieve a very good rating under Ecohomes. It is of course the intention to improve upon this score.

The following assumptions have been made when assessing this project:

- The dwellings will be renovated with new high efficiency boilers and controls, with dedicated low energy light fittings throughout.
The building fabric will be upgraded with good insulation products.
- A secure covered cycle storage area will be incorporated into the scheme, to provide a cycle position per bedspace.
- Surface water disposal from the roof and hardstandings will remain as existing with a positive connection to LA sewer, no soakaways.
- No renewables will be incorporated into the scheme, e.g solar panels or heat recovery.
- No private garden space will be provided for the residents of the apartments.
- A secure by design application will be submitted.
- No rainwater butts.
- Low water use sanitary fittings will be provided, with flow restrictors fitted to all taps and showers.

3.0 ECOHOMES PRE-ASSESSMENT ESTIMATOR

For the dwellings the score is expected to achieve 62.1, however this score could be improved once the final specification and drawings for the project has been completed and verified.

The accuracy of the score needs to be verified through further discussions with the design team. To obtain these scores it is also worth noting that the design team together with the developer and contractor need to complete all relevant forms.

Table 1.0 below proved a summary of results:

Table 1.0 Provisional Estimated Points

| Section | Point Available | Possible Score | Improvements/Comments |
|----------------------|-----------------|----------------|--|
| Energy | 22.00 | 13.76 | The average SAP rating is less than 22kg/m2. |
| Transport | 8 | 8.0 | The public transport service and frequency is yet to be confirmed, it has been assumed considering the town centre location, that a good bus service will be present. |
| Pollution | 10.0 | 4.55 | No renewable technology is being provided. The site is considered as having low flood risk. |
| Materials | 14.00 | 10.38 | The development incorporates tiled roof areas, brick/block walls and load bearing internal partition walls that all achieve a Green guide A rating. |
| Water | 10.00 | 6.66 | We have assumed that the WC cisterns will be 6/4 litre flush with flow restricted taps and shower fitments. Consideration may be given to incorporating a rainwater harvesting tank. |
| Land Use Ecology | 12.00 | 8.0 | The land is previously developed, and is therefore of low ecological value. |
| Health and Wellbeing | 14.00 | 1.75 | We have assumed that no private garden space will be provided. Acoustic sound testing will be required upon completion. |
| Management | 10.0 | 9.00 | The contractor will be required to work to a good environmental policy, and will monitor site waste/recycling and preventing pollution during construction activities. |
| Total | 100.00 | 62.1 | |

APPENDIX
Initial Calculation Sheets

EcoHomes 2006 Pre Assessment Estimator

ENERGY

| Issue | | % of total score | Dwelling | Location |
|--------|---|---|---------------------------|----------|
| | | | % of total score achieved | |
| Energy | | | | |
| Ene 1 | Dwelling Emission Rate Credits are awarded to achieve SAP 2005 CO ₂ emissions as follows: <ul style="list-style-type: none">• Less than or equal to 40 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 35 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 32 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 30 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 28 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 26 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 24 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 22 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 20 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 18 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 15 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 10 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 5 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to 0 kg/m²/yr OR <ul style="list-style-type: none">• Less than or equal to -10 kg/m²/yr Note: -10kg CO ² /m ² allows for recognition of ‘true zero’ carbon solutions. | 0.92 1.83 2.75 3.67 4.58 5.50 6.42 7.33 8.25 9.17 10.08 11.00 11.92 12.83 13.75 | 7.33 | |
| | | | (Max 13.75) | |

| | | | | |
|--------------|--|----------------------|--|--|
| Ene 2 | Building Envelope Performance Up to 2 credits awarded where thermal performance based on the Heat Loss Parameter (HLP) method meets the following requirements: For new build: <ul style="list-style-type: none"> Where the HLP is less than or equal to 1.3 W/m²K OR <ul style="list-style-type: none"> Where the HLP is less than or equal to 1.1 W/m²K | 0.92 1.83 | 0.92 | |
| | For refurbishment: <ul style="list-style-type: none"> Where the HLP is less than or equal to 2.2 W/m²K OR <ul style="list-style-type: none"> Where the HLP is less than or equal to 1.75 W/m²K | 0.92 1.83 | (Max 1.83) | |
| Ene 3 | Drying Space Provision of drying space (line over bath) | 0.92 | 0.92 (Max 0.92) | |
| Ene 4 | Eco Labelled White Goods Provision of eco labelled white goods with the following energy ratings: <ul style="list-style-type: none"> All fridges, freezers, fridge-freezers with an A⁺ rating All washing machines, and dishwashers where supplied, with an A rating and washer dryers and tumble dryers with a rating of B or higher OR <ul style="list-style-type: none"> No white goods provided but info on Eco labelling | 0.92 0.92 0.92 | 0.92 (Max 1.83) | |
| Ene 5 | Internal Lighting <ul style="list-style-type: none"> Where 40% dedicated low energy lights have been specified OR <ul style="list-style-type: none"> Where 75% dedicated low energy lights have been specified | 0.92 1.83 | 1.83 (Max 1.83) | |
| Ene 6 | External Lighting Space Lighting <ul style="list-style-type: none"> All space lighting is specifically designed to accommodate only compact fluorescent lamps (CFL) Security Lighting <ul style="list-style-type: none"> All interior lighting to be 150 watts maximum and be fitted with PIR and day light sensor and All other types of security lighting to accommodate CFLs or fluorescent strips only and be fitted with dawn to dusk sensors or times | 0.92 0.92 | 0.92 0.92 (Max 1.83) | |
| | Total Number of Energy Credits Achieved | | 13.76 (Max 22.00) | |

| Issue | | % of total score | Dwelling | Location |
|-----------|--|--|---------------------------|---|
| | | | % of total score achieved | |
| Transport | | | | |
| Tra 1 | Public Transport Urban and Suburban Areas 80% of the development within: <ul style="list-style-type: none"> 1000m of a 30 min peak and hourly off peak service OR <ul style="list-style-type: none"> 500m of a 15 min peak and a half hourly off peak service Rural Areas 80% of the development within: <ul style="list-style-type: none"> 1000m of an hourly service OR <ul style="list-style-type: none"> 500m of an hourly service OR a community bus service | 1.00 2.00 1.00 2.00 | | 2.00 (Max 2.00) |
| Tra 2 | Cycle Storage Provision of covered / secure cycle storage for: <ul style="list-style-type: none"> 50% of dwellings OR <ul style="list-style-type: none"> 95% of dwellings | 1.00 2.00 | 2.00 (Max 2.00) | |
| Tra 3 | Local Amenities Proximity to local amenities: <ul style="list-style-type: none"> Within 500m of a food shop and post box Within 1000m of 5 of the following: food shop*, postal facility, bank/cash machine, pharmacy, primary school, medical centre, leisure centre, community centre, public house, children's play area, place of worship, outdoor open access public area Safe pedestrian routes to the local amenities *if not used for the 1 st credit | 1.00 1.00 1.00 | | 1.0 1.0 1.0 (Max 3.00) |
| Tra 4 | Home Office Provision of space, and services, for a home office | 1.00 | 1.0 (Max 1.00) | |
| | Total Number of Transport Credits Achieved | | 8.0 (Max 8.00) | |

POLLUTION

| Issue | | % of total score | Dwelling | Location |
|-----------|--|------------------------------|-------------------------------|----------------------------|
| | | | % of total score achieved | |
| Pollution | | | | |
| Pol 1 | Insulation ODP and GWP Specifying insulating materials, that avoid the use of ozone depleting substances and have a global warming potential (GWP) of less than 5 or more (and an ODP of zero), in either manufacture or composition, for the following elements: <ul style="list-style-type: none">• Roof (incl. loft hatch)• Wall – internal and external (incl. all doors, lintels and all acoustic insulation).• Floor (incl. foundations)• Hot water cylinder (incl. pipe insulation and other thermal store | 0.91 | 0.91 (Max 0.91) | |
| Pol 2 | NO_x Emissions 95% of dwellings throughout the development must be served by heating and hot water systems with an average NO _x emission rate of less than or equal to the levels listed below. <ul style="list-style-type: none">• Less than or equal to 100 NO_x mg/kWh OR <ul style="list-style-type: none">• Less than or equal to 70 NO_x mg/kWh OR <ul style="list-style-type: none">• Less than or equal to 40 NO_x mg/kWh | 0.91 1.82 2.73 | 1.82 (Max 2.73) | |
| Pol 3 | Reduction of Surface Runoff Where rainwater holding facilities and/or sustainable drainage techniques are used to provide attenuation of water run-off to either natural watercourses and/or municipal drainage systems, by 50%* in areas of low probability of flooding, 75%* in areas of medium flood risk and 100%* in areas of high flood risk, at peak times from: <ul style="list-style-type: none">• Hard surface runoff• Roof runoff *Where a statutory body requires a greater attenuation then the higher requirement should be met in order to achieve these credits. | 0.91 0.91 | | 0 (Max 1.82) |

| | | | | |
|--------------|--|------|-------------|-------------|
| Pol 4 | Renewable and Low Emission Energy Source | | | |
| | <ul style="list-style-type: none"> Where evidence provided demonstrates that a feasibility study considering renewable and low emission energy has been carried out and the results implemented. | 0.91 | | |
| | AND <ul style="list-style-type: none"> Where evidence provided demonstrates that first the credit has been achieved and 10% of total energy demand for the development is supplied from local renewable, or low emission energy, sources* | 0.91 | | |
| | OR <ul style="list-style-type: none"> Where evidence provided demonstrates that the first credit has been achieved and 15% of total energy demand for the development is supplied from local renewable, or low emission energy, sources* | 1.82 | 0 | |
| | *In line with the recommendations of the feasibility study. | | (Max 2.73) | |
| Pol 5 | Flood Risk Mitigation | | | |
| | <ul style="list-style-type: none"> Where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding | 1.82 | | 1.82 |
| | OR <ul style="list-style-type: none"> Where evidence provided demonstrates that the assessed development is in a zone defined as having a medium annual probability of flooding and the ground level of the building, car parking and access is above the design flood level for the site's location | 0.91 | | |
| | | | | (Max 1.82) |
| | Total Number of Pollution Credits Achieved | | 4.55 | |
| | | | (Max 10.00) | |

MATERIALS

| Materials | | | | |
|--------------|---|--|--|--|
| Mat 1 | Environmental Impact of Materials The following elements obtaining an A rating from the Green Guide for Housing: <ul style="list-style-type: none"> Roof External Walls Internal Walls – party walls and internal partitions Floors Windows External surfacing Boundary protection | 1.35 1.35 1.35 1.35 0.90 0.45 0.45 | 1.35 1.35 1.35 0 0 0.45 0.45 4.95 (Max 7.23) | |
| Mat 2 | Responsible Sourcing of Materials: Basic Building Elements Where the majority of materials in the following basic building elements are responsibly sourced: <ol style="list-style-type: none"> Frame Ground Floor Upper floors (including any loft boarding) Roof (structure and cladding) External walls (including external cladding) Internal walls (including internal partitions) Foundations/substructure Staircase (including the tread, rises and stringers) | 0.90 - 2.71 | 1.82 (Max 2.71) | |
| Mat 3 | Responsible Sourcing of Materials: finishing Elements Where the majority of materials in the following secondary building and finishing elements are responsibly sourced: <ol style="list-style-type: none"> Stair (including handrails, balustrades, banisters, other guarding/rails (excluding staircase)) Window (including sub-frames, frames, boards, sills) External & internal door: (including sub-frames, linings, door) Skirting (including architrave, skirting boards & rails) Panelling (including any other trim) Furniture (including fitted kitchen, bedroom and bathroom) Fascia's (including soffit boards, bargeboards, gutter boards, others) Any other significant use | 0.90 - 1.35 | 0.9 (Max 1.35) | |

| | | | | |
|--------------|--|--------------|-----------------------------|--|
| Mat 4 | Recycling Facilities | | | |
| | Recycling of household waste | | | |
| | <ul style="list-style-type: none"> • Provision of internal storage only OR <ul style="list-style-type: none"> • Provision of external storage (or LA collection) only OR | 0.90 0.90 | | |
| | <ul style="list-style-type: none"> • Provision of internal AND external storage (or LA collection) | 2.71 | 2.71 (Max 2.71) | |
| | Total Number of Materials Credits Achieved | | 10.38 (Max 14.00) | |

WATER

| Water | | | | |
|--------------|---|--|--|--|
| Wat 1 | Internal Potable Water Use <ul style="list-style-type: none"> Less than or 52m³ per bed space per year OR <ul style="list-style-type: none"> Less than or equal to 47m³ per bed space per year OR <ul style="list-style-type: none"> Less than or equal to 42m³ per bed space per year OR <ul style="list-style-type: none"> Less than or equal to 37m³ per bed space per year OR <ul style="list-style-type: none"> Less than or equal to 32m³ per bed space per year | 1.67 3.33 5.00 6.66 8.33 | 6.66 (Max 8.33) | |
| Wat 2 | External Potable Water Use Rainwater collection system for watering gardens and landscaped areas | 1.67 | 0 (Max 1.67) | |
| | Total Number of Water Credits Achieved | | 6.66 (Max 10.00) | |

LAND USE AND ECOLOGY

| Issue | | % of total score | Dwelling | Location |
|----------------------|--|------------------------------|---------------------------|---------------------------|
| | | | % of total score achieved | |
| Land Use and Ecology | | | | |
| Eco 1 | Ecological Value of Site <ul style="list-style-type: none">Building on land which is inherently of low ecological value | 1.33 | | 1.33 (Max 1.33) |
| Eco 2 | Ecological Enhancement <ul style="list-style-type: none">Enhancing the ecological value of the site through consultation with an accredited expert | 1.33 | | 0 (Max 1.33) |
| Eco 3 | Protection of Ecological Features <ul style="list-style-type: none">Ensuring the protection of any existing ecological features on the site | 1.33 | | 1.33 (Max 1.33) |
| Eco 4 | Change of Ecological Value of Site <ul style="list-style-type: none">A change of between -9 and -3 species OR <ul style="list-style-type: none">A change of between -3 and +3 species OR <ul style="list-style-type: none">A change of between +3 and +9 species OR <ul style="list-style-type: none">A change of greater the +9 species | 1.33 2.67 4.00 5.33 | | 2.67 (Max 5.33) |
| Eco 5 | Building Footprint <ul style="list-style-type: none">Where the total combined Floor area: Footprint ratio for all houses on the site is greater that 2.5:1 AND <ul style="list-style-type: none">Where the total combined Floor area: Footprint ratio for all flats on the site is greater than 3.5:1 OR <ul style="list-style-type: none">Where the total combined Floor area: Footprint ratio for all dwellings on the site is greater than 3.5:1 | 1.33 2.67 | | 2.67 (Max 2.67) |
| | Total Number of Ecology Credits Achieved | | 8.0 (Max 12.00) | |

HEALTH AND WELLBEING

| Issue | | % of total score | Dwelling | Location |
|----------------------|---|----------------------|---------------------------|----------|
| | | | % of total score achieved | |
| Health and Wellbeing | | | | |
| Hea 1 | Daylighting Provision of adequate daylighting, according to BS 8206:pt2 in: <ul style="list-style-type: none">In the kitchenIn the living rooms, dining rooms and studiesView of all sky in all above rooms | 1.75 1.75 1.75 | 0 (Max 5.25) | |
| Hea 2 | Sound Insulation Up to 4 credits where pre-completion testing is carried out to comply or improve on performance standards in Approved Document E (2003 Edition, Building Regulations England and Wales) | 1.75-7.00 | 1.75 (Max 7.00) | |
| Hea 3 | Private Space Provision of private or semi private space | 1.75 | 0 (Max 1.75) | |
| | Total Number of Health and Wellbeing Credits Achieved | | 1.75 (Max 14.00) | |

MANAGEMENT

| Management | | | | |
|--------------|--|------------------------------|------------------------------|--|
| Man 1 | Home User Guide Where evidence can be provided to demonstrate that there is provision, in each home, of a simple guide that covers information to the 'non-technical' tenant/occupant on: <ul style="list-style-type: none"> The environmental performance of their home Information relating to the site and surroundings | 2.00 1.00 | 3.0 (Max 3.00) | |
| Man 2 | Considerate Constructors <ul style="list-style-type: none"> Demonstrate a commitment to comply with best practice site management principles OR <ul style="list-style-type: none"> Demonstrate a commitment to go significantly beyond best practice site management principles | 1.00 2.00 | | 2.00 (Max 2.00) |
| Man 3 | Construction Site Impacts <ul style="list-style-type: none"> Evidence that demonstrates a commitment and a strategy to monitor, sort and recycle construction waste on site AND <ul style="list-style-type: none"> Evidence that demonstrates that 2 or more of a-f listed below are achieved OR <ul style="list-style-type: none"> Evidence that demonstrates that 4 or more of a-f are achieved. <ol style="list-style-type: none"> Monitor and report CO₂ or energy arising from site activities Monitor and report on CO₂ energy arising from transport to and from site Monitor waste consumption from site activities Adopt best practice policies in respect of air (dust) pollution arising from the site Adopt best practice in respect of water (ground and surface) pollution occurring on the site 80% of site timber is reclaimed, reused or responsibly sourced | 1.00 1.00 2.00 | | 1.00 1.00 (Max 3.00) |

| | | | | |
|--------------|---|------|--|-----------------------------|
| Man 4 | Security | | | |
| | <ul style="list-style-type: none"> Commitment to work with an Architectural Liaison Officer and achieve Secured by Design award Security standards for external doors and windows, to achieve a minimum of either: <ul style="list-style-type: none"> - LPS1175SR1 (All doors and windows OR - PAS24-1 (All external pedestrian door-sets falling within scope of PAS24-1) AND BS7950 (All windows falling into the scope of BS7950) | 1.00 | | 2.0 |
| | | | | |
| | Total Number of Management Credits Achieved | | | 9.0 (Max 10.00) |
| | Total in all Sections | | | 62.1 (Max 100.00) |