RISETALL LTD

London

10a Belmont Street

Camden, London

ENERGY & SUSTAINABILITY ASSESSMENT

SUBMISSION

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This report has been prepared by Richard Hodkinson Consultancy (RHC) using all reasonable skill, care and diligence and using evidence supplied by the design team, client and where relevant, through desktop research.

RHC can accept no responsibility for misinformation or inaccurate information supplied by any third party as part of this assessment.

All information within this document has been assumed correct at the time of issue.

Energy and Sustainability Assessment

Energy and Sustainability Assessment in support of the Planning Application for the proposed development at 10a Belmont Street, Camden.

This report has been undertaken by Michael Sturdy & Samantha Lye of Richard Hodkinson Consultancy.

Schedule of Issue

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Table of Contents

1. INTRODUCTION 1
2. RE-USE LAND & BUILDINGS 2
3. CONSERVE ENERGY, MATERIALS, WATER & OTHER NATURAL RESOURCES 2
4. MAXIMISE USE OF NATURAL SYSTEMS BOTH WITHIN & AROUND THE BUILDING 6
5. MITIGATE & ADAPT TO THE EFFECTS OF CLIMATE CHANGE 7
6. REDUCE NOISE, POLLUTION, FLOODING & MICROCLIMATE EFFECTS 9
7. ENSURE DEVELOPMENT ARE COMFORTABLE & SECURE FOR USERS 10
8. CONSERVE & ENHANCE THE NATURAL ENVIRONMENT & BIODIVERSITY 11
9. PROMOTE SUSTAINABLE WASTE BEHAVIOUR 12
10. SUSTAINABLE CONSTRUCTION 14
11. CONCLUSION 15

Appendices

1) Code for Sustainable Homes Pre-Assessment to Code Level 3
2) Internal Water Calculation for the residential apartments
3) Response Camden Borough Council following comments

1. INTRODUCTION

1.1. This Sustainability Assessment has been carried out by Richard Hodkinson Consultancy, a sustainability, innovation and energy specialist, and analyses the sustainability attributes relating to the redevelopment of the site at 10a Belmont Street, Camden. The work has been commissioned by Risetall Ltd.

Proposals

1.2. 3 new residential apartments are to be built on the upper 3 floors. 2 of these flats are built within a new fabric on the fifth floor and the remaining 1 will be within 2 new upper floors.

1.3. Below is a list of the key sustainability findings of the proposals which ensure a sustainable development is created:

- Code Level 3 achieved for the 3 new residential apartments
- Green roof to be provided to the roof area
- Lifetime Homes and Secure by Design to be achieved
- Creation of a more energy efficient building for the users to benefit from
- Sustainable measures included through construction and occupation, including waste, energy and water.

Methodology

1.4. The structure of the report is based on the principles of the supplementary planning guidance – Sustainable Design & Construction, and addresses a very broad range of sustainability issues relating to the site. The document aims to address the sustainability issues raised within the following relevant planning documents:

- The London Plan; Spatial Development Strategy for Greater London, July 2011
- Camden Core Strategy, 2010
- Camden Development Policies, 2010
- Camden Planning Guidance - Sustainability, December 2006
- Relevant national Planning Policy Statements (and Guidance)

1.5. The Assessment uses the following documents as appendices, following the requirements of the relevant planning documents:

- Code for Sustainable Homes Pre-Assessment showing a route to achieve Code Level 3 for all the residential apartments.
- Internal water use calculator showing how 105 litres per person per day can be achieved.

1.6. A BREEAM assessment has not been carried out on the existing part of the development as there are no alterations proposed for the existing office space. The combined additional new floor space for commercial use is under the threshold of the Camden requirements of 500sqm to carry out a BREEAM assessment.

2. RE-USE LAND & BUILDINGS

Brownfield

2.1. 10a Belmont Street was a brownfield site, occupied by Chapel piano factory occupied recently as a B1 office. This building was granted planning permission for a mixed use B1 extension to the rear of the building plus 2 upper floor extensions for 8 residential units. This proposed planning application seeks to add an additional top floor and to change the consented 8 residential units to 3 luxury residential units. This form of development gives an efficient use of the land as well as a range of uses to give flexibility to the occupiers and the local community. The development of brownfield sites is in accordance with national planning policy.

3. CONSERVE ENERGY, MATERIALS, WATER & OTHER NATURAL RESOURCES

3.1. This section offers compliance with Camden's Core Strategy Policy CS13 – Tackling Climate Change through Promoting Higher Environmental Standards, and Policy DP22 of the Camden Development Policies.

3.2. The efficient use of resources is an extremely important part of any development. Modern day developments of any form should aim to achieve the following points:

- **Conservation** - the use of resources should be reduced through the re-use, recycling and appropriate materials management streams and energy and water efficient measures
- **Responsible -** materials to be responsible sourced from sustainable sources
- **Renewable –** developments should, where possible, supply an element of its energy requirements through renewable sources
- **Education –** information on how to reduce the use of resources should be provided to ensure good practices principles are adhered to. Data collected in the past shows that this has the greatest effect on conserving the use of resources.

Energy

3.3. It is proposed that all dwellings will achieve the mandatory energy requirements of Code for Sustainable Homes Level 3. This requires that Building Regulations Part L (2010) is achieved.

3.4. It is always preferable in a sustainable energy strategy to prioritise the reduction in energy demand over the generation of low carbon / renewable energy. It is therefore proposed to meet the required energy standards through the specification of energy efficiency measures alone.

3.5. Sample SAP calculations have been undertaken on representative dwellings. These show that the following energy measures are likely to achieve the required standard.

3.6. It is proposed to include the following measures in the design and construction of the development: -

- Enhanced insulation measures:
  - External Wall U-Value: 0.2
  - Fully insulated and sealed Party Walls achieving an effective U-Value of 0.0.
  - Roof U-Value: 0.1
  - Glazing U-Value: 1.0
- Accredited construction details for thermal bridging.

- A high efficiency gas boiler (SEDBUK 'A' rated). Where hot water cylinders are used these will have a low heat loss.
- Heating controls will maximise energy efficiency in operation. Time and temperature zone control and load/weather compensation will be used.
- 100% energy efficient lights
- Low energy and high efficiency mechanical ventilation and heat recovery system
- Air permeability below $5m^3/hm^2$

3.7. The sample SAP calculations show that the above measures should enable the mandatory requirements of Code Level 3 to be achieved. This can be seen in Table 1, below.

Table 1: Achieving Energy Requirements of Code Level 3

Unit Type	2010 Target Emission Rate (TER)	2010 Dwelling Emission Rate (DER)	Reduction Achieved
Small	15.83	15.81	**0.13%**
Large	14.30	13.84	**3.22%**

3.8. Energy display devices should be specified to the apartments for the monitoring and displaying of energy consumption. This will provide the residents of the apartments with visual information of their energy consumption with an aim the consumption will be reduced through taking an interest.

Water

3.9. Internal water consumption will be significantly reduced through the use of practical and hygienic water saving measures. An evaluation of the device to be used will be undertaken based on technical performance, cost and appeal. In the main, the following will be included throughout[1]:

- Water efficient tap and showers (less than 9L/min) and low dual flush WCs (6/4L or below)

[1] This will include the each apartment and the washroom facilities associated with the office use.

- Flow restrictors to manage water pressure
- Water efficient white goods where installed

3.10. The above measures will reduce the internal water consumption to be no more than 105L/person/day[2] for the residential apartments. This is highlighted in Appendix 2 of the report.

3.11. In addition, at least 50% of the credits in the water section of the Code for Sustainable Homes assessment will be achieved.

Environmental impact of material

3.12. New materials used in the development will be carefully sourced by the design team to ensure that, where possible, environmentally friendly and low embodied energy materials are used. A+/A rated materials and element construction will be sourced to enable the development to be as environmental friendly as possible. These materials should be specified through the use of the Green Guide to Specification published by BRE[3].

3.13. The measures have also been outlined by the Applicant for the re-use and recycling of construction waste derived from the development process in future developments through a Site Waste Management Plan and meeting national requirements for the diversion of waste from landfill.

3.14. Preference will be given to the use of local materials and suppliers where viable. This will be considered as part of the detailed design and construction process.

3.15. Timber used on the site will be sourced from sustainable sources where practical. This also includes timber used in the development phases, such as hoarding and site fencing.

[2] This is the prevailing standard within the Code for Sustainable Homes, which is the environmental assessment method for new build dwellings.
[3] This is now available as an online tool at http://www.thegreenguide.org.uk/

3.16. Insulation materials will have a Global Warming Potential (GWP) of less than 5, and a zero Ozone Depleting Potential (ODP) where practical. This will ensure that the manufacture of these materials will have limited environmental damage.

3.17. At least 50% of the credits have been secured under the Materials section the Code for Sustainable Homes Pre-Assessment, in accordance with the target within the Camden Planning Guidance.

4. MAXIMISE USE OF NATURAL SYSTEMS BOTH WITHIN & AROUND THE BUILDING

4.1. The design approach follows best practice design principles as set out in national and local planning guidance.

Natural Systems

4.2. The new development will utilise natural ventilation systems[4] to ensure the free movement of clean air. No means for cooling will be included by the developer.

4.3. Together with natural ventilation, high levels of insulation will be included throughout the aspects of the development to ensure heat is not absorbed through the fabric of the building resulting in temperatures remaining relatively constant throughout the year, and avoid overheating in the summer months. This will significantly reduce the energy demand of the building.

4.4. The developer has also specified the use of living / green roofs in the design of the development, covering suitable roof areas. These roofing systems can address many issues with regards to sustainability, and play a considerable role in delivering a sustainable development. Their inclusion acts as a form of additional insulation to ensure heat loss is minimised through the roof in winter months, but also gives a cooling effect in summer. Further benefits will be addressed in the relative sections throughout this report. The

[4] As promoted through the Camden Planning Guidance 2006 document; 44. Sustainable Design & Construction, para 44.13

inclusion of green roofs is promoted by Camden Borough Council for increasing the biodiversity of a development, as set out in Policy DP22 of the Development Policies.

4.5. The above measures also address the issue of overheating – Policy 5.9 of the London Plan – in addition to the surface area of the development being kept to a minimum where possible.

Cycle Storage

4.6. In accordance with Policy DP26 of the Camden Development Policies, a cycle store is to be provided within the building for the residents of the 3 residential units. This should provide adequate space to achieve 2 credits under the Code for Sustainable Homes assessment. This requires 1 space for every 1 bed apartment, 2 spaces for every 2 and 3 bed apartments & 4 spaces for 4+ bed apartments. This therefore requires a total of 12 spaces. The store will provide secure and safe storage for the residents.

4.7. This will be coupled with a car parking free development which will promote the use of sustainable modes of transport.

5. MITIGATE & ADAPT TO THE EFFECTS OF CLIMATE CHANGE

5.1. The ability of the proposed development to adapt to climate change is considered in the following list overleaf and is in accordance with Policy CS13 of the Core Strategy and DP222 of the Camden Development Policies. These are the measures that have been incorporated in the design of the proposed development at 10a Belmont Street and will enable the development to respond to envisaged changes in climate over the next 100 years.

Flood Risk & Drainage

5.2. Environment Agency Flood Map denotes the site and surrounding area to be in a low flood risk zone, meaning the probability of flooding is 0.1% (1 in 1,000 years). This means that development of this type, in this location is suitable and no mitigation measures are required outside of the regulatory framework.

5.3. The Applicant has included the use of green roofs which will significantly reduce the surface water run-off from the development[5] and creates of a Sustainable Urban Drainage System. Its presence will minimise the strain on the traditional drainage network thus consequently reducing the risk of flooding in the local area and further afield.

Site layout & landscape

5.4. The Applicant has made specific regard to maximising the use of natural light within the new development to enhance the quality and liveability of the residents and existing office accommodation. This will be achieved through the use of large windows to the building adding benefit to the accommodation. The new residential apartments will also benefit from high levels off natural daylight.

5.5. The low U-value windows will provide good insulation from the cold, yet will allow a level of passive solar gain to reduce the energy use and thus carbon emissions.

5.6. The use of green roofs will be incorporated providing a natural landscape for biodiversity.

Building structure, ventilation and cooling

5.7. Natural ventilation has been heavily promoted throughout the design stage to reduce the need for cooling in the summer months, and promote the free flow of air throughout the accommodation.

5.8. The designed storey heights will allow improved air flow and cooling throughout the building.

5.9. Materials used in the construction of the development will illustrate a low embodied energy[6] and low environmental impact where possible, as denoted by the Green Guide[7]. In

[5] A green roof is estimated to attenuate at least 60% of the rainfall for that area
[6] Measure of total energy used in its construction
[7] www.thegreenguide.org.uk

addition the choice of materials will perform effectively throughout the lifetime of the development.

Energy & Water efficiency

5.10. Energy and water usage will be minimised through low water consumption of products, materials & building methods. Both these elements have been discussed in greater depth in Section 3 of this report – 'Conserve energy, materials, water and other resources'.

5.11. Recycling facilities will be incorporated within each apartment which will allow for the recycling up to 3 different recyclables. These bins will be provided in addition to the standard waste bin.

6. REDUCE NOISE, POLLUTION, FLOODING & MICROCLIMATE EFFECTS

6.1. Addressing microclimate effects that may be attributed to a development can play a significant part in ensuring it operates as intended, and can promote a healthy and liveable environment. This is particularly prominent in an urban setting.

6.2. The heat island effect has been addressed in the proposals in one of the most effective means possible through the use of a Green (Living) Roof. This will greatly assist in a no increase in net temperature in the surrounding area.

6.3. Green roofs also play a key role in the site water attenuation strategy, which will greatly reduce the risk of local flooding[8].

6.4. It is not expected, given the height, scale, and shape of the development that any wind tunnelling effect will be associated with it.

6.5. Insulation improvements will be made above both the Part L and Part E requirements. This will ensure that the transfer of noise will be improved considerably over the Building Regulations requirements.

[8] The site is not within an area at risk of flooding as denoted by the Environment Agency Flood Map

7. ENSURE DEVELOPMENT ARE COMFORTABLE & SECURE FOR USERS

7.1. The proposed development incorporates a number of key measures to ensure the comfort of the user and accessibility to all areas is enhanced for everyone, with a design which has been influenced by the need for a secure, high quality environment. These measures ensure the development complies with the guidelines within the London Plan, Code for Sustainable Homes Assessment and Camden Borough Council planning policies.

Comfortable

7.2. In achieving these guidelines, particular attention has been focused on achieving high standards in respects to the following:

- Daylighting standards
- All communal areas to be accessible for wheelchair users
- Lifetime Homes will be sought for all apartments
- Provisions for a high quality data infrastructure to enable the residents to work at home
- Communal and private roof terraces are provide to a majority of the units
- Secure by Design standard to be sought through careful design. Consultation with the Architectural Liaison Officer has occurred and the advice incorporated into the design
- Sound insulation measures to be included to limit the transfer of noise from room to room

7.3. In addition, a high quality internal environment is to be created within the units with the provision of services to enable the residents to work effectively at home. These services will include:

- Multiple power outlets
- Data points for the connection to the internet
- Telephone line
- Large windows to enhance the use of natural daylight
- Effective overhead lighting when required

- Suitable ventilation through natural means

Inclusive

7.4. It is very important that in a development such as this that an inclusive development is created to ensure no-one from society's cross section is excluded. The scheme will also comply with the requirements of Approved Document Part M. This will ensure the highest standards of accessibility are achieved throughout the development and within individual buildings. Main entrances are already conveniently located for pedestrians, with levelled access via a stepped ramp.

7.5. Lifetime Homes will be designed in for all 3 residential apartments, in accordance with the revised standards, and the Code for Sustainable Homes assessment.

Secure

7.6. The design of the scheme has been influenced by an Architectural Liaison Officer in order for the Secure by Design award to be achieved. This will ensure the new scheme provides a safe environment for the residents to enjoy and helps to design-out-crime.

8. CONSERVE & ENHANCE THE NATURAL ENVIRONMENT & BIODIVERSITY

Existing

8.1. The site is currently brown field including light industrial use, and associated hard landscaping to the rear. There is no area of green landscaping within the existing site, and thus baron of any biodiversity supply.

Proposed

8.2. In addition, there is the use of green roofs giving a significant increase in biodiversity and habitat opportunities to the area around the development

8.3. Provisions for both bat and bird boxes, where deemed necessary and appropriate, will be provided, as outlined by the Camden Planning Guidance – Biodiversity.

8.4. With these measures, it can be concluded that a considerable increase in ecological value will be achieved on the site as a result of the proposed scheme.

9. PROMOTE SUSTAINABLE WASTE BEHAVIOUR

9.1. Waste reduction, both in construction and occupation, is a key principle of sustainability, as there are a host of benefits not only to the environment, but also the occupier and the developer. Throughout the design process, Risetall Ltd have illustrated their intent to reduce waste going to landfill and have promoted key waste saving measures.

Construction Waste

9.2. Construction waste is a key element to be considered in achieving a reduction in all waste – it is estimated that some 40% of all waste in the stream is construction related. It has also been shown on a number of construction sites that as soon as the issue of waste starts to be addressed, significantly improvements follow quickly.

9.3. Measure that will be implemented at Belmont Street include:

- Selection of materials and design styles that minimise waste
- Engagement of the supply chain and site team in waste and packaging issues
- Site training and information on waste issues
- Reducing waste at source, re-using or recycling material wherever practical
- Segregation of waste steams on site
- Waste monitoring and report performance against local or national benchmarks
- Site security measures to prevent loss through vandalism or theft

9.4. A number of these measures will be achieved by the site meeting best practice management principles under the Considerate Constructors Scheme.

Appropriate Construction methods and management

9.5. Construction operations generate waste materials as a result of general handling losses and surpluses. These wastes can be reduced through appropriate selection of the construction method, good site management practices and spotting opportunities to avoid creating unnecessary waste. A Construction Strategy will be developed by Risetall Ltd, once planning consent has been secured which will explore these issues, some of which are listed below:

- Proper handling and storage of all materials to avoid damage
- Efficient purchasing arrangements to minimise over ordering
- Segregation of construction waste to maximise potential for reuse/recycling
- Use of suppliers who collect and reuse/recycle packaging materials.

Occupational Waste

9.6. The Applicants are committed to achieving a high level of increase in the amount of waste being recycled to assist in delivering the government targets for recycling and landfill waste reduction, and meet Policy CS18 of the Camden Core Strategy. These measures include the following:

- Space will be provided for segregated recycling waste bins within the kitchen areas of the apartments. This will involve the supply of a recycling bin, in addition to a non-recyclable bin, which waste can be segregated into the paper, cans, plastics and glass.
- Refuse storage is also to be provided where both recyclables and waste can be stored.

9.7. Similarly to energy efficiency, much of the task in reducing waste is associated with educating users as well as providing facilities which make the process practical. Information on the subject should be provided to the residents, through the provision of a Home User Guide.

10. SUSTAINABLE CONSTRUCTION

10.1. Construction site impacts are to be address in a proactive approach by the applicant to ensure they are minimised to significantly reduce the effect on the surrounding area. The following measures within this section are to be put in place to ensure this is achieved.

10.2. The scheme will be registered under the Considerate Constructors Scheme, where best practice principles are to be met. This will ensure the construction site is managed in an environmentally and socially considerate and accountable manner. The following fields are included within the scheme, and thus must be addressed:

- Considerate
- Environmentally Aware
- Clean
- A good neighbour
- Respectful
- Safe
- Responsible
- Accountable

10.3. During the construction processes, control procedures will be put in place to minimise noise and dust pollution whilst emissions will be monitored. Roads will be kept clean. The management systems will generally comprise procedures and working methods that are approved by the development team together with commercial arrangements to ensure compliance. Reducing the impact on the existing development will be the primary aim of the development process.

10.4. As mentioned previously, construction waste is also to be monitored, sorted and recycled where possible to significantly reduce the amount of waste going into landfill leading to increased transport movements to and from the site[9].

[9] Where not enough space is available for this to occur on site, the recyclable waste will be taken off site to be used in further development projects in the nearby vicinity.

10.5. Specific action will be taken to minimise and control any nuisance from construction traffic to surrounding neighbourhoods.

10.6. Site hoarding, and temporary timber used during construction is to be sourced where possible from sustainable sources.

11. CONCLUSION

11.1. Having reviewed the proposals for the development at 10a Belmont Street, Camden, it is the opinion of this Energy and Sustainability Assessment that the development will incorporate a range of sustainability measures within an innovative design, bringing regeneration and vibrancy to the area, and providing a high quality environment for residents and business to thrive.

11.2. The development has reached a number of above best practice principles in terms of sustainability. These are highlighted below:

- Significant energy saving measures to be included in the new aspect of the development, with all new elements meeting the requirements of the 2010 Building Regulations. This will have the overall benefit of ensuring the new development is energy efficient than the existing form
- Code Level 3 will be met for the 3 residential apartments, and 50% of the credits in the Energy, Water and Materials section will be achieved, in accordance with Camden Borough Council's requirements
- Incorporation of a green roof giving a platform for the site to enhance ecology, provide biodiversity, enable a sustainable drainage technique, increase insulation in the roof and reducing a possible link with the site and the heat island effect
- Provision of further high quality employments space (B1) and significant improvement to the existing through the provision of modern benefits to the period building

- High levels of natural daylight throughout reducing the need for artificial lighting, increasing energy demand
- Cycle storage provision to promote a sustainable mode of transport and one which promotes exercise
- Lifetime Homes will be achieved for all residential apartments
- Secure by Design and Considerate Constructors to be achieved

11.3. Together with these, many more issues have been addressed and a sustainable strategy has been implemented. This has resulted in the scheme satisfying planning policy requirements, and delivers the Camden's sustainability agenda.

Appendices

1) Code for Sustainable Homes Pre-Assessment to Code Level 3

2) Internal Water Calculation for the residential apartments

Code for Sustainable Homes Pre-Assessment (November 2010) - 10a Belmont Street

Total Predicted Score	61.15
36 Points	Level 1
48 Points	Level 2
57 Points	Level 3
68 Points	Level 4
84 Points	Level 5
90 Points	Level 6

	Issue	Issues Criteria	Credits Available	Credits Predicted	Design Assumptions Made
Energy & Carbon Dioxide Emissions	**ENE 1** Dwelling Emission Rate	Credits are awarded based on the percentage improvement of the Dwelling Emission Rate (DER) over the Target Emission Rate (TER) as calculated using SAP 2005. Minimum Standards for each Code Level applies.	10	0	Meeting CL3 requires to meet 2010 Part L of the Building Regulations, which is a 25%impr on 2006 Part L Building Regs. This must be demonstrated through the use of SAPs at the detailed design stage. This will be met through high levels of fabric improvements, high levels of air tightness, provision of renewable energy technologies (if required to meet the Mandatory standards)
	ENE 2 Fabric Energy Efficiency	Credits are awarded for an improved fabric energy efficiency performance, thus future proofing reductions in CO2 emissions from dwellings over their whole life.	9	6	A FEE of less than 41 kWh/m2/year should be sought through high levels of air tightness and fabric improvements.
	ENE 3 Energy Display Devices	Credits are awarded where accessible equipment is provided, displaying energy consumption data, and thereby encouraging occupants to reduce energy use.	2	2	Energy display devices for the monitoring of electricity (and primary heating fuel) to be specified to all apartments.
	ENE 4 Drying Space	A credit are awarded for the provision of either internal or external secure drying space	1	1	A fixed means for drying clothes naturally inside will be provided - a retractable line over the bath of a line length of at least 4m.
	ENE 5 Energy Labelled White Goods	Credits are awarded where each dwelling is provided with either information regarding the EU Energy Labelling Scheme, White Goods with ratings ranging from A+ to B, or a combination of the previous according to the technical guidance.	2	2	Energy efficient white good to be provided to all units. This includes the provision of A+ rated fridge freezers, A rated washing machines and dishwashers and B rated tumble dryers or washer dryers.
	ENE 6 External Lighting	Credits awarded based on the provisions of space lighting with dedicated energy efficient fittings and security lighting fittings with appropriate control gear OR provision of dual lamp luminaries with both space and security lamps compliant with the above energy efficiency requirements.	2	2	All communal lighting should be specified to meet the CSH requirements of low energy, greater than 40 lumens per circuit watt, correct controls (PIR and/or daylight sensors). Security lighting should have a maximum wattage of 150W and be fitted with PIR and daylight sensors - if fitted.
	ENE 7 Renewable Technologies	Credits are awarded where either there is 10% or 15% reduction in total carbon emissions that result from using low or zero carbon technologies.	2	0	It is not thought that at this stage the use of renewable energy technologies will be included to achieve credits here.
	ENE 8 Cycle Storage	Credits are awarded where adequate, safe, secure and weather proof cycle storage is provided according to the Code requirements.	2	2	Secure and adequate cycle storage should be provided to all apartments. This should include space for 13 cycles in all with adequate space provisions and security.
	ENE 9 Home Office	A credit is awarded for the provision of space for a home office. The location, space and services provided must meet the Code requirements	1	1	2 double power points and 2 telephone points should be provided to a room where a home office can be set up. These provision should be located on a wall of at least 1.8m and have an openable window.
	Total Energy & CO2 Category Predicted Score		31	16	**Credit Weighting - 1.17**
Water	**WAT 1** Indoor Water Use	Credits are awarded based on the predicted average household water consumption, calculated using the Code Water Calculator Tool. Minimum Standards Apply.	5	3	Low flow water appliances (taps, showers, WC's) to be included throughout to ensure the 105 litres per person per day are met. This may require the use of rainwater harvesting to ensure higher flow rates can be used
	WAT 2 External Water Use	A credit is awarded where a compliant system is specified for collecting rainwater for external irrigation purposes. Where no outdoor space is provided the credit can be achieved by default.	1	1	No external planted areas are provided to the apartments so the credit is awarded by default.
	Total Water Category Predicted Score		6	4	**Credit Weighting - 1.5**
Materials	**MAT 1** Environmental Impact of Materials	At least 3 of the 5 key building elements must achieve a Green Guide (2008) Rating of A+ to D. Points are awarded on a scale based on the Green Guide Rating Specifications.	15	10	Materials will be chosen for the new elements which represent a low embodied energy and thus will achieve high credit levels under this section.
	MAT 2 Responsible Sourcing of Materials - Basic Building Elements	Credits are awarded where 80% of the materials used in the basic building elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score.	6	2	Where possible materials will be sought from responsibly sourced suppliers, which represent an ISO14001/EMAS. This will be assessed in greater detail at the detailed design stage when the supply chain for materials has been
	MAT3 Responsible Sourcing of Materials - Finishing Elements	Credits are awarded where 80% of the materials used in the finishing elements are responsibly sourced. The Code Materials Calculator can be used to predict a potential score.	3	1	Where possible materials will be sought from responsibly sourced suppliers, which represent an ISO14001/EMAS. This will be assessed in greater detail at the detailed design stage when the supply chain for materials has been
	Total Materials Category Predicted Score		24	13	**Credit Weighting - 0.3**
Surface Water Run-off	**SUR 1** Management of surface water run-off from developments	Drainage and surface water run-off for the site to be in accordance with Code requirements	2	0	The mandatory element of this credit will be met through the ensuring that no additional run off from the site is produced as a result of the new development
	SUR 2 Flood Risk	Credits are awarded where developments are located in areas of low flood risk or where, in areas of medium or high flood risk, appropriate measures are taken to prevent damage to the property & its contents in accordance with the Code Criteria in the Technical Guide.	2	2	Site is in a low probability of flooding area as denoted by the Environment Agency Flood Map
	Total Surface Water Run-off Category Predicted Score		4	2	**Credit Weighting - 0.55**

	Issue	Issues Criteria	Credits Available	Credits Predicted	Design Assumptions Made
Waste	**WAS 1** Storage of non-recyclable waste & recyclable household waste	The space provided for waste storage should be sized to hold the larger of either all external containers provided by the Local Authority or the minimum capacity calculated from BS 5906 AND all waste and recycling storage is wheelchair accessible in accordance with the CSH WAS 1 Accessibility Checklist. Internal provisions should also be included	4	4	Waste and recycling capacity in the communal waste store to be sized to meet the Camden waste requirements (or the BS5906 -which ever is larger). Internal provisions for the storage of recyclable material must also provided, with an overall capacity of at least 30L in a dedicated position. Extensive new Checksheet required to be completed to show wheelchair accessibility for WAS1, WAS 3 and HEA3 - Checklist IDP - Inclusive Design Principles necessary to provide access and usability to amenities. This has been drawn from LTH, BS8300, BS5709, BS1703, Part M and Part H.
	WAS 2 Construction Site Waste Management	A SWMP including the monitoring of waste generated on site and the setting of targets to promote resource efficiency must be produced and implemented. The SWMP should also include procedures and commitments for minimising waste and/or commitments to sort, reuse and recycle construction waste.	3	2	SWMP to be drawn up for the development by the contractor to set procedures for the minimising, reporting, measuring and reporting of both non hazardous and hazardous waste according to defined waste groups. Benchmarks for resource efficiency should also be provided. In addition, as least 50% of waste from the site should be diverted from Landfill.
	WAS 3 Composting	A credit is awarded where individual home composting facilities are provided, or where a community/communal composting service, either run by the Local Authority or overseen by a management plan is in operation.	1	0	It is not thought that this will be achieved for the apartments
	Total Waste Category Predicted Score		8	6	**Credit Weighting - 0.8**
Pollution	**POL 1** Global Warming Potential (GWP) of Insulants	A credit is awarded where all insulating Materials only use substances (in manufacture & installation) that have a GWP of less than 5.	1	1	All insulation used in the development to have a GWP of less than 5.
	POL 2 NOx Emissions	Credits are awarded on the basis of NOx emissions arising from the operation of the space and water heating system within the dwelling,	3	3	High efficiency combination boilers to be specified which will have a NOx emission rate of less than 40mg/kWh
	Total Pollution Category Predicted Score		4	4	**Credit Weighting - 0.7**
Health & Wellbeing	**HEA 1** Daylighting	Credits are awarded for ensuring key rooms in the dwelling have high daylighting factors (DF) and have a view of the sky	3	2	2 credits should be sought with all kitchens passing the required 2% daylighting factor, and all living, dining and home office rooms achieving a daylighting factor of at least 1.5, with a view of the sky being achieved for all applicable areas
	HEA 2 Sound Insulation	Credits are awarded where performance standards exceed those required in Building Regulations Part E. This can be demonstrated by carrying out pre-completion testing or through the use of Robust Details Limited (RSL).	4	1	a 3dB improvement over the Part E requirements should be achieved for the separating floors and walls.
	HEA 3 Private Space	A credit is awarded for the provision of an outdoor space that is at least partially private. The space must allow easy access to all designated occupants, inc. wheelchair access (BS8300) and sized accordingly (private - 1.5m2/bedroom; semi-private/communal - 1m2/bedroom).	1	1	Some units are provided with a communal terrace or a private balcony so the credit is awarded. The IDP Checklist will also be complied with. The units which are not provided with any outdoor space will not achieve this credit.
	HEA 4 Lifetime Homes	All 16 criteria of Lifetime Homes to be awarded.	4	4	All units to achieve the 16 requirements of Lifetime Homes
	Total Health & Wellbeing Category Predicted Score		12	8	**Credit Weighting - 1.16**
Management	**MAN 1** Home User Guide (HUG)	Credits are awarded where a simple guide is provided to each dwelling covering information relevant to the 'non-technical' home occupier, in accordance with the Code requirements.	3	3	A full Home User Guide to be provided to the homeowners at handover, covering locational and operational issues.
	MAN 2 Considerate Constructors Scheme	Credits are awarded where there is a commitments to comply with best practice site management principles using either the Considerate Constructors Scheme or an alternative locally/nationally recognised scheme.	2	1	A CCS score of at least 24 should be sought with no area scoring less than 3
	MAN 3 Construction Site Impacts	Credits are awarded where there is a commitment and a strategy to operate site management procedures on site.	2	1	Means for reducing construction site impacts through the reduction of air and water pollution.
	MAN 4 Security	Credits are awarded for complying with Section 2 - Physical Security from Secure by Design - New Homes. An Architectural Liaison Officer (ALO), or alternative needs to be appointed early in the design process and their recommendations incorporated.	2	2	Section 2 of Secure By Design to be achieved on the site, with the recommendations of the ALO/CPDA being incorporated in the design.
	Total Management Category Predicted Score		9	7	**Credit Weighting - 1.11**
Ecology	**ECO 1** Ecological Value of Site	A Credit is awarded for developing land of inherently low value.	1	1	Site is assumed as having no ecological value. This should be deemed by a Suitably Qualified Ecologist following a site survey
	ECO 2 Ecological Enhancement	A credit is awarded where there is a commitment to enhance the ecological value of the development.	1	1	Enhancements to be made to increase the ecological value of the site through means of planting of native species
	ECO 3 Protection of Ecological Features	A credit is awarded where there is a commitment to maintain and adequately protect features of ecological value.	1	1	It is not thought that any ecological valuable features will be removed during construction. This must be deemed by a Suitably Qualified Ecologist.
	ECO 4 Change of Ecological Value of Site	Credits are awarded where the change in ecological value has been calculated in accordance with the Code requirements.	4	2	A negligible change in ecological value to be sought; -3 to +3, following a regime of enhancement. This again should be deemed by a Suitably Qualified Ecologist
	ECO 5 Building Footprint	Credits are awarded where the floor area to footprint ratio is greater than the traditional storeys.	2	0	This credit will not be sought.
	Total Ecology Category Predicted Score		9	5	**Credit Weighting - 1.33**

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Job no:	**10a Belmont Street**
Date:	**18.09.2011**
Assessor name:	
Registration no:	
Development name:	**10a Belmont Street, Planning Application**

WATER EFFICIENCY CALCULATOR FOR NEW DWELLINGS - (BASIC CALCULATOR)

		Type 1		Type 2		Type 3		Type 4		Type 5	
	Description:	All Units									
Installation Type	**Unit of measure**	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day	Capacity/ flow rate	Litres/ person/ day
Is a dual or single flush WC specified?		Dual		Select option:		Select option:		Select option:		Select option:	
WC	Full flush volume	6	8.76		0.00		0.00		0.00		0.00
	Part flush volume	4	11.84		0.00		0.00		0.00		0.00
Taps (excluding kitchen and external taps)	Flow rate (litres / minute)	3	6.32		0.00		0.00		0.00		0.00
Are both a Bath & Shower Present?		Bath & Shower		Select option:		Select option:		Select option:		Select option:	
Bath	Capacity to overflow	180	19.80		0.00		0.00		0.00		0.00
Shower	Flow rate (litres / minute)	8	34.96		0.00		0.00		0.00		0.00
Kitchen sink taps	Flow rate (litres / minute)	3	11.68		0.00		0.00		0.00		0.00
Has a washing machine been specified?		No		Select option:		Select option:		Select option:		Select option:	
Washing Machine	Litres / kg		17.16		0.00		0.00		0.00		0.00
Has a dishwasher been specified?		No		Select option:		Select option:		Select option:		Select option:	
Dishwasher	Litres / place setting		4.50		0.00		0.00		0.00		0.00
Has a waste disposal unit been specified?		No	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00	Select option:	0.00
Water Softener	Litres / person / day		0.00		0.00		0.00		0.00		0.00
	Calculated Use		115.0		0.0		0.0		0.0		0.0
	Normalisation factor		0.91		0.91		0.91		0.91		0.91
Code for Sustainable Homes	**Total Consumption**		**104.7**		**0.0**		**0.0**		**0.0**		**0.0**
	Mandatory level		**Level 3/4**		-		-		-		-
Building Regulations 17.K	External use		5.0		5.0		5.0		5.0		5.0
	Total Consumption		**109.7**		**0.0**		**0.0**		**0.0**		**0.0**
	17.K Compliance?		**Yes**		-		-		-		-