

Proposed Development at 150 Southampton Row London

Appendix 1- Stated Goal: Achieve a Level 4 “Very Good”

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The goal is to plan and analysis the proposed design elements of the new facility (dwelling units and building) which are designed to reduce the overall energy consumption and therefore the CO₂ emissions from proposed development either directly at the location or indirectly by way of reduced consumption:

The Principles and Standards used to evaluate the proposal are:

Cat #1A Reduced Emissions (per Building Regulations)

Goal: *to limit emissions of CO₂ to the atmosphere arising from the operation of a dwelling (or building) and its (required) services*

Solution/Score: The improvement required is a minimum improvement in energy efficiency of 40% over the base line of ‘just compliant’ standard. Based on the equipment selection and calculations, the mandatory 25% improvement over the minimum standard for the building and dwelling units is easily exceeded thus providing a credit score of 10 of a total 15 in accordance with a Level Very Good goal.

Cat #1B Building Fabric

Goal: *to future proof the efficiency of dwellings over their whole life by limiting heat losses (retained thermal) across the building envelope.*

Solution/Score : The proposed renovation of the internal structure will re-instate the building completely as such the internal thermal building envelop will reflect a heat loss profile of less than 1.1 thus a credit score of 2 of a total of 2 in accordance with a Level Very Good goal.

Cat #1C Internal Lighting

Goal *to encourage the provision of energy efficient internal lighting, thus reducing the CO₂ emissions indirectly from the building.*

Solution/Score: 100% of the internal lighting, including the commons areas will be provided by dedicated low energy lighting (using LED). It is anticipated that the proposed development will exceed the requirement of 75% thus providing a credit score of 2 of a total 2 in accordance with Level Very Good goal.

Cat #1D Drying Space

Goal: *minimize the energy used to dry clothes by providing alternative solutions.*

Solution/Score: Internal retractable clothes dryers lines will be provided to all flats as well as the housekeeping provisions thus providing a credit score of 1 of a total 1 in accordance with Level Very Good goal.

Cat #1E Energy Labeled Appliances

Goal: *install energy efficient white goods, thus reducing the CO₂ emissions from the building.*

Solution/Score: all of the flats will have appliances that are fully compliant and the building wide appliance will be provided as well thus providing a score of 2 of a total 2 in accordance with Level Very Good goal.

Cat #1F External Lighting

Goal: *to encourage the provision of energy efficient external lighting, thus reducing the CO₂ emissions indirectly from the building*

Solution/Score: 100% of external and security lighting will be dedicated energy efficient fittings with appropriate controls thus a credit score of 2 of a total 2 in accordance with a Level Very Good goal.

Cat #1G Renewable and / or Low Emission Energy Source

Goal: *to reduce carbon emissions and subsequent atmospheric pollution by encouraging local energy generation from renewable sources to supply a significant proportion of the development's energy demand-may require study*

Solution/Score: The proposed heating systems exceed the low to zero carbon technologies requirements at the level of excessive of 15% of overall energy consumption. In addition, the solar will be used for hot water production thus a credit score of 2 of a total of 2 in accordance with Level Very Good goal.

Cat #1H Cycle Storage

Goal: *provide adequate cycle storage facilities (1 per flat per Camden requirement).*

Solution/Score: Cycle storage provided at 1 per flat thus a credit score of 1 of a total 2 in accordance with Level Very Good goal.

Cat #1I Home Office

Goal: *reduce the need to commute to work (or central campus) by providing residents with the necessary space and services to be able to work from within the building*

Solution/Score: there is an extensive building wide IT/Data network thus the occupants will not be required to go to the central campus to perform office related functions, and will be provided the opportunity to connect with the central campus. This confirms with the spirit of the goal to allow for adequate space and service to provide the use thus a credit score of 1 of a total 1 in accordance with Level Very Good goal.

Cat #2A- Water/ Internal Potable

Goal: *reduce overall consumption of potable water*

Solution/Score: *daily consumption level of 90 litres per person or less is required to achieve a Level Very Good goal. In the design, the sanitary and taps to be used will follow: a maximum of - 4/2 litre WC, basin & kitchen taps of 4 litres per minute flow rate, shower heads with a flow rate of 4.5 litres per minute flow rate and shaped bath with capacity to overflow of no more than 160 litres. The rain water collection will be used for gray water in toilets. thus a credit score of 4 of a total 5 in accordance with a Level Very Good goal.*

Cat #2B- Water/ External Water Use

Goal: *reduce overall consumption of potable water by encouraging recycling of rainwater for gardens*

Solution/Score: *rain water collection will be provided thus a credit score of 1 of total 1 in accordance with a Level Very Good goal.*

Cat #3A- Environmental Impact of Materials

Goal: encourage the use of materials with lower environmental impacts over their life cycle

Solution/Score: All key construction elements will achieve an 'A+ to D' rating under the 'Green Guide'. Based on the design it is intended to achieve the minimum of 3 of the key construction material elements thus providing a credit score of 12 of a total 15 in accordance with Level Very Good goal.

Cat #3B- Sourcing of Materials: Basic Building Elements

Goal: encourage the specification of responsibly sourced materials

Solution/Score: All materials used within the base construction elements are taken into consideration and it can be demonstrated as being responsibly sourced. Specifically timber materials must be certified under a Chain of Custody scheme for credit. All non-timber materials must have an EMS, statement for the manufacturing process and for the extraction of raw materials thus providing a credit score of 4 of a total 6 in accordance with Level Very Good goal.

Cat #3C- Sourcing of Materials: Finishing Elements

Goal: encourage the specification of responsibly sourced materials

Solution/Score: similar to above thus a credit scores 2 of a total 3 in accordance with Level Very Good goal.

Cat #4A- Reduction of Surface Runoff

Goal: *reduce and/or delay water run-off from the hard surfaces of a project public sewers and watercourses*

Solution/Score: post-development to be no more than that pre-development, and with the proposed collection and green roof, the runoff will be less. The impervious area will decrease with the green space of the garden area, thus providing a credit score of 1 of a total 2 in accordance with Level Very Good goal.

Cat #4B- Flood Risk

Goal: *encourage developments in areas with low risk of flooding*

Solution/Score: the existing site's annual probability of flooding is assessed to be low thus providing a credit score of 2 of a total 2 in accordance with Level Very Good goal.

Cat #5A- Household Waste Storage and Recycling Facilities

Goal: *recognize the importance of having adequate internal and external storage space for waste*

Solution/Score: The refuse storage and access required for the minimum standard (mandatory) is met by simple compliance with the Camden requirements covering all mandatory criteria. . Providing internal waste and recycling in each kitchen is required. The house management will have communal storage for both trash and recyclables in the building thus a credit score of 4 of total 4 in accordance with Level Very Good goal.

Cat #5B- Construction Site Waste Management

Goal: *recognize the importance a Site Waste Management Plan has on the efficient use of resources during construction*

Solution/Score: The mandatory elements will be met and a SWP will be implemented. It is anticipated that this will score a 2 out of a total 2 in accordance with Level Very Good goal.

Cat #5C- Composting

Goal: *encourage developers to provide the facilities to compost household waste*

Solution/Score: as this type of scheme has yet to be vetted with Camden to date thus no credit is planned for this

Cat #6A- Global Warming Potential of Insulations

Goal: *reduce global warming from emissions arising from the manufacture, installation, use and disposal of foamed thermal and acoustic insulating*

Solution/Score: All insulation products used in the project will have a GWP <5 thus a credit score of 1 of a total 1 in accordance with Level Very Good goal.

Cat #6B- NO2 Emissions

Goal: *reduce the emission of NO2 into the atmosphere*

Solution/Score: With the efficiencies of the air sourced heat pumps in combination with the full building management system planned, and that the ASHP have a COP in excess of 4, it is therefore intended to score 1 of a total 3 in accordance with Level Very Good goal. .

Cat #7A- Day lighting

Goal: *improve the quality of life in the building through good day lighting, thereby equating to a reduced need for energy for lighting*

Solution/Score: Good levels of natural day lighting are designed for each space however there are no new building penetrations proposed in the historic fabric. All existing penetrations thus with the together with a View of the Sky for all key rooms are required to score fully under this section thus a credit score of 1 of a total 3 in accordance with a Level Very Good goal. .

Cat #7B- Sound Insulation

Goal: *the provision of improved sound insulation to reduce the likelihood of noise complaints from abutting buildings*

Solution/Score: with the details for thermal barriers, we believe that the development will benefit and comply, both internally and externally with the requirements for sound transfer and transmission. The requirement for sound testing will confirm and we anticipate a score of 1 of a total 3 in accordance with a Level Very Good goal

Cat #7C- Private Space

Goal: *improve the occupier's quality of life by providing an outdoor space for their use, which is at least partially private*

Solution/Score: All flats have access to the private gardens and will be allowed use. The gardens are private from the neighbors as they bordered by walls, they also have a sound barrier thus a credit score of 1 of a total 1 in accordance with Level Very Good goal.

Cat #7D- Lifetime Homes

Goal: *encourage the construction of buildings (homes) that are accessible to everybody and where the layout can easily be adapted to fit the needs occupants*

Solution/Score: No credit is planned for this

Cat #8A- User Guide

Goal: *recognize and encourage the provision of guidance to enable building owners/occupiers to understand and operate their spaces efficiently*

Solution/Score: the building operations team will be fully trained on the operations of the building and with each semester, there will be training for all occupants. The information will be provided in a simple, understandable level along with the general information of the neighborhood, the public transport, local amenities, recycling & refuse arrangements all available along with normal emergency systems thus a credit score 3 of a total 3 in accordance with Level Very Good goal.

Cat #8B- Considerate Constructors Scheme

Goal: *encourage construction sites managed to environmentally and socially be accountable*

Solution/Score: The normal Considerate scheme will be implemented, in consideration of Camden requirements, and will allow for a credit score 2 of a total 2 in accordance with Level Very Good goal.

Cat #8C- Construction Site Impacts

Goal: *encourage construction sites managed in a manner that mitigates environmental impacts*

Solution/Score: of the criteria, 4 of the 6 will be met thus a credit score of 2 of a total 2 in accordance with Level Very Good goal.

Cat #8D- Security

Goal: *the design of spaces where people feel safe, secure, and does not undermine quality of life or community*

Solution/Score: The project has a comprehensive security plan by design and will work under the appointed ALO to enhance the safety requirements thus a credit score of 2 of a total 2 in accordance with Level Very Good goal.

Cat #9A- Ecological Value of Site

Goal: *development on land that already has a limited value to wildlife and discourages the development of ecologically valuable sites*

Solution/Score: as the development is an existing site and does not propose any further development, a simple table top analysis will be carried out to achieve credit and advice on the potential use of the external gardens as well as the green roof thus a credit of 1 of a total 1 in accordance with Level Very Good goal.

Cat #9B- Ecological Enhancement

Goal: *enhance the ecological value of a site (as possible)*

Solution/Score: based on advise of the above, all of the key recommendations and at least 30% of the other recommendations will be followed thus a credit score of 1 of a total of 1 in accordance with Level Very Good goal.

Cat #9C- Protection of Ecological Features

Goal: *protect existing ecological features from damage during the completion of construction works*

Solution/Score: based on the above, all recommendations for protection will be followed thus a credit score of 1 of a total 1 in accordance with Level Very Good goal.

Cat #9D- Change of Ecological Value of Site

Goal: *reward steps taken to improvement in ecological value*

Solution/Score: based on the above, all recommended improvements will be carried out thus we believe the improvements possible will be deemed +3 to +9 thus a credit score of 3 of a total 4 in accordance with a Level Very Good goal.

Cat #9E- Building Footprint

Goal: *promote the most efficient use of a building's footprint*

Solution/Score: no credit is planned for this

Predicted Rating

Very Good- Level 4

Mandatory requirements are all met

Breakdown on specific un-weighted

Energy exceeds 60%

Water exceeds 60%

Materials exceeds 60%

Conclusion

The Code for Sustainable Buildings (Residential) is based on the full consideration across all 9 of the above categories. Having reviewed the proposed development in regards to all 9, the project at 150 Southampton Row London demonstrates that the goal of a Level Very Good is achievable. The total analysis predicted score (weighed) of 66 shown exceeds the minimum requirement.

All mandatory requirements have been stated, and will be planned in the development approach. Of great achievement overall will be the overall energy efficiency up and beyond that of the current building regulations along with the intended range of water consumption saving.

As with any scheme, the final elements are developed over the course of the project and this analysis can be updated at each stage to ensure compliance.