Proposed Basement Extension plus Internal Alterations and Refurbishment of

51 Fitzjohn's Avenue, London NW3 6PH

Sustainability Plan:

The Site:

The existing residential building is an urban site on Fitzjohn's Avenue, within the London Borough of Camden. It has a basement, ground and three upper stories at the front of the building and a basement, ground and four upper stories to the rear. This is borne out by the fact that at the front of the building the floor to ceiling heights are around 3.0 metres whereas in the rear section the floor to ceiling heights are approximately 2.4 metres. The construction of the building is mainly of load bearing brickwork. The external walls being of solid masonry have poor thermal insulation properties.

The Proposals:

As the building is situated within the conservation area of Fitzjohn's/Netherhall, any alterations to the elevations of the building to incorporate insulating materials would change the external appearance of the building, which would go against "Camden's Design Guide for works to a building within a conservation area." Camden's goal is to "keep the historic character of the street" wherever possible and to retain the existing features of the building. We would possibly face similar problems related to the installation of items such as solar panels and micro-generation equipment.

We will, therefore, be looking at what can be carried out internally, while creating 21 new apartments, to improve the performance of the building as a whole.

In order to guide development in meeting the UK's targets to reduce CO2 emissions by 60% by 2050, the government has published policies for the development industry.

The following documents have been considered and will be complied with when implementing any future redevelopment / refurbishment scheme on this site:

- Camden Core Strategy (adopted 2010)
- Building Regulations, Part L1B (Existing Dwellings), 2010, as amended in 2011
- The London Plan (2011)

Camden Core Strategy requires all developments (except new build) over 500sqm to achieve EcoHomes excellent from 2013. Eco Homes has since been replaced by BREEAM Domestic Refurbishment, 2012.

Core Strategy Policy CS13 requires all developments to take measures to minimise the effects of climate change and encourage all developments to meet the highest feasible environmental standards that are financially viable during construction and occupation. The proposal will endeavour to take measures to adapt the building by

- Reducing the energy demand in the building ; and
- Supplying energy more efficiently

At the design stage, the applicant will work with architects, engineers and consultants to ensure that the building will meet the requirements of BREAAM Domestic Refurbishment (Excellent).

The following actions will be taken to ensure that the development complies with the BREEAM Domestic Refurbishment requirements:

i) New sealed and double glazed timber framed windows will be installed throughout the building which will protect the property from the draughts which enter the building through the existing windows. The sealed double glazed windows will contain thermally efficient glass such as Pilkington Insulight Therm "K" Glass. The applicant wishes to keep the stained glass windows, which will be installed with secondary glazing.

ii) All of the controlled fittings (windows and doors) will meet the standards within the table below as required by the Building Regulations Part L1B

Standards for controlled fittings	
Window, roof window or rooflight	WER Band C or better or U Value 1.6W/m2.K
Doors with > 50% of internal face glass	U Value = 1.8W/m2.K
Other doors	U Value = 1.8W/m2.K

i) We will be installing the most up-to-date efficient condensing boilers, together with insulated pipework, efficient radiators and modern control systems. The provision of hot water will also be supplied by the most economical method. We will consider the use of "Combi Boilers" within the smaller apartments. Consideration has been given to having a centralized system for heating and hot water serving every apartment, but because of the likelihood of apartments being empty (while the owners go abroad during the winter months) it was felt that such a system would not provide any substantial benefits by way of energy savings.

ii) A central mechanical extract system incorporating a heat recovery system for the bathrooms, shower rooms, WC's and kitchens will be installed within every apartment.

iii) Subject to the physical constraints of the building we will internally be relining all of the external walls on each floor using an insulated plasterboard dry lining system. This will lower the "U" value of the external walls and thus reduce heating demand.

iv) The existing pitched roofs will be checked and where possible additional insulation will be installed. This will, again, lower the “U” value of the roof construction and reduce heating demand.

v) Where possible we will be using the most up-to-date LED and fluorescent light fittings and will give consideration to the method of their control.

vi) A new kitchen with the appropriate low energy appliances and recycling / composting facilities will be installed.

vii) The whole external envelope of the building will be checked to ensure that it is in a good state of repair. All old openings within the envelope, such as from the removal of redundant overflow pipes, will be made good. The upgrading of the windows, the addition of installing draft strips around all external doors will help to make the building as air tight as possible.

If during any refurbishment work we uncover other elements of the building where improvements can be made to save energy, we will endeavour to carry out these improvements because it will inevitably help to increase the value of the property.