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CLIENT

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PROJECT

Sustainability Report for Planning for
3 Belsize Place
London
NW3 5AL

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CONTENTS

1 INTRODUCTION

This report sets out the sustainability issues and targets intended for the refurbishment of No. 3 Belsize Place, London NW3 5AL

The development comprises the redevelopment of an existing plot and includes extension and rebuilding.

The Developer of the site acknowledges the current issue with regard to concerns about climate change and the contribution that building stock makes in the form of emissions to the atmosphere, the use of water, waste generation and the use of polluting materials.

It is proposed that the redevelopment sets out to meet the requirements of the Code for Sustainable Homes, Code Level 3, and current Best Practices.

The aim of the development is to:-

- Reduce greenhouse gas emissions.
- Reduce impact on the environment overall.

2 SUSTAINABILITY

2.1 TARGET

It is the team's aim to achieve level 3 of the Code for Sustainable Homes for the property.

For level 3 to be obtained the following criteria must be met:-

- The Dwelling Emission Rate (DER) must be 25% improved when compared to the maximum DER allowed under Building Regulations Part L 2006.
- Potable water usage must be limited to 105 litres/per person/per day.
- At least 3 of the 5 key elements of the structure should achieve a BRE Green Guide 2006 rating of at least D.
- Ensure surface water run-off rates and annual volumes of run off are no greater than the previous conditions for the site.
- A site waste management plan will need to be put in place.
- Household waste storage and recycling facilities shall feature in the proposals.

In addition 46.7 points will be required for the various categories set out in the Code. This report sets out the aims of the project to achieve this.

2.2 ENERGY AND CO2 (CfSH Category 1)

The scheme will be designed to limit the emissions of carbon dioxide to the atmosphere from the operation of the building services.

i) Target Emission Rate

The target emission rate will be set at 25% below the 2006 Building Regulations Part L Standard.

Initial proposals and provisional calculations show that this can best be achieved with the provision of Air Source Heat Pumps (ASHPs). The drawings submitted for planning are based on the use of this technology.

ii) Building Fabric
The initial assessments of the project indicate that a Heat Loss Parameter (HLP) of ≤ 1.3 will be achieved.

iii) Internal Lighting
The project brief will require that 75% of the lighting sources used will be of a low energy type as required by Building Regulations Part L 2010.

iv) Other Energy
It is proposed that a clothes drying space be provided in a secure location.

v) Eco-Labelled White Goods
Electrical appliances used shall have an A+ rating under the EU Energy Efficiency Scheme, with the exception of washing machines and dishwashers were an A rating shall be applied and a B rating for tumble dryers.

vi) External Lighting
External lighting shall use low energy sources. Security lighting shall have a maximum rating of 150W and be controlled by proximity detection and with a daylight shut off.

vii) Low Carbon Energy Technologies
The best use will be made of the most feasible LZC / Renewable Energy Technologies available. Air Source Heat Pumps are considered to be one of these technologies, however solar Photovoltaics may also be considered to enhance the scheme by further reducing carbon emissions.

viii) Cycle Storage
Cycle storage for 4 No. bicycles will be incorporated into the scheme.

ix) Home Office
The development includes the provision for a home office (studio).

2.3 WATER USAGE (CfSH Category 2)

Efficient use of water is a mandatory requirement of the Code for Sustainable Homes. The production and delivery of water is a high energy process and added to the fact that the water infrastructure is severely strained it is essential that water is used in an efficient and non-profligate manner.

In line with the Code for Sustainable Homes water usage will be set at 105 litres/person/day. It is intended that 6/4 dual flush WCs be installed, that taps will be of the reduced flow/aerated type, shower flow rates would be in the range of 9-10 litres per second, dishwasher water usage per cycle would be limited to 18 litres and washing machines would have a maximum volume of 60 litres.

The site does not include any garden but a number of terraces which would be irrigated by rainwater collection.

2.4 MATERIALS (CfSH Category 3)

Materials for use in the site will be responsibly sourced with the following elements to meet the BRE Green Guide rating 2006 of a rating to grade D or better.

The principal external wall construction will be a brickwork outer leaf on lightweight steel framing with insulation and plasterboard lining. Upper floors will be timber framed with some steelwork and the arched members over the single storey area will be in laminated timber. Windows and curtain walling will be framed in timber with aluminium external facings. All timber used will be FSC certified.

2.5 SURFACE WATER RUN OFF (CfSH Category 4)

It is not believed that the site is in a flood risk area (see also Basement Impact Assessment).

The rate of surface water run off will be attenuated by the provision of a buried attenuation vessel.

2.6 WASTE (CfSH Category 5)

a) Household Waste:
Household waste recycling facilities will be incorporated into the project including 3 No. internal recycling storage bins with a total capacity of 60 litres or more.

b) Construction Waste:
A construction waste policy will be set up that will require that the WRAP/ENVIROWISE guidance is adopted, in addition to a commitment to sort, re-use and recycle construction waste.

c) Composting:
Given the lack of garden space it is unlikely that a home composting area will be able to be established.

2.7 POLLUTION (CfSH Category 6)

a) Global Warming Potential:
It is intended that all insulation material used has a GWP of less than 5 and ozone depletion potential of 0.

b) Nitrous Oxide (NOx) Emissions:
It is intended that all space heating and hot water systems have a Dry NOx level < = 100mg/kWh or use a Class 4 boiler to BS EN 297:1994. The use of ASHP technology will satisfy this requirement.

2.8 HEALTH AND WELLBEING (CfSH Category 7)

a) Daylight:
The design of the kitchen shall be such that the roof lights give an average daylight factor of 2%.

Living rooms, dining rooms and the study will achieve an average daylight factor of 1.5%.

b) Sound Insulation:
Sound insulation to the development will be as a minimum to the requirements of Part E of the Building Regulations. Post-completion tests will be undertaken.

c) Private Space:
The development currently includes 2 No. private open spaces in the form of roof terraces. The roof terrace at 3rd floor level is served by a lift and would be accessible by disabled persons.

d) Lifetime Homes:
Lifetime Homes Standards will be adopted. A compliance matrix is included in the PKD Design and Access Statement.

2.9 MANAGEMENT (CfSH Category 8)

a) Home User Guide:
A home user guide will be incorporated into the manuals and information handed to the building occupier.

b) Considerate Contractor Scheme:
The development specification to the Principal Contractor will require that he meets with Best Practices under the Considerate Contractor Scheme.

c) Security:
It is intended that the development complies with 'Secured by Design - New Homes - Section 2 Physical Security'.

2.10 ECOLOGY (CfSH Category 9)

a) Ecological Value of the Site:
It is believed that the land is of low ecological value as defined by the BRE Ecological Value Checklist.

3 CONCLUSIONS/SUMMARY

It is the intention of our Client to provide a highly insulated structure which will inherently reduce the energy usage of the proposed scheme. The proposal will target high standards in terms of Code for Sustainable Homes and will achieve Code 3 by the measures set out in this report.

Air Source Heat Pump technology will provide the main source of heating and hot water generation for the building.

All appliances and equipment used from taps and boilers to white goods will be of the highest quality and selected to provide the most sustainable systems.

All materials selected will be from the most sustainable sources, and all construction work itself will be carried out in the most sustainable manner including everything from demolition to transportation.