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11-12 Grenville Street
London

Energy Statement

Issue 3

Client Name:	Calabar Properties Ltd
Property:	11-12 Grenville Street London WC1N 1LZ
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1.00 INTRODUCTION

Watkins Payne Partnership have been instructed by Calabar Properties Ltd to provide a high level energy statement relative to the proposed development of 6 flats at 11-12 Grenville Street. This development is relatively simple consisting of a small scale residential refurbishment scheme and therefore the energy statement has been presented in a format to demonstrate the intent, rather than a detailed analysis of the individual flats / accommodation units. The study is based upon an area weighted analysis that has been undertaken using SAP software by a registered and trained SAP assessor.

11-12 Grenville Street residential development is a refurbishment and falls under Building Regulation Part L1B:2013. Unlike the Building Regulation L1A which applies to new build there is no carbon emission or a fabric efficiency target for the refurbished apartments. Camden Sustainability policies follow the principals of London Plan. In regards to refurbishments the London Plan calls for reduced carbon emissions but there are no set targets as there is for new dwellings.

The scheme sustainability targets are:-

1) To achieve BREEAM Domestic Refurbishment, Excellent which requires a minimum Energy Efficiency Rating of 70 post refurbishment.
2) To incorporate energy efficiency features that amount to 10% of the project cost.

2.00 EXECUTIVE SUMMARY

Total number of flats	Total floor area (m^2)	Pre Refurbishment Energy Efficiency Rating	Post Refurbishment Energy Efficiency Rating
6	399.9	19.93	70.56

Energy Efficient Design Measures

- All new wall ‘U’ values improved to 0.28W/m^2 K.
- All new roof ‘U’ values improved to 0.18W/m^2 K.
- All new floor ‘U’ values improved to 0.22W/m^2 K.
- Window ‘U’ values improved to 1.6W/m^2. K (0.73G value and 0.7 frame factor).
- Entrance door ‘U’ values improved to 1.8W/m^2 K.
- Air permeability improved to 5m^3/hm^2 (@50Pa).
- Naturally ventilated accommodation with extract fans to bathrooms and kitchens.
- Heating to be achieved via B and A combi-boiler (95% efficient).
- 100% energy efficient lighting.

With these energy efficiency measures the Scheme provides an area weighted Energy Efficiency Rating of 70.56.

3.00 ENERGY DEMAND ASSESSMENT

An area weighted energy demand assessment has been undertaken on all flats as detailed in the table below.

The energy demand assessment has utilised a good envelope performance, and this is an effective way of producing an energy efficient scheme for the development.

SAP calculations have been undertaken demonstrating that an average improvement of 50.63 points (Energy Efficiency Rating), compared to the baseline defined within BREEAM Domestic Refurbishment, was achieved.

Flat Number	Floor area (m^2)	Pre Refurbishment Energy Efficiency Rating	Post Refurbishment Energy Efficiency Rating
1	101.64	11.62	74.29
2	96.3	16.18	60.32
3	47.75	31.38	71.79
4	47.75	36.07	73.62
5	57	20.22	74.7
6	49.46	17.31	73.88

4.00 LOW AND ZERO CARBON TECHNOLOGIES ASSESSMENT

4.01 General

Low and zero carbon (LZC) technologies are systems that generate energy with either zero or reduced CO_2 emissions when compared against traditional energy generation methods.

4.02 LZC Technologies Appraisal

Due to the form of the building and the site location there are no low and zero carbon technologies that are appropriate to this development.

5.00 CONCLUSIONS

The energy strategy for the proposed development has adopted an approach of using passive design technologies to reduce the baseline energy demand and hence CO_2 emissions.

The requirements for planning to achieve BREEAM Domestic Refurbishment, Excellent, which requires a minimum Energy Efficiency Rating of 70 post refurbishment. The scheme will provide:

- An area weighted Energy Efficiency Rating of 70.56.
- An improvement in area weighted Energy Efficiency Rating of 50.63.