WARREN COURT
EUSTON ROAD
LONDON. NW1 3AA

APPENDIX 04:
ENERGY STATEMENT

By

Ferguson Brown

to be read

in conjunction with

DESIGN & ACCESS STATEMENT

for submission to the London Borough of Camden to accompany an application for the demolition of one residential unit (Class C3) at 6th floor level and the construction of two new residential units (Class C3) at 6th and 7th floor levels.

Prepared by Moxley Architects
for
Warren Court Investments LLP.

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8.0 APPENDICES:

APPENDIX 04: ENERGY STATEMENT	Ferguson Brown:

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Warren Court Residential Scheme

Tottenham Court Road London SW1

Energy Statement

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Issue	***Rev***	***Prepared by***	***Checked by***	***Description***	***Issued***
0	*0*	*Ken Crawford*	*Piet Sportel*	*Energy Statement*	*07 December 2015*

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1.0 Energy Strategy

The energy statement outlines an energy strategy in line with the London Plan 2015 and GLA Guidance on Preparing Energy Assessments.
In first instance improving and extending the existing services has been used to reduce energy demand where possible.
Since the development is smaller than 500sqm there is no requirement to provide a dynamic thermal energy model.
The new apartments will be constructed with a thermal envelope which will be equal or better than stated in Part L1b of the Building Regulations.

1.1. Heating

The existing boilers were manufactured between 1970 and 1980 and with an original new built efficiency of 70%.
It is proposed to replace the existing boiler for new improved energy efficient gas fired boilers. New efficiency will be around 90 to 94%.
The existing heating distribution will be extended to the two new apartments.
The bathrooms will be fitted out with electrical under floor heating, which will be activated based on timer requirements. This will reduce the energy usage of the local UFH.

1.2. Ventilation

The development is within the Camden Air Quality Management Area (AQMA). There for we will provide NOx filtration on the air inlet systems.

Mechanical Variable fresh air rate	according to Part F
Heat recovery	70% eff.
Specific Fan Power	2.0 W / l / s

Local ceiling void mounted HR units (three per dwelling)
Purge ventilation will be provided by openable windows.
Treated fresh air will be supplied to all living rooms and bedrooms.
Kitchen cooking space will be provided with re-circulating extract canopies with cleanable filter cassettes.

1.3. Domestic Hot Water

The existing apartment has hot water generation by local electrical water heaters.
We propose to extend the existing hot water distribution system to provide domestic hot water to the new apartments.

1.4. Building Management System

There will be a two tier BMS system provided. One tier will control the main boiler and hot water generation plant. The second tier will control the heating / cooling requirements within the apartment.

1.5. Lighting

Power Use	10 W/m^2
Average illuminance	200 Lux
Automatic daylight control Man	on/ auto off
Parasitic power of	0.2 W/m^2

1.6. Renewable Energy

1.6.1. Air Source Heat Pumps (ASHP)

We are recommending that ASHPs are used for cooling of the apartments, during the heating season these units will be able to operate in Heat Pump mode to provide efficient electric top up heating.
Current SAP calculations do not recognise carbon savings from the use of ASHP. However, this issue is under review to possibly achieve one credit. The ASHP do make the provision heating to the apartments easier as there is no requirement for gas flues up through the building.

Cooling Seasonal Energy Efficiency Ratio SEER:	3.3
Energy Efficiency Ratio (EER):	3.7