KUT

PLANNING BRIEF

for the

MECHANICAL AND ELECTRICAL SERVICES

at

MIDLAND CRESCENT
LONDON NW3

RFB/BB/DO/HC/6000
13 NOVEMBER 2012

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1. THE PROJECT

The project proposes the erection of a Part 4 storey and Part 5 storey with double level basemen comprising flexible commercial space (Use Classes A1/A2/A3/A4/B1/D1 and D2) at lower basement and ground floor levels, 138 student bedrooms with communal kitchen, lounge and common room areas at upper basement to fourth floor levels, common room at fifth floor and associated landscaping to site

2. SCOPE OF ENGINEERING WORKS

Building Engineering Services:

- Mechanical services to include; space heating, ventilation, hot and cold water services.
- Electrical services to include; mains intake, mains distribution, power, lighting, wiring system, emergency lighting, lightning protection, fire alarm, Security, TV/FM and telephone and data wiring.
- The student accommodation will be cooled via natural and mechanical ventilation means
- Sanitary plumbing and Rainwater.
- Incoming utility services to include telecommunication infrastructure, gas supply, electricity sub-station and bulk potable mains water supply
- Solar Photo Voltaic Systems to generate electricity for use and/or exported to the grid
- Solar Thermal Hot Water Systems
- The flexible commercial areas shall be developed as a “shell” with incoming utility services provided
- No greywater recycling system will be provided in this development. Refer to Page 25 of the”Sustainable Design and Construction Statement”

4. COLD WATER SYSTEMS

A cold water break tank and booster pump set shall be provided for the development located in the lower ground floor plantroom. Pipework shall be extended off the pump set to serve all cold water taps and fittings and domestic hot water cylinders in the development

All pipework shall be run in riser ducts and ceiling/floor voids as required.

5. HOT WATER SYSTEMS

Dual coil hot water cylinders will be provided in the central plantroom to provide domestic hot water to the student accommodation.

The upper coils in the cylinders shall be connected to the boilers and the lower coils to the solar thermal heating panels on the roof.

All pipework shall be run in riser ducts and ceiling/floor voids as required.

6. HEATING

High efficiency low NOx gas fired condensing boilers shall be provided to serve the development to provide LTHW for comfort heating and hot water requirement.

From the gas fired condensing boilers, low temperature heating water will be piped into the student accommodation via a set of flow and return LTHW pipework riser.

The student accommodation will be heated by radiators fitted with thermostatic radiator valves. Programme controllers will be installed to enable the occupants to set the timed programme operation for the heating and hot water system.

A room thermostat will be installed inside the student accommodation linked to the operation of heating valve. The thermostat will generally be installed inside the living room of the student accommodation. The heating valve will shut when the room temperature is satisfied, shutting off the heating water supply to the student accommodation. This design is an energy saving measure.

All pipework shall be run in riser ducts and ceiling/floor voids as required.

7. MECHANICAL VENTILATION

Mechanical supply and extract ventilation with heat recovery (MVHR) shall be provided to the student accommodation. The MVHR air handling units shall be located on the roof. Special NOx filters shall be installed in-line with the air intake duct into the MVHR ahus.

The ventilation system shall be equivalent to a category Type 4 ventilation system with regards to Part F of the Building Regulation.

Domestic cooker hoods shall have its air discharge directly to the outside via wall terminals. The domestic cooker hoods shall have intermittent operation on demand.

8. GAS

A new gas supply connection will be installed to serve the gas fired condensing boilers in the roof top plantroom.

The boiler room will be naturally ventilated. A flue pipe taken to roof top level as shown on the architects drawings will be installed to discharge flue gases safely and in accordance with the regulations.

9. ENERGY STATEMENT

This Planning Brief for the Mechanical and Electrical services document is to be read in conjunction with the Energy Strategy Statement prepared by Metropolis Green, accompanying the package of planning documents.

The gas fired boilers shall be of the high efficiency condensing type with low NOx emissions with an efficiency of at least 90%.

Low energy lighting shall be provided with a target of at least 75%. The use of high output LED's and fluorescent lighting shall also be used to achieve this target figure. Lighting design shall be based on an energy consumption of 5 Watts/square metre.

The available roof space has been investigated and it has been determined that there is sufficient space for a total of 78 no (equivalent to 100 square metres) of Photo-Voltaic Panels. With an array of this size if is possible to offset the electrical consumption of the development by a total of 11,299 kWh/year, hence lowering the carbon emissions of the development by 16,582 kgCO2/year from the efficient baseline.

There is also sufficient roof space to enable the installation of a total 43 no (equivalent to 100 square metres) Solar Thermal Panels. The energy for the hot water consumption in the development will be offset by a total of 53,560 kWh/year, reducing the carbon emissions of the development by 10,605 kgCO2/year

10. MAINS ELECTRICAL

The existing incoming mains shall be relocated within the ground floor electricity intake room to suit new planning arrangement of the building. The existing incoming electricity intake shall be re-utilised wherever possible.

11. SMALL POWER

Small power systems shall comprise distribution board, twin and earth cabling and socket outlets.

The specification for the socket outlets will be moulded white plastic to all areas inside the student accommodation.

12. LIGHTING

Lighting throughout the property shall be to architects proposals to meet their aspiration for the design of the flats. Low energy lighting will be utilised to comply with Building Regulations. All to be developed and agreed with the Interior Designer/Architect.

Low energy lighting shall be provided with a target of at least 75%. The use of high output LED's and fluorescent lighting will be and considered for use to achieve this target figure.

13. TV/SATELLITE

An aerial array comprising digital terrestrial TV aerial and FM aerial shall be provided. Boosters as necessary and cable shall distribute the services to all points throughout the development. Such points shall be in all lounges/living rooms. The extent of provision of Terrestrial TV points inside the student accommodation shall be determined and agreed with the developer

14. TELEPHONE/DATA

A network and infrastructure shall be provided to all principal rooms and bedrooms, providing a network which can be adapted for telephone and data services as required

Home office facility shall be provided in each flat to meet the Code requirements

15. SECURITY

The provision of CCTV monitoring for the development shall be considered.

15. ACOUSTICS

An acoustics survey for the development has been carried out by AECOM Ltd and a report in relation to the noise and vibration assessment for the development. There will be no internal air handling units inside the building.