Proposals for Mixed Use Regeneration

140-146 CAMDEN STREET
LONDON NW1 9PF

Planning Report
Service Strategy

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KUT

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140-146 CAMDEN STREET
LONDON NW1

SERVICES STRATEGY FOR THE PROVISION OF BUILDING SERVICES

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This is considered as a working document requiring input from all members of the team. Further issues will be submitted incorporating various comments and observations from team members.

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SERVICES STRATEGY FOR THE PROVISION OF BUILDING SERVICES

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1. INTRODUCTION

This report summarises the principal strategy for the building services installation for the mixed use scheme at 140-146 Camden Street, London NW1.

The building services summarised within this report comprise the following:

(a) Options for using sustainable energy technologies for the provision of energy and carbon reduction are being considered by the Energy specialist.
(b) Utility services such as Electricity, Gas, Drainage, Water and Communications (BT/Cable).
(c) Drainage.
(d) Heating systems.
(e) Ventilation.
(f) Cooling systems to specific areas.
(g) Hot and Cold Water Services.
(h) Power Supply/Distribution.
(i) Lighting and Emergency Lighting.
(j) Communications Services.
(k) Security and Access Control.
(l) Vertical Transportation.

2. SUSTAINABILITY

Sustainability will be considered in commercial and residential premises. The property has reasonable access to public transport, the sites begin with potential for good environmental credentials. Improvements will be considered, including increased energy efficiency of the building fabric and services.

- The potential for whole house ventilation with heat recovery will be assessed.
- The use of combined heat and power plant (CHP).
- Highly efficient gas condensing boiler.
- Good heating control systems.
- Energy efficient lighting
- Reduction of carbon emissions from the development, by adopting the London Mayor's Energy Hierarchy, 'Be Lean, Be Clean, Be Green.
- Metering of ventilation, plant and lighting.
- Metering of water use.
- Solenoid valve to toilets in commercial areas.
- Water leak detection.
- Solar and PIR control lighting.
- Smart electric metering to all residential units.
- Heat meters to all residential and commercial units.
- Main water harvesting.
- Use of grey water recycling.

3. UTILITY SERVICES PROVIDERS

3.1 The Utility Services to be provided to serve the building are Drainage, Water, Electricity, Gas, Telecommunications, as summarised below:

3.2 Drainage

3.2.1 Sewer Connections

The existing final sewer connection to be retained and adapted to suit the new scheme.

It is noted that a main trunk sewer passes diagonally through the site. This may restrict routing of some inground services.

Main Drainage Collection

The internal drainage systems are likely to be part gravity fed and part pumped from suitable plant located within the basement plant area.

Rainwater

Piped rainwater systems generally to remain.

Local flood prevention measures will be taken using a proprietary collection and discharge system.

Rainwater harvesting shall be adopted for irrigation.

Above Ground Main Collection

A system of vertical soil stacks will be employed throughout the development to connect the services for each area to the main drainage plant.

3.3 **Electricity Supply**

Early indications suggest that the development will require a sub-station.

The site is currently served by a substation. We understand the lease has expired. Negotiations are to commence to ascertain status of lease and whether the substation can be removed altogether or relocated. The construction process indicates that it will require de-commissioning during the works.

3.4 **Gas Supply**

It is proposed that LTHW heating to the development will be provided by Natural Gas provided by British Gas/Transco. Gas load to be assessed, relative to the existing gas supply.

3.5 **Water Supplies**

It is proposed that the site will be served by a new metered incoming mains water connection provided by Thames Water.

Individual TWU meters will be provided to each residential and commercial unit.

3.6 **Telecoms and Cable Communications**

British Telecom and local Cable Communications providers will provide suitable digital and analogue communications to serve the development.

Cabled copper and fibre-optic communications services to be terminated within the dedicated communications room within the basement.

Cabled distribution will be provided to all required locations.

The site will require BT Redcare monitored telephone line to provide remote monitoring of the security and like systems, e.g. CCTV, fire alarm, intruder alarms. Telephone lines will also be required for two lifts.

4. MAIN PLANT AND SERVICES

The main plant installations will be required for various services are summarised below.

4.1 Heating and Hot Water

The space heating to be provided by communal energy centre comprising a CHP boiler as lead unit and two/three high efficiency low NOx gas boilers.

The Landlord's central energy centre system shall serve heat exchange units within each residential and commercial unit.

4.2 Ventilation

Localised 'whole house' ventilation systems will be provided to each residential and commercial unit with heat recovery. All to comply with Building Regulations in accordance with CIBSE Codes or Practice.

The kitchen extracts will be ducted to a suitable high level discharge position.

4.3 Cooling

Energy efficient heat pump cooling condenser plant shall be provided to the commercial units and penthouse residential units.

4.4 Cold Water Services

The new mains water service to the development shall be boosted. The boosters shall be inverter driven.

4.5 Hot Water Services

Hot water shall be provided by the heat interface units to be located in each residential and commercial unit.

5. SERVICES SYSTEMS

5.1 Mechanical Services

Heating

Each unit shall be provided with a heat interface unit (HIU) to transfer heat from the central energy centre system to the individual properties. Space heating to be provided by underfloor heating or radiators, with concealed pipework complete with local thermostatically controlled heating zones distributed from accessible, concealed pipework manifolds.

Local electric floor warming and towel radiators to be considered for bathroom areas so as to allow the central heating plant usage to be minimised in the warmer months.

Ventilation

Provision of 'whole house' ventilation systems to all residential and commerical areas, complete with heat exchanger as necessary and noise attenuation.

Hot Water Service

Hot water service distribution pipework served from the HIU unit to terminate at local isolation valves and thermostatic blending valves at wash hand basins and showers. Longer runs of pipework shall be trace heated.

Gas

Gas services pipework to be distributed to central boiler plant only.

No gas provision will be provided to any residential or commercial units.

Cooling

Cooling to be provided by cassette and concealed fan coil units to commercial and penthouse units respectively. Local noise attenuation to most rooms.

Fan coil units to be low noise type.

5.2 **Electrical Services**

Lighting and Emergency Lighting

The illumination will require careful consideration with respect to the following factors.

(a) Compliance with Document L Building Regulations being the provisions of low energy lighting.
(b) Security lighting and limitation on the local night time neighbourhood.
(c) Emergency lighting to comply with the work place regulations, as BS 5266.

Power to Mechanical Services and Sub-Mains

Sub-main cables will be provided from the central main switchgear to all main plant, control panels, and to local MCB distribution boards.

The cable routes will be concealed where practicable.

Local Small Power

All 13 Amp socket outlets to be protected by 30mA RCD (Residual Current Device).
13 amp connection units to be provided to serve appliances, fan coil units, heated towel rails, U/F heating manifolds, electric floor warming, fire alarm system, intruder alarms, access control system and CCTV.

Connection units to be concealed where practicable.

Communications and Data

Provision of a Category 5E structured cable installation throughout the development to be used for Broadband data and voice communications.

A secure communications hub, equipment room to be established in the basement plant area to serve the whole development.

Security

The development will require a variety of security systems and services:

(a) An intruder alarm system shall be provided to each unit with facility for off-site monitoring by an authorised watching station service provider.
(b) A site wide perimeter CCTV system with local and remote monitoring.
(c) Access control system to operate the electric gates and at the various entrances to the development.
(d) Audio visual visitors door entry system to communicate between each unit and the main gates and various entrances.

Refer also to specialist security scheme details.

Fire Alarms

Various fire alarm provisions will be provided to suit uses. In general, provision of a comprehensive automatic fire alarm system to comply with the requirements of the local fire Officer, comprising an L2 addressable system recommended by BS 5839 to comply with the results of the Fire Risk Assessment for the building.

Remote relay contacts to be provided to control particular systems in the event of a fire, e.g. gas solenoid valves, grounding of the lifts, isolation of the kitchen extract systems, etc.

The Landlord's fire alarm system to be connected to a remote security watching station for monitoring.

AOV

Automatic opening vents (AOV) shall be provided to meet Building Control requirements. This to stalls and corridors.

Television/Satellite

Terrestrial digital and Satellite reception systems to be provided with full interactive TV cable distribution to outlet positions.

Refer to specialist AV/Media/Comms scheme.

Lightning Protection

140-146 Camden Street is located in an area with a likelihood of a lightning strike (less than 1 in 25000).

It is proposed to protect the building structure with an air termination network so as to disperse a direct strike to ground in accordance with BS 6651.

Also, due to the installation of communications and media systems equipment, it is proposed to provide suitable electronic surge protection on incoming copper cabled services, electricity, BT, TV aerials/satellite dish etc.

6. VERTICAL TRANSPORTATION

New passenger lift shall be provided by the Landlord to serve both residential and commercial blocks.

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