

LEVEL 5 & 9 SPECIFICATION

1.0 STRUCTURE

1.1 Loadings

The following indicate the imposed floor loading allowances:

Location Live Load Allowance (KN/M²)

Office floors 3.5 (+1.0 partitions)

Dealer floors 4.5

Note: 5% of office floor area is designed to accommodate enhanced loadings of 7.5 KN/m²

1.2 Structural Grid

The structural grid is typically 15.0m x 7.5m and 7.5m x 7.5m

1.3 Frame

- Structural steel columns and beams with composite slab construction.
- Beams have web openings for services distribution.

1.4 Raised Floors

Typically 150mm overall,

1.5 Floor to Ceiling Height

Generally 2.75m.

2.0 MECHANICAL SERVICES

2.1 Occupancy Density

Level 9 - 1 person per 9 m²

Level 5 - 1 person per 9 m²

2.2 Air Conditioning

4-pipe fan coil units (2 pipe internal zone) fed by centralised low pressure hot water and chilled systems.

2.3 Office Outside Air Ventilation

Outside air ventilation and extract air to the office areas are provided from central air handling plant at basement level. Outside supplied at a rate of 12l/s/person, based on occupational densities above.

2.4 Chilled Water System

- Chilled water is provided by packaged air cooler water chillers located externally at roof level and serves a common chilled water system feeding the tenants offices and landlords plant. 10W/m² upgrade capacity is included in the plant and risers.

- The main branches onto the floor are sized to include capacity for 35W/m² small power load allowance with standard Cat A based upon 25W/m².

2.5 Condensed Water System

A separate condensed water system is provided with branch connections onto the office floors for use by tenants for I.T. equipment cooling.

2.6 Atria Environmental Control

The Atrium spaces are provided with tempered and cooled air to moderate the climate in the occupied zones at the base of the atria. Where appropriate this is supplemented by under floor heating.

2.7 Building Management System and Controls

The building services plant is provided with automatic control. The BMS controllers associated with the plant are intelligent and addressable and are connective via a communication network to a central network controller.

2.8 Vertical Transportation

2.8.1 Escalators

Escalators are provided as follows:

- Level 1 to Level 3 (North of main core)
- For the floor level change between the entrance (Level 1) and Atrium Base.

2.8.2 Passenger Lifts

- These comprise of a group of eight, 24 person destination hall call passenger lifts travelling at 2.5m/s rated at 1800kg, serving Levels 1 to 11.
- A separate group of three 24 person destination hall call passenger lifts are provided at the southeast end of the building travelling at 2.0m/s also rates at 1800kg.
- The lifts have been designed on an occupancy density of 1 person per 12m² (with 10% absenteeism). An average waiting time of less than 30 seconds will be achieved with a handling capacity of 14% of the predicted population in a five-minute period.

2.8.3 Fire Fighting Lifts

There are three firefighting lifts:

- Lift car size: 8 person, 630kg
- Lift speed: 1.6m/s

2.8.4 Goods Lifts

Two goods lifts located in the central core serving the office floors and operating between Level -2 and Level 11:

- Lift capacity: 2000kg
- Lift speed: 1.6m/s

2.8.5 Car Park Transfer Lift

- Secure access provided between the parking areas in the basement and lobby Level 1 by means of a 16 person 1200kg passenger lift at 1.0m/s.
- A separate lift if provided for cycle access to the car park area by means of a 21 person, 1600kg passenger/goods lift at 0.5m/s.

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3.0 ELECTRICAL SERVICES

3.1 Electrical Distribution

- The tenants and landlords areas are supplied via 3 diverse dedicated HV supplies from South, North and West London areas. The design requires the failure of all three supplies before further emergency backup is needed.
- The 11KV supply serves the office and landlord areas from the EDF switchgear located in the basement via multiple landlord and tenant transformers and switchgear.

3.2 Standby Power

Generators and UPS available by separate arrangements.

3.3 Lighting

- Cat A floors provided with recessed T5 luminaires supplements with perimeter downlights (or an equivalent capital contribution to the tenant).
- Cat A lighting is controlled via a combination of ceiling-mounted presence detection and daylight sensors.

3.4 Telecommunications Services

- Telecommunications (telecom) riser cupboards separate from the tenants and landlord's power risers and cupboards provide for tenants use.
- Two incoming telecoms frame rooms provided with multiple duct entries into each from Upper Thames Street.

3.5 Security and CCTV

- A landlord CCTV system is provided to cover roof areas, ground floor, lower ground floor and basement areas, including car park entry locations for CCTV surveillance and door entry system.
- The entrance hall is designed to incorporate a bag screening system to be installed by the tenant(s), if desired. The level of security cover and detailed logistical arrangements are to be agreed.

3.6 Satellite Master Antenna TV System (SMATV)

- Space provided on the roof for the future installation of a SMATV system. Space also provided for future installation in the tenant electrical riser or comms cupboards for cabling in connection with the SMATV system.

4.0 SERVICE PROVISIONS FOR OFFICE TENANT

4.1 Mechanical Services

- Capped and valve chilled water connections at

each office floor, providing an additional 10W/m² cooling capacity for extension by the tenant if additional cooling is required (non-trading).

- Space at Roof Level above the fire station to tenants' additional chillers or condensers.

4.2 Electrical Services

- Circa 20% spare outgoing ways on the main 400 volt switchgear for future connection to outgoing ways.
- Provision in tenants' electrical risers for additional sub-mains cabling.
- Separate intake rooms and cable tray to tenant's telecommunications risers for telecommunications cabling.
- Cable containment system (conduit/trunking/draw-line) for future security and CCTV systems shall be provided.

5.0 ENERGY EFFICIENCY MEASURES

5.1 The building services include the following energy efficiency measures:

- Photovoltaic Cells at roof level
- Heat recovery on main office air handling plant
- Condensing operation on the heating system
- Variable speed drives to designated plant for capacity control
- DC motor technology on fan coil units
- BMS Control without a set point and energy monitoring facilities.

5.2 The building fabric includes the following energy efficiency measures:

- Double skin façade with motorised interstitial blinds to the upper levels of the main building South facing elevation
- External solar shading structure to the South elevation of the South West building element
- High performance interlayer coatings to the West and West facades with supplementary fritting for enhanced solar gain control
- Optimised building fabric thermal insulation valves to reduce heating loads in winter
- If required by the ingoing occupiers mixed mode displacement ventilation operation to South East space and sun tracking louvers
- Greywater and rain water harvesting from the green roof
- 20% improvement over Building Regulations Part L2 requirements
- BREEAM "Excellent" expected.