

Breem Rating

Very Good

Structure

Super Structure

- Structural steel frame with typically 130mm thick concrete slab on metal decking.

Sub Structure

- Reinforced concrete basement box with piled pad foundations and a suspended lower basement floor. Steel frame to basement slab with typically 200mm minimum thick concrete slab on metal decking.

Floor Loading

- Office Areas: $3.5\text{kN/m}^2 + 1.0\text{kN/m}^2$ for demountable partitions (5% net floor area enhanced to achieve 7.5kN/m^2).
- Roof Plant: typically 7.5kN/m^2 .
- Ground: Retail area 2 – 6m x 3m softspot for future access to upper basement.

Offices

Planning Grid

1.500m.

Floors 1 – 16

- Range from 5,479 sq ft (509 sq m) to 14,004 sq ft (1,301 sq m).

Occupancy Levels

- Typical Floors – 10 sq m/person of net internal area.
- Optional Trading Floor 1st – 7 sq m/person over 80% net internal area.

Office floor dimensions

1st floor:

- Raised floor: 200 mm.

Typical floors 1st – 8th:

- Raised floor: 150mm o/a.
- Finished floor to ceiling height: 2,900mm.
- Slab to slab height: 3,900mm.

Typical floors 9th – 16th

- Raised floor: 150mm o/a.
- Finished floor to ceiling height: 2,750mm.
- Slab to slab height: 3,750mm.

Retail

Ground

- Retail 1 2,422 sq ft (225 sq m).
- Retail 2 2,648 sq ft (246 sq m).
- Café 1,130 sq ft (105 sq m).

Internal Finishes

Office floors

- Fully accessible raised modular floor system consisting of 600mm x 600mm galvanized steel encased tiles mounted on adjustable pedestals.
- Metal tile access ceiling (1500 x 500mm grid).
- Painted plasterboard walls.

Toilets

- Black Basalt Stone floor tiles and skirtings.
- White back painted glass, mirror or laminate.
- Laminate panel cubicle walls and doors.
- Marble vanity tops.
- Painted plasterboard ceilings.
- Back painted glass wall cladding.

Entrance hall and lift lobbies

- Basalt stone flooring.
- Sivic marble feature wall to entrance lobby.
- Back painted glass walls to all front 4 no. solid lift with clear glass to front of 2 no. scenic lifts.
- American walnut timber panelled feature walls.
- Painted plasterboard ceilings to reception and lift lobby areas.

Mechanical Services

Offices

Air conditioning provided by 2 and 4 pipe ceiling void fan coil units.

Reception

Main entrance is conditioned by a combination of underfloor heating/cooling and displacement ventilation. Heating and cooling to this area is derived from a ground source heat pump.

Main lift lobbies

Lift lobbies are heated/cooled by fan coil units.

General

Central refrigeration plant comprises two water cooled chillers and open circuit cooling towers located in the basement and on the roof respectively. Heating to the building is provided by two modular gas fired condensing boilers located at roof level.

Provision for future tenants

- Route for Kitchen ventilation ducts passing through Ground Levels to roof for installation of a main kitchen area within tenant demise.
- Plant space at basement for installation of 2 no tenants generators.
- Space for tenants' plant is provided at roof level 18.
- Connections and space for an additional chiller and pumps at basement level.
- 500 KW additional cooling capacity incorporated into cooling towers and the condenser water systems either for installation of additional chiller at basement level or for use as tenants' condenser water cooling on a pro rata floor area basis. Condenser water connections are provided at floor levels 1-16.
- An additional 10 W/sq m of small power cooling within the main chilled water connection at floor levels 2-16, with an additional 95 W/sq m of small power cooling at level 1.
- Gas connection and space for future meter.
- Two 54 mm dia wastes, and two 15 mm dia BCWS connections at each floor for tenant tea station.
- 100mm dia drain and a BCWS connection at high level basement, to serve future reception café area.
- Louvres to front of retail areas for supply / extract ventilation.
- An 800 x 600 kitchen extract duct from ground floor to roof for installation of kitchen within a retail unit demise.
- Capped drain connections for retail units at high level basement.
- Sleeves for incoming statutory services to retail units.

Design Parameters

External design conditions:

Summer: $29^{\circ}\text{C db} / 20^{\circ}\text{C wb}$.

Winter: $-4^{\circ}\text{C saturated}$.

Internal design conditions (Heating)

Office: $22^{\circ}\text{C} \pm 2.0^{\circ}\text{C}$.

Toilets: 20°C minimum. No humidity control.

Lift lobby: $21^{\circ}\text{C} \pm 2^{\circ}\text{C}$. No direct humidity control.

Entrance lobby: 18°C minimum.

Staircases: 18°C minimum.

Internal design conditions (Cooling)

Offices: 22°C ± 2.0°C.

Occupation rate for cooling

Office floors (levels 2 – 16): 1 person per 10m²
 Optional Trading floor (level 1): 1 person per 7m²
 over 80% floor area.

Localised trading area provision

120 W/m² small power cooling.

Heat gain from small power

25 W/m² (35 W/m² riser).

Heat gain from lighting

12 W/m².

Outside supply air rate

12 l/s per person based on an occupancy of 1 person/10m² on floors (1-16) plus 1 person/7m² over 80% level 1. Provision for installation of future gas fired humidifier exists in central air handling plant.

Ventilation rates

Toilets: 8 Air changes per hour
 (make up via office transfer).

Car park: 6 – 10 Air changes per hour.

Basement: min 1.5 Air changes per hour.

Smoke extract

Office: 6 Air changes per hour.

Car park: 10 Air changes per hour.

Basement/Storage: Via car park exhaust system.

Noise rating: External:

- Roof Perimeter: 65dBA.
- Ground Floor: 55dBA 5m from building façade.

Fan coil density: - Perimeter: 1 per 4.5 x 6.0

Open plan: up to 1 per 60.

Internal acoustic criteria

- Offices NR38
- Toilets NR45
- Plant 80 dBA

Lifts

6 x Passenger lifts x 24 persons (1,800kg),
 Speed 3.5m/s.

- Destination control & 2 Scenic lifts
- Designed to achieve an 'up peak interval' of 30 seconds or less.
- A five minute handling capacity of at least 15% of the effective building population.
- 1 x Fire-fighters lifts x 8 person (630kg).
 Speed 1.6m/s.
- Fire-fighters lifts serving between the FSAL and the furthest floor within 60 seconds.
- 1 x Goods lift x 33 person (2,500kg) serving B2 to 16.
- 1 x Vehicle lift serving basement levels.

Electrical Services**Design parameters**

Power availability on each floor from the rising bus-bars:

- Lighting 12 W/m²
- Small Power 25 W/m²
- Additional Riser Capacity Allowance 10 W/m².

High voltage installation:

- 1 incoming EDF 11KV closed network supply rated at 100% of the building load.
- 2 Packaged substations fed from the EDF 11 KV switch board.

Low voltage installation

- The LV switchboards comply with BS EN 60439-1 with a minimum ingress protection of IP31.

Power

- The small power installation will be 13 amp socket outlets for general use.
- Externally mounted socket outlets will be moulded units affording IP65 protection.

Lighting

- Office illumination at an average at desk height to be 400 – 450 lux based on an open plan layout with a uniformity of 0.8. Designed to CIBSE Guide LG7.
- Entrance 200 – 300 lux and to suit specialist lighting requirements.
- Toilets and lobbies 200 lux.
- Staircase lighting 150 lux.
- Car Parking 150 lux.
- Storage and plant areas 200 lux.

Emergency generator:

- A single 870kVA (standby) low voltage generator will be provided at B2 level for life safety and landlord services use.
- The packaged generator will have an integral fuel oil day tank, with bulk fuel oil storage being provided for 12 hours operation.
- Spatial provision for potential tenants generators has been made at B2 level (2 No 820 kVA low voltage machines).

Voice data:

- Two incoming multiple entry ducts (8 No 150mmØ) will be provided at basement level.
- Two comms risers will be provided with cable trays for the future installation of communications and IT cabling.
- The intake locations and comms risers will be linked by a cable tray at basement level.

Fire detection and voice evacuation

- The systems will comply fully with BS5839, EN54 and the requirements of the Local Building Control and Fire Officer plus section 20 of the Building Regulations.

The system will comprise main fire control panel, printer, point smoke detectors, point heat detectors, duct detectors, manual call points, fully programmable input/output interface units, an annunciator panel, flashing beacons, sounders, speakers, voice alarm racks, etc, and links to other systems.

Security

- Close circuit television surveillance provided to all main public areas and entrances, and car park.
- Access control system and intercom to all main pedestrian and vehicle entrances.
- Monitored door contacts will be provided to all fire exit doors.
- Security station located at ground floor level.