

Outline specification

Twenty

Gresham Street

01: BREEAM RATING

- **Excellent**

02: STRUCTURE

• Super structure

- Structural steel frame with typically 140mm thick concrete slab on metal decking.

• Sub structure

- New reinforced concrete basement box with single pile per column.

• Floor loading

- Office Areas – 3.0kN/m² + 1.0kN/m² for demountable partitions. (5% net floor area enhanced to achieve 7.5kN/m²).
- Roof Plant – typically 7.5kN/m², (11.0kN/m² for future tenant generator areas).
- Provision has been made for a future escalator bank installation from the ground floor lobby up to first floor (optional trading floor).

03: OFFICES

- **Planning grid** 1.500m

• Floors G, 3-7 –

- Range from 19,956 sq ft (1,854 sq m) to 34,778 sq ft (3,231 sq m).

• Occupancy level

- Typical Floors – 10 sq m/person of net internal area.

• Office floor dimensions

	Raised floor	Finished floor to ceiling height	Slab to slab height
Typical floors	150mm	2,750mm	3,960mm

04: INTERNAL FINISHES

• Office floors

- Fully accessible raised modular floor system consisting of 600mm x 600mm galvanised steel encased tiles mounted on adjustable pedestals.
- Metal tile access ceiling (750x750mm grid).
- Painted plasterboard walls.

• Toilets

- Stone floor tiles and skirtings.
- Painted plasterboard.
- Laminate panel cubicle walls and doors.
- Terrazzo vanity tops.
- Painted plasterboard ceilings with metal access ceiling tiles where required.

• Entrance hall and lift lobbies

- Stone flooring.
- Travertine feature wall to entrance lobby.
- Colour laminated glass walls to GF and 1st floor lift lobbies.
- Painted plasterboard walls to lift lobbies 2nd to 7th floors.
- Painted plasterboard ceilings to all.

05: MECHANICAL SERVICES

- **Offices** – Air conditioning provided by 2 and 4 pipe ceiling void mounted fan coil units.

- **Reception** – Main entrance air conditioned by an all air system with perimeter trench heating and over door heaters.

- **Main lift lobbies** – Lift lobbies and atrium balconies are cooled by fan coil units.

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

• Provision for future tenants

- Spare riser capacity from basement to roof located in the north core.
- Structural soft spot in the perimeter of the north core for future services riser from second floor to roof.
- Structural soft spot located adjacent to the south core for future services riser.
- Plant space at basement and at roof level.
- Connections and space for an additional chiller, cooling tower and pumps to offer a N+1 level of redundancy.
- 500 KW additional cooling capacity incorporated into central plant.
- Chilled water flow and return connection provided in each riser on floors ground-seventh inclusive.
- Condenser water flow and return connections at roof level.
- Additional fan coil unit manifold pipework connections. - Gas connection and space for future meter.
- Up to four 54mm dia waste, ASP and 22mm dia BCWS connections at each floor level.
- 2 x 100mm dia drain and 2 x BCWS connections at high level basement.

• Design parameters

External design conditions:
Summer: 29°C db / 21°C wb
Winter: -4°C saturated

• Internal design conditions (Heating)

Office: 22°C ± 2.0°C, 40% minimum relative humidity.
Toilets: 18°C minimum. No humidity control.
Plantrooms/ Storage: 15°C minimum. No humidity control.
Lift lobby/ Atrium Balcony: 21°C ± 2°C. No direct humidity control.
Entrance lobby: 18°C minimum.

• Internal design conditions (Cooling)

Offices: 22°C ± 2.0°C, 40% minimum relative humidity.
Entrance lobby: 25°C maximum air temperature.
Lift lobby/Atrium balcony: 23°C ± 2°C. No direct humidity control.

Outline specification

• Occupation rate for cooling

Office floors (ground, levels 3-7 only): 1 person per 10m²
Optional Trading floors (1&2 only): 1 person per 7m².

• Localised trading area provision

150 w/m² small power cooling.

• Heat gain from small power

25 w/m².

• Heat gain from lighting

12 w/m².

• Outside supply air rate

16 l/s per person based on an occupancy of 1 person/10m² on all floors.

• Ventilation rates

Toilets: 10 Air changes per hour (make up via office transfer).

Car park: 6 Air changes per hour (make up via ramp).

Loading Bay: 6 Air changes per hour (make up via louvre system).

Basement: min 1.5 Air changes per hour.

• Smoke extract

Office: 6 Air changes per hour.

Atrium: 6 Air changes per hour.

Car Park: 10 Air changes per hour.

Basement / Storage: Via car park exhaust system.

Noise rating: External:

• Internal acoustic criteria

- Offices NR38.

- Atrium NR40.

- Reception NR40.

- Toilets NR45.

- Storage NR45.

- Car park/Plant areas NR50.

• Lifts

6 x Passenger lifts x 21 persons (1,600 kg). Speed 1.6m/s.

- 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.

2 x Fire Fighter lifts x 8 person (630 kg). Speed 1.6m/s.

- Fire-fighters lifts serving between the FSAL and the furthest floor within 60 seconds.

1 x Goods lifts x 33 person (2,500 kg) serving all areas.

1 x Goods lift x 33 person (2,500 kg) goods shuttle lift serving basement and ground floor.

06: ELECTRICAL SERVICES

• Design parameters

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

- Lighting 12 W/m²

- Small Power 25 W/m²

- Mechanical power for fan coils 5 W/m²

- Additional Riser Capacity Allowance 10 W/m²

• High voltage installation

- 2 incoming EDF 11KV supplies each rated at 100% of the building load.

- 2 dual fed LV switchboards, each fed by two 11,000/400-volt transformers.

• Low voltage installation

- 2 low voltage switchboards will be dual fed, which in the event of the loss of a single transformer, the remaining unit will maintain 100% of the switchboard load, utilising fan assisted cooling.

- The LV switchboards comply with BS EN 60439-1 with a minimum ingress protection of IP31 and will be Form 4 Type 6 tested.

- 4 rising bus-bars for tenants use.

• Lighting

Office lighting

- Recessed luminaire designed around the requirements of LG7 based on a lighting level of 400 lux.

• Power

- Distribution boards provided for tenants small power in each riser.

• Emergency generator:

- A single 500kVA (standby) low voltage packaged, containerised generator will be provided at roof level 8 for life safety use only.

- The packaged generator will have an integral day tank, which will give sufficient storage for 8 hours operation.

- Space provision for tenants generators has been made at roof level 8 (3 No 2MVA high voltage 11kV packaged containerised machines).

• Voice data:

- Two incoming communications rooms will be provided within the basement served with multiple entry ducts (12 No 150mmØ).

- Four comms risers will be provided with cable basket for the future installation of communications and IT cabling.

- The incoming communications rooms and comms risers will be linked by a cable basket at basement level.

• Fire detection and voice evacuation

- Systems compliant with BS5839, EN54 and the requirements of the Local Building Control and Fire Officer plus section 20 of the Building Regulations.

- Category L2 fire alarm system.

- Phased evacuation voice alarm system.

• Security

- Close circuit television surveillance provided to all main public areas and entrances, loading bay 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 the entrance lobby reception desk.

- Equipment located within the fire command centre in the basement within a dedicated equipment rack.