

## 1. Occupancy

Means of escape: 8m<sup>2</sup> / person.

Occupation density: 1 person / 8m<sup>2</sup>.

Lift Provision: 3 no. passenger lifts and 1 goods lift (ground to basement only).

Sanitary provision: 1 person / 8m<sup>2</sup> on a floor by floor basis.

## 2. Standard of finishes

Ground, 1st, 2nd, 4th, 5th Floor: Shell and core with raised access floor and fully lined walls and soffits.

3rd Floor: CAT A+ with fully exposed services.

6th, 7th Floor: CAT A with exposed services.

## 3. Floor Loadings

	Imposed Load	Partition Load
Basement	4.0 kN/m <sup>2</sup>	—
Ground	3.0 kN/m <sup>2</sup>	—
First – Sixth	2.5 kN/m <sup>2</sup>	1.0 kN/m <sup>2</sup>
Seventh	2.4 kN/m <sup>2</sup>	0.2 kN/m <sup>2</sup>
Roof terrace	4.0 kN/m <sup>2</sup>	—
Roof – plant space	5.0 kN/m <sup>2</sup>	—
Roof – inaccessible	0.75 kN/m <sup>2</sup>	—

Permanent and dead loads have been calculated from the known self-weight of the materials used in construction.

The following superimposed loads have been allowed for in the design: Typical office (ceiling, services and raised floor) = 0.85 kN/m<sup>2</sup>. Roof terrace superimposed: 3.45 kN/m<sup>2</sup>. Roof inaccessible superimposed: 1.45 kN/m<sup>2</sup>.

## 4. Clear Ceiling Heights

Floor to ceiling height with minimum services zone 250mm. Measure from assumed FFL to the notional ceiling height, this equates to underside of raft or underside of lowest M&E for floors with exposed services.

- G: 2,710mm.
- 01: 2,670mm.
- 02: 2,545mm.
- 03: 2,201mm (exposed services).
- 04: 2,573mm.
- 05: 2,890mm.
- 06: 2,040mm (exposed services).
- 07: 2,674mm (exposed services).

## 5. Structure

The proposed development comprises the following:

- Relocation of stability cores.
- Reconstruction of roof structure.
- Column removal.
- Strengthening of existing columns and foundations.
- Level reception access off Keeley Street.

### New structure:

The roof is constructed from Cross Laminated Timber (CLT) panels supported by steel beams. CLT panels also form the first floor slab, and therefore visible in the exposed reception area. All other infills across the floor plates are concrete on metal deck supported by steel beams.

The new stability core (Keeley Street stair core and Wild Court lift core) is formed from reinforced concrete walls.

Existing columns are strengthened with steel plates welded to the existing flanges to increase their capacity where the load increases.

## 6. Internal Office Finishes

Walls: Painted plasterboard throughout.

Floors: 2-7

1st Floor: a combination of installed floor boxes and 600x600m fully accessible medium duty raised access floor.

Ceilings:

Floor: G, 1, 2, 4, 5

- Painted plasterboard soffit.

Floor: 3

- Painted plasterboard soffit. Exposed services.

Floor: 6

- Painted plasterboard soffit. Exposed services.

Floor: 7

- Exposed Visible Residential Quality Cross Laminated Timber (CLT) polished finish. Exposed services.

Windows:

- New double glazed PPC aluminium fixed windows.
- New double glazed PPC aluminium curtain walling to 6th and 7th floor mansard.

Floor: 3,6,7

- Suspended linear direct / indirect lighting in the exposed ceiling areas.

Doors: Flush factory finish lacquered doors.

Skirting: Planted painted MDF skirting.

## 7. Toilet Provision and Finishes

Ground & 6th Floor: Unisex Superloos.

Floors 1,2,3,4,5,7 - separate male and female WC's.

1 no. accessible WC on each floor.

1 no. accessible WC on roof terrace.

Wall hung white vitreous china WC pans with pipework and cisterns concealed behind IPS panels.

Walls: Painted plasterboard, tiles to walls over vanity units.

Floors: Porcelain tiles.

Ceilings: Emulsion painted plasterboard.

Hand Basins: Corian slab vanity top with integrated sinks.

Lighting: Flush recessed LED circular downlighters / linear fittings.

Mirrors: Wall mounted mirror over each WHB with concealed fixings and LED feature lighting behind.

Cubicles: Matte black laminate finish, full height.

Black PVD coated stainless steel ironmongery and accessories.

## 8. Cycle and Changing Facilities

*Male changing room:*

- 4 showers.
- 1 WCs.
- 75 lockers.
- 3 wash hand basins.
- 2 hair dryers.

*Female changing room:*

- 4 showers.
- 1 WCs.
- 57 lockers.
- 3 wash hand basins.
- 2 hair dryers.

1 no. accessible shower and WC.

Communal drying room.

61 cycle spaces with integrated maintenance stand.

## 9. Lifts

3 no. passenger lifts, each with capacity of 17 person providing access to all office floors. Specific lift link to the basement commuter facilities and roof terrace.

1 no. Goods lift with capacity of 8 person serving Basement Floor to Ground Floor.

*Lift performance:*

Passenger lifts: To BCO 2019 requirements.

Occupancy: 1 person per 8m<sup>2</sup> with 80% attendance.

Handling capacity: 12% of building population in a 5 minute period with 85% up, 10% down, 5% interfloor for up-peak morning demand.

13% of building population in a 5 minute period with 45% up, 45% down, 10% interfloor for lunchtime peak demand.

Average waiting time      Up-peak average waiting time (AWT) at the main entrance of no more than 25 seconds. An AWT of 30 seconds is acceptable where average time to destination is less than 80 seconds.

Lunchtime average waiting time at the main entrance of no more than 40 seconds.

Average time to destination      Up-peak average time to destination (ATTD) of no more than 90 seconds. An ATTD of 110 seconds is acceptable where the AWT is less than 25 seconds.

Loading capacity factor: ≤ 80%.

Car loading per person: 0.21m<sup>2</sup>.

Design Life: As CIBSE Guides

- Lift Size / Weight: 3 x 17-person (1,275kg) passenger lifts.
- Speed: 2.0m/s.

*Goods Lift:*

- Lift Size / Weight: 1 x 17-person (1,275kg) dual purpose passenger/ goods lift integrated into main passenger lift group & equipped with padded drapes to protect car interior finishes. Serving all building floors.
- 1 x 8-person (630kg) dual purpose passenger / goods lift. Serving building floors B & G.

*Speed:*

- 2.0m/s – 17-person passenger / goods lift.
- 1.0m/ – 8-person passenger / goods lift.

## 10. Communal Roof Terrace

Approx. 122 sq m terrace with outdoor lighting and planting plus power, water and drainage provision for events.

## 11. Mechanical Installations

*Cooling and Heating:*

Office Area: simultaneous heating and comfort cooling variable refrigerant flow (VRF) air conditioning system. Separate systems per office floor.

Reception:

- Simultaneous heating and comfort cooling variable refrigerant flow (VRF) air conditioning flow.
- Local electric reception desk heater.
- Electric overdoor heater.
- Electric underfloor heating.

Circulation areas:

- Wall mounted electric panel heaters.

WCs:

- Wall mounted electric panel heaters.

Showers & Drying Room:

- Wall mounted electric panel heaters.

## 12. Design Parameters

### External Temperatures

Summer: 30°C dry bulb 22°C wet bulb.

Winter: -4°C saturated.

### Internal Temperatures:

Office: Winter 20°C +/-2°C. Summer: 24°C +/-2°C.

Reception: Winter 20°C +/-2°C. Summer 24°C +/-2°C.

Toilets: Winter 18°C min. Summer: No maximum temperature control.

Corridors, lobbies & Staircases: Winter: 18°C min. Summer: No maximum temperature control.

### Ventilation Rates

Office: 12 litres/s/person + 10% fresh air supply (8m<sup>2</sup>/person).

WCs & Showers: 10 air changes per hour extract.

Bike store ventilation rate: 2 air changes per hour extract.

### Design Cooling Loads

Office occupancy level: 1 person per 8 m<sup>2</sup> net office area.

Small power: 23 W/m<sup>2</sup> for office area terminal units.

14 W/m<sup>2</sup> for central plant.

Lighting: 6 W/m<sup>2</sup> office areas.

### Occupants:

Sensible: 80 W per person.

Latent: 60 W per person.

### Infiltration:

Summer: 0.2 air changes per hour.

Winter: 0.2 air changes per hour.

Reception: 1.0 air changes per hour.

### External Noise Design Criteria:

In compliance with the existing planning condition

- Offices: NR38.
- Reception: NR40.
- Toilets: NR45.
- Staircases and circulation: NR40.

### Water Storage and Quality

Cold water storage: 15 litres storage per person/day

Occupancy level (for water storage) 1 person per 10m<sup>2</sup> net office area.

Domestic water pressure: To achieve minimum 1 bar pressure from outlets.

Hot water storage temp: 60°C.

Hot water distribution temp: 55°C .

Hot water outlet temperature: 43°C (controlled via TMV3 valves).

Pasteurisation temperature: 70°C for 1 hour.

### Illumination levels:

Lighting Levels: As CIBSE Lighting Guide, BCO Guide 2019 to include the following:

- Office areas: 300–500 lux 400 lux maintained recommended based upon the following reflectance's:
  - Ceilings: 70% (Standard white tiles). >50 lux maintained ave Target 100 lux.
  - Walls: 60% (Painted light colour). >75 lux maintained ave Target 150 lux.
  - Floors: 30% (Light carpet /light reflective desks).

Other internal areas: As CIBSE Lighting Guide.

### Small Power Loads

Workplace Density: 1 person per 8m<sup>2</sup> net office area.

- Office Areas: 23W/m<sup>2</sup> on floor peak small power load 10m<sup>2</sup> per person effective density assuming 80% utilisation 20 W/m<sup>2</sup> on floor allowance at risers.

### Life Safety

Emergency Lighting: In accordance with BS 5266.

Lighting Controls: Automatic occupancy control with daylight linking at the perimeter. Zonal control.

Lightning Protection: In accordance with BS EN 62305 Parts 1, 2 & 3.

Fire Alarm System: In accordance with BS 5839, Part 1, Category L2 with simultaneous evacuation.