

# Specification

## 58,417 SQ.FT OF LEED GOLD OFFICE SPACE

The Hampstead Building is targeting LEED Gold Certification.

Secure cyclist parking and shower facilities promoting sustainable transport.

Proximity to Luas and Dublin Bus.

Detailed energy modelling to validate the proposed energy cost savings.

7,500 sq.ft of green roof minimising heat island effect.

Energy efficient infrastructure to serve each tenant space.

Energy efficient LED lighting with sophisticated controls to minimise electrical consumption.

Comprehensive commissioning and testing to ensure energy efficient operation.

Low water usage sanitary fittings.



### OCCUPANCY

#### Means of Escape

3 no. means of escape  
2 no. means of escape if floor is subdivided.

#### Internal Climate

1 person per 8 m<sup>2</sup>.

#### Lift Provision

1 person per 8 m<sup>2</sup>.

#### Toilets

1 person per 10 sq.m as per BCO recommendations and provisions as per BS6564-1 2014.

### PLANNING MODULE

6 m square generally throughout.

### STRUCTURAL GRID

8.2 m x 7.8 m and 8.8 m x 7.8 m.

### FLOOR LOADINGS

#### Office Floors

Dead Load - 9.0 kN/m<sup>2</sup>,  
Live Load - 5.0 kN/m<sup>2</sup>  
(including partitions).

#### Lift Lobby and Toilet Areas

Dead Load - 9.0 kN/m<sup>2</sup>,  
Live Load - 5.0 kN/m<sup>2</sup>  
(including partitions).

### Plant Rooms

Dead Load - 9.4 kN/m<sup>2</sup>,  
Live Load - 7.5 kN/m<sup>2</sup>.

### Area of Roof Outside Plant Areas Including External Plant Area

Dead Load - 13.5 kN/m<sup>2</sup>,  
Live Load - 4.0 kN/m<sup>2</sup>.

### Car Park

Podium - Dead Load - 14.5 kN/m<sup>2</sup>,  
Live Load - 4.0 kN/m<sup>2</sup>,  
Fire tender wheel load - 50kN/m<sup>2</sup>,  
Basement - Dead Load - 10.8 kN/m<sup>2</sup>,  
Live Load - 2.5 kN/m<sup>2</sup>.

### FLOOR HEIGHTS

Reception and ground floor  
Floor-to-ceiling: 6,420 mm  
Office slab-to-slab: 3,720 mm  
Office floor-to-ceiling: 2,700 mm  
Raised floor zone: 150 mm  
Ceiling zone: 550 mm

### STRUCTURE

Typical reinforced concrete flat slab roof and floor structure supported on RC columns on pad foundations. The basement consists of a tanked reinforced concrete slab and wall with a series of reinforced concrete beams throughout, as required.

The stability of the building is provided by reinforced concrete stairwells and lift shaft/central core area. The external plant is screened using cladding fixed to a steel structure and a raised deck will be provided to house the external steelwork in these zones.

### EXTERNAL FINISHES

#### Façade

Structural Silicone Glazed System/  
Polished Recon Stone Cladding.

#### External Landscaped Areas

Mixed species shrub, grass and fern planting, and selected stone paving.

#### Roof

Extensive Sedum Roof.

#### Main Entrance Doors

Automatic Bi-parting sliding doors.

#### U - Values

Flat roof:	0.18
External walls:	0.21
Ground/Exposed floors:	0.21
Curtain wall glazing:	1.40
Insulation curtain wall spandrel panels:	1.00

#### Airtightness

Target = 3m<sup>3</sup>/m<sup>2</sup>/hr @ 50Pa

# Specification

## INTERNAL OFFICE FINISHES

### Floors

Raised Access Floor, Screw down, 600 mm x 600 mm, Galvanised steel encapsulated board core.

### Ceilings

"E" 600 mm x 600 mm ceiling tile, E15 suspended grid system. Or E.A. Proprietary transition strips/ trims to be used at junctions with plasterboard.

### Columns

Encased in plasterboard and skimmed and painted.

## RECEPTION

### Walls and Floors

Tiled walls and floors in building entrance.

### Ceilings

Suspended Metal Frame plasterboard ceiling, skimmed and painted.

### Columns

Encased in plasterboard and skimmed and painted.

## ESCAPE STAIRS

### Walls and Floors

Tiled walls and floors in escape stair areas.

### Ceilings

Skim and paint.

### Balustrades

Painted mild steel handrails and balustrade.

## TOILETS

### Walls and Floors

Tiled walls and floors in toilets.

### Ceilings

Gyproc Moisture Resistant plasterboard skimmed and painted.

### Doors

Toilet Cubicle System.

### Sanitary Fittings

Concept wall mounted WC pan Strada 50 cm rectangular Washbasin 1 hole mixer, classic single lever. Profile 21 waterless urinal bowl.

## BUILDING MAINTENANCE

### Facade Window Cleaning

MEWP/ Telescopic brush.

## BASEMENT FACILITIES & PARKING

Car park spaces	x	85
Bicycle spaces	x	29
Lockers	x	48
Showers	x	7

## MECHANICAL INSTALLATION

### Design Criteria

Winter Temperature:  
Outside  
-5°C db 100% Saturated.

Open Plan Office  
21-23°C No RH Control.

Toilets  
19-21°C No RH Control.

General Circulation Area  
19-21°C No RH Control.

Comms  
23+ -2°C No RH Control.

Summer Temperature:  
Outside  
27°C db 20°C wb.

Open Plan Office  
22-25°C No RH Control.

Comms  
23+ -2°C No RH Control.

### Internal Heat Gains

People:  
75 w per person sensible.  
55 w per person latent.

Lighting:  
12 w/m<sup>2</sup>.

Equipment:  
25 w/m<sup>2</sup>.

### Acoustic Levels

Open Plan Office: NR 35  
Toilet Area: NR 40  
Kitchen Area: NR 45  
Plant Room: NR 50

### Air Quality

Rooms, such as toilets, will be put in under negative pressure towards surrounding room spaces, i.e. more exhaust air than make-up air. Exhaust discharge points at roof level.

### Operating Periods

The building will operate on a 24 hour/7 days a week basis. The office areas will be assumed to operate on a 12 hour day with extended operation on a floor-by-floor basis achievable through the BMS. Computer and individual hub rooms will operate on a 24 hour cooling basis, utilising their own tenant fit-out cooling plant (riser space and plant space provided for such tenant plant). Riser provision also allowed for fully operable staff canteen/kitchen adjacent to stair core no. 2. These services will be provided as part of a tenant fit-out. This may also require additional cooling outside of normal hours.

# Specification

## Heating System

High efficiency gas fired condensing boilers will be installed to generate low temperature hot water (LTHW) to provide heating for the following applications:

- Radiant panels within the lift lobbies and accessible WC
- Domestic hot water generation
- Radiators in toilet cores
- Door curtain

The LTHW will be distributed via dedicated heating circuits pumped from the main central plant room on the roof. A dedicated radiator system will be installed for back of house areas including toilets and lift lobbies. All radiators will be of the low water content, low surface temperature type. As well as LTHW radiators, electric radiators will be installed to provide heating to the escape corridors.

## Cooling System

Open Plan Office:  
High efficiency VRF System with designated Roof plant area and Tenant riser space.

Landlord Comms Room:  
High efficiency wall mounted AC units (duty/standby). These units will be complete with drip trays and leak detection.

## Air-Conditioning System

The internal air conditioning units will generally be above ceiling concealed VRF Units ducted to high induction diffusers. Return air grilles in the ceiling will allow for a return path. The fresh air will be introduced through two central air handling units located at roof level. The central AHUs will include high efficiency thermal wheels as an energy saving device. The air will be ducted in vertical risers to each floor, at each core.

## Water Services

24 hour water storage will be provided based on 45L per person. Potable water will be available to each floor for tenant fit-out canteen/kitchen facilities and suitable for connection of Zip Taps (by others).

## Fire Services

First aid and firefighting will be provided in accordance with building regulation requirements. Portable fire extinguishers will be positioned throughout the development at all exit routes. Fire hose reels will be provided in the basement.

## Sanitary

The soils and waste installation will be in uPVC.

## Sustainability Target

The building is targeting LEED Gold accreditation and Building Energy Rating (BER) of B1.

## ELECTRICAL

### Design Criteria

The building will be designed on the basis of 1 workstation per 8m<sup>2</sup>. A minimum total power requirement of 87 w/m<sup>2</sup> is to be available for building use with a minimum of 40 w/m<sup>2</sup> available on each floor for general services, desk power and lighting.

### Incoming Power Supply

As part of this development, a new ESB MV substation will be provided. This substation will provide new LV supplies for both the tenants and the landlord. The new incoming supply has spare allowances designed into the connection to allow the supply to be increased by 20%. The LV switchroom will be designed to accommodate a main distribution board suitable for multi tenancy metering, provision for surge protection equipment with an allocation of 20% for new equipment.

## Switchgear and Distribution Boards

Distribution Boards will have multi-functional energy meters which will record the overall energy consumption for each distribution board. In addition to this, each service on all distribution boards will be recorded separately. These services include lighting, general services and small power. All new sub-distribution boards are to be Form 2 Type 2, in accordance with IS EN 60439 and of metal construction. A series of local landlord distribution boards will be provided within risers in landlord lobbies to supply landlord services throughout the building. Single distribution boards will be provided per each lettable space in separate electrical risers on each floor. 20% spare circuit breakers will be provided on all switchgear and distribution boards.

## Standby Power Supply

Allowances have been made for the connection of back-up power generation to any and all tenant distribution boards if required/desired.

# Specification

## **Cable Distribution Containment Systems**

The containment system will include for distribution of low voltage, extra low voltage and life safety systems as per ETCI rules and HSA regulations. Cabling will be routed through dedicated electrical vertical risers on cable ladder, tray, trunking or basket depending on the type of service.

Internal diverse vertical routes will be provided for all ICT cabling.

All containment systems will have a spare capacity of 20%.

## **General and Emergency Lighting**

The lighting installation in landlord areas will be designed according to the current EN 12464, CIBSE Lighting Guides and SLL Code for Lighting.

A fully addressable digital lighting control and management system will be installed for the building to provide a comprehensive facility to test and manage the operation of the lighting systems including daylighting dimming, occupancy detection and time scheduling.

The system shall be the KNX DALI type with din rail mounted control modules/gateways installed in each tenant distribution board. Each tenant and the landlord system will

be wired/controlled independently per floor with the facility for each tenant to install a dedicated front end control PC. The landlord system will be provided with a front end control PC to control the landlord areas.

Lights in toilet and core areas will be energy efficient LED recessed down lighters to CIBSE recommended levels.

The emergency lighting installation will comply with IS3217 2013. Emergency lighting will be provided via battery packs contained within the fittings. In the event of power failure these battery packs will power the fittings for 3 hours and will provide adequate light for safe escape. An emergency lighting central test system will be installed.

## **Protective Installation Systems**

**Fire Alarm System:**  
The fire alarm system will comply with IS3218 2013. The system will be designed for L2 coverage. The fire alarm system will be fully addressable and capable of interfacing with other systems.

**Security System:**  
The security installation will consist of internal CCTV. In addition, intruder alarm and access control systems will be installed.

**Communication:**  
Multiple Telecom Providers are available in the area. 3 separate telecom provider connections are entering the development.

## **Earthing and Bonding**

An earthing installation will be provided in accordance with ETCI requirements.

## **Testing and Commissioning**

All systems will be commissioned in accordance with CIBSE and BSRIA codes, including controls and Building Management Systems.

## **LIFTS**

All lifts to comply with current EN 81. Lift provision/installation will be in accordance with CIBSE guidelines and BCO Guide for Offices recommendations.

Lift Lobby = 2 no. 1,000kg 1.6 m/s lifts providing a 4-star rating under the CIBSE rating scheme.

Average Waiting Time (AWT) – a 4-star rating results in passenger lift average waiting time less than 25 seconds.

## **PLANT SPACE & RISER STRATEGY**

### **Minimum Service Zones**

Floor Void: 150 mm incl. Tile.  
Ceiling Void: 550 mm incl. Tile.

### **Vertical Distribution**

Vertical service risers will have spare capacity to accommodate specialist tenant services such as but not limited to kitchen/restaurant area.

### **Tenants' Plant Space**

Plant space provision within screened plant area on roof for future tenant plant e.g. comms room AC units.