

SPECIFICATION

SCOPE OF WORK

The works will comprise the conversion of the existing 5-storey Farmiloe Building along with creation of a new 6-storey building accommodating retail at part ground floors, basement office and ancillary spaces along with 5 upper floors of office use.

The office floors will be fitted out to a high quality "Category A" standard, including raised floors. Floor-to-ceiling glazing links the historic character of the existing building and contemporary new office space to the vibrant Farringdon area. The office entrance will be from St John Street and leads to a dramatic 5-storey atrium spanning the length of the building from entrance to the lift core. 2 staircases and 3 generous passenger lifts will provide vertical circulation to the upper floors. Cyclist facilities and showers will be found in the basement, and exterior terraces at 3rd and 4th floor will provide private amenity space.

STRUCTURE

Structural Frame

All horizontal and vertical structure in the proposed building will be constructed with in-situ cast reinforced concrete and extends from basement to roof level. Steel-beam link bridges with composite concrete floors will connect the proposed superstructure with the existing building at the upper levels.

BUILDING WORKS

Common Part Areas

External Fabric

External elevations will be in natural stone to St John Street and brickwork to the side and rear elevations.

Glazing

Solar control double glazed units, set within aluminium frames with a natural bronze colour finish are proposed within the new building, with glazing to be replaced throughout to the existing building.

Main Reception

The reception will be finished with Limestone Flooring, 100mm wide in varying lengths, random laid and a brick feature wall. Other walls will be plasterboard, painted white, a fair-faced concrete wall near the lift core with exposed structural columns and floor edges, and a plasterboard ceiling with lacquered acoustic ceiling fins.

Lifts

3 x 13-person passenger lifts

Speed – minimum 1.0 m/s

The performance of the lifts will exceed BCO recommendations.

Lift cars will have a white metal ceiling, back-painted glass cladding to walls, and stone tile flooring to match entrance lobby.

Stairs

Stairs will have exposed concrete walls and soffits.

Steel balustrades will support steel handrails.

Doors and Ironmongery

All circulation doors will be solid core feature veneered with hardwood lipping and have high quality brushed stainless steel ironmongery.

WCs

Superloos are to be provided with full-height partition walls giving acoustic privacy. The floors will be finished in terrazzo. Cast concrete vanity units with integral wash hand basins will be provided with full-width mirrors above.

High quality vitreous china WC and fittings and brushed stainless steel accessories.

Lighting and services will be suspended from an exposed concrete soffit.

Roof Terraces

3 accessible paved roof terraces will be provided at the 3rd and 4th floors along with landscaping incorporated at the 4th floor level.

Cleaners' Cupboards

Cleaners' cupboards will have vinyl flooring and wall-hung cleaners' sinks.

Bicycle Storage

Bicycle store facilities for 120 bicycles will be provided at basement level, together with 116 locker / drying cupboards.

Showers

10 showers and 2 WCs will be provided at basement level, adjacent to the bicycle storage area. Each shower cubicle will include a generous shower tray, shelf and a fold-down bench.

Disabled Access

Disabled WCs will be provided to each floor in accordance with statutory requirements. An additional disabled shower cubicle is to be included at basement level.

An automated access door will be provided to the main office reception.

OFFICE FLOORS

Ceilings

Office ceilings to the new building will comprise exposed finished concrete. To the existing building a combination of existing feature retained ceilings and new plasterboard ceilings are to be provided.

Lighting

Surface-mounted metal conduits with wire hung LG7 compliant LED modular light fittings will be provided.

Floors

Raised floors will be proprietary metal encapsulated tiles on adhesive-fixed steel pedestals except to part ground and part 1st floors of the existing building, where provision for data and electrics will be provided through the existing floors.

The overall floor void will be 150 mm, including floor tile to raised floor areas.

Walls

Perimeter walls will be generally plasterboard and painted white to the new building, with generally retained brickwork proposed to be painted white to the existing building. Columns will have a fair-faced concrete finish.

DESIGN CRITERIA

Design Parameters

For the new building, planning grids are to be 1,500 mm x 1,500 mm.

The office space finished floor-to-ceiling height 2.55 m – 2.7 m. Raised floor void – 150 mm (including floor tile).

Occupancy

The WC occupancy condition will be 1:10 sq m.

Building Services 1:8 sq m (net internal area).

Means of Escape 1:6 sq m (net internal area).

MECHANICAL SERVICES

Design Criteria

The following design criteria has been utilised in the design of the base building services.

External Design Criteria

Summer = 28°C db 19°C wb

Winter = -4°C

Internal Design Criteria

Internal Offices (for purposes of main plant sizing)

Temperature:

Summer 24°Cdb +/- 2°C

Winter 22°Cdb +/- 2°C

Humidity:

No RH Control

Toilet Areas:

Summer supply air-cooled to 22°C at AHU.

Winter min 19°C

No humidity control

Staircase: 18°C (min)

Reception:

Summer 24°Cdb +/- 2°C Winter 21°Cdb +/- 2°C

No humidity control.

Temperature and humidity tolerances quoted are control tolerances only. Plant and equipment to be designed to maintain specified temperatures.

OFFICE AIR-CONDITIONING LOADS

Lighting: 8W/m²

Equipment: 15W/m² at 1 person per 10m² (energy efficient operation using coolth store FCU flow & return 13°C/16°C).

FCUs can accommodate 25W/m² for 1 person per 8m² if operating directly from chiller (FCU flow & return 8°C/11°C).

Occupancy one person per 10m² with provision to increase to one person per 8m².

Heat Gain From People

75 W/p Sensible

55 W/p Latent

Ventilation Rates

Offices: 12 l/s/person at 1 person per 8m²

Toilets: 10 ac/hr

Occupancy Period

Plant noise emissions will be designed to allow roof-mounted fan coil units to operate at night to allow storage of free night cooling.

Internal Noise Levels

Offices: NR38

Toilets: NR45

Reception: NR45

Corridors and lobbies: NR40

Filtration Standard

Supply air: F7

Extract air: F5

AIR-CONDITIONING

The offices will be temperature controlled by local wall-mounted fan coil units. The new extension will benefit from thermal mass in the exposed concrete soffit and coupling the supply air with the thermal mass of the concrete slab through cast-in supply ductwork.

Cooling to the fan coil units will be supplied either from the coolth store in the basement or from the chiller. LTHW will be supplied from the boilers, or from the buffer vessels linked to the chiller/heat pump.

System Operating Parameters:

Primary chilled water
8°C Flow 13°C return

Secondary Chilled Water

13°C Flow 16°C return (from coolth store)
8°C Flow 11°C return (from chiller)

Primary LTHW

80°C Flow 60°C return

Secondary LTHW

45°C Flow 35°C return

Office Fresh Air Supply

20°C Summer 20°C Winter

Fan coil units will be controlled manually or automatically, via local temperature sensors and controllers. The fan coil unit system will be suitable for adaptation in the future by means of localised wall sensors or user adjustable thermostats if required by tenants as part of their fit out.

LIGHTING

Lighting will be designed in accordance with the requirements of CIBSE Code for Interior Lighting to allow tenants to comply with the CIBSE lighting Guide LG7.

The following criteria will have been adopted at the relevant working plane height:

Office areas open plan – 300 lux average

Entrance hall – 300 lux average

Toilets – 100 lux average

Stairs (at Tread Level) – 100-150 lux

Plantrooms – 150-200 lux average

Emergency lighting – 0.5 lux average for office areas

1.0 lux minimum for defined escape routes

POWER SUPPLY INFRASTRUCTURE

There will be a UKPN substation in the basement of the new extension, with metered supply to each tenant.

Electrical Services

Electrical Design Criteria

The following allowances have been used to calculate the overall building load, main switchgear ratings etc:

Service: Peak Allowance

Tenant's lighting: 12W/m²

Tenant's power: 25W/m²

Tenant's future SER loads: 20% spare electrical capacity allowed in each Tenants Distribution Board and cabling

Tenant's Power

3 electrical risers will be provided per floor, each equipped with Sectionalised Lighting and Small Power Distribution Boards with separate meters.

An integrated MID approved energy metering system will also be provided.

The system will cover all utilities and load centres in accordance with Building Regulations Part L.

Voice & Data

3 combined Electrical and Data risers will be provided with containment systems.

TELECOMS

There will be a frame room in the basement with access to all floors via risers in the front Victorian, rear Victorian and the new build core.

Security Systems

A proximity card reader will provide access to the office entrance with containment for the system to be extended to the office floors. CCTV coverage will be provided to the perimeter of the building and entrance area.

Fire Alarm System

Fire alarm system will be installed in accordance with BS 5839 – Category L1.

The building is to be designed as a simultaneous evacuation, with two main escape staircases exiting onto St John Street.

Cold Water Service

A potable water storage tank will be provided at basement level.

A boosted pressurised water supply will serve sanitary appliances and basement showers.

Cisterns will be provided with internal overflows in accordance with the Water Supply (Water Fittings) Regulations.

Insulation will be provided for frost protection and to guard against the build up of temperature to all cold water pipes and storage cisterns.

Tenants will be connected to boosted water supply pipes within risers for tenants' tea stations at each floor level.

Hot Water Service

Hot water will be provided to toilet areas and basement showers by centralised hot water calorifiers served by the central boiler plant/heat pump buffer vessels.

Soil and Waste Installation

Vertical stacks will be cast iron with UPVC wastes and vent pipes.

Stub waste connections are to be provided for future tea stations at each floor level in the riser.

Environmental Features

BREEAM – The works will be designed to achieve a BREEAM 2008 rating of 'Excellent' in the existing building and BREEAM 2011 rating of 'Excellent' in the new extension.

Sub-metering will allow monitoring of energy and water consumption.

Facilities for cyclists – 120 bicycle racks, 116 lockers and 11 showers.

The new extension has been designed to operate in either naturally ventilated mode with openable windows, or be mechanically ventilated and cooled.

The heating and cooling loads for the new extension will be reduced by incorporating exposed thermal mass into the design, coupling the ventilation system to the thermal mass by passing ventilation air through ducts cast into the concrete slab and exposing the thermal mass of the slab soffit in the office spaces.

The new extension will have a high performance thermal fabric, and the thermal fabric of the existing building will be upgraded to improve its efficiency.

Both the existing building and the new extension will be fitted with efficient building services. Heating and cooling loads across the development will be reduced by providing heat and coolth stores in the basement to store heat that would otherwise be rejected from the chillers and coolth taken from free night cooling.

Green roofs; Five green roofs will be provided over four floors and planted with enhanced sedum with a paved perimeter.

Floor Loadings

The new and existing building will provide floor loadings of 3.5 kN/sq m live load plus 1.0 kN/sq m partition load for all office floors. The accessible roof has been designed for 1.5 kN/sq m live load.

Retail, restaurant and circulation space at ground will have a live load allowance of 5.0 kN/sq m.

Plant in the basement areas will have a loading capacity of 7.5 kN/sq m, whereas on the roof it is 4.5 kN/sq m. Retail and general storage areas in the basement will have an allowance of 2.4 kN/sq m per metre height based on the floor to soffit height.

RESTORATION FINISHES

All existing brickwork to office areas and gallery atrium are to be sympathetically restored, cleaned and repointed. The retained atrium brickwork will be sympathetically restored and cleaned to retain the natural finish. Atrium windows are to be replaced with steel frame single glazed heritage windows.

Timber panels are to be restored and oil-finished or repainted. The atrium gantry bridges are replaced at first floor level and restored on the other floors. The atrium floor will have dark finished end-cut timber flooring.

The primary structural steelwork to the roof of the atrium and top floor office areas are to be retained and repainted. The existing atrium glazing is to be replaced with double-glazed roof glazing. New double-glazed, north-facing rooflights are to be installed to the 4th floor office areas.