

# TECHNICAL SPECIFICATION



## DEVELOPMENT DESCRIPTION

The Bond sits on Queen Street in Central Glasgow, comprising an existing multi-storey office building with ground floor atrium and basement car park. Providing tenant office space across ground to seventh floors, the refurbishment of the existing office building is across basement, ground and first to second floors.

The first and second floors provide multi-let tenancy CAT-A open office accommodation with exposed services. The ground floor atrium will be refreshed to create new flexible breakout areas and the basement will have new changing and bike storage facilities added as part of the works.



## BASIS OF DESIGN

This report outlines the standard of the proposed Mechanical, Electrical and Public Health services for the refurbishment project works at the The Bond, 55 Queen Street, Glasgow.



## LIFT

Refurbishment of the lift car finishes provide new modern appearance.



## OFFICE

Where office floors are refurbished guidance from British Council of Offices Guide to Specification 2019 has been adopted.

The refurbished office floor plates shall achieve EPC 'A' rating and the whole building will be upgraded to EPC 'B' rating.



## TEMPERATURE AND HUMIDITY

### External Design Conditions

Summer	30°C db, 20°C wb
Winter	-4°C dB, 100% RH

### Internal Design Conditions

Office Areas	Winter	21°C
	Summer	23°C
Stairwells	Winter	20°C
	Summer	None
Corridors	Winter	20°C
	Summer	None
Toilets	Winter	20°C
	Summer	None

### Note:

Where 'None' stated, denotes no comfort cooling provided.



## INTERNAL PLANT LOADINGS

Lighting	12 W/m <sup>2</sup>
Occupancy	90W/person(sensible)
Occupancy	50W/person (latent)
Small Power	30W/m <sup>2</sup>
Solar Gain	100W/m <sup>2</sup>
Occupancy	10m <sup>2</sup> per person

### Note:

The above values are intended to provide robust back-stop values. Actual heating and cooling loads shall be determined via thermal modelling. Final plant selection shall be based on calculated loads.



## VENTILATION RATES

Office Areas	12 l/s per person
Toilets	6 air changes/hr
Entrance	Natural Ventilation
Stores	2-3 air changes/hr



## NOISE

### Criteria for Building Services Noise:

Office Areas	NR 38
Toilets / Stairs	NR 40
Roof Plant	NR 50



## INFILTRATION

Office	0.25ac/h (summer)
Office	0.5ac/h (winter)
Office infiltration rates based on 4.5m perimeter zone	

Entrance	1.0ac/h (summer)
Entrance	1.0ac/h (winter)



## PUBLIC HEALTH SERVICES

The basis of the design has been taken from the following documentation:

- British Council for Offices: Guide to Specification 2014
- CIBSE Guide and Technical Memoranda
- Local Statutory Authority Requirements
- Supply Authority Regulations

Generally speaking, the public health services comprise of the following:

- Water efficient appliances including dual flush WCs and spray nozzle sensor taps.
- Water saving features including automatic water solenoid shut-off valves and leak detection.
- Efficient instantaneous electric hot water heaters (no storage) in each Tenant toilet block.

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## LV DISTRIBUTION

Each tenant floor plate provides a 200A rated three-phase LV supply, feeding new tenant switchgear located on each floor level. Tenant floor plate LV supplies are individually metered by the tenant's chosen electricity shipper and fed via a BEMCO board arrangement in the basement landlords electrical meter room.

The tenant floor plate power supply rating is based on the following design allowances:

Mech. Plant	As Installed
Small Power	23W/m <sup>2</sup>
Lighting	10W/m <sup>2</sup>

## ILLUMINATION LEVELS – OFFICES

The lighting installation is designed and installed as per the recommendations of the SLL lighting code, BS EN1246 and SLL Lighting Guide 7, to provide the following average maintained illuminance levels (allowing for lamp ageing and maintenance factors for luminaires and room surfaces):

Office Areas	300-500 lux
Toilets	200 lux
Stores	100 lux

Suspended uplight/downlight linear architectural luminaires provide the general lighting solution within the exposed services installation areas throughout the tenant office floor plates luminaires are provided with integral lighting control system sensors.

The lighting within the open plan office floor plates is controlled by an intelligent lighting control system which can individually address each luminaire and provide full emergency monitoring and testing of all emergency luminaries.

Lighting control system equipment include multi-sensor lighting control devices and manual switches providing presence, absence and dimming daylight control functionality.

## FIRE SERVICES

The existing dry risers in the escape core in the building shall be retained and reused.

The existing analogue addressable fire detection and alarm detection system has been retained and modified in the building projects works areas. Existing fire alarm system control panels have been retained and reused. New fire alarm system devices and system wiring have been provided throughout the project works areas to provide L1 coverage inline with the requirements of BS5839-1.

Detection coverage have been provided to all internal areas and within ceiling voids in excess of 800mm in all project refurbishment works areas.

Sufficient spare capacity has been built into the system loop wiring capacity, for future tenant fit out works.

All new fire detection and alarm cabling is CWZ fire resistant to the enhanced requirements of BS 5839-1.

## VERTICAL TRANSPORTATION

The existing 2 scenic passenger lifts, twin observation passenger lifts and single observation passenger lift in the building has been retained and reused. Lifts car finishes has been updated as part of the project works.

A new enclosed platform lift has been installed to provide DDA compliant vertical transportation between the ground and basement floor levels as part of the project works.

A new platform lift is provided in the ground floor main entrance lobby as part of the project works.

## ELECTRIC VEHICLE CHARGING POINTS

3 No new 7kW electrical vehicle charging points are provided in the basement car park, as part of the project refurbishment works.