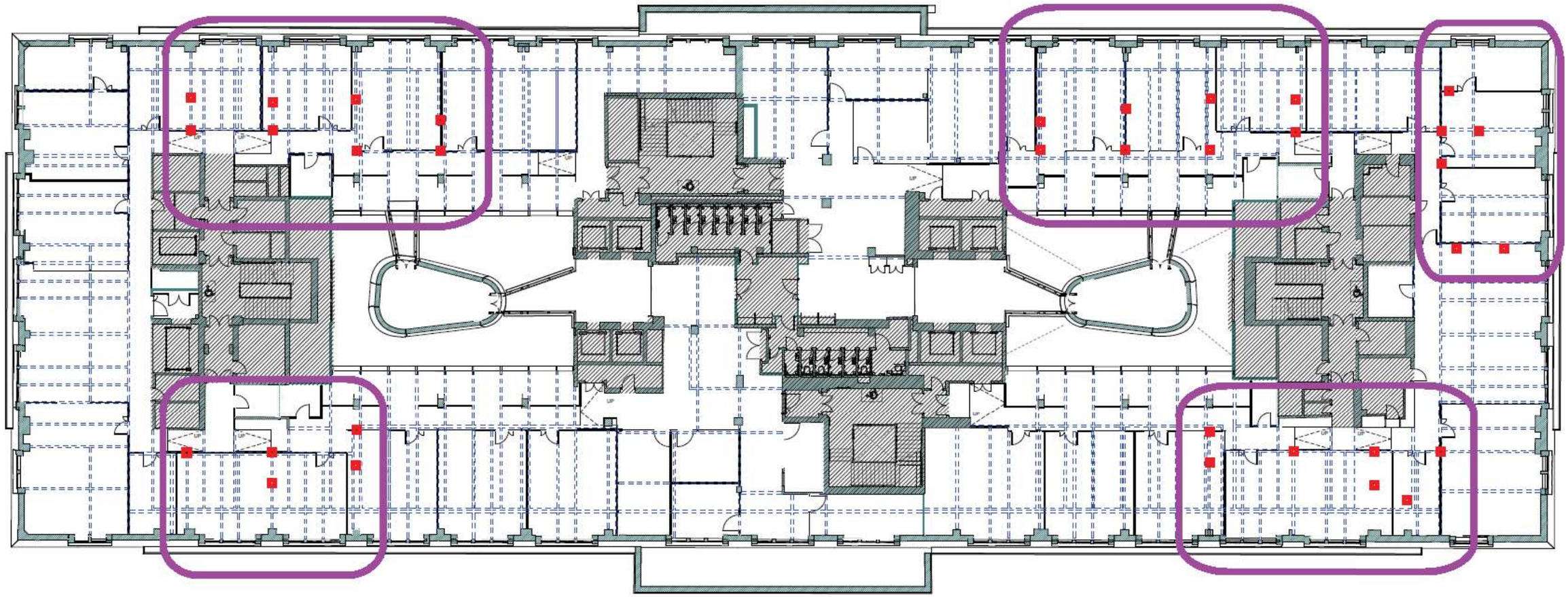
Fit Out - Anti Vibration Posts - Levels 1 & 6



Level 6 - The areas highlighted with in purple require additional anti-vibration posts to be installed to enable the laboratories within these areas to fall within the required response factor requirements.

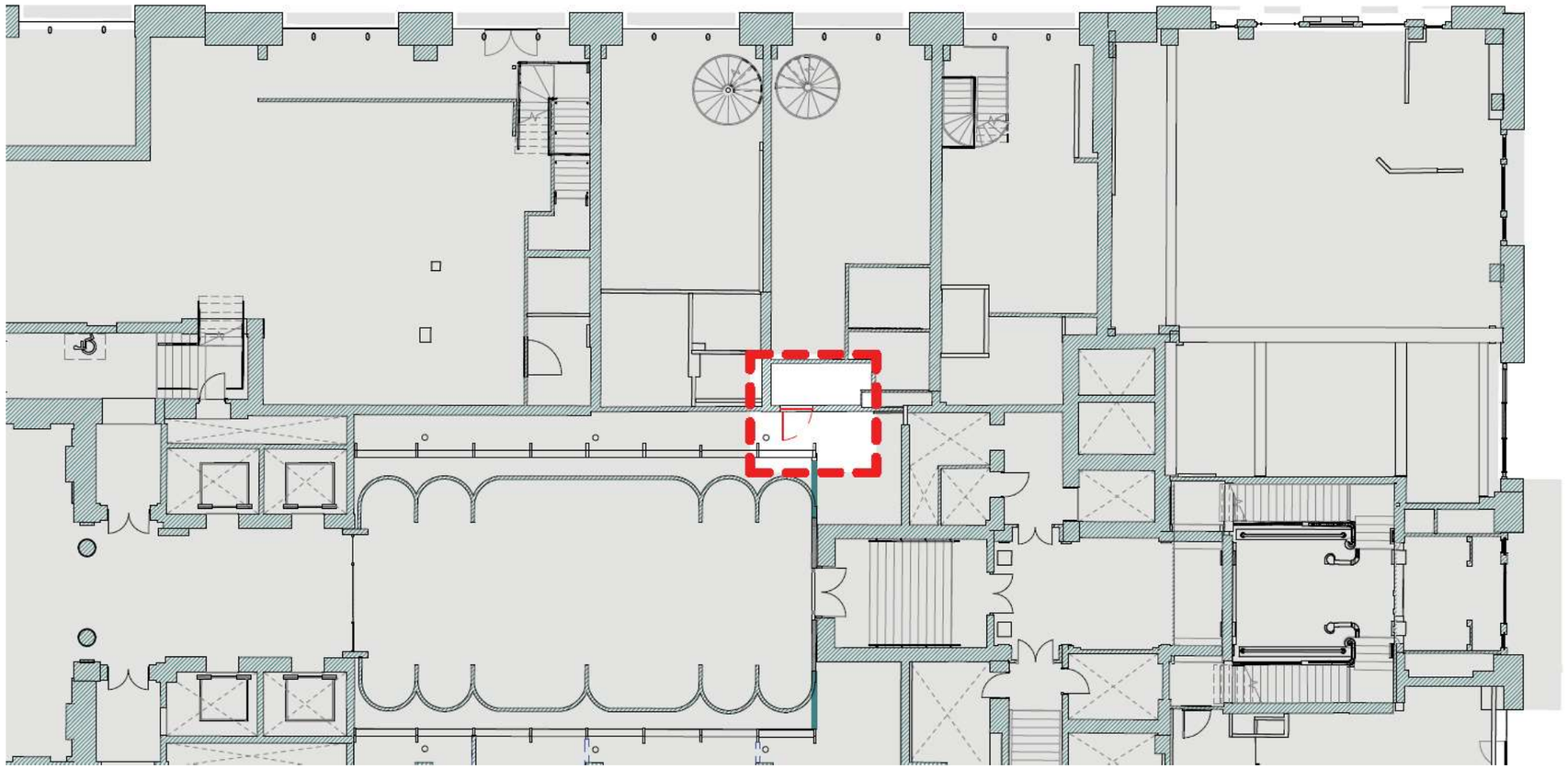
The red squares – Indicates the approximate proposed location of anti-vibration posts, size as follows. Level 1: RHS 150x100mm, Level 6: RHS 120x80mm. Allowance to be made for stud and plasterboard surround for each column to the full height of the floor to ceiling space.

Note: Anti-vibration posts are required to through-bolt to the soffit below due to restrictions in fixing depth and also a head fixing above.

3.4 Retail Unit 3 - Maintenance Access to the South Atrium

Part of the fit out works require MEP installations and maintenance access to an area to the South Atrium. At present this area does not have any access to enable these works to be carried out. Following careful consideration an opening is proposed within the space known as Retail Unit 3.

The plan opposite is an extract of the submitted drawing VTH-CWA-ZZ-UG-DR-A-0325. The wall that we proposed to create an opening within is a block work wall. Existing MEP within this area that serves Unit 3 will be modified to allow for access.

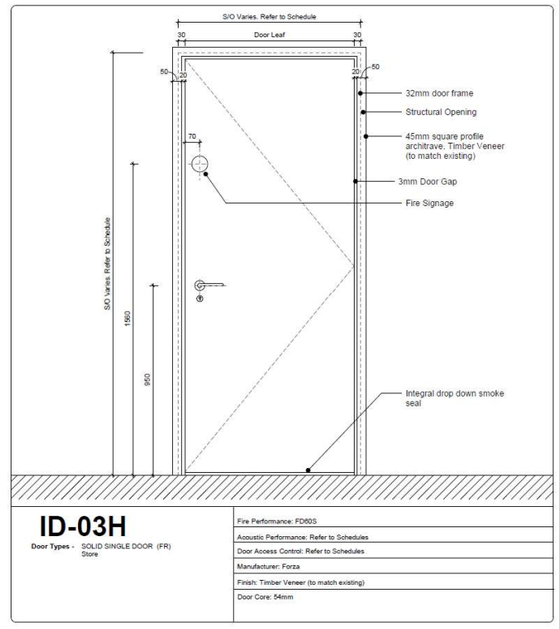


Retail Unit 3 - Maintenance Access to the South Atrium

The above photograph shows the space to the rear of Unit 3 at UGF level. The MEP equipment will be modified to allow for access to the new proposed access door to be created in the block wall through to the south atrium.

The above photograph shows the space to the rear of Unit 3 at UGF level. The red outline showing where the door is proposed to be located

The above photograph shows the space to the rear of Unit 3 at UGF level. The stud work wall to the right is part of the current arrangement of the mezzanine level of the Retail Unit. This space is currently used as a service void with access for maintenance.



The above drawing shows the type of door proposed for the opening. This has been used for other risers within the building that have previously been approved.

4.0 MEP Report

1.0 INTRODUCTION

1.1 General

This is a summary of the proposed mechanical, electrical and public health services for the CAT-B installation at Victoria House located at Bloomsbury, London. These works are a variation to the previously consented works although the principles remain the same.

This document provides a summary of the mechanical, electrical and plumbing drawings, specifications and schedules submitted as part of the CAT-B Listed Building Consent (LBC) application.

The CAT B works proposed are for the fit-out of the following areas:

- Part Upper Ground Floor Level. Accesses from the North Lift area, incorporating the former offices of Michael Page. This area consists of the 'octagon space', adjacent office space, stores and staircase to Level 1.
- Basement Level B2, Store number 4. Works at B2 are additions to a storage area with upgrades required and associated access control to existing doors. The storage area is currently used to store flooring materials from the 2021 works
- Part Upper Ground Floor Level. Accessed from the North Lift area, incorporating the former offices of Michael Page. This area consists of the 'octagon space', adjacent office space, stores and staircase to Level 1. This area remains as an office / reception area in the proposed CAT B fit-out. No Laboratories are located in this area.
- Levels 1, 5 and 6 are to be a CAT B fit-out for Laboratories, Write up, offices and ancillary spaces.

For further information please refer to the Corstorphine + Wright DAS document

2.0 Mechanical Services

Each of the proposed mechanical services work for the proposed CAT-B fit-out are described below:

2.1 Mechanical Ventilation

- Ducted mechanical ventilation to all Lab spaces to achieve a minimum of 6ac/h.
- Supply and extract ductwork to all Lab spaces to include new VAV boxes which will be commissioned and operate in conjunction with new fume exhaust ductwork.
- Ducted mechanical ventilation to all Write-Up and Offices spaces to achieve minimum of 10 litres/second/person at an occupancy density of 1 person/10m^2.
- Ducted mechanical ventilation to any new Tea Prep and Breakout spaces to achieve minimum of 4-6ac/h.
- All supply and extract ventilation ductwork within the Labs shall be concealed within the suspended ceiling void and thermally insulated with preformed section of foil-faced insulation.
- All supply and extract ventilation ductwork in the Write-Up and Circulation areas is exposed and thermally insulated with pre-formed sections of foil-faced insulation.
- Ductwork within Lab areas shall terminate with suspended ceiling diffusers.
- Any ductwork passing through Escape zones shall include smoke dampers where required.
- Any ductwork passing through fire rated construction including cavity barriers shall include fire dampers where required.

2.2 Heating and Cooling

- Four pipe heating and cooling concealed chassis type fan coil units to all Lab spaces with new water side controls.
- Four pipe heating and cooling exposed cassette type fan coil units to all Write-Up and Office spaces with new water-side controls.
- All heating and pipework to Labs shall be concealed within the suspended ceiling void and thermally insulated with preformed section of foil-faced insulation.
- All heating and pipework to Write-Up and Office spaces shall be exposed and thermally insulated with preformed section of foil-faced insulation
- Supplementary electric heating is required to improve the thermal comfort in the North Atrium.

2.3 Exhaust for Fume Cupboards

- Ducted fume exhaust will connect from these locations to the central systems with VAV box to be commissioned and operate in conjunction general room ventilation.

2.4 Microbiological Safety Cabinets

- All planned locations for microbiological safety cabinets shall include 13A wall socket for future power provision.

2.5 Lab Gases

- It is proposed Level 1 will have 3 dedicated gas rooms and Levels 5 & 6 will each have 2 dedicated gas rooms where manifolds for the delivery of the following gases will be installed:
  - 1 no Carbon Dioxide
  - 1 no. specialist gas (to be determined) or compressed air
- The distribution pipework shall be designed to serve all laboratories identified as being used for laboratory fit out space, the exact quantity and location of outlets included has been clearly defined on the floor layout drawings produced. The pipelines will distribute within the ceiling void of the corridor areas. As the pipework enters each of the laboratory areas, above the door, all the gas pipelines will be terminated in the ceiling service pods with a solenoid isolation valve.
- Where labs do not include island benches, pipework to terminate below ceiling, on the wall with an isolation valve at locations shown on the drawings
- Support brackets to be installed to allow two additional pipes to run alongside two pipes being installed to provide future flexibility.
- Agreed layouts to allow for new gas bottle stores per floor; Gas bottle stores are to include a single fire rated gas bottle enclosure, fume exhaust ventilation, CO_2 and oxygen depletion sensors with audible and visual alarm indications.
- Gas alarms, sounders, controls and meters are to be included. Refer to detailed MEP Specification

3.0 Public Health Services

3.1 Water Services

- Central deionised water plant near Goods/Fireman's Lift (Agreed location on Level 01 South adjacent to Gas Bottle Store) to allow Tenant to fill flasks remotely and take back to lab spaces.
- Point of use water heaters for Lab Hygiene Stations at each lab entrance.
- Hot and cold water services to any agreed Tea Prep locations.
- All concealed hot and cold water pipework to be copper pipework thermally insulated with preformed section of foil-faced insulation.
- All exposed hot and cold water pipework to be copper pipework to

be chrome plated.
- All hot and cold water outlets to include isolation valves.
- All hot water outlets to include thermostatic mixing valves.
- All water fittings to be WRAS approved and suitable for lab environment.
- All new hot and cold water pipework to comply with the recommendation of ACoP L8 guidance.

3.2 Internal Above Ground Drainage

- Vulcathene Lab waste from Hygiene Stations at each lab entrance.
- All sinks shall be fitted with dilution recovery traps
- Condensate waste from Lab fan coil units.
- Drainage to any agreed Tea Prep locations.
- All drainage pipework to comply with the current edition of BS EN 12056.

4.0 Outline of Electrical Services

4.1 LV Power Distribution

- Connect into the rising busbar system, both non-essential and generator backed, with on floor panel boards.
- Local lighting, power and mechanical distribution boards with energy metering to each board connected to the BMS for automatic data collection.
- Three electrical distribution cupboards per floor.
- Single phase distribution boards in each laboratory space to serve to rooms small power requirements.
- Containment system to each floor with separate containment for sub-mains, lighting and power, communications and life safety systems.

4.2 Standby Power Generation

- Allowance of 30% of the small power in laboratory areas provided from the essential busbar system and backed up by the generator. Standby power sockets to be coloured to be provided throughout all laboratories

4.3 Small Power

- Power to laboratory benching to be fed from benchtop / wall mounted trunking and ceiling service pods where present.
- RCD protection to be present on sockets mounted on ceiling service pods.
- Isolators to be provided to fume cabinets locations and other items of fixed equipment.
- Cleaners' sockets to be provided to each individual space and along circulation routes, wall mounted except where a raised floor is present and then these will be recessed into the raised floor in cleaners floor boxes / grommets.
- Small power to write-up and reception spaces with raised floors to be provided from an underfloor busbar system and tap off units supplying floor boxes.
- Small power to write-up and reception spaces with no floor void to be provided via a combination of power poles, wall mounted sockets and dado trunking as suitable to the area.
- The comms rooms shall have power provided for the cabinets from suspended trunking above the cabinets.
- Power will be provided to all proprietary systems where required including, but not limited to:
  - Access Control
  - Communications Equipment
  - Interface Units

4.4 Power to Mechanical Services Systems

- Allowance of 60W/m^2 in laboratory areas.
- Allowance of 25W/m^2 in non-laboratory areas.
- Fused connection outlets to individual water heaters at laboratory sinks and in WCs.
- Power to other mechanical plant as required including FCU.

4.5 Lighting Systems

Illumination Levels (average maintained)

- Circulation areas: 100-150lux @ FFL
- Toilets: 200lux @ FFL
- Plant rooms: 200lux @ FFL
- Reception: 300lux @ FFL
- Laboratories: 500lux @ working plane (750mm AFFL), dimmable, with ability to enhance at task areas using task lighting or through controls.
  Uniformity >0.6 at task area.
  UGR 19
- Offices: 300-400lux @ working plane (750mm AFFL), with ability to enhance at task areas using task lighting (by Tenant) or through controls.
  Uniformity >0.6 at task area.
  UGR 19
- Stores: 200lux @ FFL
- Emergency Lighting: As BS 5266 requirements
- Recessed 600x600 modular fittings, IP54 rated to laboratory areas complete with DALI control gear and dimming provided by retractive manual switches located adjacent to the laboratory entrance doors. Laboratory spaces also to be fitted with presence detection.
- Emergency lighting to laboratory spaces to be provided from emergency versions of the luminaires providing the general lighting.
- Write up and reception spaces to be lit with a track system and suspended circular fittings. Fittings to be complete with DALI control gear. Write-Up spaces also to be fitted with presence detection.
- Circulation spaces to be lit using surface mounted downlight fittings and controlled via presence detection.
- Emergency lighting to write-up, reception and circulation spaces to be provided using stand-alone non-maintained luminaires.
- Emergency lighting circuits shall be connected such that they operate on a local sub-circuit failure.
- The emergency escape signage will be in accordance with bs iso 3864-1:2011, health and safety (safety signals and signs) regulation 1996 and the regulatory reform (fire safety) order 2005.
- All emergency luminaires shall have 3-hour NiMH or NiCADs battery support. A test facility shall be located adjacent to each light switch serving each individual area, and shall comprise a key switch to isolate the mains permanent feed to each circuit.
- Lighting control shall be provided throughout via an intelligent DALI2 network lighting control system. The lighting control system shall interface with the future digital smart building management system to allow full integration and control by the Building Manager.

4.6 Access Control:

- The access control system will be installed to all entrances of each Tenant demise including service entrances and the entrances to each laboratory space and server hub room.
- Internal access-controlled doors shall be interfaced to the fire detection and alarm system, such that all door locking systems will automatically release in the event of an evacuation signal.

4.7 Communication Systems

- Rising fibre cables to each floor will be terminated in new on floor comms rooms.
- Structured cabling shall be to Cat 6A UTP standard and shall emanate from the communications cabinet to each area via the dedicated containment system.
- Hardwired outlets and Wi-Fi access points shall be provided to floors being fitted out to CAT B.
- Secondary comms cabinet rooms will be formed on each of the floors being fitted out to house the data cabinets serving that floor.
- A minimum of 1No Wi-Fi point and associated twin data outlet shall be provided to each laboratory, write up and reception space. This shall be increased when this would provide insufficient coverage.
- 4No data outlets should be provided on each power pole and in each floor box.
- 2No data outlets should be provided to each laboratory bench position and 2No data outlets to each ceiling services pod.

4.8 Fire Detection and Alarm

- Warning of a fire will be broadcast via a voice alarm system (PA/VA) designed and installed in accordance with BS 5839 Part 8.
- The Fire Detection & Alarm System shall comprise the following equipment:
  - Existing Fire Alarm Panels
  - Smoke, heat and multi-criteria detectors
  - Break Glass Units
  - Visual Alert Devices
  - Wireless Devices in heritage areas
  - Concealed detector indicators
  - Loop wiring
- Fire detection will mainly be in the form of smoke or heat detectors to suit each area with manual break glass call points located on escape routes.
- The fire alarm installation shall be wired in enhanced grade zero halogen, low smoke cable which shall maintain circuit integrity when exposed to fire. The cable shall meet the requirements of enhanced category of BS 5839-1.

4.9 Accessible Toilet Call Systems

- An accessible toilet/distress alarm shall be provided to all new or refurbished accessible toilets as shown on the drawings in accordance with BS8300-1/2:20.
- All new or refurbished accessible toilets and changing facilities shall be provided with local alarm indication. Alarm signal shall also link to a remote accessible alarm panel, located at the building security control room. There is an existing call system installed within the building and this shall be extended if suitable.
- Within each accessible toilet, shower or changing room the following shall be provided:
  - Emergency pull cord with integrated reassurance indication. The alarm pull cord shall be accessible for the full height of the room and extended under tension at low level using eyelets.
  - Wall mounted over door combined sounder/visual indicator unit.
  - Local call reset button.

KJ Tait

OXFORD PROPERTIES

VICTORIA HOUSE

BLOOMSBURY SQUARE, LONDON

LISTED BUILDING CONSENT FOR CAT-B MEP FIT-OUT WORKS ON LEVELS 01, 05 & 06

REVISION P03