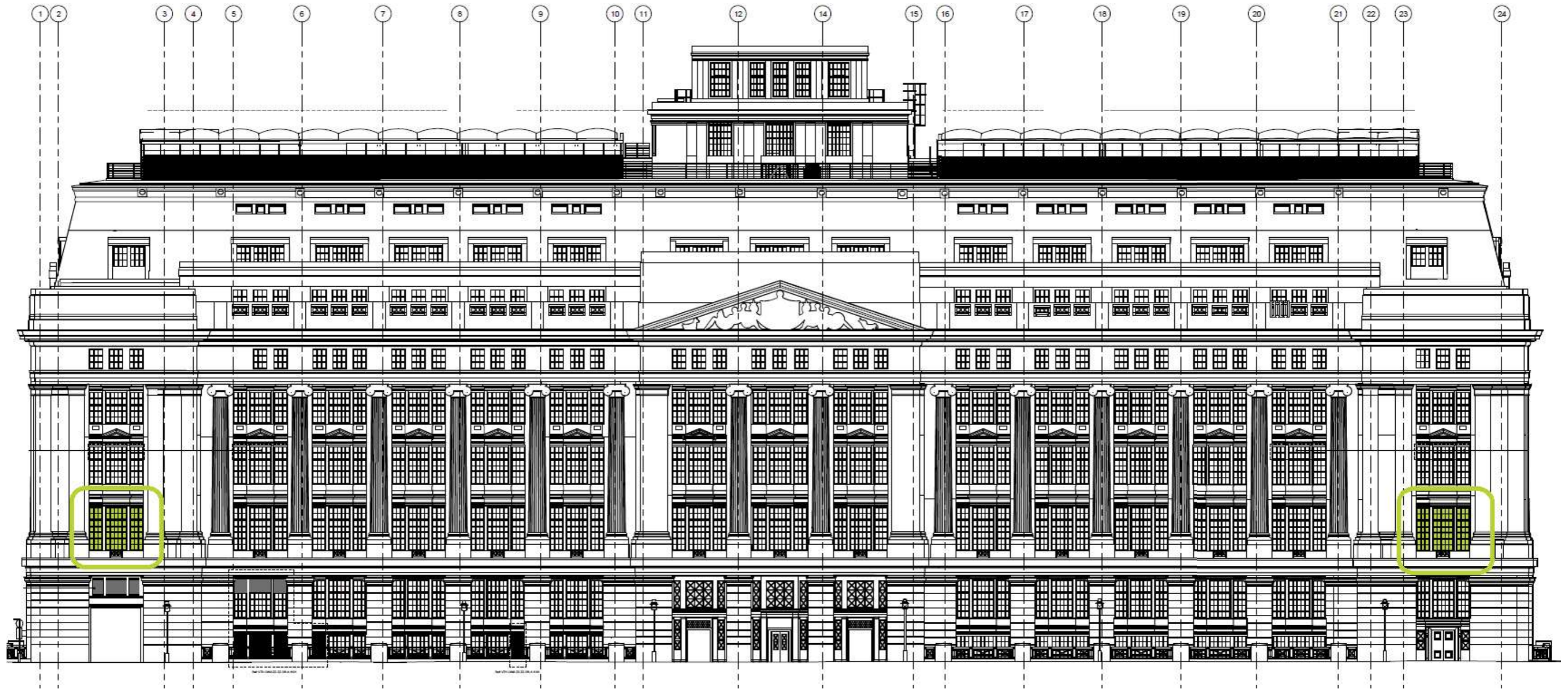
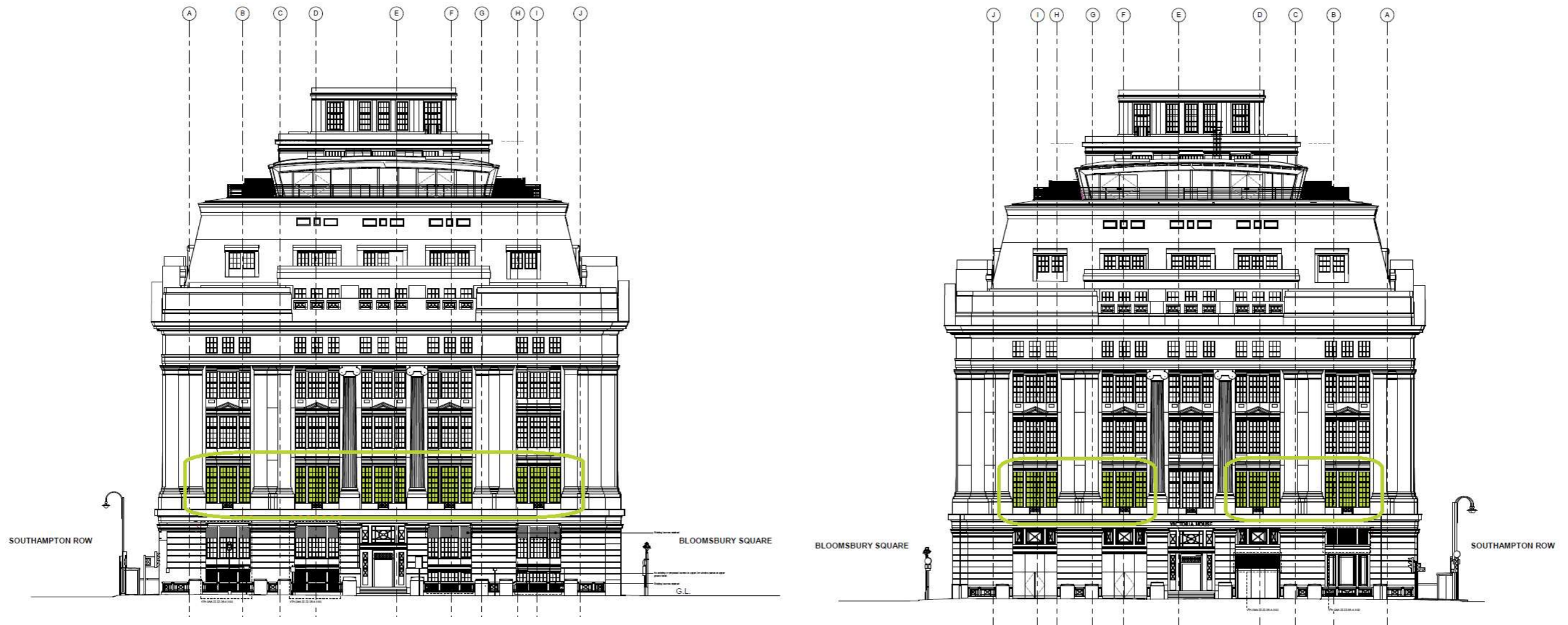


Fit Out - Secondary Glazing - Level 1, 5 & 6



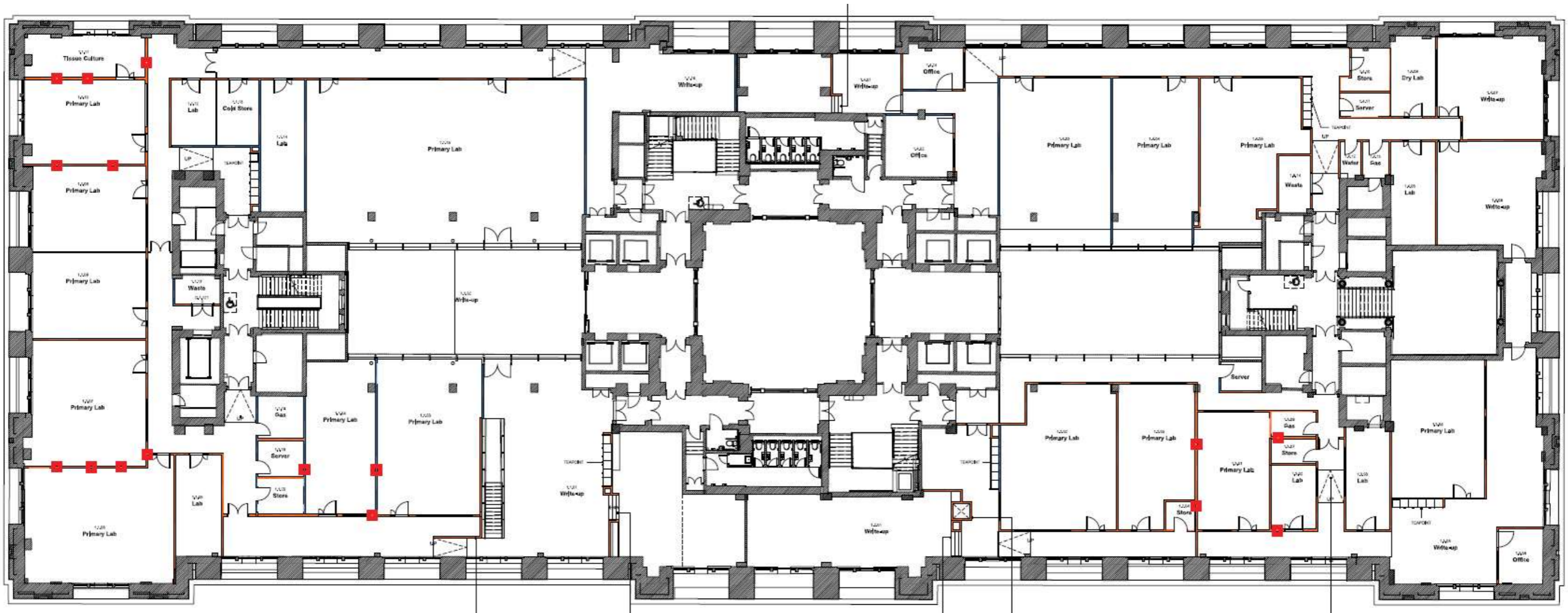
Bloomsbury Square - Windows highlighted in green requiring secondary glazing to Level 1.

Fit Out - Secondary Glazing - Level 1, 5 & 6



Bloomsbury Place (Left) & Vernon Place (Right) - Windows highlighted in green requiring secondary glazing to Level 1.

3.3 Fit Out - Anti Vibration Posts - Levels 1 & 6



As part of the design requirements for the fit out, the laboratories are required to have a floor responses factor of equal to or less than 2 over 60% of the laboratory floor area. The floors were analysed and certain laboratory areas on levels 1 and 6 did not meet these requirements. These areas are highlighted with the purple outlines. The engineers proposed an installation of columns tied into the structure at the base and head. (exact design of the details will be similar to those installed on Level 7) These columns will be bolted to the structure and could be removed at a later date should the building use change. The red squares within the image show the positions of the proposed columns.

Level 1

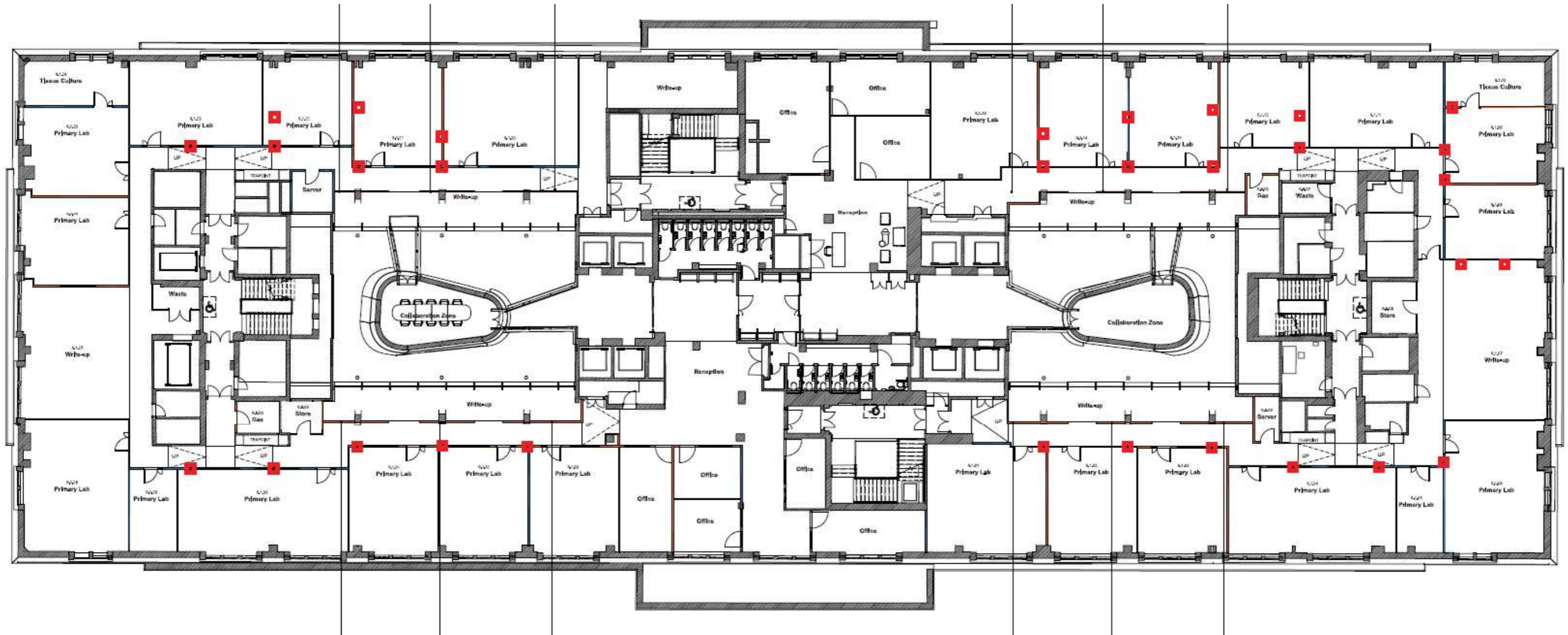
The areas highlighted with a red square require additional anti-vibration posts to be installed to enable the laboratories within these areas to fall within the required response

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. On Level 1 all the posts will be incorporated within the partition walls.

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.

Fit Out - Anti Vibration Posts - Levels 1 & 6



Level 6 - The areas highlighted with a red square require additional anti-vibration posts to be installed to enable the laboratories within these areas to fall within the required response factor requirements. Most of the posts will be located within the proposed partition walls. Though some will be exposed within the lab areas where shown.

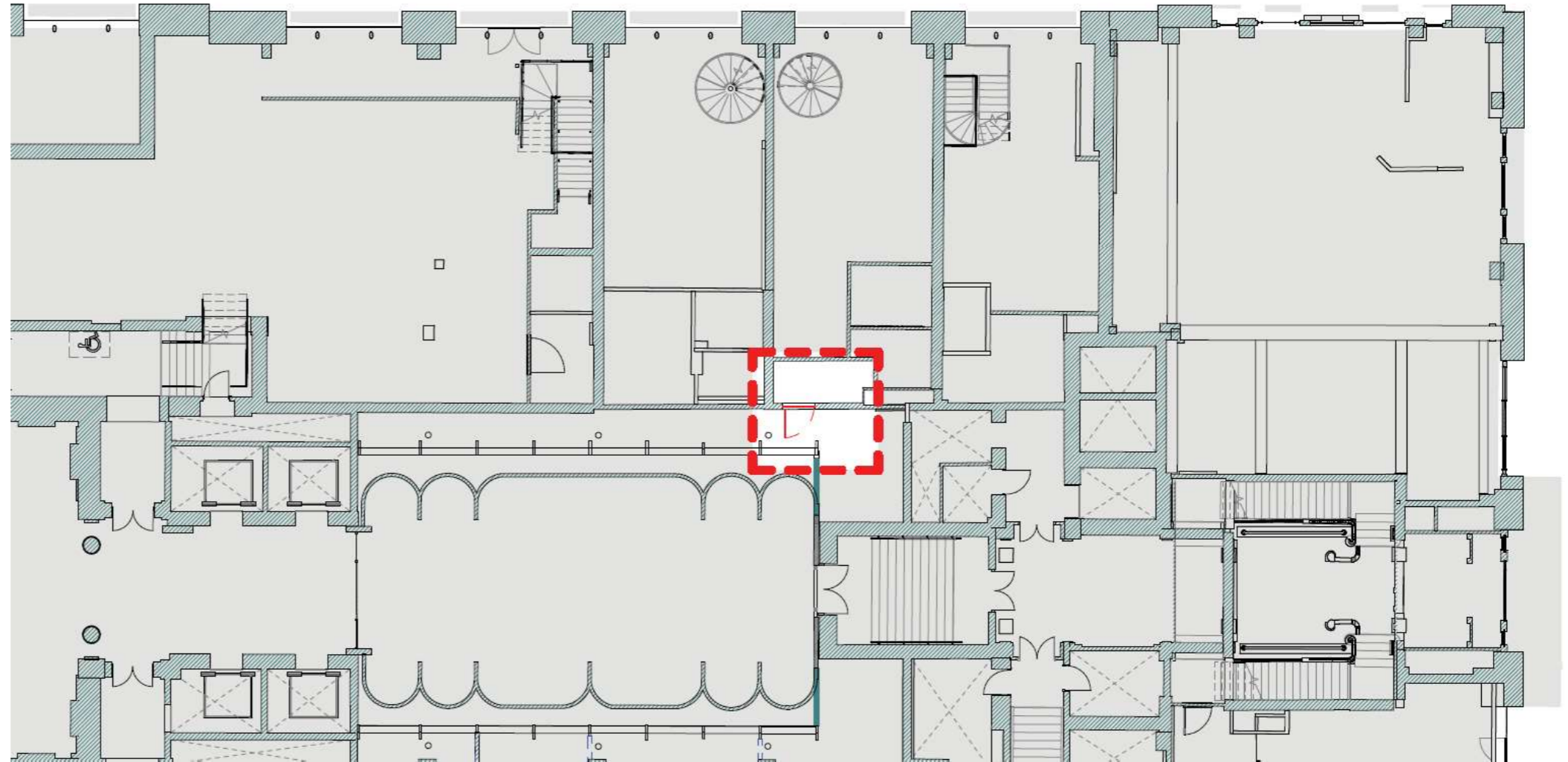
The red squares – Indicates the approximate proposed location of anti-vibration posts, size as follows. Level 1: RHS 150x100mm, Level 6: RHS 120x80mm. Allowance to be made for stud and plasterboard surround for each column to the full height of the floor to ceiling space.

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



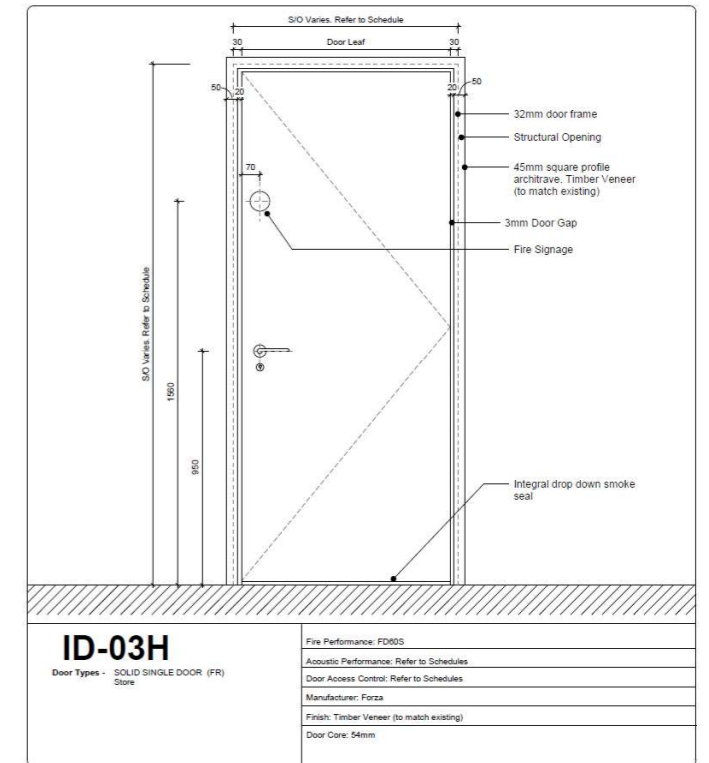
The above photograph shows the space to the rear of Unit 3 at UGF level. The MEP equipment will be modified to allow for access to the new proposed access door to be created in the block wall through to the south atrium.



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/10m².
- 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 preformed 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.

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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, CO₂ 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

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- 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

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