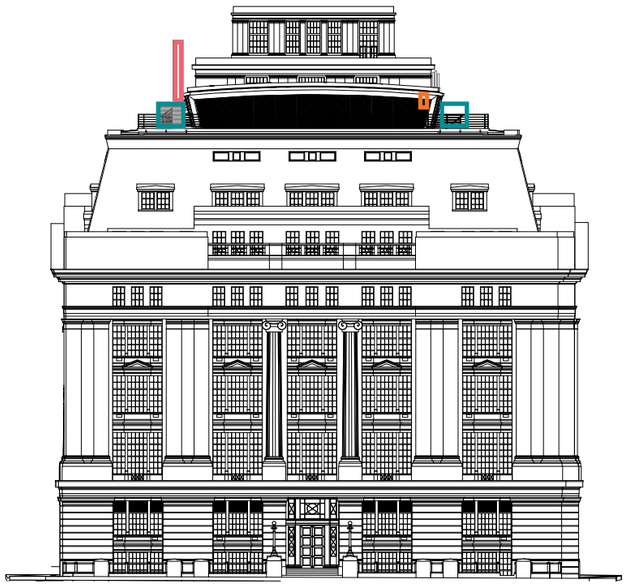
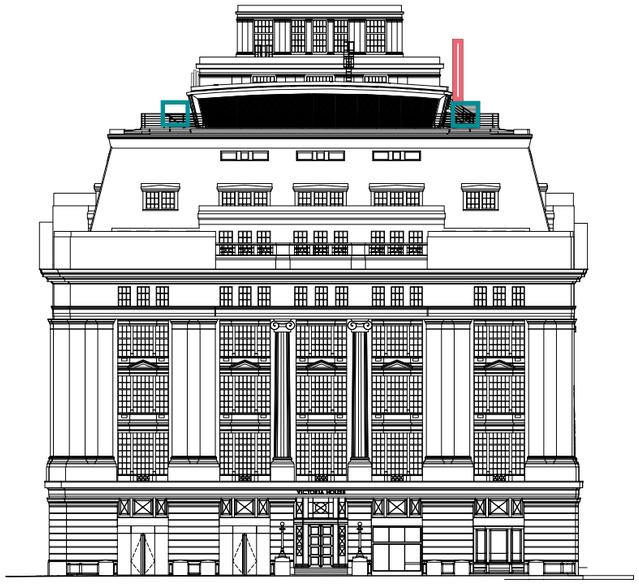
4.3 Fume Stacks

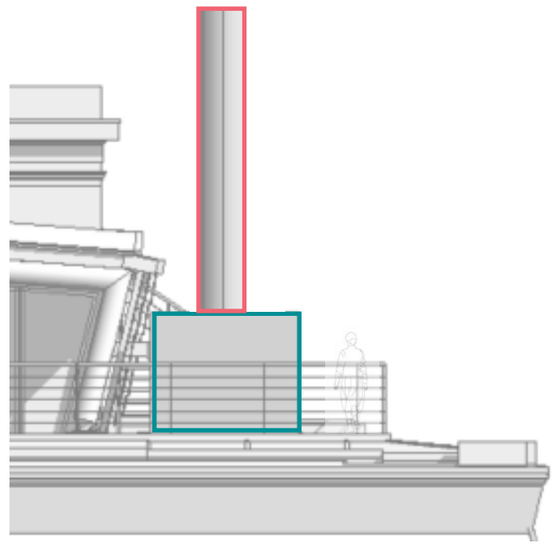
4.3.4 Option 02 - North & South Elevations



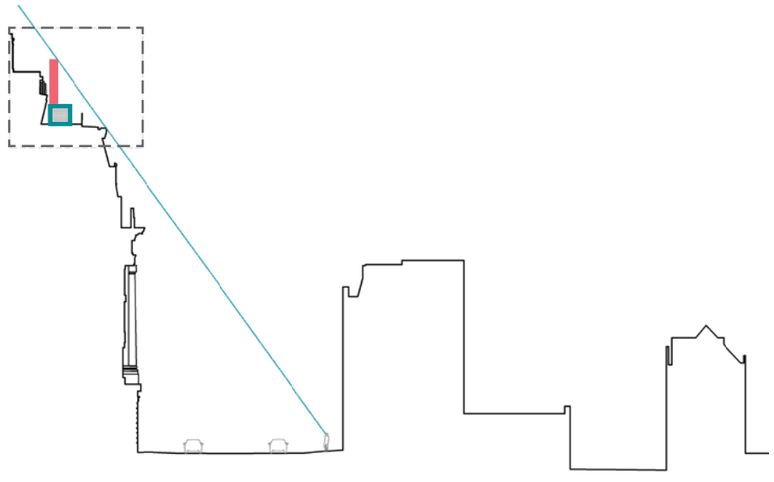
Bloomsbury Place Elevation (North)



Vernon Place Elevation (South)



Proposed Detailed Roof Section (From Vernon Place)



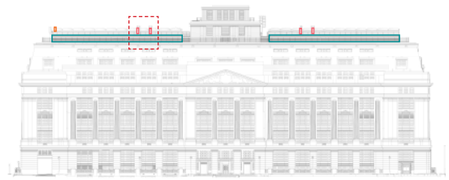
Proposed Site Section Through Southampton Row

Key

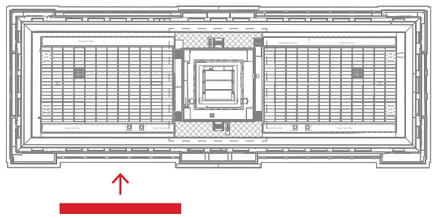
- Proposed fume exhaust stacks (Ø 800mm) 4.3m above eaves level.
- Proposed 2.1m high louvred screen.
- Existing flues to be replaced with single (ø400mm) flue.

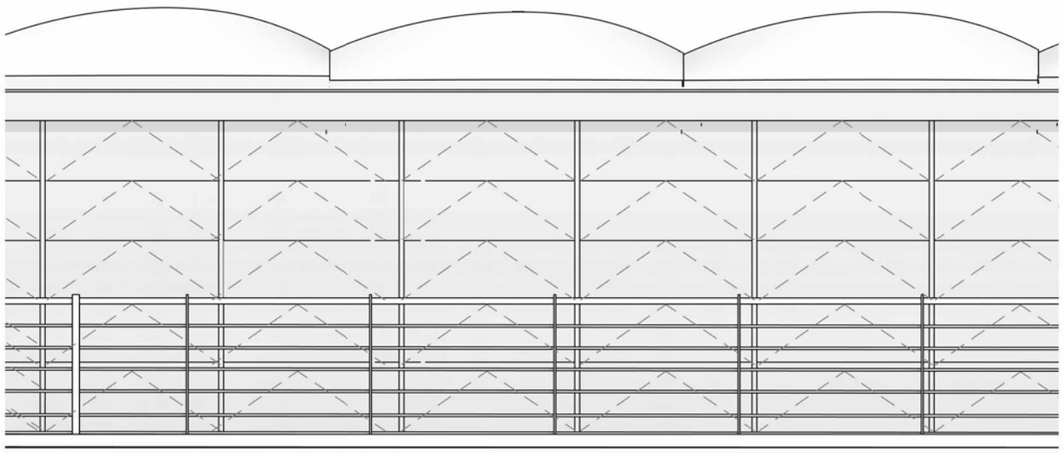
4.3 Fume Stacks

4.3.5 Fume Stack Response

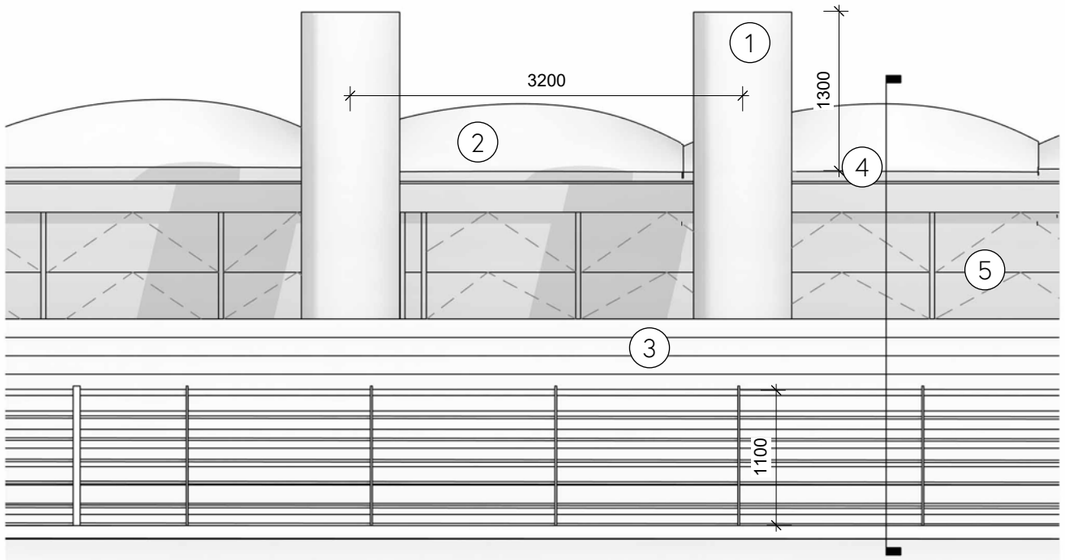


Key Elevation - Bloomsbury Square





Elevation existing



Elevation proposed

From the above studies Option 01 with fume stacks located facing Bloomsbury Square has been selected as the preferred proposal due to their lower height and overall impact on the building. The height is the minimum we can provide to ensure the safe dispersal of fumes to protect air quality and avoid air re-entering the building.

They are located behind the perimeter plant screen (covered under Section 4.4) and so will only be visible against the sky as a backdrop and so the surface finish will be proposed as a light grey and non-reflective finish.

Verified views have been prepared by Miller Hare showing the proposed fume stacks & plant screen and are included later in this document.

Key

1. Proposed Fume Stacks 1.3m above eaves
2. Existing ETFE roof beyond
3. Proposed new PPC aluminium louvred plant screen
4. Existing roof eaves line
5. Existing atrium louvred glazing beyond

4.4 Roof Plant Screens

In order to neatly screen the proposed new roof top plant zones and fume stacks, the proposal seeks plant enclosures at roof level which will be capable of hiding the plant required for the building.

The screens have been located 2m in front of the existing atrium glass walls with the intention that they are an addition to and compliment the 2002 modern intervention. The screen height has been carefully considered so it does not extend higher than the atrium roof eaves line when viewed at street level from across Bloomsbury Square.

For our initial proposals, the design team had shown a vertical screen at 2.1m high, positioned 2m in front of the existing atrium glass louvred wall We have carried out further modelling and believe that a reduction in height to 1.8m will ensure the screens do not extend higher than the atrium roof eaves line when viewed at street level from across Bloomsbury Square.

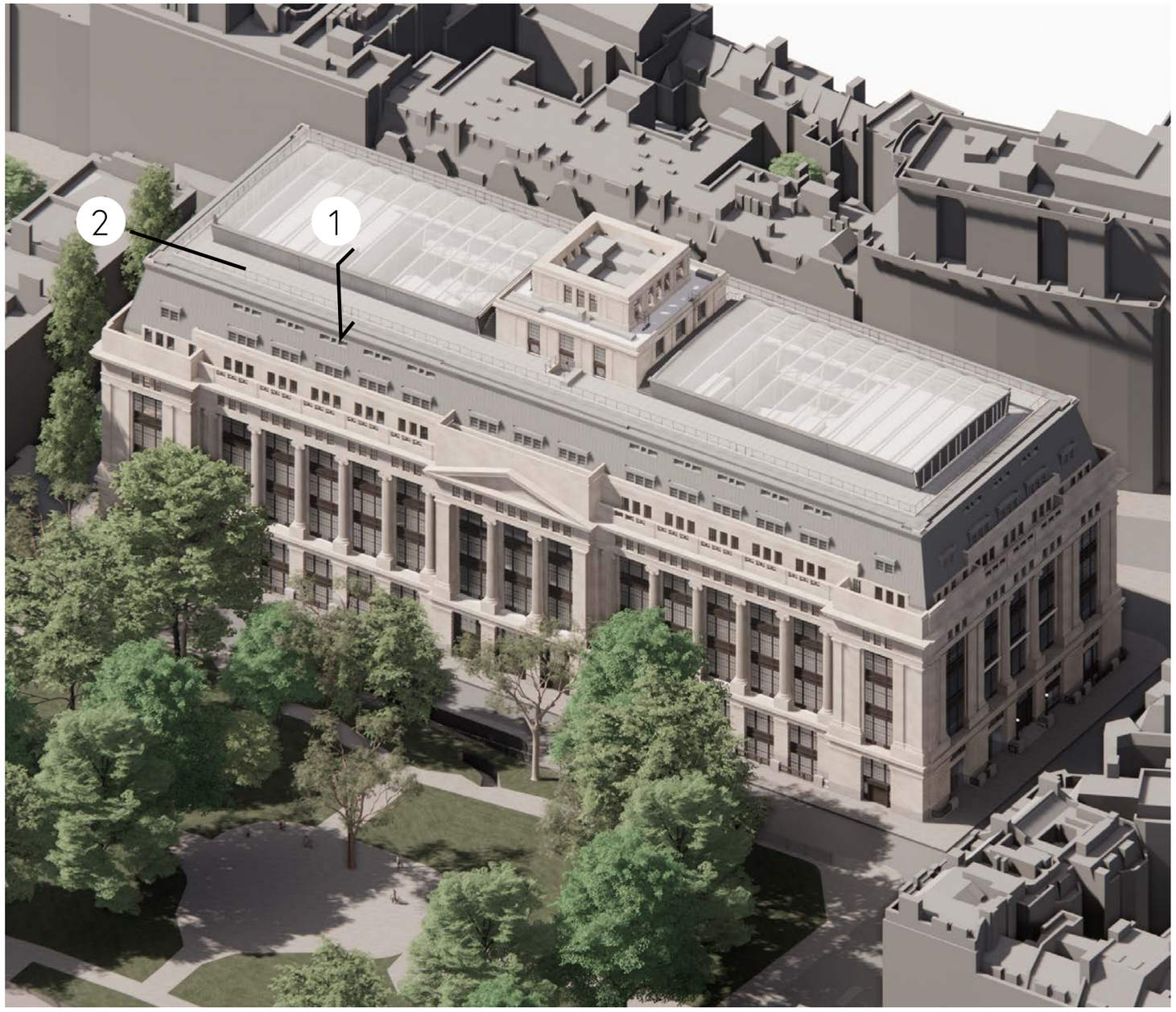
As the design progressed, the Applicant looked at the angle of the screen and considered various options including; vertical, an option angled forward, similar to the incline of the existing glass louvred wall and an alternative angled back, similar to the angle of the existing mansard roof. It is our opinion that the screen should be as similar to the existing modern intervention as possible, including colour and reflectance and avoid emulating the historic building form.

Sections and 3D views of the different screen options are presented in the following sections:

- Section 4.4.1 – Existing condition
- Section 4.4.2 – Vertical screen at 2.1m high
- Section 4.4.3 – Vertical screen at 1.8m high
- Section 4.4.4 – Plant screen at 1.8m angled forward
- Section 4.4.5 – Plant screen at 1.8m angled back

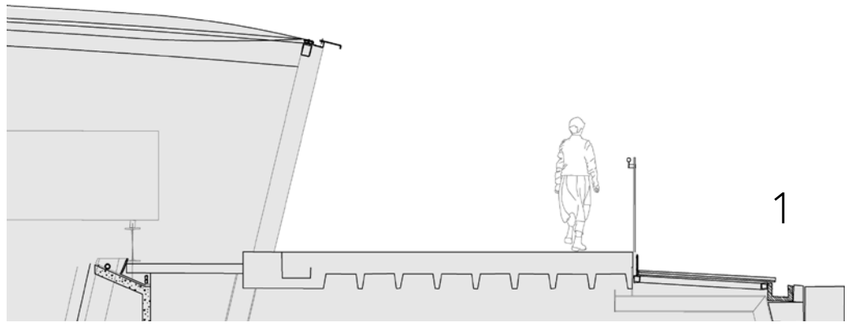
4.4 Roof Plant Screens

4.4.1 Level 8 Plant Screen – Existing Condition



Axonometric South West - Existing - Showing existing rooftop plant

As set out in previous sections, the current plant zones allocated on Level 8 are insufficient in terms of area and location to accommodate the additional ventilation required for office and retail use assuming full occupation.

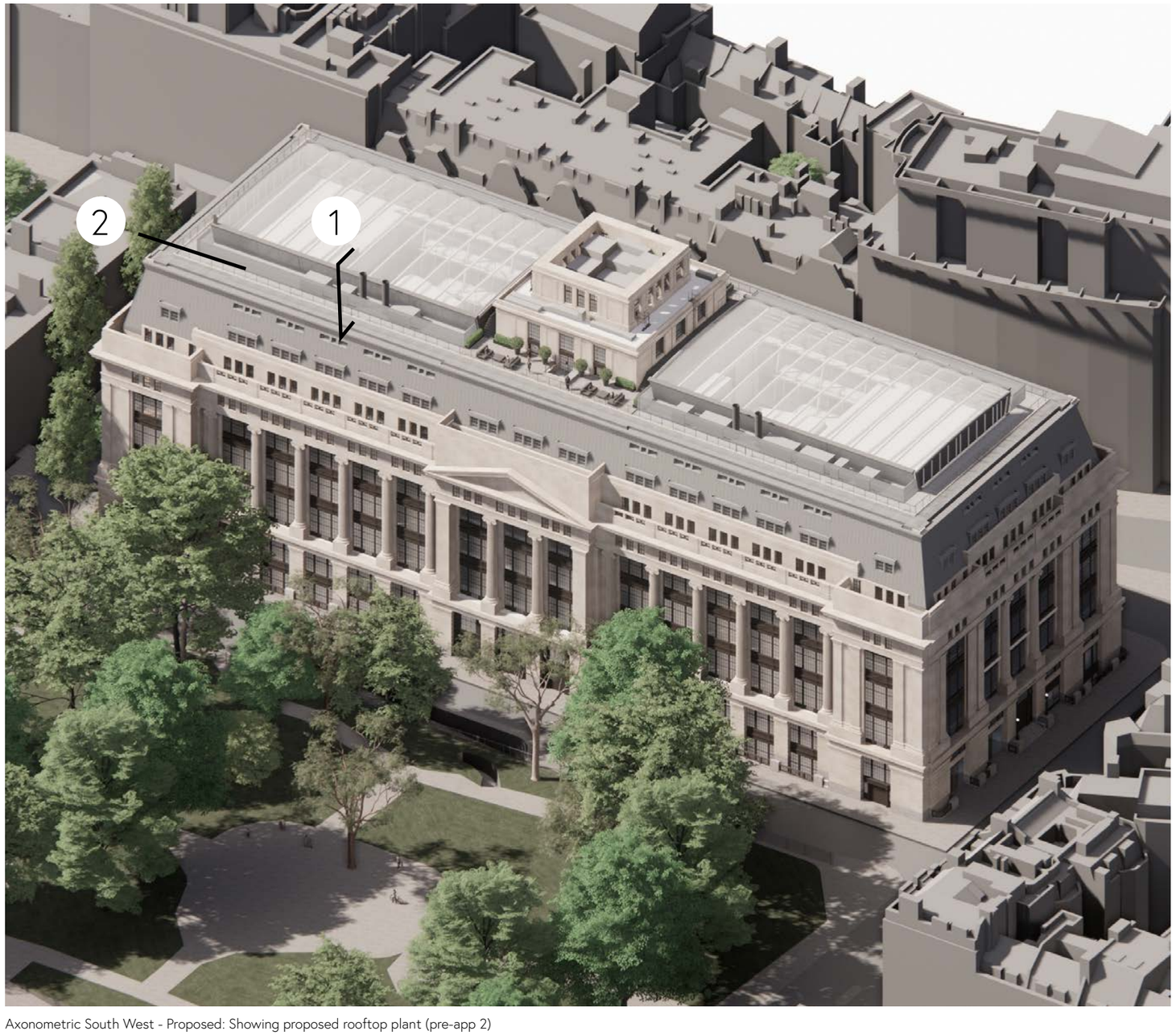


Section through existing Level 8 external terrace

3d view across existing Level 8 external terrace

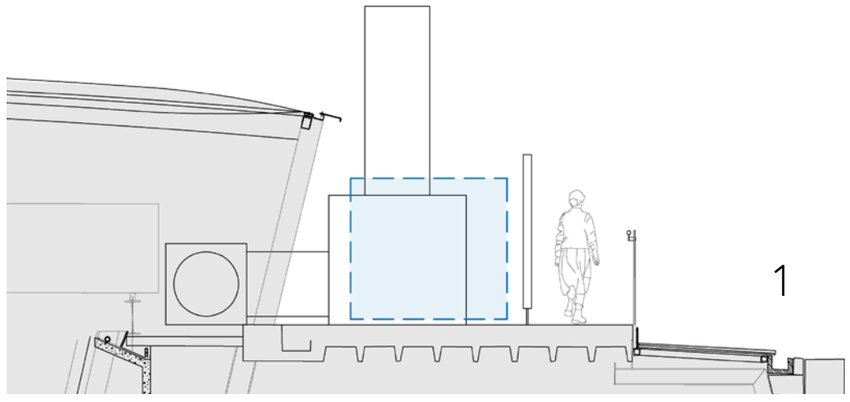
4.4 Roof Plant Screens

4.4.2 Level 8 Plant Screen – 2.1m high



Axonometric South West - Proposed: Showing proposed rooftop plant (pre-app 2)

- Vertical Louvred Screen
- 2.1m Height
- Light grey powder coated finish matches existing in terms of colour and reflective properties.

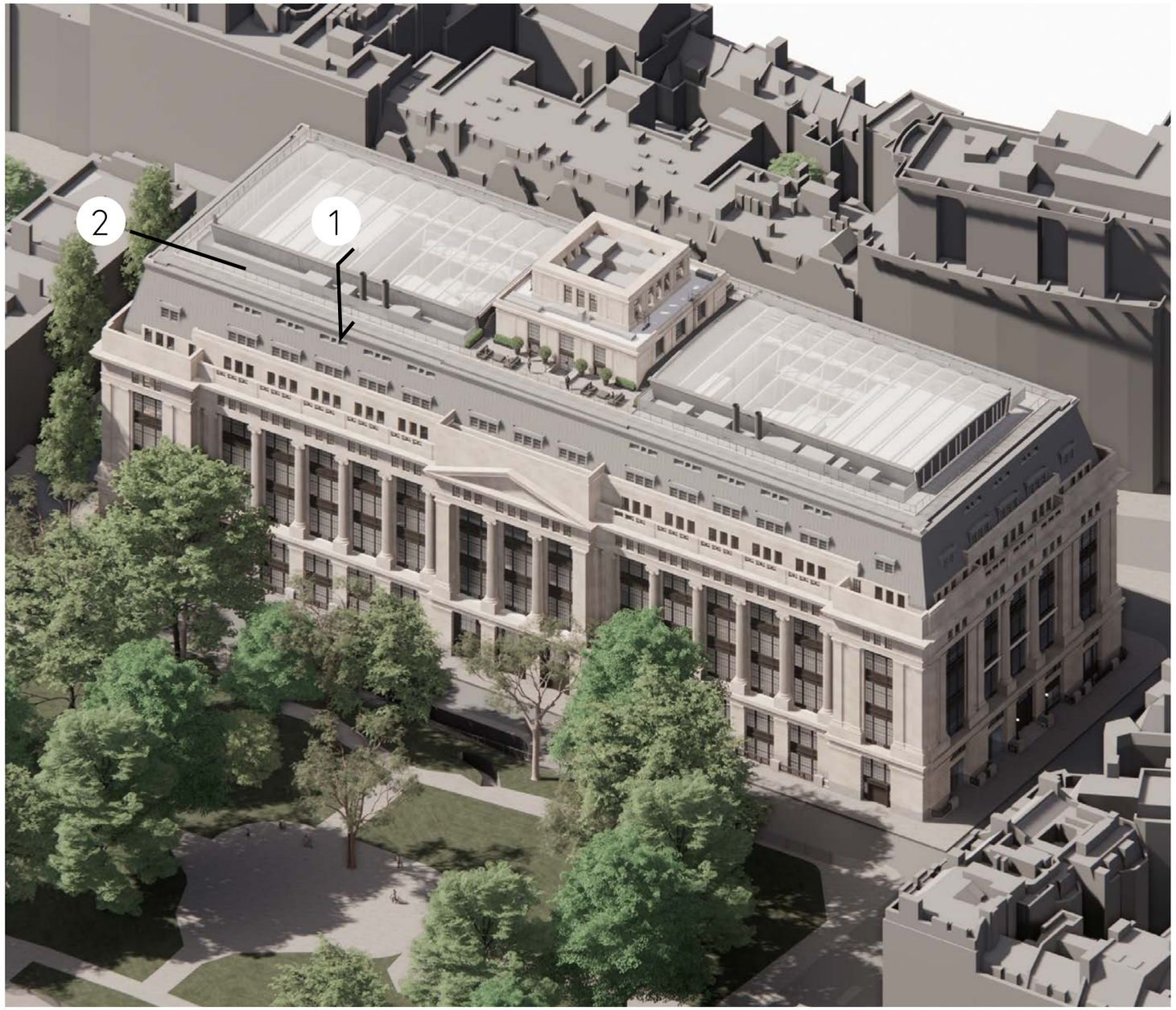


Section (pre-app 2) Level 8 louvred plant zone

3d view across (pre-app 2) Level 8 louvred plant zone

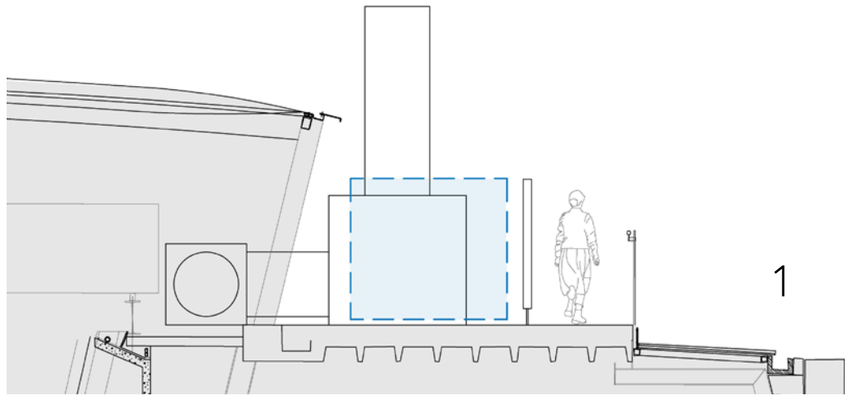
4.4 Roof Plant Screens

4.4.3 Level 8 Plant Screen – 1.8m high Vertical



Axonometric South West - Proposed: Showing proposed rooftop plant

- Vertical louvred screen
- Height reduced by 300mm to 1.8m
- Light grey powder coated finish matches existing in terms of colour and reflective properties.

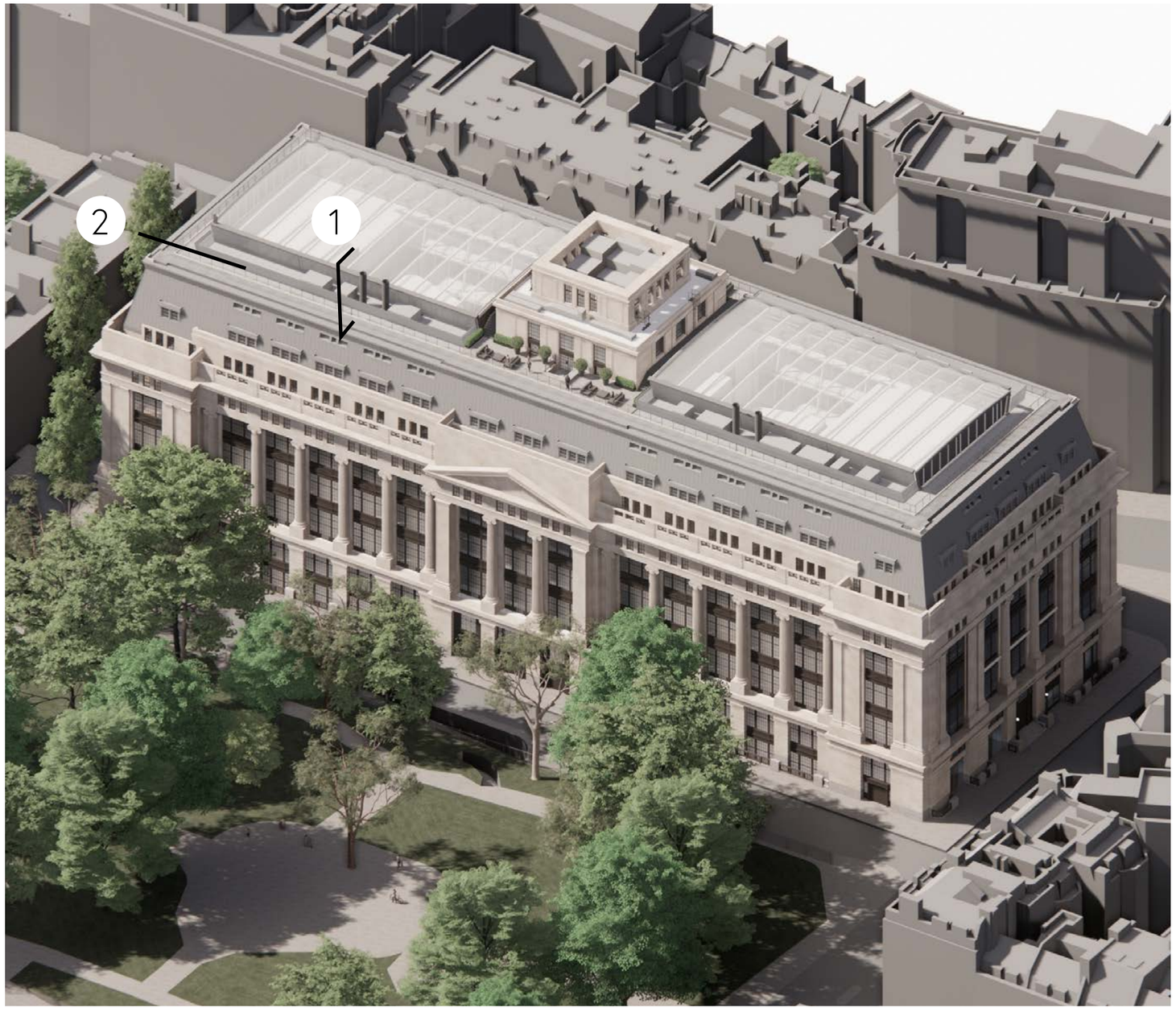


Section through proposed Level 8 louvred plant zone

3d view across proposed Level 8 louvred plant zone

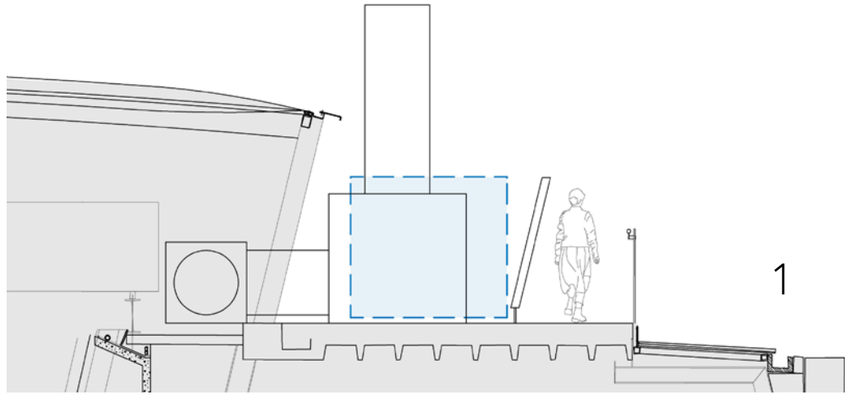
4.4 Roof Plant Screens

4.4.4 Level 8 Plant Screen – 1.8m High Angled Forward



Axonometric South West - Proposed: Showing proposed rooftop plant

- Angled screen - forward
- Height reduced by 300mm to 1.8m
- Angle of screen inclined to match form of existing modern interventions
- Light grey powder coated finish matches existing in terms of colour and reflective properties.
- Option should be as similar to the existing modern intervention as possible, including colour and reflectance and avoid emulating the historic building form.

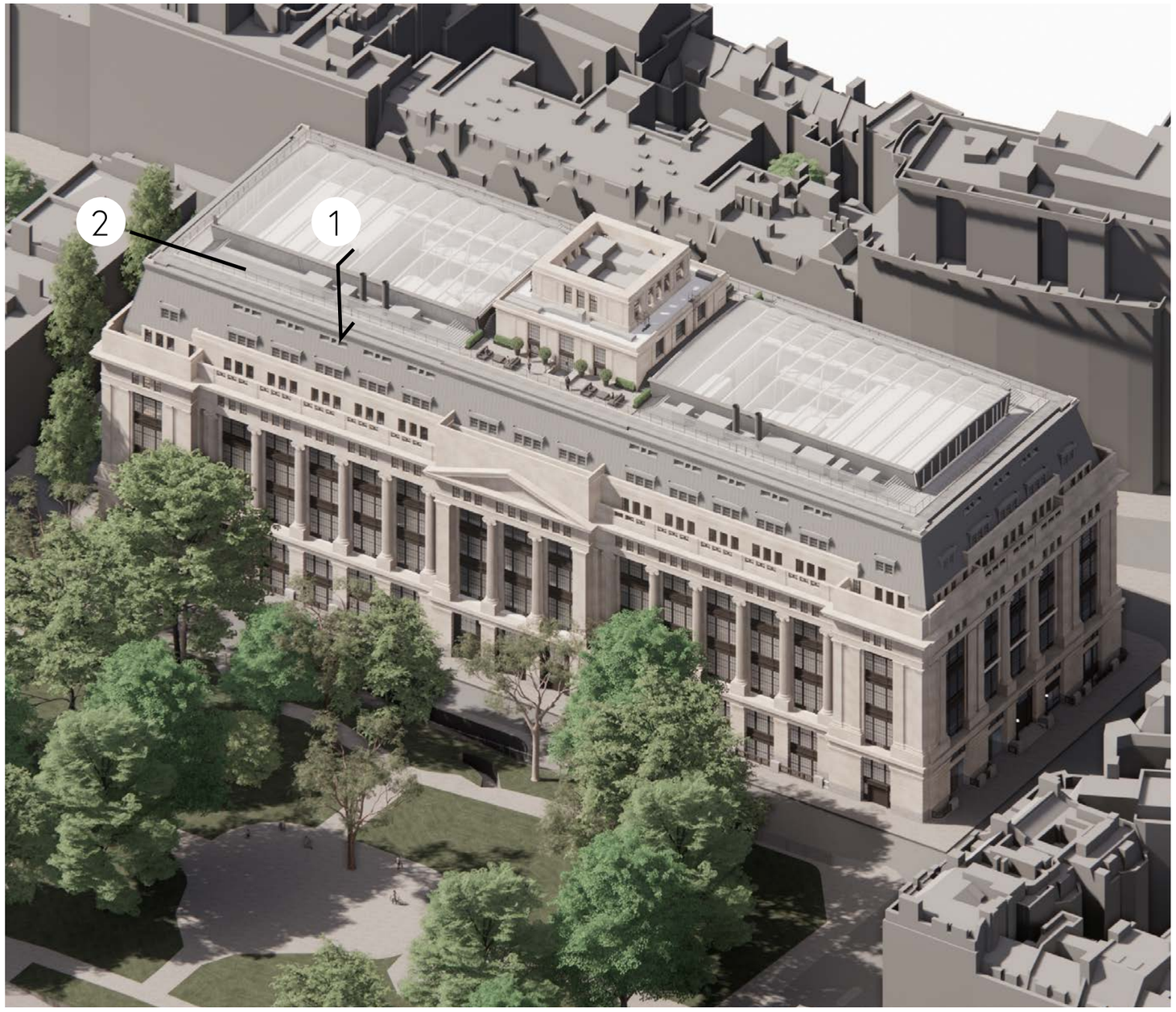


Section through proposed Level 8 louvred plant zone

3d view across proposed Level 8 louvred plant zone

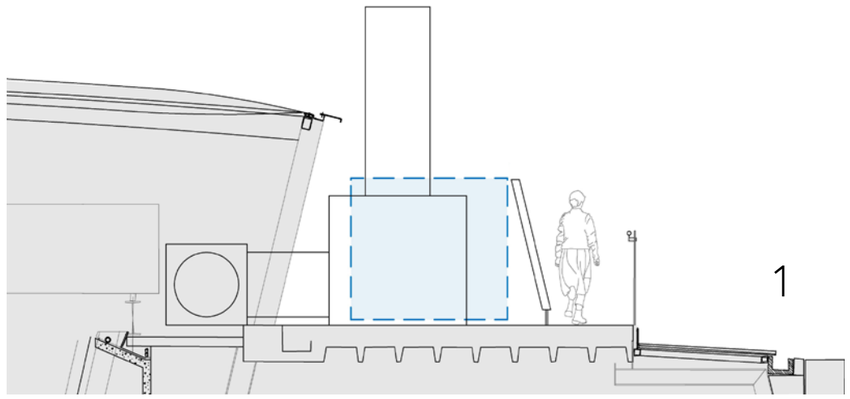
4.4 Roof Plant Screens

4.4.5 Level 8 Plant Screen – 1.8m High Angled Back



Axonometric South West - Proposed: Showing proposed rooftop plant

- Angled screen - backward with angled corners to minimise visual impact
- Height reduced by 300mm to 1.8m
- Angled screen, to match pitch of mansard roof below
- Light grey powder coated finish matches existing in terms of colour and reflective properties.
- Reduces width of walkway

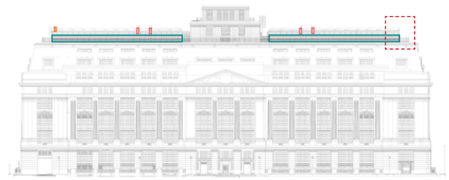


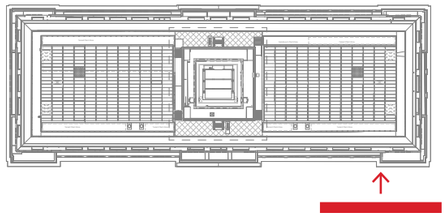
Section through proposed Level 8 louvred plant zone

3d view across proposed Level 8 louvred plant zone

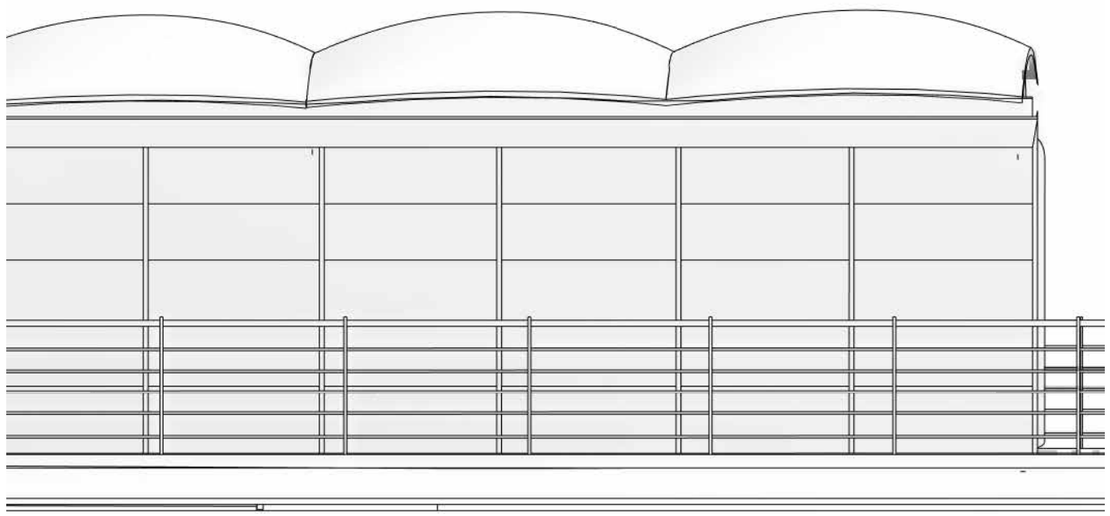
4.4 Roof Plant Screens

4.4.6 Plant Screen Response

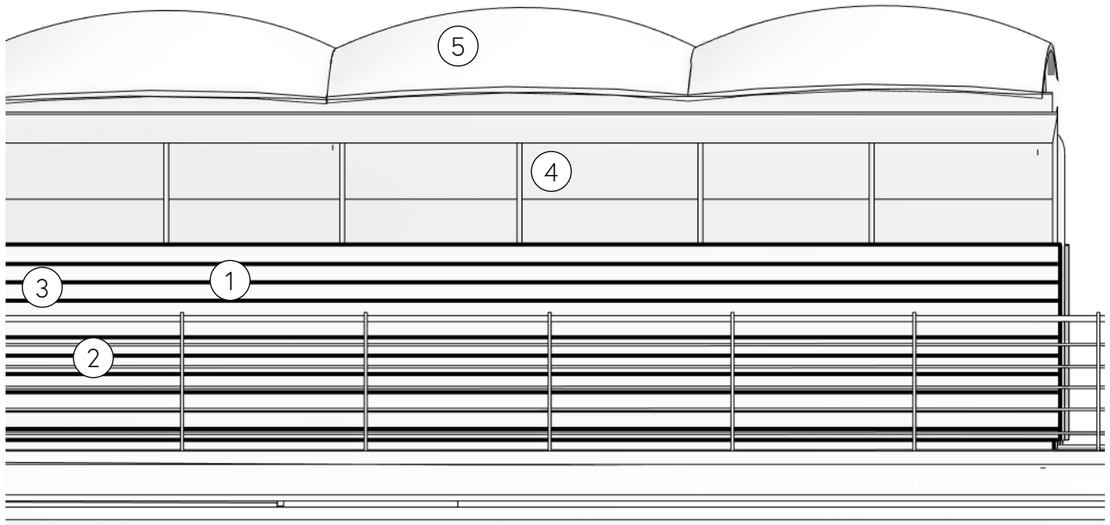




Key Elevation



Elevation existing



Elevation proposed

Of the options investigated the preferred option is to progress the lower screen height as this has reduced impact while still ensuring the screens do not extend higher than the atrium roof eaves line when viewed at street level from across Bloomsbury Square.

The new, lower proposed screen sits comfortably on the roof and may have the added benefit of preventing some light spill from the existing glazed roof enclosure. It would not detract from the historic elevation below nor the central stone tower which would remain unobscured and would not cause heritage harm.

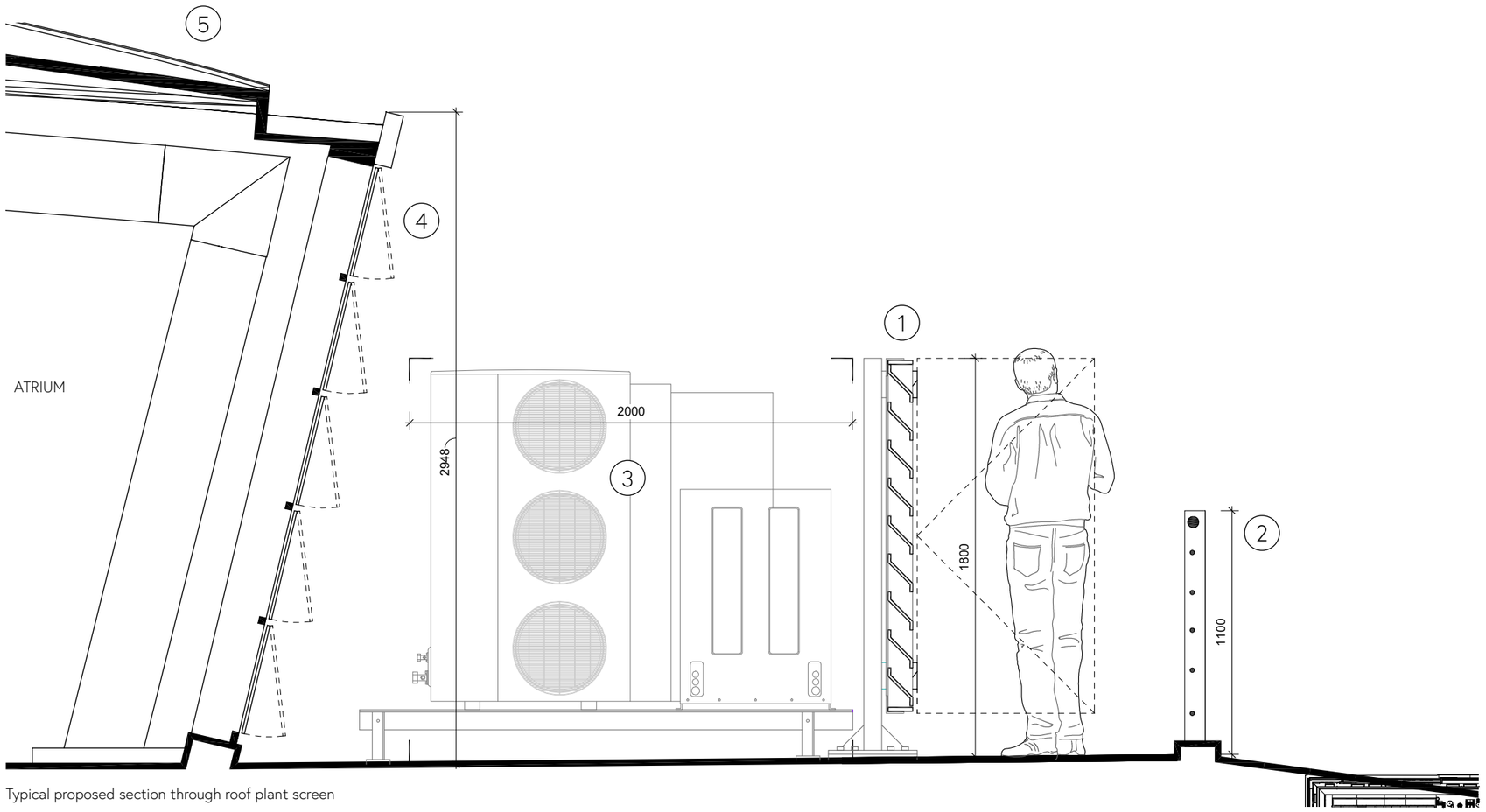
Of the three screen variants, the preferred option is for the vertical arrangement as this avoids reducing the outer perimeter access walkway, avoids encroaching into the plant zone space as the angled back version would and allows a more practical and safer arrangement to form access doors through the screen.

Key

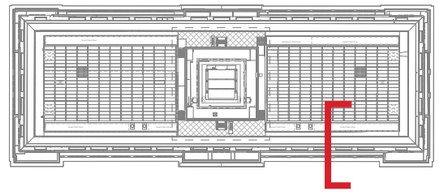
1. Proposed new 1.8m PPC aluminium louvred plant screen on steel structure
2. Existing tension wired guarding
3. Proposed new tenant plant zone behind
4. Existing atrium glazing
5. Existing ETFE roof

4.4 Roof Plant Screens

4.4.7 Louvred screen sections



Typical proposed section through roof plant screen

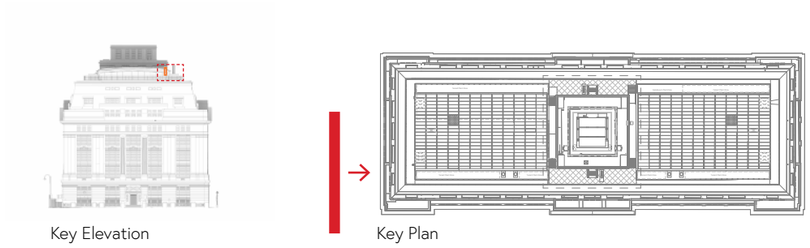


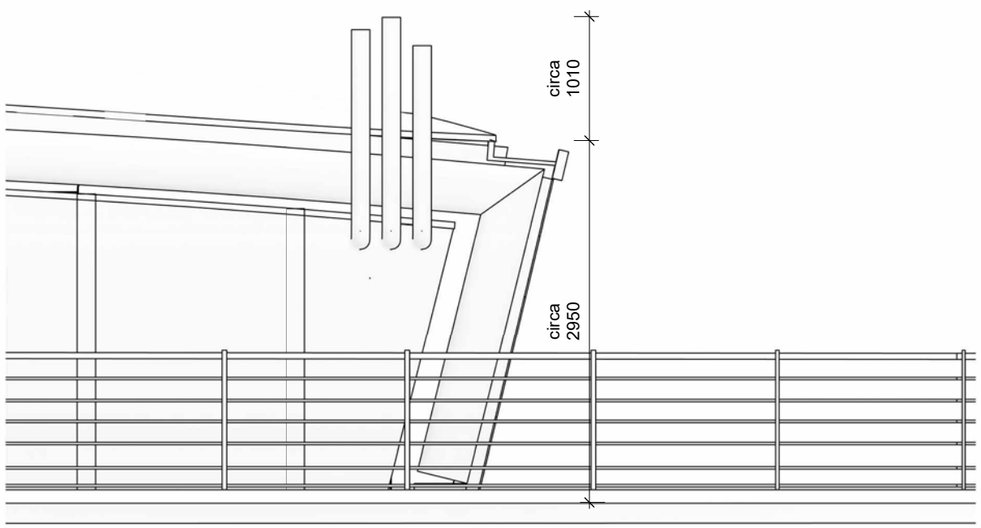
Key

1. Proposed new 1.8m PPC aluminium louvred plant screen on steel structure
2. Existing tension wired guarding
3. Proposed new tenant plant zone
4. Existing atrium louvred glazing
5. Existing ETFE roof

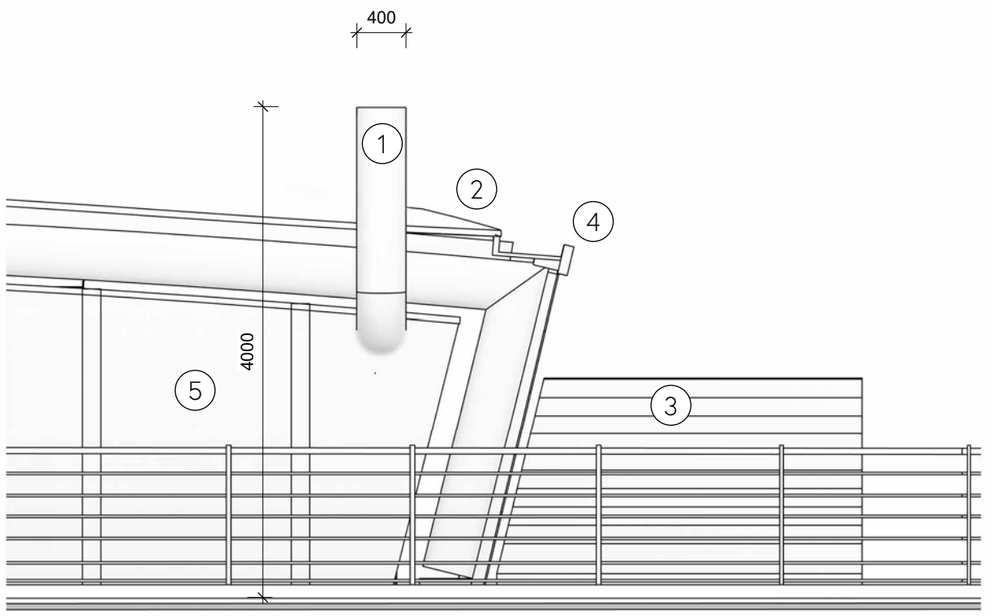
4.5 Generator Flue

4.5.1 Generator Flue - Close Up





Part Bloomsbury Place elevation existing



Part Bloomsbury Place elevation proposed

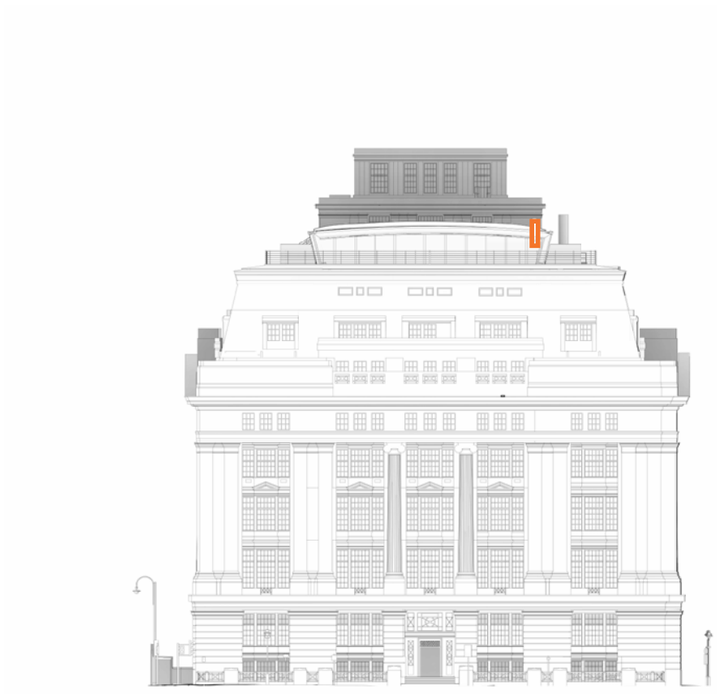
3No existing standby generator flues are located on the North West corner of the level 8 roof plant enclosure. As part of the proposals a new standby generator is being installed and as part of the efficiencies of the new unit, this only requires a single exhaust flue. The proposals are to replace the 3No existing flues with a single 400mm diameter flue set at approximately the same height as the existing installation. This will be beneficial as it reduces the visual clutter at the corner of the building.

Key

1. Existing flues to be replaced with single 400mm diameter flue
2. Existing ETFE roof beyond
3. Proposed new PPC aluminium louvred plant screen
4. Existing roof eaves line
5. Existing mesh screen beyond

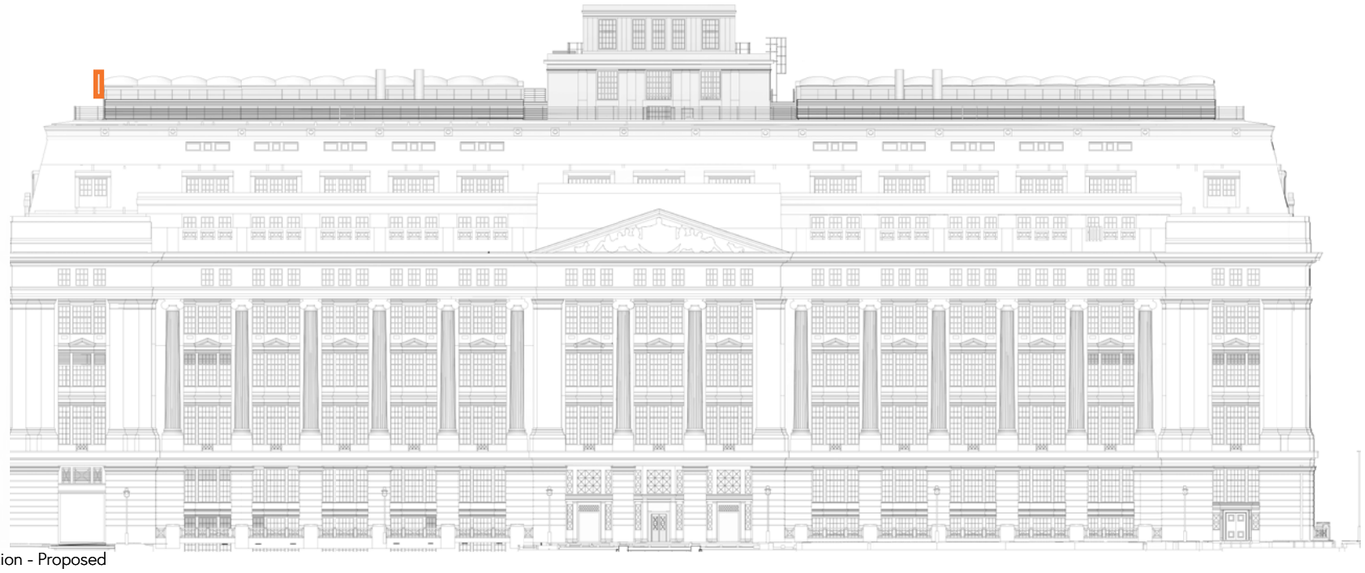
4.5 Generator Flue

4.5.2 Generator Flue - Elevations



North Elevation - Proposed

Bloomsbury Place



West Elevation - Proposed

Bloomsbury Square

Key

- Existing flues to be replaced with single (Ø400mm) flue

4.6 Facade Louvres

Existing louvres are located in a small number of bays across all elevations of Victoria House. A large proportion of these are in the low part of the elevation, a smaller number (eight louvres) are in prominent locations on the second floor (see image opposite).

Continuation of the MEP strategy adopted by the previous building owner (as per Level 2) would require an additional 16 No. louvres to the main elevations, additional AHUs and further condensers to be added within new plant rooms on levels 1 and 3.

The Applicant's proposed strategy will enable the further refurbishment of remaining levels and laboratory enablement of the building without the need for additional louvres at above ground levels. It would only require additional louvres behind the existing window of the loading bay to provide ventilation to a proposed LN2 (Liquid Nitrogen) storage space (required for laboratory enablement and further described in Section 4.6.2 and 4.6.3).

In our Pre-app 2, we had shown a first proposal to future proof Level B1 and retail units which required further louvres on the Ground Level.

The final proposal is included in this application showing a reduced number of future proofing louvres, which will only be implemented should these areas be progressed in the future (pending follow-on applications). As described in this section, louvres have been minimized and where possible only added to the lower part of the building to avoid prominent locations.

Proposals also aspire to remove the existing louvres on Level 2 (8No.) if this floor becomes laboratory enabled. This would provide a positive enhancement to the Listed Building.

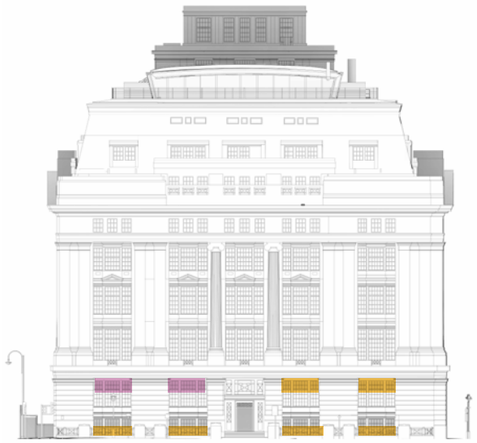
4.6 Facade Louvres

4.6.1 Facade Louvres - Elevations

Elevation - Bloomsbury Square

Elevation - Vernon Place

Elevation - Southampton Row



Elevation - Bloomsbury Place

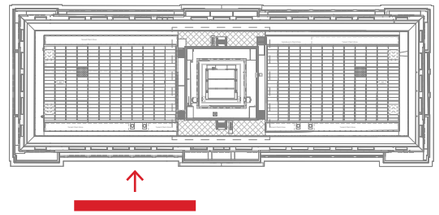
Key

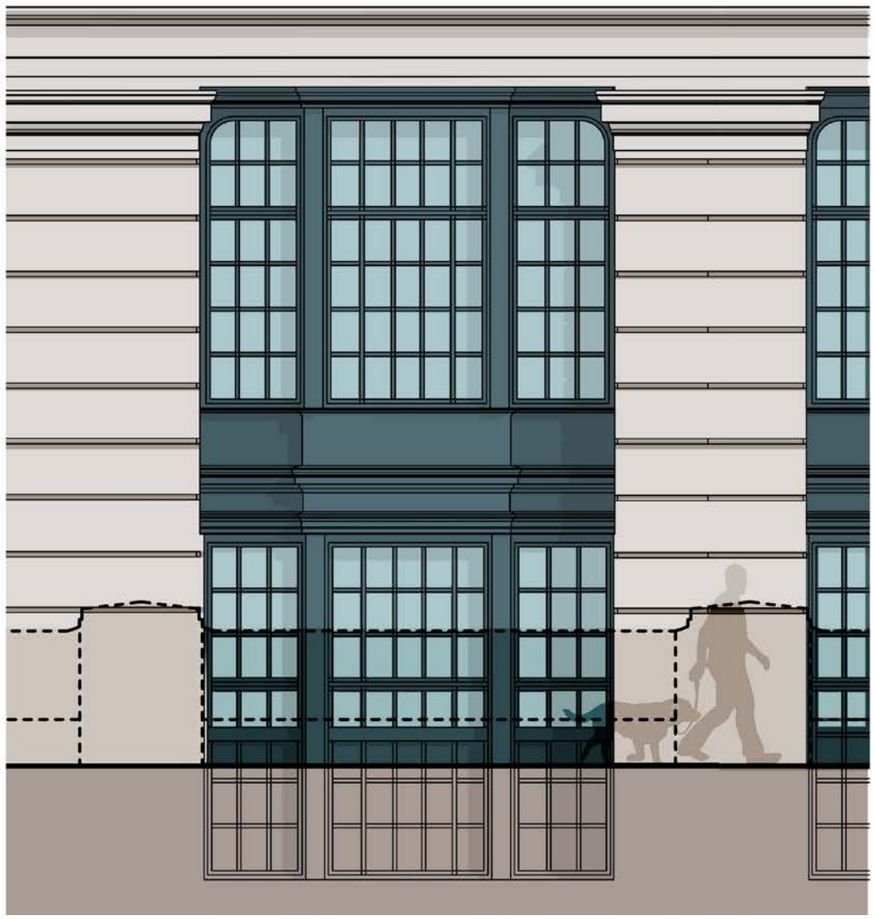
- Proposed Louvres
- Future Proofing Louvres
- Louvres recently added
  The recently added louvres could be removed if Level 2 is converted to lab enabled space
- Louvres Historic
- New or future proofing louver below Ground Level

The recently added louvres could be removed if Level 2 is converted to accommodate lab enabled space as per our proposal.

4.6 Facade Louvres

4.6.2 Facade Louvres - Elevation at Loading Bay on Bloomsbury Square Elevation





Elevation Detail - Existing

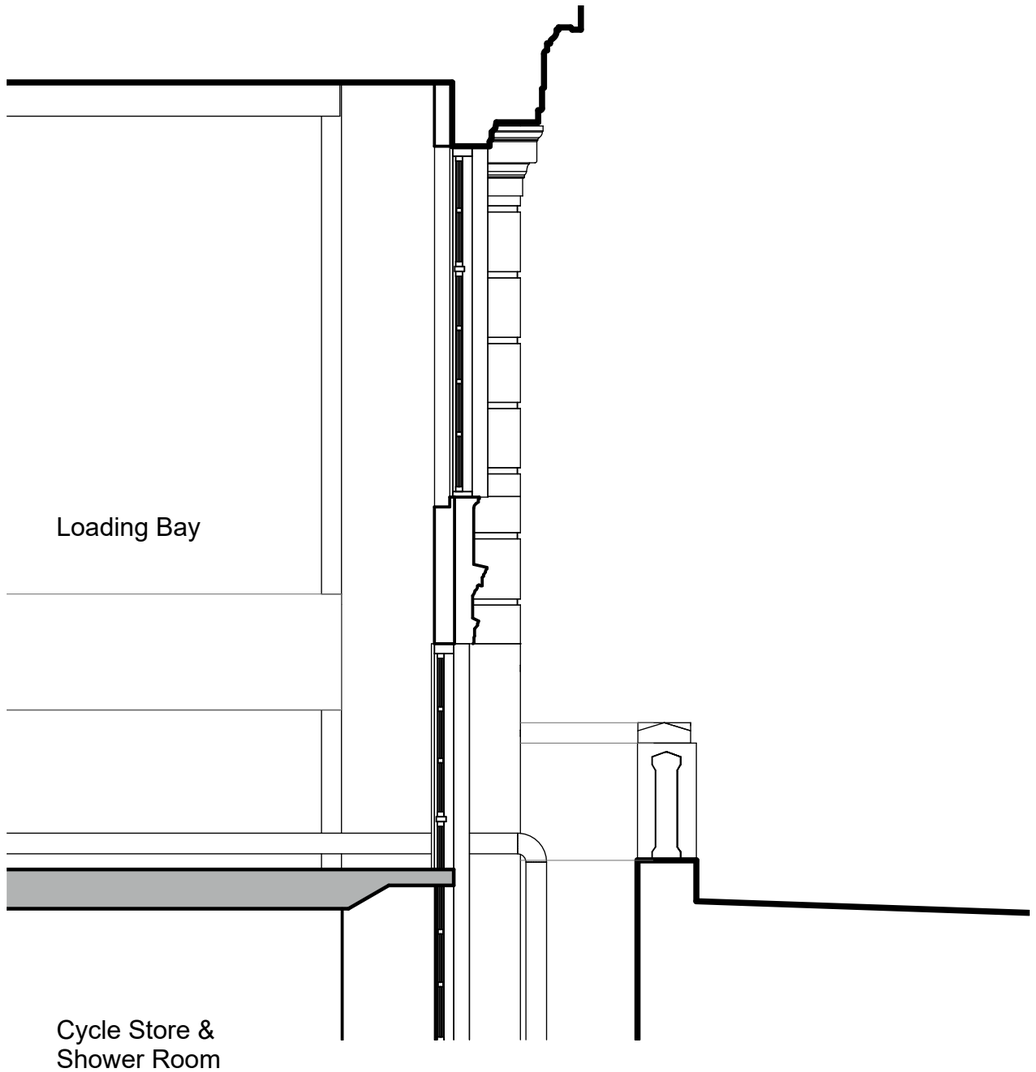
Elevation Detail - Proposed

Key

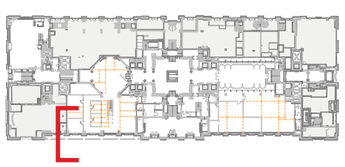
1. New louvres serving the LN2 store, proposed to be installed behind existing metal window frames to match the existing installation elsewhere
2. Existing stone facades unaltered
3. New louvres serving the Basement level B1, proposed to be installed behind existing metal window frames to match the existing installation elsewhere

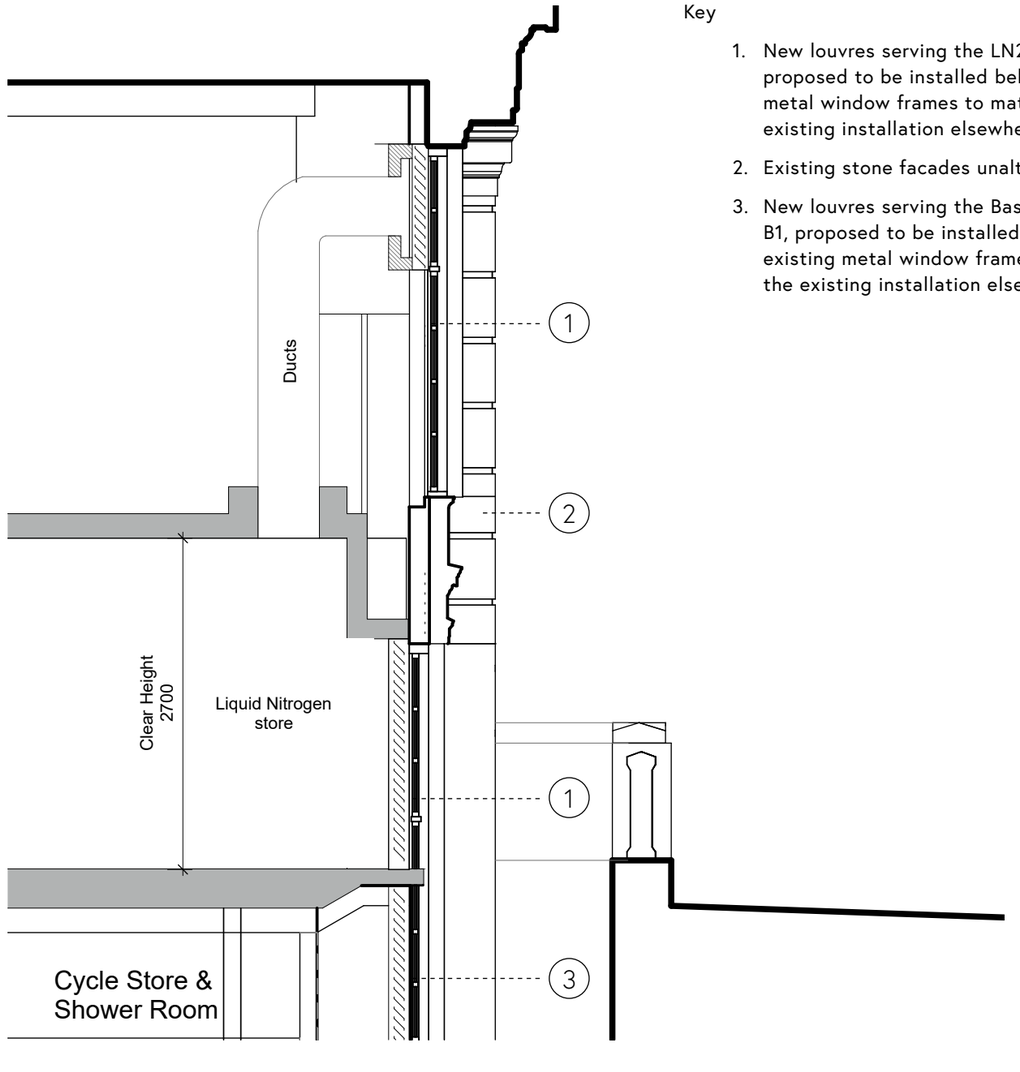
4.6 Facade Louvres

4.6.3 Facade Louvres - Section at Loading Bay



Typical section existing





Typical section proposed

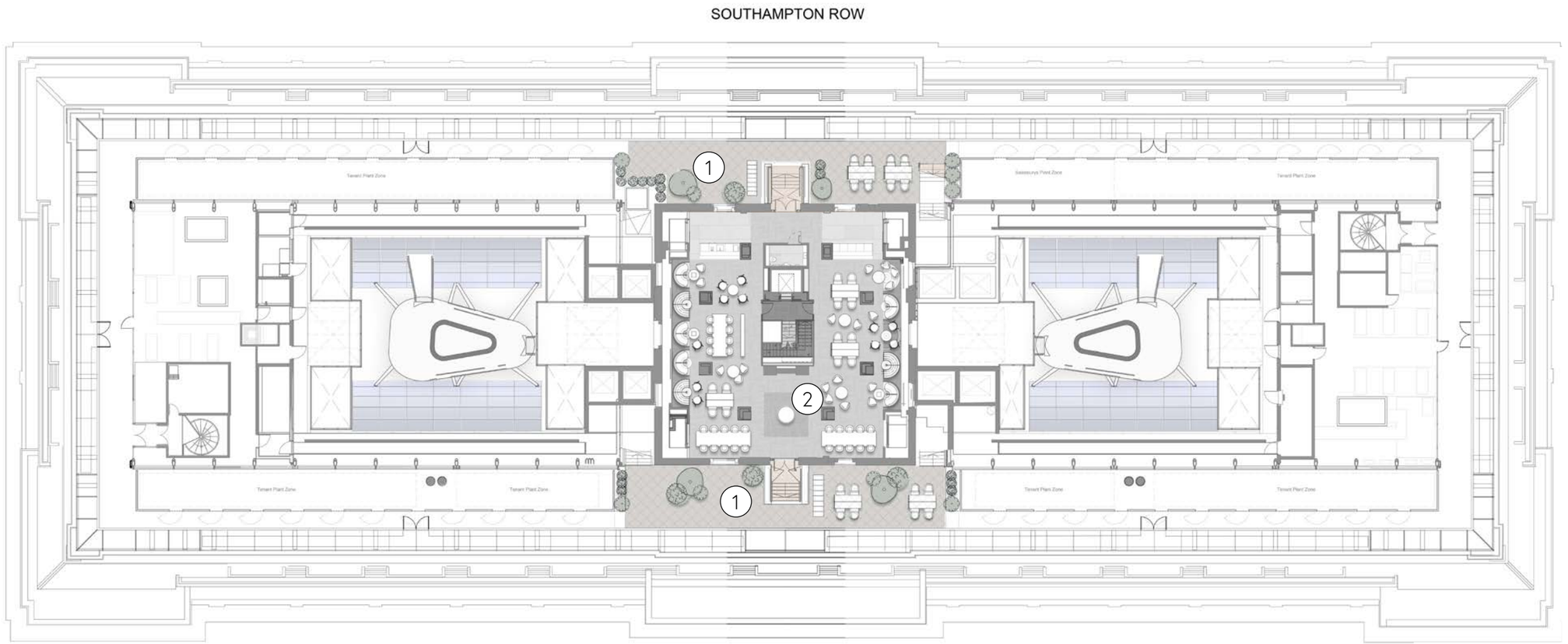
Key

1. New louvres serving the LN2 store, proposed to be installed behind existing metal window frames to match the existing installation elsewhere
2. Existing stone facades unaltered
3. New louvres serving the Basement level B1, proposed to be installed behind existing metal window frames to match the existing installation elsewhere

These louvres are necessary for the safe ventilation of the liquid nitrogen store to meet current regulation requirements.

Two separated louvre locations are required so as to separate the intake location from the exhaust position.

4.7 Amenity Space at Level 8



There is ground floor amenity provided within the building already, in addition to the wider site context which provides strong F&B offer to tenants. There is however a strong consideration for delivery of an amenity type space on the 8th floor that is for the sole use of the tenants within the building. The layout, design and finish will follow the principles used within the ground floor amenity area so that the design is cohesive.

The floor at level 8 has fantastic views across the London skyline so is an outstanding location for an amenity space. This level also has direct access out onto the existing roofscape, so provides the perfect opportunity to take advantage of this and enhance the amenity provision further. Consideration has therefore been given to create an external seating terrace on the existing roof areas directly to the east and west of the level 8 internal floorplate and form part of the application proposals.

The proposals include the following improvements:

- Existing concrete paving slabs are to be replaced with new paving slabs or composite timber decking.
- Raised metal planter containers in pre-weathered steel or bronze type finish to define the terrace perimeters and create focal soft landscaping.
- Existing services penetrations to be boxed in with new slatted enclosures.
- Replacement of existing wall lights with more sympathetic fittings, more in keeping with the amenity space & historic setting

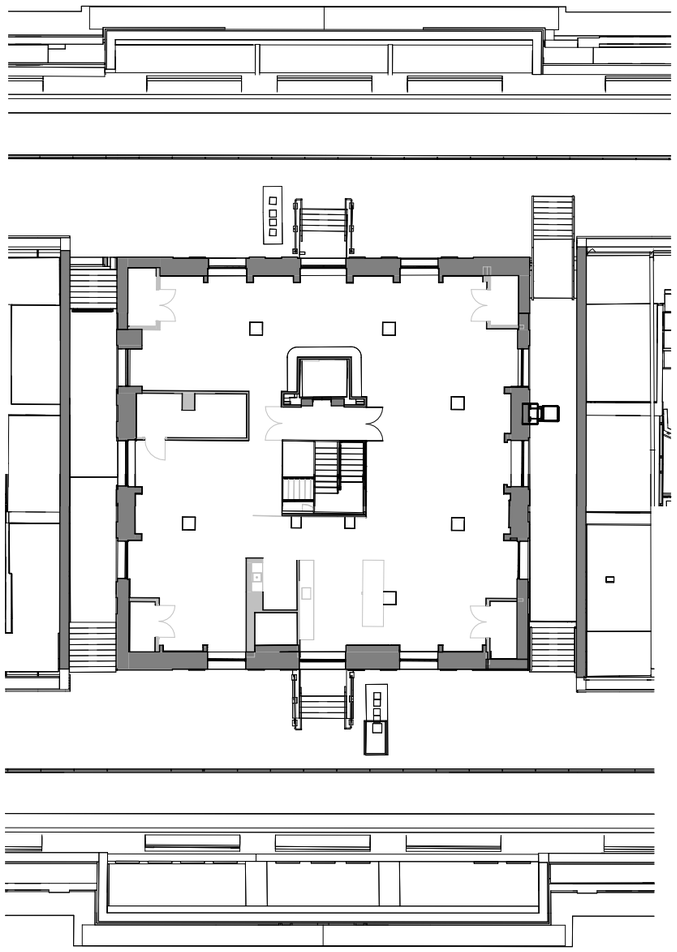
Key

1. Proposed external terraces
2. Level 8 amenity space

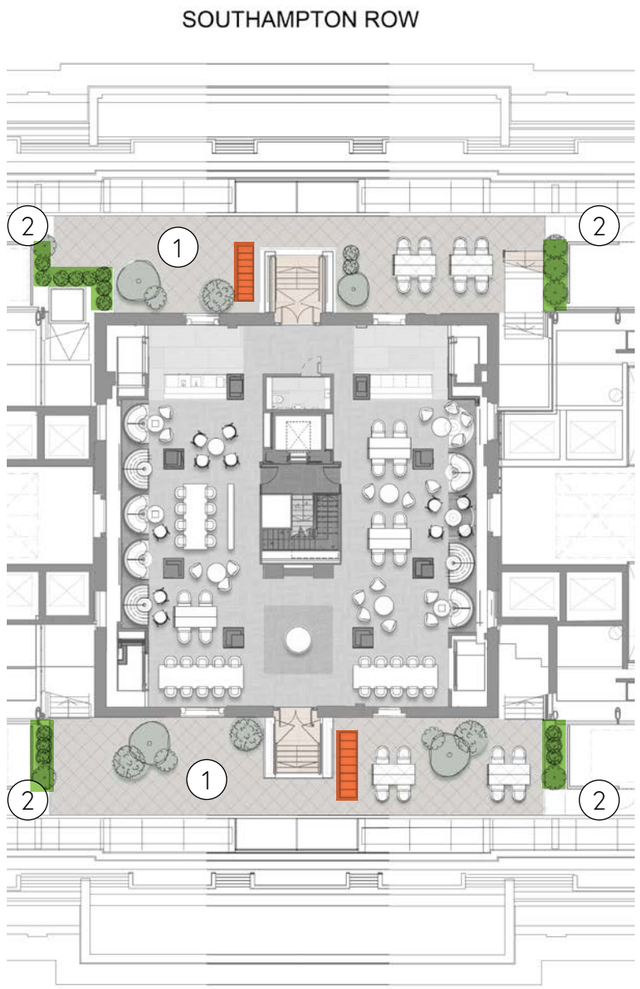
Note: Furniture & planters indicated for illustration purposes only.

4.7 Amenity Space at Level 8

4.7.1 Amenity Spaces Level 8 - East & West Terrace Existing/Proposed



Plan existing



Plan proposed

Key

1. New paving slabs or composite timber decking
2. Existing paved roof maintenance walkway with controlled access

Metal planter container in pre-weathered steel or bronze type finish*

Existing services to be boxed in with new slatted enclosures

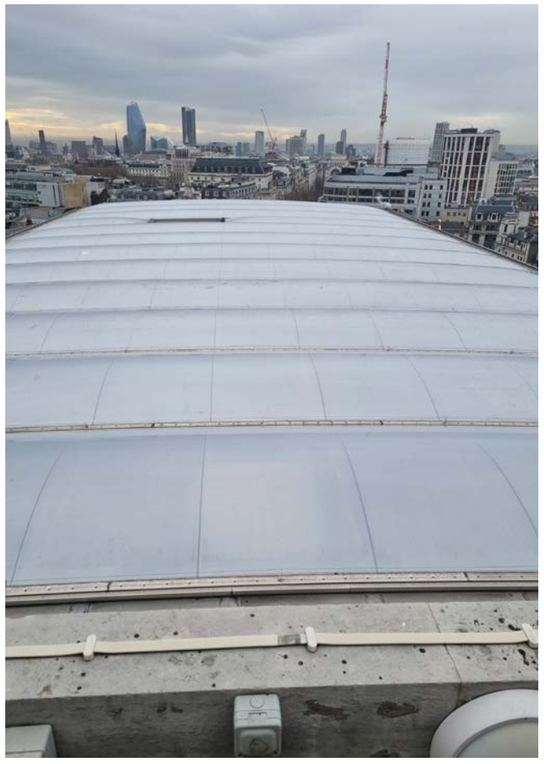
* Metal planters and interior layout shown indicatively only. For amenity spaces - See 4.10.2 Eighth Floor Plan Proposed

Note: Furniture & planters indicated for illustration purposes only.

4.8 ETFE Roof

The building has a modern roof extension of c2002 which provides the enclosed space over the central atriums. This roof is an inflated ETFE polymer construction supported on structural steelwork. As this roof is reaching the end of its serviceable lifespan it is now proposed that the roof does require replacement.

This will be on a like for like basis with only the ETFE membrane being replaced and as such we have not sought consent for these works. It must however be noted that the existing plant spaces located below the ETFE roof at both ends of the building do suffer from overheating and as such it has been recommended to introduce some additional shallow profile opening roof vents within the replacement ETFE roof. This will allow the plant equipment to operate more efficiently. Given the shallow curvature of this roof these new vents won't be visible from ground level and as such their impact is considered very low.

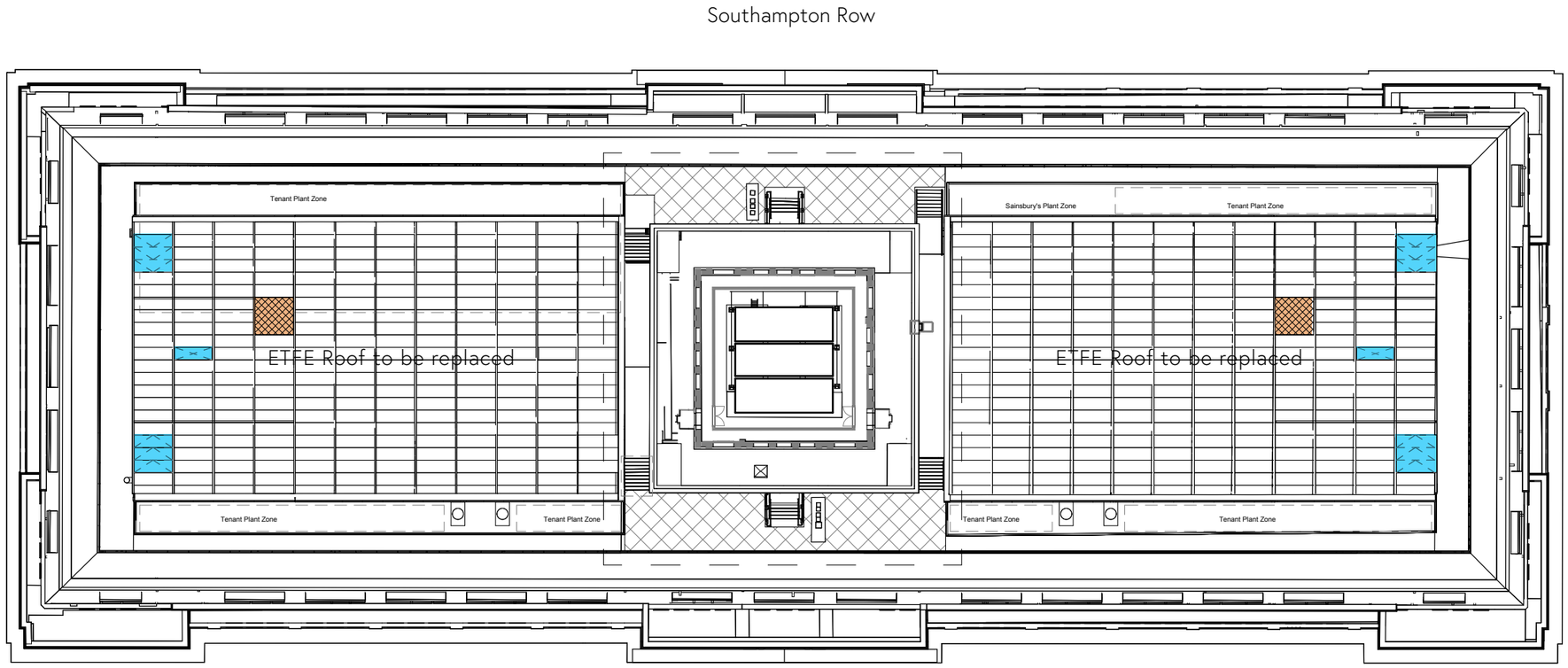


Existing photograph of the roof

Existing ETFE roof

4.8 ETFE Roof

4.8.1 Roof Level Floor Plan - Proposed



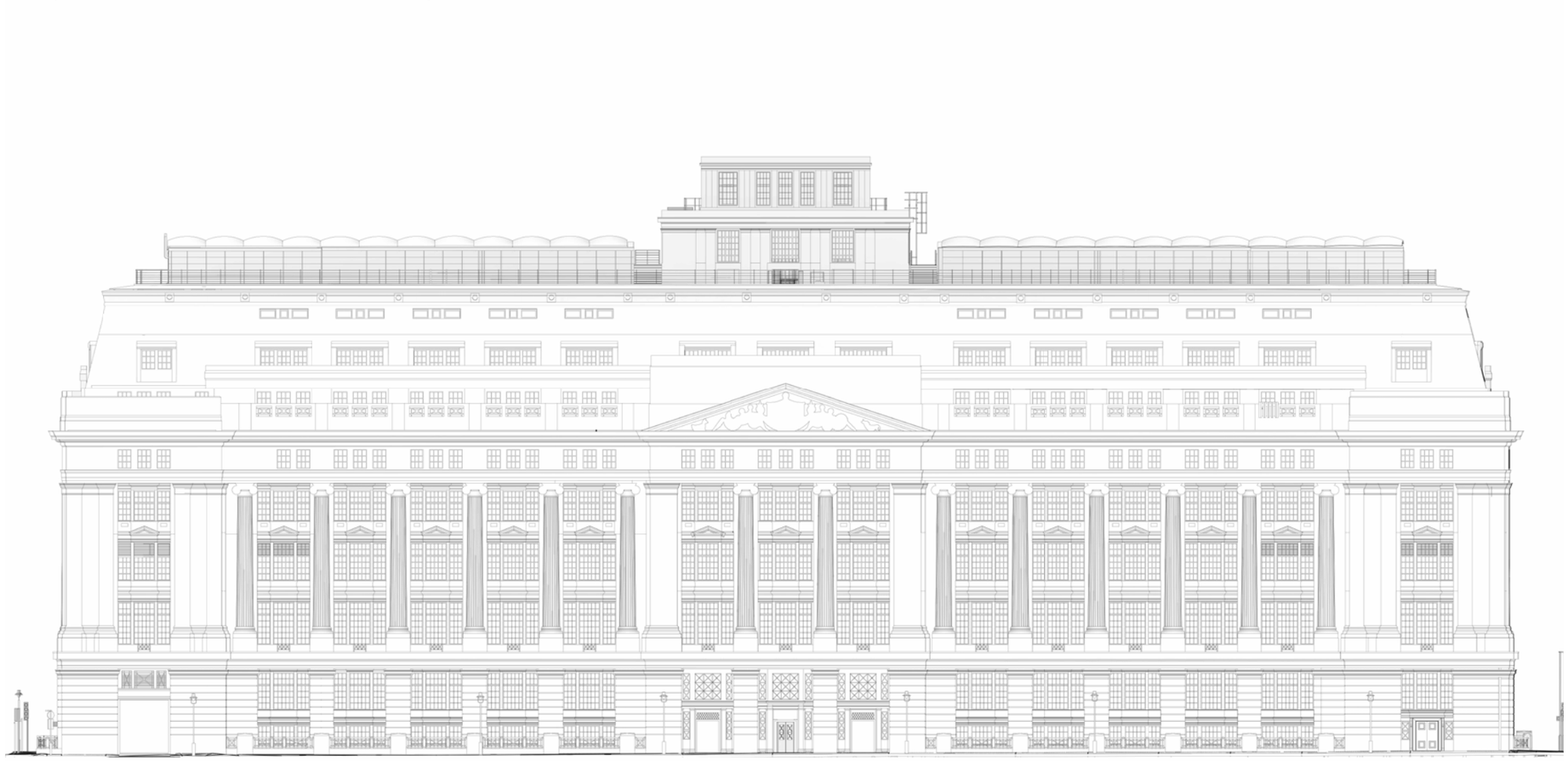
Floor Plan Level: Roof

Key

- Proposed roof vents
- Existing roof vents

4.9 Elevations

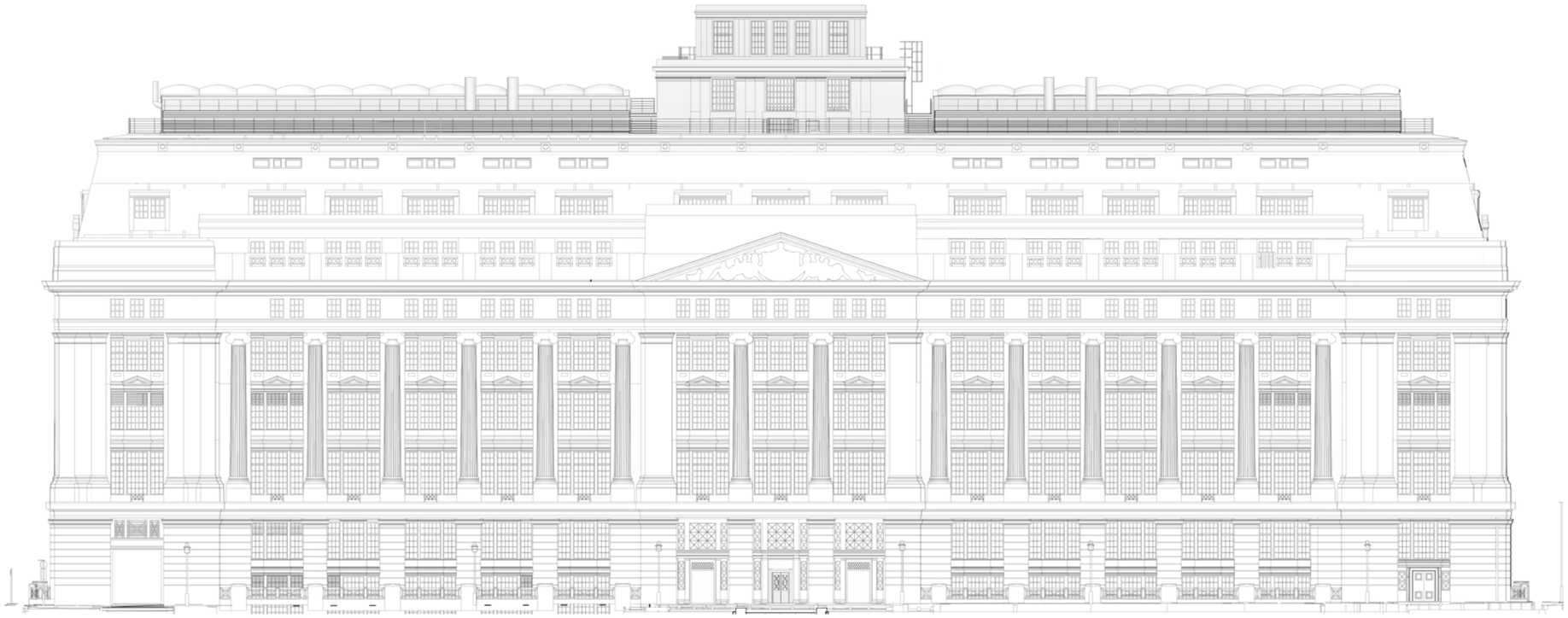
4.9.1 Bloomsbury Square Elevation (West) - Existing



Bloomsbury Square
Elevation - Existing

4.9 Elevations

4.9.2 Bloomsbury Square Elevation (West) - Proposed



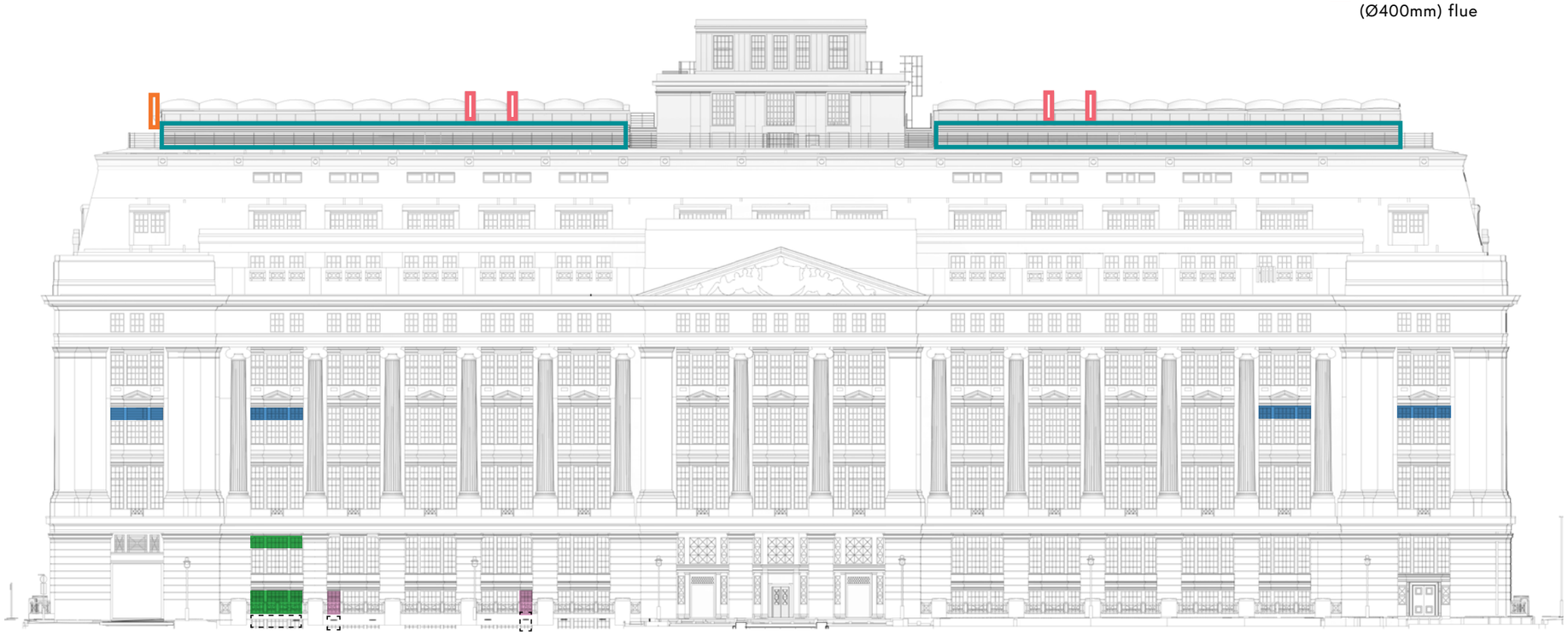
Bloomsbury Square
Elevation - Proposed

4.9 Elevations

4.9.3 Bloomsbury Square Elevation (West) - Proposed

Key

- Proposed Louvres
- Future Proofing Louvres
- Louvres recently added
  The recently added louvres could be removed if Level 2 is converted to lab enabled space
- Louvres Historic
- New or future proofing louvre below Ground Level
- Proposed fume exhaust stacks (Ø800mm) 1.3m above eaves level
- Proposed 1.8m high louvred screens
- Existing flues to be replaced with single (Ø400mm) flue



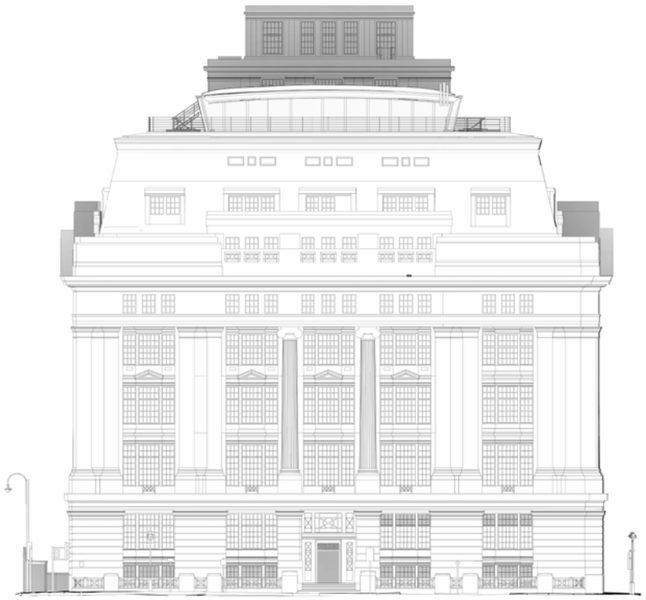
Bloomsbury Square
Elevation - Proposed

In order to neatly screen the proposed new roof top plant zones and fume stacks, our proposal seeks 1.8m high plant enclosures at roof level which will be capable of hiding the plant required for the building. The fume stacks are to be 800mm diameter, to be located roughly centrally within the proposed dedicated new plant zones facing Bloomsbury Square and set at 1.3 meters above eaves level. 3No existing generator flues are to be replaced with a single 400 diameter flue at the same height, located at the top left of the elevation. New louvres serving the LN2 store and basement level B1 are proposed at the ground floor loading bay, to be installed behind existing metal window frames to match the existing installation elsewhere.

The recently added louvres at second floor level could be removed if Level 2 is converted to lab enabled space.

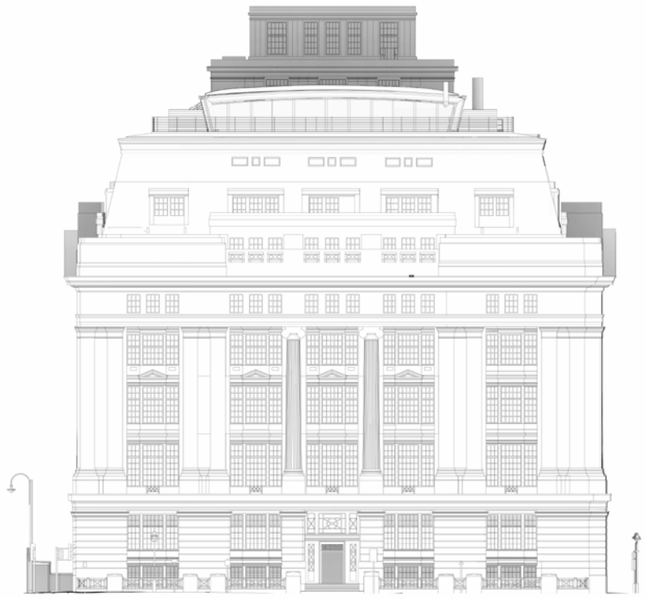
4.9 Elevations

4.9.4 North Elevation - Existing/Proposed



Bloomsbury Place

North Elevation - Existing

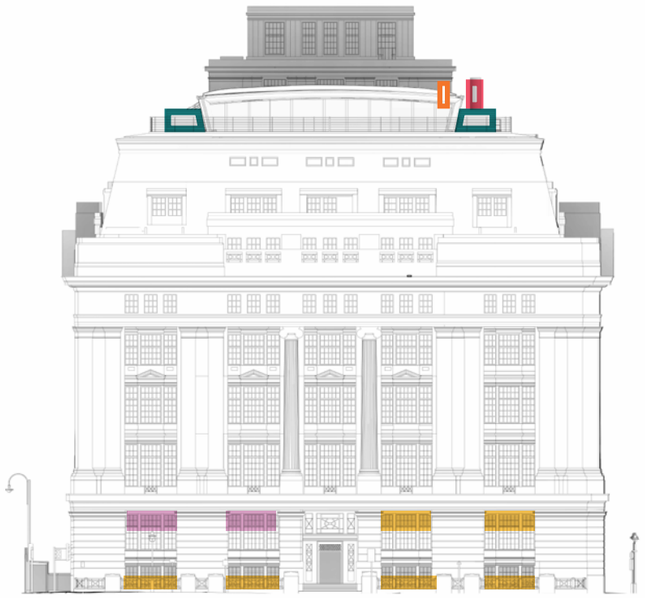


Bloomsbury Place

North Elevation - Proposed

Key

- Proposed Louvres
- Future Proofing Louvres
- Louvres recently added
  The recently added louvres could be removed if Level 2 is converted to lab enabled space
- Louvres Historic
- New or future proofing louvre below Ground Level
- Proposed fume exhaust stacks (Ø800mm) 1.3m above eaves level
- Proposed 1.8m high louvred screens
- Existing flues to be replaced with single (Ø400mm) flue



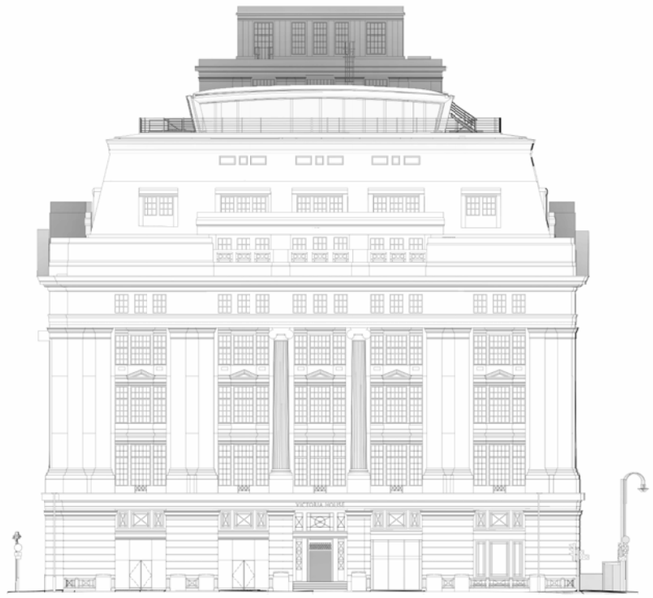
Bloomsbury Place

North Elevation - Proposed

This elevation only introduces the high level 1.8m high plant enclosure returns. 3No existing generator flues are to be replaced with a single 400 diameter flue at the same height, located at the top right of the elevation. The fume stacks are indicated beyond in the distance but would not make up part of the elevation composition due to their set back position.

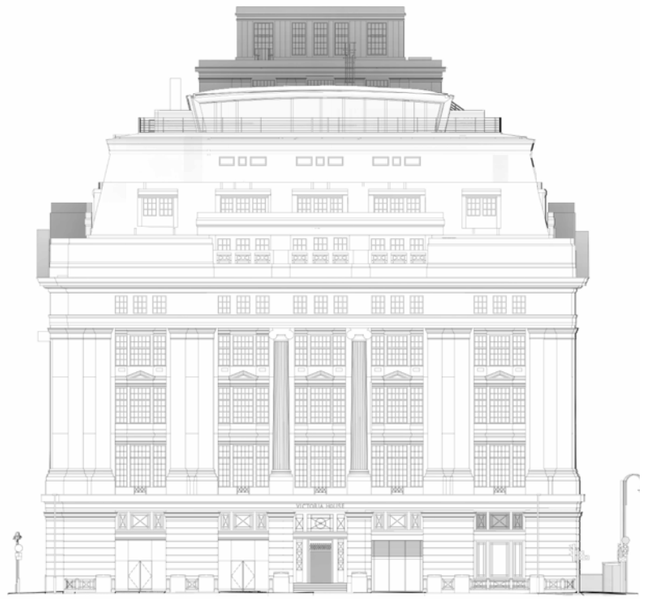
4.9 Elevations

4.9.5 South Elevation - Existing/Proposed



Vernon Place

South Elevation - Existing

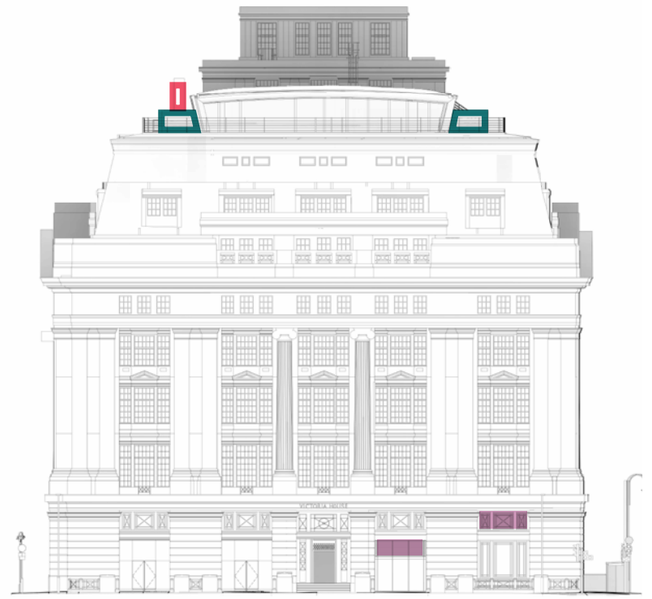


Vernon Place

South Elevation - Proposed

Key

- Proposed Louvres
- Future Proofing Louvres
- Louvres recently added
  The recently added louvres could be removed if Level 2 is converted to lab enabled space
- Louvres Historic
- New or future proofing louvre below Ground Level
- Proposed fume exhaust stacks (Ø800mm) 1.3m above eaves level
- Proposed 1.8m high louvred screens
- Existing flues to be replaced with single (Ø400mm) flue



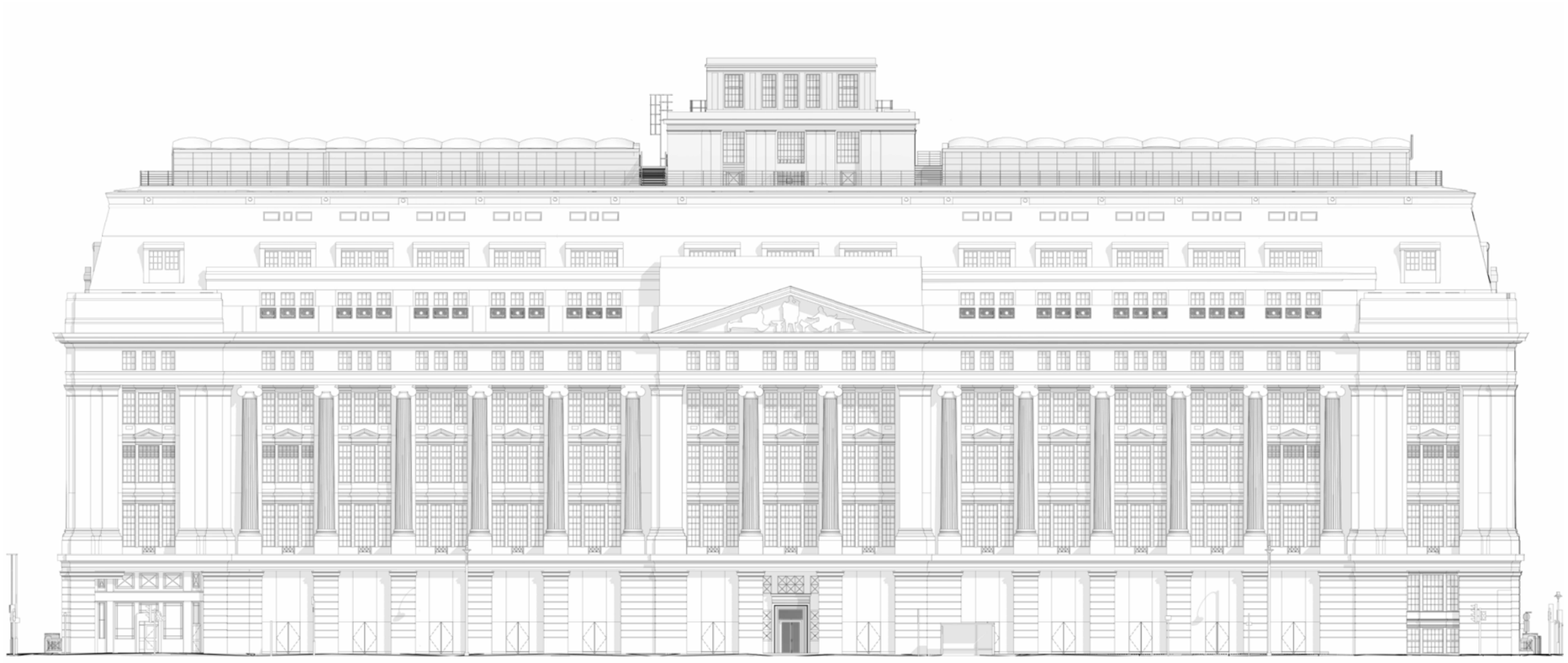
Vernon Place

South Elevation - Proposed

This elevation only introduces the high level 1.8m high plant enclosure returns. The fume stacks are indicated beyond in the distance but would not make up part of the elevation composition due to their set back position. Future proofing louvres are also indicated at ground floor level.

4.9 Elevations

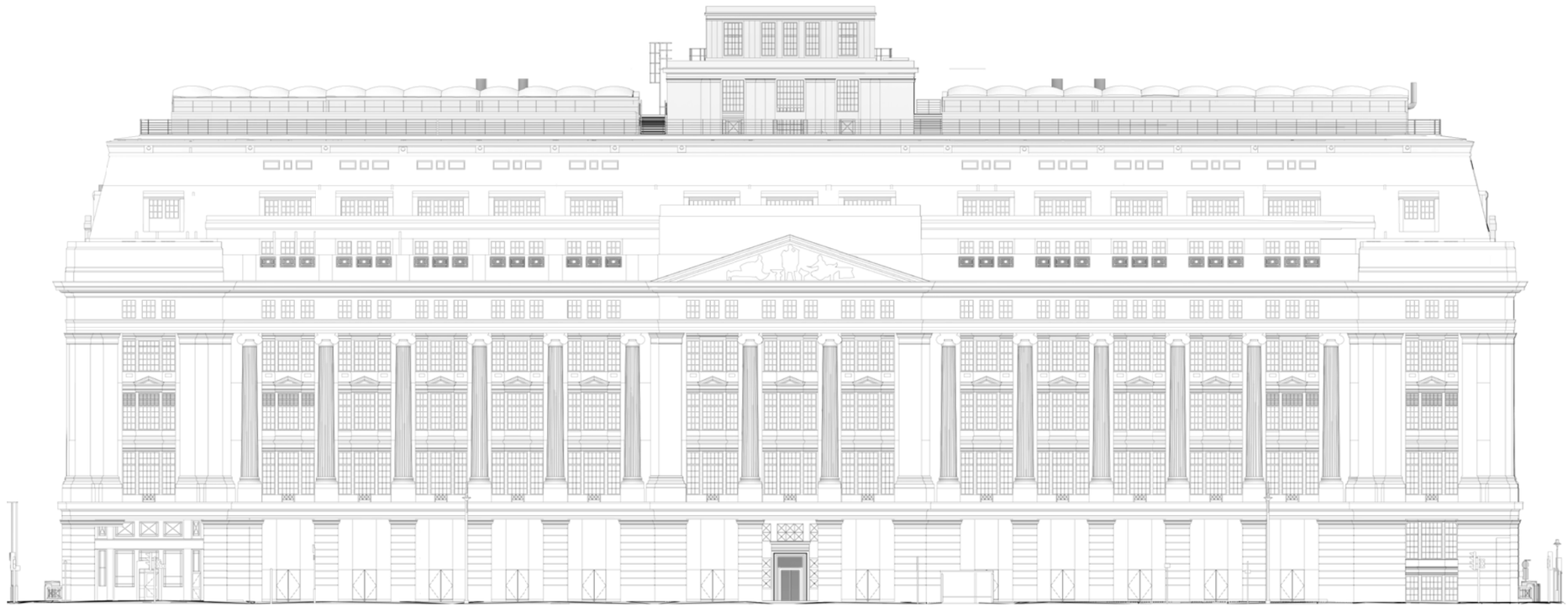
4.9.6 Southampton Row Elevation (East) - Existing



Southampton Row
Elevation - Existing

4.9 Elevations

4.9.7 Southampton Row Elevation (East) - Proposed



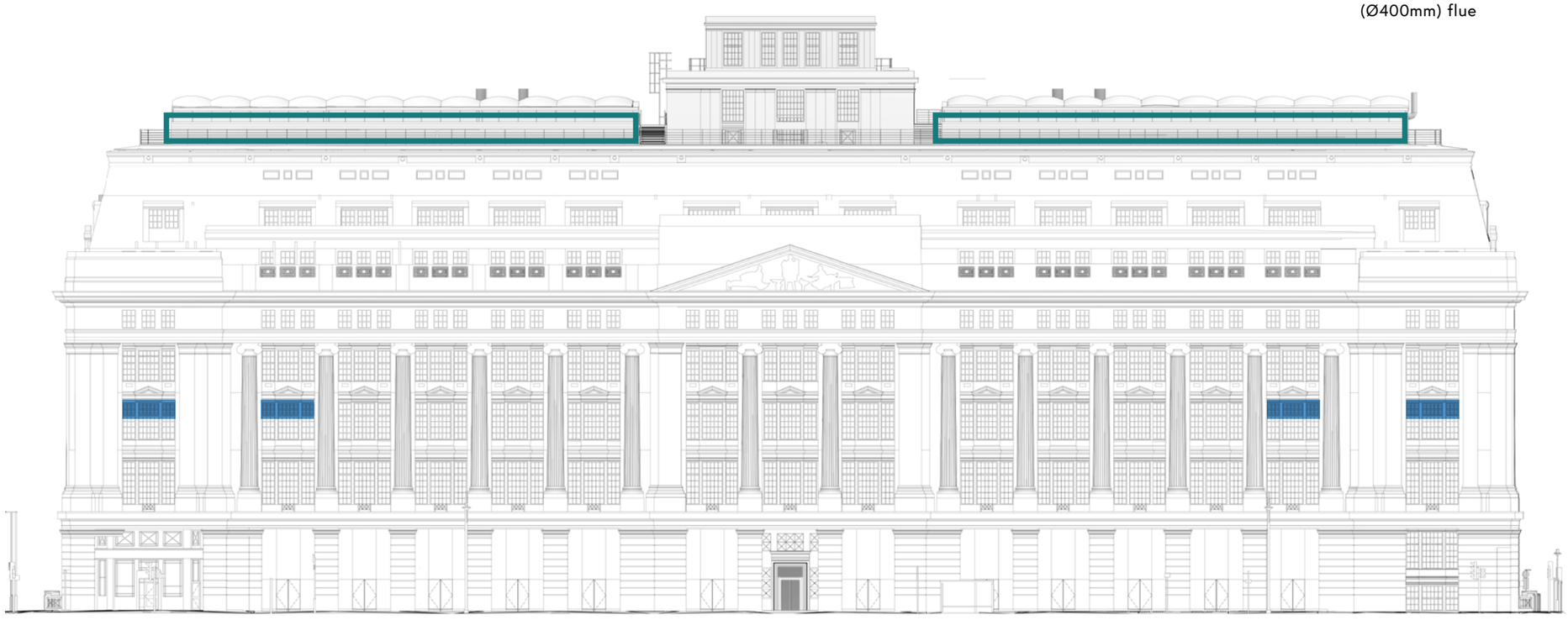
Southampton Row
Elevation - Proposed

4.9 Elevations

4.9.8 Southampton Row Elevation (East) - Proposed

Key

- Proposed Louvres
- Future Proofing Louvres
- Louvres recently added
  The recently added louvres could be removed if Level 2 is converted to lab enabled space
- Louvres Historic
- New or future proofing louvre below Ground Level
- Proposed fume exhaust stacks (Ø800mm) 1.3m above eaves level
- Proposed 1.8m high louvred screens
- Existing flues to be replaced with single (Ø400mm) flue



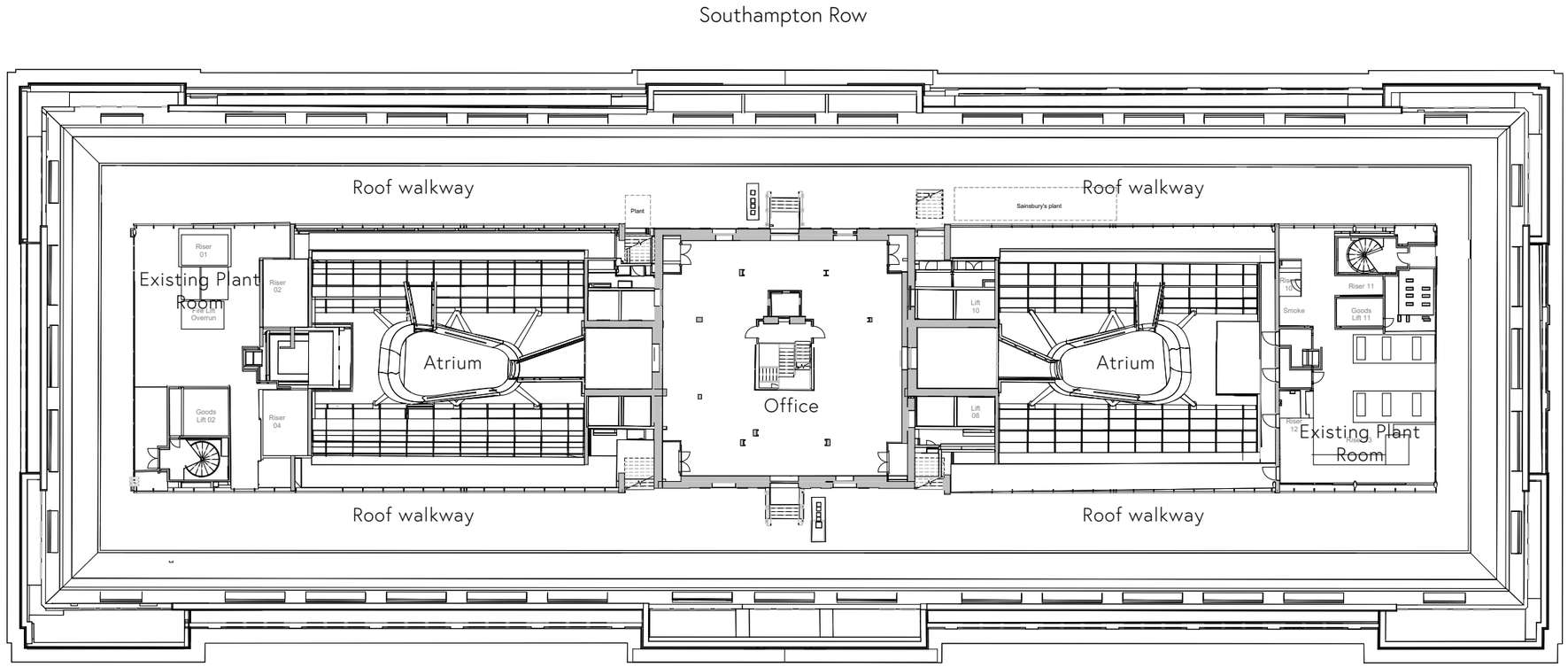
Southampton Row

Elevation - Proposed

This elevation only introduces the high level 1.8m high plant enclosure returns. The fume stacks are indicated beyond in the distance but would not make up part of the elevation composition due to their set back position.

4.10 Eighth Floor

4.10.1 Eighth Floor Plan - Existing



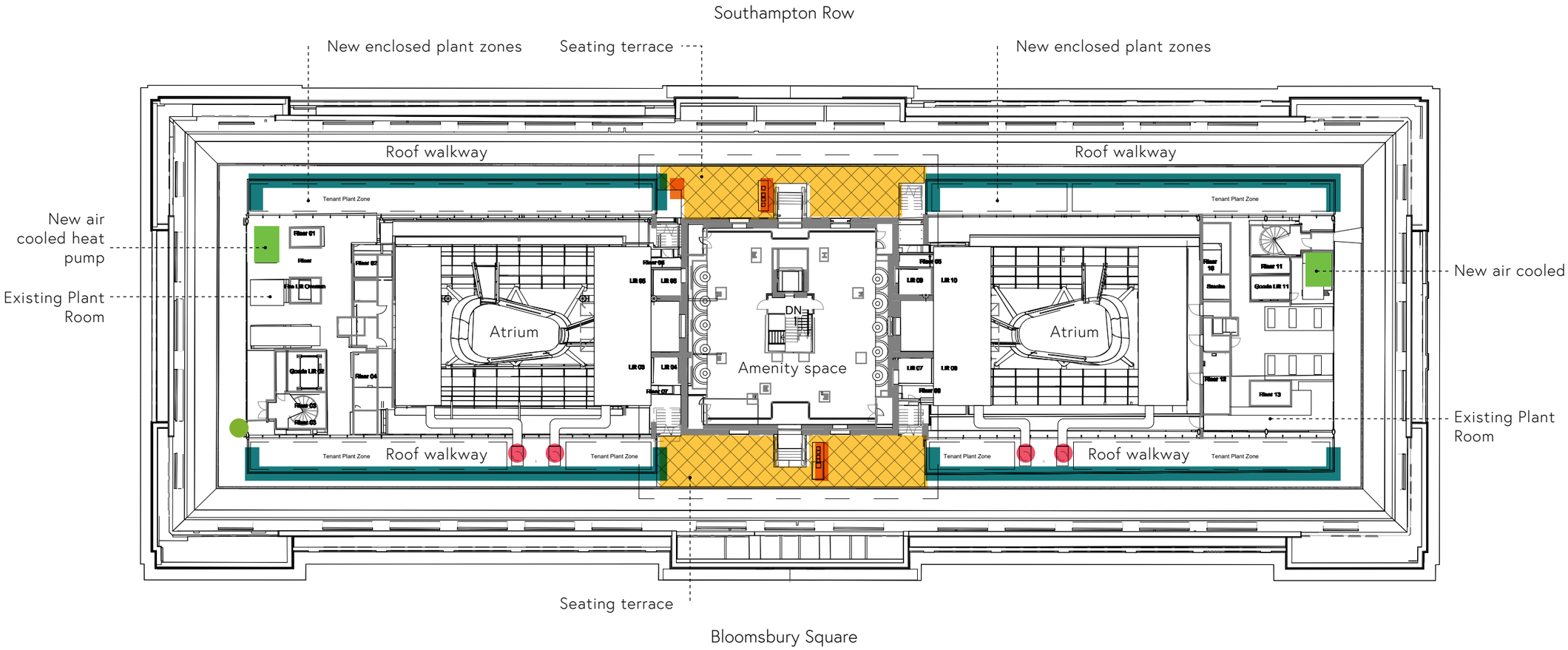
Floor Plan Level: 8

4.10 Eighth Floor

4.10.2 Eighth Floor Plan - Proposed

Key

- Existing plant outside proposed louvre screens
- Existing flues to be replaced with single (Ø400mm) flue
- Proposed louvred screens 1.8 metres high
- Proposed fume exhaust stacks (Ø800mm) 1.3m above eaves level
- Potential for upgrading floor finishes to roof terrace in these areas



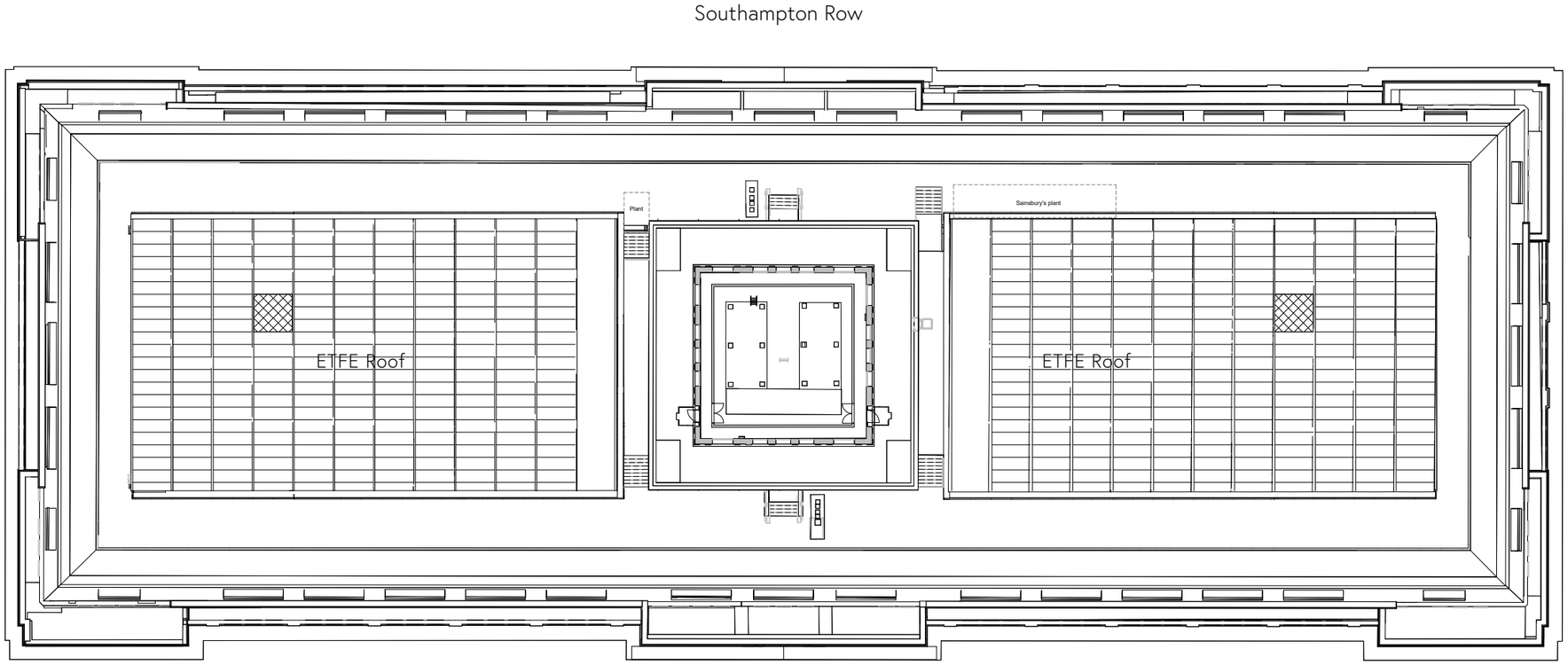
Floor Plan Level: 8

The 8th Floor is currently a shell and will be fully fitted out to CAT B to provide an amenity space for tenants and visitors. Access is via the staircase from the level 7 central lift lobby. There are external amenity spaces proposed facing East and West on the level 8 roof terrace which benefit from wonderful views across the London skyline.

Proposals include new 1.8m high louvered plant screens to enclose new plant zones either side of the atrium spaces. New fume stacks will be located within the plant enclosures facing Bloomsbury Square, set at 1.3m above eaves level and 3No existing generator flues are to be replaced with a single 400 diameter flue at the same height, located at the northwest corner.

4.11 Roof Level

4.11.1 Roof Level Floor Plan - Existing



Floor Plan Level: Roof