

UCL Rockefeller Refurbishment

Compressed Air Plant Enclosure

Project No: 880

Date: 27th August 2021



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Introduction

The process of relocation of the Eastman Dental Institute into the Rockefeller building has allowed the institute to re-prioritise its service delivery and invest in cutting edge research and teaching equipment.

Subsequent to the submission of the full planning and listed building application, that facilitated the relocation from Gray's Inn Road into the Rockefeller building, further funds have been made available to upgrade the specification of the clinical teaching equipment. This upgrade of equipment requires an increase in the volume of compressed air plant required to support the multifaceted apparatus and increase in simultaneous use of the facility.

The increased mass of compressed air plant is beyond that which could be accommodated within the building. The project team have examined several options including further levels of plant deck at the rear of the building and locations on the roof.

These studies have concluded that the most cost effective and positive from a town planning perspective is to locate the plant on the roof of the Huntley street side of the building where it will not be visible from the surrounding streetscape.

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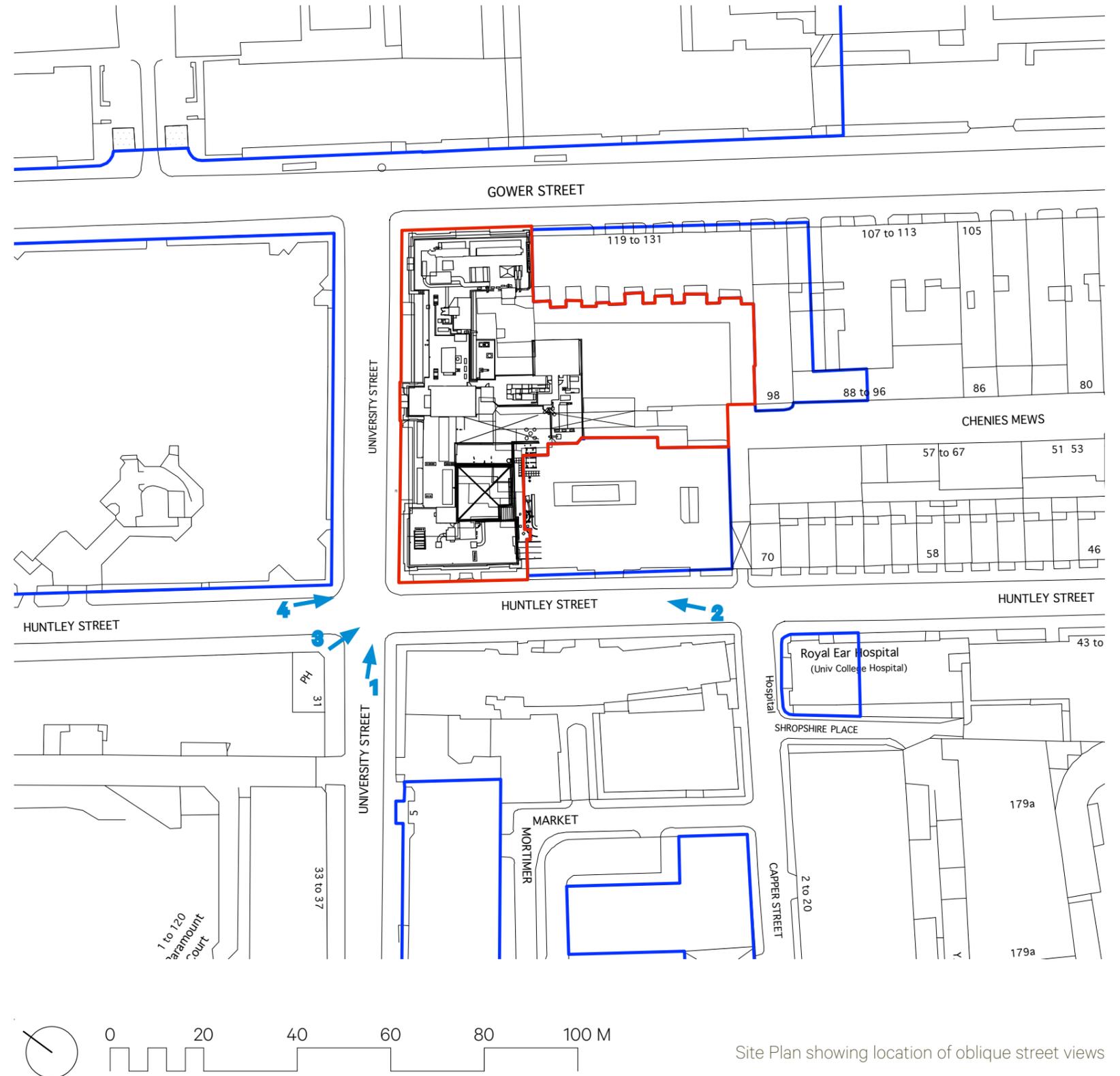
Street Views

The team have conducted site visits to explore the impact of the plant, and the required enclosure, on the roof scape of the building and establish pipework routes etc.,

The visit concluded that locating the enclosure at a specific location would prevent it from being visible for within the surrounding street scape.

In order to test this conclusion that plant enclosure, the Rockefeller building and the wider urban context has been modelled in 3D. Key views have been selected as shown on the drawing to the right.

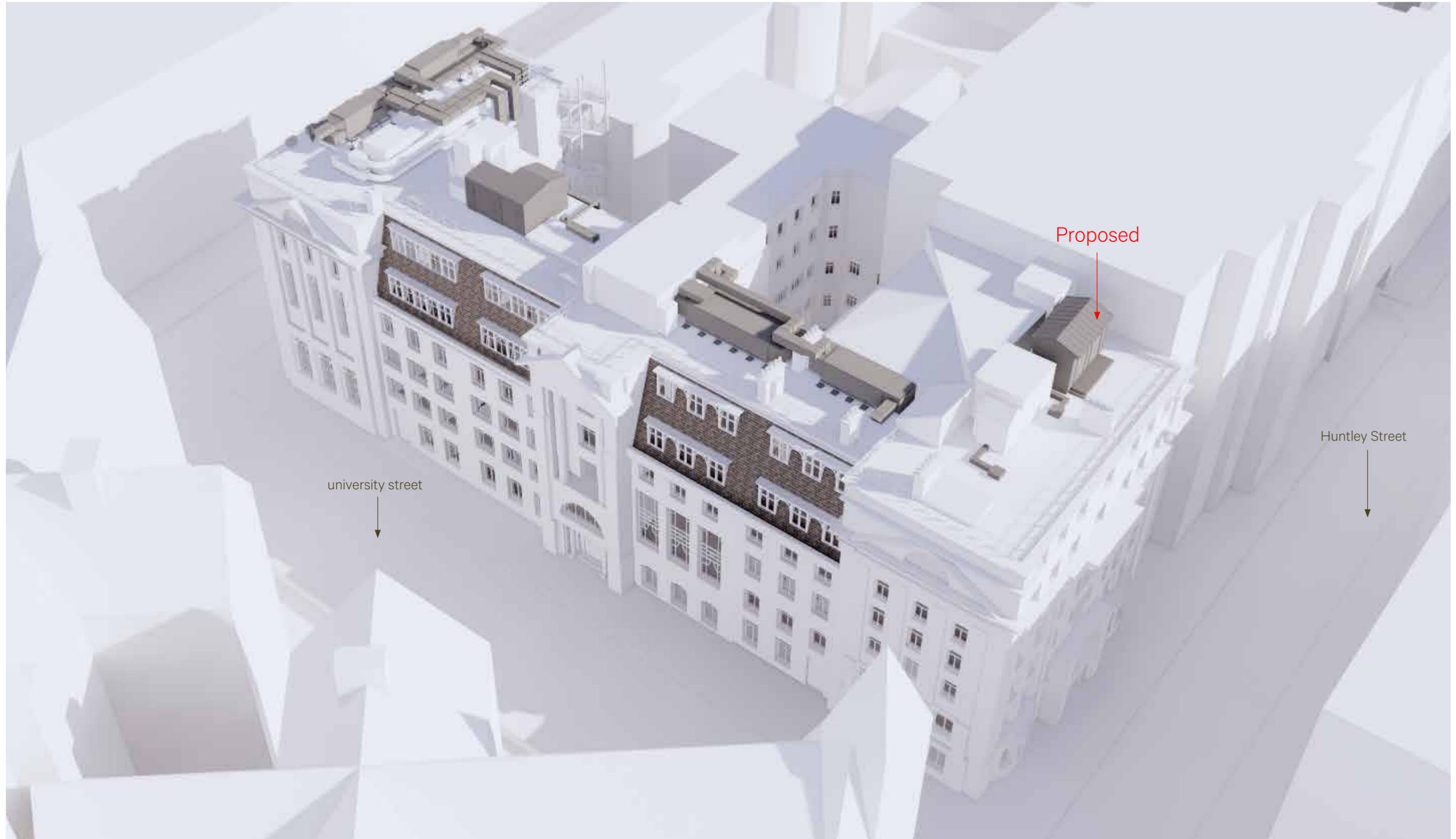
The visuals on the following pages illustrate the views from these key locations. These confirm that the proposed plant enclosure is not visible from these locations.



Site Plan showing location of oblique street views

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01 | University Street View 1: Existing



01 | University Street View 1: Proposed

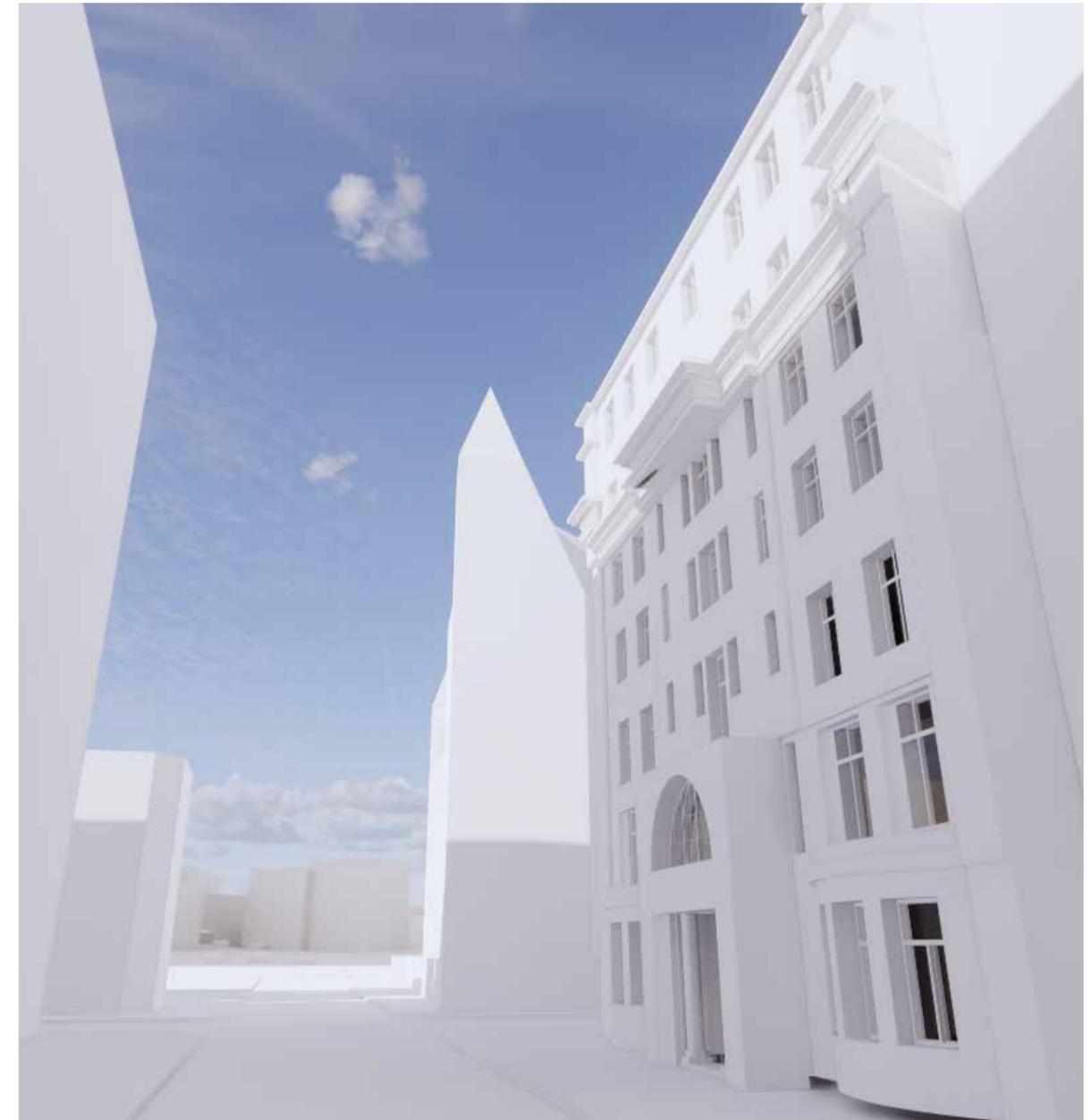
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Street Views



02 | Huntley Street Street View 2: Existing



02 | Huntley Street View 2: Proposed

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03 | Intersection University Street & Huntley Street View 3: Existing



03 | Intersection University Street & Huntley Street View 3: Proposed

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Street Views



02 | Huntley Street Street View 4: Existing



02 | Huntley Street View 4: Proposed

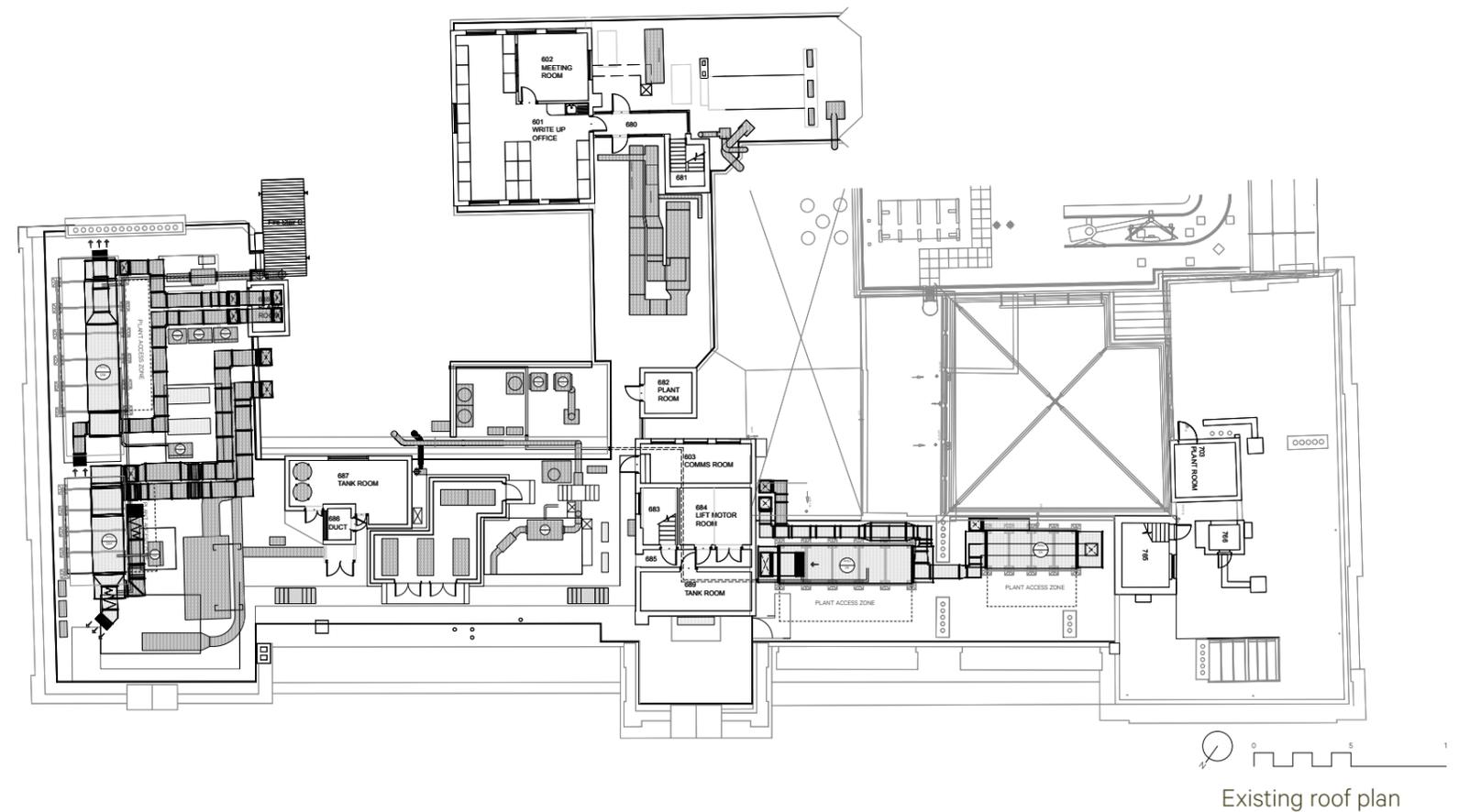
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Detailed Proposals

The new compressed air plant will not require the relocation of existing roof equipment.

Due to load constraints on the existing roof structure a lightweight solution is required for the new plant enclosure. Insulated SIPs panels will be clad in a single ply membrane with applied profiles of a dark grey colour (RAL 7015) which will give an appearance similar to the enclosure on the Gower street side of the building. The maximum height of the enclosure will not exceed 3500mm from existing roof level ensuring the enclosure is not visible from street level.

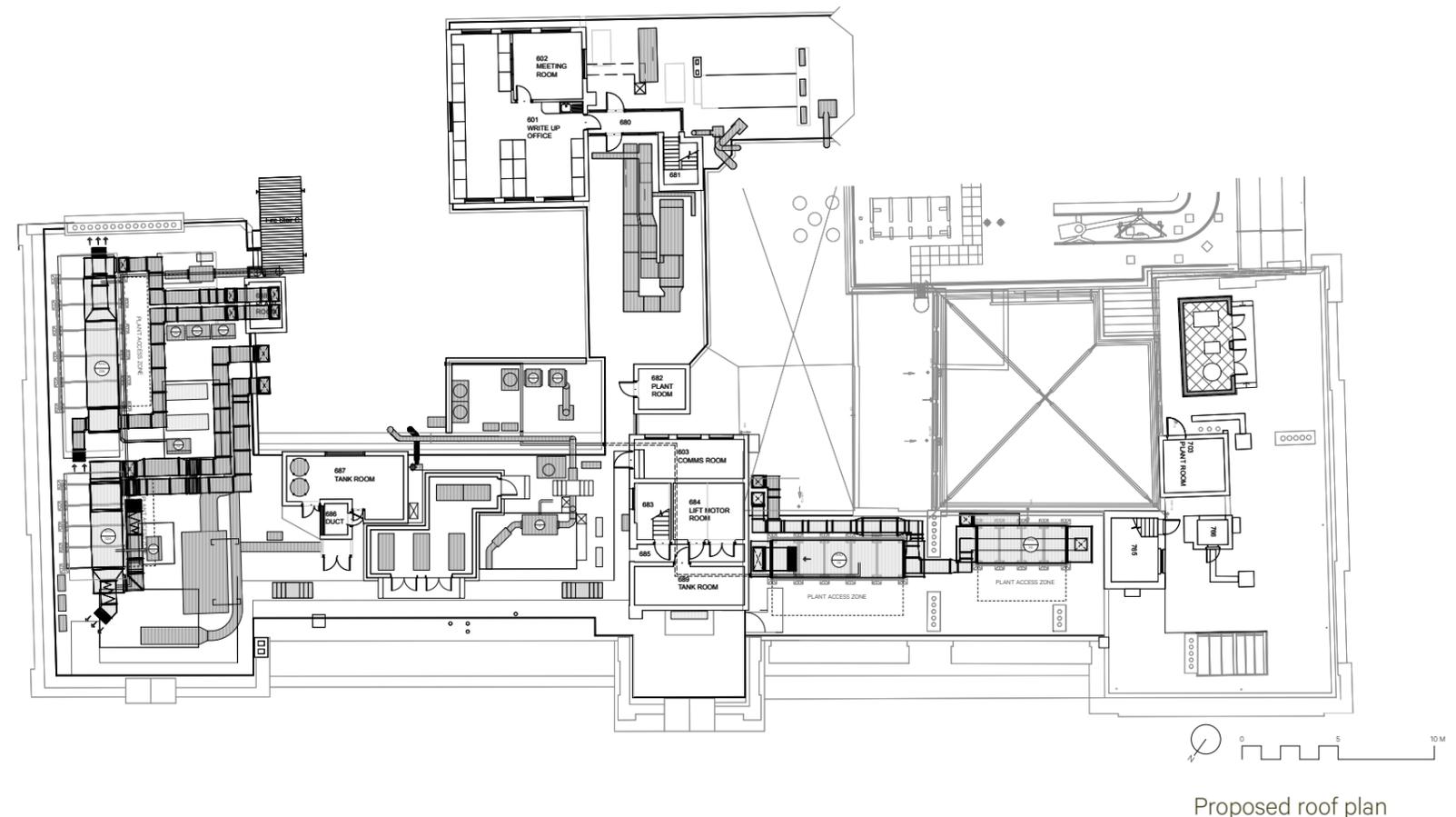


Existing roof plan

Access

The proposals have been designed to allow safe access and maintenance to all new and existing plant for operatives.

Due to the location on the roof the proposals do not have any impact on access arrangements for general building users.



Proposed roof plan

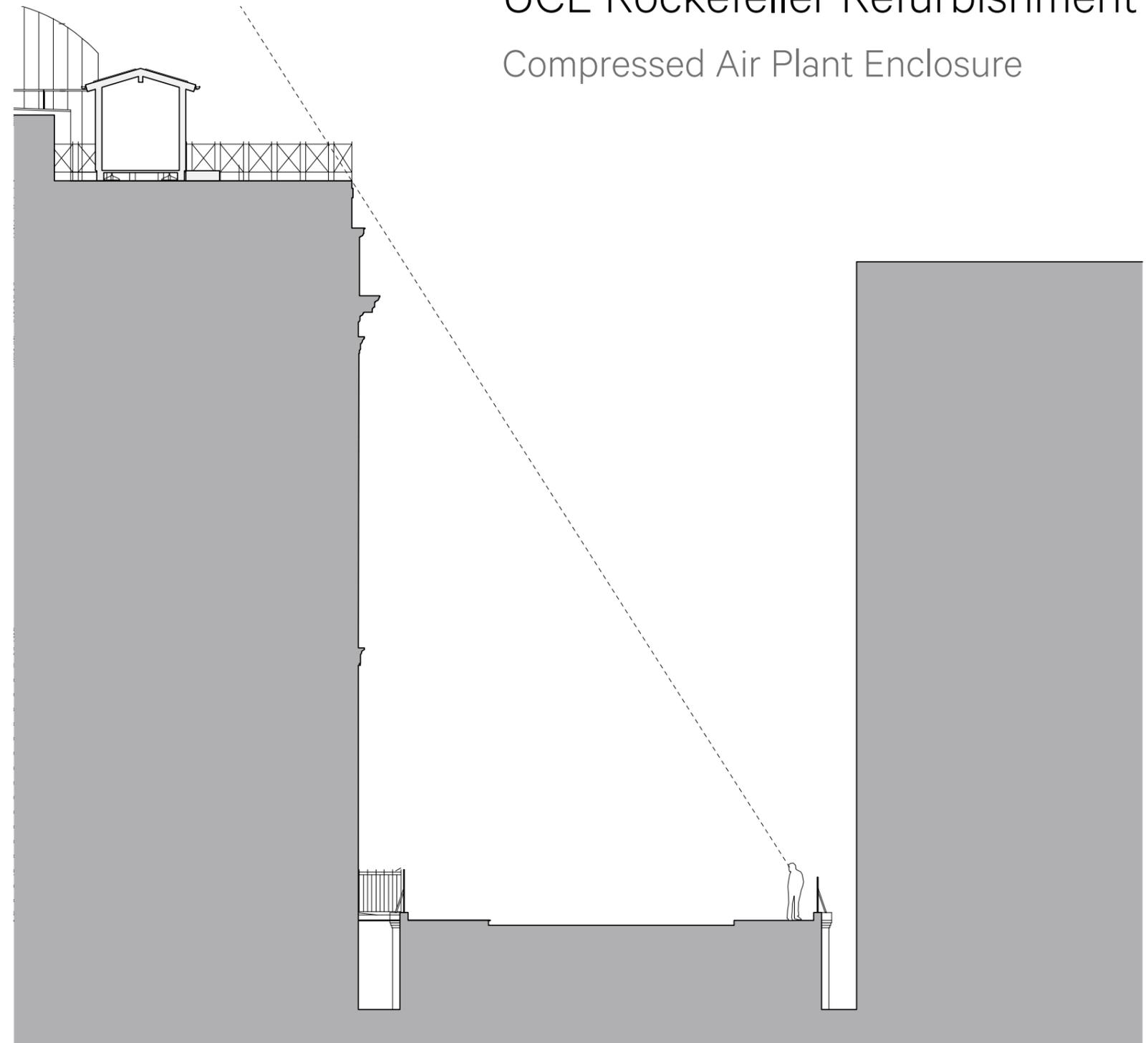
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Acoustic Mitigation Measures

We expect that noise mitigation requirements will be established by the local authority and that conditions detailing these will be attached to any consent achieved.

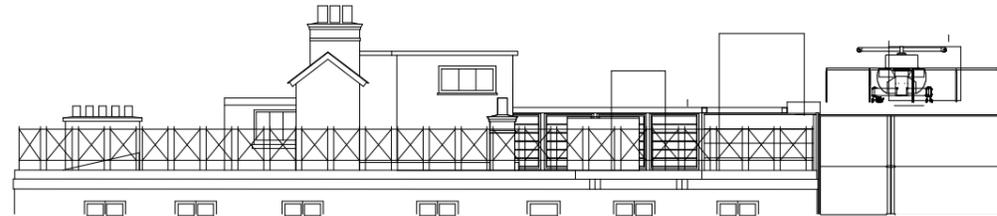
The proposed enclosure can be detailed to provide high levels of noise attenuation.



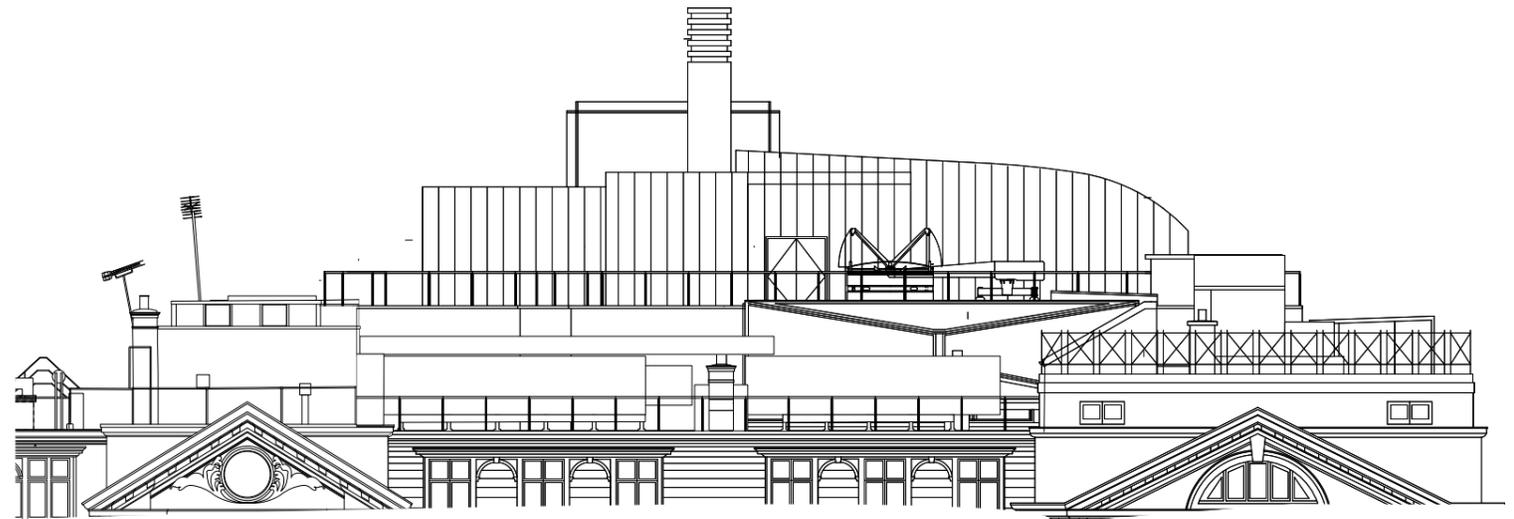
University Street Section: Illustrating proposed enclosure to rear of building

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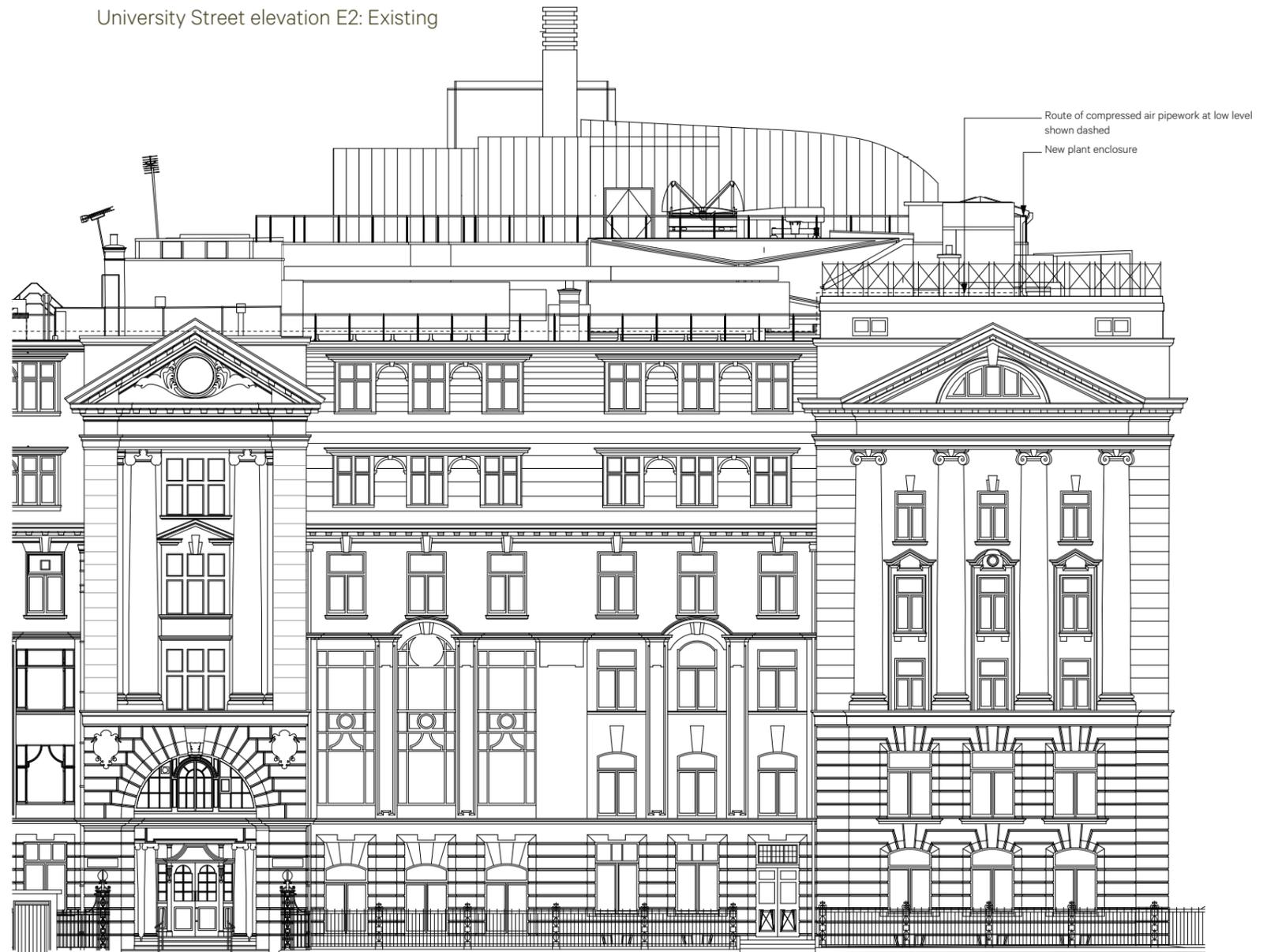
Huntley Street Elevation E4: Existing



University Street elevation E2: Existing



Huntley Street Elevation E4: Proposed showing new plant and enclosure.



University Street elevation E2: Proposed showing new plant and enclosure.

Case Study :
 North Parade Schools
 for Portsmouth City Council
 Single ply membrane with PVC standing seam
 profiles in RAL 7015 by IKO Polymeric



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Materials

Roof and walls - Single ply membrane with applied profiles. RAL 7015.

Doors - Powder polyester coated metal doors with louvres. RAL 7015.

Gutters and down pipes - black PVC.

Plinth - Waterproofing membrane to match existing.

Steps and landings - Galvanised metal grating on 'big foot' supports.

