Kendall Kingscott

UCL LMS Small works

Design & Access Statement

Replacement of External Chiller for Rayne Institute

Client
University College London

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1.0 Introduction

This Design and Access Statement has been prepared by Kendall Kingscott Limited in support of a planning application on behalf of University College London. The application pertains to proposed works at Rayne Institute, specifically the replacement of an internal chiller unit with an external exhaust and attenuation unit located at roof level.

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This statement relates specifically to the replacement of the 5th floor internal chiller unit with external exhaust and attenuation unit located at roof level.

The statement comprises of the following sections-

1. Introduction
2. Site Description
3. Planning statement
4. Proposed works
5. Design & access statement
6. Parking and Access
7. Sustainability
8. Summary & Conclusions

2.0 Site Description

The Rayne Institute is a non-statutory listed building situated within the Bloomsbury Conservation Area. The site is located on University Street, bordered by Mortimer Market to the south and adjacent to Paramount Court. Currently, the building serves as an educational and research facility for University College London's Division of Medicine.

The surrounding area is predominantly occupied by educational buildings, forming part of the wider UCL campus. Notably, the Grade II listed Cruciform Building is situated to the northeast of the site. Additionally, there are clusters of residential properties in the vicinity.

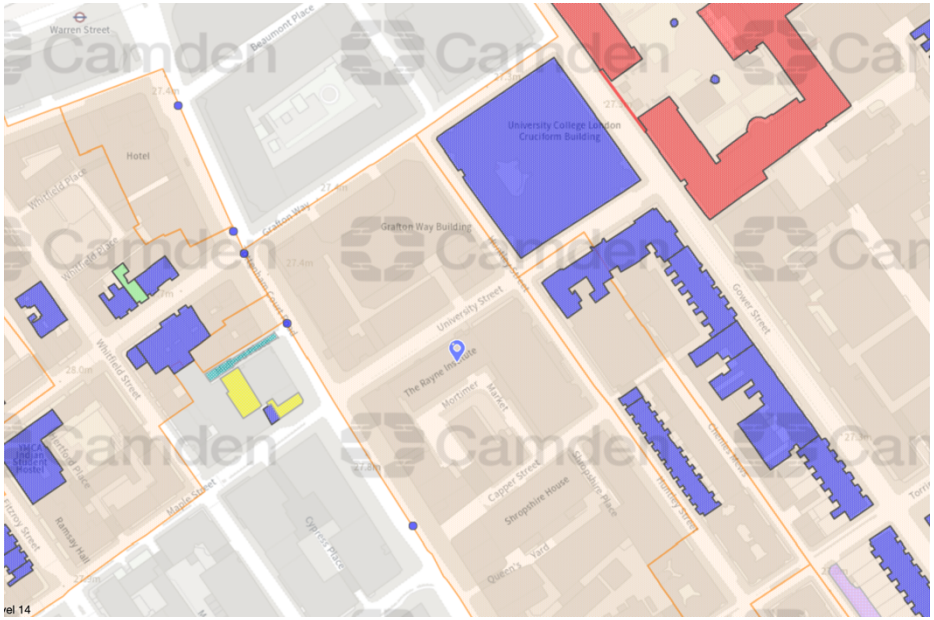

Fig.1 *London Borough of Camden map outlining listed buildings and Conservation Area*

3.0 Planning statement

The works are in accordance with the relevant national and local policies. The London Borough of Camden's Local Area Requirements for Planning Applications (2018) state that where a development may give rise to noise, including plant, ventilation, air extraction or conditioning near a "noise sensitive use" (which) may include housing, schools/libraries, hospitals, offices, workshops, laboratories, hotels and open spaces, then an Acoustic Report should be provided in support of the planning application.

Policy Drivers are listed as:
National Planning Policy Framework;
Camden Local Plan Policies A1, and A4;
Relevant Neighbourhood Plans;
Appendix 3 of the Local Plan and Camden Planning Guidance on Amenity.
Guidance cited in Appendix 3 - Proposed Developments likely to be Sensitive to Noise.

Policy A4 Noise and vibration of the Camden Local Plan 2017 states that:
The Council will seek to ensure that noise and vibration is controlled and managed.

Development should have regard to Camden's Noise and Vibration Thresholds (Appendix 3). We will not grant planning permission for:
a. development likely to generate unacceptable noise and vibration impacts; or
b. development sensitive to noise in locations which experience high levels of noise, unless appropriate attenuation measures can be provided and will not harm the continued operation of existing uses.

We will only grant permission for noise generating development, including any plant and machinery, if it can be operated without causing harm to amenity. We will also seek to minimise the impact on local amenity from deliveries and from the demolition and construction phases of development.

In this case, an acoustic report for the external chiller unit will form part of the supporting documentation for this planning application. Refer to appendix D.

There was no record of any planning permission for the existing external condenser units that are already in place. It is therefore required that a full planning application and listed building consent Is required.

3.01 Consultees

The requirement for the proposed works was instigated by UCL, to improve the thermal comfortability of the research office, three offices, meeting room and two image analysis rooms in Rayne, following the refurbishment works of the rooms to enhance their usability.

3.02 Site History

No record was found of any planning permission for the existing chiller unit currently in place. As a result, a full planning application is required.

3.03 Statement of Community Involvement

The building is situated within UCL's main campus, and the students and staff will benefit from the proposed works.

3.04 Supporting Documentation

The relevant information is attached within the Appendices of this Design and Access Statement.

The rooms on the ground floor of Rayne have a high occupany and therefore the demands on climate control are high.

The ground floor rooms are currently provided with heating and cooling via multiple systems. These systems are life expired and have failed, hence requiring replacement. The redundant systems will be stripped out and climate control provided though a single more efficient system.

One of these failed systems is a chiller located in the 5th floor plant room. This chiller is provided with exhaust air routed through ductwork and attenuation to a roof level terminal. The Proposal is to replace the existing chiller within the existing 5th floor plant room with a new Daikin REYA28A VRV heat pump. This will be provided with new ductwork and attenuation to the roof level terminal.

4.0 Proposed Works

The proposed works will involve the removal of the existing internal chiller, external attenuator and galvanized roof cowls, provision of temporary weather proofing, and a crane lift to remove existing units and lift new VRV heat pumps, attenuation and roof cowls into place.

5.00 Design and Access Statement

5.01 Use

UCL aims to utilise the Rayne Institute as a high-quality teaching and research space for students. The existing chiller has failed, making its replacement essential to maintain suitable internal environmental conditions for the occupants.

5.02 Amount

The proposed internal heat pump is sized to serve the ground floor area where the existing chiller and other redundant systems served.

6.0 Parking and Access

A mix of parking spaces is available opposite the building along University Street. These spaces will be temporarily impacted during the delivery and installation of the new unit, as a crane will be required to lift the units into place. However, parking will not be affected for the remainder of the construction period.

Access to the site will be maintained through the existing entrances to the Rayne Institute. The proposed works will not alter the current access arrangements.

Refer to Appendix B for Architectural drawings.

7.0 Sustainability

The primary objective of replacing the chiller unit is to ensure the comfortable and efficient use of the Rayne Institute. The proposed installation will upgrade the existing system to a more effective and efficient one, requiring less maintenance and improving overall performance.

The new chiller represents a more sustainable solution, as heat pumps can deliver both heating and cooling while generating significantly fewer greenhouse gas emissions compared to the multiple systems currently used. Additionally, the upgraded unit will operate at a higher efficiency, leading to reduced electricity consumption and a smaller environmental footprint.

Refer to Appendix C for mechanical drawings.

8.0 Summary & Conclusions

Throughout the design process every effort has been made to consider the impact of the proposal and balance this against the comfort and wellbeing of both students and staff as well as the teaching and now administrative requirements of UCL.

Kendall Kingscott was appointed to deliver Architectural Design Services and M&E services for the works proposed. An Acoustic Consultant has carried out a background noise survey and made recommendations on noise mitigation measures which have been incorporated within the proposed scheme.

A key principle emphasised by UCL relates to the sustainability of any future works as it has pledged to become a carbon neutral entity by 2030. To this end, in accordance with Camden's approach towards sustainable development within the borough (set out within Policies CS13 and DP22 in Camden Development Policies) the proposed works 'include measures to minimise the effects of, and adapt to, climate change' through mechanical and electrical design.

The proposal will benefit UCL sustainable needs and will ultimately improve the comfort and wellbeing of both students and staff.