

ROYAL PRINCE ALFRED HOSPITAL

REDEVELOPMENT WORKS: REF 6 – Molecular Imaging Plant Room

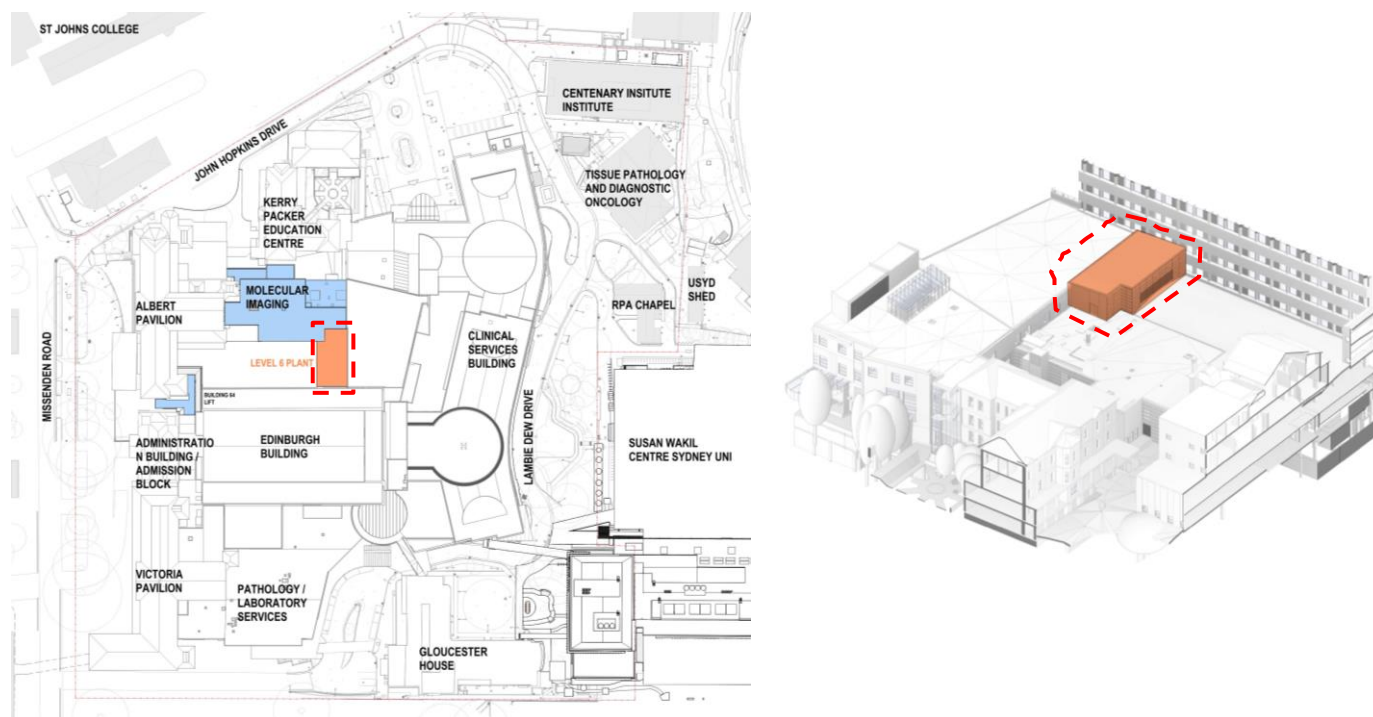


Figure 1- Overall Site plan (Royal Prince Alfred Hospital Campus) & Axonometric of Proposed L6 Plant room to serve Emergency Dept (proposed plant room shown in dashed red line)

1. Scope of Works

The project involves the expansion of new mechanical services plant and associated works on Level 6 of Building 89. The plant expansion is required to provide compliance upgrade and new infrastructure capacity for the hospital campus to serve ongoing and projected growth for the Emergency Department.

The detailed architectural works for the new Mechanical Plant room on Level 6 of Building 89 is listed below with the location shown on the overall architectural site plan.

The new Mechanical plant is positioned adjacent to the proposed Molecular Imaging Early Works 3 (EW3) expansion project (approved REF) with existing campus buildings in close proximity such as Building 75, Building 63 and Building 64 – refer to figure 2.

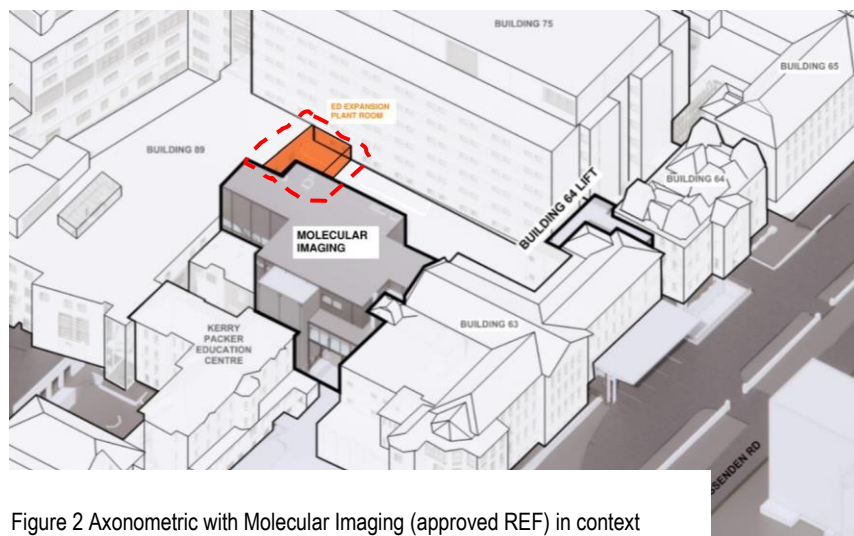


Figure 2 Axonometric with Molecular Imaging (approved REF) in context

All work is designed to comply with the current NCC (2022) and Australian Standards.

All new works shall be coordinated to ensure hospital operations are not impacted during construction.

In the event of unexpected hazardous materials being found, site remediation will also be undertaken.

1.1 New Construction

The works include the following below:

- Removal of existing Level 6 mechanical plant and making good to extent shown on the drawings.
- Penetrations for new services within the plant room.
- Waterproofing of existing slab
- Building interface works to the existing adjacent campus buildings where impacted.
- Construction of new structure for lightweight steel roof, gutter, and fascia works.
- Construction of new façade enclosure to plant room with a steel frame and metal stud framing.
- New façade system with the inclusion of solid aluminium cassette cladding and acoustic louvres.
- New construction of fire rated walls.
- Finishes within plant room as required.

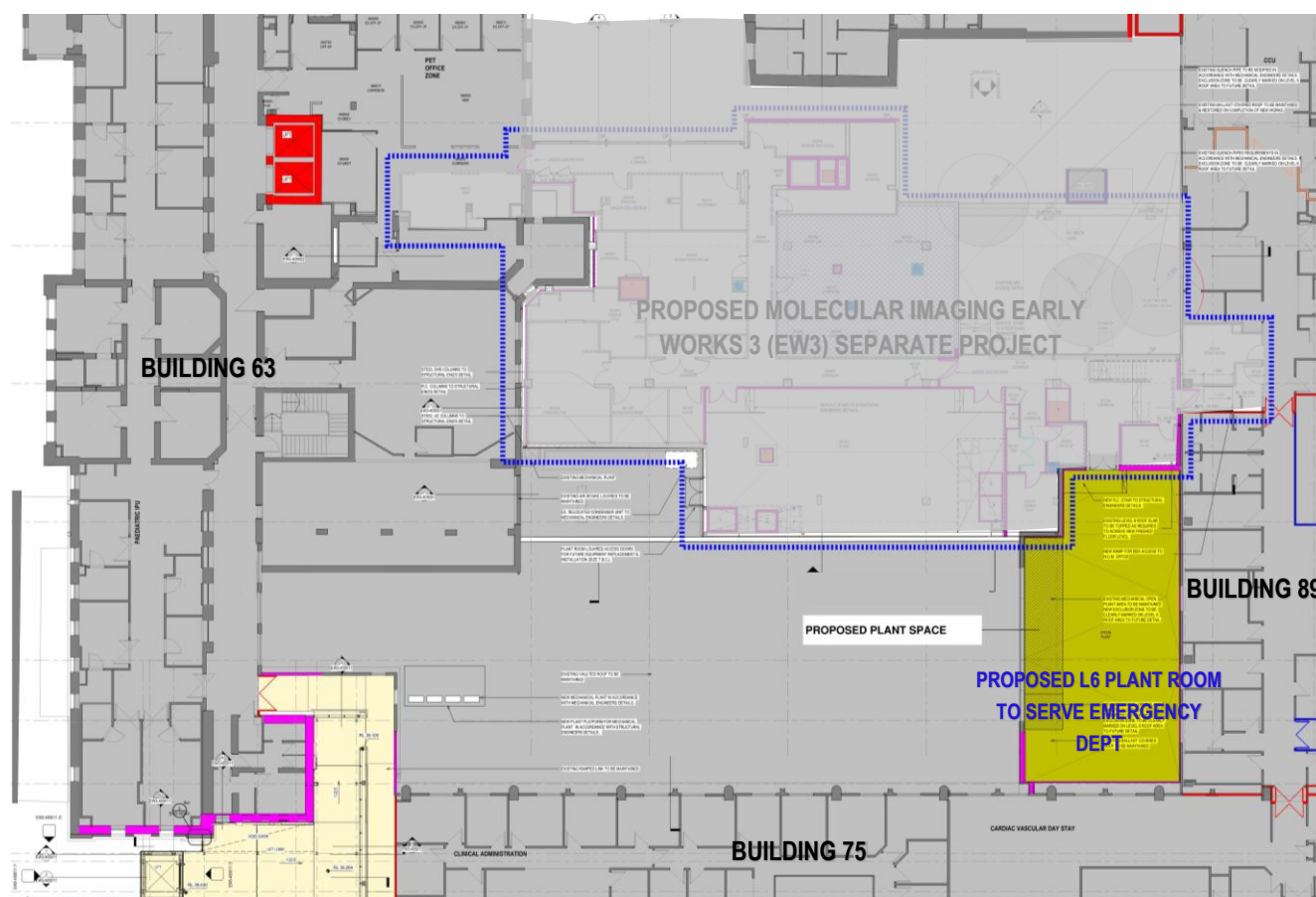


Figure 3 Level 6 General Floor Plan

2. Visual Amenity & Impact

The proposed Level 6 Mechanical plant room is to be located on an existing open roof area between Building 75, Building 89 and Building 63 upon which there is existing rooftop services plant serving Building 89. The proposed plant room is located on part of this roof and there is no visibility from ground level because of the adjoining taller campus buildings in all directions. The plant room will only be visible from above, where windows overlook the roof scape below. Refer to Figure 4 for images.

The proposed façade finishes and colour scheme complement and integrate with the existing building finishes. The introduction of the proposed plant room space has a negligible impact on the existing building context.

The proposed plant room does not exceed 15m height measured from ground (RL30.630) to the highest point of the plant room (RL44.726). Calculated height 14.096m above existing ground level.



Figure 4 Level 6 Existing Plan & Proposed Level 6 Plan

The proposed plant room abuts the external wall of Building 75. On the Level 7 patient care area where a 4-bed bedroom is impacted, there is a void between the plant room and the recessed external walls of Building 75 such that the existing natural light provision to existing windows is maintained. Windows will receive a translucent film applied up to the roof line, to avoid the view of the plant room wall, but retain the view to sky.

On Level 6 where several windows to the Cardiac Vascular Day Stay waiting zone are impacted, the windows will be retained, but treated with film to obscure the view of the plantroom wall.

Refer to the Level 6 and Level 7 floor plan below indicating the rooms that are impacted by the proposed L6 plant room.

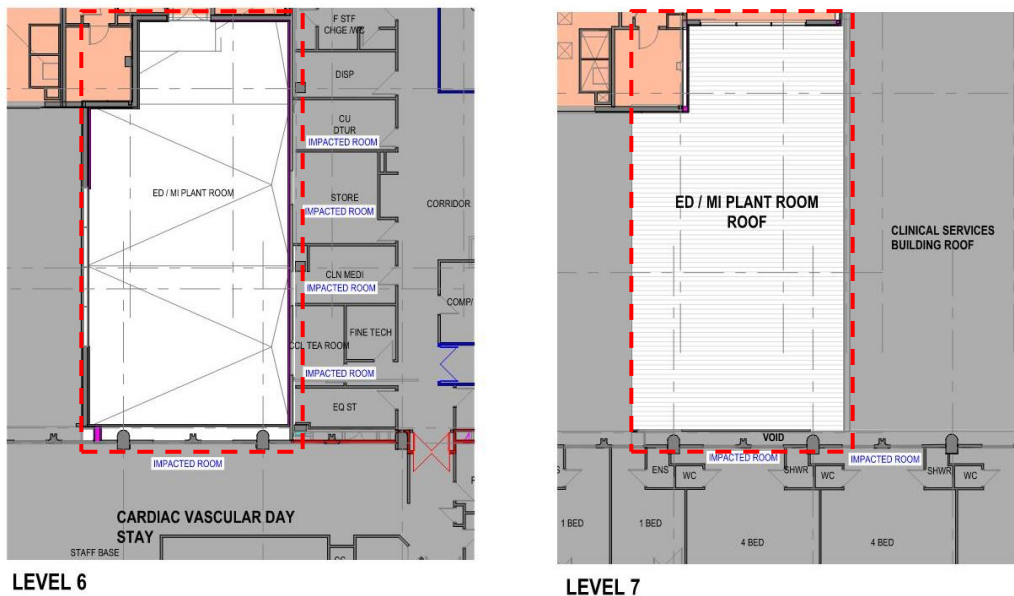


Figure 4 Level 6 & Level 7 Floor Plan

3. Sustainability Strategy

The ESD approach considers holistic project aspirations, ESD priorities and a range of sustainable design strategies to achieve this objective. Finishes and materials will be selected based on sustainable performance criteria to reflect Health Infrastructure DGN 58 - Environmentally Sustainable Development. Paint finishes will be selected to meet Volatile Organic Compounds (VOC) guidelines. Reference: LCI Sustainability Action Plan (SAP) Revision 2 dated 27/10/2023.

The new mechanical systems for the project will meet NCC and MEPS/GEMS performance requirements including the following:

- Compliance with NCC 2022 Section J Energy Efficiency Requirements
- 10% improvement from the minimum NCC 2022 Section J Energy Efficiency Requirements (as per DGN 058 and the new ESGs)
- 5-Star Green Star Healthcare equivalent design
- Use of Electronically Commutated (EC) fans as applicable to meet NCC Section J.
- High efficiency water-cooled chillers
- Outside air economy cycle for wards and non-critical areas (where dehumidification control not needed) as required by NCC Section J
- Energy reclaim for mechanical ventilation systems as required by NCC Section J

4. Materials & Finishes

The plant room expansion is designed to relate to the existing buildings by a continuation of similar building forms with panelized façade cladding and color palette. An overarching key design driver has been that the expansion abuts the heritage building (Building 75) with minimal impact.



Figure 5 Materiality & Finishes