

ROYAL PRINCE ALFRED HOSPITAL WESTERN CAMPUS INFRASTRUCTURE WORKS REF#5

- Medical Gases Storage Compound Upgrade
- Associated Works



Figure 1- Campus Location

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1. Scope of Works

The subject of this REF (Review of Environmental Factors) consists of the following works:

- Additions and alterations to the West Campus Medical Gases Storage Compound and associated works.

The detailed architectural works are listed below with the locations shown on the architectural site plan:

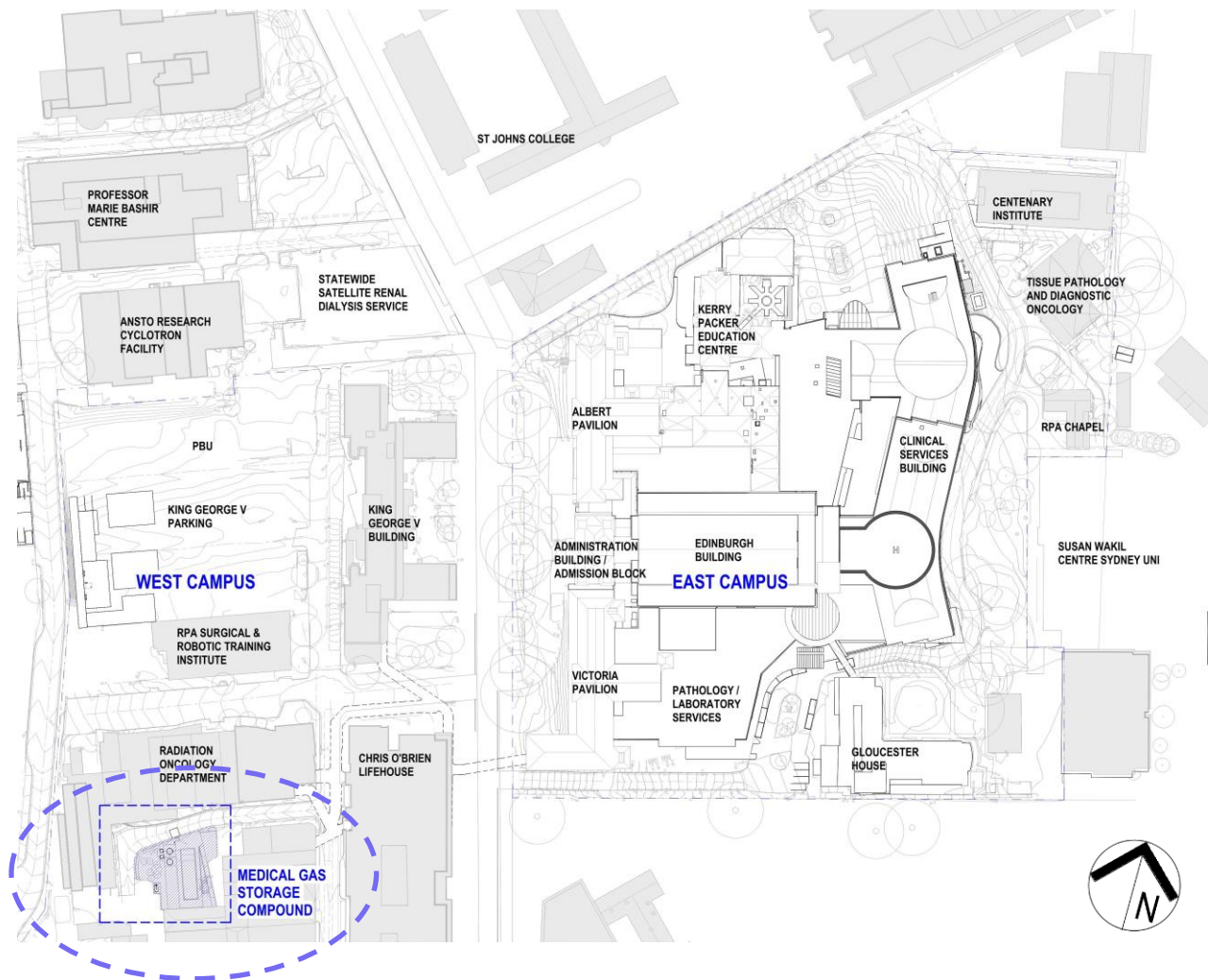


Figure 2- Campus Site Plan



Figure 3- Existing Medical Gas Storage Compound Plan

1.1 Demolition

The demolition work includes:

1. Existing landscape area to be demolished to 300mm below existing ground level in preparation for new works.
2. Existing fences to be removed.
3. Existing trees to be removed.
4. Existing walls to be removed to extent required for new works.
5. Existing diesel tank proposed to be removed (needs to be confirmed).
6. Existing fence and door to be removed to extent required for new works.
7. Existing railings to be removed to extent required for new works.

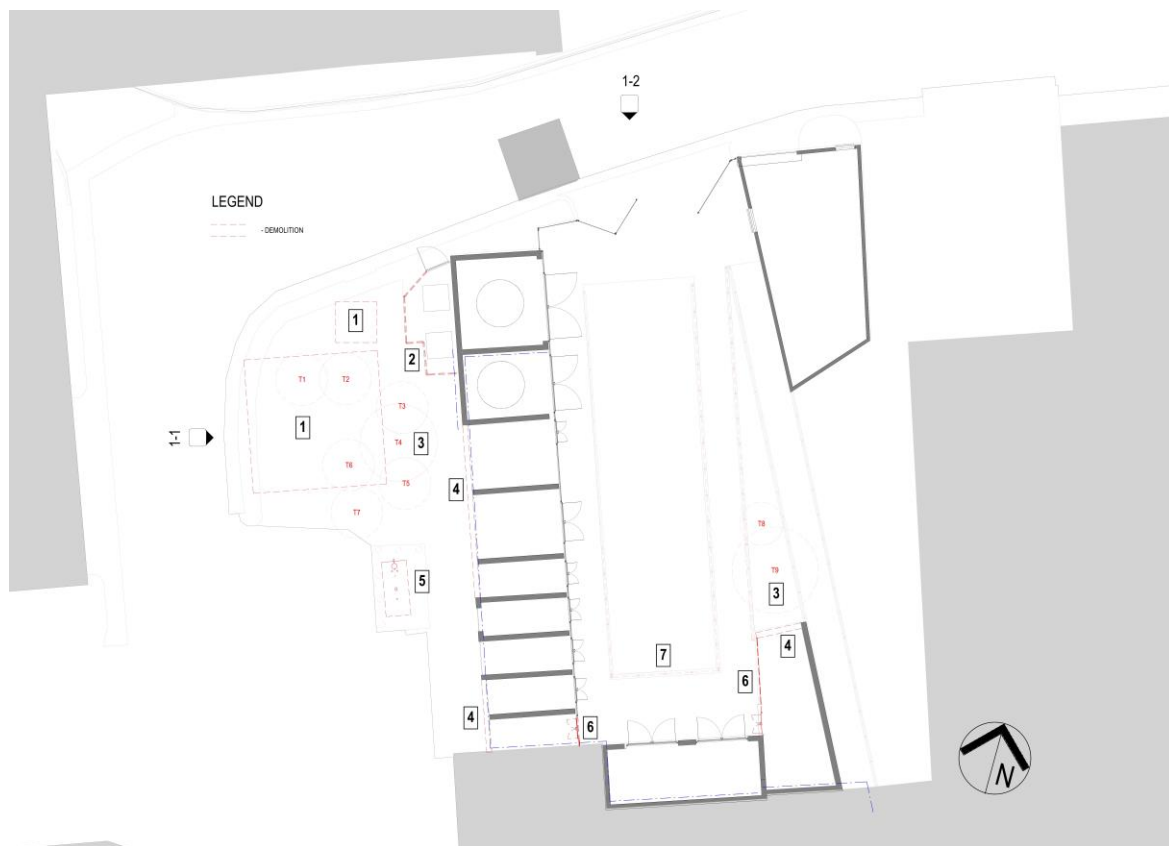


Figure 4- Demolition Plan

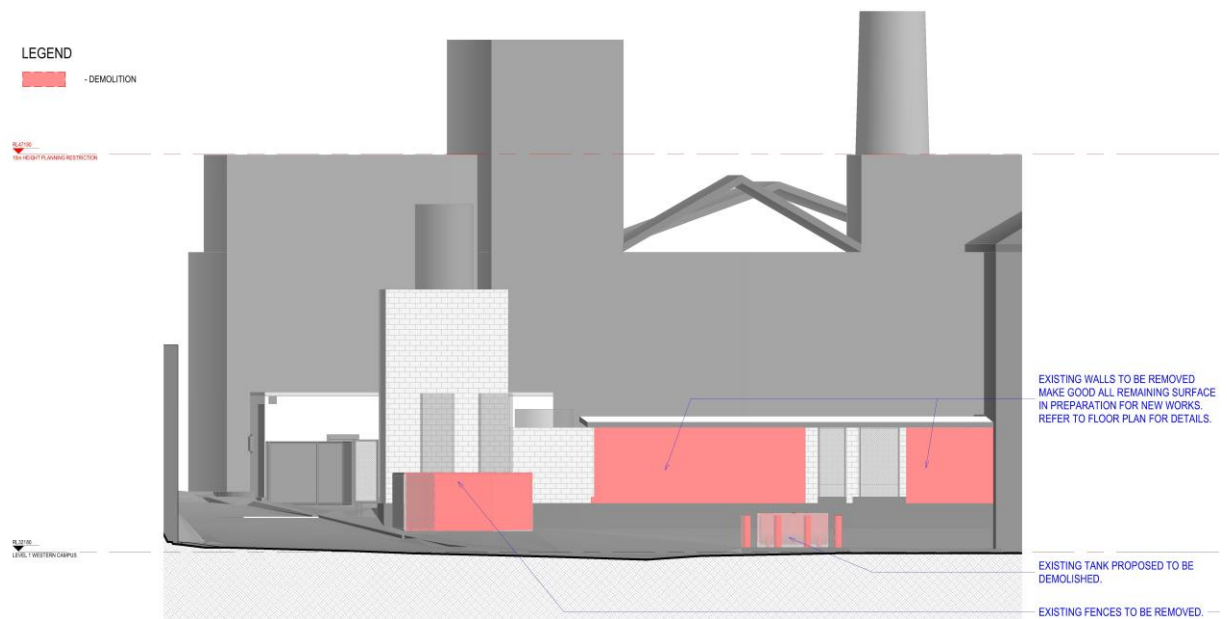


Figure 5- Demolition Elevation 1 (Refer to Elevation 1-1 in Figure 4)

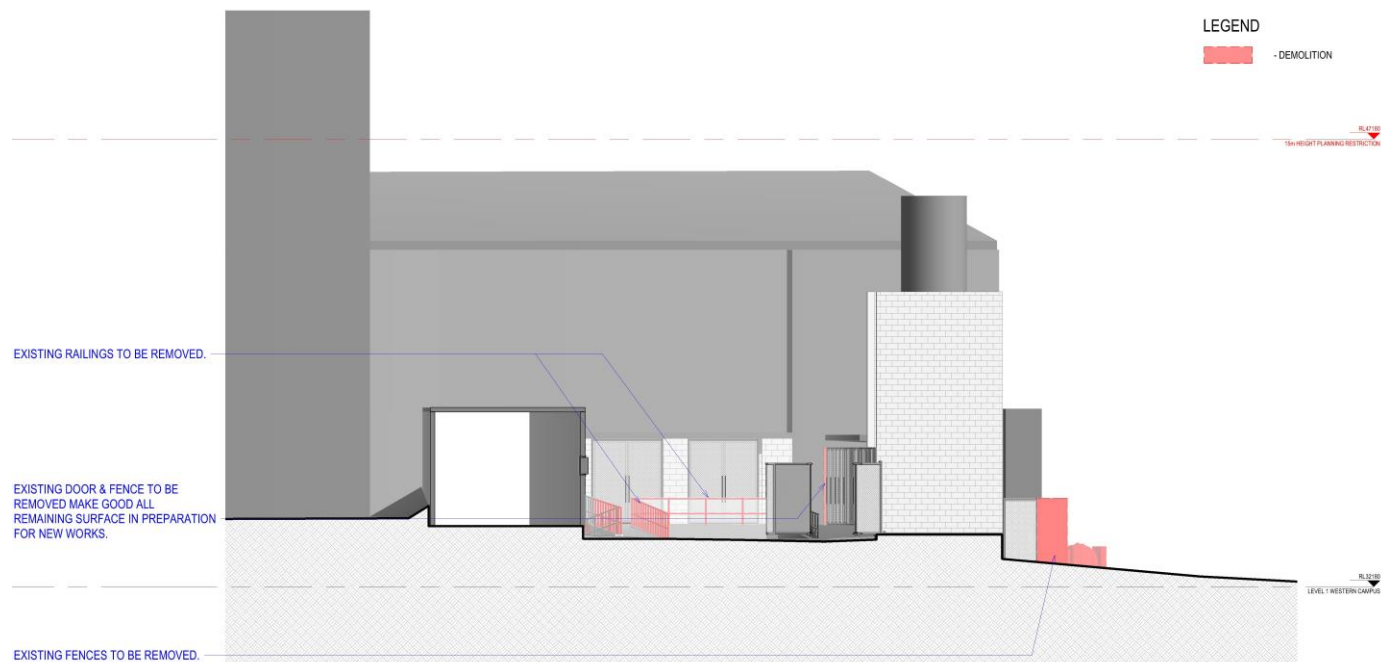


Figure 6- Demolition Elevation 2 (Refer to Elevation 1-2 in Figure 4)



Figure 8- Proposed Roof Plan

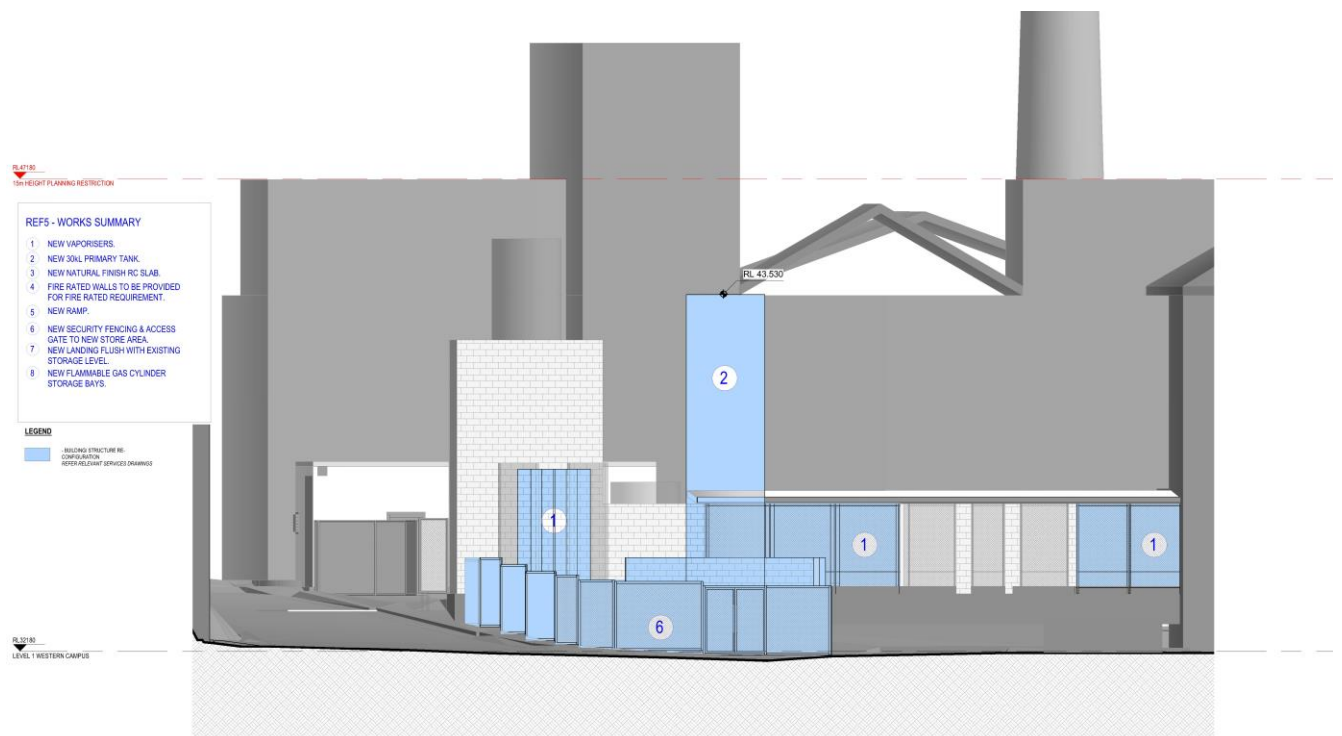


Figure 9- Proposed Elevation 1 (Refer to Elevation 2-1 in Figure 7)

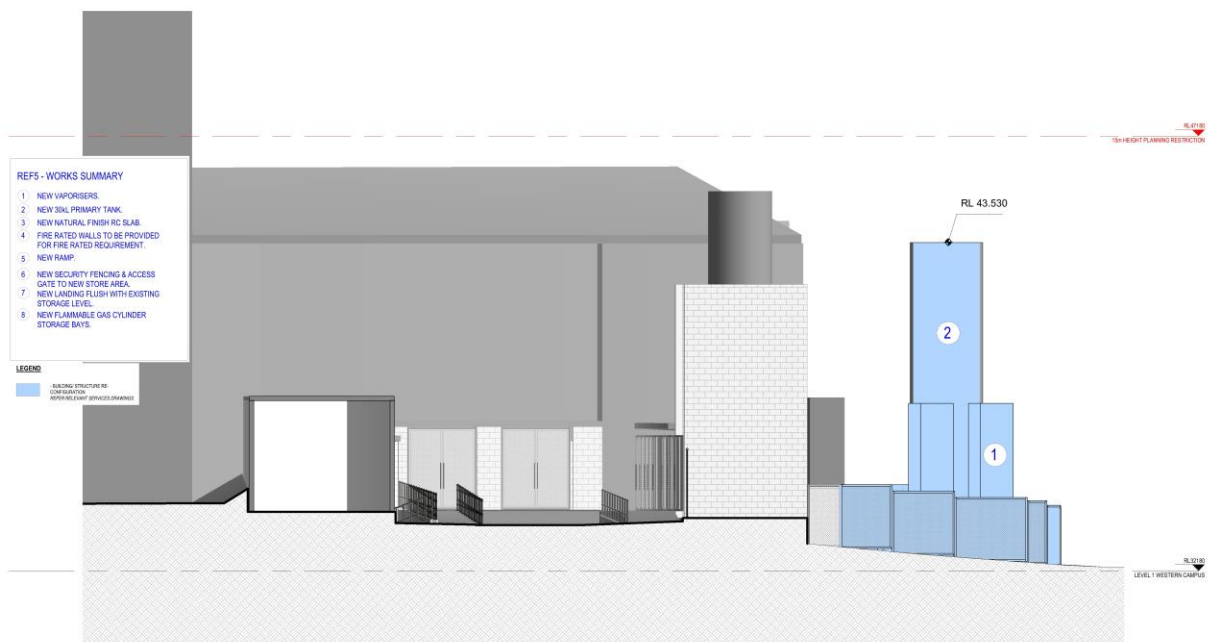


Figure 10- Proposed Elevation 2 (Refer to Elevation 2-2 in Figure 7)

2. Architecture Design Statement

2.1 Proposal Requirements & Project Objectives

The project involves reconfiguring and expansion of the existing west campus medical gas storage compound and associated works. The medical gas compound upgrade and expansion is required to provide compliance upgrade and new infrastructure capacity for the hospital campus to serve ongoing and projected growth in bed numbers.

A new 30kL primary tank and vaporizer set will be installed adjacent to the existing medical gas compound. To satisfy planning permission, the overall height of the tank will not exceed 15m. The tank and vaporisers will be installed within a naturally ventilated enclosure which also includes a 3.0m high fire rated wall required to meet minimum separation distances noted in AS1894:1997. An extension to the elevated external concrete access pathway is also proposed to improve access to the existing medical gas compound.

All work is designed to comply with the current NCC and Australian Standards.
All new works shall be coordinated to ensure hospital operations are not impacted during construction. In the event of unexpected in ground hazardous materials find, site remediation will also be undertaken.

2.2 Materials and Finishes

- Concrete slab plinth and hardstand.
- Face blockwork walls. (unpainted)
- Steel security palisade fencing and gates. Powdercoat paint finish

2.3 Site Conditions

The existing medical gas compound consists of a 30kL oxygen primary tank and a service yard incorporating numerous medical gas cylinder storage bays and stores. The existing cylinder stores within the LHD service yard are not compliant and these need to be reconfigured to comply with the current requirements outlined in the dangerous goods report. The cylinder stores are currently naturally ventilated.

2.3.1 Site Photos



Figure 11- Medical Gas Storage Compound and Gas Cylinder Stores



Figure 12- 30kl Gas Tank and Blockwork Enclosure

2.4 Shadow Assessment

The shadow diagrams show the shadow impact for the Summer and Winter Solstice at 9am, 12am 3pm. The 30kl bulk oxygen vessel is the tallest structure proposed at 14.78m high. The diagrams indicate it has minimal impact to the surrounding area due to the vessel being only 2.3m diameter. The diagrams indicate a narrow shadow falling to the roof of the adjoining building to the east at 3pm.



Figure 13- Summer Solstice 9am,12am and 3pm

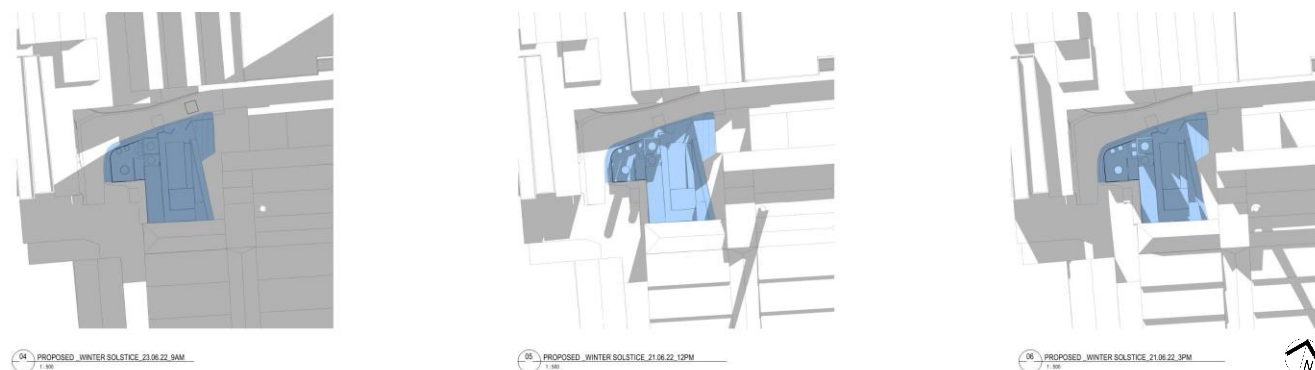


Figure 14- Winter Solstice 9am,12am and 3pm

2.5 Connecting with Country

The campus has a commitment to Connection with Country and this project is aligned with the NSW Government Connecting with Country Framework and will integrate the design approach to reflect Aboriginal storytelling, histories, and identities in physical and visual forms.

There is a clear connection of Country and its relationship with healing, social connectedness, and wellbeing. Exploring and acknowledging Gadigal Country and Culture, recognizing Aboriginal and Torres Strait Islander diversity, and exploring Indigenous understandings of healing through the design of the hospital will create a more accessible, culturally safe, and calming experience for all users of the hospital.

The design work in this project seeks to unite the strong tradition of service with RPAH's history and to Country, acknowledging the Gadigal people of the Eora nation as traditional landholders.