Environmental Impact Statement

Ryde Hospital Redevelopment (Stage 2) – SSD-58210458
1 Denistone Road, Denistone

Submitted to Department of Planning and Environment
On behalf of Health Infrastructure

Prepared by Ethos Urban

8 September 2023 | 2210291

'Gura Bulga'
Liz Belanjee Cameron

'Gura Bulga' – translates to Warm Green Country. Representing New South Wales.

By using the green and blue colours to represent NSW, this painting unites the contrasting landscapes. The use of green symbolises tranquillity and health. The colour cyan, a greenish-blue, sparks feelings of calmness and reminds us of the importance of nature, while various shades of blue hues denote emotions of new beginnings and growth. The use of emerald green in this image speaks of place as a fluid moving topography of rhythmical connection, echoed by densely layered patterning and symbolic shapes which project the hypnotic vibrations of the earth, waterways and skies.

Ethos Urban acknowledges the Traditional Custodians of Country throughout Australia and recognises their continuing connection to land, waters and culture.

We acknowledge the Gadigal people, of the Eora Nation, the Traditional Custodians of the land where this document was prepared, and all peoples and nations from lands affected.

We pay our respects to their Elders past, present and emerging.

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This document has been prepared by:		**This document has been reviewed by:**	
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EIS Declaration

Project Details	
Project Name	Ryde Hospital Redevelopment (Stage 2)
Applicant Number	SSD-58210458
Address	Lot 11 DP 1183279, Lot A DP 323458, Lot B DP 323458, Lot 10 DP 1183279
Applicant Details	
Applicant Name	Health Administration Corporation
Applicant Address	1 Reserve Road, St Leonards
Details of the person by whom this EIS was prepared	
Name	Chris McGillick
Professional Qualifications	BPlan (Hons) RPIA, REAP
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Declaration by Registered Environmental Assessment Practitioner	
Name	Chris McGillick
Registration Number	51052
Organisation Registered with	Planning Institute of Australia

The undersigned declares that this EIS:

- Has been prepared in accordance with the Environmental Planning and Assessment Regulation 2021.
- Contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which the EIS relates.
- Does not contain information that is false or misleading.
- Addresses the Planning Secretary's environmental assessment requirements (SEARs) for the project.
- Identifies and addresses the relevant statutory requirements for the project, including any relevant matters for consideration in environmental planning instruments.
- Has been prepared having regard to the Department's State Significant Development Guidelines - Preparing an Environmental Impact Statement.
- Contains a simple and easy to understand summary of the project as a whole, having regard to the economic, environmental and social impacts of the project and the principles of ecologically sustainable development.
- Contains a consolidated description of the project in a single chapter of the EIS.
- Contains an accurate summary of the findings of any community engagement.
- Contains an accurate summary of the detailed technical assessment of the impacts of the project as a whole.

Signature

Date 08/09/2023

EIS Summary

Purpose of this Report

This submission to the Department of Planning and Environment (DPE) comprises an Environmental Impact Statement (EIS) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates to the Ryde Hospital Redevelopment (Stage 2) (the project).

Development for the purposes of a hospital with a capital investment value (CIV) of more than $30 million is identified in Schedule 1 of *State Environmental Planning Policy (Planning Systems) 2021* as State Significant Development (SSD) for the purposes of the EP&A Act. A CIV Statement has been prepared by Genus Advisory that confirms the project has a CIV of more than $30 million (provided under a separate cover) and the project is therefore SSD.

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought on 5 May 2023. Accordingly, the SEARs were issued on 12 May 2023. This submission is in accordance with the DPE's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the SEARs.

Photomontage of the Proposed Development

Project Overview

The SSD Application seeks approval for the Ryde Hospital Redevelopment (Stage 2), including:

- Demolition of existing buildings.
- Excavation to accommodate basement structure.
- Remediation works to address site contamination.
- Construction of a new hospital building and associated basement structure.
- Construction of part above ground, below ground and at-grade car parking.
- Construction of internal road network.
- Site-wide landscaping including tree planting and a new forecourt in front of Denistone House.
- Retention of, and conservation works to, the heritage significant Denistone House and Stables buildings.
- Upgrades to services and utilities to support the development.

- Retention of the existing Blue Gum High Forest and management of an asset protection zone.
- Tree removal within the grounds of the existing hospital.
- Signage.
- Public domain improvements.

This application follows the Concept Plan approval SSD-36778089 which approved maximum building envelopes, maximum gross floor area and Stage 1 works for the hospital redevelopment.

Strategic Context

The project will deliver a state-of-the-art hospital facility that will create greater efficiencies, improve operation and respond to existing capacity constraints and expected population growth in the Northern Sydney Local Health District (NSLHD). The existing hospital buildings are aging and no longer fit-for-purpose to meet the requirements of modern healthcare. The proposal is directly consistent with the overarching themes and requirements of the relevant plans, policies and guidelines, which include:

- NSW State and Premier's Priorities.
- Greater Sydney Region Plan.
- North District Plan.
- Ryde Local Strategic Planning Statement.
- Government Architect NSW Connecting with Country.
- State Infrastructure Strategy 2018 – 2038 Building the Momentum.
- Future Transport Strategy 2056.
- Crime Prevention through Environmental Design (CPTED) Principles.
- Better Placed: An Integrated Design Policy for the Built Environment of New South Wales.
- Healthy Urban Development Checklist.
- Draft Greener Places Design Guide.
- Ryde Resilience Plan 2030.

Statutory Context

The site is zoned SP2 Infrastructure (Health Services Facility). The project is permissible with consent and meets the objectives of the zone. The project is consistent with the relevant planning controls that apply to the site, including all relevant SEPP's.

Engagement

Extensive consultation has been undertaken for both the Concept Plan and the Stage 2 EIS, including with various stakeholders including the Australian Department of Agriculture, Water and the Environment, DPE, City of Ryde Council, NSW Rural Fire Service, Government Architect NSW, DPE's Environment, Energy and Science Group, Transport for NSW and service providers including Ausgrid, Fire and Rescue, Sydney Water.

Consultation has also been undertaken with hospital patients, staff and visitors, local residents, community members and business owners and representatives of local Aboriginal and Torres Strait Islander community and stakeholder groups. Consultation included vulnerable communities and the wider community.

The key issues raised during the consultation process included biodiversity impacts, Aboriginal heritage, clinical services, hospital features, transport concerns green space and child care facilities. The outcomes of the consultation process have been considered in the design of the project.

Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by Health Infrastructure NSW to manage and minimise potential impacts arising from the development. The environmental impacts and mitigation measures resulting from the proposal are consistent with those considered in the Concept Plan under SSD-36778089.

Noise and vibration impact during the construction works will require specific management and mitigation, including limiting the use of heavy plant and equipment within proximity to sensitive receivers and implementing respite periods where construction activities exceed the relevant noise levels. Impacts related to traffic and impacts to heritage relics also have the potential to arise during construction, however, they will be suitably mitigated through the implementation of a detailed Construction Environmental Management Plan (and supporting documentation) that will be prepared by the Principal Contractor prior to the commencement of works. As necessary, this documentation will be continually reviewed and updated throughout the construction phase to accommodate for the construction works and hospital management requirements. Overall, it is noted that the impacts of construction will be temporary in nature. These construction impacts will be suitably mitigated to manage impacts on the surrounding community.

The project seeks to avoid significant impacts to biodiversity through retention of the Blue Gum High Forest and the implementation of a sympathetic bushfire asset protection zone and ongoing management of vegetation to protect occupants from bushfire. The proposal results in positive heritage impacts by reinstating view corridors to Denistone House from the public domain, demolishing non-significant elements and carrying out conservation works to significant heritage buildings within the site. The impacts of the proposal will include visual amenity impacts resulting from the proposed built form and minor overshadowing impacts, which are mostly internal to the site and on roads/car parks. These issues are addressed through modulation and articulation of the built form as well as site-wide landscaping. Once operational, the redevelopment of Ryde Hospital will generate significant long-term positive benefits including a wide range of improvements to health and clinical services, opportunities for job growth and improved public amenities within and surrounding the site.

Conclusion and Justification

The EIS addresses the SEARs, and the project establishes the Ryde Hospital Redevelopment (Stage 2). The potential impacts of the development are acceptable and can be managed. Having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- The proposal will facilitate the development of a new state-of-the-art health facility which will further support and strengthen the services and facilities provided at the hospital for the benefit of the NSLHD.
- The proposal represents a significant investment in the NSLHD, which will deliver approximately 287 direct jobs during the construction phase and an additional 588 direct ongoing jobs during the operational phase.
- The development will upgrade a significant piece of social infrastructure, increasing the number of hospital beds and health workers at Ryde Hospital.
- The existing site allows for the provision of new health facilities that meet the special design requirements for the future proposed uses, whilst not resulting in impacts on surrounding uses that cannot be managed.
- The proposal will facilitate health uses on the site and is consistent with the NSW State Priorities, North District Plan and Ryde Local Strategic Planning Statement by providing opportunities for future precinct activation and increased and improved health facilities.
- The proposal will facilitate the delivery of new landscaped areas and tree planting, as well as retention of the existing Blue Gum High Forest.
- The assessment of the proposal has demonstrated that the development will not result in any environmental impacts that cannot be appropriately managed, and the development is consistent with the relevant planning controls for the site.
- The proposal results in substantial positive public benefits such as additional employment opportunities and improved healthcare outcomes.
- The proposal is generally consistent with the approved Concept Plan and the impacts arising from the development are commensurate with those anticipated and assessed under SSD-36778089.
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the Environmental Planning and Assessment Regulation 2021.

Given the planning merits of the project, the proposed development warrants approval by the Minister for Planning.

1.0 Introduction

This Environmental Impact Statement (EIS) has been prepared on behalf of Health Infrastructure NSW (HI), in support of a State Significant Development (SSD) Application for the proposed redevelopment of Ryde Hospital (the site).

The project is SSD under Schedule 1 of the *State Environmental Planning Policy (Planning Systems) 2021* (Planning Systems SEPP), as it is development for the purpose of a hospital with a capital investment value of more than $30 million.

The report is based on the Architectural Plans provided by STH (see **Appendix D**) and other supporting technical information appended to the report (see Table of Contents).

This EIS has been prepared in accordance with the requirements of:

- Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).
- Clause 175 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation).
- The Secretary's Environmental Assessment Requirements (SEARs) for the preparation of the EIS.
- The State Significant Development Guidelines – Preparing an Environmental Impact Statement.

Appendix A provides a SEARs compliance table that shows where the SEARs have been addressed in this EIS. **Appendix B** outlines the mitigation measures that will be implemented during the construction and operational phases of the project. **Appendix C** provides a statutory compliance table that identifies where the relevant legislation has been addressed in this EIS. An assessment against the conditions of the Concept Plan approval is also provided at **Appendix C**.

This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report. The EIS intends to inform the community and stakeholders about the Project, including its social, economic and environmental impacts, mitigation measures and benefits.

1.1 The Applicant

The Applicant's details are presented in **Table 1** below.

Table 1 Applicant Details

Applicant	Health Administration Corporation
Address:	1 Reserve Road, St Leonards
ABN:	89 600 377 397

1.2 Overview of Proposed Development

The project seeks development consent under 'Division 4.7 - Stage Significant Development' of the EP&A Act for the Ryde Hospital Redevelopment (Stage 2), generally consistent with the Concept Approval (SSD- 36778089). Specifically, the proposal includes:

- Demolition of existing buildings.
- Excavation to accommodate basement structure.
- Remediation works to address site contamination.
- Construction of a new hospital building and associated basement structure.
- Construction of part above ground, below ground and at-grade car parking.
- Construction of an internal road network.
- Site-wide landscaping including tree planting and a new forecourt in front of Denistone House.
- Retention of, and conservation works to, the heritage significant Denistone House and Stables buildings.

- Upgrades to services and utilities to support the development.
- Retention of the existing Blue Gum High Forest and management of an asset protection zone.
- Tree removal within the grounds of the existing hospital.
- Signage.
- Public domain improvements.

1.3 Objectives of the Development

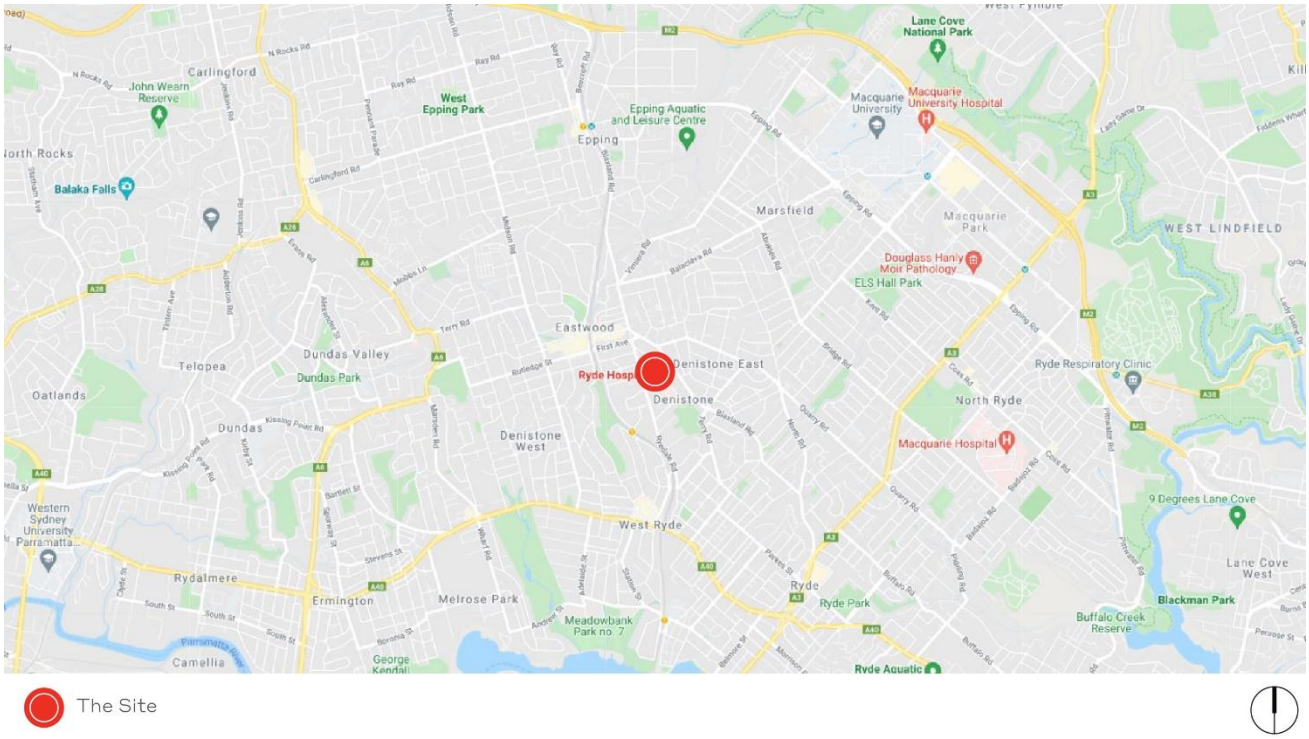
The North Sydney Local Health District (NSLHD) have undertaken extensive stakeholder consultation in the development of the Ryde Hospital and Health Services Clinical Services Plan (CSP) dated April 2022. The CSP identifies a future high-level vision for the future of Ryde Hospital and Health Services, that includes:

- A comprehensive health care hub that meets most of the secondary health needs of the local population.
- A vibrant hospital and health service facility that has a clear and specific role within the network of hospitals within the NSLHD.
- A provider of effective treatment delivered with compassion by clinicians in partnership with patients and their carers, as well as with GPs and other primary care providers.
- A hospital of the future taking advantage of new models of care, new technologies and new approaches to sustainability.
- A focus for education, training and research in collaboration with education institutions to develop the current and future health workforce.

Without this project, the ability of the NSLHD and Ryde Hospital to implement this vision would be severely constrained by poorly located, outdated and aging infrastructure coupled with the challenges of meeting the needs for a rapidly growing population.

1.4 Site Overview

The project site is legally described as Lot 10 and Lot 11 in DP1183279 and Lot A and Lot B in DP323458. It has an area of approximately 7.69Ha and currently accommodates the existing Ryde Hospital Campus. Ryde Hospital is located within the City of Ryde Local Government Area (LGA) and the NSLHD.



The Site

Figure 1 Site Locational Context

Source: Nearmap & Ethos Urban

1.5 Other Approvals

SSD-36778089 for the Ryde Hospital Redevelopment (Concept Proposal and Stage 1) was approved by the Department of Planning and Environment (as a delegate for the Minister of Planning) on 30 June 2023. The Concept Proposal established a maximum building envelope and gross floor area to facilitate the future redevelopment of the site. A series of Stage 1 preparatory works were also approved.

In accordance with Section 4.24 of the EP&A Act, the proposed development is generally consistent with the terms of the approved Concept Proposal. An assessment against the Conditions of Consent for SSD-36778089 is provided in **Appendix C**.

A licence has been granted for undertaking low-level exotic vegetation clearing within the Blue Gum High Forest under the *Environment Protection and Biodiversity Conservation Act 1998* (EPBC Act). This licence authorises the damage to a threatened ecological community by means of bush regeneration in accordance with the EPBC Act. On 28 June 2022, the Commonwealth Department of Agriculture determined that the proposed works do not constitute a 'controlled action' under the EPBC Act and therefore, the project does not require further approval or assessment under the EPBC Act (Application Number 2022/09129). The clearing has been undertaken in accordance with the licence.

2.0 Strategic Context

This chapter identifies the key issues that are relevant to the project's strategic context and provides a justification for the project in light of this context. The chapter also provides an analysis of alternatives that were considered as part of the scoping process.

2.1 Site Context

The primary allotment comprising the existing Ryde Hospital is located at 1 Denistone Road, Denistone. While the site includes other allotments, the address of the site is herein referred to as 1 Denistone Road, Denistone, for simplicity (as well as within the appended reports). The legal description of the site and its ownership is as follows:

- Lot 11 DP 1183279 (1 Denistone Road, Denistone) – Health Administration Corporation.
- Lot A DP 323458 (243 Ryedale Road, Denistone) – Health Administration Corporation.
- Lot B DP 323458 (241 Ryedale Road, Denistone) – Health Administration Corporation.
- Lot 10 DP 1183279 (37 Fourth Avenue, Denistone) – the State of New South Wales.

The site has an area of approximately 7.69Ha and is located in a low density residential area at the interface between the suburbs of Denistone and Eastwood. It is bound by Fourth Avenue to the north, Denistone Road to the east, Florence Avenue to the south and Ryedale Road to the west. An aerial photo of the site is shown at **Figure 2**.

Figure 2 Aerial Photograph of the Site

Source: Nearmap & Ethos Urban

2.2 Key Features of Site and Surrounds

2.2.1 Existing Development

The site currently accommodates the existing Ryde Hospital Campus, which is characterised by several one and two storey buildings, connected and built on the site in an ad-hoc manner. These buildings accommodate a range of health and medical uses, including an emergency department, cardiology unit, rehabilitation centre, nurses' residences and a several administrative uses.

A general arrangement plan of the existing campus is shown in **Figure 3**. Photos of the existing development are shown in **Figure 4** to **Figure 9**.

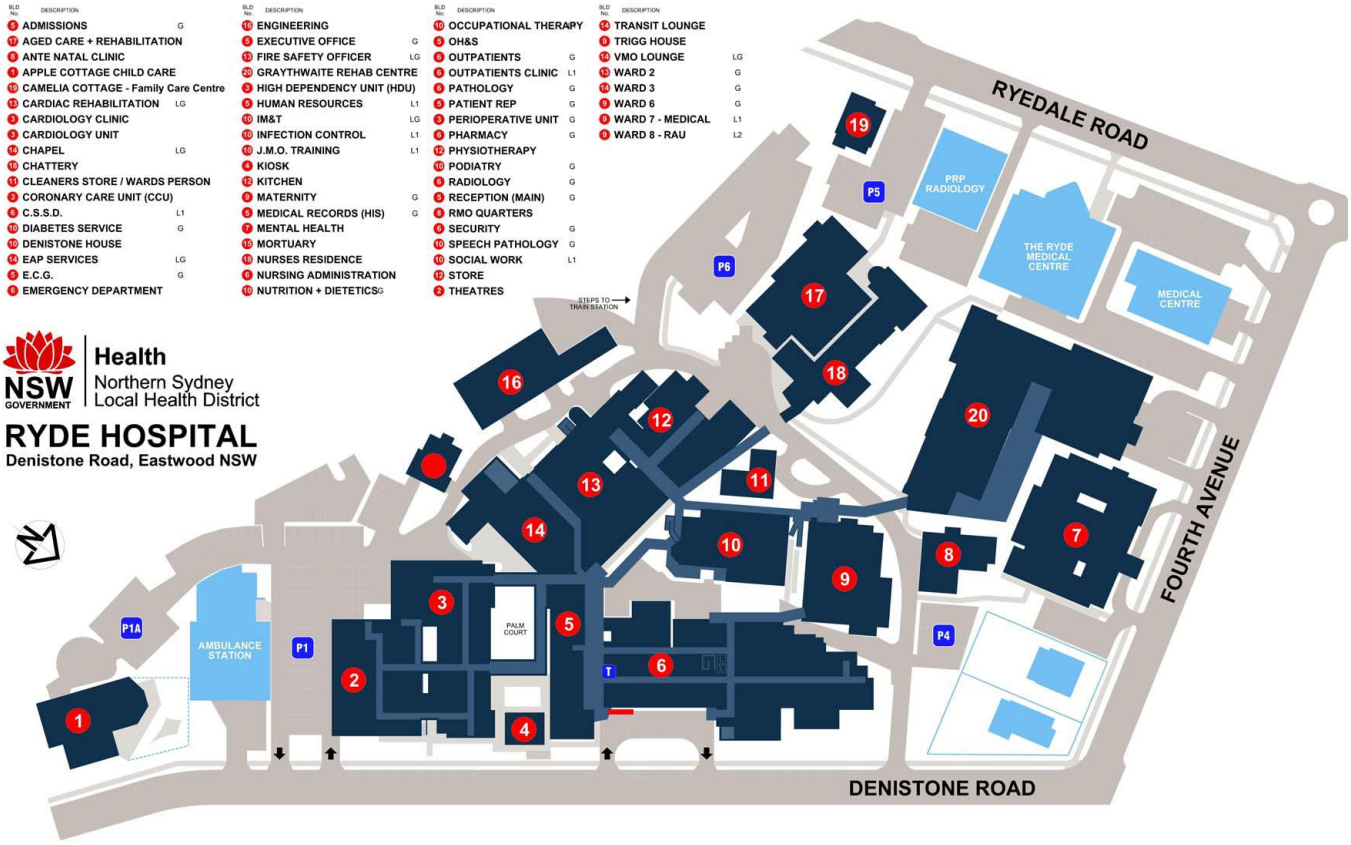


Figure 3 Existing Layout of Ryde Hospital

Source: NSLHD

Figure 4 Main Hospital Entrance off Denistone Road

Source: Ethos Urban

Figure 5 At-Grade Parking Area

Source: Ethos Urban

Figure 6 Existing Building on Site

Source: Ethos Urban

Figure 7 Denistone House

Source: NSLHD

Figure 8 Vegetation in the Southern Portion of the Site

Source: Ethos Urban

Figure 9 Development off Denistone Road

Source: Taylor Brammer

2.2.2 Vegetation

The southern half of the site is devoid of any built form. It contains vegetation that has been identified as plant community type (PCT) Blue Gum High Forest, also referred to as *PCT 1237 Sydney Blue Gum – Blackbutt – Smooth-barked Apple moist shrubby open forest on shake ridges of the Hornsby Plateau, Sydney basin Bioregion*. PCT 1237 is listed as a critically endangered ecological community under both the *Biodiversity Conservation Act 2016* (BC Act) and

the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act). Under the EPBC Act, the Blue Gum High Forest is also identified as a Matter of National Environmental Significance.

The northern portion of the site also contains a number of exotic and native plant species. They range from 1.6 – 28m in height and generally comprise the following species – *Callistemon viminalis* (bottlebrush), *Cupressus sempervirens* (cypress pine) and *Pyrus calleryana* (callery pear).

Further detail is provided in the Cover Letter to the Biodiversity Development Assessment Report (BDAR) (**Appendix F**) and the Arboricultural Impact Assessment (**Appendix G**). The location of vegetation on site as identified in the BDAR is provided at **Figure 10**.

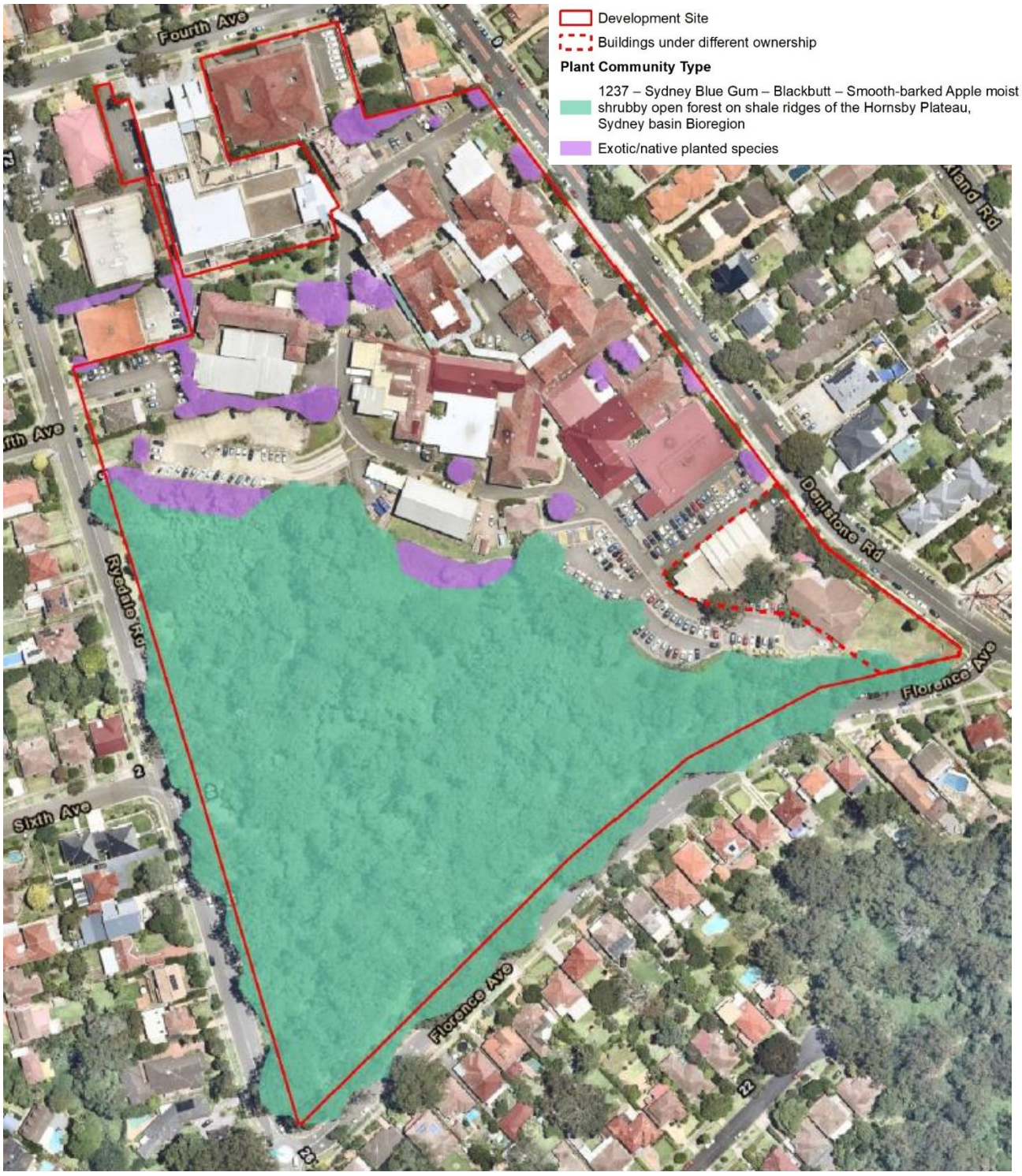


Figure 10 Location of Vegetation Community on Site

Source: Ecological

2.2.3 Topography

The site slopes significantly from north to south, with a drop of approximately 50m from the highest to the lowest point. A Survey Plan has been prepared by Monteath & Powys and is included at **Appendix H**.

2.2.4 Bushfire

The southern portion of the site is mapped as bushfire prone land, due to the Blue Gum High Forest vegetation and significantly sloping land. As shown at **Figure 11** below, over half of the site is mapped as category 2 vegetation in accordance with the City of Ryde's Bushfire Prone Land Map.

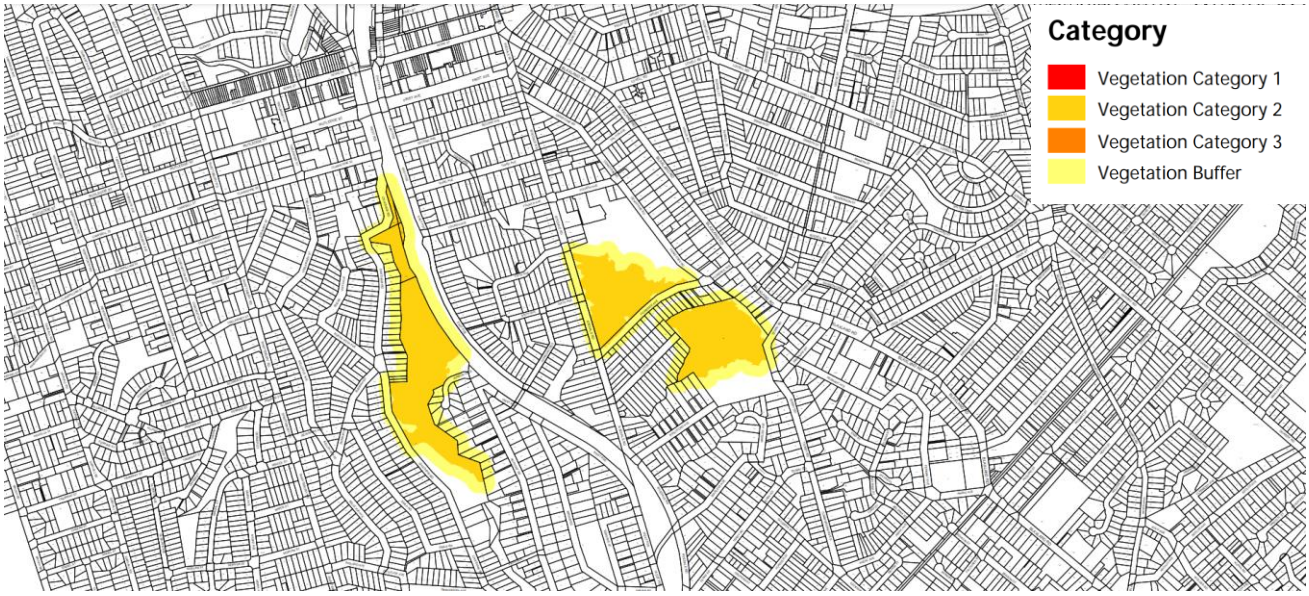


Figure 11 Bushfire Prone Land on Site and in the Vicinity of the Site

Source: City of Ryde Council

2.2.5 Heritage

Ryde Hospital comprises development dating back to the late 19th century as part of a colonial estate. Hospital development at the site dates back to circa 1914, originally for use as a convalescent hospital for men, through the 1934 opening of the Ryde District Soldier's Memorial Hospital on the site, to the modern Ryde Hospital currently in operation. Under the *Ryde Local Environmental Plan 2014* (RLEP 2014), the site is identified as a local heritage item, being Item no. 47 "Denistone House" and "Trigg House" (Ryde Hospital). The "Stables" building (building 8) is also of heritage significance. The buildings of heritage significance are described as follows:

- Denistone House is significant for being remnant of one of the large colonial estates of the district. It is a rare amalgam of a number of different Victorian period architectural styles and is located on a prominent elevated site. Denistone House was built in 1875 for Richard Rouse Terry who is one of the major landholders in the district. A photograph of Denistone House is provided at **Figure 7** above.
- Trigg House is listed for its association with Richard Rouse Terry. It was constructed in 1934 in response to a desperate lack of accommodation within the hospital. The heritage significance of Trigg House has been compromised by substantial alterations and additions, which have rendered the original building form and facades unrecognisable. Trigg House has been assessed by Urbis as being of little heritage significance.
- The Stables (also known as the Lodge) is listed for its former use as the stables for Denistone House and the 1933 conversion of the building to accommodation for hospital staff. The Stables is a fine example of a Victorian Regency stables building, the original form of which remains legible with a sympathetic interwar rear wing addition.
- The rest of the buildings on the site are not considered to be of heritage significance. The site is not identified as being located within a Heritage Conservation Area. There are a number of local heritage items within the vicinity of the site, including Item no. 125 "Open Space" at Denistone Park (100m south of the site) and Item no. 309 "House" at 36 Fourth Avenue, Eastwood (50m north of the site).

Refer to the Heritage Impact Statement (**Appendix P**) and Conservation Management Plan (**Appendix DD**) for further description of the site's historical context.

2.2.6 Transport and Accessibility

Vehicle Access and Internal Circulation

Entry to the site is provided off Denistone Road, which provides access to car parking areas, front-of-house and emergency department drop off areas, ambulance bays, and the loading dock and waste collection areas via the internal road network. Additional vehicle access is provided off Fourth Avenue and Ryedale Road.

Car Parking

The existing Ryde Hospital accommodates 271 parking spaces, which are spread throughout the site. This includes a total of 21 parking spaces which are allocated for fleet vehicles, service vehicles, ambulance parking, drop off and pick up activity (excluding accessible) and restricted parking. All other parking spaces are unallocated and can be used by either staff, patients or visitors. The existing parking provision is identified in **Figure 12** below.

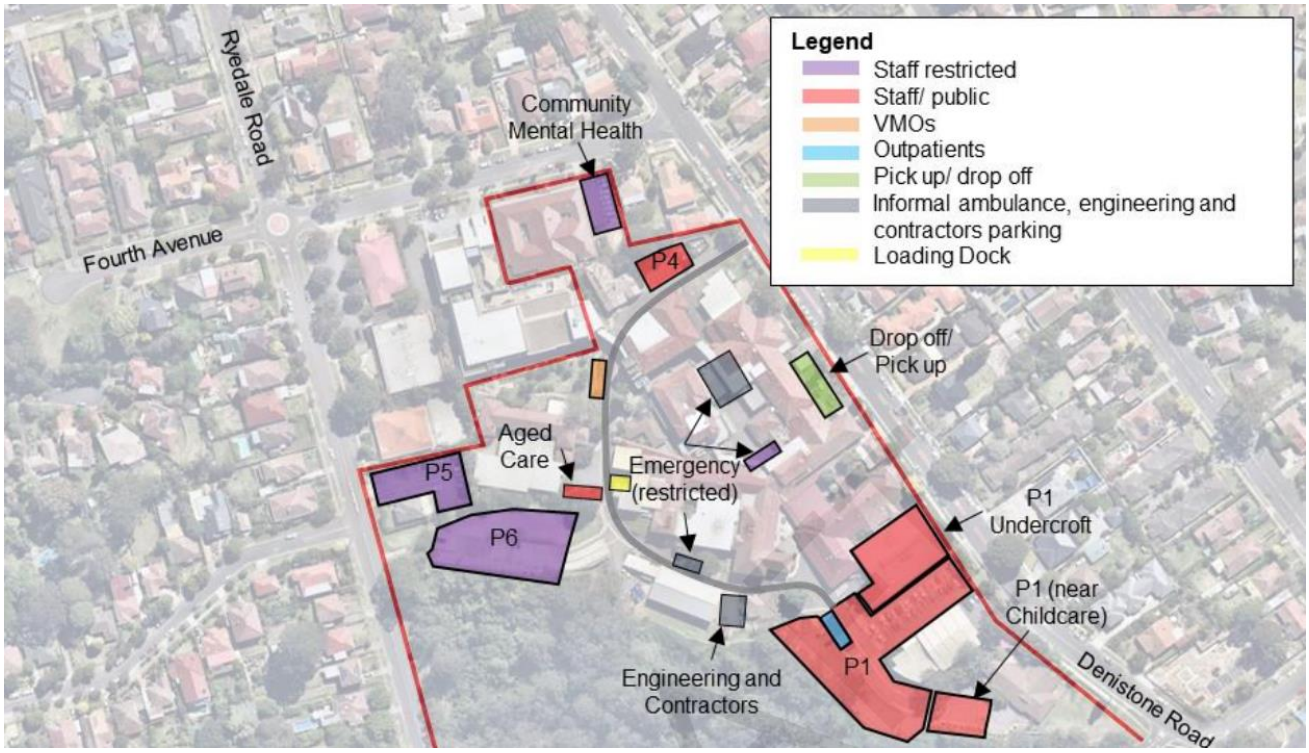


Figure 12 Existing Site Parking Provision

Source: Stantec

The existing car parking provision within the hospital and the surrounding streets operates at or near capacity between 8am and 3pm. Based on analysis undertaken by Stantec in **Appendix F**, the hospital currently generates demand for 380 car parking spaces. The intensification of clinical services and increase in staff numbers is expected to create further demand for carparking spaces on site which will be accommodated in the proposal.

Active Transport

The site is supported by key pedestrian infrastructure, including footpaths and refuge islands, which are provided on the surrounding roads. The main pedestrian access point is located off Denistone Road and provided direct access to the main hospital facilities and the emergency department. Additional pedestrian entry is provided from the vehicle driveways on Denistone Road, Ryedale Road and Forth Avenue.

On road cycle routes are provided within the areas surrounding the site. These routes provide connection to the surrounding suburbs, as well as the nearby railway stations located in Eastwood, West Ryde and Denistone. Bicycle parking racks are located in the P1 and P4 parking areas, and shower facilities are provided in Denistone House and Building 18.

Public Transport

Ryde Hospital is located 500m north-east of Denistone Railway Station, which provides access between the Sydney CBD and Hornsby via Strathfield, Epping, Chatswood and North Sydney. A bus stop located is along the Denistone Road frontage of the site, servicing the 515 route, which provides access to the Ryde and Eastwood Town Centres. Another bus stop exists on Fourth Avenue to the north-west of the site (but not along the site's frontage).

2.2.7 Contamination

The site has historically been used as a residential estate in the early 1800's after which the site has been used as a hospital. A detailed site investigation and data gap analysis has confirmed that there are a number of contaminants located on site, including asbestos and heavy metals. Asbestos containing fill and material within the soil exceeding acceptable exist in two locations to the south of the existing hospital footprint, north of the Blue Gum High Forest. Other buildings that are being demolished may have asbestos containing fill under their footprint. Refer to the Remediation Action Plan at **Appendix L** for further discussion. The contaminated soil will be remediated as required as part of the proposed development.

2.2.8 Geotechnical Conditions

Based on the results of previous site investigations, the ground conditions on the majority of the site comprise fill overlaying residual silty clay. The fill comprises compacted clay, sand and gravel to a maximum depth of 4.5m and residual silty clays are of a low to medium plasticity. Bedrock levels vary throughout the site between 1.2m and 8.18m.

Groundwater was encountered during the borehole investigations, with observations made between 1.7m and 10.3m below surface level. Groundwater may be encountered as part of the proposed works. Further discussion is provided at **Section 6.15**. Refer to the Geotechnical Investigation provided at **Appendix AA** for further detail.

2.2.9 Hydrology

According to the NSW Hydrography layer on SEED (NSW Government) and topographic maps, no mapped creeks or waterways are located within the site, or are present within 500 metres of the site.

2.2.10 Pipelines

There are no high-pressure gas pipeline corridors within or directly adjacent to the site.

2.2.11 Surrounding Development

The area surrounding the site predominantly comprises low density residential development. Specifically:

- **North**: Directly to the north of the site is the low-density residential suburb of Denistone, which is characterised by one to two storey, detached residential dwellings. Beyond this is Blaxland Road, which is a main road connecting Ryde and Eastwood. Further north is the suburb of Eastwood and Eastwood Town Centre.
- **East**: The low density residential suburbs of Denistone and Denistone East are located to the east of the site.
- **South**: To the south of the site is Denistone Park, a heritage listed park under the Ryde Local Environmental Plan 2014. Beyond this is the T9 Train Line and Denistone Train Station. West Ryde Town Centre is located to the south of Ryde Hospital.
- **West**: The site slopes significantly down towards the west, and backs onto low density residential and the T9 Train Line. Further west are the suburbs of Denistone West, Ermington and Rydalmere.

Photographs of the surrounding development are provided at **Figure 13** to **Figure 16**.

Figure 13 Development Along Fourth Avenue

Source: Ethos Urban

Figure 14 Development Along Ryedale Road

Source: Ethos Urban

Figure 15 Denistone Park, South of the Site

Source: City of Ryde Council

Figure 16 Eastwood Town Centre, North of the Site

Source: City of Ryde Council

2.3 Strategic Planning Context

Table 2 below summaries the project's strategic context as established by Government plans, policies and guidelines relevant to the project.

Table 2 Summary of Consistency with Relevant Strategies, Policies and Guidelines

Instrument/Strategy	Comments
NSW State Priorities	The project will deliver on key state priorities, including: • Building infrastructure. • Improving service levels in hospitals. • Better access to community mental health services. • Providing community health and public health services. • Jobs closer to home. • Improving outpatient and community care. The project will deliver health facilities that will reduce waiting times by improving capacity, allowing for greater integration of services, and creating greater efficiencies by incorporating state of the art facilities and equipment. The project will create job opportunities in manufacturing, construction, and construction management during the project's construction phase of works, and job opportunities in health and administration at the project's completion.
Greater Sydney Region Plan	The Ryde Hospital Redevelopment will support the vision of boosting Greater Sydney's liveability, productivity and sustainability. In a general sense, the project will closely align with the key priorities and vision identified in the District and Region Plan by: • Integrating and targeting delivery of services and infrastructure to support population growth and respond to the needs of different population groups.

North District Plan	• Delivering key infrastructure that will reduce the strain on existing hospital services and capacity. • Integrating a diverse range of services on site to deliver an efficient and effective model of health care. • Providing additional employment opportunities within the Northern District to assist in achieve the 30-minute city vision.
Ryde Local Strategic Planning Statement	The Ryde Local Strategic Planning Statement (LSPS) was prepared to guide Council's land use planning for the next 20 years, implements priorities from Council adopted strategies and gives effect to State Government strategic directions for the LGA. The project is consistent with the strategic directions outlined within the LSPS for growth and development in Ryde as follows: • **Infrastructure and Collaboration:** The project will deliver a key piece of upgraded infrastructure that supports the ongoing and future health needs of the NSLHD. It will be constructed in an area that is close to housing, the Eastwood Town Centre and is well integrated with existing public transport infrastructure. The project is also supported by pedestrian and bicycle infrastructure within the vicinity of the site and will further encourage active transport usage through the provision of bicycle racks and end of trip facilities. • **Liveability:** The project recognises the importance and value of preserving, revitalising and strengthening the historical and heritage significance of the site. This will be done through the protection and improvement of Denistone House and The Stables. The design of the forecourt and landscaping areas surrounding the heritage items will contribute to a sense of place and local distinctiveness when viewed from the public domain or within the hospital campus. Further, the proposed development will be accessible and inclusive. The project will provide services and facilities that directly reflect the diverse population of the NSLHD, which may include childcare, prayer rooms and on-site interpreters. Further, the design will balance the functional needs of a hospital with the desire to provide a sustainable, high-quality and unique development that will showcase design excellence and contribute positively to the natural, cultural, visual and architectural character of the existing hospital campus and surrounds. • **Productivity:** The project directly contributes to the long-term strength and productivity of the health sector. It will deliver a state-of-the-art hospital which will stimulate job growth in manufacturing, construction and construction management during the construction phase of works, and job opportunities in health and administration during operation. • **Sustainability:** The Blue Gum High Forest in the southern portion of the site will be retained and protected so that clearing is largely avoided. The project seeks to provide additional landscaping to offset any tree removal within the development footprint. The development will target a 5-star equivalency rating and support the NSLHD strategic direction of carbon neutrality. This will be achieved through encouraging the use of active transport, efficient building design, dedicated facilities for waste avoidance and management, and electrification of major plant.
Government Architect's Connecting with Country Framework	The Connecting to Country Framework acts as a guide for developing connections with Country to inform the planning, design, and delivery of built environment projects in NSW. Cultural consultants, Bangawarra, have been appointed to ensure the Ryde Hospital Redevelopment will seek to celebrate and acknowledge the Aboriginal significance of the site. Connection to Country will be incorporated throughout the lifecycle of the project and has formed part of the State Design Review Panel (SDRP) process. Further detail is provided in **Section 3.2**.
State Infrastructure Strategy 2018 – 2038 Building the Momentum	The project is consistent with the State Infrastructure Strategy by: • Delivering hospital infrastructure to respond to existing capacity constraints and expected population growth.

<table>
<tr><td></td><td>

- Providing state of the art facilities to create greater efficiencies and improved operation.

Importantly, the project forms part of a coordinated investment in the growth of the NSLHD to support population growth and change.
</td></tr>
<tr><td>Future Transport Strategy 2056</td><td>The Future Transport Strategy 2056 sets the 40-year vision, directions and outcomes framework for customer mobility in NSW, which will guide future transport investment over the long term. The supporting plans provide further detail on customer outcomes or place-based planning documents to guide the Strategy's implementation.

The project includes improvements to the internal road system of the hospital that will incorporate adequate accessibility to reduce vehicular congestion at critical areas. It will increase the parking provision on site to accommodate additional staff, patients and visitors and will encourage safe, convenient access for all. The use of public and active transport will also be encouraged through the provision of end of trip facilities on site, a bus stop located directly adjacent to the main hospital entry and active transport infrastructure located within the vicinity of the site.</td></tr>
<tr><td>Crime Prevention through Environmental Design (CPTED) Principles</td><td>Refer to Section 6.3.6. The proposed development is consistent with the principles of CPTED. A CPTED Assessment has been undertaken and is provided at Appendix V.</td></tr>
<tr><td>Better Placed: An integrated design policy for the built environment of New South Wales</td><td>The Better Placed Policy includes seven key objectives in the design of the built environment prepared by the Government Architect. A summary of the project's consistency with the principles of Better Placed is provided below. STH have provided a design response to the objectives and principles of Better Placed at Section 10 of the Design Report (Appendix D).
<table>
<tr><th>Objective</th><th>Comment</th></tr>
<tr><td>Objective 1. Better Fit – contextual, local and of its place</td><td>The proposed development responds to the surrounding context and its location within Ryde Hospital. It provides a new hospital building at an appropriate scale, responding to the existing built form and its local context. The new built form has been designed to provide greater access throughout the hospital campus and between clinical services, and utilise the natural topography and biodiversity value of the site.</td></tr>
<tr><td>Objective 2. Better Performance – sustainable, adaptable and durable</td><td>Health Infrastructure has taken a responsible approach to ensuring the principles of ESD are incorporated into the proposal, ensuring effective and environmentally responsive ESD initiatives including:
• A minimum 10% improvement in energy efficiency compared to a baseline of National Construction Code (NCC) Section J 2019.
• A minimum of 60 points under the Health Infrastructure ESD Framework (which is a customised version of Green Star Design & As-Built v1.3).
• Deliver relevant components towards a target of Carbon Neutral by 2035, including through efficient building design and active systems, dedicated facilities for waste avoidance and management, and electrification of major plant.
Further discussion is provided in Section 6.20.</td></tr>
</table>
</td></tr>
</table>

	Objective 3. Better for Community – inclusive, connected and diverse	The proposed development incorporates accessible access to cater to the varying needs of the public who will use the facilities. The site will have pedestrian paths that connect to the surrounding streetscape allowing access by public transport to ensure suitable access arrangements for all members of the community. The hospital will offer improved services and capacity to support the needs of the district. It is proposed that the new built form will improve connectivity and efficiency within the hospital through integration of services and facilities.
	Objective 4. Better for People – safe, comfortable and liveable	The proposed development has sought to balance the operational needs of the hospital while providing a fit for purpose building that incorporates high quality design features to make patients and staff feel comfortable. The proposed development will also include secured open space and outdoor seating areas, to enhance passive surveillance to public and private areas. The CPTED principles are discussed in **Section 6.3.6**.
	Objective 5. Better Working – functional, efficient and fit for purpose	The proposed development seeks to integrate and link in with the existing hospital campus to provide a facility that will improve the operational efficiency and meet the health care needs of the growing population.
	Objective 6. Better Value – creating and adding value	The proposed development will cater for the increased health demands of the community, whilst meeting the NSW Government's budget for the works.
	Objective 7. Better Look and Feel – engaging, inviting and attractive	These design principles have informed the proposed development and are illustrated in the Design Report prepared by STH and included at **Appendix D**. A discussion of the principles guiding this development is also provided at **Section 3.1.1**.
Healthy Urban Development Checklist	The Healthy Urban Development Checklist has been prepared by NSW Health to assist professionals in the industry in providing advice on urban development and to ensure that considerations are made with regard to health effects of urban development on policies and proposals and how they can be improved to provide better health outcomes. The proposed development will provide a state-of-the-art facility that allows for an improved urban design outcome by means of new, modern hospital facilities and built form as well as new pedestrian and vehicular circulation throughout the site.	
Draft Greener Places Design Guide	The draft Greener Places Design Guide has been prepared by the GANSW to guide the design, planning and delivery of green infrastructure across NSW. The aim is to create healthier and more liveable cities and towns by improving community access to recreation and exercise, walking and cycling connections and the resilience of urban areas. The proposed development directly aligns with the aims of the draft Greener Places Design Guide through the protection and enhancement of the Blue Gum High Forest, which will result in over 53.4% canopy cover across the site. In addition, the project will include publicly accessible open space and extensive vegetation planting throughout the hospital campus to create a healthier urban environment. It also aims to establish improved vehicular, pedestrian and cycling connections to and from the hospital campus. A summary of the project's consistency with the principles of Greener Places has been prepared by Taylor Brammer at **Appendix J**.	

Ryde Resilience Plan 2030	The Ryde Resilience Plan 2030 sets out a vision, goals, and strategic directions to enable the local community to be adequately prepared to withstand and survive future shocks and stresses that may affect them and thrive into the future. The project will closely align with this plan in that it will: • Protect the biodiversity values on site, including retaining the Blue Gum High Forest. • Contribute to the carbon neutral target by 2035, including through implementing a number of features into the built form. • Encourage resource efficiency during the construction phase, including by prioritising the reuse of materials or procurement of recycled materials. • Undertake steps to mitigate the risk of bushfire on site (as detailed in **Section 6.6**). • Promote public and active transport use.

2.4 Cumulative Impacts

The Ryde Hospital redevelopment will deliver significant benefit to the community and is not expected to give rise to any unacceptable environmental impacts that cannot be appropriately managed. The project is not located in the vicinity of any other significant developments that are planned or are currently being undertaken. The Stage 1 Early Works (approved as part of SSD-36778089) will be finalised prior to the commencement of any works proposed within this SSDA. This will ensure that there is no cumulative impact associated with construction from both projects occurring simultaneously. The project is considered to have positive impacts in the long-term, in making more efficient use of the existing hospital land and contributing to future improvements in hospital facilities and services. Overall, the impacts to the existing hospital campus and the surrounding region are expected to be relatively minimal and short-lived.

2.5 Project Justification

The project is consistent with the overarching objectives of the relevant strategic plans, policies and guidelines. It provides for the construction of a new clinical services building to accommodate future demand and improve hospital efficiency. The potential impacts of the development are acceptable and are able to be managed. The project will incorporate measures to restore and revitalise site heritage and will retain and protect the critically endangered ecological species, including the Blue Gum High Forest.

2.6 Analysis of Alternatives

Four options are available to Health Infrastructure in responding to the identified need for the redevelopment of Ryde Hospital.

2.6.1 Option 1 – Do Nothing

Under the 'do nothing' scenario, the existing infrastructure at Ryde Hospital and the NSLHD would continue to provide services to cater for the increasing health needs of the region. This would not adequately respond to the strong population growth in the region and would potentially lead to a decline in health outcomes. Not undertaking the work would be an inappropriate outcome for a project of this nature, which will facilitate much needed health infrastructure in the region. The existing hospital facilities are not fit-for-purpose to meet the demands of modern healthcare, bushfire protection or sustainability.

2.6.2 Option 2 – Alternative Designs

As part of the Concept Proposal (SSD- 36778089), Health Infrastructure and the design team explored a number of different options for managing the increased growth of health needs and resultant infrastructure response needed within Ryde Hospital. Several design options were considered in detail to respond to the siting of the proposed building in relation to existing development car parking arrangements, and site features.

The designs were assessed against key criteria which included enabling business continuity, opportunities for direct access to existing clinical services, integration into or use of existing and proposed infrastructure, and opportunities for future expansion. In addition, each design considered the existing environmental constraints on site including a sloping topography, endangered fauna, bushfire impacts and heritage.

Considering all of the analysis undertaken, the approved Concept Proposal was the most effective to meet the objectives of the project. This project is generally consistent with the Concept Proposal. A full analysis of the options is provided in the Design Report prepared by STH at **Appendix D**.

Options for the Multi-Deck Car Park

In addition, a range of options were considered for siting the car park as part of the Concept Proposal This included:

- **Option 1** – Adjacent to the Ryedale Road frontage. This location provides proximity to the hospital, while not being suited to clinical uses due to disconnection from internal circulation network and constraints imposed by required APZ. However, this option would impact on views for hospital users and for surrounding residents.
- **Option 2** – Southern end of the site between existing Ambulance station and proposed hospital. This location can accommodate the car park with access from Denistone Road, and provides opportunity for future expansion of the hospital in that area of the site (through considered design). It also presents an opportunity to address and activate the Denistone Road Street frontage.
- **Option 3** – In front of Denistone House. This location could accommodate access off Denistone Road and provide short walking distance to the main hospital entrance, however would be inconsistent with the project's Connection to Country Strategy and intention to re-introduce Denistone House, visually, to the street. Development in this area of the site would also not be feasible until the last phase of campus redevelopment.

For the reasons summarised above, Option 2 was selected and progressed through the design in collaboration with the Government Architect NSW.

2.6.3 Option 3 – Alternative Site

Alternative sites were considered, including a new off-site location for the construction of a new hospital facility at Macquarie University. After expert technical analysis, community and stakeholder analysis, and consideration of a project assessment criteria based on the objectives of the project (as discussed in **Section 1.3**), the redevelopment of the existing Ryde Hospital site was preferred.

2.6.4 Option 4 – The Project

The proposed design involves undertaking the proposed redevelopment as outlined in this SSD application (as described in **Section 3.0**). It will deliver the Concept Proposal envisaged in SSD-36778089. The proposed building responds to the precinct layout, as well as the objectives and is consistent with the established Design Principles (see **Section 3.1.1**). The proposal will facilitate the efficient construction of a high-quality design that responds to the strategic need identified above. Importantly, the proposal supports the growth and expansion of Ryde Hospital in line with NSW Health and NSW State Government budget allocation.

The siting of the proposal provides direct access to existing clinical services and the newly built Graythwaite Rehabilitation Centre. The design responds to existing topography and provides an opportunity for potential future expansion to the east. It protects and celebrates the heritage significance of the site and will protect the Blue Gum High Forest to the south.

3.0 Project Description

This chapter describes the proposed development, including the Project's disturbance area, conceptual layout and design, main uses and activities and staging.

3.1 Project Overview

The Applicant seeks development consent under 'Division 4.7 - Stage Significant Development' of the EP&A Act for:

- Demolition of existing buildings.
- Excavation to accommodate basement structure.
- Remediation works to address site contamination.
- Construction of a new hospital building and associated basement structure.
- Construction of part above ground, below ground and at-grade car parking.
- Construction of internal road network.
- Site-wide landscaping including tree planting and a new forecourt in front of Denistone House.
- Retention of, and conservation works to, the heritage significant Denistone House and Stables buildings.
- Upgrades to services and utilities to support the development.
- Retention of the existing Blue Gum High Forest and management of an asset protection zone.
- Tree removal within the grounds of the existing hospital.
- Signage.
- Public domain improvements.

Architectural drawings are included at **Appendix E**. A photomontage of the proposed development is shown at **Figure 17**.

Figure 17 3D Artistic Rendering of the Proposed Development

Source: STH

Table 3 below provides an overview of the Project.

Table 3 Key Project Information

Component	Project
Project Summary	Construction and operation of an 8-storey hospital building at Ryde Hospital.
Project Address	The works will be carried out at Ryde Hospital within Lot 10 and Lot 11 in DP1183279 and Lot A and Lot B in DP323458.
Campus Area	7.69 Hectares
Proposed Use	Hospital
Physical Layout and Design	An 8-storey building that incorporates a rectangular shaped Beacon (which comprises building entry, front of house and circulation) which breaks into two clinical blocks (that include a clinical services and back of house areas). A 4-storey multi-deck car park will also be constructed at the eastern edge of the site, fronting Denistone Road. Additional works to be undertaken as part of this proposal include provision of at-grade parking, landscaping and public domain works.
Proposed Site Preparation Activities	Demolition, earthworks, remediation, tree removal.
Gross Floor Area	27,935m^2 (new hospital building)
Maximum Height	RL 136.5
Storeys	8 storeys
Car Spaces	482 car parking spaces.
Bicycle Parking Spaces	67 bicycle parking spaces will be provided for staff and a further 14 spaces will be provided for visitors and patients.
Proposed Tree Removal	28 Trees
Proposed Tree Planting	150 trees will be planted as part of the proposed development.
Total Tree Canopy	53.4% canopy coverage (including the Blue Gum High Forest).
Jobs	• Direct Construction Jobs: 287 • Direct Operational Jobs: 588
Operational Hours	24 hours a day for seven days a week.
Construction Hours	7:00am and 6:00pm Monday to Friday, 8:00am to 1:00pm on Saturday. No work is to take place on Sunday or public holidays.
Staging	The project will be carried out in three stages across a period of four years. Further detail is provided in **Section 3.13**.

3.1.1 Design Principles

The following overarching design principles have been developed to outline the objectives and vision for the project:

- Meaningful – Resonate with local context and history of place through urban form making, architectural articulation, curation of interior settings and integration with local ecologies.
- Comprehensible – Create intuitive way finding cues through considered planning arrangements at campus, building and departmental scale supported by colour and material selections and articulation.
- Manageable – Allow for the personalisation of space to meet an individual's need to attenuate noise, control daylight penetration, adjust comfort levels and configure lay outs to meet specific cultural and privacy needs.
- Access – Vehicle, pedestrian, and public transport to and through the site that provides clarity and integration for users.

- Connection – Maintain identity of Ryde Hospital and maintain or establish linkages between new assets and existing service.
- Continuity and Expansion – Facilitate positive staging and decanting solutions along with growth opportunities for priority services areas. Optimise the re-use of existing assets that retain sufficient residual life cycle.
- Connection to Country – Celebrate, respect and conserve cultural and environmental heritage.
- Future Proofing – Provide efficient growth opportunities for priority service areas.
- Heritage – Leverage Heritage assets to frame and create high value public domain areas.

3.2 Connecting with Country

The proposal will celebrate the enduring spirit of Country, acknowledging the healing and ceremonial qualities of this place, and protecting land, water and sky Country. The hospital design will seek to tell the stories of how this escarpment is the place for the Elders and Koradji (healers) from all of the Sydney Aboriginal peoples to come together for ceremony. The Ancestral stories of Country, the Aboriginal knowledges of caring for Country and the local languages of Country will be reflected in the landscape, architecture, and the clinical and non-clinical spaces of the hospital.

The site has historical and cultural significance to the Aboriginal community in the Sydney region. It is located on a ridge line that enables visual connections with Sydney Olympic Park, which is another site of historical and cultural significance.

Bangawarra, as Connecting with Country consultants, have developed a series of principles to ensure that the Ryde Hospital Redevelopment can maximise the potential for positive 'Connection to Country' outcomes. The principles are as follows:

- Maximising views and connections to important cultural sites, including the Blue Gum High Forest, Parramatta River and Sydney Olympic Park.
- Inclusion of several culturally significant locations to be revitalised or developed on the site as part of network of public spaces and linked walking trails.
- Utilising the vertical building components to establish a 'meeting place' and 'beacon' on site and to enable to continuation of stories.
- Protecting and creating habitats for native species.
- Incorporating local art in the design of the built form and utilising the healing qualities of Country.
- Embedding the Connecting to Country methodological approaches during the planning, design, delivery phases and beyond.

The Connecting with Country principles have been considered and ingrained into the project design. Refer to the Design Report at **Appendix D** for further detail.

3.3 Site Preparation

3.3.1 Demolition

Demolition will be carried out in 3 separate stages, in accordance with the construction staging for the Ryde Hospital Redevelopment. This will include:

- Stage 1 – Demolition of all relevant built form in the upper portion of the site that was not demolished as part of SSD-36778089 (as modified).
- Stage 2 – Demolition of car parking and buildings (which comprise services for mortuary, wards, engineering, food services, physiotherapy, intensive and critical care units) in the central portion of the site.
- Stage 3 – Demolition of the existing Denistone Road entry and buildings (which include services for the Emergency Department, operating theatres and medical imaging) in the lower portion of the site.

The extent of the demolition works is shown in **Figure 18** below. The existing sandstone fence along Denistone Road will only be demolished in small portions where required to provide access to the new hospital.

It is noted that SSD-36778089 (as modified) approved demolition within the Stage 1 footprint including buildings 11, 17, 18 and 19 as well as the P6 car park.

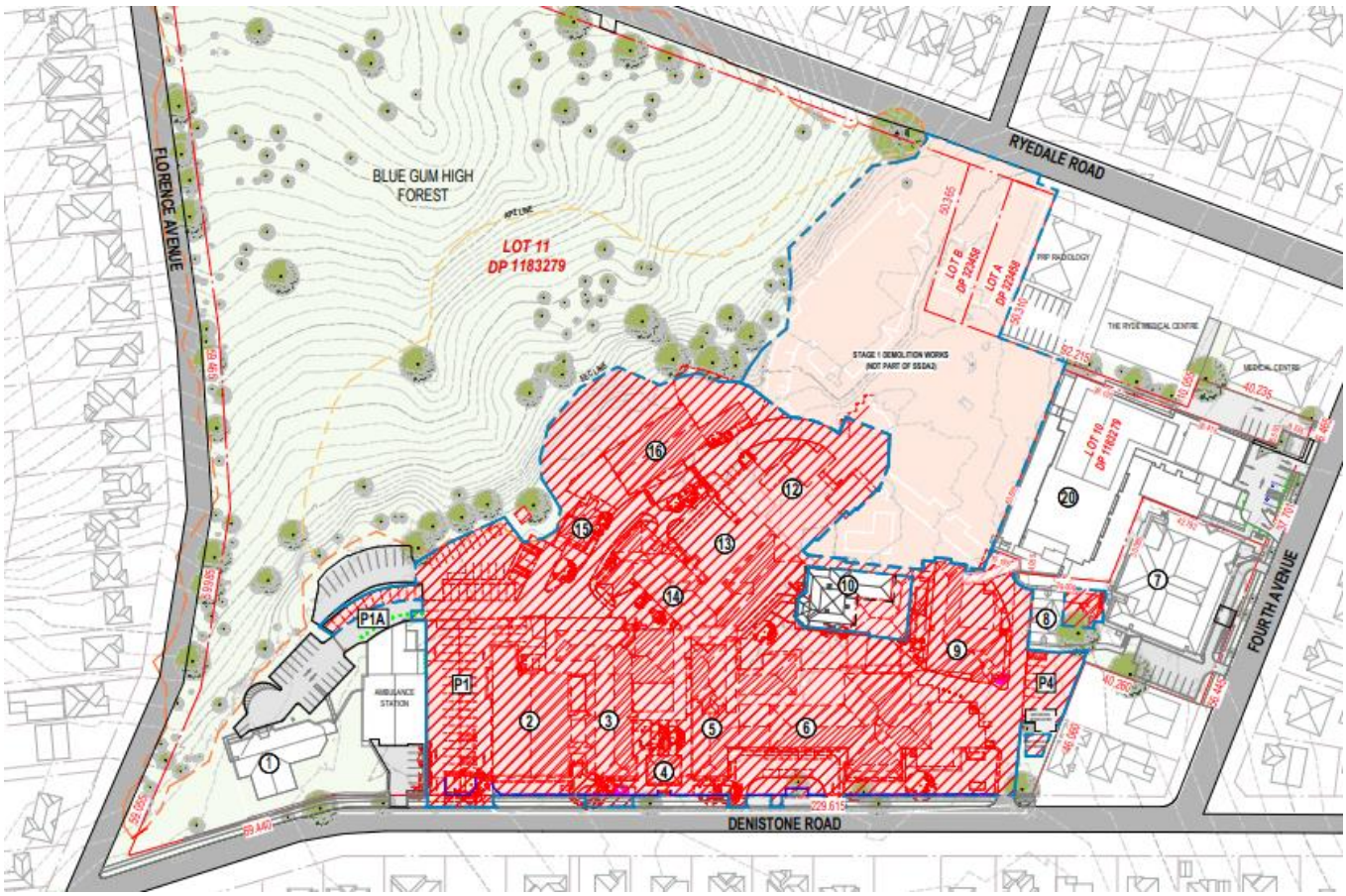


Figure 18 Site Plan Showing Extent of Proposed Demolition

Source: STH

3.3.2 Earthworks

Due to the topography of the existing site and the extent of the proposed development, there is approximately 5 metres of level difference across the site that will need to be managed as part of the project. Earthworks will be undertaken across the site to achieve the desired building design levels and will result in a total cut volume of 33,400m^3 and a total fill volume of 7,700m^3.

A shoring system will be implemented where excavation will occur in close proximity to operational buildings. Retaining walls will also be implemented at the interface between new and existing structures, as necessary.

Further detail is provided in the Civil Engineering Report at **Appendix K**.

3.3.3 Tree Removal

There are 87 trees located in the development area. Approval has been granted (per SSD-36778089) for the removal of 45 trees within the Stage 1 works area (subject to Modification 1 under assessment).

As part of this SSD, a further 29 trees are required to be removed – which are trees 52, 53, 55, 58, 60, 61, 62, 63, 64, 65, 66, 67, 69, 70, 71, 72, 73, 74, 75, 77, 78, 79, 80, 81, 82, 83 and 87. The remaining trees within the development area will be retained, pending incursion into their structural root zones and tree protection zones.

Where possible, the trees will be retained, and protection measures will be implemented to enable ongoing protection during construction works. Consideration will also be given to transplanting trees 53, 62, 63, 64, 65, 66 and 67, if further assessment confirms this is feasible. Further detail and identification of tree numbers is provided in the Arboricultural Impact Assessment at **Appendix G**.

3.3.4 Remediation

Based on a review of the available contamination assessments and previous works undertaken at the site, JBS&G have identified a number of contaminants including fill material impacted with PCBs and TRH, PAHs identified in soil, elevated levels of heavy metals identified in fill, soil and groundwater, and asbestos in bonded and friable form.

As a result, remediation is required to be carried out in accordance with the methodology detailed in the Remediation Action Plan (RAP) provided at **Appendix L**. It will generally comprise the following:

- Excavation and off-site disposal of PCB impacted soil to a lawful waste facility.
- Excavation and off-site disposal of asbestos impacted shallow fill beneath existing building footprints (where removal of these soils is required to facilitate development), to a lawful waste facility.
- On-site retention of all remaining asbestos (in bonded and friable form) impacted fill material where this can be achieved within the development, via implementation of a cap/cover remedial strategy based on physical separation, with implementation of on-going management plan.
- Excavation and off-site disposal of asbestos (in bonded and friable form) impacted fill that cannot be contained to a lawful waste facility (where removal is required to facilitate development).

With the exception of potential sub-floor contaminants beneath existing buildings, remediation will be constrained to two areas in the southern portion of the hospital development site, to the north of the Blue Gum High Forest and a small area adjacent to Building 5 where PCB impacted fill was detected.

3.4 Physical Layout and Design

3.4.1 New Hospital Building

The new Ryde Hospital building is situated in the central portion of the site, where it best responds to biodiversity, bushfire and heritage constraints. It comprises an 8-storey building that is irregular in shape, with a 4-storey podium and 4-storey tower form. It will have a maximum height of RL 136.5 (including plant) and a total GFA of 27,935m^2.

The building massing has been developed through consideration of the clinical requirements, site constraints and the Connecting to Country principles. The building massing will be separated into three distinct, but connected, vertical forms, being two clinical blocks connected by a linking element dubbed the 'Beacon' (refer to **Figure 19**). The Beacon component is generally rectangular in shape. It will comprise the front of house, building entry and building circulation. The clinical block components comprise two wings that extend from the Beacon and will include all clinical services and back of house areas.

The project has attended the State Design Review Panel, who support the built form and design outcome for the site, as discussed in the Architectural Design Report at **Appendix D**.

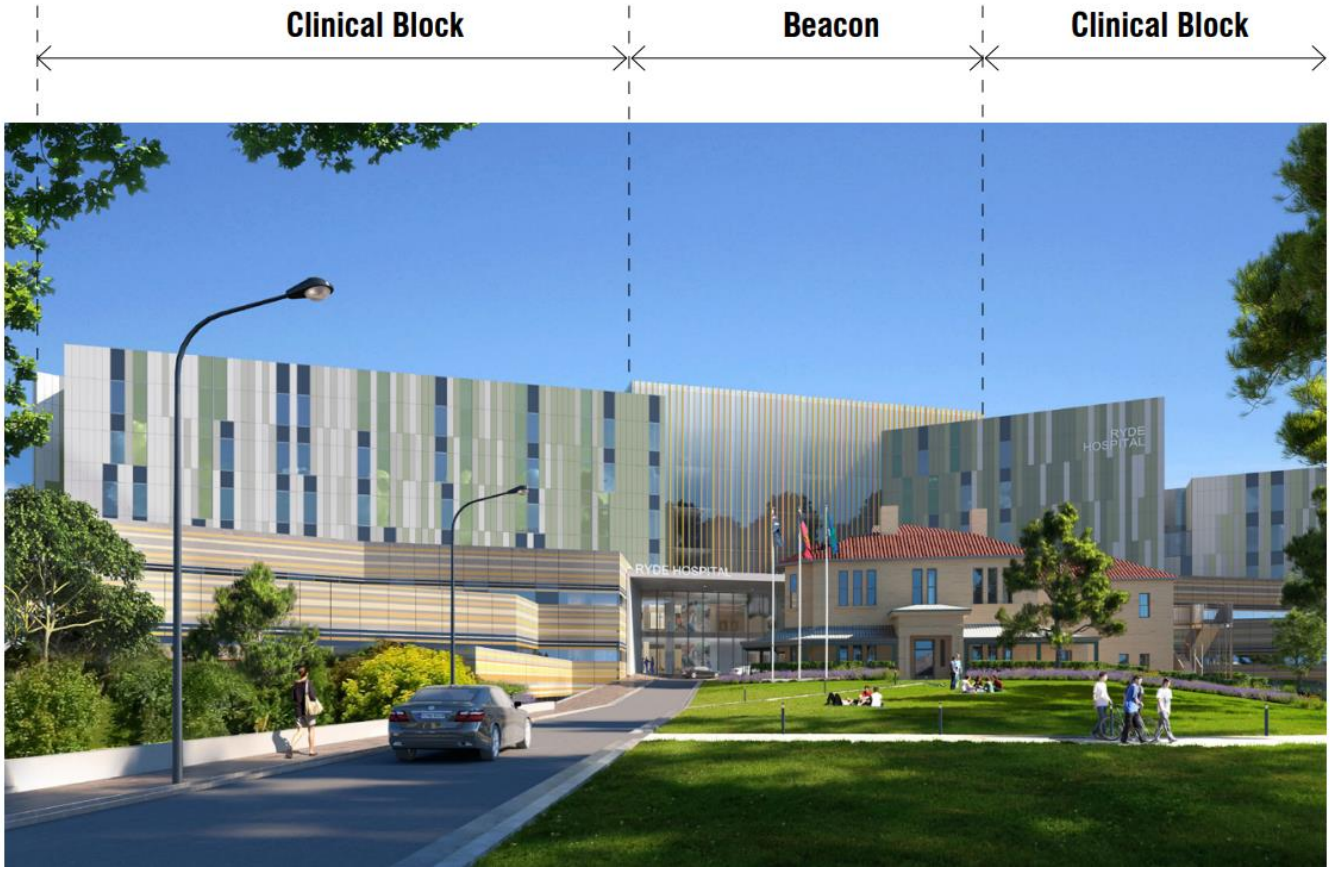


Figure 19 Artistic 3D Rendering of Proposed Building (from Denistone Road)

Source: STH

The building layout and design is described in **Table 4** below.

Table 4 Building Layout and Design

Level	Building Layout
Lower Ground	• Clinical services, including emergency department, medical imaging and mortuary. • Emergency vehicle access. • Public access provided via the emergency department at-grade carpark. • Back of House, such as end of trip facilities, storage and food services. • Circulation, including lift cores and stairways. • Basement Car Park. • Loading Dock. • Plant.
Ground Floor	• Clinical services, including ambulatory services and pathology. • Public access provided via the main drop off / pick up loop. • Public access provided via the Graythwaite Building link bridge. • Front of House / Reception. • Ancillary retail. • Outdoor terrace. • Back of House, such as amenities and ICT services. • Ballast / Green Roof. • Circulation, including lift cores and stairways. • Plant.
Level 1	• Clinical services, including operating unit, paediatric short stay and sterile services department.

	• Back of House, such as administration offices. • Ballast / Green Roof. • Circulation, including lift cores and stairways. • Plant.
Level 2	• Clinical services, including ICU and IPU. • Shared staff and patient areas. • Ballast / Green Roof. • Circulation, including lift cores and stairways. • Plant.
Level 3	• Clinical services, including medical and surgical IPU. • Shared hospital and patient areas. • Shared staff and patient areas. • Outdoor terrace. • Ballast / Green Roof. • Circulation, including lift cores and stairways. • Plant.
Level 4	• Clinical services, including medical and surgical IPU. • Shared staff and patient areas. • Circulation, including lift cores and stairways. • Plant.
Level 5	• Clinical services, including medical and surgical IPU. • Shared staff and patient areas. • Ballast Roof. • Circulation, including lift cores and stairways. • Plant.
Level 6	• Ballast Roof. • Circulation, including lift cores and stairways. • Plant.
Level 7 / Roof	• Ballast Roof. • Plant.

The built form elements of the proposed Ryde Hospital have been prepared by STH (**Appendix E**) and included in **Figure 20** to **Figure 23** below.

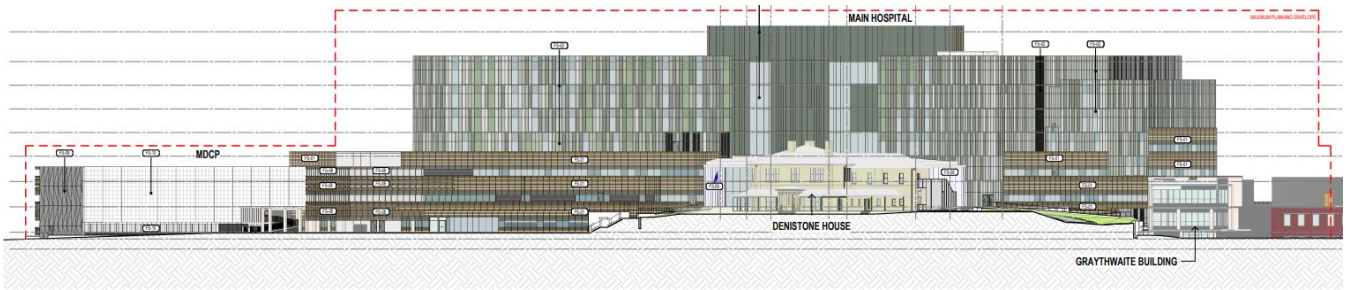


Figure 20 Proposed North East Building Elevation

Source: STH

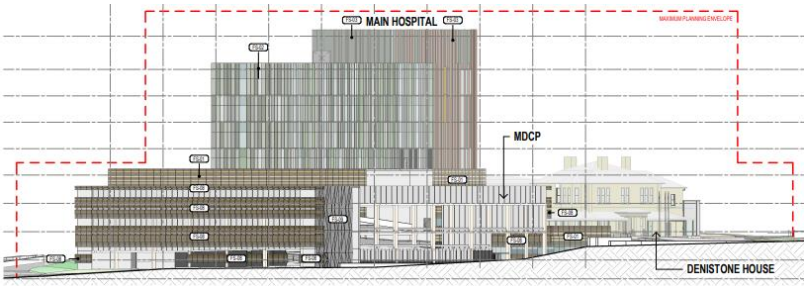


Figure 21 Proposed Eastern Building Elevation

Source: STH

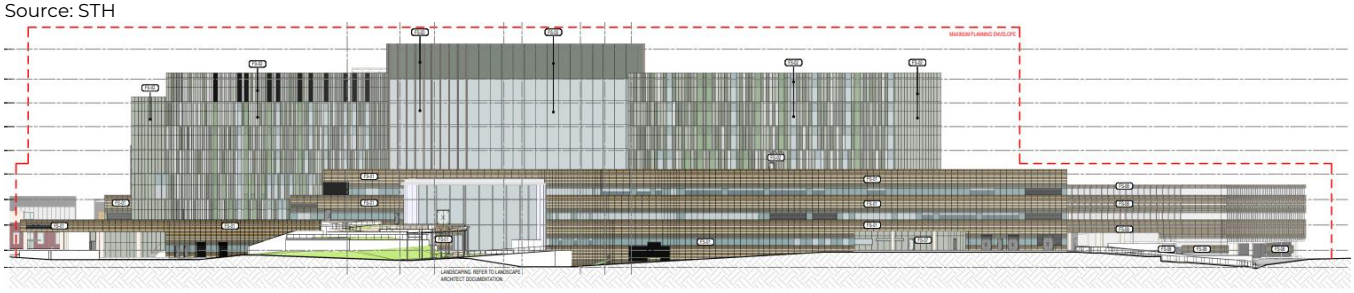


Figure 22 Proposed South West Building Elevation

Source: STH

Figure 23 Proposed Western Building Elevation

Source: STH

Hospital Entrance and Drop Off

Entry to Ryde Hospital is provided at the Ground Floor and is accessed from either the landscape area fronting Denistone Road or the main drop off / pick up loop. The main entry includes a front of house / reception area, public lifts and stairs and retail tenancies.

Additional access to the building is provided via the pedestrian bridge which links to the Graythwaite Building.

Ancillary Retail

A small amount of retail space is to be provided on the Ground Floor and will be orientated to internal spaces and outdoor spaces at the southwest of the building. This retail will be ancillary to the hospital use, such as a pharmacy and kiosk-type food and drink premises that will cater to the needs of the hospital and its users.

Link to Graythwaite Building

A new pedestrian bridge link is proposed to connect the new Ryde Hospital Building and the Graythwaite Building. It will be approximately 1 storey in height and provide a connection to the Ground Floor of both buildings.

3.4.2 Multi-Deck Car Park

A four-storey multi-deck car park is proposed on the eastern edge of the site, fronting Denistone Road. The multi-deck car park will have a maximum height of RL 110.5.

The height and materiality of the multi-deck car park has been designed so that it blends with the hospital building podium. The multi-deck car park will include a car park operator office at the Denistone Road frontage.

It is noted that separate single level basement car park will also be provided as part of the project. While the multi-deck car park and basement are connected, the design will enable them to operate as two separate areas depending on user allocation. As necessary, access to the two separate parking areas will be restricted by boom gates.

The car park is setback from Denistone Road by approximately 2m with a landscaped setback zone and the façade design includes modulation and green-façade planting to lessen visual impact on the street.

3.4.3 Denistone House and The Stables

As part of the proposal, Denistone House will be retained and conserved, whilst allowing for a viable, ongoing and compliant use. This will include the retention and conservation of the original portion of Denistone House and removal of intrusive additions. Internal to the building, the existing room layout and significant features (such as fireplaces and joinery) will largely be retained. New works include the addition of a fire egress stair attached to the rear northern wing.

Similarly, the proposal seeks to retain the important original form of The Stables to enable greater interpretation of its original function, whilst allowing for a viable, ongoing and compliant use. It will comprise the demolition of the rear wing and façade infill. No internal works are proposed beyond the necessary conservation works. A Schedule of Conservation Works for both Denistone House and The Stables has been prepared by Urbis and is included at **Appendix EE**.

A key element of the project's design is to restore the visual connection between the public domain and Denistone House, as well as the visual connection between Denistone House itself and The Stables. By demolishing non-significant buildings and designing the proposal to have significant open spaces and a generous landscaped forecourt, these significant heritage buildings will have their visual prominence to the public domain restored.

3.5 Materials and Finishes

STH (**Appendix D**) have selected a combination of contemporary materials and finishes that aim to create visual interest, enhance the Connection to Country and respond to the surrounding existing hospital landscape. The building has been designed with three distinct façade elements, as follows:

- **The Beacon** – The Beacon will comprise coloured fins that are orientated vertically and forms a gradient which gets lighter towards the centre of the building. The transparency of the façade will signify the importance of this building element for site access and circulation but will also allow the Beacon to recede into the Blue Gum High Forest to reduce the perceivable scale of the building.
- **Inpatient Unit Tower (IPU)** – The façade of the IPU Tower will be expressed vertically and incorporate a muted colour palette to ensure that the tower component is visually recessive in context of the site. The façade design will allow for views to nature from the upper levels, including to the Blue Gum High Forest while responding to the clinical needs of the tower.
- **The Podium** – The colour, texture and layered arrangement of the building podium have been designed with reference to the rising terrain. The windows will be arranged in a horizontal formation to create visual interest and allow for maximum views from hospital rooms to the surrounding areas.

In addition to the above, the multi-deck car park has been designed to blend with the façade and materiality of the podium. It will incorporate colour-matched materials on the eastern and western facades. The façade of the multi-deck car park which fronts Denistone Road will incorporate a green wall (comprising a planting mesh affixed to the façade and greenery growing up the mesh). This façade design, in parallel with the landscaped setback to Denistone Road will contribute to softening the visual appearance of the car park as well as obscuring any vehicle light spill that may be caused by cars within the car park.

The proposed materials and finishes are shown within the Design Report at **Appendix D**.

3.6 Signage

Approval is sought for the following building identification signage:

- One illuminated 'Ryde Hospital' primary building identification sign fixed to the building's northeastern façade. The signage dimensions will be 3,620mm wide x 2,700mm high.
- One illuminated 'Ryde Hospital' secondary building identification sign fixed to the awning at the main building entry at the northeastern façade. The signage dimensions will be 7,200mm wide x 800mm high.
- One illuminated 'Emergency Department' building identification sign fixed above the public emergency department entrance. The signage dimensions will be 11,025mm wide x 1,550mm high.
- One illuminated 'Ambulance Only' wayfinding sign fixed above the entry to the ambulance parking area. The signage dimensions will be 500mm high and have a width to match the length of 5 façade panels.

In addition, wayfinding signage will be provided throughout the hospital campus to improve legibility and navigation for pedestrians and vehicles. Wayfinding signage will be fully integrated into the design of the built form and will utilise high quality material. Where possible, Connection to Country will be strengthened through utilising the D'harwal six seasons of Sydney.

3.7 Car Parking and Access

3.7.1 Vehicle Access

This SSDA seeks approval for a number of vehicle access arrangements, which are described in **Table 5** and shown in **Figure 24** below.

Table 5 Proposed Access Arrangements

Access	Frontage	Direction	User
1	Denistone Road	Two way (entry/ exit) (existing point of access)	• Staff, fleet and restricted access to the multi-deck car park and P1A parking area. • Public access to the basement car park and the childcare centre pick up/drop off loop. • Transit port access. • Fire trail access (for Emergency Vehicles only, otherwise access to the fire trail is by foot only).
2		Two way (entry/ exit)	• Emergency vehicle access to ambulance parking area.
3		Two way (entry/ exit)	• Public access to emergency department drop off/pick up area and at-grade car park.
4		One way (entry only) (existing point of access)	• Public access to main entry and at-grade public car park.
5		Two way (entry/ exit) (existing point of access)	• Public access to public at-grade car park. • Bulk oxygen delivery.
6	Ryedale Road	Two way (entry/ exit) (existing point of access)	• Staff access to staff at-grade car park. • Service vehicle access to loading dock. • Fire trail access (for Emergency Vehicles only, otherwise access to the fire trail is by foot only).

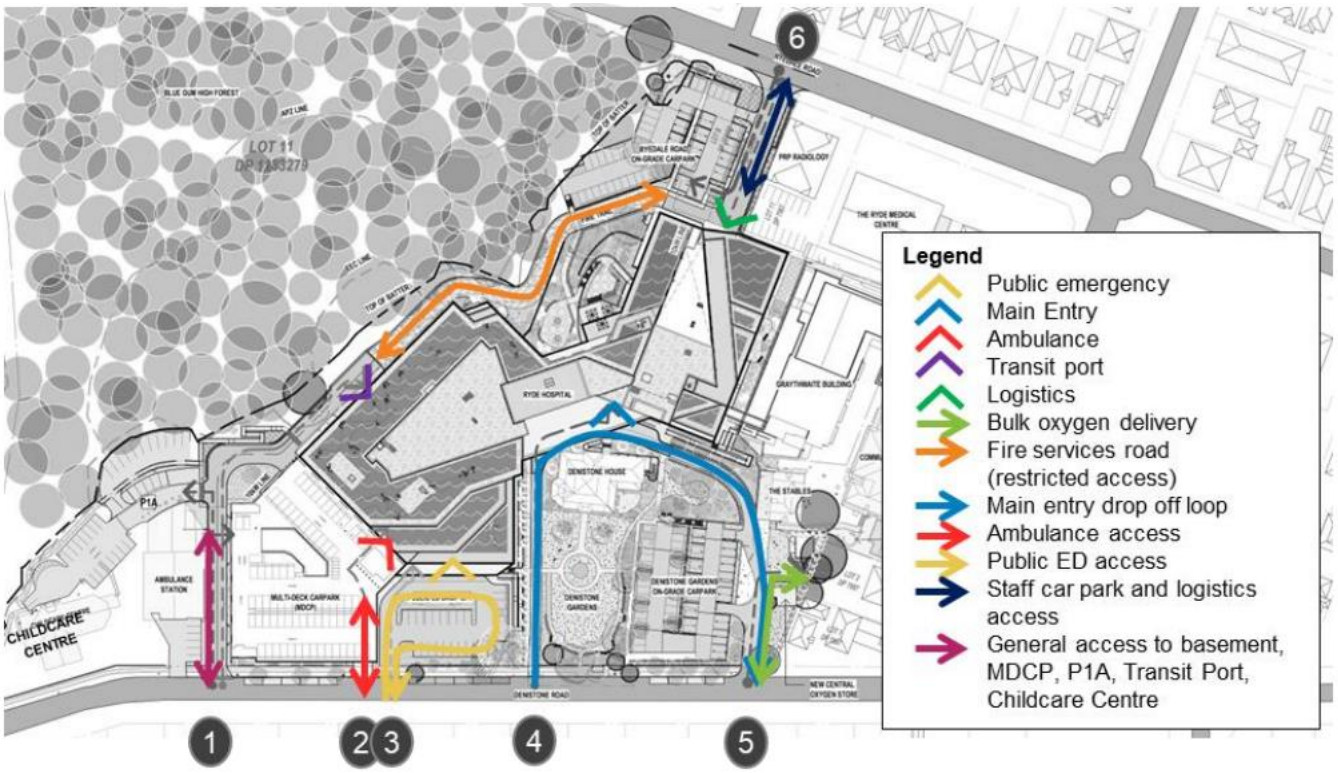


Figure 24 Proposed Vehicle Access Arrangements

Source: Stantec

3.7.2 Car Parking

As a result of the proposed development 482 car parking spaces will be provided on site. These will be spread across the multi-deck car park, basement car park and four at-grade car parks (including P1A which will be retained as part of the project). The majority of parking including all public parking will be accessed from the Denistone Road frontage, with only a minor quantum of staff parking accessed from the Ryedale Road frontage.

A breakdown of the proposed parking allocation is provided in **Table 6** and shown in **Figure 25** below.

Table 6 Proposed Car Parking Allocation

Car Park	Supply	Indicative Allocation
Denistone Road At-Grade	54	Public
Emergency Department At-Grade	25	Public
Basement Car Park	101	Public, fleet, visiting medical officers
Multi-Deck Car Park	214	Staff
P1A At-Grade	32	Staff, visiting medical officers and contractors
Ryedale Road At-Grade	56	Staff
Total	**482**	

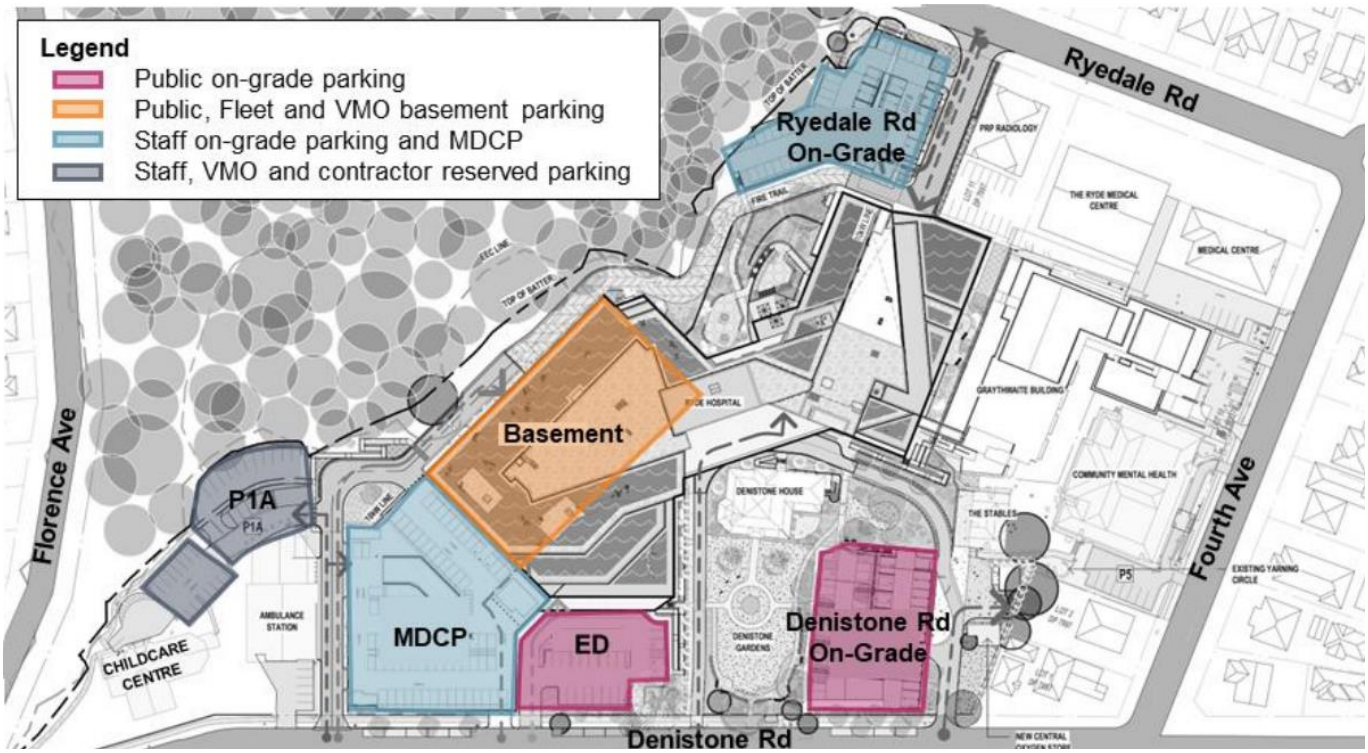


Figure 25 Proposed Car Parking Allocation

Source: STH

3.7.3 Loading Facilities

A loading dock will be located along the western side of the building on the Lower Ground. Access will be provided from Ryedale Road. The loading dock will be capable of accommodating the following:

- Two bays suitable to accommodate vehicles up to 12.5 metre HRV's.
- One bay suitable to accommodate vehicles up to 6.4m SRV.
- One bay suitable to accommodate courier vehicles.
- Two compactors.

3.7.4 Bicycle Facilities

67 secure bicycle spaces will be provided within the multi-deck car park for staff, with access from Denistone Road. An additional 14 bicycle spaces will be provided for visitors and will be located at the main entry. End of trip facilities, including showers, changing rooms and lockers will be provided for staff within the Lower Ground.

3.8 Landscaping

A Landscape Design Report and Plans have been prepared by Taylor Brammer and are included at **Appendix J**. The landscape design will integrate elements of nature with clinical care whilst respecting the existing heritage values and Connection to Country. The key elements of the landscape design include:

- **Community Heart** – The drop-off / pick up forecourt will provide a link between the carparking areas, hospital facilities and proposed open space.
- **Healing Gardens** – Rooftop and garden terraces will provide a congregational space for patients, visitors and the community to gather and recreate. Visual links to bushland and the Parramatta River will be maintained.
- **Denistone House and Garden** – The heritage curtilage of Denistone House will be retained and enhanced. The proposed garden and open space will incorporate themes of European and Aboriginal significance, including through reinterpreting aspects of the original 19th century cultural landscaping, restoring views from Denistone Road and providing a location for yarning circles, seating and picnicking.
- **Entry and Exit Points** – Feature trees will highlight the vehicular and pedestrian access points along Denistone Road.

- **Heritage Curtilage** – Additional planting will be provided along the perimeter of heritage curtilage, including Denistone House and the Stables. Planting will generally comprise native shrubs and groundcovers.
- **Grandmother Tree and Ceremonial Space** – The existing grandmother tree located along the Ryedale Road site boundary will be retained and a ceremonial space will be development to promote Connection to Country.
- **Yarning Circle** – The existing yarning circle located off Forth Avenue will be maintained and protected during construction works.

Further to the above, the existing Blue Gum High Forest in the southern portion of the site will be retained and managed. The retention and protection of existing trees in this area represents approximately 53.4% of the site area with supplementary trees retained and proposed across the remainder of the site. An additional 150 trees are proposed to be planted throughout the site and will include a variety of native species (refer to the tree planting schedule at **Appendix J**).

The Landscape design is shown at **Figure 26** below.

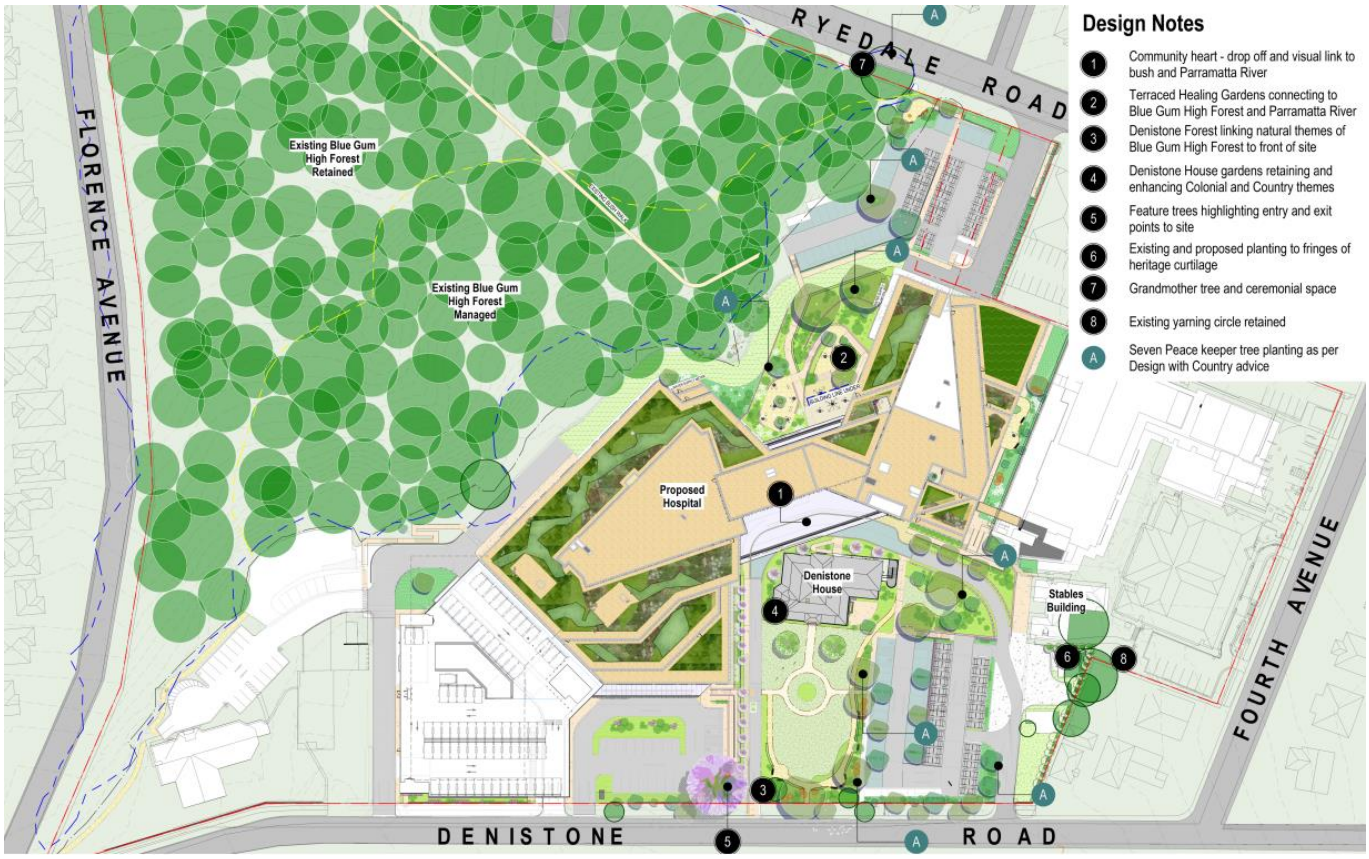


Figure 26 Proposed Landscape Design

Source: Taylor Brammer

3.9 Public Domain Infrastructure

As part of the proposed development, the following public domain infrastructure will be delivered (as shown in the Public Domain Infrastructure Plan at **Appendix E** and **Figure 27**):

- Reinstate the bus stop and shelter on Denistone Road frontage.
- Extension of the existing median strip along Ryedale Road to ensure hospital access operates as left-in, left-out only.
- Provision of a publicly accessible through-site asphalt surface for use by pedestrians and cyclists, with resting places/platforms within the site at the top of the Blue Gum High Forest.
- Retention or replacement of all street trees.
- A new pedestrian footpath along the site frontage to Denistone Road.
- Changes to on-street parking along Denistone Road to allow for loading, drop off etc.
- Provision of utilities as described in **Section 3.12**.

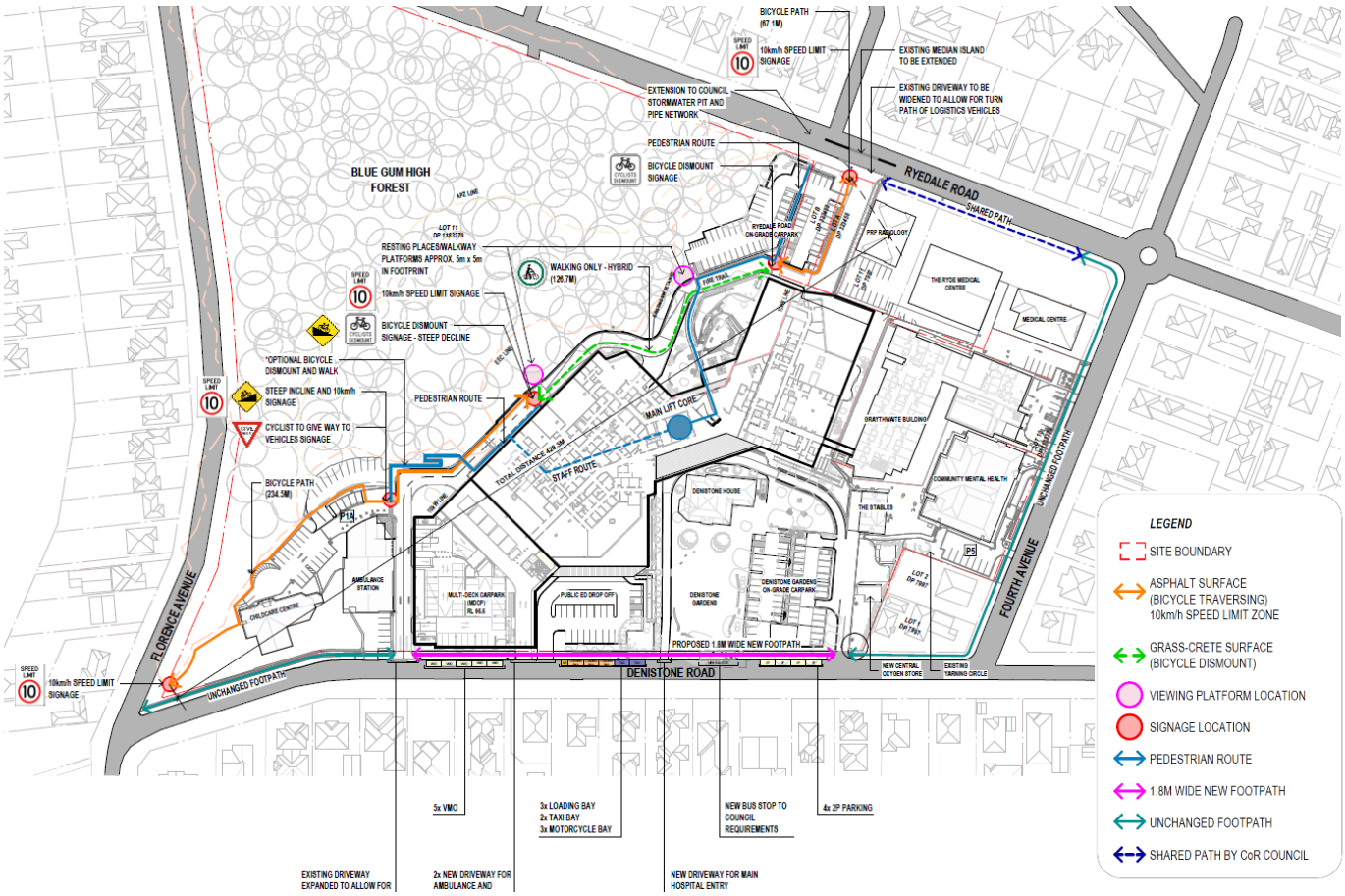


Figure 27 Proposed Public Domain Infrastructure Plan

Source: STH

3.10 Lighting Strategy

Outdoor night time lighting will be required to support the needs of a major hospital. All lighting will be designed and documented in accordance with AS/NZ standards 1680 and 4282-1997 Control of the obtrusive effects of outdoor lighting. An External Lighting Strategy has been prepared by Arup and is provided at **Appendix KK**.

3.11 Environmentally Sustainable Development

The proposed development will incorporate Environmentally Sustainable Development (ESD) design strategies and principles. In particular, the development will be targeting the following performance:

- A minimum 10% improvement in energy efficiency compared to a baseline of National Construction Code (NCC) Section J (NCC 2019 assumed).
- A minimum of 60 points under the HI ESD Framework (refer to **Appendix S**).

The above will be achieved by incorporating a range of design measures into the development including:

- Electrification of all building services and systems.
- Electric vehicle (EV) parking for fleet vehicles, including the provision of 17 electric vehicle chargers.
- Provision of bicycle parking and end of trip facilities to encourage active transport use.
- Use of water efficient irrigation systems for all landscape areas.
- Installation of solar panels.
- Provision of green roofs to the podium rooftop areas to provide visual amenity and climate resilience benefits.

3.12 Infrastructure and Services

The required connections to infrastructure and services for the future development are provided in the Hydraulic Services Report (**Appendix M**) and Electrical and ICT Utility Report (**Appendix N**). Further detail is provided in **Table 7** below.

It is noted that some preparatory infrastructure and services works will be carried out under the Stage 1 Approval (SSD-36778089). This includes the termination of in-ground building services and augmentation of utilities associated with the Stage 1 Works area.

Table 7 Proposed Infrastructure and Services

Service	Proposal/Comment
Water	The proposed development is to be connected to the existing Sydney Water mains located on Ryedale Road, Denistone Road and Forth Avenue. The existing water supply load proposal will increase from 75kL per day to 130kL per day by 2031. The performance of the authority water supply for drinking purposes is adequate for the proposed development. Notwithstanding, the project will necessitate the upgrade of the existing potable water mains Ryedale Road and diversion of new main around the footprint of the new building. Further detail is provided at the Hydraulic Services Report at **Appendix M**.
Electricity	Electricity to the site is supplied via three Ausgrid substations which are located within the hospital campus. In addition, above and below ground high voltage (HV) cables run along Denistone Road, and below ground HV cables run along Fourth Avenue and Ryedale Road. These cables operate at 11kV and feed the adjacent substations. Two of the existing substations will be removed and replaced as part of the proposal. They will be supplied with electricity from the existing HV feeders on Denistone Street and Forth Avenue. Detail is provided in the Electricity and ICT Utilities Report at **Appendix N**.
ICT	The site is serviced by the following communication infrastructure: • A primary wide area network (WAN) connection, comprising a Telstra Fibre from Denistone Road to Denistone House Campus distributor. • A secondary WAN connection, comprising NBN fibre from Denistone Road to the main comms room in the Graythwaite Building. • A copper ~200pair connection from Denistone Road to the private automatic branch exchange (PABX) room located in building 6. A main comms room will be developed in the proposed hospital building to support new and existing buildings on the hospital campus. Diverse copper and fibre connections will be derived from Denistone Road and Fourth Avenue. The pit and pipe system from the main comms rooms will be installed during the construction process of the new hospital.
Fire Services	Subject to Sydney Water approval, augmentation of water supply main from Blaxland Rd to Denistone Rd for fire-fighting supplies is required due to the inadequate performance of the mans for fire-fighting purposes. This augmentation will be solely for fire-fighting supply. A fire hydrant will be located on the Denistone Road site boundary.
Sewerage	The proposed development will be connected to the existing sewer drainage system located on Ryedale Road. The existing sewer loads will increase from 72kL per day to 126kL by 2031 as a result of the project. Therefore, the existing site sewer infrastructure will be diverted, removed and replaced to cater for the proposed development. It is envisaged that the site infrastructure will largely comprise of DN150mm sewer drainage lines.
Natural Gas	The existing 1050 kPa steel gas main is located in the western portion of the site, near Ryedale Road. The project will include the relocation of existing natural gas master meter and inground piping.

3.13 Operational Details

3.13.1 Land Use

The proposed works will enable the continued use of the site as a hospital.

3.13.2 Beds and Treatments Spaces

The proposed development will provide between 130-230 inpatient beds for acute medical care. A number of treatment spaces will also be provided within the hospital, as identified in **Table 4** and detailed within the Design Report at **Appendix D**.

3.13.3 Operating Hours

The proposed development will operate 24 hours a day for seven days a week. Visiting hours will be established prior to the commencement of operation and will vary based on the type of in-patient care being provided.

3.13.4 Staff (Operational Jobs)

The proposed development will generate approximately 588 additional FTE (full time equivalent) jobs during the operational phase. Staff will comprise a series of nurses, doctors, allied health professionals, corporate and support staff, and ancillary roles such as retail assistants.

3.14 Staging and Delivery

Construction works proposed as part of this SSDA are anticipated to be carried out over a four-year period. The works will be staged to minimise impact to the operation of the existing hospital throughout construction. The staging is described in **Table 8**. A Staging Plan is provided in the Preliminary Construction Management Plan provided at **Appendix GG**.

It is also noted that additional construction works will occur on site in accordance with the separate Stage 1 Approval. These will be carried out prior to the works described in **Table 8**.

Table 8 Construction Staging

Stage	Description	Anticipated Duration
1	• Demolition of all relevant built form in the upper portion of the site that was not demolished as part of SSD-36778089 (as modified). • Targeted excavation near Ryedale Road. • Construction Stage 1 New Acute Services (hospital) Building. • Temporary linkages and pathways to services impacted. • Decant of services including Front of House, nursing administration and medical records.	15 months
2	• Decant of services including Chattery services, Mortuary, Critical Care Units, pathology laboratory and food services into Stage 1 Acute Services Building. • Demolition of car parking and buildings (which comprise services for mortuary, wards, engineering, food services, physiotherapy, intensive and critical care units) in the central portion of the site. • Construction Stage 2 Acute Services Building including Main Entry and front of house and ED. • Decant of ICU, Maternity, Ambulatory Care, ED, Medical imaging, Main entry and Admin into Stage 2.	19 months

3	• Demolition of the existing Denistone Road entry and buildings (which include services for the Emergency Department, operating theatres and medical imaging) in the lower portion of the site. • Construction of new emergency department drop off, multi-deck car park, ambulance drop off, at-grade Denistone House works and landscaping.	16 months

Prior to the commencement of works and once a contractor is appointed for the project, a detailed Construction and Environmental Management Plan (CEMP) will be prepared for the proposed development and will be provided as a condition of development consent. The CEMP will be prepared in accordance with the relevant applicable Australian Standards and Occupational Health and Safety requirements. It will address the following:

- Site access control, public safety, amenity and security.
- Construction hours.
- Noise and vibration control.
- Material management, waste and material re-use.
- Sediment and erosion control.
- Construction traffic management.
- Dust suppression.
- Notification of surrounding properties and complaints handling.

3.15 Construction Management

Construction activities will be undertaken between 7:00am and 6:00pm Monday to Friday, and 8:00am to 1:00pm on Saturday. No work is to take place on Sunday or public holidays.

The construction works will result in the provision of 287 direct jobs.

4.0 Statutory Context

Development approval is sought for the project under the State Significant Development provision of Part 4 of the Environmental Planning & Assessment Act 1979. The project's key statutory requirements are outlined in the sections below. This section is complemented by a statutory compliance table at **Appendix C** that identifies all statutory requirements and where those requirements have been addressed in the EIS.

4.1 Land Use Definition

The Project is defined as a 'Hospital' under the Standard Instrument, which is a type of 'Health Services Facility'.

4.2 Permissibility

The proposal is located on land which is subject to the Ryde Local Environmental Plan 2014 (RLEP 2014). The site is zoned SP2 Infrastructure (Health Services Facility). Development for the purpose shown on the SP2 Infrastructure Land Zoning Map (i.e., health services facility – which includes hospitals) including any development that is ancillary or ordinarily incidental to development for that purpose is permitted with consent under RLEP 2014.

Therefore, the proposed development is permissible with consent under RLEP 2014.

4.3 Power to Grant Consent

4.3.1 Declaration of State Significant Development

Development consent will be sought under 'Division 4.7 - Stage Significant Development' of the EP&A Act.

Section 4.36(2) of the EP&A Act states that:

> *A State environmental planning policy may declare any development, or any class or description of development, to be State significant development.*

Schedule 1 of Planning Systems SEPP lists development that is declared State significant development. Schedule 1, Clause 14 states:

> *Development that has a capital investment value of more than $30 million for any of the following purposes—*
> ***(a) hospitals**,*
> *(b) medical centres,*
> *(c) health, medical or related research facilities (which may also be associated with the facilities or research activities of a NSW local health district board, a University or an independent medical research institute).*

As the project is for the purpose of a hospital and has a CIV of more than $30 million, it is declared State significant development.

4.3.2 Consent Authority

Section 4.5 of the EP&A Act and Section 2.7 of the Planning Systems SEPP stipulate that as an application made by a public authority the consent authority is the Minister for Planning.

Section 4.5 of the EP&A Act and Section 2.7 of the Planning Systems SEPP stipulate that the consent authority is the Minister for Planning (or DPE as their delegate) unless the development triggers the matter set out in Section 2.7(1) in which case the consent authority will be the Independent Planning Commission.

4.4 Other Approvals

The following section outlines other legislative approvals required for the Project in addition to a development consent under Division 4.7 of the EP&A Act.

4.4.1 Consistent Approvals

Section 4.42 of the EP&A Act stipulates that certain authorisations cannot be refused if they are necessary for carrying out State significant development. The following table lists legislative approvals that are required for the Project and cannot be refused if the Project is approved.

Table 9 Consistent Approvals under Section 4.42 of the EP&A Act

Act	Approval Required
Legislation that must be applied consistently	
Fisheries Management Act 1994	No
Mine Subsidence Compensation Act 1961	No
Mining Act 1992	No
Petroleum (Onshore) Act 1991	No
Protection of the Environment Operations Act 1997	No
Roads Act 1993	Yes
Pipelines Act 1967	No

4.4.2 Environmental Protection and Biodiversity Act Approval

The *Environmental Protection and Biodiversity Act 1999 Act* (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities, and heritage places. These are known as matters of National Environmental Significance. If the proposed development will, or is likely, to impact a matter of National Environmental Significance, then it is required to be referred to the Federal Department of the Environment for assessment to determine if it constitutes a 'controlled action' requiring EPBC approval. Presently, a bilateral agreement allows the Commonwealth Minister for the Environment to rely on the NSW environmental assessment process when assessing a controlled action under the EPBC Act.

The Project includes management works to the Blue Gum High Forest, which is a critically endangered ecological community under the EPBC Act. Separately to the development application process, a scientific licence to undertake clearing of invasive species was granted on 28 June 2022 by the Commonwealth Department of Agriculture. (Application Number 2022/09129). These clearing works have been undertaken.

4.4.3 Approvals not Required for State Significant Development

Section 4.41 of the EP&A Act stipulates that certain authorisations are not required for State significant development. The following legislative approvals would otherwise be required if the Project was not State significant.

Table 10 Legislation that does not apply

Legislation	Approval Otherwise Required
Legislation that does not apply to State Significant Development	
Fisheries Management Act 1994	No
Heritage Act 1977	No
National Parks and Wildlife Act 1974	No
Rural Fires Act 1997	No
Water Management Act 2000	No

4.5 Pre-conditions to Exercising the Power to Grant Consent

The following section identifies pre-conditions to be fulfilled by the consent authority before exercising their power to grant development consent.

Table 11 Pre-conditions to be fulfilled by the Consent Authority

Legislation	Pre-Condition
State Environmental Planning Policy (Transport and Infrastructure) 2021	The *State Environmental Planning Policy (Transport and Infrastructure) 2021* (T&I SEPP) aims to facilitate the effective delivery of infrastructure across the State. Section 2.121 requires the consent authority to provide the RMS with written notice of the development application for developments considered a 'traffic generating activity'. The development is considered a traffic generating activity. Further detail is provided in **Section 6.5**.
State Environmental Planning Policy (Industry and Employment) 2021	The State Environmental Planning Policy (Industry and Employment) 2021 (Industry and Employment SEPP) sets out planning controls for advertising and signage in NSW. Section 3.6 stipulates that a consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied that: • The signage is consistent with the objectives of the SEPP. • The signage satisfies the assessment criteria specified in Schedule 1 of the SEPP. Business/Building identification signage is proposed as part of the development. A description of the proposed signs is provided in **Section 3.6** and an assessment of the signs against Schedule 5 of the Industry and Employment SEPP is included in **Section 4.5.1** below.
State Environmental Planning (Resilience and Hazards) 2021	The State Environmental Planning (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. Section 4.6 stipulates that a consent authority must not consent to the carrying out of development unless: • It has considered whether the land is contaminated, and if the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out. • If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for that purpose. The site can be made suitable for the proposed development, subject to the successful implementation of the measures described in the RAP (**Appendix L**).

4.5.1 State Environmental Planning Policy (Industry and Employment) 2021

The Industry and Employment SEPP applies to all signage that under an environmental planning instrument can be displayed with or without development consent and is visible from any public place or public reserve.

The proposed signage is building/business identification signage for the purpose of assessment under the Industry and Employment SEPP, in that it will contain signage which indicates the name and business being carried out by the occupant of the new building. The provisions within Part 3.3 of the Industry and Employment SEPP therefore do not apply. Only the objectives of the Industry and Employment SEPP and the criteria in Schedule 5 – Assessment Criteria of the Industry and Employment SEPP requires consideration.

Under Section 3.6 of the Industry and Employment SEPP, a consent authority must not grant consent for any signage application unless the consent authority is satisfied that the project is consistent with the objectives of the SEPP and with the assessment criteria which are contained in Schedule 5. The project will remain compliant with the aims and objectives of this SEPP, as it is compatible with the proposed development, provides effective communication, is suitably located and is of a high-quality design and finish.

Table 12 below demonstrates the consistency of the proposed signage with these assessment criteria.

Table 12 Industry and Employment SEPP – Signage Assessment Criteria

Assessment Criteria	Comments	Compliant
1 Character of the area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The signage is of a scale and design which is compatible with the character of the development and the area.	✓
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	The proposed signage is consistent with the locality. No third-party advertising is proposed.	✓
2 Special areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The proposal does not detract from the visual quality of any heritage buildings or open space and has been carefully designed to include the highest quality materials that will contribute to the aesthetic of the area. The signage achieves an appropriate functional balance for the future use of the site as a hospital and will not adversely impact on surrounding development.	✓
3 Views and vistas		
Does the proposal obscure or compromise important views?	The proposed signs do not obscure or compromise any important views.	✓
Does the proposal dominate the skyline and reduce the quality of vistas?	The proposed signs are modest in design and scale, they will not dominate the skyline or reduce the quality of vistas.	✓
Does the proposal respect the viewing rights of other advertisers?	The signs do not obstruct the views of any existing signage on or in the vicinity of the site.	✓
4 Streetscape, setting or landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	The scale, proportion and form of the signage is appropriate for the type of the development.	✓
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?	The proposed signs are of a modest design and will effectively identify the hospital building from the surrounding streetscape and promote wayfinding through identification of key features within the site (such as car parking and building entries).	✓
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	The proposed signage has carefully considered the location and design of existing signage within the hospital campus and will not contribute to any visual clutter. It does not comprise any advertising.	✓
Does the proposal screen unsightliness?	The proposed signs do not screen unsightliness, rather it fits within the design of the building.	✓
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The proposed signs do not protrude above the proposed roof/canopy height.	✓
Does the proposal require ongoing vegetation management?	The proposed signs do not require ongoing vegetation management.	✓
5 Site and building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building,	The proposed signage is compatible with the scale and proportion of the proposed development.	✓

Assessment Criteria	Comments	Compliant
or both, on which the proposed signage is to be located?		
Does the proposal respect important features of the site or building, or both?	The proposed signs are respectful in their design and are appropriately integrated with the features of the buildings. The proposed signage is located at key areas of the site, including at the main site and building entrances.	✓
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The proposed signs appropriately relate to their location and are attractive and tasteful in design.	✓
6 Associated Devices and logos with advertisements and advertising structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	Not applicable.	✓
7 Illumination		
Would illumination result in unacceptable glare?	The proposed signs which will be illuminated will not result in unacceptable glare.	✓
Would illumination affect safety for pedestrians, vehicles or aircraft?	The illumination will not affect the safety of pedestrians or vehicles, given that the illumination will be directed towards the signs which are at the top of the building facade, they are therefore distanced from pedestrians and vehicles.	✓
Would illumination detract from the amenity of any residence or other form of accommodation?	The illumination would not detract from amenity of any residence or other form of accommodation, including patient rooms.	✓
Can the intensity of the illumination be adjusted, if necessary?	The proposed lighting is to comprise fluorescent internally lit acrylic signs, the intensity will comply with all luminosity conditions and will not be required to be adjusted.	✓
Is the illumination subject to a curfew?	The illumination is not intended to be subject to a curfew. Notwithstanding, the illumination will be minimal and will not result in any excessive glare or cause excessive reflection.	✓
8 Safety		
Would the proposal reduce safety for any public road?	The proposed signage does not contain images, flashing lights, moveable parts and the like which would impact upon road safety.	✓
Would the proposal reduce safety for pedestrians/cyclists?	The location and scale of the proposed signs do not pose any adverse impacts on pedestrian or cyclist safety.	✓
Would the proposal reduce safety for pedestrians, particularly children, by obscuring sightlines from public areas?	The proposed signage will not obscure sightlines from public areas.	✓

4.6 Mandatory Matters for Consideration

The following section identifies matters that the consent authority is required to consider in deciding whether to grant consent to any development application.

Table 13 Matters for Consideration

Legislation	Matter for Consideration	
Considerations under the Act and Regulations		
Environmental Planning & Assessment Act 1979	The proposed development is consistent with the objects of the EP&A Act for the following reasons: • It allows for the orderly economic development of the land for a public use and provides improved health care infrastructure that is able to implement contemporary models of care. • It allows for additional employment opportunities throughout the construction and operation phases. • It will facilitate ecologically sustainable development. • It achieves a high-quality design outcome that will benefit patients, staff and visitors. • It is a development for public purposes and will facilitate the delivery of community spaces. The proposed development is consistent with Division 4.7 of the EP&A Act, particularly for the following reasons: • The development has been declared to have state significance. • The development is not prohibited by an environmental planning instrument. • The development has been evaluated and assessed against the relevant heads of consideration under section 4.15(1).	
Environmental Planning & Assessment Regulations 2021	The EIS has addressed the specification criteria within clause 190 and clause 192 of the EP&A Regulation. Similarly, the EIS has addressed the principles of environmentally sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage. As required by clause 4.42 of the EP&A Act, no additional approvals will be required in order to permit the development to occur. Further discussion is provided in **Section 7.0**.	
Mandatory relevant considerations under EPIs		
State Environmental Planning Policy (Resilience and Hazards) 2021	Section 3.12 outlines mandatory matters for a consent authority to consider when determining an application for potentially hazardous or offensive development. Chapter 3 applies to any project which fall under the policy's definition of 'potentially hazardous industry' or 'potentially offensive industry'. The works proposed as part of this SSDA fall within these definitions. Notwithstanding, a Preliminary Hazard Analysis has been undertaken by Premier (**Appendix O**) which confirms that the risks associated with the proposed development are not hazardous and no offensive activities are expected to occur as a result of the project.	
Ryde Local Environmental Plan 2014	Clause 2.3 Zone Objectives and Land Use Table	The site is zoned SP2 Infrastructure – Health Services Facility. Development of a hospital and ancillary services or works are permissible with development consent. The proposal is consistent with the SP2 objectives as: • It provides health infrastructure that is a specific use supported by the Zone. • The proposed development is compatible with Ryde Hospital, being a health services facility. • Does not prevent the use of the land for provision of further infrastructure as required within the site.
	Clause 4.3 – Height of Buildings	There is no mapped maximum building height under the RLEP 2014 for the site.
	Clause 4.4 – Floor Space Ratio	There is no mapped floor space ratio under the RLEP 2014 for the site

Legislation	Matter for Consideration	
	Clause 5.10 – Heritage Conservation	The site is listed as a heritage item. This is discussed further at **Section 6.7** and **Appendix P**.
	Clause 5.21 – Flood Planning	The site is not identified as being within a flood prone area.
Considerations under other legislation		
Biodiversity Conservation Act 2016	The *Biodiversity Conservation Act 2016* (BC Act) protects native vegetation, species of threatened flora and fauna, endangered populations and endangered ecological communities and their habitats in NSW. Section 7.9 requires a development application for State significant development to be accompanied by a Biodiversity Development Assessment Report and Section 7.14 requires the consent authority to take into consideration the likely impact of the proposed development on biodiversity values as assessed in the Biodiversity Development Assessment Report (BDAR). A BDAR was previously prepared for the Concept and Stage 1 Application (SSD-36778089), which confirmed that the project is unlikely to constitute a significant impact to Matters of National Significance. Eco Logical (**Appendix F**) confirm that the works proposed as part of this SSDA will have no additional impact to biodiversity than what was already assessed in the BDAR for SSD-36778089. Further discussion is provided at **Section 6.4**.	
Development Control Plans		
Ryde Development Control Plan 2014	It is noted that development control plans are not a matter for consideration in the assessment of SSDAs by virtue of Section 2.10 of the Planning Systems SEPP, which states that 'Development Control plans... do not apply to... State significant development'.	

4.7 Development Contributions

The relevant contributions plan is the *City of Ryde Fixed Rate Levy (Section 7.12) Development Contributions Plan 2020* (Fixed Rate Plan). The purpose of the Fixed Rate Plan is to enable Council to require a contribution towards the provision, extension or augmentation of public amenities and services that will or are likely to be required as a consequence of development within the LGA.

Under Section 2.5 of the Fixed Rate Plan, Council does not impose a Section 7.12 levy on development by not-for profit organisations for essential community services or development exempted from section 7.12 levies by way of a direction made by the Minister for Planning under section 7.17 of the EP&A Act. While development for the purposes of a public hospital is not explicitly exempt from the levy, an exemption is sought for this development since it is for the purposes of essential community services, supported by former Planning Circular D6, discussed below.

Circular D6 – Crown Development Application and Conditions of Consent

Exemptions from the payment of development contributions for Crown Development is supported by former Planning Circular D6, issued by the then Department of Urban Affairs and Planning. Circular D6 sets out the circumstances in which it is appropriate for a consent authority to seek the approval of the applicant or the Minister to impose conditions of consent. Circular D6 notes that where a consent authority intends to levy contributions on Crown Development, they must be justified, and consideration should be given to the Crown's role in providing a community service, the cost of which is accountable to all taxpayers in the State.

The currency of Circular D6 is confirmed in the Draft Development Contributions Practice Note – July 2005, which states "*the current limitation on imposition of levies on Crown Developments as outlined in Circulate D6...remain in force*." Health Infrastructure is a government agency which relies on government grants to provide new facilities for the local community.

The levying of a development contribution would divert a portion of these public funds, which have been specifically provided to fund a hospital redevelopment, to local services without any direct nexus to the impact of those services.

The inherent public character of the proposed development contrasts with a strictly commercial development where a full levy might be considered reasonable. The nature of the development means that the infrastructure which Council typically seeks to levy for will largely be provided by the hospital for use by the staff and public.

Public Domain Works

Notwithstanding the above, HI agree to undertake a series of public domain upgrades in the areas immediately surrounding the site as described in **Section 3.9**. This is on the basis that any council fees associated with these works are waived.

5.0 Community Engagement

This chapter describes community consultation undertaken to date, outlines initial community views and describes the proposed community engagement strategy to be undertaken following the lodgement of the EIS. The Applicant's approach to community engagement is informed by the Department's *Undertaking Engagement Guidelines for State Significant Development (2021). This includes adopting the following community participation objectives provided in the Guideline.* An Engagement Report is provided at **Appendix Q**.

5.1 Engagement Carried Out

5.1.1 Identified Stakeholders

A comprehensive list of community members and stakeholders to consult throughout during the preparation of the EIS process was developed through:

- The identification of neighbours who would be impacted by the Project unless mitigation measures were implemented,
- The identification of stakeholders who would have a particular interest in the Project.
- The identification of stakeholders who would have information of value to the Project, for example, Aboriginal groups with cultural knowledge relating to the Project site.
- Consultation with the DPE. This included the community members and stakeholders listed in the Project's SEARs that the Applicant was required to consult with.

As a result of the above process, the following stakeholders were identified for consultation:

- Hospital patients, staff and visitors.
- Local residents, community members and business owners.
- Aboriginal and Torres Strait Islander community and stakeholder groups.
- Department of Planning and Environment.
- State Design Review Panel.
- Treasury NSW.
- Infrastructure NSW.
- NSW Health Services.
- Northern Sydney Local Health District.
- NSW Government Architect's Office.
- Environment, Energy and Science Group.
- Rural Fire Services NSW.
- City of Ryde Council.
- Fire and Rescue
- Service Providers – Ausgrid, Sydney Water.
- Australian Department of Agriculture, Water and Environment.
- Transport for NSW.

5.1.2 Consultation Methods

A range of consultation methods were used throughout the EIS process to engage community members and stakeholders. This includes ongoing meetings and liaison with stakeholders via in person and electronic means as well as online surveys.

Consultation undertaken for this SSDA is additional to the engagement carried out for the Concept Proposal and Stage 1 SSDA (SSD-36778089). In particular, meetings were held with the following authorities for the Stage 2 SSDA:

- Government Architect NSW: meeting held on 5 October 2022, 8 February 2023 and 14 April 2023.

- City of Ryde Council: only meeting held on 20 October 2022, 14 November 2022 and 29 November 2022.

Preparation of SEARs

In preparing the Industry Specific SEARs for Health Service Facilities, DPE consulted with various regulatory authorities to inform the SEARs.

Preparation of EIS

Through the preparation of the EIS, key stakeholders were engaged with to identify key matters of consideration that would inform the built form design, focusing on both clinical and non-clinical design elements.

5.1.3 Aboriginal Community Consultation

Consultation was undertaken with Aboriginal groups during the preparation of the Aboriginal Cultural Heritage Assessment in accordance with the 'Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010' and the requirements of Clause 60 of the National Parks and Wildlife Regulation 2019.

The aim of the consultation process was to integrate cultural and archaeological knowledge and ensure registered Aboriginal stakeholders have information to make decisions on Aboriginal cultural heritage. The Aboriginal consultation process involved the following stages:

- Stage 1 – Notification & Registration of Interest.
- Stage 2 – Presentation of Project Information.
- Stage 3 – Gathering Information about Cultural Significance.
- Stage 4 – Review of Draft Cultural Heritage Assessment.

A summary of the Aboriginal consultation process and outcomes is provided in the Aboriginal Cultural Heritage Assessment (**Appendix R**).

5.1.4 Engagement to Inform the Social Impact Assessment

In order to inform the project's understanding of likely social impacts, develop mitigation approaches together with impacted people and guide the Social Impacts Assessment, HI with support from Ethos Urban conducted engagement with the stakeholders most affected by the proposal (such as residents immediately adjacent to the site), as well as with broader community, between 2022 to 2023. An online survey was undertaken for targeted vulnerable communities and the wider community. The survey was completed by 261 respondents. The findings of this engagement are provided within the Social Impact Assessment at **Appendix JJ**.

5.2 Stakeholder Views

The following table outlines the key issues/matters raised by community members and stakeholders during the preparation of the Scoping Report, SEARs and EIS.

Table 14 Summary of Stakeholder Views

Feedback Received	Comment
Connecting with Country	
The Beacon	A Connecting with Country Strategy has been prepared by Bangawarra and is reflected in the Design Report at **Appendix D**. Ryde Hospital has cultural significance to the Aboriginal community in the Sydney region. It is located on a ridge line that enables visual connections with Sydney Olympic Park, which is another site of historical and cultural significance. Historically, Elders would lit large fires on the ridge line to act as a beacon for all those assembled on Country and to show that an important ceremony was being enacted. This has been reflected in the proposed design through the provision of a central structure, known as the Beacon.

Co-designing with the Aboriginal and Torres Strait Islander Health Unit	Extensive consultation has been carried out with the Aboriginal and Torres Strait Islander Health Unit, which has influenced the proposed redevelopment. This includes the design of lighting, colours, building layout, retention of the Blue Gum High, and implementation of cultural art.
Landscaping Choices	The project team has met with a number of key agencies to discuss landscaping features and plant selection. The proposed landscaping strategy will include native plants that promote healing, ignite the senses and are local to the area.
Position of the Mortuary	Aboriginal and Torres Strait Islander Health Unit were consulted with regarding the design and position of the mortuary. Based on these discussions, the mortuary will be positioned adjacent to an outdoor courtyard (which can be used for smoking ceremonies and family gatherings). This courtyard will also have Aboriginal artwork incorporated into the design and landscaping.
Hospital Features and Inclusions	
Palliative Care Facilities	The project team has been working alongside the NSLHD and Palliative Care Network to create a sympathetic and effective space as part of the redevelopment. This collaboration has identified a need to provide reflective rooms, quiet and private spaces, and facilities for family members. This will assist patients and visitors when navigating this difficult time.
Consultation with Dementia Australia	Early in the design process, the project team sought recommendations from Dementia Australia and key NSLHD clinicians. A range of suggestions were presented to the project team, which have since been integrated into many aspects of this design. This includes ensuring that the size of the terrace allows for patient manoeuvring, incorporating wayfinding and consideration for the colour of floor tiles and toilet seats.
Activity Based Working Principles	Various key stakeholders were consulted to ensure the operation of Ryde Hospital will incorporate the best staff practices. Activity based working principles will be implemented in the final stages of the design.
Healthy Built Environments	A connection to the environment and outdoors promotes health and wellness amongst patients and the community. The proposed development will incorporate certain tools and features that help to promote a healthy workplace and staff wellbeing. One initiative will be the inclusion of a wellness walk throughout the Blue Gum High Forest, supported with QR codes to the guide visitors on their wellness journey.
Food Services	The proposed development will incorporate a hybrid food service design to enable flexibility and food on demand. Based on stakeholder feedback, the design will also provide access to food services for carers. This would assist with the large culturally and linguistically diverse community that use Ryde Hospital.
Clinical Features and Inclusions	
Emergency Department	The project team consulted with the Ministry of Health and Ambulance NSW regarding the design and functionality of the new emergency department. Based on this engagement, the location of the paediatric unit has been moved to ensure that it is more secure and shielded from any potential adult traumas that may occur in the emergency department. The design of the emergency department was also changed to incorporate a safer design for staff and patients. This includes ensuring the location of the ambulance bays supports efficient patient flow and staff wellbeing.
Inbound and Outbound Room Configuration	The original hospital design incorporated an inbound configuration for the majority of overnight rooms to promote views. Following consultation with various consumer groups, the design was amended to incorporate greater outbound rooms which allow a carer to stay overnight.
Medical Imaging	The project will integrate a larger reporting room to support the Ultrasound modalities and promote a workspace that enabled clinicians to work within a comfortable space, while also providing the opportunity for teaching, learning, and collaboration between

	clinicians. The redevelopment will future proof the facility by building a space for an MRI machine that can be purchased when budget allows.
Blue Gum High Forest	
Blue Gum High Forest	Ongoing consultation and collaboration will be carried out with key internal and external agencies, and community groups and members regarding the bush regeneration works.
Social Impacts	
Hospital and healthcare infrastructure	Most respondents strongly agreed that Ryde Hospital is an important part of the local community. The second most popular response also reflected positively on Ryde Hospital's place in the community. It was agreed that improvements to healthcare at the hospital is supportable.
Transport	Concerns were raised about increased traffic congestion, followed by construction disruption. Refer to **Section 6.10** for a discussion.
Improving the wider social locality	Most respondents were supportive of the hospital redevelopment and the potential for positive impacts to the community. Refer to **Section 6.21**.

5.3 Further Engagement to be Carried Out

5.3.1 Exhibition and Assessment

The Applicant is committed to ongoing community consultation following the submission of the EIS. This includes during the exhibition and assessment of the Project, and if approved, following a determination.

5.3.2 Post-Approval

The Applicant will implement the following post-approval stakeholder consultation strategies in addition to the Conditions of Consent requirements. This includes:

- Further engagement and information provided to Culturally and Linguistically Diverse communities such as the Ryde Intercultural Network, Ryde Council and throughout multicultural project champion' networks.
- Continued consultation with key community groups, including the Consumer Reference Group, Community Design Reference Partners and Arts & Culture Working Group.
- Host staff and community drop-in sessions at various stages throughout the project to keep consumers, staff and the broader community informed.
- Facilitate regular General Manager staff forums to advise the staff community of latest project activity and opportunity for staff to ask questions.
- Distribute regular project updates to the community and key stakeholders.
- Provide regular updates to the dedicated project website keeping the information up to date and relevant to the stage of the project.
- Monitor the dedicated project phone line and email address providing the residents and broader community with a direct channel to a project representative.

6.0 Assessment of Impacts

This section of the report assesses and responds to the environmental impacts of the proposed SSD Application. It addresses the matters for consideration set out in the SEARs (see **Appendix A**). The Mitigation Measures proposed to mitigate any environmental impacts are provided at **Appendix B** and complement the findings of this section.

6.1 Built Form and Urban Design

6.1.1 Bulk, Scale and Urban Design

The proposed built form and massing is a result of the extensive design analysis undertaken by STH and the consultant team, aimed at achieving an optimum urban design outcome for the existing hospital campus and its local context. Specifically, the site is highly constrained by a number of factors, including:

- **Biodiversity** – A large proportion of the site is covered by Blue Gum High Forest, which is a critically endangered ecological community.
- **Bushfire** – Bushfire danger associated with the quantum and density of Blue Gum High Forest requires the implementation of an APZ.
- **Heritage** – Denistone House and the Stables are located in the central portion of the site and have been assessed to have exceptional heritage significance.
- **Topography** – The current hospital campus is located over the relatively flat plateau, which is part of a continuous ridge, running east west across the precinct. The site drops significantly in its southern half (50m).

As such, only a limited portion of the site is suitable for redevelopment.

The proposed hospital building will be located in the central portion of the site. It will comprise an 8-storey building that is irregular in shape, with a 4-storey podium and 4-storey tower form. The building will have a maximum height of RL 136.5 (including plant) and a total GFA of 27,935m^2.

The building massing presents as three distinct, but connected, vertical forms, being two clinical blocks connected by a linking Beacon element. The massing has been designed to minimise the perceived bulk and scale from the surrounding residential developments. Importantly, the massing will incorporate large setbacks from the street frontages. The building will also follow the existing ridge line to maximise views from hospital inpatient bedrooms to Blue Gum High Forest and towards the Parramatta River. The siting of the building has been subject to engagement with NSW RFS and EESG from bushfire and biodiversity perspectives.

Where the building adjoins the existing hospital development it provides appropriate connectivity, open space and form that allows for efficient functionality and use of space. In particular, the proposal mitigates potential impacts to the heritage buildings on site by modulating the built form to allow for a lower scale podium to respond to Denistone House with the upper levels and setting back to reduce bulk and scale. The building design will incorporate a pedestrian link to the Graythwaite Rehabilitation Centre to enhance accessibility and connectivity within the hospital campus. The building will also incorporate green roofs to maximise opportunities for landscaping and to reduce the overall appearance of the built form.

The multi-deck car park has been sited to minimise vehicular movements through the site to access the car park. As such, the car park building is located in the east of the site, with access from Denistone Road. The car park footprint has been driven by the site constraints described above, the proposed hospital building footprint, and the functional requirements for an above ground car park. The multi-deck car park has also been designed to blend seamlessly with the height and materiality of the hospital building podium and is capable of being converted to clinical uses in future (as required).

The proposed development is generally consistent with the maximum building envelopes as per the Concept Approval. In particular, the tower form presents a significantly lesser bulk compared to the building envelope for the tower. As such, the built form impacts associated with the proposal are less than those assessed under the Concept Proposal and are therefore considered acceptable given the constraints that exist on the site.

6.1.2 Building Height

The hospital building will have a maximum building height of RL 136.5 and the multi-deck car park will have a maximum height of RL 110.5. Although there are no specific controls for the site relating to building height, the proposal has been designed to minimise the perceived bulk and scale from the surrounding residential developments. This will be achieved through the use of large setbacks, modulation, articulation and landscaping. In particular, the hospital building, which is the tallest component of the development, is located centrally in the large site. This minimises its impact when viewed from the street and concentrates massing centrally within the site. The overall building height is consistent with that approved under the Concept Approval.

6.1.3 Setbacks

The proposed development is located in the central portion of the existing hospital campus and includes appropriate setbacks to the surrounding local context. There are no prescribed setback controls for the site, therefore, the setbacks have been provided with consideration of the existing constraints and opportunities including:

- The steep topography to the southern portion of the site.
- The location of the two heritage listed buildings central to the site – Denistone House and the Stables.
- The desire to create better public amenity with the introduction of gardens and public spaces to better inform the building to its residential neighbourhood and the creation of a better streetscape.
- Potential for activation of the public domain.

The proposed built form will respond to the natural ridgeline of the site and will provide generous setbacks from the surrounding local context. Preliminary massing studies and drawings (shown in **Appendix D**) indicate that the proposal will become a community focal point, without overwhelming the residential development in the vicinity of the site.

The multi-deck car park incorporates a 2m landscaped setback from Denistone Road to provide a buffer to the street, which includes residential dwellings across the road. This landscaped buffer will soften the visual appearance of the car park.

6.1.4 Signage

The proposed signage will be designed in response to the architectural and visual character of the hospital and surrounding area. The signage will have high quality design and finish that integrates with the building façade. It is compatible with desired amenity and visual character of the area and in keeping with the signage of surrounding development. The signage will enhance legibility promote building identification across Ryde Hospital. The signage will not include any safety devices or logos. Illumination will not result in any unacceptable impact to patient rooms or surrounding residential areas. Further detail is provided in **Section 3.6** and at **Appendix D**.

6.2 Consistency with Concept Approval

A Concept Plan for Ryde Hospital (SSD-36778089) was approved on 30 June 2023. It established a maximum building envelope for the future development, as follows:

- A hospital building envelope located in the centre of the site, with a podium height of RL 113.7 and a tower height of RL 136.5.
- A multi-deck car park envelope located in the east of the site, with a maximum height of RL 116.2 that can accommodate approximately 350 vehicles.

This proposal is generally consistent with the maximum building envelopes established in the Concept Plan. Of particular note, the tower building is significantly smaller in plan than the approved building envelope which represents a reduction in bulk compared with the Concept Plan.

Notwithstanding, further design development (which has in part occurred due to the functional requirements for a contemporary hospital and in part due to additional stakeholder engagement) has resulted in some minor building elements protruding from the concept envelope. These minor protrusions are shown at **Figure 28** and explained at **Table 15**.

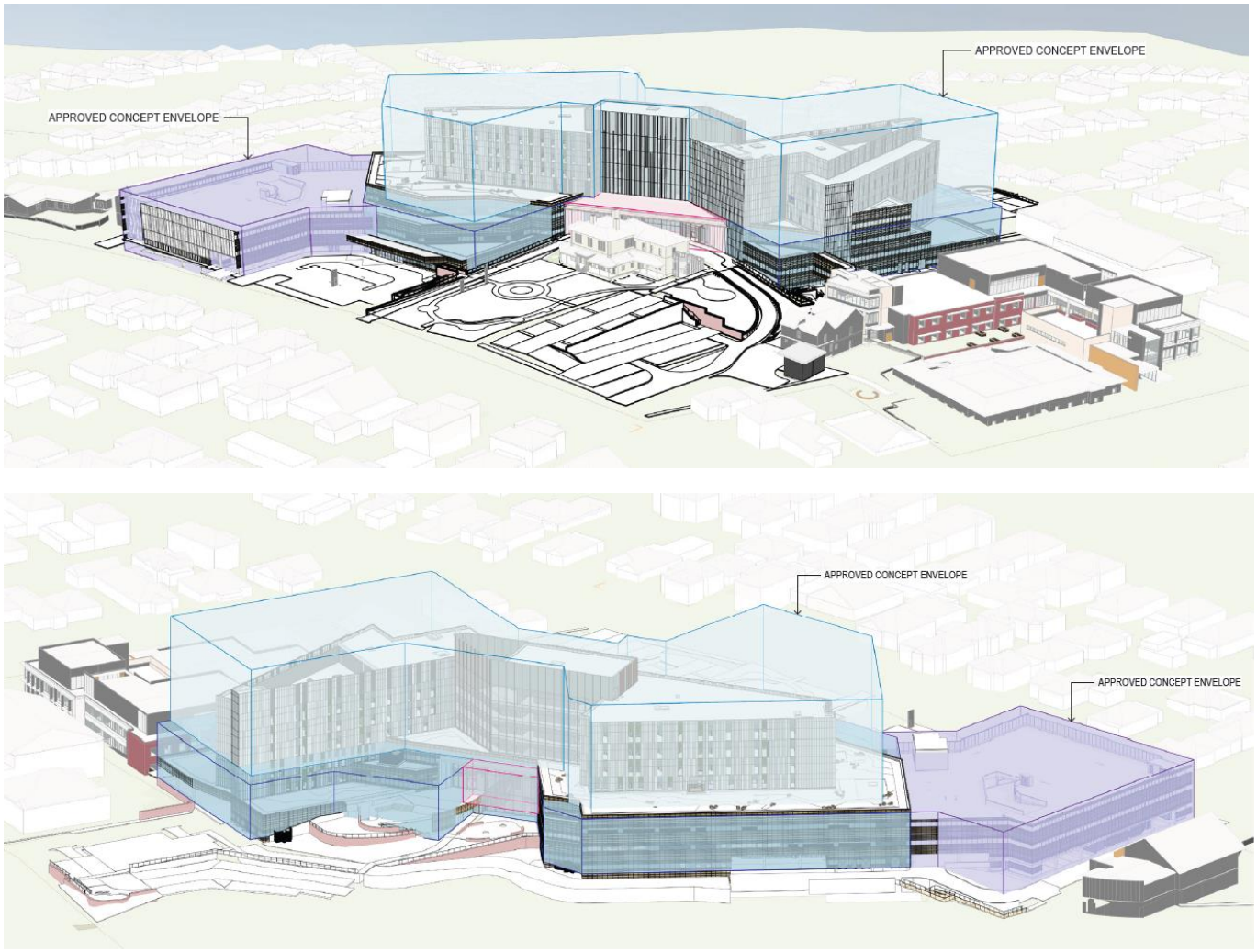


Figure 28 Comparison of the proposed development and approved maximum building envelopes

Source: STH

Table 15 Consistency with the Concept Proposal

Building Element	Explanation
Podium Height and Depth – Including the Basement Car Park and Loading Dock	The proposed podium will protrude slightly from the concept envelope. The reason for this protrusion is that the concept envelope was set on top of the structural slab level and did not factor in any requirements for parapets, facades, roof built up or insulation. Lowering the structural slab level (so that the proposal sits within the concept envelope) would have impact to clinical services and operating theatres, be inconsistent with waterproofing requirements and increase the potential for mould and thermal bridging to occur to insulation. The loading dock set down of 1200mm was also not factored into the concept envelope. In addition, the basement car park proposed in the concept envelope was preliminary in nature and had yet to undergo design refinement. The extent of the basement car park proposed as part of this SSDA has been modified so that it is more cost-effective, easier to construct, and can provide fewer points of failure from a groundwater / waterproofing perspective. The basement car park shown in the Concept Proposal also has several CPTED issues which have been resolved through aligning the basement with the slab edge above.
Link Bridge	The location of the proposed link bridge to the Graythwaite Building has been adjusted so that it aligns with both building corridors. The reason for this adjustment is that the concept envelope was set at the top, edge and underside of the structural slab level and did not factor in any requirements for parapets, facades, roof built up or insulation.

Southern Building Frontage and Healing Gardens	Further design refinement to the southern portion of the building has resulted in a small area protruding from the concept envelope. This was required to enable accessible entry into the building from the healing garden in accordance with AS1428.1, without triggering a complete building redesign or resulting in a far greater protrusion of the building envelope. In addition, the relocation of the multi-deck car park from Ryedale Road to Denistone Road (which occurred during the Response to Submissions phase for the Concept Proposal) resulted in the relocation of the fire pump room. The only viable location for the fire pump room is below the healing garden, meaning that the height of the healing garden has been raised slightly above the concept envelope.
Emergency Department	The northern façade of the emergency department has been moved and protrudes into the concept envelope for the multi-deck car park. This is due to the introduction of a fire rating between the multi-deck car park and hospital building, and also to resolve construction issues such as waterproofing requirements.
Multi-Deck Car Park Height and Façade	Several function requirements were not considered in preparing the concept envelope for the multi-deck car park. This includes lift overruns, façade crash barriers and compliance with Australian Standards and HI Car Parking Guidelines. The proposed multi-deck car park has also been designed to utilise an 8.4m grid to allow for future clinical expansion, but its location in the context of the hospital site means that this is difficult to achieve within the without protruding slightly from the concept envelope in height and along the Denistone Road frontage. All modifications to the multi-deck car park have been prepared under the guidance of the traffic engineer.
North Entry Canopy Depth	The depth of the north entry canopy has been amended to align with the termination of the podium façade. This will optimise waterproofing and mitigate any issues associated with the façade. The height of the canopy will not change when compared to the concept envelope and is aligned with the Denistone House eaves, consistent with heritage advice.

Notwithstanding the above, the conditions of the Concept Approval require the building to be generally not inconsistent with the approved building envelopes:

> *C1. Future development application(s) must demonstrate that the proposed buildings above ground level are generally not inconsistent with the maximum building envelopes in the architectural plans listed in Schedule 2 condition A2, as modified by conditions B1 and B2. Works below ground level are not subject to building envelopes.*

Therefore, the proposed development is considered to be generally not inconsistent with the approved envelopes, since it for the most part is significantly smaller than the approved envelopes, despite some minor protrusions beyond the envelope in areas due to further design development. On balance, the proposal results in less visual bulk than the maximum building envelopes approved. Consistency with the Concept Approval is further discussed in **Appendix C**.

6.3 Environmental Amenity

6.3.1 Solar Access and Overshadowing

The project is supported by shadow diagrams prepared by STH (**Appendix F**). The diagrams illustrate overshadowing associated with the proposed buildings, shown at one-hour interval between 9am and 3pm on 21 June (winter solstice) and 21 December (summer solstice).

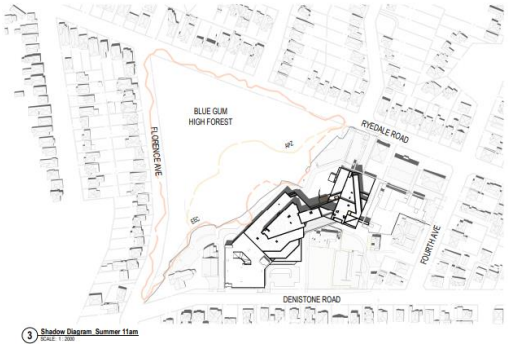
The impact of overshadowing on the surrounding areas was previously assessed and approved as part of the Concept Proposal (SSD-36778089). The bulk and scale of the proposed development is less than that of the approved Concept Envelope and in effect, the overshadowing impacts have been reduced.

In particular, the shadow diagrams show that the proposed development will result in some overshadowing to the Blue Gum High Forest and to existing residential houses opposite Ryedale Street (to the west) during the winter solstice. The largest impact on the Blue Gum High Forest will occur in the early morning period (9am), with some shadows on the northern most portion of the forest extending into the afternoon periods. Overshadowing of the residential houses also occurs during the 9am period, however the shadow from the proposed development moves later in the day. From

10am until 3pm, the residential dwellings across Ryedale Road are not impacted by shadows cast by the proposed building and appear to received constant sun throughout this time period (approximately five hours). The Ryde DCP controls for residential dwellings seek to preserve at least 3 hours of sunlight to north facing windows to habitable rooms, and 2 hours to other windows to habitable rooms and private open space. The residential dwellings across Ryedale Street will exceed these requirements. Therefore, these residents will receive adequate levels of solar access.

Overshadowing impacts experienced during the summer solstice will be minor and will be generally contained within the hospital campus. The health service facilities located directly adjacent to the hospital campus will experience some overshadowing, however, there are a variety of spaces available that receive sunlight throughout the day.

Overall, the proposed building is setback from the site boundaries to ensure that the overshadowing impact to nearby development is minimal. The design and orientation of the built form will ensure that open space landscaped areas will enjoy sunlight throughout the day, ensuring that the proposed development will provide a high level of amenity for patients, staff and visitors. **Figure 28** and **Figure 29** illustrate the additional overshadowing as a result of the proposed development.



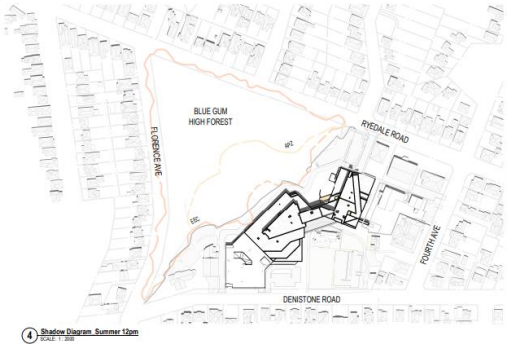


Figure 29 Overshadowing Impacts during the Summer Solstice (21 January)

Source: STH

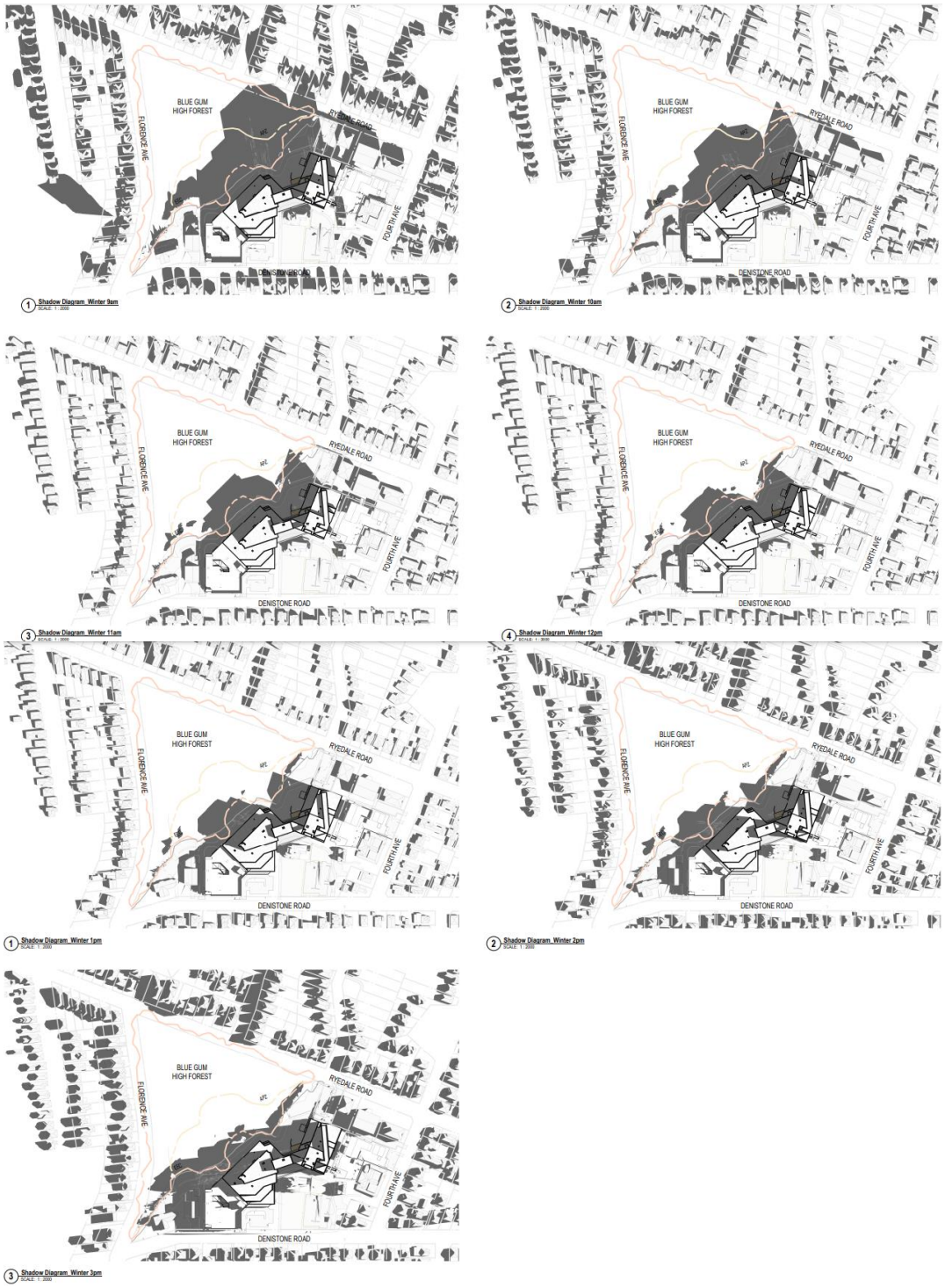


Figure 30 Overshadowing Impacts during the Winter Solstice (21 June)

Source: STH

6.3.2 Visual Privacy

The proposed development is located wholly within the existing hospital campus and has been designed to provide appropriate setbacks to the boundary and surrounding development context. The hospital building will sufficient setback from the site boundaries to maintain privacy for residents. To further mitigate privacy concerns, the orientation of windows and provision of architectural metal louvres will mitigate any overlooking into adjacent rooms or surrounding buildings. The proposal also incorporates vegetation along the site boundary will ensure visual privacy to and from the site.

6.3.3 View Impacts

Consideration has been given to the impact of the proposal on existing views from the surrounding area. Four viewpoints were selected for the view impact assessment that are publicly accessible locations from Denistone Road and Ryedale Road. A Visual Impact Assessment (VIA) has been prepared by Ethos Urban and is included at **Appendix T**.

The VIA is supported by photomontages of the proposal prepared by CMS Surveyors and Virtual Ideas. The methodology adopted by the VIA is derived from the international standard 'Guidelines for Landscape and Visual Impact Assessment' version 3 (GLVIA3) which has been adjusted to better suit the urban and NSW contexts and to align with the NSW Land and Environment Court planning principle for 'impact on public domain views' established in Rose Bay Marina Pty Limited v Woollahra Municipal Council and Anr [2013] NSWLEC 1046.

The VIA confirms the following:

- Due to the complexity of the surrounding landscape, in particular the relationship between topography, the public domain, buildings and vegetation, the area of greatest visual exposure to the proposal will the adjoining streets of Denistone Road and Ryedale Road, and to a lesser extent Fourth Avenue.
- It is unlikely that the proposal will be highly visible from the adjoining Florence Avenue due to the screening effect of the well-established, dense Blue Gum High Forest. As it occupies the top and western flank of a ridge, the proposal may be visible in the longer range to the south. However, distance and the complexity of the landscape will significantly reduce visibility.
- While a hospital already exists on the site, the proposal is of a different scale than existing development, in particular in height.
- The proposal is considered to result in a number of positive visual impacts, in particular opening up of views to the heritage listed Denistone House from the Denistone Road public domain with the concurrent inclusion of landscaped open space in the foreground. The proposal also provides opportunity to achieve other positive visual outcomes, including improving the site's visual quality and by association the surrounding streetscape by replacing the aged collection of disparate buildings with an integrated, contemporary composition.
- While it will change the character of the surrounding area due to greater scale of development, the proposal is consistent with what can reasonably be expected in the SP2 Infrastructure zone. It also incorporates a number of fundamental design measures that respond to the planning framework. This includes siting buildings to the less sensitive southern part of the site and the incorporation of substantial setbacks to surrounding streets.
- The proposal has incorporated a number of primary measures appropriate to the surroundings of the site to mitigate visual impact. Consideration has been given in the form of detailing the design in modulation and articulation to improve the externally visible elements of the building, such as elevations and landscaping.
- The proposal is generally consistent with the Concept Proposal maximum building envelopes. In particular, the tower form is of a size that is much smaller than the allowance in the tower envelope, resulting in lesser visual impact than approved maximum envelope.

On the balance of considerations relevant to visual impact and subject to the recommended mitigation measures at **Appendix B**, the proposal is assessed as having an acceptable visual impact and can be supported on visual impact grounds.

6.3.4 Wind Impacts

An Environmental Wind Assessment Report has been prepared by Arup and is included at **Appendix U**. The Report has assessed the local wind conditions at outdoor areas within and around the site to determine whether the proposal would have an impact on existing conditions or pedestrian comfort.

Although the hospital would be much greater in size when compared to the surrounding development, the topography at the site would mean that the local wind conditions would not significantly change when compared to the existing conditions. Specifically, as a result of the proposal, wind conditions in some areas would become calmer and other would become windier, depending on the direction of the wind.

Overall, measured wind conditions in and around the site are considered appropriate for their intended uses of the site and for pedestrian comfort and no exceedances of the wind safety criteria are expected.

6.3.5 Lighting Impacts

Due to the 24-hour nature of the hospital use, lighting will be required throughout the night. It is anticipated that the greatest lighting impacts will come from the building entrances and areas of higher glazing. Notwithstanding this, careful consideration has been given to the type of luminaries, location and orientation of lighting in order to limit any light spillage onto surrounding areas. In areas where luminaries are required along the property boundary, the lights will be orientated away from the property boundary. All lighting will be designed to comply with the requirements of AS4282: 1997 Control of the Obtrusive Effects of Outdoor Lighting.

In addition, the multideck car park design will incorporate an articulated facade treatment with crash barriers, and the Denistone Road frontage will include low-level landscaping. These design features will fully screen and diffuse light spill from vehicles using the multideck car park at night. Although, it is noted that most activity within the multideck car park will occur during the day at 3pm when staff changeover occurs, which will further minimise any light spill impacts. Overall, the proposed lighting and illumination are not expected to have an impact on surrounding receivers. An External Lighting Strategy is provided at **Appendix KK** and further discussion is provided within the Design Report at **Appendix D**.

6.3.6 Crime Prevention Through Environmental Design

The development implements the principles of Crime Prevention through Environmental Design (CPTED), as identified in the Department's guidelines titled Crime Prevention and the Assessment of Development Applications 2001 are discussed below and in the CPTED Report at **Appendix V**. Mitigation Measures are included at **Appendix B**.

Principle 1 – Natural Surveillance

Good surveillance means that people can see what others are doing. People feel safe in public spaces when they can easily see and interact with others. Would-be offenders are often deferred from committing crimes in areas with high level of surveillance. The development provides adequate natural surveillance in accordance with this principle.

The development has been designed to incorporate natural surveillance through the incorporation of design features that maximise visibility of people using public spaces. This will promote the reality and/or perception that open spaces are under casual surveillance during both the day and night. The well-lit nature of the hospital environment will also enhance passive and surveillance and provide continuous activation throughout the site. The following principles and strategies will be adopted to enhance natural surveillance:

- Maintain sightlines to and from the proposed development and the surrounds by ensuring signage and equipment do not create a significant visual obstruction.
- Ensure opportunities for concealment are minimised by seeking to reduce any alcoves and recesses throughout building exteriors.
- Ensure circulation spaces (internal publicly accessible areas/ emergency vehicle access and car park ingress/egress) are unobstructed by structures, to remove opportunities for concealment and ensure that pedestrians and vehicles can move freely with clear sightlines of their surrounds.
- The glazed facades of the building should be free of clutter and signage to allow sightlines between the development and the public domain, particularly to the Healing Garden.
- Where possible all new landscaping should ensure that sightlines are achieved and are not prohibited by tree canopies or large shrubbery forms.

Principle 2 – Access Control

Access controls use physical and symbolic barriers to attract, channel or restrict the movement of pedestrians. As noted in Crime Prevention and the Assessment of Development Applications, effective access controls make it clear where people are permitted to go or not go, and makes it difficult for potential offenders to reach and victim people and damage property.

The development has been designed to incorporate natural barriers such as roadways and landscape, electronic and physical barriers through the use of the following:

- Provide secure electronic access (card / key controlled entries / lifts etc.) to all private entrances of the building and any restricted area where members of the public are not permitted to provide a delineation between public and private spaces. This suggestion should extend to any area internally where there is patient or employee sensitivity, including private rooms or surgeries.

- The installation of an appropriate bollard/barrier system may be required in sensitive locations such as near the public domain areas or to the childcare centre to prevent vehicles driving into the site. A security consultant with a Class 2A licence under the *Security Industry Act 1997* is recommended to be engaged to provide specific advice on the type, placement and installation of this bollard/barrier system to ensure vehicles moving at high velocity cannot enter the site in locations not intended for vehicles.

Principle 3 – Territorial Reinforcement

Territorial reinforcement refers to the clear identification of public spaces, and the creation of a sense of community ownership over such spaces. As noted in the Crime Prevention and the Assessment of Development Applications, people feel comfortable in, and are more likely to visit places which feel owned and cared for. Well used places also reduce opportunities for crime and increase risk to criminals.

Through the definition of space, territorial reinforcement provides social regulation. The proposed development has been designed with the integration of the following principles:

- Maintain that future building entrances are highly visible from the streetscape frontages and avoid any entrapment areas associated with entries.
- Display CCTV security notice signs to convey that the site is under constant surveillance (if applicable).
- Clearly delineate between publicly and privately accessible areas via passive boundaries (such as landscaping) that do not appear to over fortify an environment. High fencing is discouraged in these areas.
- Provide signage throughout the precinct to direct pedestrian movements and deter loitering where it is not designated.

Principle 4 – Space Management

Space management refers to providing attractive, well maintained and well used spaces. As noted in Crime Prevention and the Assessment of Development Applications, space management strategies include site cleanliness, rapid repair of vandalism and graffiti and the removal of damaged physical elements.

To achieve effective place management and maintenance, the proposed development will incorporate the following:

- Ensure the effective management of the proposed development is articulated through a Plan of Management (or similar). This is particularly important for high use areas such as the future arrival public domain space at Denistone House and the Healing Garden at the rear.
- Ensure future buildings and wayfinding signage is appropriate to deter access to private spaces and direct pedestrian movements through the precinct.
- A Security Management Plan be prepared by the NSLHD, which should denote appropriate security procedures across the site such as building patrol or emergency protocols.

6.4 Biodiversity

Eco Logical have prepared a BDAR Cover Statement (**Appendix F**) which confirms that the proposed development will have no additional biodiversity impacts beyond those assessed in the Concept Proposal and Stage 1 SSD (SSD-36778089). For completeness, a summary of the biodiversity impacts associated with the proposal (as assessed within the BDAR for SSD-3677808) is provided as follows.

One plant community type (PCT) of native vegetation is located on site, being PCT 1237 *Sydney Blue Gum – Blackbutt – Smooth-barked Apple moist shrubby open forest on shake ridges of the Hornsby Plateau, Sydney basin Bioregion* (Blue Gum High Forest).

The Blue Gum High Forest is also listed as a critically endangered ecological community (CEEC) under both the BC Act and the EPBC Act. Notwithstanding this, the proposed works will not result in the removal or fragmentation of the CEEC. The location of all built form and construction activities will be located outside of the CEEC. The composition, structure, and function of the CEEC will not be adversely affected by the project.

The proposal seeks to balance protection of biodiversity values with bushfire requirements. An asset protection zone is proposed to be managed within a portion of the CEEC to utilise a performance solution that is sympathetic to the Blue Gum High Forest and seeks to manage low-lying exotic species and maintain the cleared areas. No tree canopy will be removed. Accordingly, a biodiversity offset is not required for the direct impacts to the PCT 1237 Blue Gum High Forest.

The management of the asset protection zone and regeneration of the Blue Gum High Forest will be implemented through a Vegetation Management Plan as provided at **Appendix FF**.

In addition, the BDAR has assumed the presence of one fauna species, being the Powerful Owl. While it is highly unlikely that breeding occurs on site, the proposed APZ is assumed to affect approximately 0.85 hectares of the species breeding habitat (comprising weeds and planted vegetation). However, no known breeding trees would be removed and therefore, no species credits are required to offset the impacts to the Powerful Owl.

The proposal is not assumed to result in any impact to the Grey-headed Flying Fox (listed under the EPBC Act) given that no camps were present on site or within the vicinity of the site. The proposed works will also not result in the removal of any potential foraging or breeding habitats for this species.

We note that Health Infrastructure consulted with DPE EESG in relation to biodiversity impacts and the proposed bushfire management strategy whilst undertaking design for the SSDA.

Overall, Eco Logical confirm that the proposal has successfully avoided and minimised any impacts as far as practical, given the purpose of the development and its position in relation to a potential fire hazard. No ecosystem credits are required to offset the unavoidable residual impacts to PCT 1237 Blue Gum High Forest or for any other species that may be assumed present on the site. A number of mitigation measures have been prepared by Ecological and are included at **Appendix B**.

Figure 31 Impacts to Native vegetation and Extent of Managed Bushfire Asset protection Zone

Source: Eco Logical

6.5 Tree Removal

An Arboricultural Impact Assessment has been prepared by ArborViews and is provided at **Appendix G**. The report provides an assessment of all trees expected to be impacted by the project.

The assessment identified the presence of 87 trees within the development area. Existing trees on the site are proposed to be retained where possible. 45 trees will be removed as part of the Stage 1 works (subject to Modification 1 under assessment). An additional 29 trees are proposed to be removed as part of the Stage 2 works in order to accommodate the hospital building footprint. Of these 29 trees:

- 9 have a high retention value.
- 16 have a moderate retention value.
- 4 have a low and very low retention value.

In addition, the project has a significant landscaping strategy that will include the creation of additional new landscaped areas with up to 150 new trees proposed to be planted. This will ensure that the design of the development will appropriately offset the required tree removal. As well, significant tree canopy throughout the hospital campus (including all Blue Gum Tree High Forest) will be retained as part of the proposal. The total tree canopy on the hospital campus will therefore equate to approximately 53.4%.

ArborViews has provided a number of mitigation measures to ensure that tree removal is appropriately carried out and will not result in any unacceptable impacts. These measures are adopted at **Appendix B**.

6.6 Bushfire

Eco Logical have prepared a Bushfire Protection Assessment which is included at **Appendix W**. The purpose of the assessment is to determine the impact of bushfire on the proposed hospital development.

The site is located in land mapped as being bushfire prone, as described at **Section 2.2.4**. The proposed development is considered a Special Fire Protection Purpose (SFPP) development under Section 100B of the *Rural Fires Act 1997*. Eco Logical have assessed the proposed development against the Specific Objectives, Performance Criteria and Acceptable Solutions prescribed for SFPP development within the *Planning for Bushfire Protection 2019* (PBP).

As a result of the proposal, Eco Logical found that:

- There is a very low likelihood of any bushfire, particularly a moderate to higher intensity bushfire, occurring on site due to the isolated 3.4 ha remnant bushland having no known bushfire history and being located within an expansive urban area.
- There is a very low likelihood of an ignition on the site developing into a fully developed bushfire, given the high visibility around all interfaces, nature of the fuel (mesic vegetation) and availability of suppression opportunities (brigades and local residents).
- There is a very low likelihood of the Bushfire Attack Levels (using the Acceptable Solution principles) occurring in remnant bushland as there is no bushfire encroachment from elsewhere and a very small 'bushfire catchment' of 3.4 ha.

Notwithstanding, the hospital occupants represent a high-risk cohort and therefore, the proposal will require the inclusion of an APZ that complies with the PBP Performance Criteria '*Radiant heat levels of greater than 10kW/m² (calculated at 1200K) will not be experienced on any part of the building*'. As noted in **Section 6.5**, Blue Gum High Forest is a CEEC and is present in the southern portion of the site and impedes the implementation of an APZ. Therefore, a performance-based solution has been developed in consultation with the biodiversity consultants to retain the CEEC while also providing an APZ that offset the risk of bushfire. The APZ will be managed in accordance with the Vegetation Management Plan provided at **Appendix FF**, which has been coordinated with the requirements of the Bushfire Protection Assessment.

The radiant heat exposure of the new hospital building will be on average approximately 50% less than the Performance Criteria. In addition, the low likelihood of the worst-case bushfire attack being experienced at the site, combined with the bushfire protection strategies employed in the design including building construction to BAL-29, means that the proposed development goes beyond the minimum Acceptable Solution and complies with the PBP.

Therefore, the proposal is considered acceptable subject to the relevant mitigation measures outlined in **Appendix B**.

6.7 Heritage

A Heritage Impact Statement (HIS) has been prepared by Urbis and is included at **Appendix P**. The HIS has been prepared to assess the potential heritage impact of the proposed development on heritage items located on site and within the vicinity of the site. Notably, the site is identified as a local heritage item, being Item no. 47 "Denistone House" and "Trigg House" (Ryde Hospital). The "Stables" building on site is also of heritage significance and there are a number of local heritage items within the vicinity of the site, including Item no. 125 "Open Space" at Denistone Park (100m south of the site).

The HIS confirms the following:

- The proposal will have a positive impact on the heritage significance of the site. Most notably, this will be achieved through the retention and conservation of Denistone House and the former Stables, which are assessed to be of exceptional heritage significance. Later additions to Denistone House (assessed as intrusive) will also be demolished to allow for the original form and façades of the building to be restored.
- The proposal will establish Denistone House as a centrepiece within the new public realm, that is separate and independent to the proposed hospital building.
- Demolition of intrusively sited buildings (including Trigg House) will reinstate important historical views between Denistone House to Denistone Road and The Stables.
- The proposed site landscaping has been informed by historical documentation and will reinterpret the former circular carriage loop as an ornamental drive. Landscaping features to the south of the proposed hospital building will allow for a connection to the remnant Blue Gum High Forest.
- Works proposed internal to Denistone House will facilitate its ongoing use for administrative / educational purposes and are generally minor. Largely, the original significant interior layout and significant original features (such as ceilings, door and window joinery, decorative plaster arches, fireplaces and the original timber stair) will be conserved and retained. New works are mainly concentrated within the rear wing, where previous modifications have resulted in a loss of the original layout. This will ensure that any new works will not result in further impact to Denistone House. Importantly, the proposed works also include the removal of some intrusive partitions on the ground floor and will restore the original volumes to principal rooms.
- The proposal includes the provision of fire egress stairs, which will be attached to the rear northern wing of Denistone House. The stairs will be modestly scaled, noticeably contemporary and visually recessive to Denistone House.
- The proposed demolition of the Stables' rear wing and the façade infill is supported, given that it will reinstate the original form and façade, and will its relationship to Denistone House.
- The disparity of scale between the proposed hospital building and Denistone House is acknowledged. However, this will be successfully mitigated through the building design (including the proposed building form, podium height, modulation, setbacks and material palette) which reduces the bulk and scale of the proposal and allows for wide views to Denistone House.
- Specifically, the podium is sympathetic and responds to Denistone House in terms of its scale, height and modulated built form. Although the podium extends to Denistone Road at the southernmost extent for the multi-deck carpark, the form and massing is stepped, with a substantial setback to the Emergency Department entry, and a further setback to the main entry behind Denistone House. Where the podium is adjacent to Denistone House, the upper section incorporates a splayed form, which will reduce the overall massing in immediate proximity to the heritage item and further enhance the prominence of the entry behind Denistone House. The horizontal scale and massing of the podium is further articulated by a glazed façade and awning which extends over the roadway behind Denistone House.
- In line with the conditions of consent for SSD-36778089, the proposal will retain the significant sandstone street front fencing (noting that some modifications are proposed to enable site access).
- Trigg House has been assessed to be of little heritage significance and is considered to have been compromised by the extent of alterations and additions. The building is also unsympathetically located as it blocks views and connections between Denistone House and the Stables. In this regard, Urbis consider that the removal of Trigg House is justified.
- While their contribution to the site is acknowledged, the early hospital buildings that existing on the site are no longer fit for purpose. The site is highly constrained in terms of a development zone and clinical needs, and the retention of these buildings is not feasible. Having regard for assessed heritage significance, the fact that the buildings reflect generic examples of the period, the extent of alterations to the extant buildings, the redundancy of

the existing built stock from a clinical perspective and in the context of necessary hospital expansion and redevelopment, the removal of all early hospital buildings (inter-war and post-war) is supported.

- An Archival Recording (AR) of the site has been undertaken and includes photographic recording of the site, all hospital buildings (externally), the general setting and internal photographs of any buildings identified to be of moderate heritage significance. The AR provides a record of the site and assists to mitigate the proposed demolition.

While some heritage impacts are acknowledged, the proposed development demonstrates some significant heritage benefits which would not otherwise be achieved except in the context of a major redevelopment. Notably, this includes the demolition of unsympathetic and substantial additions to heritage items and removal of poorly sited development to re-establish significant historical settings and views, as well as the conservation of significant heritage elements, being Denistone House and the Stables. Mitigation measures are described at **Appendix B**.

An updated Conservation Management Plan has been prepared by Urbis and is provided at **Appendix DD**. The proposed development is consistent with the updated Conservation Management Plan. Heritage conservation works are proposed to Denistone House and The Stables as described in the Schedules of Conservation Works provided at **Appendix EE**.

Heritage protection methodologies will be developed in the CEMP and implemented prior to any intrusive works being undertaken in the vicinity of heritage items, to ensure the existing heritage significant buildings on the site will be protected during construction.

Urbis have provided a framework for heritage interpretation at Appendix A to the Heritage Impact Statement at **Appendix P**. The heritage interpretation strategy will be further developed and implemented prior to the operation of the hospital. The interpretation framework recommends the themes of Connecting with Country, Denistone House and Estate, and Caring for Community are explored in the strategy. The themes will be explored through a range of opportunities, potentially including landscaping detail, interpretation panels/plaques/signage, website, QR Codes, archaeology, conservation, children's spaces, and public art. Refer to Appendix A of the Heritage Impact Statement (**Appendix P**) for further detail.

6.8 Aboriginal Cultural Heritage

An Aboriginal Heritage Cultural Heritage Assessment has been prepared by Urbis and included at **Appendix R**. The assessment has been prepared in accordance with the *Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW* (OEH [now DPE] 2011), the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (the Code of Practice) (DECCW [now DPE] 2010) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (the Consultation Guidelines) (DECCW [now DPE] 2010).

A search of the Aboriginal Heritage Information Management System (AHIMS) was undertaken on 22 June 2021. The AHIMS search identified no Aboriginal objects or places are registered within the curtilage of the subject area, nor are any Aboriginal objects or places located within 1km of the site. A total of 72 Aboriginal objects were registered in the broader search area.

A site inspection was undertaken by Urbis and members of Registered Aboriginal Parties on 23 February 2022. The inspection determined that the northern portion of the site is highly disturbed. The southern portion of the site was unable to be thoroughly inspected given the presence of dense vegetation, however, was deemed to have low levels of ground disturbance based on a review of previous archaeological assessments. No registered Aboriginal sites, unrecorded Aboriginal sites or areas of archaeological potential were identified.

Overall, Urbis determined that the northern portion of the site is determined to have nil to low Aboriginal heritage significance, while the southern portion of the site is determined to have moderate Aboriginal cultural heritage significance for its aesthetic and scientific value associated with the Blue Gum High Forest and potential modified trees. There is not expected to be any harm to known or unknown Aboriginal objects on site as a result of the proposal.

Based on the above conclusions, Urbis recommends a number of mitigation measures which are included at **Appendix B**.

6.9 Archaeological Heritage

A Historical Archaeological Assessment (**Appendix X**) was undertaken by Urbis to determine the archaeological potential of the site, to assess the significance of any identified or potential historical archaeological resources and to investigate the potential impact of the proposed works on those archaeological resources.

The site possesses a moderate archaeological potential in the location of the original Denistone House and a high archaeological potential in the location of existing hospital buildings, including the Ryde District Soldiers' Memorial Hospital, Denistone House, the Stables and Camelia Cottage. The structural and sub-surface remains associated with the original Denistone House are of local historical heritage significance.

Based on historical records and visual inspections undertaken on 7 February 2022 and 18 April 2023, Urbis have determined that there is a moderate to high potential for historical relics to be located within the vicinity of Denistone House (refer to **Figure 32**). These relics would comprise:

- Structural remains and deeper subsurface features of the original Denistone House, dating between 1830-1872, may survive within the former lawn to the east of Denistone House.
- Structural remains of a brick water storage cistern and toilets, dating between 1874-1875, are known to exist and are likely be retained within the basement of the 1970s Denistone House extension.

The proposed works (including demolition, ground disturbance, construction and landscaping) will be carried out in the areas described above and as a result would likely result in impact to the historical relics. Notwithstanding this, Urbis note that this impact can be resolved through the successful implementation of the mitigation measures described at **Appendix B**.

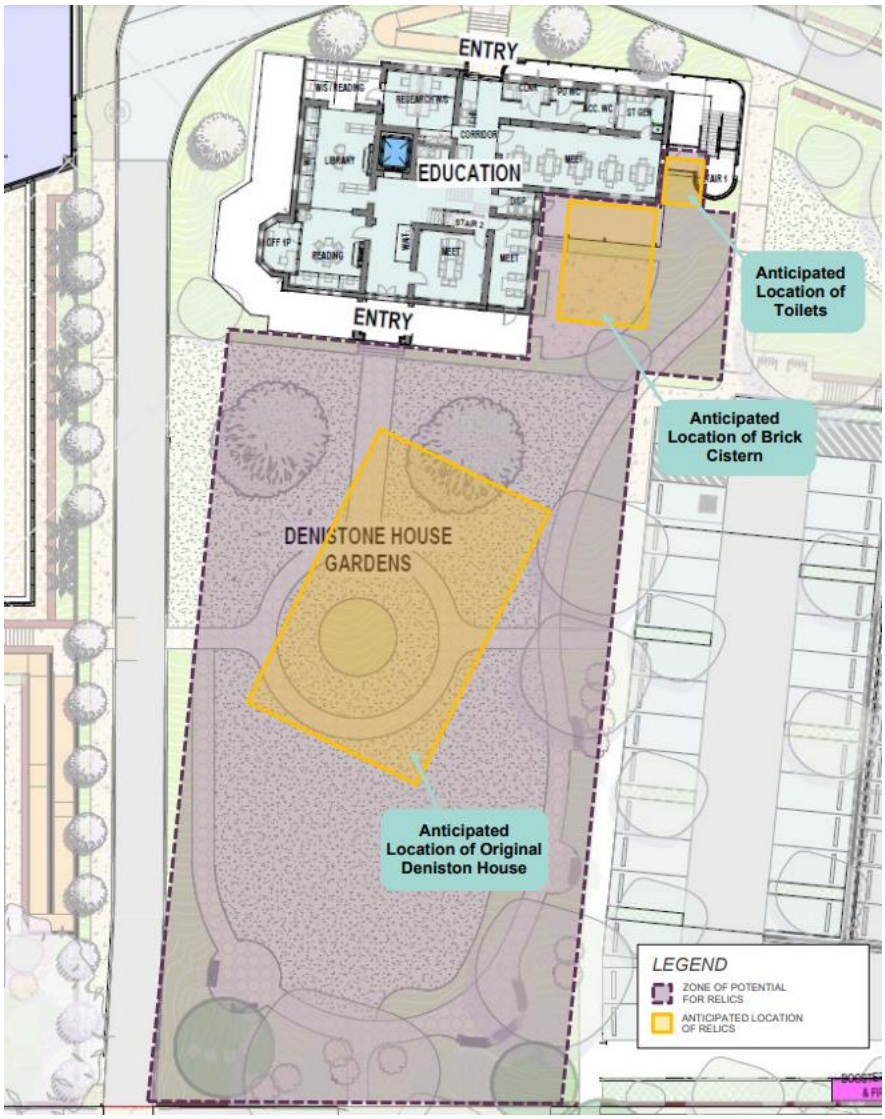


Figure 32 Anticipated Location of Relics near Denistone House

Source: Urbis

6.10 Traffic, Access and Parking

Traffic and parking modelling for the Concept Approval (SSD- 36778089) assumed that approximately 500 car parking spaces would be provided on the site. This SSDA builds on the findings of the previous assessment through a more informed understanding of the car parking provision and vehicle movements during construction and operation. It is supported by a Transport Impact Assessment that has been prepared by Stantec and is included at **Appendix Y**. A summary of the assessment is provided below.

6.10.1 Operational Parking

A Parking Demand Study was prepared in March 2023 to understand the parking requirements associated with the proposed development. The study was completed through an analysis of:

- The existing demand for on-site and street parking.
- Current and future staffing levels.
- Existing staff travel patterns and transport modes.
- Availability of public and active transport options within the site catchment.
- Current and anticipated student, visitor and patient demands.

As identified by the Parking Demand Study, the projected parking requirements for the Ryde Hospital Redevelopment are summarised in **Table 16**.

Table 16 Future Parking Demand Requirements

	Existing Hospital	Design Year	
Type	**2021**	**2026**	**2031**
Staff	160	246-293	261-402
Visiting Medical Officers	2	14**	16**
Public	79	127	154
Fleet	13	15	17
Total Parking Supply	**254***	**403-449**	**449-589**

** Excludes service vehicles, patient transfer space, drop off and pick up bays (excluding accessible) and restricted parking bays.*

***Assumes 5 visiting medical officer spaces will be retained along Denistone Road*

Adequacy of Parking Supply

The development will provide 482 car parking spaces across the site. This exceeds the Ryde DCP requirements of 320-350 spaces at day of opening (2026) and 344-445 in 2031 (projected). The 482 spaces provided is within the range of expected parking demand based on the 2031 projections. Therefore, the parking provision is considered adequate.

Car Park Management Initiatives

To manage car park demand, the following measures and initiatives will be considered by HI in finalisation of the Green Travel Plan:

- Primary car parking areas to be access controlled (i.e. through boom gates) to limit misuse of parking facilities by surrounding land uses and ensure equitable access to parking spaces by staff and visitors.
- Implement various timed parking restrictions to ensure equitable access for various users, including patients, short stay or long stay visitors.
- Introduce staff parking fees to manage staff parking demand.
- A staff waitlist arrangement could be implemented as available car parking approaches capacity.
- Facilitate and encourage carpooling between staff, reducing parking demand on site.

- If public parking demand approaches capacity, a parking booking system could be established to allow patients to book a parking space when they need it.

If a paid parking scheme is implemented, the following measures will be considered to reduce potential impacts to surrounding on-street parking, finalised in the Green Travel Plan prior to operation of the hospital:

- Provide parking fee concessions to various user groups to ensure access to parking on site at an affordable rate.
- Parking fees to align with Ministry of Health policy, noting staff parking fees are set to "encourage greater public transport use while ensuring the impact of the policy is equitable, recognising that many health care workers are shift workers and public transport may not provide a suitable alternative for private vehicles at all times".
- Have Council implement timed parking restrictions around the site to reduce the quantum of unrestricted parking near site for staff, coupled with a residents parking scheme to permit residents to park all day. This is standard approach for hospitals within residential areas, including but not limited to Blacktown Hospital.

The final car park management strategies will be detailed in the Green Travel Plan to be finalised and implemented prior to operation of the hospital.

The implementation of a paid parking scheme on-site is not expected to significantly reduce the utilisation of on-site parking. Evidence of a similar arrangement resulting in high car park utilisation is provided to DPE in accordance with condition C24 of the Concept Approval. Refer to **Appendix Y** for further information.

6.10.2 Vehicle Access

The proposed vehicle access arrangements are described in **Section 3.7.1** above. The project will retain the same number of access points along both Denistone Road. While opportunities to consolidate or reduce the number of access points was considered, this was not practical as:

- Separate access points are required to limit any risk of congestion internal to the site that would impact travel time for ambulances, minimise conflict between vehicles accessing different areas on site, and ensure wayfinding can be achieved.
- A consolidated access point for public access to the Emergency Department and Main Hospital entry cannot be achieved due to the gradient changes internal to the site along Denistone Road and the limited availability for a ramp to be provided that would accommodate this gradient change.

Notwithstanding this, the proposed vehicle access arrangements are not expected to result in any traffic impacts to the surrounding residential areas when compared to a scenario which consolidates the number of access points. It is assumed that the ambulance and Emergency Department access points would both generate low volumes of traffic – being less than 40 vehicles during peak hours which equates to one vehicle every two minutes. All vehicle access arrangements have also been designed in accordance with the relevant Australian Standards.

To ensure there is appropriate pedestrian access around the site, the emergency vehicle access point has been designed as an intersection to reinforce priority for emergency vehicles. Alternatively, the public access point to the Emergency Department has been designed as a layback driveway to ensure that pedestrians are prioritised.

Finally, there is no change to the indicative tree removal identified in the Concept Proposal as a result of the driveways. Any additional tree removal on site is required to accommodate the hospital building and multi deck car park.

The proposed vehicle access arrangements are therefore, consistent with Condition C26 of the Concept Proposal.

6.10.3 Operational Traffic Impact

Traffic generation for the redevelopment has been based on NSLHD clinical planning data which details an increase of approximately 98 beds to a total of 230 beds in 2026 and no further uplift in 2036. Future staff projections have also been based on the growth in full time staff (FTE) as per NSLHD forecasting. Current projections indicate an increase by 338 FTS in 2026 and 676 FTS in 2036.

The results indicate that by 2036, the proposal could generate up to 402 trips during the AM peak and 363 trips during the PM peak. This is an increase of 197 and 187 vehicle trips respectively in the AM and PM peak periods when compared to the existing development.

Intersection Performance

The additional traffic generated by the proposed redevelopment of the hospital has been modelled in SIDRA. **Table 17** and **Table 18** below presents the proposed operational performance of key intersections relating to the site at opening (2026) and 10-year horizon (2036) respectively.

Overall, key intersections surrounding the site are expected to continue operating well and at a similar level when compared to the modelling if no new development were to be provided on site. Only minor increases to the degree of saturation, delays and queues are expected as a result of the proposed development by 2036, if at all. As such, Stantec recommend that the existing median strip along Ryedale Road is extended to ensure the proposed access point located at the northern boundary of the site operates as left in, left out only.

Table 17 Operating Conditions in 2026 – With and Without the Proposal

Intersection	Peak	Degree of Saturation		Average Delay (sec)		Queue (m)		Level of Service	
		With	Without	With	Without	With	Without	With	Without
Blaxland Road/ First Avenue	AM	0.78	0.78	32	32	123	107	C	C
	PM	0.89	0.88	38	38	153	158	C	C
First Avenue/ Ryedale Road	AM	0.07	0.07	15	15	1	1	B	B
	PM	0.19	0.18	12	12	2	2	A	A
Blaxland Road/ Florence Avenue	AM	0.57	0.49	14	13	67	57	A	A
	PM	0.59	0.58	13	13	73	69	A	A
Ryedale Road/ Florence Avenue	AM	0.08	0.14	9	8	3	5	A	A
	PM	0.13	0.11	9	9	5	4	A	A
Ryedale Road/ Forth Avenue	AM	0.08	0.07	9	9	3	2	A	A
	PM	0.11	0.10	9	9	4	4	A	A
Blaxland Road/ Dalton Avenue	AM	0.21	0.18	57	48	5	4	E	D
	PM	0.23	0.21	63	57	5	5	E	E
Denistone Road/ Fourth Avenue	AM	0.05	0.06	5	5	1	1	A	A
	PM	0.06	0.06	6	5	1	1	A	A
Florence Avenue/ Denistone Road	AM	0.12	0.09	6	6	3	2	A	A
	PM	0.08	0.06	6	6	2	1	A	A

Table 18 Operating Conditions in 2036 – With and Without the Proposal

Intersection	Peak	Degree of Saturation		Average Delay (sec)		Queue (m)		Level of Service	
		With	Without	With	Without	With	Without	With	Without
Blaxland Road/ First Avenue	AM	0.90	0.90	40	38	135	130	C	C
	PM	1.10	1.04	86	79	300	278	F	F
First Avenue/ Ryedale Road	AM	0.08	0,07	16	15	2	2	B	B
	PM	0.25	0.21	14	14	3	3	A	A
Blaxland Road/ Florence Avenue	AM	0.61	0.53	14	13	73	64	A	A
	PM	0.67	0.63	14	13	85	80	A	A
Ryedale Road/	AM	0.10	0.18	9	9	4	7	A	A

Florence Avenue	PM	0.16	0.14	9	9	6	5	A	A
Ryedale Road/ Forth Avenue	AM	0.10	0.08	9	9	4	3	A	A
	PM	0.14	0.12	9	9	5	5	A	A
Blaxland Road/ Dalton Avenue	AM	0.25	0.21	68	55	6	5	E	D
	PM	0.37	0.32	106	90	10	8	F	F
Denistone Road/ Fourth Avenue	AM	0.07	0.08	6	6	2	2	A	A
	PM	0.08	0.08	6	6	2	2	A	A
Florence Avenue/ Denistone Road	AM	0.21	0.16	7	6	5	4	A	A
	PM	0.10	0.07	7	6	2	2	A	A

As shown above, the Blaxland Road/ Dalton Avenue intersection is expected to operate at an F level of service by 2036 (both with and without the proposed development) due to vehicles turning right out of Dalton Avenue.

Notwithstanding, Dalton Avenue is a local road and experiences low volumes of traffic and therefore, is considered satisfactory. It is also noted that the development is expected to generate no additional right turn movements, with vehicles expected to turn right via the Florence Avenue/ Blaxland Road intersection instead, and further, the left turn movement from Dalton Avenue onto Blaxland Road is expected to continue operating well and with spare capacity post development, with a Level of Service A.

As such, no road network mitigations are proposed with exception of extending the existing median along Ryedale Road to ensure the proposed access positioned at the northern boundary of the site operates as left in, left out only.

6.10.4 Accessible Parking

Based on provision of 482 spaces across site, the proposal is required to provide up to 10 accessible parking spaces. Accordingly, 14 accessible spaces will be provided and located in a variety of car parking areas on the site. The accessible spaces will be compliance with the relevant BCA requirements and the AS/NZS 2890.6:2009.

6.10.5 Motorcycle Parking

Based on provision of 482 spaces across site, the proposal is required to provide a minimum of 24 motorcycle spaces. Accordingly, the proposal will provide 32 motorcycle spaces – 12 located within the multi-deck car park, 6 located within the Ryedale Road at-grade car park and 14 within the basement car park.

6.10.6 Bicycle Parking and End of Trip Facilities

In accordance with the requirements of ecologically sustainable design, 67 secure bicycle spaces will be provided within the multi-deck car park for staff, with access from Denistone Road. An additional 14 bicycle spaces will be provided for visitors and will be located at the main entry. End of trip facilities, including showers, changing rooms and lockers will be provided for staff within the Lower Ground.

6.10.7 Emergency Services

The proposed development will provide 5 ambulance parking bays, which will be located directly adjacent to the emergency department and separate from any other users on the site. The spaces have designed in accordance with NSW Ambulance Specifications for Hospitals and will provide the adequate spatial requirements for each ambulance to load/unload from either the rear or side doors.

One additional parking space will also be provided within the ambulance parking area, suitable for use by authorised vehicles as required by the NSLHD.

6.10.8 Loading Facilities

A loading dock will be located along the western side of the building on the Lower Ground, with access will be provided from Ryedale Road. The loading dock will be capable of accommodating the following:

- Two bays suitable to accommodate vehicles up to 12.5 metre HRV's.
- One bay suitable to accommodate vehicles up to 6.4m SRV.
- One bay suitable to accommodate courier vehicles.
- Two compactors.

Vehicular access to the mortuary is also provided via the loading dock.

The swept path analysis provided in **Appendix Y** confirms vehicles up to 12.5 metre HRVs can adequately navigate into the relevant loading bays, with all bays able to be accessed independently.

6.10.9 Public Transport

Ryde Hospital is currently serviced by a number of bus stops located along Denistone Road, including one bus stop located directly adjacent to the site at the corner of Denistone Road and Forth Avenue. No additional bus stops will be provided as part of the project. Notwithstanding this, DDA compliant pedestrian paths will be provided between the bus stop and key pedestrian entries to the hospital.

6.10.10 Green Travel Plan

A Preliminary Green Travel Plan (GTP) has been provided by Stantec and is included at **Appendix Y**. The GTP provides a series of measures aimed at promoting sustainable travel and reducing reliance on the private car. The following potential measures and initiatives could be implemented to encourage more sustainable travel modes:

- Provide high quality and prominent bicycle parking and change/ shower facilities.
- Provide clear pedestrian and cyclist wayfinding.
- Provide shelters along walkways or near bus stops and street lighting.
- Encourage cultural change through:
  - Creating a bike user group (targeting staff living within five kilometres of the hospital).
  - Events such as annual 'ride to work' day.
  - Providing information detailing opportunities and facilities available to staff, such as maps of cycling routes to and within the hospital.
- Provide prioritised carpool parking spaces on-site, including consideration for incentives such as prices, location and proximity to services.
- Limiting on-site parking allocation to staff.
- Encouraging staff that drive to work and park on surrounding roads to carpool through creation of a carpooling club or registry/ forum.
- Update the existing Travel Access Guide (TAG) following the redevelopment and ensure the TAG is publicly available to all staff and visitors.
- Providing public transport information boards/ apps to inform staff and visitors of alternative transport options.

A final Green Travel Plan will be developed and implemented prior to operation of the hospital.

6.10.11 Construction Traffic and Parking

A Construction Traffic Management Plan has been prepared by Stantec and is provided at **Appendix Y**. It details a number of initiatives to be implemented as part of the construction works associated with the proposal.

During peak construction activities, a total of 100 heavy vehicles could access the site per day. These movements would be spread across the day in order to dissipate the traffic impacts. Light vehicle traffic generation would be largely generated by construction worker traffic movements to and from the site. The number of construction workers vehicles would be (at maximum) 320 per day during peak construction activities. Some minor increase in average delay to vehicles at surrounding key intersections can be expected at times during the construction period as is typical for construction projects. Notwithstanding this, this will be minimised to the furthest possible extent by encouraging workers to use public transport or carpool to access the site. Further to this, any construction worker traffic movements will generally be outside of peak periods and disruption during peak periods will be avoided.

It is not anticipated that an on-street Works Zone would be required during the early/enabling works. If a Works Zone is required, the contractor would be required to obtain approval from the relevant authority.

6.10.12 Parking Impacts during Construction

As a result of the proposed development, on-site parking would be temporarily displaced during the construction phase. The indicative changes to the supply of on-site parking during construction is detailed in **Table 19** below.

Table 19 Net Change to Parking Supply during Construction

Stage	Description	Approximate Net Change to On-Site Parking Supply
Stage 1		
1A	Loss of parking in P5, P6, P1 and along internal road.	-114
1B	Opening of new staff car park along Ryedale Road.	-58
Stage 2		
2B/C	Further removal of parking in P1.	-88
2D	Opening of basement car park.	+13
Stage 3		
3A/B	Removal of P4, public parking near the emergency department and remainder of P1.	-50
3C	Opening of multi-deck car park and parking areas along Denistone Road.	+200

The exact quantum of on-site parking will fluctuate depending on when the various parking facilities are removed, and new parking facilities become available for use. Generally, parking on site will operate at a loss until such time where the multi-deck car park opens to create a surplus of parking on site.

Accordingly, HI are currently developing an off-site parking strategy to offset the temporary loss of parking on the site. Any offsite parking solution would be exclusively used by staff to ensure parking spaces on site are provided for public use. This may include parking at nearby properties such as The Church of Latter Day Saints, which is located 550m (a seven minute walk) south-east of the hospital and would provide approximately 60 spaces for staff. Additionally, Stantec estimate that there are approximately 193 on-street parking spaces available within the vicinity of the site during peak hospital periods. As such, there is adequate capacity for any loss of staff parking on-site to be accommodated elsewhere during the construction period.

6.10.13 Adequacy of Surrounding Public Domain Infrastructure

An assessment of the additional generated walking and cycling trips has been undertaken by Stantec at **Appendix Y** in order to determine if additional demand for cycling or pedestrian infrastructure would be generated by the hospital redevelopment. Stantec's analysis finds that the hospital is expected to generate up to an additional 25 two-way public transport trips, 13 two-way walking trips and five two-way bicycle trips per day. This increase in public and active transport trips is considered minor and could be accommodated on the existing public transport network. Therefore, no additional walking or cycling / public transport infrastructure is required to be provided by the redevelopment.

6.11 Noise and Vibration

A Noise and Vibration Impact Assessment has been prepared by Acoustic Studio and is included at **Appendix Z**. The report includes an assessment of the potential noise and vibration impacts during the construction and operation of the proposed hospital development. The surrounding land uses include the existing hospital campus, residential, educational and commercial receivers. The site monitoring and receiver locations are shown in **Figure 33** below.

Figure 33 Noise Monitor Locations

Source: Acoustic Studio

6.11.1 Construction Hours

The "recommended standard hours" for "normal construction", as proposed in the Interim Construction Noise Guideline (ICNG), are:

- Monday to Friday 7:00am to 6:00pm.
- Saturday 8:00am to 1:00pm.
- No work on Sundays and Public Holidays.

All construction work will be undertaken during the standard construction hours.

6.11.2 Construction Noise Impacts

EPA Guidelines adopt different strategies for noise control depending on the predicted noise levels at the nearest residencies. For the nearest sensitive receivers, the noise effected levels occur when the construction noise exceeds ambient noise levels by:

- 10dB(A)Leq(15min) for work during standard construction hours.
- 5dB(A)Leq(15min) for work outside of standard construction hours.

A summary of the noise emission management levels for the proposed hours of construction are detailed in **Table 20** below.

Table 20 Construction Noise Management Levels

Location	Noise Management Level $L_{Aeq(15\ min)}$
Residential (to the north, east and west)	51 (standard construction hours) 50 (outside standard construction hours) 75 (highly noise affected)
Residential (to the south)	53 (standard construction hours) 43 (outside standard construction hours) 75 (highly noise affected)
Office, Retail and Commercial	70 external (when in use)
Hospital Wards and Operating Theatres	45 internal 65 external
Educational Institutions	45 internal 65 external

The key noise sources for the activities occurring during construction are likely to be:

- Site machinery (e.g., excavator, forklift, concrete pump etc.).
- Heavy vehicles (e.g., delivery trucks, dump trucks, concrete mixer trucks etc.).
- Hand held tools (e.g. drill, jackhammer, chainsaw etc.).

Vibration and ground-borne noise impacts are likely to be highest during the excavation stages of the Project, when equipment such as rock breakers and jackhammers are used.

The construction noise impacts will be greatest from the existing Graythwaite Rehabilitation Centre and existing hospital building. Noise from various plant and equipment operating individually are generally predicted to be above the recommended noise management level (NML) due to the proximity to the nearest affected receivers. In a worst-case scenario, the noise impacts associated with excavators will exceed the NMLs by up to 29dB.

Similarly, construction noise impacts from residential receivers will be highest along Ryedale Road. In a worst-case scenario, the noise impacts associated with construction (use of the demolition saw) will exceed the NMLs by up to 33dB and are above the Highly Affected Noise Levels (75 dB(A)), when works are at the closest position to the receiver. However, it is noted that for the majority of works noise levels from various construction activities are predicted to be 6-12dB lower when the location of activities within the site boundary are further away from the sensitive revivers, and in some cases, will be within the NMLs, depending on the distance to the receiver.

The exceedance of the NMLs is not unusual given the heavy plant and equipment that must be used, such as excavators and hammers, and the proximity to sensitive receivers on campus (some of which are within 20m). Notwithstanding this, Acoustic Studio confirms that the implementation of all reasonable and feasible mitigation measures (outlined in **Appendix B**) will ensure that any adverse noise impacts to surrounding health, residential, commercial and educational receivers are minimised when NMLs cannot be met due to safety or space constraints. In particular, it is recommended that a comprehensive Construction Noise and Vibration Management Plan (CNVMP) is prepared prior to the commencement of construction works. The CNVMP would detail the construction methodology and equipment and include mitigation measures to reduce the overall acoustic impact of the construction works.

6.11.3 Construction Vibration Impacts

Based on the scope of works and typical equipment required, some structural and human perception vibration impacts are expected, particularly from the use of excavators with hammers near the existing Ryde Hospital buildings. There is also potential for vibration impacts on sensitive equipment, particularly for the diagnostic imaging facility located opposite the site on Ryedale Road.

A detailed vibration assessment has not been carried out at this stage, as actual vibration levels experienced will be dependent upon a number of factors which are unknown at this point in time. Accordingly, the significance of the vibration impacts will be determined as part of the CNVMP prepared prior to the commencement of construction works. Vibration management controls will be put in place to ensure vibration impacts are minimised using all reasonable and feasible measures. Implementation of all reasonable and feasible mitigation measures for all

construction works will ensure that any adverse noise impacts to surrounding residential, commercial and recreational receivers are minimised when noise goals cannot be met due to safety or space constraints.

6.11.4 Operational Noise Impacts

The noise sensitive receivers surrounding the project site have been identified as being residential, commercial, and the existing hospital campus. The noise emissions associated with the proposed hospital operation have been assessed in accordance with the *NSW Environmental Protection Authority 'Noise Policy for Industry' 2017*.

Acoustic Studio has identified that the mechanical plant, loading dock and noise from traffic will be the primary source of operational noise for the project. Overall, Acoustic Studio has determined that the impact of the operational noise impacts is expected to be relatively minor and can be mitigated through the successful implementation of the recommendations in **Appendix B**.

Mechanical Plant

The mechanical plant and equipment associated with the operation of the development is to be controlled to ensure external noise emissions are not intrusive and do not impact on the amenity of the surrounding sensitive receivers. As is typical for this stage of the design development, final plant selections have not been made, and therefore a detailed assessment has not been carried out. Notwithstanding, an assessment will be undertaken once the detailed design of the plant has been completed. A preliminary review of the plant finds that it is able to comply with relevant controls, with a number of design strategies incorporated to reduce acoustic impact where appropriate.

Loading Dock

In a worst-case scenario (being 3 HRV and 4 courier vehicles arriving and reversing into the loading dock at the same time during the day period), the use of the loading dock is anticipated to comply with the relevant noise criteria for the nearest residential receiver on Ryedale Road.

The use of the loading dock at night is unlikely to occur, however, there could be certain circumstances where this would be required. In this event, Acoustic Studio anticipates that use of the loading dock during night-time period would result in an exceedance of the Sleep Disturbance Screening Criteria by up to 18dB(A) the nearest residential receiver on Ryedale Road. Notwithstanding this, the Road Noise Policy notes that one or two noise events per night, with maximum internal noise levels of 65–70 dB(A), are not likely to affect health and wellbeing significantly. This indicates that such night-time noise levels are unlikely to cause awakening from sleep or affect health and wellbeing of receivers.

Overall, the loading dock noise emissions due to vehicle movements are predicted to satisfy all relevant criteria during day, evening and night-time periods.

Traffic

In a worst-case scenario, the noise levels associated with traffic on Denistone Road and Ryedale Road will include by 2.6dB during peak hour as a result of the proposal. Even if this increase was applied to the entire day period the total noise level will still be within the $L_{eq(15hr)}$ assessment criteria of 60dB(A) for existing residences affected by the project. The predicted increase is also considered to represent a minor impact and is not expected to have any adverse impact on sensitive noise receivers.

6.12 Contamination

A Detailed Site Investigation was prepared for the purpose of the Concept Approval (SSD-36778089) which confirmed the presence of contamination on the site and required the implementation of a Remediation Action Plan to make the site suitable for its intended use as a hospital.

Accordingly, a Remediation Action Plan (RAP) has been prepared by JBS&G and is provided at **Appendix L**. The purpose of the RAP is to document the procedures and standards to be followed in order to address the contamination impacts at the site, ensuring the protection of human health and the surrounding environment, such that the impact is remediated/managed in a manner as to make the site suitable for the proposed land use. The RAP has been reviewed by an accredited site auditor and is deemed suitable for implementation. Interim Audit Advice prepared by the site auditor is provided at **Appendix OO**.

Based on a review of the available contamination assessments and previous works undertaken at the site, JBS&G have identified a number of contaminants including fill material impacted with PCBs and TRH, PAHs identified in soil, elevated levels of heavy metals identified in fill, soil and groundwater, and asbestos in bonded and friable form.

Accordingly, remediation is required to be carried out on the site in accordance with the following methodology:

- Excavation and off-site disposal of PCB impacted soil to a lawful waste facility.
- Excavation and off-site disposal of asbestos impacted shallow fill beneath existing building footprints (where removal of these soils is required to facilitate development), to a lawful waste facility.
- On-site retention of all remaining asbestos (in bonded and friable form) impacted fill material where this can be achieved within the development, via implementation of a cap/cover remedial strategy based on physical separation, with implementation of on-going management plan.

The preferred remediation strategy also requires that the following documentation is developed and implemented to ensure the risks and impacts during remediation works are controlled in an appropriate manner:

- An Asbestos Management Plan be prepared for the redevelopment footprint, detailing the safe implementation of the RAP in undertaking asbestos removal, as guided by the SafeWork regulatory framework. This has been provided at **Appendix HH**.
- A Remediation Environment Management Plan, to document the monitoring and management measures required to control the environmental impacts of the remedial works.
- A Work Health and Safety Management Plan to document the procedures to be followed to manage the risks posed to the health of the remediation workforce.

As shown in **Figure 34**, there are two primary areas of in-ground remediation required (outside of existing building footprints). These are the asbestos containing material/fill zones shown in yellow just to the north of the Blue Gum High Forest, as well as the PCB containing area adjacent to Building 5.

Overall, JBS&G consider that the proposed actions outlined in the RAP are technically feasible, environmentally justifiable, and to the requirements of the relevant regulatory requirements made or approved by the NSW Environment Protection Authority (EPA) and relevant Australian Standards.

Subject to the successful implementation of the measures described in the RAP and the recommendations identified in **Appendix B**, it is concluded that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment, such that the site can be made suitable for the proposed hospital use.

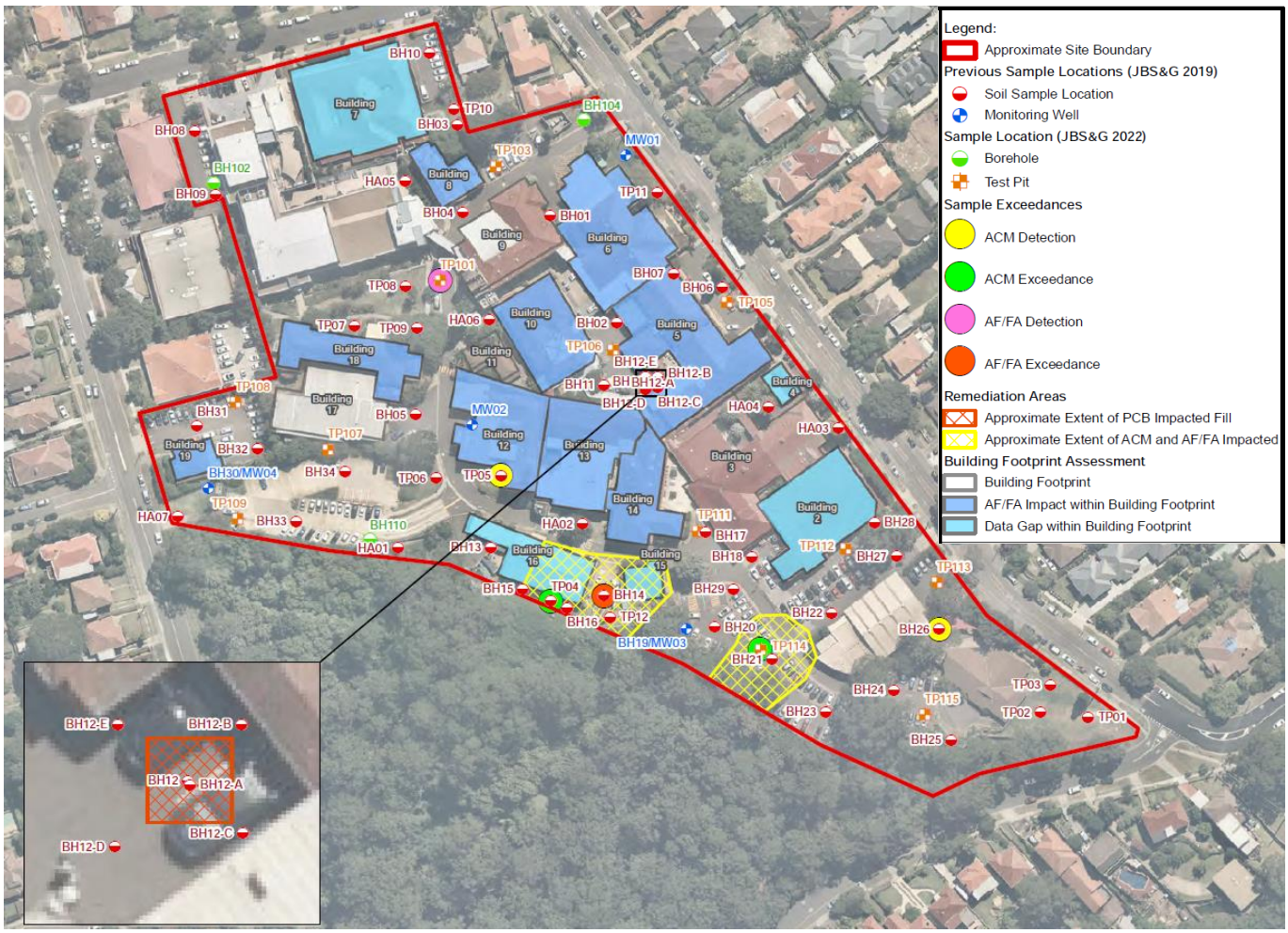


Figure 34 Extent of contamination borehole testing and areas requiring remediation

Source: JBS&G

6.13 Hazardous and Offensive Development

State Environmental Planning Policy (Resilience and Hazards) 2021 (formerly SEPP 33) establishes a protocol for planning for development that can be categorised as Potentially Hazardous or Potentially Offensive Development. DPE's Applying SEPP 33 Guidelines 2011 (the guidelines) establish screening thresholds for Dangerous Goods stored on site. A Preliminary Hazard Analysis has been prepared by Premier Engineering (**Appendix O**) to identify hazardous materials and risks associated with the use of such materials in the hospital.

The proposal envisages an increased use and storage of several chemicals and hazardous substances within the future hospital development. This includes:

- Flammable gases, such as acetylene for maintenance welding and LPG for maintenance and barbeque use.
- Bulk liquid oxygen.
- Compressed oxidised gases, such as medical oxygen and nitrous oxide.
- Flammable liquids, which are required for Pathology Lab use.
- Reactive or flammable solids, such as sulphur contained in anti-covid wipes.
- Sterilisers.
- Methanol, including waste methanol.
- Clinical waste.
- Medical isotopes.
- Cleaning chemicals.

The inventories of all such materials will generally be in small quantities and below the relevant thresholds as described in the SEPP 33 Guidelines. The only exception to this is the increased use and storage of bulk liquid oxygen, which is classified Class 5.1 oxidizing substance. Class 5.1 materials have a threshold of 5 tonnes. The proposed total inventory of the bulk liquid oxygen is approximately 21 tonnes and therefore exceeds the threshold.

The bulk liquid oxygen is intended to be partly stored in the existing facilities on site, which comprises a 3000L tank located in a compound in the northeast corner of the site near Denistone Road. This tank will be supplemented by a new 15,000L tank located adjacent to the existing tank.

The most important safety issue relating to the storage of bulk liquid oxygen is ensuring that it is adequately separated from the public and also isolated from any combustible materials (given that oxygen accelerates the rate of any combustion it contacts). Accordingly, the location of the tank is separated / screened from vulnerable areas of the project where people are likely to congregate, such as hospital wards and open space. The area in and around the tanks will also be kept free of combustible materials (including vegetation) and the proposed filling, storage and handling arrangements will comply with all relevant Australian Standards.

In the improbable event that an incident relating to the bulk liquid oxygen were to occur, this event would constitute an acceptable risk. Accordingly, the proposed development is not deemed to be potentially hazardous.

In addition, the proposed number of vehicle movements associated with transporting the bulk liquid oxygen is well below the relevant thresholds for Class 5.1 materials. Therefore, the proposal is not considered hazardous on this basis.

6.14 Hazardous Materials

JBS&G have prepared a Hazardous Building Materials Survey of the structures associated with the proposed demolition works to determine the presence of asbestos or other hazardous materials. A copy of the survey is included at **Appendix I**. The following hazardous materials were observed throughout the site:

- Asbestos containing materials (ACMs).
- Lead, including lead-based paint and lead containing dust.
- Synthetic mineral fibres (SMF).
- Polychlorinated biphenyls (PCB).

If the hazardous materials are not appropriately managed or removed, they could result in a significant exposure risk to all hospital occupants and visitors. Accordingly, JBS&G have prepared a number of mitigation measures (**Appendix B**) to ensure that hazardous materials are appropriately handled during the construction phase. This includes the preparation of a Hazardous Materials Management Plan which will detail the procedures for the management and removal of the identified hazardous materials to be implemented prior to and for the duration of the proposed demolition and refurbishment works. As far as reasonably practical, all hazardous materials should be removed by a suitability qualified and experienced hazardous removal contractor prior to the commencement of works. An Asbestos Management Plan has been prepared for the redevelopment and is provided at **Appendix HH** which will be implemented.

6.15 Geotechnical and Groundwater Assessment

A letter addressing the geotechnical and groundwater implications for the site has been prepared by PSM and is included at **Appendix AA**.

Based on the results of previous site investigations, the ground conditions on the majority of the site comprise fill overlaying residual silty clay. The fill comprises compacted clay, sand and gravel to a maximum depth of 4.5m and residual silty clays are of a low to medium plasticity. Bedrock levels vary throughout the site between 1.2m and 8.18m.

Groundwater was encountered during the borehole investigations, with observations made between 1.7m and 10.3m below surface level. The basement will have a depth of up to 6m, which will result in excavation below the standing water levels. Notwithstanding this, seepage resulting from the excavation works will be controlled through redirection and pump out if required. The impact of the basement on groundwater at the site and the surrounding areas is expected to be minimal, given that the basement is shallow with a small footprint that is only expected to partially penetrate groundwater during construction and is proposed to be tanked in the long term. In its proposed long term tanked condition, the effect of the basement on the groundwater at the site and in the surrounding area is expected to be negligible.

Groundwater during construction will be subject to the relevant approval by Water NSW prior to any excavation commencing on-site. Initial inflows may be slightly higher in the short term as equilibrium conditions are being established, but will plateau to be in the order of the estimated 1.5 ML/yr in the long term. Even with slightly elevated inflows during early construction stage, the inflow is not expected to reach 3 ML/yr.

Landslip in the Blue Gum High Forest

In response to conditions of the Concept Plan approval, additional geotechnical investigations were undertaken within the Blue Gum High Forest to determine the potential for landslip in light of vegetation removal and management of an APZ.

The investigation found that while vegetation clearing has occurred (under the scientific licence granted under the EPBC Act), there was no evidence of existing slope instability. The geotechnical advice provided at **Appendix AA** therefore remains valid.

PSM consider that the proposed revegetation of the slope in accordance with the Vegetation Management Plan, with erosion protection implemented prior, will be sufficient to minimise the risk of any land slip in the future. It is recommended that in the period until the slope has been revegetated, semi-regular inspections should be undertaken by a suitably qualified geotechnical engineer (every three months and after any significant rainfall events).

The findings of the Geotechnical Investigation are detailed at **Appendix LL** and have informed the management procedures in the Vegetation Management Plan (**Appendix FF**).

6.16 Waste Management

TSA has prepared a Waste Management Plan (WMP) (**Appendix II**) to detail the waste management procedures during the construction and operational phases.

6.16.1 Construction Waste Management

The WMP has been prepared to assess the volumes and management of waste during the construction phase in accordance with the relevant legislative requirements including the Protection of the Environment Operations Act 1997 and the NSW EPA Waste Classification Guidelines, Part 1: Classifying Waste.

The WMP details the type, volume and disposal methods for all waste material during the construction phase. It provides details regarding the responsibilities of the principal contractor to lawfully dispose of waste and ensure that reports on the management and capacity of facilities to receive waste are recorded. Records will be kept of all wastes and recyclables generated and either used on the site or transported off-site during the demolition. Further discussion is provided in **Appendix II**.

6.16.2 Operational Waste Management

Operational waste for the proposed development will be managed in accordance with an existing Waste Management and Resource Recovery Plan which aims to minimise the environmental impact of waste treatment and disposal for both clinical and non-clinical operational waste streams. This plan is to be reviewed regularly to ensure it remains current and aligned with the operation of the new hospital development.

Waste generated within the hospital will be collected by relevant hospital staff and transported to the waste room located at the western side of the building on the Lower Ground, prior to collection and removal offsite. The proposed development would increase the existing volume of waste produced on site. Notwithstanding this, TSA confirm that the procedures to be put in place and the size of the waste room will ensure that there is sufficient capacity to store this waste until such time where it is collected by a waste contractor. The frequency of waste collection will be 3x per week for general and recycling waste and 4x per week for clinical waste. The collection of other waste streams will be determined upon operation of the hospital.

6.17 Water Cycle Management

A Civil Engineering Report has been prepared by ACOR and is included at **Appendix K**. A summary of the assessment is provided below.

6.17.1 Stormwater

The site is split into two catchments (north and south, with the northern catchment split into two sub-catchments), with multiple discharge locations across the site. The existing drainage network will be utilised to convey stormwater around the site, and it is not anticipated that any diversion or temporary works will be required.

As part of the proposal, stormwater will be directed to inground Onsite Stormwater Detention (OSD) storage tanks before being discharged directly to Council infrastructure through the existing pipework. The OSD tanks will be located near the low point of each catchment, adjacent to the proposed outlet location. For the northern catchments, these are proposed to be close to the Stables and for the southern catchment, this is proposed to be located within the Ryedale Road at-grade carpark.

The stormwater will achieve Council's stormwater quality requirements as outlined in **Table 21** below.

Table 21 Pollutant Target Controls

Pollutant	Annual Load Reduction Target	Reduction Achieved
Gross Pollutants	90%	96.5%
Total Suspended Solids (TSS)	85%	85.2%
Total Phosphorus (TP)	65%	68.6%
Total Nitrogen (TN)	45%	53.1%

6.17.2 Water Sensitive Urban Design

ACOR have developed a Water Sensitive Urban Design (WSUD) strategy that is consistent with the stormwater quality objectives set out in Council's DCP. It is proposed that WSUD will be implemented as part of the proposal and will include products such as Gross Pollutant Traps and filter cartridges which are installed below ground and within OSD tanks. WSUD Measures incorporated into the development must satisfy the pollutant target controls meet the stormwater quality objectives set out Council. As shown in **Table 21** above, the proposed WSUD measures will exceed Council's reduction targets.

6.17.3 Water and Wastewater Management

In order to reduce the demand on local water and wastewater infrastructure, the proposed development will consider the following potable water demand reduction strategies, where possible:

- Provision of low flow taps and sanitary fixtures.
- Provision of water meters to monitor water demands and leaks.
- Provision of a rainwater harvesting system to provide storage capacity and enable rainwater reuse.
- Install a water efficient irrigation system that is sub-soil drink irrigated with moisture sensor overrides.

6.18 Sediment and Erosion Control

ACOR has identified a number of erosion and sediment control measures at **Appendix K**. These will be put in place during construction to ensure that stormwater runoff will be collected and diverted around the site with sediments removed prior to discharge to the existing stormwater system. The proposed controls include:

- Establish sediment fencing to the downstream perimeter of the zone of disturbed works to protect downstream assets and properties.
- Installation of stabilised construction entry and exit grids to prevent construction vehicles tracking debris into adjacent Authority roadways and stormwater systems.
- Construction of "clean water" diversion drains with rock check dams to divert unpolluted water to the existing stormwater system in a controlled manner.
- Construction of "dirty water" catch drains with rock check dams to divert sediment-laden and silt-laden water to proposed sedimentation basins.

- Construction of appropriately sized and maintained sedimentation basins to promote settling of gross pollutants and suspended solids. Dosing and flocculation of fine suspended particulates will also be undertaken depending on tested water quality profiles within the sedimentation basin.
- Protection of materials stockpiles by suitable wind protection fencing and / or temporary covering of stockpiles.
- Protection of existing and recently constructed surface inlet pits with temporary sediment traps using geotextile filter fabric and sandbags.
- Protection of existing and recently constructed overland flow paths with vegetated ground cover.
- General expedited revegetation and stabilisation of exposed earthworks to prevent sedimentation of stormwater runoff.

These controls have been incorporated into the mitigation measures at **Appendix B**.

6.19 Flooding

An assessment of the flood impacts on site has been undertaken by ACOR at **Appendix K**. In general, the area of the site in which development is proposed is not subject to flooding during the Probable Maximum Flood (PMF). The extent of overland flow flooding during the PMF is restricted to very small patches within the Blue Gum High Forest and along Florence Avenue. Flooding does also occur within the surrounding region to the north and south of the site.

As part of the proposal, ACOR recommend that rainfall runoff generated on site is controlled to ensure that there are no adverse effects on downstream properties during storms up to and including the 1% Annual Exceedance Probability (AEP). This will be undertaken though the use of an on-site detention system to limit the stormwater discharge. No flood mitigation will need to be undertaken as part of the proposed development.

6.20 Environmentally Sustainable Development

A Sustainability Report has been prepared by Climatewise and is included at **Appendix S**. The environmental performance of the development has been assessed against Clause 193 of the EP&A Regulations. The initiatives and targets relate for the proposed development are as follows:

- The proposal will be required to deliver a minimum 10% improvement in energy efficiency compared to a baseline of National Construction Code (NCC) Section J 2019.
- A minimum of 60 points under the HI ESD Framework, which is an industry recognised *Green Star Design & As-Built v1.3* rating tool.
- Enable the NSLHD's strategic direction for Carbon Neutrality by 2035 through the delivery of relevant components including efficient building design and active systems, dedicated facilities for waste avoidance and management, and electrification of the building.

Furthermore, the proposed development is consistent with the four accepted principles of ESD. The Regulation lists four principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle.
- Intergenerational equity.
- Conservation of biological diversity and ecological integrity.
- Improved valuation and pricing of environmental resources.

An analysis of these principles is provided in **Section 7.1**.

6.21 Social Impact

Ethos Urban has prepared a Social Impact Assessment (SIA) (**Appendix JJ**) in accordance with the *Social Impact Assessment Guideline for State Significant Projects (2023)*. The purpose of SIA is to assess the impacts of the development, both positive and negative, for all stages of the project lifecycle for key stakeholders and the broader affected community, through:

- Identifying, analysing and assessing any likely social impacts, whether positive or negative, that people may experience at any stage of the proposal lifecycle, as a result of the proposal.
- Investigating whether any group in the community may disproportionately benefit or experience negative impacts and proposing commensurate responses consistent with socially equitable outcomes.
- Developing social impact mitigation and enhancement options for any identified significant social impacts.

In addition, HI and Ethos Urban conducted engagement with stakeholders who may be more significantly affected by the proposal over the development process, and with broader community, from 2022 to 2023, to inform the project's understanding of likely social impacts, develop mitigation approaches together with impacted people and guide the SIA. The engagement process and findings are detailed within **Appendix JJ** and at **Section 5.0**.

Through the above methodology, the SIA identified the following potential negative social impacts and the most significant social benefits of the proposed development.

Key social benefits of the proposed development include:

- Conservation of Denistone House and the former Stables (including the removal of any intrusive additions) will reinstate important historical views and retain the heritage significance of the site.
- Provision of a new hospital and associated clinical spaces is likely to lead to increased accessibility of healthcare in the NSLHD, as well as a higher quality of care.
- Retention of the Blue Gum High Forest, provision of a nature walk, and delivery of green open space on site will provide benefits to health and wellbeing associated with biophilic design.
- The construction and operation of the development will provide jobs that could provide economic benefit to the community.

Key impacts identified include:

- Patients and staff of the hospital will be decanted to allow for construction staging. This is likely to cause disruption to usual care and work routines, and may result in inconvenience, frustration, and/or reduced wellbeing for patients, staff and visitors.
- During the development's construction, there is the potential for increased dust, noise, and vibration for hospital, patients, staff, visitors, and surrounding residents and businesses. This could disrupt sleeping patterns, concentration, and ability to work, and affect those that live with a health condition such as asthma.
- The location of the site near residential and businesses could result in increases construction traffic in the area. This could impact travel times and road access, as deviations and road closures may need to be used during major construction milestones. Residents and businesses along surrounding streets may also have difficulty with street parking being used by construction and worker vehicles, and potentially staff and visitor vehicles if any on-site parking is temporarily closed during construction.

Overall, the assessment determined that the impacts arising from the proposed development can be well managed and mitigated. The negative impacts are generally associated with the construction phase and therefore, will be temporary in nature. The redevelopment of the site, if impacts associated with construction are well mitigated, will ensure positive social outcomes for the broader community. Broader benefits of the investment in this significant new regional scale health facility and associated community infrastructure will be widespread, significant, and long term.

The assessment identifies various mitigation measures to be implemented during the construction and operational phases of the development. The mitigation measures are included at **Appendix B**.

6.22 BCA

A BCA Report has been prepared by Philip Chun and included at **Appendix BB** to review the capability of the proposed design to meet the requirements of the Building Code of Australia 2019 (BCA). Overall, it is considered that the design is generally capable of meeting the deemed to satisfy provisions and performance requirements of the BCA.

6.23 Access

An Access Capability Statement has been prepared by Philip Chun and included at Appendix CC to review the capability of the proposed design to meet the requirements of the BCA, Disability (Access to Premises – Buildings) Standards 2010 (Premises Standards), relevant Australian Standards as they relate to access to development. Overall, it is considered that the design is generally capable of meeting the relevant requirements, subject to normal design development.

7.0 Project Justification

7.1 Ecologically Sustainable Development

The EP&A Regulation lists 4 principles of ecologically sustainable development to be considered in assessing a project. They are:

- The precautionary principle.
- Intergenerational equity.
- Conservation of biological diversity and ecological integrity.
- Improved valuation and pricing of environmental resources.

An analysis of these principles follows.

7.1.1 Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the project. The proposal will deliver a high standard of ESD outcomes and initiatives at the site, as described above, and will minimise environmental impacts in areas of energy, water, and materials efficiency.

7.1.2 Intergenerational Equity

Inter-generational equity is concerned with ensuring that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations. The project has been designed to benefit both the existing and future generations by:

- Ensuring the health, diversity and productivity of the environment are maintained through the implementation of passive and active design measures that reduce operational energy and water use from the project.
- Reducing energy, water and waste to ensure that the health, diversity, and productivity of the environment is maintained for the benefit of future generations.
- Implementing safeguards and management measures to protect environmental values during construction and operation, including reduced waste to landfill and reduced portable water consumption.
- Facilitating job creation in close proximity to homes and public transport.
- Improving health outcomes for the community.

The project has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long term implications such as waste disposal would be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this EIS and the appended technical reports.

7.1.3 Conservation of Biological Diversity and Ecological Integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The project would not have any significant effect on the biological diversity and ecological integrity of the study area, as addressed in **Section 3.14**. A detailed Construction Management Plan will also be in place to ensure works do not adversely affect environmentally sensitive parts of the site, including measures to protect the trees which are to be retained.

The project is also in alignment with the NSW Government's Net Zero Plan which aims to achieve net zero emissions by 2050 with a 50% reduction in emissions by 2030, the project is seeking to transition to a fully electric building to eliminate fossil fuel use within the scope of the redevelopment.

7.1.4 Improved Valuation, Pricing and Incentive Mechanisms

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources which may be affected by a project, including air, water, land and living things. Mitigation measures for avoiding, reusing, recycling and managing waste during construction and operation would be implemented to ensure resources are used responsibly in the first instance.

As outlined in the ESD Report (**Appendix S**), the project will conduct life cycle cost analysis to evaluate cost effective measures to reduce on site operational carbon emissions. A key design criterion of the development also includes the sustainable selection of building systems and materials. Materials are selected based on a life cycle assessment which considers the cradle-to-grave environmental impact of materials. Mechanical, lighting and vertical transportation systems are being designed for low energy consumption and their components will be selected considering whole-of life costs.

Additional measures will be implemented to ensure no environmental resources in the locality are adversely impacted during the construction or operational phases.

7.2 Likely Impacts of Development

7.2.1 Social and Economic

The social and economic impacts and benefits associated with the proposed development include:

- A development that will provide a significant piece of social infrastructure, increasing the number of hospital beds. The design and capacity increase of the redevelopment is anticipated to have positive impacts on the overall health outcomes of the region.
- Improves access to an extensive range of health services and facilities for people in the NSLHD.
- Provides additional social benefits for the region in terms of providing adequate employment in the area.
- The proposed development is anticipated to create additional employment in consultancy, construction and operation.
- Will be a stimulus to economic investment by delivering a key anchor development that will encourage and attract additional allied businesses and uses to the Ryde Hospital campus and surrounding area.
- To not invest in the development would exacerbate the service offering and capacity constraints of the existing health infrastructure in the region.

7.2.2 Biophysical

The environmental impact assessment of the proposed development has demonstrated that:

- The development will generate limited environmental impacts, due to the existing hospital campus which is already present on the site.
- The development will not have a significant impact on any threatened flora or fauna species.
- The Blue Gum High Forest, listed as a critically endangered ecological community, will be retained and protected as part of the proposal.

7.3 Suitability of the Site

Having regard to the characteristics of the site and its location in Eastwood the proposed development is considered suitable in that:

- The site is an existing hospital campus and can accommodate new development for clinical services.
- Bus services located on Denistone Road provide frequent connections between the site and the surrounding areas, including the Eastwood Town Centre and Denistone Railway Station.
- The scale, height and form of the proposed building is compliant with the development controls and is consistent with the desired future character of the area.

- The site will have access to all utility services to accommodate the demand generated by the proposed development.
- The local road network and key intersections have been assessed to be able to accommodate the traffic volumes generated by the proposed dwelling yield, without adverse impact on performance or safety.
- The proposed development will not result in any unacceptable or material environmental impacts in relation to adjoining and surrounding properties, particularly in terms of overshadowing, views, privacy and solar access.

7.4 Public Interest

The proposed development is in the public interest for the following reasons:

- The proposal will increase the capacity of the existing hospital to deliver clinical services in order to meet the needs of the local population.
- The proposal will retain and protect the Blue Gum High Forest which is located in the southern portion of the site.
- Assist with integration between hospital services through the facilitation of additional vehicle, pedestrian and public transport access to and through the campus.
- Retention of existing heritage buildings Denistone House and the Stables will maintain the identity of Ryde Hospital, allows for a generous landscape setting and provide expansive views to the Blue Gum High Forest, Parramatta River and the surrounding region.
- The proposed redevelopment will provide updated facilities and services in line with the temporary standards of care. The project will reduce the pressure on the existing facilities at Ryde Hospital and within the wider NSLHD. Overall, the project will provide an efficient work environment for staff and a high standard of amenity for patients.

8.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed Ryde Hospital Redevelopment (Stage 2). The EIS has addressed the issues outlined in the SEARs (**Appendix A**) and accords with Schedule 2 of the EP&A Regulation.

Having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development, the carrying out of the project is justified for the following reasons:

- The proposal will facilitate the development of a new state-of-the-art health facility which will further support and strengthen the services and facilities provided at the hospital for the benefit of the NSLHD.
- The proposal represents a significant investment in the NSLHD, which will deliver approximately 287 direct jobs during the construction phase and an additional 588 direct ongoing jobs during the operational phase.
- The development will upgrade a significant piece of social infrastructure, increasing the number of hospital beds and health workers at Ryde Hospital.
- The existing site allows for the provision of new health facilities that meet the special design requirements for the future proposed uses, whilst not resulting in impacts on surrounding uses that cannot be managed.
- The proposal will facilitate health uses on the site and is entirely consistent with the NSW State Priorities, North District Plan and Ryde Local Strategic Planning Statement by providing opportunities for future precinct activation and increased and improved health facilities.
- The proposal will facilitate the delivery of new landscaped areas and tree planting, as well as regeneration of the existing Blue Gum High Forest.
- The assessment of the proposal has demonstrated that the development will not result in any environmental impacts that cannot be appropriately managed and consistent with the relevant planning controls for the site.
- The proposal results in substantial positive public benefits.
- The proposal is generally consistent with the approved Concept Plan and the impacts arising from the development are commensurate with those anticipated and assessed under SSD-36778089.
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the Environmental Planning and Assessment Regulation 2021.

Given the merits described above it is requested that the application be approved.