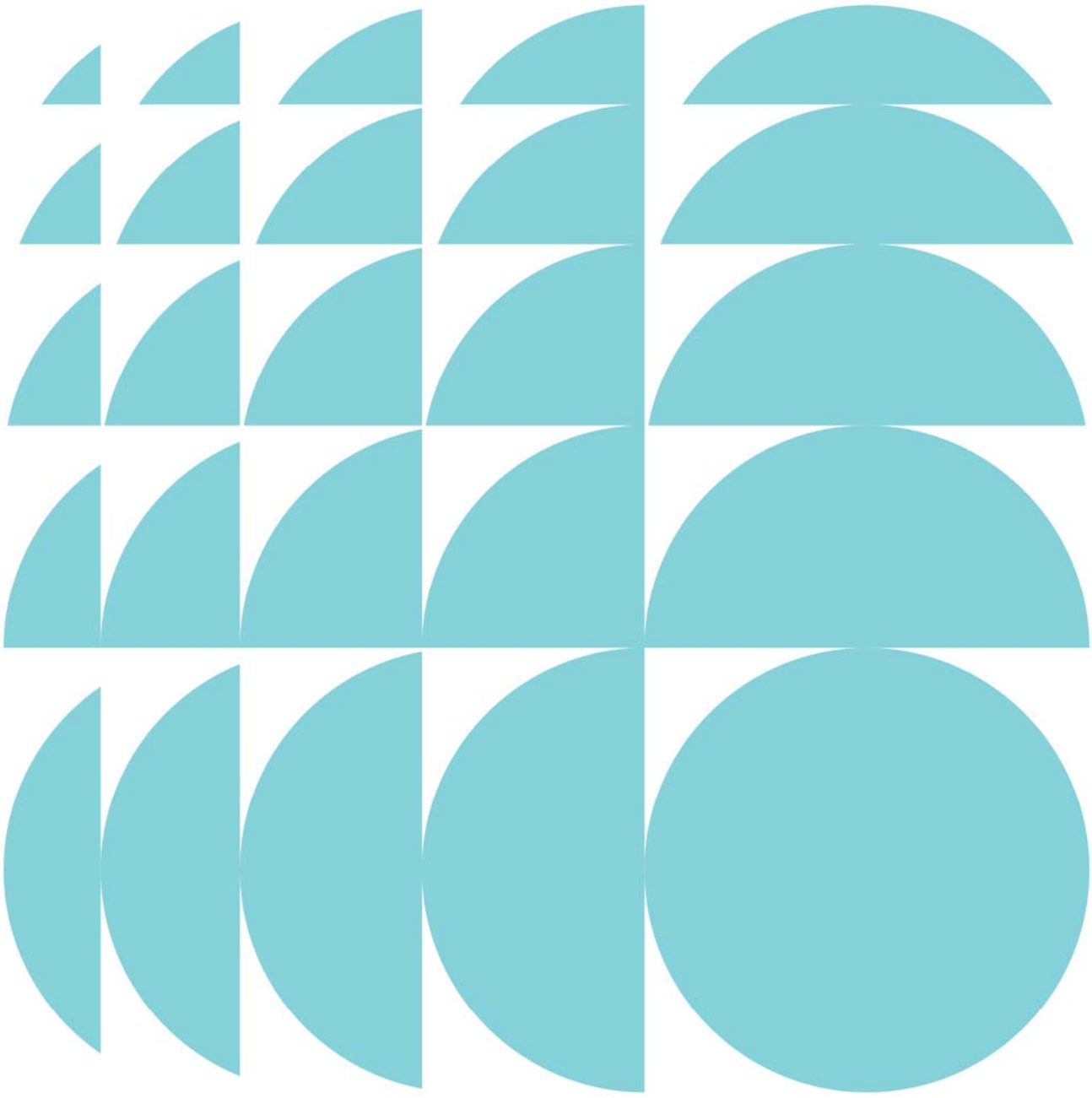
ETHOS URBAN

Environmental Impact Statement

1 Denistone Road, Denistone
Ryde Hospital Redevelopment
(Concept Proposal and Stage 1 Application)

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

16 August 2022 | 2210291



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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Applicant name	Health Administration Corporation
Applicant address	1 Reserve Road, St Leonards, NSW 2065
Land to be developed	Lot 11 DP 1183279, Lot A DP 323458, Lot B DP 323458, Lot 10 DP 1183279
Proposed development	A Concept Proposal for the redevelopment of Ryde Hospital and Stage 1 Early Works as described in Section 3.0 of this Environmental Impact Statement.
Prepared by	
Name	Chris McGillick
Qualifications	BPlan (Hons) RPIA
Address	173 Sussex Street, Sydney, NSW 2000
In respect of	State Significant Development - Development Application
Certification	
	I certify that I have prepared the content of this EIS and to the best of my knowledge: • it is in accordance with Division 5 of the Environmental Planning and Assessment Regulation 2021; • all available information that is relevant to the environmental assessment of the development to which the statement relates; and • the information contained in the statement is neither false nor misleading.
Signature	
Name	Chris McGillick
Date	16/08/2022

Executive 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 a Concept Proposal and Stage 1 Application for the redevelopment of Ryde Hospital.

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* (Planning Systems SEPP) as State Significant Development (SSD) for the purposes of the EP&A Act. A CIV Statement has been prepared by Genus Advisory confirming that the project has a CIV of more than $30 million (provided under a separate cover) and the proposal is therefore SSD.

A request for the issue of project-specific Secretary's Environmental Assessment Requirements (SEARs) was made on 14 February 2022. The SEARs were issued on 14 March 2022. This submission is made in accordance with DPE's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses all issues raised in the SEARs.

Project Overview

This State Significant Development Application seeks approval for a Concept SSD Application pursuant to section 4.22 of the EP&A Act to facilitate the future redevelopment of the site. Specifically, this SSD Application seeks approval for:

- A Concept Proposal to establish maximum building envelopes and gross floor area (GFA) for future development, comprising:
  - Two maximum building envelopes:
    - A clinical services building envelope located in the centre of the site, with a podium height of RL113.70 and a tower height of RL136.50.
    - A multi-deck car park envelope located in the east of the site, with a maximum height of RL116.20 that can accommodate approximately 350 vehicles.
  - A maximum GFA of 40,000m^2 for the clinical services building and equivalent 15,000m^2 for the multi-deck car park (if parking spaces counted as GFA).
  - Vehicle access from Ryedale Road and Denistone Road.
  - Refurbishment of existing buildings including Denistone House.
  - Indicative demolition and vegetation removal.
  - Retention of the existing Blue Gum High Forest in the southern portion of the site.
- Physical Stage 1 works to prepare the site for the future development, including:
  - Demolition of buildings 11, 17, and 18.
  - Installation of a temporary building to facilitate the decanting and relocation of existing hospital services.
  - Site preparation works, including clearing and tree removal.
  - Bulk earthworks, shoring work and internal roads.
  - Establishment of access points for construction workers and vehicles from Ryedale Road.
  - Termination of in-ground building services and augmentation of utilities as required.
  - Provision of temporary at-grade parking for hospital staff, visitors and construction workers.

Strategic Context

The proposal 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). This is directly consistent with the overarching themes and requirements of all 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 proposal is permissible with consent and meets the objectives of the subject zone. The proposal is consistent with the relevant planning controls that apply to the site, including all relevant SEPP's.

Engagement

Consultation has been undertaken with various stakeholders including the Department of Agriculture, Water and the Environment, DPE, City of Ryde Council, NSW Rural Fire Service (RFS), Government Architect NSW, DPE's Environment and Heritage Group (EHG), Transport for NSW (TfNSW) and service providers including Ausgrid, Jemena, Sydney Water.

Key to the Concept Proposal, a series of meetings and correspondence was undertaken with RFS and EHG to ensure the project adopted an appropriate, balanced outcome between the bushfire and biodiversity considerations. This engagement was critical in the siting of the Concept Proposal building envelope and the strategy for managing bushfire threats. RFS and EHG have indicated support for the proposal as represented in this EIS.

As well as this, 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.

The key issues raised during the consultation process included biodiversity impacts, Aboriginal heritage, and bulk and scale. 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 proposal.

The impacts of the Concept Proposal include bulk, scale, and visual amenity impacts resulting from the proposed built form. These will be addressed through modulation, articulation and landscaping, as part of the future Stage 2 Detailed SSDA. The Concept Proposal adequately seeks to avoid impacts to biodiversity through retention of the Blue Gum High Forest and the implementation of a sympathetic bushfire asset protection zone. Similarly, the proposal will minimise any impact to heritage through careful consideration of existing heritage buildings and features on site. Overall, the potential impacts to arise as a result of the Concept Proposal are considered reasonable given the modulation of the massing and the needs of a major hospital. 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 and opportunities for job growth.

Noise and vibration impacts during the Stage 1 Early 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, waste management and disruption to hospital services also have the potential to arise during construction, however, they will be suitably mitigated through the implementation of a detailed Construction 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 and discontinuous. Any impacts will be suitably mitigated to minimise the impact to hospital patients, staff, visitors, and the surrounding community.

Conclusion and Justification

The EIS addresses the SEARs, and the proposal establishes a Concept Proposal and Stage 1 works for the future redevelopment of Ryde Hospital. The potential impacts of the development are acceptable and are able to 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 North Sydney region, which will deliver approximately 312 jobs (including 281 direct jobs) during the construction phase and an additional 232 direct ongoing health services jobs and 26 indirect jobs during the operational phase.
- The development will support a significant piece of social infrastructure, increasing the number of hospital beds and health workers to Ryde.
- 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 future 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 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 consistent with the relevant planning controls for the site.
- 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 proposal, 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 (Health Infrastructure), in support of an SSD Application for a Concept Proposal and Stage 1 application for the redevelopment of Ryde Hospital (the Project) at 1 Denistone Road, Denistone (the Site).

The proposal is SSD under Schedule 1 of the 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 EP&A Act, Clause 175 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), and the issued SEARs. **Appendix A** provides a SEARs compliance table that shows where the SEARs have been addressed in this EIS. 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, as well as providing an environmental assessment of the project.

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

This State Significant Development Application seeks approval for a Concept SSD Application pursuant to section 4.22 of the EP&A Act to facilitate the future redevelopment of the site. Specifically, this SSD Application seeks approval for:

- A Concept Proposal to establish maximum building envelopes and gross floor area (GFA) for future development, comprising:
  - Two maximum building envelopes:
    - A clinical services building envelope located in the centre of the site, with a podium height of RL113.70 and a tower height of RL136.50.
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  - Vehicle access from Ryedale Road and Denistone Road.
  - Refurbishment of existing buildings including Denistone House.
  - Indicative demolition and vegetation removal.
  - Retention of the existing Blue Gum High Forest in the southern portion of the site.
- Physical Stage 1 works to prepare the site for the future development, including:
  - Demolition of buildings 11, 17, and 18.

- Installation of a temporary building to facilitate the decanting and relocation of existing hospital services.
- Site preparation works, including clearing and tree removal.
- Bulk earthworks, shoring work and internal roads.
- Establishment of access points for construction workers and vehicles from Ryedale Road.
- Termination of in-ground building services and augmentation of utilities as required.
- Provision of temporary at-grade parking for hospital staff, visitors and construction workers.

Termination of in-ground building services and augmentation of utilities as required. **Section 3.0** of this EIS provides further description of the Project.

1.3 Objectives of the Development

The objectives of the proposed development include:

- Increasing clinical services capacity in order to meet the needs of the local population.
- Emphasise the local context and the site's connection to country through urban form making, architectural articulation, curation of interior settings and integration with local ecologies, including the Blue Gum High Forest which is located on the site.
- Assist with integration between hospital services through the facilitation of additional vehicle, pedestrian and public transport access to and through the campus.
- Create intuitive wayfinding cues, located throughout the campus, supported by colour and material selections and articulation.
- 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.
- Maintain the identity of Ryde Hospital and establish/maintain linkages between new and existing buildings.
- Facilitate positive staging and decanting solutions, as well as growth opportunities for priority service areas.
- Optimise the re-use of existing assets that retain a sufficient residual life cycle.
- Leverage heritage assets to frame and create high value public domain areas.

1.4 Site Overview

The Ryde Hospital site is located at 1 Denistone Road, Denistone within the City of Ryde Local Government Area (LGA). **Figure 1** shows the site and its context. **Section 2.1** and **Section 2.2** of this EIS provide a detailed description of the site and its surrounding context. The site is legally described as Lot 10 and 11 in DP 1183279, and Lot A and Lot B in DP323458.

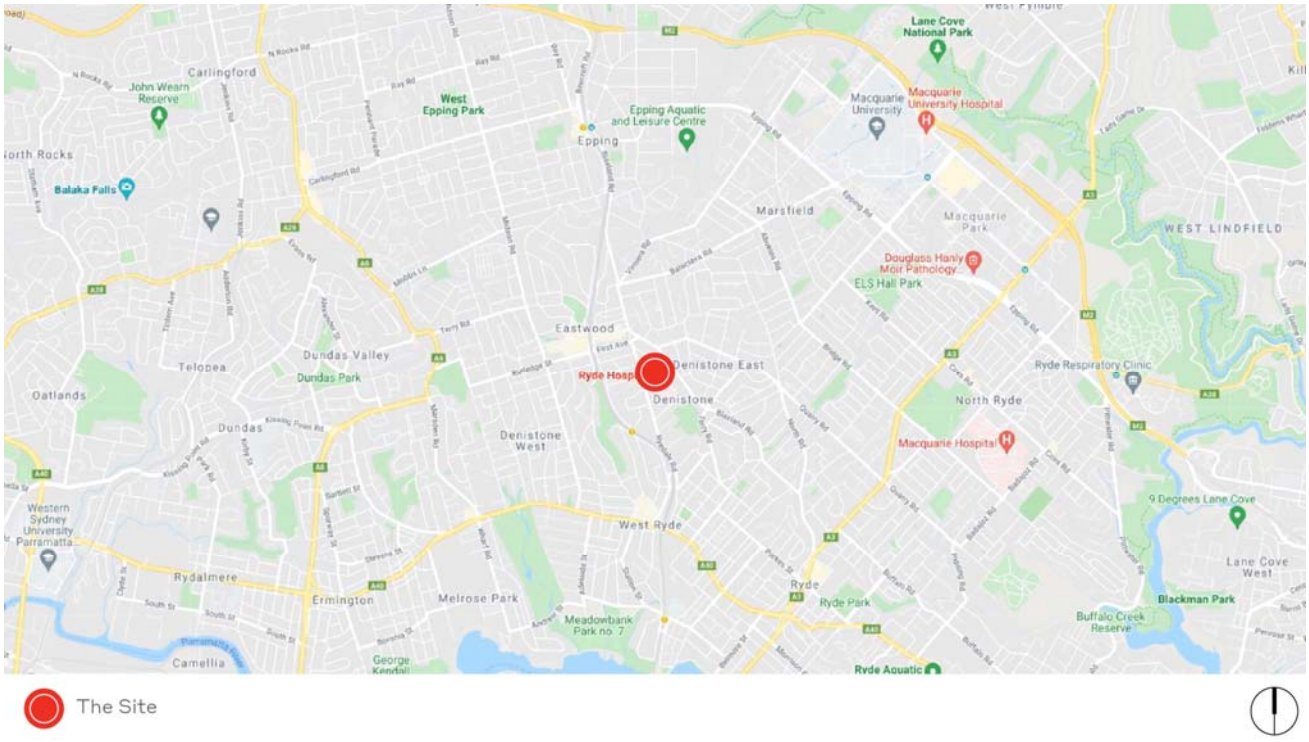

Figure 1 Locational Context

Source: Nearmap & Ethos Urban

1.5 Other Approvals

No other planning approvals are being sought for the Ryde Hospital Redevelopment under the EP&A Act. It is expected that the required works will be undertaken in accordance with this SSD Application, which includes physical Stage 1 Early Works, and the future Stage 2 Detailed DA for main works associated with the redevelopment. A licence has been granted for undertaking low-level exotic vegetation clearing within the Blue Gum High Forest. 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).

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 Concept Proposal includes an overhead pedestrian connection to Lot 10 DP 1183279 (known as 37 Fourth Avenue, Denistone), which is owned by the State of NSW. While some physical works would need to be carried out to facilitate the link within this allotment (subject to a future application), it is not relevant to all technical assessments. Therefore, Lot 10 DP 1183279 is only referred to in the consultant reports to which assessment of the link bridge is relevant.

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

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** and photos of the existing development are shown in **Figure 4** to **Figure 9**.

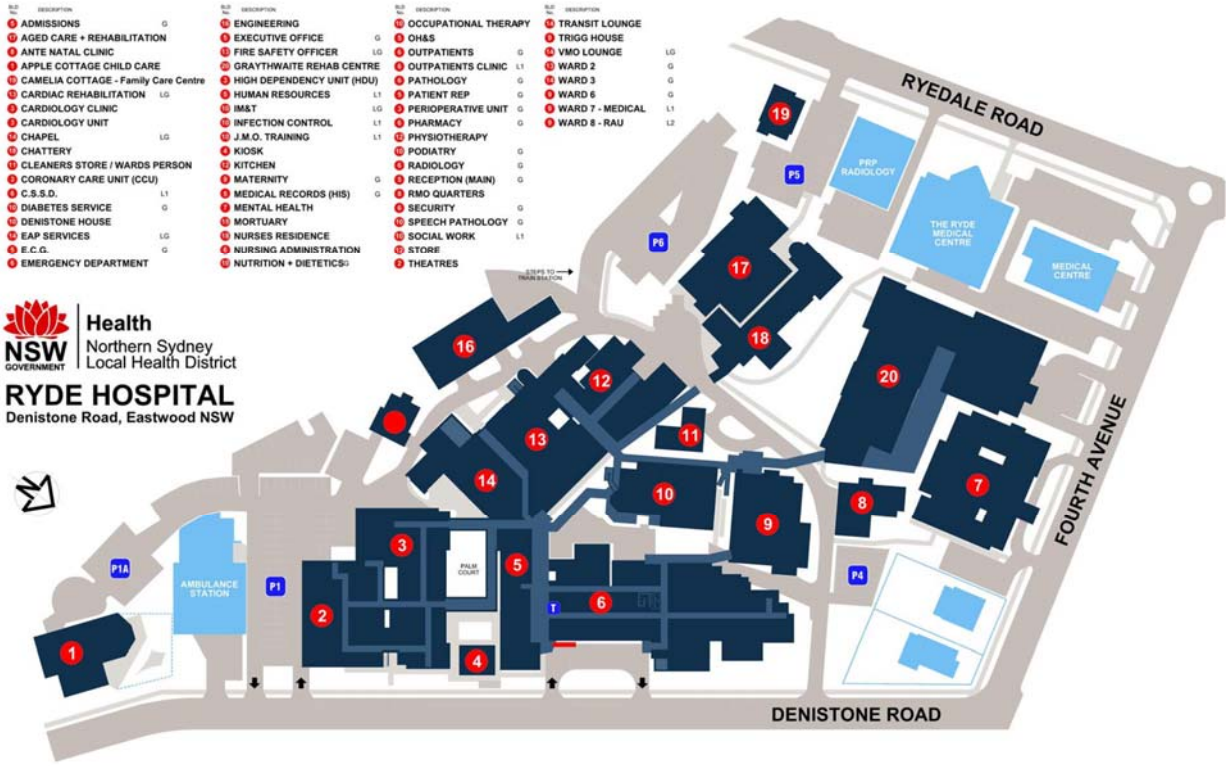

Figure 3 Existing layout of Ryde Hospital

Source: Northern Sydney Local Health District

Figure 4 Main Hospital Entrance off Denistone Road

Source: Ethos Urban

Figure 5 P6 Car Parking Area

Source: Ethos Urban

Figure 6 Existing Building in the central portion of the site

Source: Ethos Urban

Figure 7 Vegetation in the southern portion of the site

Source: Ethos Urban

Figure 8 Denistone House

Source: Ryde Hospital

Figure 9 Blue Gum High Forest, viewed from Ryedale Road

Source: Google Maps

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 *Environment 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 Biodiversity Development Assessment Report (**Appendix M**) and the Arboricultural Impact Assessment (**Appendix N**). The location of vegetation on site as identified in the BDAR is provided at **Figure 10**.

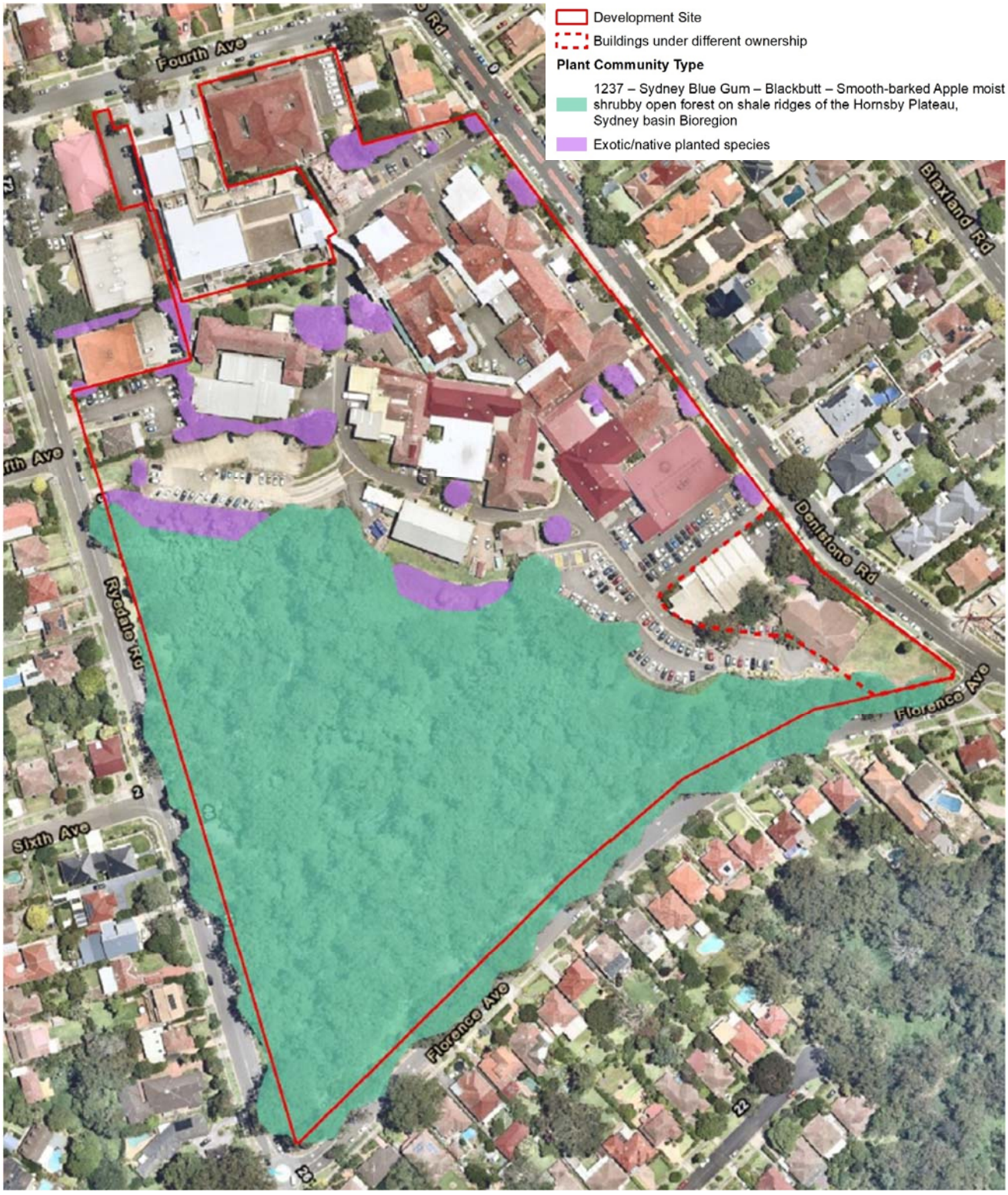

Figure 10 Location of Vegetation on Site

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 AA**.

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.

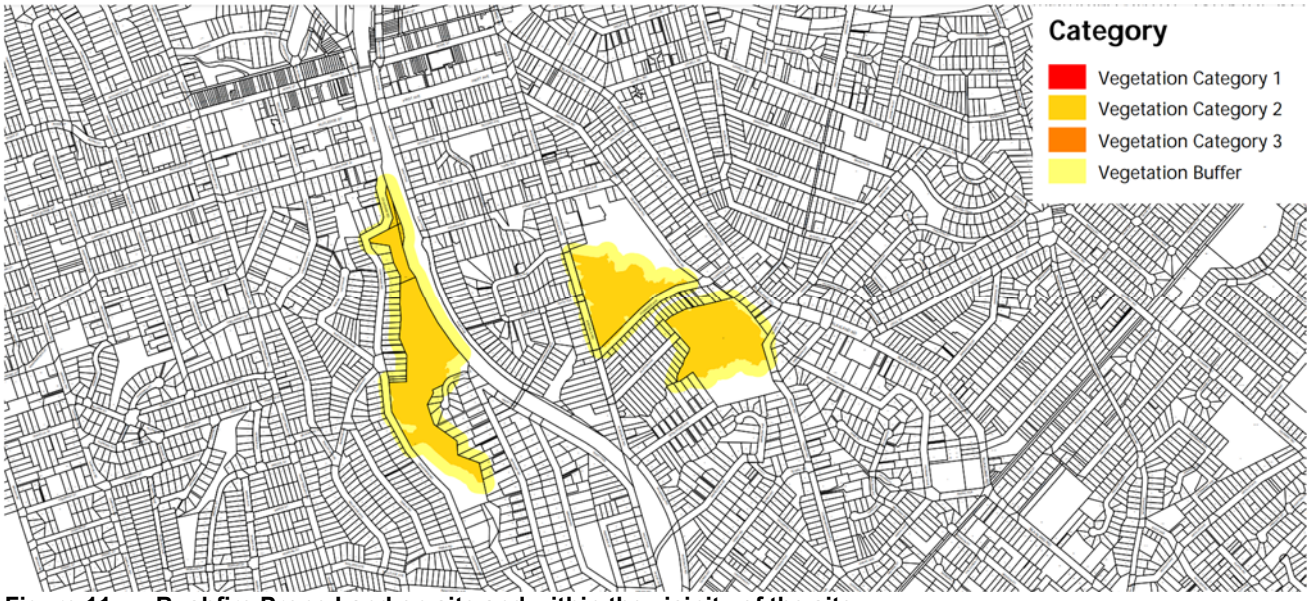

Figure 11 Bushfire Prone Land on site and within the vicinity of the site

Source; City of Ryde Council

2.2.5 Heritage

Ryde Hospital comprises development from 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 8**.
- **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).

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.

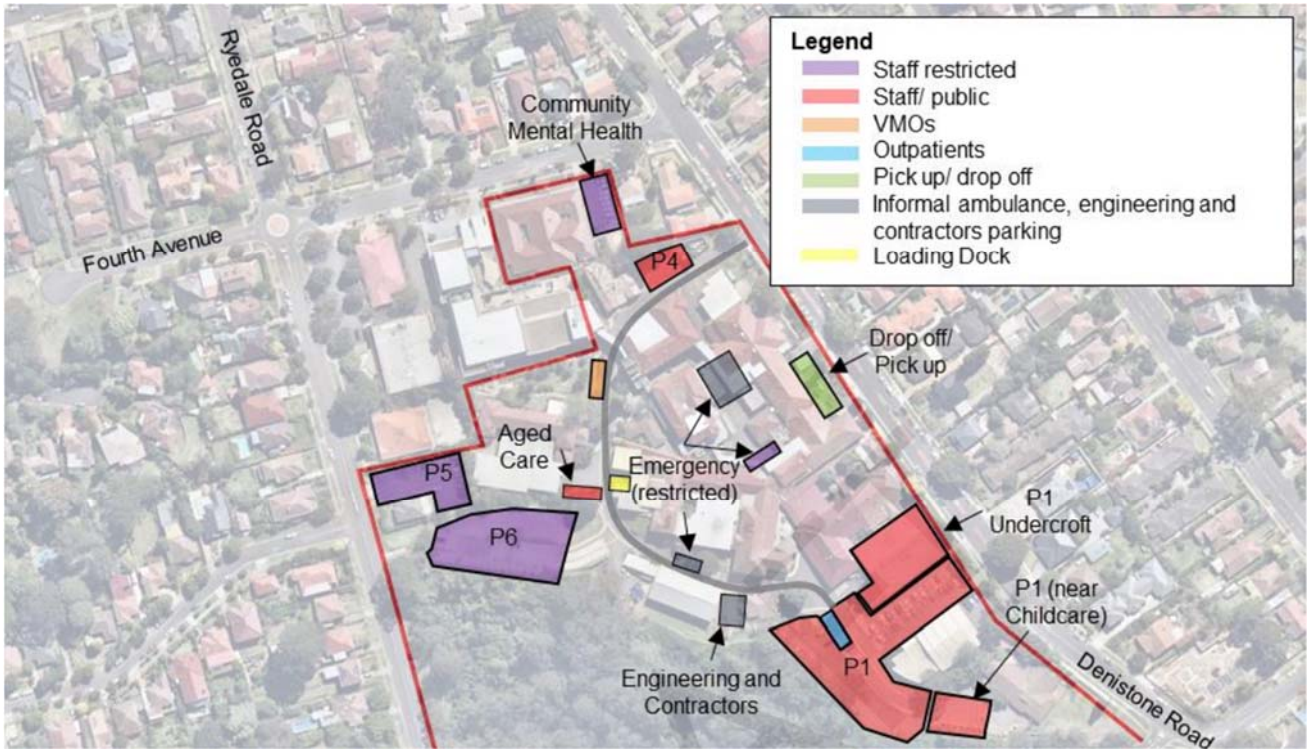

Figure 12 Parking Provision

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 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.

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 along Florence Avenue, Fourth Avenue and Ryedale Road. 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 opposite the site on Denistone Road, servicing the 515 route, which provides access to the Ryde and Eastwood Town Centres.

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 has confirmed that there are a number of contaminants located on site, including asbestos and heavy metals. Refer to the Detailed Site Investigation at **Appendix O**.

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 2.7m and 3.01m below surface level.

2.2.9 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.

Figure 13 Development along Fourth Avenue

Source: Ethos Urban

Figure 14 Development along Ryedale Road

Source: Ethos Urban

Figure 15 Denistone Park, located south of the site

Source: Ethos Urban

Figure 16 Eastwood Town Centre, located further north of the site

Source: Ethos Urban

2.3 Strategic Planning Context

Government plans, policies and guidelines relevant to the Project's strategic context 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.

Table 2 below summarises the Project's strategic context as established by these documents.

Table 2 Summary of Strategic Context

Strategic Plan	Strategic Context
NSW State and Premier's Priorities	The proposal 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 proposal will deliver health infrastructure 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 proposal 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 North District Plan	The Ryde Hospital Redevelopment will support the vision of boosting Greater Sydney's liveability, productivity and sustainability. In a general sense, the proposal 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. • 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 LSPS does not identify any specific strategic vision for the site. Notwithstanding, the proposal aligns with the planning priorities of the LSPS in that it will: • Provide necessary infrastructure to support the needs of the current and future population. • Promote connectivity and accessibility by providing critical health infrastructure that is close to residential development and the Eastwood Town Centre. • Encourage walking and cycling through the provision of bicycle racks, end of trip facilities and through existing pedestrian and bicycle infrastructure within the vicinity of the site. • Provide an attractive, sustainable, well-designed and efficient hospital campus. • Protect and enhance the Connection to Country through inclusion of a number of culturally significant locations on the site as part of network of public spaces and linked walking trails. • Stimulate job growth through the provision of 312 jobs during construction (Stage 1 and Stage 2) and 258 additional jobs during operation. • Protect and enhance the Blue Gum High Forest that is located in the southern portion of the site.
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 process. Further detail is provided in **Section 6.2**.
State Infrastructure Strategy 2018 – 2038 Building the Momentum	The proposal is consistent with the State Infrastructure Strategy by: • Delivering hospital infrastructure to respond to existing capacity constraints and expected population growth. • Providing state of the art facilities to create greater efficiencies and improved operation. Importantly, the proposal forms part of a coordinated investment in the growth of the NSLHD to support population growth and change.
Future Transport Strategy 2056	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.

<table>
<tr><th>Strategic Plan</th><th>Strategic Context</th></tr>
<tr><td></td><td>The proposal 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 6.14.</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 proposal’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 9 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.
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 6.19.</td></tr>
<tr><td>Objective 3. Better for Community – inclusive, connected and diverse</td><td>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.</td></tr>
<tr><td>Objective 4. Better for People – safe, comfortable and liveable</td><td>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 6.14.</td></tr>
<tr><td>Objective 5. Better Working – functional, efficient and fit for purpose</td><td>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.</td></tr>
<tr><td>Objective 6. Better Value – creating and adding value</td><td>The proposed development will cater for the increased health demands of the community, whilst meeting the NSW Government’s budget for the works.</td></tr>
</table></td></tr>
</table>

Strategic Plan	Strategic Context	
	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. The Health Urban Development Checklist has been considered by project architect STH and a summary of its inclusion into the design process is described at Section 6.3 of the Design Report (**Appendix D**).	
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 45% canopy cover across the site. In addition, the proposal will include communal 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 proposal's consistency with the principles of Greener Places is provided below. Project landscape architects Taylor Brammer have provided a landscape response to the principles at **Appendix E**.	
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 proposal 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 6.5**). • 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 proposal is not located in the vicinity of any other significant developments that are planned or are currently being undertaken. The proposal 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 proposal 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 proposal 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.

The proposed redevelopment will provide facilities and services in line with modern 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 and visitors.

2.6 Analysis of Alternatives

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

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.

Option 2 – Alternative Designs

Health Infrastructure and the design team have explored a number of different options for managing the increased growth of health needs and resultant infrastructure response needed within Ryde Hospital. Six design options were considered in detail (**Figure 17**) to respond to the siting of the proposed building envelope 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 proposed development is the most effective proposal to meet the objectives of the project. A full analysis of the options is provided in the Design Report prepared by STH at **Appendix D**.

Figure 17 Alternative Designs Considered

Source: STH

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.

Option 4 – The Proposal

The proposed design involves undertaking the proposed redevelopment as outlined in this SSD application (as described in **Section 3.0**). The proposed building envelope 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.

Options Considered for the Multi-Deck Car Park

A significant component of the proposal is a building envelope for the multi-deck car park. As part of the Concept Proposal design development, a range of options were considered for siting the car park, including (options shown at **Figure 18**):

- **Option 1**: Adjacent to the Ryedale Road frontage. This location provides optimal proximity to the hospital, including the main vertical circulation core, while not being suited to clinical uses due to disconnection from internal circulation network and constraints imposed by required APZ. The location also allows for access from Ryedale Road with a distinct separate logistics entrance away from the main entrance to the hospital.
- **Option 2**: Southern end of the site between existing Ambulance station and proposed hospital. While this location can accommodate the car park with access from Denistone Road, it precludes future expansion of the hospital in that area of the site, presents a long travel distances to the hospital main entry and would be restricted in terms of staging to the last phase of campus redevelopment.
- **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 1 was selected and progressed to concept design.

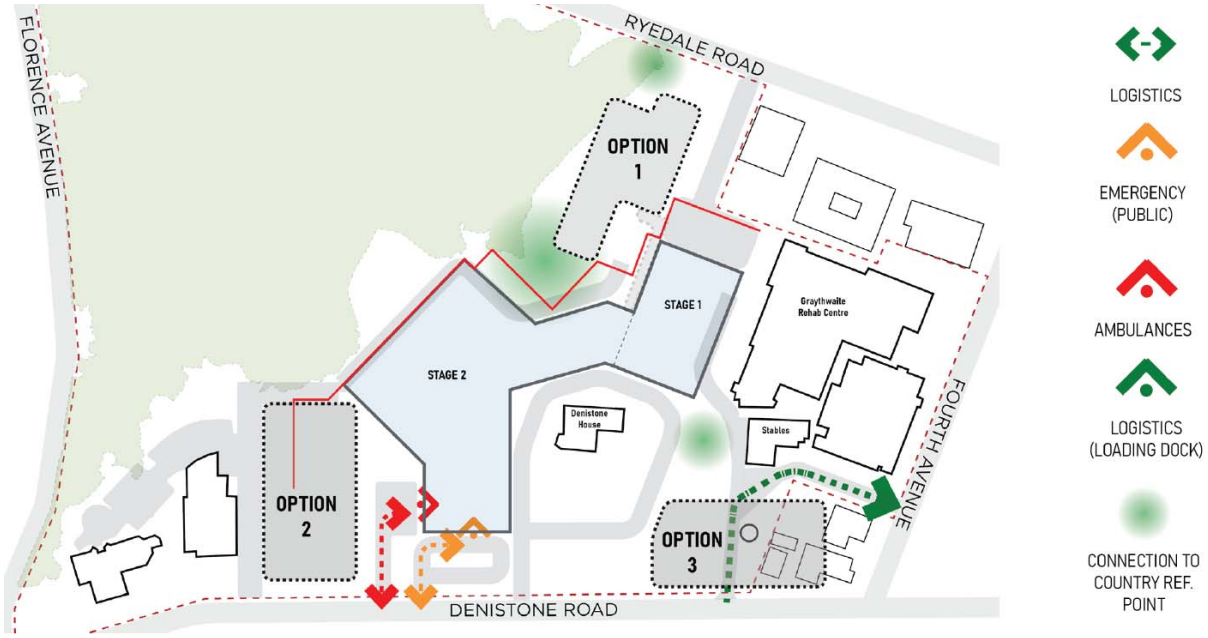

Figure 18 Options Considered for Car Park Location

Source: STH

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

This State Significant Development Application seeks approval for a Concept SSD Application pursuant to section 4.22 of the EP&A Act to facilitate the future redevelopment of the site. Specifically, this SSD Application seeks approval for:

- A Concept Proposal to establish maximum building envelopes and gross floor area (GFA) for future development, comprising:
  - Two maximum building envelopes:
    - A clinical services building envelope located in the centre of the site, with a podium height of RL113.70 and a tower height of RL136.50.
    - A multi-deck car park envelope located in the east of the site, with a maximum height of RL116.20 that can accommodate approximately 350 vehicles.
  - A maximum GFA of 40,000m^2 for the clinical services building and equivalent 15,000m^2 for the multi-deck car park (if parking spaces counted as GFA).
  - Vehicle access from Ryedale Road and Denistone Road.
  - Refurbishment of existing buildings including Denistone House.
  - Indicative demolition and vegetation removal.
  - Retention of the existing Blue Gum High Forest in the southern portion of the site.
- Physical Stage 1 works to prepare the site for the future development, including:
  - Demolition of buildings 11, 17, and 18.
  - Installation of a temporary building to facilitate the decanting and relocation of existing hospital services.
  - Site preparation works, including clearing and tree removal.
  - Bulk earthworks, shoring work and internal roads.
  - Establishment of access points for construction workers and vehicles from Ryedale Road.
  - Termination of in-ground building services and augmentation of utilities as required.
  - Provision of temporary at-grade parking for hospital staff, visitors and construction workers.

Architectural drawings are included at **Appendix D**. A plan showing the proposed building envelopes is provided at **Figure 19**.

Figure 19 Proposed Site Layout of the Concept Proposal (Showing Maximum Building Envelopes)

Source: STH

Table 3 below provides an overview of the key numerical information relating to the Project.

Table 3 Key Project Information

Component	Proposal
Ryde Hospital Redevelopment (Concept and Stage 1)	
Proposed land use	Hospital
Legal Description	Lot 11 DP 1183279, Lot A DP 323458, Lot B DP 323458, Lot 10 DP 1183279
Site area	7.69Ha
Concept Proposal	
Maximum Gross Floor Area	55,000m^2 (including 40,000m^2 clinical services building and 15,000m^2 if car parking is counted as GFA)
Maximum Height	Hospital Building – 39.5m (RL 136.50) Multi-Storey Car Park – 24.9m (RL 116.20)
Car Parking	A total of approximately 500 car parking spaces across the campus. The proposed building envelopes have been designed to accommodate approximately 350 spaces in the multi-deck car park and 150 at-grade throughout the remainder of the site.
Jobs	Construction: 312 (281 direct and 31 indirect) Operation: 258 additional jobs (232 direct and 26 indirect)
Stage 1 Early Works	
Construction Hours	• 7:00am and 6:00pm on Monday to Friday;

Component	Proposal
	• 8:00am to 1:00pm on Saturday; and • No work to take place on Sunday or public holidays.

3.1.1 Design Principles

The following 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. Leverage Heritage assets to frame and create high value public domain areas.

3.2 Concept Proposal

This application seeks approval for a Concept Proposal that will facilitate the future redevelopment of the site. Specifically, the Concept Proposal seeks approval for maximum building envelopes and maximum GFA. The proposed building envelopes set the maximum physical extents within which the future detailed building design must be contained. The Concept Proposal does not seek consent for the construction of any built form, or for the detailed internal layout or external treatment of the building additions. These elements will be subject to a future Stage 2 Detailed SSDA.

Building envelope drawings have been prepared by STH and are provided in **Appendix D**. The building envelope is shown in **Figure 20**. Each component of the Concept Proposal is described in further detail within the following sections.

3.2.1 Maximum Building Envelopes

The proposed building envelope comprises two separate components, a clinical services component and a multi-deck carpark component. The elevations of the building envelopes are shown in **Figure 21** to **Figure 24**.

The building envelope for the clinical services component has a maximum height of 39.5m (RL 136.50). The envelope is irregular in shape and responds to the site constraints (including biodiversity, heritage and bushfire) while also accommodating the functional requirements of the future hospital building. It can facilitate an eight-storey building, with a four-storey podium and four-storey tower component.

The tower component will be setback between 6-9m from the podium. An above-ground pedestrian link will also be provided between the clinical services building and the existing Graythwaite Building (Lot 10 owned by the State of NSW). Allowances have also been made for canopies over the key budling entrance locations. The clinical services building envelope is shown in blue at **Figure 20** to **Figure 23**.

The building envelope for the multi-deck carpark component has a maximum height of 24.9m (RL 116.2). It can accommodate approximately 350 car parking spaces. The proposed setbacks enable vehicle access from Ryedale Road and response to the sloping topography of the site. The multi-deck car park building envelope is shown in purple at **Figure 20** to **Figure 23**.

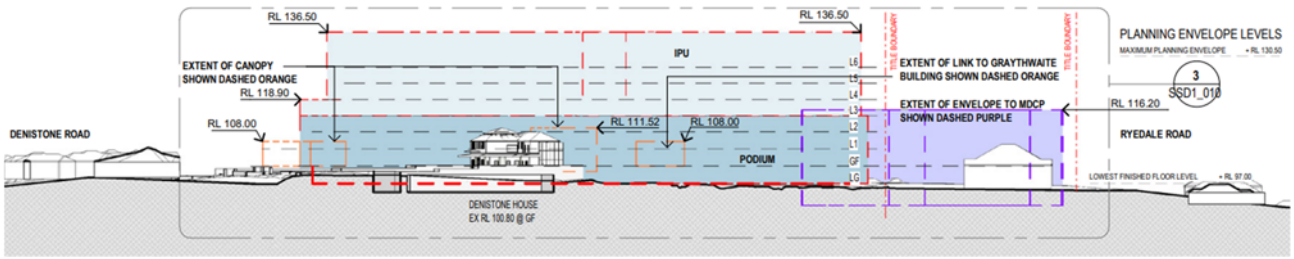

Figure 20 Building Envelope North Elevation – from Fourth Avenue

Source: STH

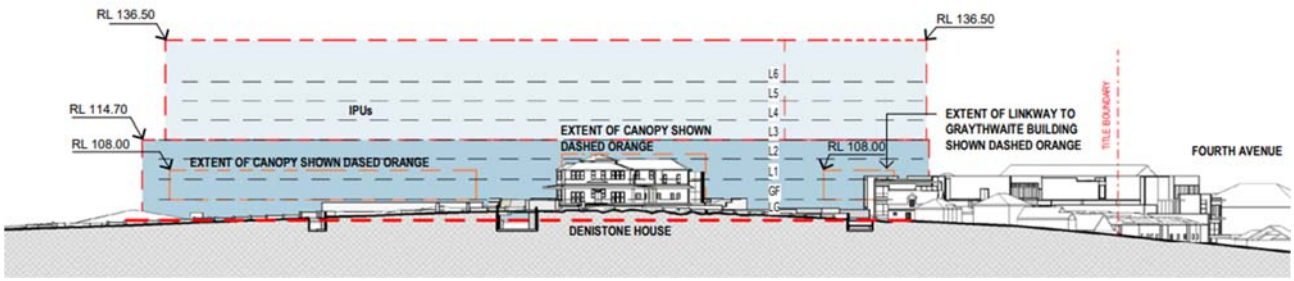

Figure 21 Building Envelope East Elevation – from Denistone Road

Source: STH

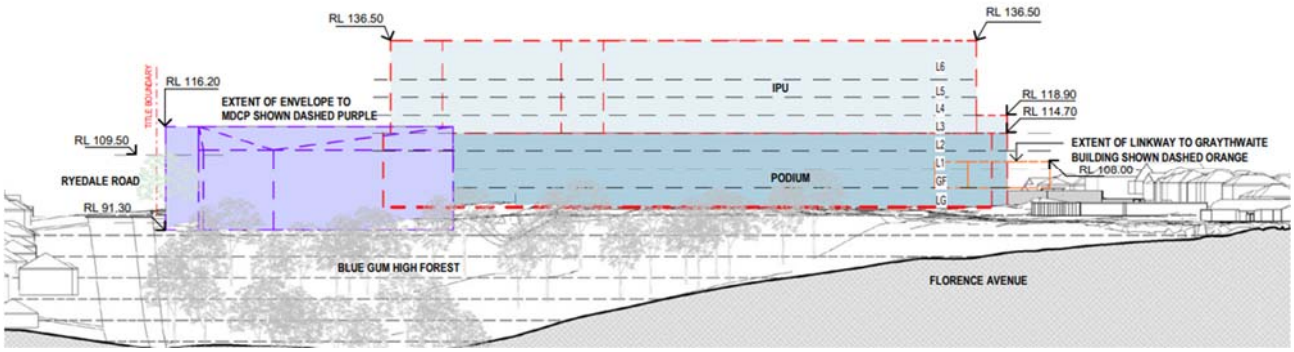

Figure 22 Building Envelope South Elevation – from Florence Avenue

Source: STH

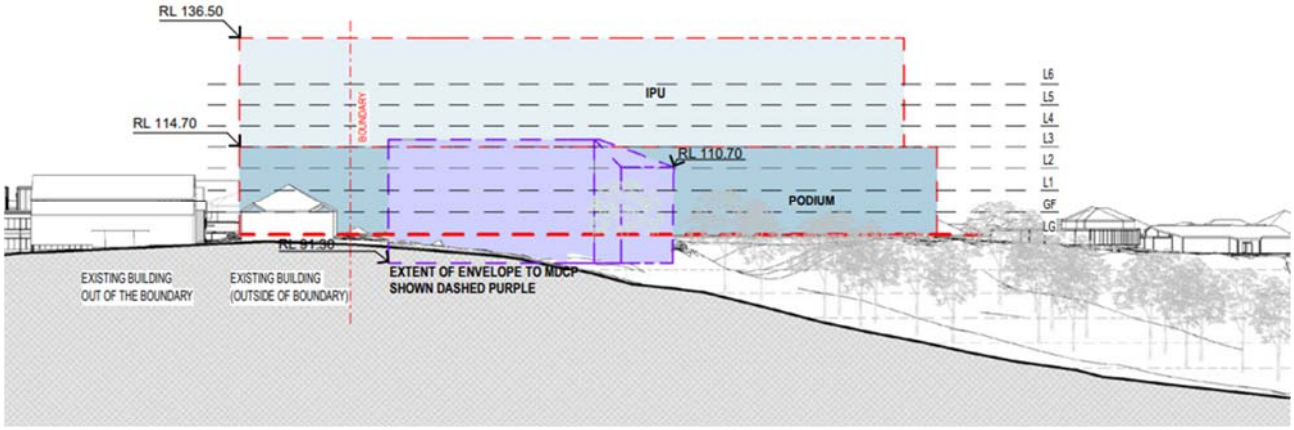

Figure 23 Building Envelope West Elevation – from Ryedale Road

Source: STH

3.2.2 Maximum Gross Floor Area

The Concept Proposal seeks approval for a maximum GFA of 55,000m^2. The maximum GFA and the maximum building envelopes set the maximum potential future detailed development. This includes 40,000m^2 within the clinical services building envelope and 15,000m^2 of GFA in the multi-deck car park building envelope (which includes car parking spaces, if they are considered to count as GFA).

3.2.3 Indicative Façade Design and Materiality

Approval is not sought for the façade design of the future buildings. However, façade design has been considered in the consideration of the building envelopes, including how the future development will respond to visibility from all street frontages. It will incorporate articulation and modulation to minimise the overall appearance of the building. Both buildings will use a combination of contemporary materials and finishes that aim to create visual interest and blend harmoniously into the surrounding landscape. The clinical services building will incorporate canopy on the building façade to referencing the natural habitat and environmental influences of the area.

The proposed façade design, including the materials and finishes, will be subject to further review during the Stage 2 Detailed SSDA.

3.2.4 Indicative Landscaping and Public Domain

A Concept Landscape Report and Plans have been prepared by Taylor Brammer and are included at **Appendix E**. The concept 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.
- **Supplementary Tree Planting** – Under the guidance of bushfire engineers, the existing Blue Gum High Forest in the southern portion of the site will be retained and managed to support the proposed APZ. The retention and protection of existing trees in this area represents approximately 45% of the sites area with supplementary trees retained and proposed across the remains of the site. An additional 80 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 E**).
- **Denistone House 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.

Retention of the Blue Gum High Forest means that the canopy coverage at the site will be significant (in excess of 45%). The indicative landscape design is shown in **Figure 25** below. An indicative species selection and planting schedule is provided at **Appendix E**. The final landscape design will be subject to approval as part of the future Stage 2 Detailed SSDA. No landscaping is proposed as part of the Stage 1 Early Works.

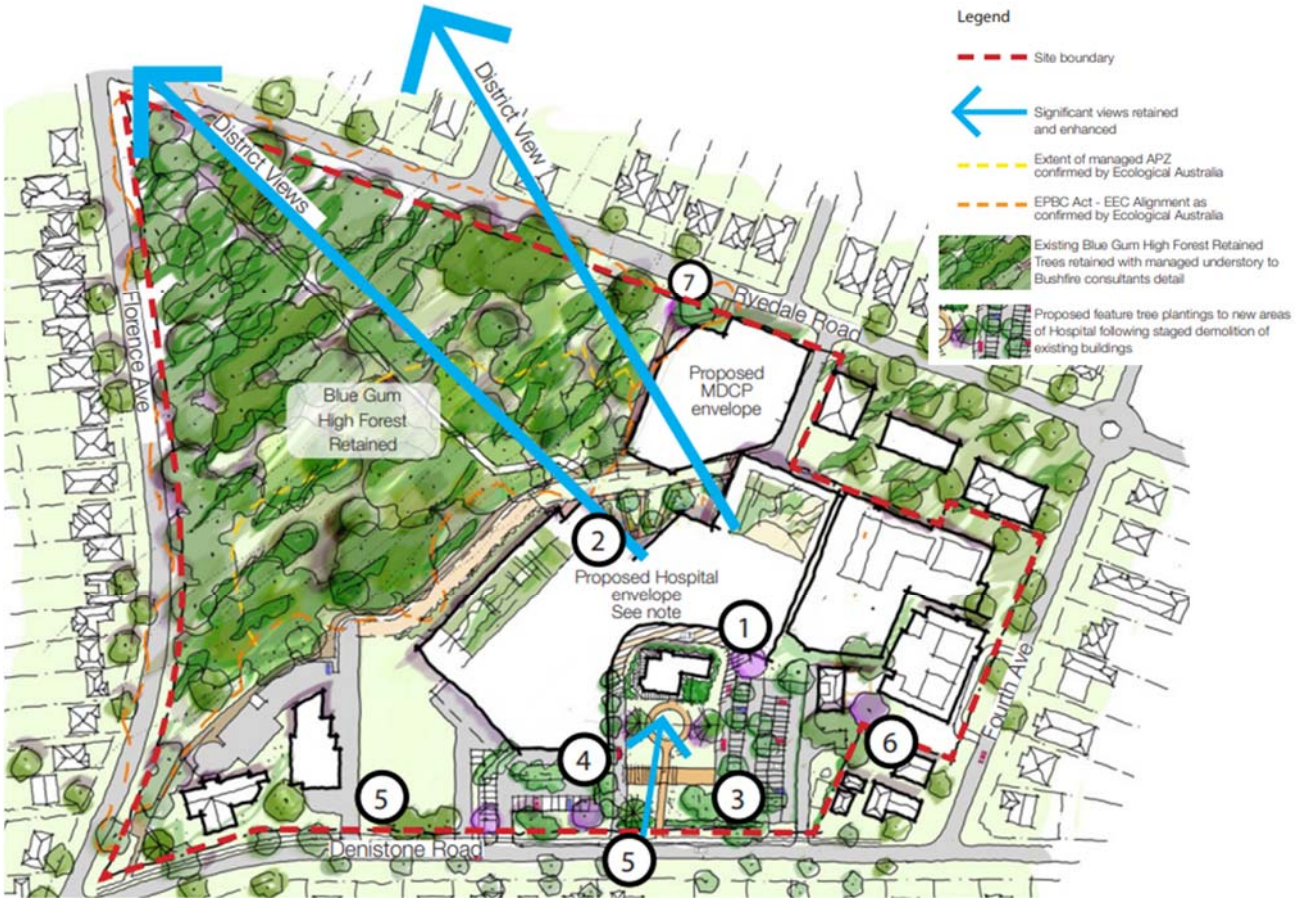

Figure 24 Indicative Landscape Design

Source: Taylor Brammer

3.2.5 Site Access, Parking and Loading

Vehicular access to the multi-deck carpark and loading dock will be provided from Ryedale Road. Additional vehicular access will be provided from Denistone Road and will provide access to:

- At-grade carpark provided along the eastern frontage of the site;
- Short term parking areas to accommodate drop-off / pick up activity associated with the main hospital entrance and emergency department; and
- The Ambulance Station and parking bays located in the eastern most portion of the site.

Pedestrian access will be achieved via the existing pedestrian infrastructure that surrounds the site from the various street frontages. Up to approximately 500 total car parking spaces will be provided across the site, including approximately 350 parking spaces within the multi-deck car park and 150 spaces at-grade throughout the site.

3.2.6 Indicative Heritage Works

As detailed in the Heritage Impact Statement (**Appendix H**), a number of works will be undertaken to the existing heritage buildings on site.

Denistone House will be retained and conserved to the highest extent feasible, whilst allowing for a viable, ongoing and functional use. The proposal includes the retention and conservation of the original portion of Denistone House and removal of intrusive additions which will assist to conserve and restore original building facades, form and setting and provide a better curtilage for the building. Building 6 will be demolished to reinstate views of Denistone House from Denistone Road and will also enable a generous landscaped area to be provided for the community.

In addition, the future proposal will seek demolition of Trigg House, which is of low heritage value. This is necessary to re-establish the visual and physical landscape connection between Denistone House and the Stables. It will also serve to make these buildings more prominent in the setting of the hospital campus.

The former Stables will be retained, whilst also allowing for a viable, ongoing and compliant use. The rear wing may be removed, noting that it is in a very poor condition.

Works to heritage buildings will be subject to future approval under the Stage 2 Detailed SSD Application.

3.2.7 Indicative Demolition, Tree Removal and Earthworks

An indicative extent of the demolition, tree removal and earthworks required to facilitate the future Detailed SSD Application is provided in the appended Architectural Drawings, Arborist Report and Civil Engineering Report. Approval for these works will be sought as part of the Stage 2 Detailed SSDA. The works are expected to include:

- Demolition of several existing hospital buildings and internal roads to be undertaken in a staged manner to ensure the ongoing operation of the hospital campus.
- Earthworks to manage the 5m of level difference across the proposed building footprint. Shoring will likely be required where earthworks are undertaken in close proximity to existing operational buildings.
- Tree removal within the development footprint and asset protection zone to facilitate the future built form. Trees will be retained or relocated if possible.
- Minor alterations and additions to existing hospital buildings to be retained to improve the functionality and service offering.

3.2.8 Indicative Infrastructure and Services

The required connections to infrastructure and services for the future development are provided in Hydraulic and Fire Systems Engineering Statement, Electricity and ICT Utility Report, and Civil Engineering Report respectively at **Appendix I** to **Appendix K** and in **Table 4** below.

Table 4 Proposed Infrastructure and Services

Infrastructure/Service	Comment
Water	The proposed development will be connected to the existing Sydney Water mains located on Ryedale Road and Denistone Road. The existing water supply load proposal will increase from 15,600kL per day to 39,600kL per day by 2031. Therefore, the Concept Proposal will necessitate the replacement, diversion and increase of the existing water main to support new loads. Further detail is provided in the Hydraulic and Fire Systems Engineering Statement (**Appendix I**).
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 J**.
Communication Infrastructure	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	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 9,200kL per day to 23,300kL by 2031 as a result of the proposal. Therefore, the Concept Proposal will necessitate the replacement, diversion and increase of the existing sewer drainage system to support new loads. Further detail is provided in the **Appendix I**.
Natural Gas	The existing 1050 kPa steel gas main is located in the western portion of the site, near Ryedale Road. It is proposed to reuse the existing natural gas connection which has been confirmed as adequate to support the requirements of the proposal.

3.3 Stage 1 Works

This SSD Application also seeks approval for physical Stage 1 Early Works. The Stage 1 Early Works will prepare the site for future development while also limiting disruption to clinical services within the live hospital environment. The works will be undertaken in the western portion of the site. Further detail is provided in **Figure 26** and the following sections.

Figure 25 Plan Summarising Stage 1 Early Works

Source: STH

3.3.1 Demolition and Decanting

As part of the Stage 1 Early Works, buildings 11, 17 and 18 will be demolished. Prior to this, the existing hospital services located in these buildings will be decanted and relocated into a prefabricated building that will be temporarily installed along the northern boundary of the site.

3.3.2 Earthworks

As detailed in the Civil Engineering Report at **Appendix K**, partial site grading and shoring will be undertaken to accommodate the future buildings and internal roads within the Stage 1 footprint (shown at **Figure 25**).

The excavation will result in a maximum cut of approximately 2.4m in the south-east corner and a fill of approximately 0.6m in the north-west corner of the proposed location of the Stage 1 works. Temporary shoring will also be required as the proposed excavation will be adjacent to existing operational buildings. The shoring system is proposed to be a concrete contiguous or secant piling wall.

3.3.3 Vegetation Clearing and Tree Removal

There are 47 trees located in the proposed Stage 1 works area. Where possible, the trees will be retained and protection measures will be implemented to enable ongoing protection during construction works. 33 trees are proposed to be removed, which are trees 7, 8, 9, 10, 14, 15, 16, 17, 18, 21, 22, 23, 24, 25, 27, 28, 31, 32, 33, 34, 35, 36, 37, 38, 39, 41, 42, 43, 44, 45, 45, 84 and 85. The remaining trees within the Stage 1 works area will be retained if possible, pending incursion into their structural root zones and tree protection zones. Further detail and

identification of tree numbers is provided in the Arboricultural Impact Assessment at **Appendix N**. In addition, partial removal of the Lantana undergrowth will also be undertaken during the Stage 1 Early Works to support bush management. This was approved separately to the SSDA under a Part 2 Licence of the BC Act.

3.3.4 Site Access

To minimise the impact to the hospital's ongoing operation during the construction phase, all construction vehicles will access the site via the existing driveway on Ryedale Road.

In addition, the works also include the partial demolition of an existing internal road. As a result, access to the loading dock and the maternity ward will be temporarily provided from Denistone Road. Emergency access to the maternity ward will be provided from the informal ambulance parking area and public access to the maternity ward will be provided through the Emergency Department. Access to the loading dock will require vehicles to travel through the P1 parking area via the existing access point on Denistone Road. To accommodate the 4.5 metre height clearance for service vehicles, existing tree branches across the driveway entry will be removed, height clearance bars along the driveway entry will be relocated and a temporary barrier will be provided along the entry road to ensure service vehicles do not travel under an existing area of reduced height clearance along the access road.

The proposed site access routes are shown in **Figure 27** below and further detail is provided in the Traffic Impact Assessment at **Appendix F**.

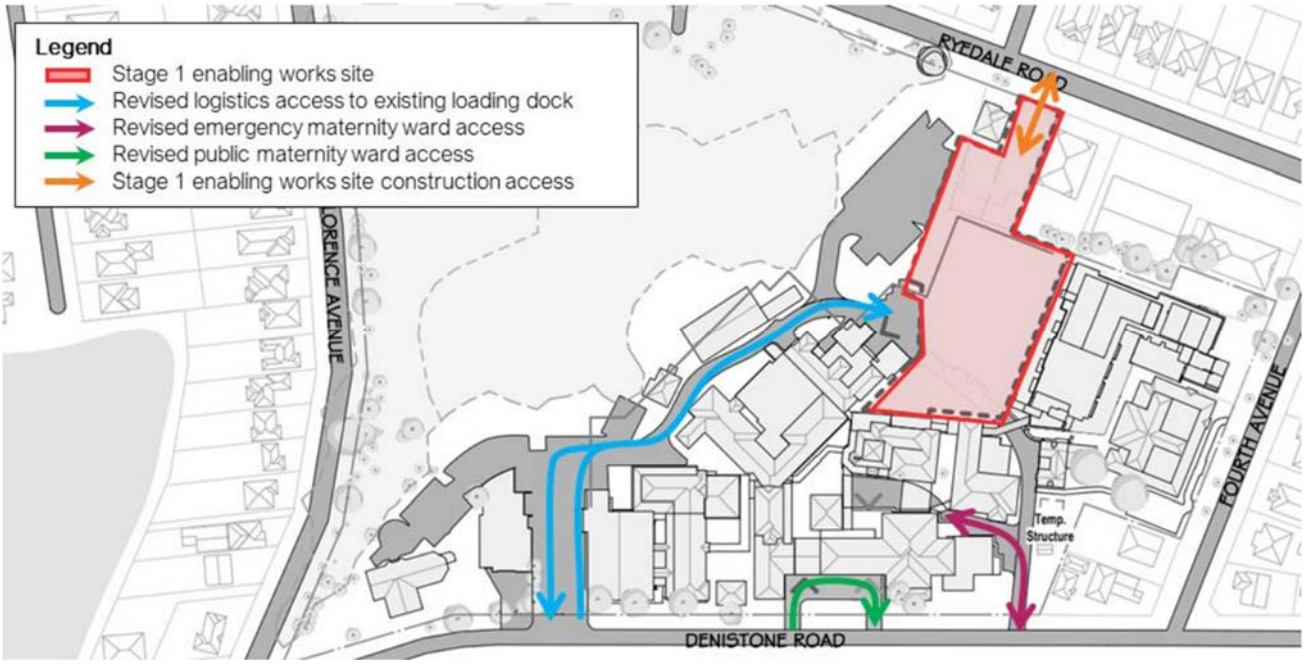

Figure 26 Planned Site Access during Stage 1 Works

Source: Stantec

3.3.5 Utilities and Services

A number of in-ground building services and utilises will be relocated or capped/terminated to facilitate the Stage 1 bulk earthworks. The proposed works include:

- Diversion of the existing DN150 mm sewer drainage pipeline.
- Upgrades to the existing potable water main site infrastructure from Ryedale Road and diversion of new main around the footprint of the new building.
- Relocation of the existing water meter and upgrades to the new meter set to suit Sydney Water requirements.
- Upgrades and relocation to the existing natural gas master meter and inground piping.
- Modifications to the existing fire-fighting site mains, including localised diversion, cutting and capping.

The existing electrical, ICT and security services will be unaffected by the Stage 1 Early Works. These facilities will remain operational. Further detail is provided within the Hydraulic and Fire Systems Engineering Statement (**Appendix I**) and the Electricity and ICT Utility Report (**Appendix J**).

3.3.6 Temporary Car Parking

As part of the Stage 1 Early Works, temporary at-grade car parking will be provided for hospital staff, visitors and construction workers. It will comprise a car park located at the corner of Denistone Road and Florence Avenue and a car park directly adjacent to Building 16.

Access to the car parking areas will be provided via the existing access routes (as outlined in **Section 3.3.4**). Minor civil works will be required to accommodate the proposed parking areas. Further detail is provided respectively in the Transport and Traffic Report and Civil Engineering Report at **Appendix F** and **Appendix K**.

3.4 Land Use and Operational Details

The Concept Proposal and Stage 1 Early Works will enable the continued use of the site as a hospital. The proposed hours of operation are 24 hours a day for seven days a week. It is anticipated that there will be an additional 258 jobs created as a result of the proposal. This includes 232 direct jobs and 26 indirect jobs. Further detail regarding the operation of the hospital will be provided as part of the Stage 2 Detailed SSDA.

3.5 Staging and Delivery

The proposed redevelopment development will be undertaken in two stages:

- Stage 1 – comprises a number of preliminary enabling works that aim to prepare the site for future development. These works are described in **Section 3.3**. Stage 1 is expected to commence in Q1 2023 and will be completed in Q4 2023.
- Stage 2 – comprises the construction of a future hospital building, multi-deck car park and ancillary development works. All works to be undertaken in Stage 2 will be subject to a separate SSDA approval.

3.6 Construction Hours

Construction activities are anticipated to 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.

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 (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 State Environmental Planning Policy (Planning Systems) 2021 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 State Environmental Planning Policy (Planning Systems) 2021 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 State Environmental Planning Policy (Planning Systems) 2021 stipulate that the consent authority is the Minister for Planning (or the Department of Planning and Environment 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. **Table 5** lists legislative approvals that are required for the Project and cannot be refused if the Project is approved.

Table 5 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 1999 Approval

The *Environmental Protection and Biodiversity Act 1999* (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. Approval to undertake these management works has been sought separately via EPBC Licence. As described in **Section 1.5**, a determination on whether the proposal constitutes a controlled action under the EPBC Act is has been undertaken by the Commonwealth Department of Agriculture, Water and the Environment. The determination confirmed that the proposed works do not constitute a controlled action under the EPBC Act and that no further assessment or approval is required (Application Number 2022/09129). A Biodiversity Development Assessment Report has been undertaken and is provided at **Appendix O**. The BDAR assesses the impacts to endangered communities in accordance with the bilateral agreement in accordance with the NSW Biodiversity Conservation Act 2016.

4.4.3 Approvals not required for State Significant Development

Section 4.41 of the EP&A Act stipulates those certain authorisations are not required for State significant development. As shown in **Table 6**, the following legislative approvals would otherwise be required if the Project was not State significant.

Table 6 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

Table 7 identifies pre-conditions to be fulfilled by the consent authority before exercising their power to grant development consent.

Table 7 Pre-Conditions to be fulfilled by the consent authority

Legislation	Pre-Condition
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. A Biodiversity Development Assessment Report has been prepared by Ecological and is included at **Appendix M**. It states that Matters of National Environmental Significance (MNES) have been identified on or near the development site. Notwithstanding this, Ecological confirm that the proposal is unlikely to constitute a significant impact to the MNES. Refer to **Section 6.4**.
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 concept proposal will increase the overall number of hospital beds on site to 230. Therefore, the site is considered a traffic generating activity. Further detail is provided in **Section 6.9**.
	Section 2.48 requires the consent authority to give written notice to the electricity supply authority for the area and take into consideration any response to that notice before granting consent to a development likely to affect an electricity transmission or distribution network. The proposal does not impact on any electricity transmission or distribution network. Substation design would be subject to future detailed design under the Stage 2 SSDA.
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; and • The signage satisfies the assessment criteria specified in Schedule 1 of the SEPP. No signage is proposed as part of the proposed development.
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; and • 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 Detailed Site Investigation prepared by JBS&G confirms that the site can be made suitable for the proposed development and ongoing hospital use, subject to the successful implementation of the recommendations outlined in **Appendix O**.

4.6 Mandatory Matters for Consideration

Table 8 identifies matters that the consent authority is required to consider in deciding whether to grant consent to any development application.

Table 8 Matters for Consideration

Legislation	Matter for Consideration	
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; and • The development has been evaluated and assessed against the relevant heads of consideration under section 4.15(1), as outlined in this table.	
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 proposals which fall under the policy's definition of 'potentially hazardous industry' or 'potentially offensive industry'. The works proposed as part of this SSDA do not fall within these definitions.	
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; and • 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.
	Clause 5.10 – Heritage Conservation	The site is listed as a heritage item. This is discussed further at **Section 6.7** and **Appendix H**.
	Clause 5.21 – Flood Planning	The site is not identified as being within a flood prone area.
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 Clause 2.10 of Planning Systems SEPP, which states that *'Development Control plans… do not apply to… State significant development*'. Nonetheless, regard has been given to the RDCP 2014 to the extent which it applies to the site.	

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 are 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.

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 DPE's *Undertaking Engagement Guidelines for State Significant Development* (2021). This includes adopting the following community participation objectives provided in the Guideline. An Engagement Report has been carried out by Health Infrastructure and is included at **Appendix P**.

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.
- Treasury NSW.
- Infrastructure NSW.
- NSW Health Services.
- Northern Sydney Local Health District.
- NSW Government Architect's Office.
- Environment and Heritage Group.
- Rural Fire Services NSW.
- City of Ryde Council.
- Service Providers – Ausgrid, Jemena, 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 EIA process to engage community members and stakeholders. This includes ongoing meetings and liaison with stakeholders via in person and electronic means.

In particular, meetings were held with the following authorities:

- Government Architect NSW: online meeting held on 3 November 2021 and 9 March 2022.
- Environment and Heritage Group: online meeting held on 27 November 2021.

- NSW Rural Fire Service: face to face meeting held on 21 December 2021.
- Australian Department of Agriculture, Water and the Environment: online meeting held on 9 March 2022.
- City of Ryde Council: online meeting held on 15 March 2021.
- Transport for NSW: face to face meeting held on 1 April 2022.

Scoping Report

Following receipt of the Project's Scoping Report, DPE consulted with various regulatory authorities to inform the development of the Project SEARs. This included:

- City of Ryde Council.
- Ausgrid.
- DPE's North District Team.
- Environment and Heritage Group.
- Heritage NSW.
- Sydney Water.
- Transport for NSW.

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**).

5.2 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 9 Summary of Stakeholder Views

View	Stakeholders	EIS Section / Comment
Site location to cater for future demand	Local Residents and Hospital Staff	Alternative options were explored for the Ryde Hospital Redevelopment, including a new off-site location for the construction of a new hospital facility at Macquarie University. Notwithstanding this, 72% of local residents and 90% of hospital staff preferred the current location of the hospital. Additional feedback sought from residents and staff will be considered throughout the project design process.

View	Stakeholders	EIS Section / Comment
Connecting with Country	Aboriginal and Torres Strait Islander community and stakeholder groups	Feedback from Aboriginal and Torres Strait Islander community and stakeholder groups continues to inform the proposed design. Refer to **Appendix D**.
Access and Public Transport	Transport for NSW and City of Ryde Council	The Traffic Impact Assessment (**Appendix F**) includes details regarding modelling inputs, public domain improvements and a Green Travel Plan in accordance with comments from Transport for NSW. Any access issues that may arise as a result of the proposal will be managed holistically through ongoing discussions between the project team, City of Ryde Council and Transport for NSW.
Overshadowing due to the scale of building in residential area	Local Residents	Overshadowing is discussed in **Section 6.3.1** of this report and within the Design Report at **Appendix D**.
Protection of Blue Gum High Forest	Environment and Heritage Group and Rural Fire Services NSW	The proposal seeks to preserve the Blue Gum High Forest in the southern portion of the site. Partial removal of the Lantana undergrowth was approved separately to the SSDA under a Part 2 Licence of the BC Act.. Further detail is provided in **Appendix M**.
Historical components of existing hospital	City of Ryde Council and Department of Planning and Environment	The proposal will include the preservation and protection of key historical buildings such as Denistone House and the retention of key historical buildings such as the former Stables. The proposal will necessitate the removal of Trigg House, however, this is suitably justified given that it has a moderate heritage significance and is currently in a decrepit condition.
Hospital artwork and colour themes	Aboriginal and Torres Strait Islander community and stakeholder groups, Local Residents and Hospital Staff	An Arts and Culture Working Group will be established and will undertake engagement with multicultural, Aboriginal and local community groups. The outcomes of this engagement will be considered throughout the future design.

5.3 Engagement to be Carried Out

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.

5.3.1 Exhibition & Assessment

Following its submission, DPE will exhibit the EIS on the Major Projects NSW Website and invite submissions from government agencies and the public. Once the exhibition period is complete, DPE may require the Proponent to prepare a Submissions Report in response to issues raised. The Proponent will continue to liaise with DPE and stakeholders during the Project's assessment to address queries that may arise.

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:

- Collaboration with the Consumer Reference Group – made up of a diverse range of people including residents from multicultural backgrounds, former patients, people with an interest in the hospital and those who are connected with the community – throughout the planning, design and delivery phases of the project.
- Drop-in sessions with hospital staff and local residents at various stages throughout the project lifecycle, including during the exhibition of the Stage 2 Detailed SSDA, to ensure they are able to stay informed.
- Seeking input from consumers, hospital staff and local residents during the schematic design process.
- Distributing regular project updated to the community and key stakeholders.
- Providing regular updates and up to date information on the dedicated project website.
- Monitoring the dedicated project phone line and email address to enable communication between stakeholders and 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 Urban Design, Bulk and Scale

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 clinical services building envelope will be located in the central portion of the site. It will comprise an eight-storey building that is irregular in shape, with a four-storey podium and four-storey tower form. The future design will present the building as a series of distinct separate but connected volumes 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 envelope 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 envelope has been subject to engagement with NSW RFS and EHG 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 envelope 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. Canopies will also be provided on the building façade 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 envelope is located in the west of the site, with access from Ryedale Road. The car park footprint has been driven by the site constraints described above, the proposed clinical services building footprint, and the functional requirements for an above ground car park.

6.1.2 Building Height

The clinical services building envelope will have a maximum building height of 39.5m and the multi-deck car park will have a maximum height of 24.9m. Although there are no specific controls for the site relating to building height, the Concept 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 clinical services building envelope, 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.

6.1.3 Setbacks

The proposed development is located in the central portion of the 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.

With consideration of the above, the following setbacks have been incorporated:

- Clinical Services Building Envelope:
  - North: 3m
  - South: 49.7m
  - East: 31.8m
  - West: 71m
- Multi-deck Carpark Building Envelope:
  - North: 5.2.
  - South: 115.4m
  - East: 76.7m
  - West: 3m

The proposed built form will responds 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.

6.2 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:

- 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.
- Maximising views and connections from the built form to important cultural sites, including the Blue Gum High Forest, Parramatta River and Sydney Olympic Park.
- 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.

6.3 Environmental Amenity

6.3.1 Solar Access and Overshadowing

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

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 just before 11am until 3pm, the residential dwellings across Ryedale Road are not impacted by shadows cast by the proposed building envelope and appear to received constant sun throughout this time period (approximately four 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 boundary to ensure that the overshadowing impacts to nearby development is minimal. The design and orientation of the built form will ensure that open space landscaped areas (located in the eastern portion of the site) 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.

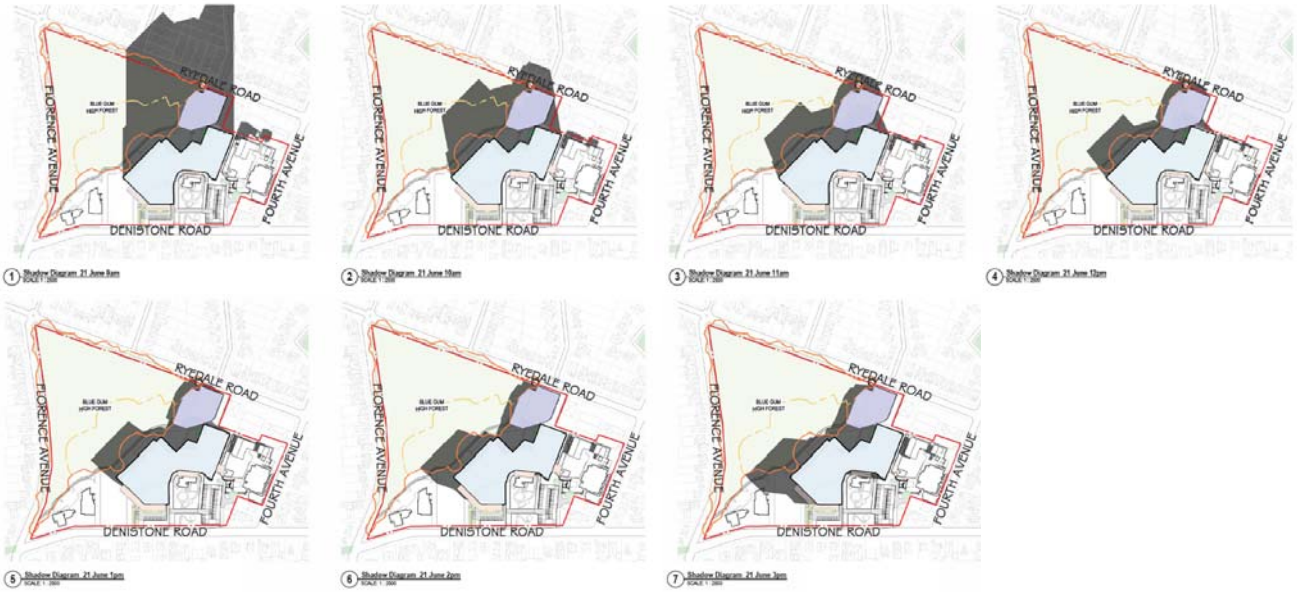

Figure 27 Overshadowing Impacts on 21 June (winter solstice)

Source: STH

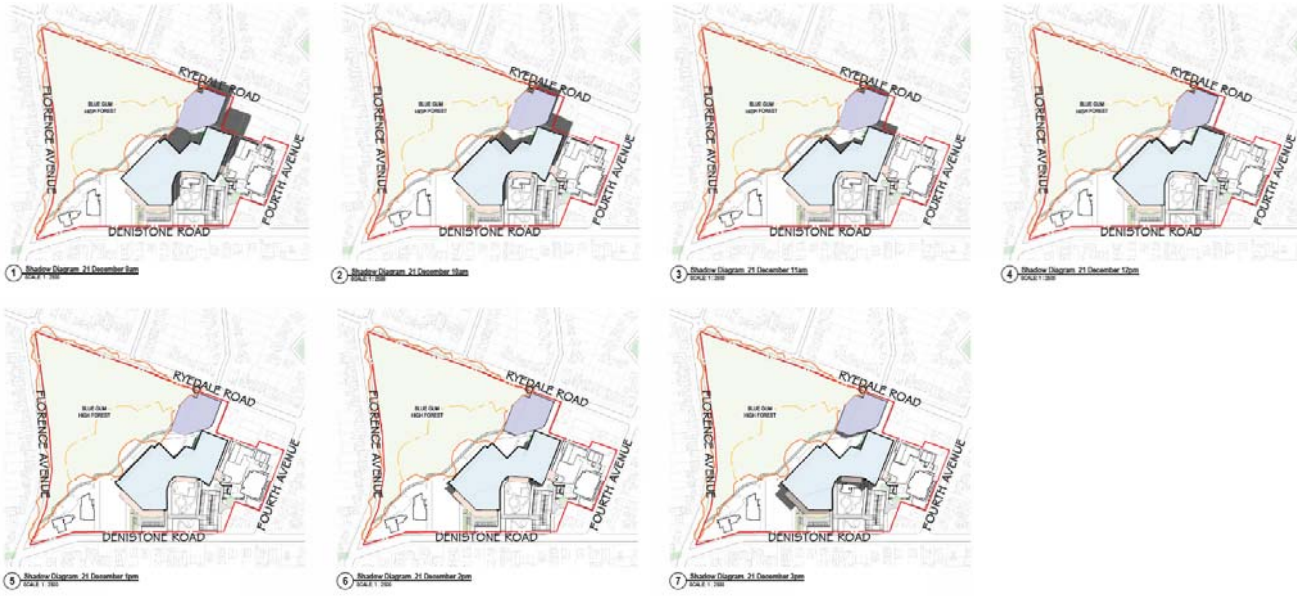

Figure 28 Overshadowing Impacts on 21 December (summer solstice)

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 clinical services building will achieve a setback of 31.8m (at minimum), providing sufficient setback to maintain privacy for residents. To further mitigate privacy concerns, the proposal incorporates vegetation along the site boundary will ensure visual privacy to and from the site. Visual privacy will be further assessed as part of the future detailed Stage 2 SSDA.

6.3.3 Visual Impact

Consideration has been given to the impact of the concept 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 **Attachment Q**. 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 will have a significant visual impact on the character of the existing visual environment. Nonetheless, visual impact is considered reasonable considering the needs of a major hospital, the proposal incorporates primary measures appropriate to a concept SSDA such that seek to avoid and minimise any potential significant adverse visual impacts and there is considerable opportunity to further develop and refine the proposal, in particular through address of modulation, articulation and landscaping, as part of the subsequent detailed DA process to further mitigate visual impact.

On this basis, and subject to the recommendations in VIA, the proposal is assessed as having acceptable visual impact. Mitigation Measures are provided in **Appendix B** and will be incorporated into the Stage 2 Detailed SSDA.

6.4 Biodiversity

A Biodiversity Development Assessment Report (BDAR) has been prepared by Ecological and is included at **Appendix M**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The BDAR aims to assesses any biodiversity impacts associated with the proposal in accordance with the requirements of the *Biodiversity Conservation Act 2016* (BC Act) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The assessment confirms that 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 (both Stage 1 and Stage 2) will not result in the removal or fragmentation of the CEEC. All proposed building envelopes and Stage 1 Early Works are located outside of the CEEC. The composition, structure, and function of the CEEC will not be adversely affected by the project. In particular, the required bushfire asset protection zone has been designed to utilise a performance solution that is sympathetic to the Blue Gum High Forest and seeks to remove *Lantana camara* and other low-lying exotic species and maintain the cleared areas (**Figure 29**). 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.

In addition, the BDAR has assumed the presence of one fauna species, being the Powerful Owl. While it is unclear whether 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 EHG in relation to biodiversity impacts and the proposed bushfire management strategy whilst undertaking design for the SSDA.

Mitigation Measures

Overall, Ecological 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**.

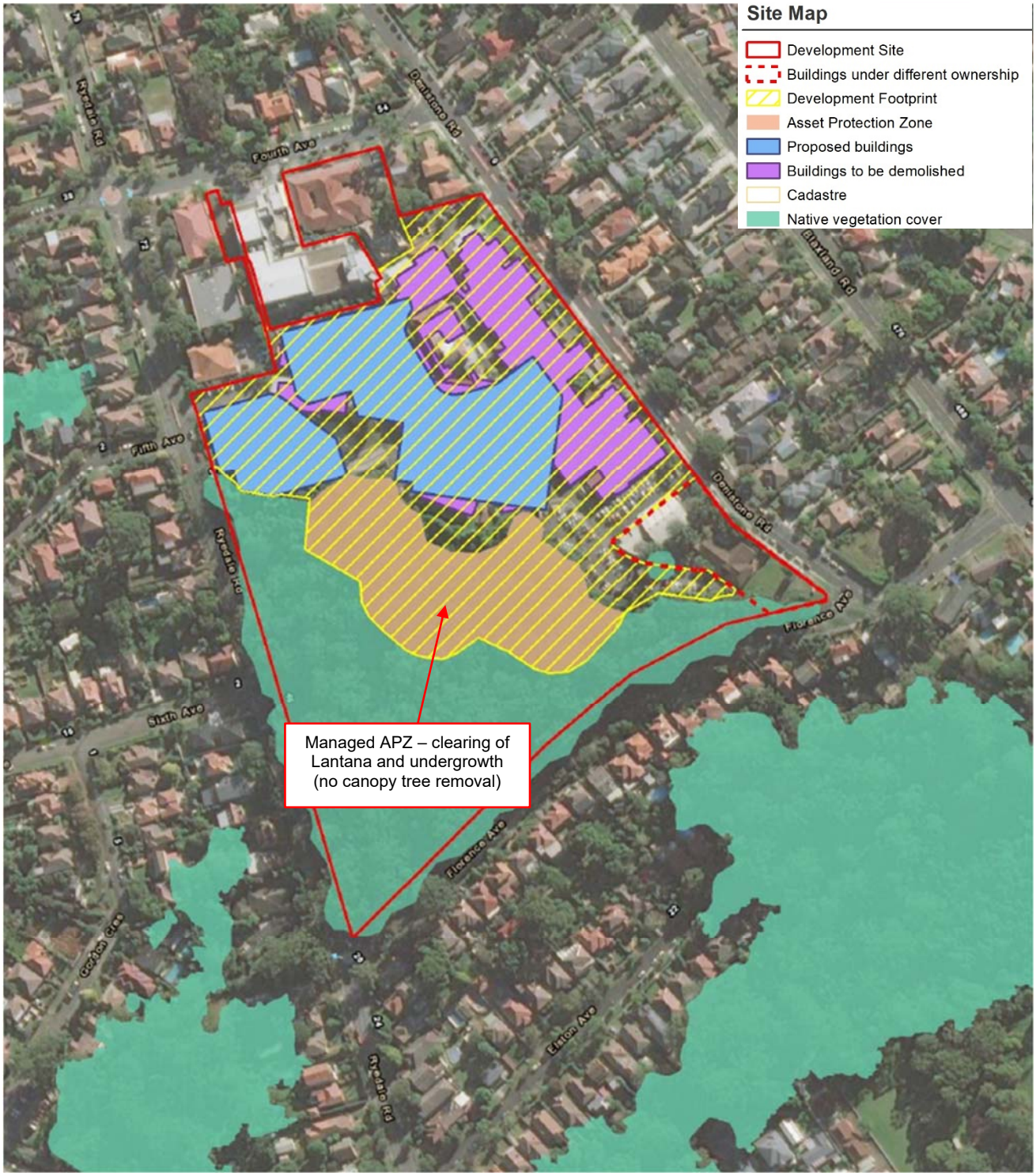

Figure 29 Impacts to Native Vegetation and Extent of Managed Bushfire Asset Protection Zone

Source: EcoLogical

6.5 Bushfire Impact

Ecological have prepared a Bushfire Protection Assessment which is included at **Appendix S**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The site is located in land mapped as being bushfire prone, as described at **Section 2.2.3**. 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 Concept Proposal, Bushfire Consultant Ecological 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 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 6.4**, 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.

Importantly, the proposed performance-based solution has been developed in consultation with NSW Rural Fire Service and Fire and Rescue NSW. The solution includes utilising the multi-deck car park for shielding purposes to the main hospital buildings, as well as clearing of low-level ground vegetation such as Lantana and ground cover within the Blue Gum High Forest, with ongoing vegetation management to keep the APZ maintained and safe. Ecological confirm that the proposed performance-based solution is acceptable and minimises impacts to the Blue Gum High Forest.

No new buildings proposed as part of the Concept Proposal will be exposed to a radiant heat flux from bushfire greater than 10 kW/m^2, except for the multistorey car park which us deemed acceptable. The proposal also has the potential to significantly lower the bushfire risk to the existing hospital through shielding, better perimeter access and other bushfire protection measures. Specific bushfire measures for each building will be determined with the relevant application that seeks their construction.

Therefore, the proposal is considered acceptable provided that the relevant mitigation measures are implemented (outlined in **Appendix B**).

6.6 Aboriginal Heritage

An Aboriginal Heritage Cultural Heritage Assessment has been prepared by Urbis and included at **Appendix R**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

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.

Mitigation Measures

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

6.7 European Heritage

A Heritage Impact Statement (HIS) has been prepared by Urbis and is included at **Appendix H**. 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). A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The HIS confirms the following:

- The proposal demonstrates some significant heritage benefits which will be achieved through the retention and conservation of Denistone House and the retention of the Stables (assessed to be of exceptional heritage significance).
- The proposed building envelope will be located to the rear of Denistone House. The siting and irregular building form also extends forward of the building line of Denistone House to the south of the house. The disparity of scale is acknowledged however the proposal mitigates potential impacts by providing modulating the envelope 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 proposed hospital building incorporates substantial setbacks from Denistone Road, which allows for a generous landscape setting and wide views to the heritage building.
- The heritage significance of Trigg House is considered to have been compromised by the extent of alterations and additions. As such, the original form and facades are unlikely to be retrieved. The building is also unsympathetically located as it compromises the original setting of the former Denistone Estate buildings and blocks views and connections between Denistone House and the Stables. Having regard for the above, the removal of Trigg House is justified.
- The demolition of the remaining inter-war and to a lesser degree some post-war development of the hospital site will impact on the historical values of the place and its ability to demonstrate the progression of the hospital development in the 20th century. While their contribution to the site is acknowledged, the early hospital buildings are no longer fit for purpose, the site is highly constrained in terms of a development zone and clinical needs, and the retention of the 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.
- The existing Critically Endangered Blue Gum High Forest which dominates the southern slopes of the site will be retained where possible under the guidance of bushfire engineering to manage this existing natural asset of the place in the context of the masterplan for the site.

Mitigation Measures

The HIS has assessed the potential heritage impact of the proposed development on heritage items located on site and within the vicinity of the site. Overall, Urbis deems that the proposed works are acceptable from a heritage perspective, provided that the mitigation measures are successfully implemented during the construction phases and the Stage 2 Detailed SSDA. The mitigation measures are provided in **Appendix B**.

6.8 Archaeological Heritage

A Historical Archaeological Assessment (**Appendix BB**) 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. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

A site inspection was undertaken on 7 February 2022 and found that:

- The northern portion of the site has been subjected to moderate to high levels of ground disturbance associated with the construction existing and former buildings.
- No archaeological remains were identified during the visual inspection, other than the fabric and fittings of the extant buildings.
- 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. All other areas on site have been identified as possessing a nil to low archaeological potential.
- The structural and sub-surface remains associated with the original Denistone House are of local historical heritage significance. All other archaeological remains (including existing buildings on site) are not considered to hold any significance at either a State or Local level.

Based on the above, Urbis have determined that the Stage 1 Early Works are unlikely to result in any archaeological impacts since the works are located away from the footprint of the original Denistone House.

Works to be undertaken as part of the Stage 2 Detailed SSDA will be within the vicinity of the location of the original Denistone House and may encounter surviving archaeological items. Relevant protocols will be implemented with the Stage 2 Detailed SSD Application.

Mitigation Measures

Urbis has prepared a number of recommendations which have been included as part of the mitigation measures at **Appendix B**. An unexpected finds protocol will be implemented for the Stage 1 Early Works, and the Stage 2 Detailed SSD Application will be subject to further assessment and implementation of its own protocols in relation to the area that contained the original Denistone House.

6.9 Access and Transport

A Transport Impact Assessment has been prepared by Stantec and is included at **Appendix F**. The assessment includes details around traffic movements, car parking and access arrangements. Further, the report outlines the existing surrounding road network arrangements and conditions and provides an assessment of the traffic and parking impacts associated with the Stage 1 Early Works and the Concept Proposal. A summary of the assessment and proposed mitigation measures are provided below.

6.9.1 Operational Parking

A preliminary parking demand study has been prepared for the Concept Proposal to understand the current and projected parking requirements at Ryde Hospital. It is based on an analysis of the car parking requirements contained within:

- Ryde Development Control Plan 2014.

- Transport for NSW Guide to Traffic Generating Developments (2002).
- The proposed indicative uplift in beds on site.
- The proposed indicative uplift in beds and treatment spaces on site.
- The proposed indicative uplift in clinical activity.

The analysis provided significantly varied results in estimating the future parking requirement for Ryde Hospital Redevelopment, indicating the redevelopment would be required to provide an uplift of between 125 to 435 parking spaces on site. Given existing supply of 271 spaces, this results in a future supply of between 400 and 700 parking spaces. As such, a comprehensive Parking Demand Study undertaken as part of the Stage 2 Detailed SSDA and informs parking requirements of the Ryde Hospital Redevelopment.

The Concept Proposal includes an allowance of approximately 500 total car parking spaces across the entire campus, comprising approximately 350 spaces in the multi-deck car park and 150 at-grade spaces located throughout the site.

Access to the proposed car parking areas is detailed in **Section 3.2.5**. Further detail regarding accessible, motorbike and bicycle parking will also be provided during the Stage 2 Detailed SSDA.

6.9.2 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 of 180 FTS by 2026 and a further increase of 258 FTS by 2036. A summary of the trip generation estimates for the Concept Proposal on the RMS traffic generation rates is provided in **Table 10**.

Table 10 Traffic Generation Estimation

Method	Year of Opening (2026)		10-year Horizon (2036)	
	AM	PM	AM	PM
	Morning Vehicle Trips	Peak Vehicle Trips	Morning Vehicle Trips	Peak Vehicle Trips
Guide 2002 (based on number of beds and staff)	123	274	126	289
Adjustment Factor based on surveys	2.9	1.0	2.9	1.0
Traffic Generation	**357**	**274**	**365**	**289**

The results indicate that by 2036, the Concept Proposal could generate up to 365 trips during the AM peak and 289 trips during the PM peak. This is an increase of 160 and 113 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 11** and **Table 12** 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 11 Operating Conditions in 2026 – With and Without the Concept Proposal

Intersection	Peak	Degree of Saturation		Average Delay (sec)		Queue (m)		Level of Service	
		With	Without	With	Without	With	Without	With	Without
Blaxland Road/ Florence Avenue	AM	0.51	0.49	13	12	51	48	A	A
	PM	0.74	0.69	16	14	87	75	B	A
Denistone Road/ Florence Avenue	AM	0.09	0.07	6	6	2	2	A	A
	PM	0.12	0.06	6	6	3	2	A	A
Ryedale Road/ Florence Avenue	AM	0.06	0.06	9	9	2	2	A	A
	PM	0.09	0.10	9	9	3	3	A	A
Ryedale Road/ Fourth Avenue	AM	0.11	0.07	10	9	4	2	A	A
	PM	0.11	0.10	9	9	4	3	A	A
First Avenue/ Ryedale Road	AM	0.01	0.01	12	12	0	0	A	A
	PM	0.21	0.19	13	13	6	5	A	A
Blaxland Road/ Dalton Avenue	AM	0.14	0.15	40	40	3	3	C	C
	PM	0.19	0.20	57	54	4	5	E	D
Denistone Road/ Fourth Avenue	AM	0.05	0.06	5	5	1	1	A	A
	PM	0.06	0.06	5	5	1	1	A	A

Table 12 Operating Conditions in 2036 – With and Without the Concept Proposal

Intersection	Peak	Degree of Saturation		Average Delay (sec)		Queue (m)		Level of Service	
		With	Without	With	Without	With	Without	With	Without
Blaxland Road/ Florence Avenue	AM	0.59	0.53	13	11	62	54	A	A
	PM	0.82	0.80	18	16	111	99	B	B
Denistone Road/ Florence Avenue	AM	0.11	0.08	6	6	3	2	A	A
	PM	0.14	0.08	6	6	3	2	A	A
Ryedale Road/ Florence Avenue	AM	0.07	0.08	9	9	3	3	A	A
	PM	0.12	0.11	9	9	4	4	A	A
Ryedale Road/ Fourth Avenue	AM	0.13	0.08	10	9	5	3	A	A
	PM	0.13	0.12	9	9	5	4	A	A
First Avenue/ Ryedale Road	AM	0.01	0.01	13	13	0	0	A	A
	PM	0.26	0.27	16	16	7	7	B	B
Blaxland Road/ Dalton Avenue	AM	0.24	0.24	60	60	5	6	E	E
	PM	0.32	0.32	91	89	8	8	F	F
Denistone Road/ Fourth Avenue	AM	0.06	0.07	5	5	1	2	A	A
	PM	0.07	0.07	6	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. Any delays resulting from queuing will be minimal and therefore, this is considered satisfactory.

6.9.3 Emergency Services

The redevelopment will provide ambulance parking bays which are to be designed in accordance with NSW Ambulance Specifications for Hospitals. Ambulances will reverse into the parking bays which will provide the adequate spatial requirements for each ambulance to load/unload from either the rear or side doors. This will be discussed further as part of the Stage 2 Detailed SSDA.

6.9.4 Loading Facilities

The future loading dock provided as part of the Concept Proposal should provide:

- Two bays suitable to accommodate vehicles up to 12.5 metre HRV's.
- Two bays suitable to accommodate courier vehicles.
- Two compactors.

The loading dock will be accessible from Ryedale Road. Further consideration of the loading facilities will be undertaken as part of the Stage 2 Detailed SSDA.

6.9.5 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 Concept Proposal. Notwithstanding this, DDA compliant pedestrian paths will be provided between the bus stop and key pedestrian entries to the hospital.

6.9.6 Green Travel Plan

A Green Travel Plan (GTP) has been provided by Stantec and is included at **Appendix F**. 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.

6.9.7 Construction Traffic

A Construction Traffic Management Plan has been prepared by Stantec and is provided at **Appendix F**. It details a number of initiatives to be implemented as part of the Stage 1 Early Works.

It is expected that on a typical day, a total of 20 heavy vehicles could access the site. These movements would be spread across the day in order to dissipate the impact. Light vehicle traffic generation would be largely generated by construction worker traffic movements to and from the site. The number of construction workers vehicles is currently unknown. Notwithstanding, limited parking will be provided on-site, with workers to be encouraged to use public transport to access the site. As such, light vehicle traffic generation associated with construction workers will be minor. Further to this, any construction worker traffic movements will generally be outside of peak periods and disruption during peak periods will be avoided.

In order to manage the impact of construction traffic on the operation of the existing hospital, alternate site access arrangements are proposed, as detailed in **Section 3.3.4**. 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.

The construction program for the Ryde Hospital Redevelopment is indicatively expected to take 11 months for Stage 1 to be completed.

6.9.8 Construction Parking

It is anticipated that there will be a maximum of 35 workers on-site at any given time during the Stage 1 Early Works construction activities.

Some construction parking will be provided on site within the existing car park 5. As discussed in **Section 3.3.6**, temporary car parking will also be provided on site during the Stage 1 Early Works. Given the site's proximity to a range of high frequency public transport services, workers will be encouraged to use public transport to access the site. Workers will be encouraged to operate a car pool system to/ from surrounding train stations to encourage uptake of available public transport services, with vehicles parked on site used to pick up/ drop off workers. During site induction, workers will be informed of the existing train/ bus network servicing the site. Appropriate arrangements will be made for any equipment/ tool storage and drop-off requirements.

6.10 Contamination

This SSD Application is supported by a Detailed Site Investigation prepared by JBS&G provided at **Appendix O.** The reports detail the procedures and standards to be followed in order to remove the risks posed by the identified in-ground contamination issues, to make the site suitable for the proposed development while ensuring the protection of human health and the surrounding environment. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The assessment included a review of historical information and sampling from 53 boreholes and 4 groundwater monitoring wells. 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.

Based on a review of the available contamination assessments and works undertaken at the site, the following contaminants were identified:

- Fill materials, impacted with polychlorinated biphenyls (PCBs) and total recoverable hydrocarbon (TRH).
- Carcinogenic polycyclic aromatic hydrocarbon (PAHs) identified in soil.
- Elevated levels of heavy metals, including copper, nickel, zinc and lead, have been reported in fill and soil.
- Elevated levels of heavy metals have been reported in groundwater.
- Asbestos identified in bonded and friable form.
- No indicators of acid sulfate soils (ASS) or potential ASS was observed in any sample locations.

It is noted that sampling was restricted in some locations due to the existing operating hospital. Accordingly, a number of data gaps are identified, which relate to further sampling being required and further investigation on the nature and extent of asbestos on site, and the location and potential contamination status of above / below ground storage tanks which have been identified on site.

JBS&G recommend that further investigation is required outside of the Stage 1 Early Works footprint, with a remediation action plan and long-term contamination management plan be prepared (if required, pending results of further investigations) prior to commencement of the main works associated with the Stage 2 Detailed SSD.

JBS&G also recommend that further investigations be undertaken beneath the building footprints associated with the Stage 1 Early Works area after these buildings have been demolished, to confirm the findings of the soil investigations in the Detailed Site Investigation provided at **Appendix O**.

Mitigation Measures

Based on the findings of the detailed site investigation, JBS&G are of the opinion that the site can be made suitable for the Concept Proposal, subject to further investigation of the identified data gaps and implementation of a Remediation Action Plan and a Long-Term Asbestos Management Plan, which will be prepared and implemented as part of the Stage 2 Detailed SSDA. Detailed mitigation measures are provided in **Appendix B**.

Further investigation will be required after demolition associated with the Stage 1 Early Works to verify the results of the soil testing undertaken in the Detailed Site Investigation.

6.11 Hazardous Materials

JBS&G have prepared a Hazardous Building Materials Survey of the structures associated with the proposed Stage 1 Early Works to determine the presence of asbestos or other hazardous materials. A copy of the survey is included at **Appendix T**. 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.

6.12 Geotechnical Implications

A Geotechnical Investigation has been prepared by PSM and is included at **Appendix U**. The Investigation identifies that 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 2.7m and 3.01m below surface level.

Based on the results of the previous site investigations, the report provides advice on the proposed civil and structural design. These recommendations relate to earthworks, excavation, batter slopes, foundations, dewatering, disposal of material and specific geotechnical input will be sought during the construction phase of the project. Further discussion is provided in **Appendix U** and the mitigation measures are provided in **Appendix B**.

6.13 Noise and Vibration

A Noise and Vibration Impact Assessment has been prepared by Acoustic Studio and is included at **Appendix V**. The report includes an assessment of the potential noise and vibration impacts during the Stage 1 Early Works and

the operation of the Concept Proposal. The surrounding land uses include the existing hospital campus, residential, educational and commercial receivers. The site monitoring and receiver locations are shown in **Figure 31** below.

Figure 30 Noise Monitor Locations

Source: Acoustic Studio

6.13.1 Construction Noise

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 during Stage 1 will be undertaken during the standard construction hours.

The construction noise impacts will be greatest from the existing Graythwaite Rehabilitation Centre and Ryde Medical Centre Buildings. 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 21dB.

Similarly, construction noise impacts from residential receivers will be highest along Ryedale Road. In a worst-case scenario, the noise impacts associated with excavators will exceed the NMLs by up to 21dB. However, they will comply with the Highly Affected Noise Levels criteria (75dB(A)).

The exceedance of the NMLs is s 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.

6.13.2 Construction Vibration

Based on the scope of works and typical equipment required, it is anticipated that vibration undertaken during the Stage 1 Early Works will be perceivable by humans. There is also the potential for minor cosmetic impacts to some structures which must be reviewed as works processes are planned in more detail – particularly from the use of excavators with hammers near the existing buildings. In addition, there is potential for vibration impacts on sensitive equipment. As a result, a comprehensive Construction Noise and Vibration Management Plan (CNVMP) will be prepared by the engaged Contractor. The CNVMP will consider proposed plant, equipment and construction methodology, prior to the commencement of any Stage 1 Early Works.

6.13.3 Operational Impacts

The noise emissions from the plant servicing the project building have been assessed in accordance with the NSW Environmental Protection Authority 'Noise Policy for Industry' 2017. Pursuant to this policy, the project noise trigger levels from all noise sources that is consistent with the general environment has been assessed and a summary is provided in **Table 13** below.

Table 13 Project Noise Trigger Levels for External Noise Emissions from Proposed Development

Receiver (External)	Period	Project Noise Trigger Level (PNTL) dBLAeq(15min) dB(A)
Residential (Zone 1 - North, Zone 2 - East, Zone 3 - West)	Day	46
	Evening	43
	Night	38
Residential (Zone 4 - South)	Day	48
	Evening	43
	Night	35
Hospital Ward	When in use	43
Commercial Premises	When in use	58

Redevelopment of any site must consider all neighbouring receivers. When the redevelopment site is an extension of an existing campus, neighbouring receivers will include existing "on-campus" buildings.

A target noise level of 50 to 55 dB(A) is recommended at external occupied and trafficable areas surrounding existing hospital buildings. This is based on observations of pre-existing conditions made by Acoustic Studio during site inspections and noise surveys at the Ryde Hospital Campus. This target also applies to external areas for the new building. Further detail will be provided as part of the Stage 2 Detailed SSDA.

Overall, Acoustic Studio confirm that the current layout and design of the Concept Proposal can successfully mitigate any potential noise impacts, provided the mitigation measures (**Appendix B**) are implemented.

6.14 Crime Prevention Through Environmental Design

The principles of Crime Prevention through Environmental Design (CPTED) are identified in DPE's guidelines titled *Crime Prevention and the Assessment of Development Applications 2001*. CPTED features will be incorporated during the Stage 2 Detailed SSDA. A preliminary discussion is provided below.

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 deterred from committing crime in areas with high levels of surveillance. The development will provide adequate natural surveillance in accordance with this principle.

The development will be designed to incorporate natural surveillance through the implementation 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 provide continuous activation throughout the site.

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 2001*, 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 victimise people and damage property. The development will be designed to incorporate natural barriers such as roadways and landscape, electronic and physical barriers.

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 2001*, people feel comfortable in, and are most 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 will achieve this through clearly defining public and back of house spaces through the use of physical barriers and sufficient wayfinding signage.

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 2001*, 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 restrict access to sensitive areas such as goods lifts and will utilise materials and external finishes that require minimal maintenance.

6.15 Wind Impacts

An Environmental Wind Assessment has been prepared by Arup and is included at **Appendix W**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The purpose of the Assessment was to determine the impact of the proposal on pedestrian level wind conditions and potential implications for comfort and safety in and around the site. Arup have undertaken an assessment of the local wind conditions and the predicted wind conditions on the ground plane utilising qualitative data. The results indicate that the wind conditions are expected to be suitable for pedestrian standing type activities, with slightly windier locations experienced around building corners. All locations are expected to meet the relevant safety criterion and are considered acceptable for the intended use, pending detailed design as part of the Stage 2 DA.

Mitigation Measures

Arup confirms that the wind conditions as a result of the proposed built form will not give rise to any unacceptable comfort or safety impacts and are considered acceptable for the intended use. Notwithstanding, it is recommended that further assessment is undertaken as part of the Stage 2 Detailed SSDA, once the location of the main entrances and pedestrian recreational areas are confirmed.

6.16 Waste Management

TSA has prepared a Waste Management Plan (WMP) (**Appendix X**) to detail the waste management procedures during the Stage 1 Early Works and the operational phase.

6.16.1 Construction Waste

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 X**.

6.16.2 Operational Waste

The WMP will be updated as part of the Stage 2 Detailed SSDA and will provide specific waste management procedures to be undertaken during the operational phase. The WMP will be compliant with all relevant policy and legislation for waste management, including generation, handling, storage and disposal of all forms of waste. At a high level, waste management during operation will be undertaken as follows:

- Waste will be transported from the wards/hospital building to waste storage areas by designated hospital staff, prior to removal off site by waste contractors. All staff and contractors that handle waste will wear appropriate PPE.
- Where possible, waste transport routes will avoid food preparation and heavily used areas.
- Procedures will be undertaken to appropriately minimise and recycle waste to promote sustainability.
- Waste storage areas will be cleaned regularly and will be inaccessible to the public. Waste storage areas will be separated from food and clean storage areas to avoid contamination.
- All staff will be educated on waste practices and Workplace Health and Safety.
- Waste audits will be undertaken annually to ensure optimal waste management is being undertaken. Any recommendations will be incorporated into the WMP.
- Spill management will be conducted in a safe and timely manner.

6.17 Social Impacts

Ethos Urban has prepared a Social Impact Assessment (**Appendix Y**) in accordance with the *Social Impact Assessment Guideline for State Significant Projects (2021)*. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

The purpose of Social Impact Assessment 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. The assessment methodology includes:

- A baseline analysis of the existing socio-economic environment, involving:
  - Study area definition, including primary and secondary geographic areas likely to be impacted.
  - Demographic analysis, including socio-economic characteristics of current communities and population forecast.
  - Review of relevant background information, along with relevant local and state policy frameworks.
- Stakeholder and community engagement: Findings of stakeholder and community consultation undertaken by Health Infrastructure have been reviewed to identify community and stakeholder aspirations and values.

- Scoping of issues: Analysis of potential impacts during and post-construction, with each of the directly affected communities and other stakeholders identified in relation to the way they may be affected. Both positive and negative potential issues are identified.
- Identification of impacts: The assessment ultimately appraises the significance of each identified impact based on its duration, extent and sensitivity of impact "receivers."
- Identification of mitigation strategies to manage impacts and enhance benefits of the development.

Overall, the assessment determined that the potential negative amenity and way of life impacts arising from the operation of the facility in the immediate locality can be well managed and mitigated. The refurbishment and expansion 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.

6.18 Construction Impacts

A preliminary Construction Management Plan (CMP) has been prepared by TSA and is provided at **Appendix L**. This CMP details the construction works and the interface with existing operations, as well as the proposed staging details and management of public safety and amenity.

The CMP outlines staging details for the development, as outlined at **Section 3.6**, which has been designed to reduce the impacts on the existing operational hospital services and road network. The CMP also identifies appropriate measures to reduce impacts on noise and vibration, and dust, erosion and sedimentation. The management of construction to reduce amenity and environmental impacts for the public is discussed further at **Appendix L**. A complete Construction Environmental Management Plan will be finalised by the Principal Contractor appointed to the project.

6.19 Environmentally Sustainable Development

A Sustainability Report has been prepared by Climatewise Design and is included at **Appendix G**. A summary of the assessment and proposed mitigation measures are provided below.

Assessment

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.
- Target certified 5 star self-certified equivalency rating against the Green Building Council of Australia (GBCA) Design and As-Built version 1.3 rating tool.
- Carbon Neutral 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 major plant.

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**.

Mitigation Measures

The Sustainability Report does not include any specific mitigation measures to be implemented as part of the project. Compliance with the relevant ESD requirements will be further discussed as part of the Stage 2 Detailed SSDA.

6.20 BCA Compliance

A BCA Assessment has been prepared by Phillip Chun and is included at **Appendix Z** 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.

6.21 Water Cycle Management

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

6.21.1 Stormwater

The site is split into two catchments, with multiple discharge locations across the site. During the Stage 1 Early Works, 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 Concept Proposal, it is anticipated that stormwater will be directed to inground Onsite Stormwater Detention (OSD) storage tanks before being discharged directly to Council infrastructure through the existing pipework. The stormwater will be required to be treated to meet Council stormwater quality requirements, which is outlined in **Table 14** below.

Table 14 Pollutant Target Controls

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

ACOR estimate that the north and south catchments will have a post-development impervious area of 80% and 90%, respectively. Further confirmation will be undertaken during the detailed design and the Permissible Site Discharge (PSD) rate and OSD volumes will be adjusted accordingly. This will ensure that the level of stormwater runoff discharged from the site does not to exceed the peak stormwater discharge arising from the post-developed works, during a 5-year ARI storm event.

6.21.2 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 Stage 2 Detailed SSDA and will include products such as Gross Pollutant Traps and filter cartridges which are installed below ground and within OSD tanks. Further review will be undertaken during the detail design phase to determine if natural filtration such as bio retention basins can be incorporated into the landscape design. These measures will be confirmed and incorporated into the stormwater drainage design as part of the Stage 2 Detailed SSDA.

Due to the limited nature of the Stage 1 Early Works, WSUD works will not be undertaken.

6.21.3 Water and Wastewater Management

In order to reduce the demand on local water and wastewater infrastructure, the Stage 2 Detailed Design of 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.

6.22 Flooding

An assessment of the flood impacts on site has been undertaken by ACOR at **Appendix K**. In general, the site is not subject to flooding during the Probable Maximum Flood (PMF). The extent of overland flow flooding during the PMF is restricted to 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 Concept 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 as part of the Stage 2 Detailed SSDA and will include 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 Stage 1 Early Works.

6.23 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**.

7.0 Project Justification

In general, investment in major projects can only be justified if the benefits of doing so exceed the costs. Such an assessment must consider all costs and benefits, and not simply those that can be easily quantified. As a result, the EP&A Act specifies that such a justification must be made having regard to biophysical, economic and social considerations and the principles of ecologically sustainable development.

This means that the decision on whether a project can proceed or not needs to be made in the full knowledge of its effects, both positive and negative, whether those impacts can be quantified or not.

The proposed development involves the Ryde Hospital Redevelopment (Concept and Stage 1). The assessment must therefore focus on the identification and appraisal of the effects of the proposed change over the site's existing condition.

Various components of the biophysical, social, and economic environments, as well as the proposal's alignment with the objects of the EP&A Act and other statutory instruments applicable to the site, have been examined in this EIS and are summarised below.

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.

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 proposal.

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 proposal 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.
- Facilitating job creation in close proximity to homes and public transport.

The proposal 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.

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 proposal would not have any significant effect on the biological diversity and ecological integrity of the study area. It also seeks to retain and enhance the existing critically endangered Blue Gum High Forest in the southern portion of the site.

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 proposal, 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.

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

7.2 Environmental Planning and Assessment Act 1979 – Objects of the Act

This EIS has examined and considered all possible matters affecting or that are likely to affect the environment by reason of the proposed development. The project is consistent with the relevant Objects of the EP&A Act, as outlined in **Section 4.0**, and will not result in any unjust or significant environmental impact.

7.3 Environmental Planning and Assessment Act 1979 – Clause 4.15 Evaluation

The following section assesses the proposal against the relevant heads of consideration listed in Section 4.15 of the EP&A Act.

7.4 Environmental Planning Instruments

As described in **Section 4.0**, the proposal is consistent with all relevant EPIs relating to the site, including:

- Environmental Protection and Biodiversity Conservation Act 1999.
- Environmental Planning and Assessment Act 1979.
- Biodiversity Conservation Act 2016.
- State Environmental Planning Policy (Planning Systems) 2021.
- State Environmental Planning Policy (Transport and Infrastructure) 2021.
- State Environmental Planning Policy (Industry and Employment) 2021.
- State Environmental Planning (Resilience and Hazards) 2021.
- Ryde Local Environmental Plan.

The Statutory Compliance Table at **Appendix C** outlines the relevant statutory requirements of each EPI and the location in the EIS where those requirements have been assessed. Those statutory requirements that are yet to be assessed in the EIS are addressed below.

7.5 EP&A Regulations

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 ecologically sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage (see above). As required by clause 4.42, no additional approvals will be required in order to permit the proposed development to occur.

7.6 Likely Impacts of Development

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.

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.

7.7 Suitability of the Site

Having regard to the characteristics of the site and its location in Denistone 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 envelope 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.

7.8 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 (Concept and Stage 1). The EIS has addressed the issues outlined in the SEARs (**Appendix A**) and in accordance 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 North Sydney region, which will deliver approximately 312 jobs (including 281 direct jobs) during the construction phase and an additional 232 direct ongoing health services jobs and 26 indirect jobs during the operational phase.
- The development will support a significant piece of social infrastructure, increasing the number of hospital beds and health workers to Ryde.
- 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 future 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 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 consistent with the relevant planning controls for the site.
- 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.