Concord Hospital Redevelopment (Concept and Stage 1)

State Significant DA 9036

Environmental Impact Statement
Concord Hospital Redevelopment (Concept and Stage 1) 
State Significant DA SSD 9036 
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Report Contact: 
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This report is considered a draft unless signed by a Director 

Michael Harrison, Director Urban Design and Planning 
24 August 2018 

Revision history 

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Statement of Veracity

Submission of Environmental Impact Statement:
Prepared under Schedule 2 of the Environmental Planning and Assessment Regulation 2000. Environmental Impact Statement (EIS) has been prepared by:

Jonathan Archibald
Senior Urban Planner
Bachelor of Planning (Macquarie University)

And;

Jane Fielding
Senior Associate, Urban Planning
Bachelor of Landscape Architecture (Honours) (University of Canberra)
Master of Social Science (International Urban and Environmental Management) (RMIT University)
Member, Planning Institute of Australia (PIA)

Address:
Architectus Group Pty Ltd
Level 18, MLC Centre, 19 Martin Place
Sydney NSW 2000

In respect of:
State Significant Development Application (SSD 18_9036) for the proposed redevelopment (Concept and Stage 1) of Concord Repatriation General Hospital (Concord Hospital) (as described in Section 3 of this EIS) located at Hospital Road, Concord West.

Applicant:
NSW Health Infrastructure

Declaration:
It is declared to the best of my knowledge that:

- This Environmental Impact Statement has been prepared in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000; and
- This Environmental Impact Statement contains all available information that is relevant to the environmental assessment of the proposed development; and
- The information contained in this report is neither false nor misleading.

Jonathan Archibald
Senior Urban Planner

Jane Fielding
Senior Associate, Urban Planning
Executive Summary

Preliminary

This Environmental Impact Statement (EIS) has been prepared by Architectus on behalf of NSW Health Infrastructure to accompany a State Significant Development Application (SSDA) for the Concept and Stage 1 redevelopment of the Concord Repatriation General Hospital (Concord Hospital). The project is an important part of the long-term planning and development of health services for Concord Hospital and within the Sydney Local Health District (SLHD).

The application is made under Part 4, Division 4.1 of the Environmental Planning and Assessment Act 1979 (EP&A Act), by Architectus, on behalf of NSW Health Infrastructure.

The total estimated Capital Investment Value (CIV) of the project is $968.3 million, which is over the minimum threshold of $30 million CIV for hospitals to be assessed as State Significant Development (SSD), as specified under Schedule 1, Clause 14 of the State Environmental Planning Policy (SEPP) (State and Regional Development) 2011.

The Site

The site is located at 1H Hospital Road, Concord West, NSW within the Canada Bay Local Government Area (LGA). The site is located approximately 11 kilometres west of the Sydney CBD and includes a total of eight (8) allotments as detailed in Section 2 of this EIS which comprises the broader Concord Hospital precinct.

The site currently accommodates eighty-eight (88) documented buildings associated with Concord Hospital. The site is largely developed with numerous hospital buildings spread across the site varying in height and scale. These buildings comprise both the main public hospital facilities, as well as a range of teaching training and research facilities. Generally, public hospital facilities are located to the south west of the site, with other facilities (teaching, training, research etc.) located to the north-east portion of the site.

The main public Concord Hospital building (known as the multiblock building) is located at the intersection of Hospital Road and Fremont Street to the south west of the site. The main entrance to Concord Hospital (including emergency) is located on Hospital Road, which intersects with Concord Road approximately 500m south west of the site.

The site also accommodates a large at grade car park, located to the north and accessible from Hospital Road. All hospital buildings are located to the south of Hospital Road, except for a small building (associated with NSW Sports Medicine) located opposite the main entrance to the multiblock and located within the south west corner of the car park.

The Proposal

This SSDA seeks consent for the proposed redevelopment of Concord Hospital to improve and replace outmoded facilities to meet the substantial growth in clinical service demand across the hospital’s catchment.

- Concept approval is sought for the redevelopment indicatively comprising 82,000sqm GFA, to be undertaken in two (2) stages including:
  - Clinical Services Building (CSB) and multi-storey car park (Stage 1); and
  - Acute Services Building (ASB) and multi-storey car park (Stage 2).

- Detailed approval is sought for the Stage 1 construction of the proposed CSB (44,000sqm GFA) and the construction of a multi-storey car park located to the north of Hospital Road.
Detailed development approval for the proposed Stage 2 works will be completed at a later date and does not form part of this SSDA. The Concept redevelopment will be delivered as funding is allocated and as necessary to meet SLHD needs. The Stage 1 Detailed works are estimated to be completed by 2021.

Conclusion

This EIS provides a detailed analysis of the subject site, an overview of the proposed development, consideration of the legislation and policies applicable to the development, an assessment of the environmental impacts and proposed mitigation measures to manage and protect the environment from these impacts.

The proposed development will have significant benefits for Sydney, NSW and Australia. As detailed within this EIS it is considered the environmental impacts are acceptable and where necessary, can be appropriately mitigated. The site has been found suitable for the proposed development. It is found on balance the development is significantly in the public interest.

Accordingly, it is recommended that the proposed development be approved by the consent authority.
1. Introduction

1.1 Project overview

This EIS has been prepared by Architectus on behalf of NSW Health Infrastructure to accompany a SSDA for the Concept and Stage 1 redevelopment of Concord Hospital.

This SSDA seeks consent for the proposed redevelopment of Concord Hospital to improve and replace outmoded facilities to meet the substantial growth in clinical service demand across the hospital’s catchment.

- Concept approval is sought for the redevelopment indicatively comprising 82,000sqm GFA, to be undertaken in two (2) stages including:
  - Clinical Services Building (CSB) and multi-storey car park (Stage 1); and
  - Acute Services Building (ASB) and multi-storey car park (Stage 2).

- Detailed approval is sought for the Stage 1 construction of the proposed CSB (44,000sqm GFA) and the construction of a multi-storey car park located to the north of Hospital Road.

Detailed development approval for the proposed Stage 2 works will be completed at a later date and does not form part of this SSDA. The Concept redevelopment will be delivered as funding is allocated and as necessary to meet SLHD needs. The Stage 1 Detailed works are estimated to be completed by 2021.

The proposed Concept redevelopment is in accordance with the concept architectural package prepared by Jacobs at Appendix C.

The proposed Stage 1 detailed development (CSB and multi-storey car park) is in accordance with the architectural drawings prepared by Jacobs at Appendices D and E.
Site

The site is located at 1H Hospital Road, Concord West, NSW within the Canada Bay LGA. It includes a total of eight (8) lots as detailed in Section 2 of this EIS.

Figure 1   Site Location Plan  
Source: NearMap

Reason for the proposal

The SSDA seeks consent for the Concept and Stage 1 redevelopment of Concord Hospital to improve and replace outdated facilities to meet the substantial growth in clinical service demand from across the hospital’s catchment that has occurred and will continue to occur into the future.

Substantial growth in service demand has been projected for the hospital within the Concord Clinical Services Plan 2014 (CSP) which is well beyond the Hospital’s capacity. This growth will require an additional 210 inpatient beds to be accommodated at the Hospital to meet the immediate 2021 demand (Source: NSW Health Infrastructure). This projected growth has necessitated the need for redevelopment of the hospital and is detailed within Section 1.8 of this EIS.

This EIS is to be read in conjunction with the Secretary’s Environmental Assessment Requirements (SEARs) issued for the project and provided at Appendix A, Concept and Stage 1 architectural drawings provided at Appendices C through E, and all other documentation and supporting information provided at Appendix B and Appendices F through AT.
1.2 Objectives of the development

As per Schedule 2, Part 3, 7(1)(b) of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation), the objectives of the proposed redevelopment are to:

- Provide the platform to deliver the best healthcare for the people of Central Sydney and beyond;
- Achieve better health outcomes for the people of Central Sydney, NSW and Australia;
- Articulate a clear and cogent case for service and capital development at Concord Hospital which delivers priorities outlined in the 2014 CSP;
- Increase the sub-acute bed capacity to 2026;
- Upgrade and expand the Aged Care and Rehabilitation service and associated ambulatory services;
- Establishment of a comprehensive Cancer Care Centre;
- Promote cohesive multi-disciplinary team based patient centred care;
- Support workforce recruitment, retention and skills development in Central Sydney; and
- Provide a high quality built environment which people connect with and which harnesses their pursuit of skills, knowledge and care.

(Source: NSW Health Infrastructure)

1.3 Applicant and project team

Applicant

The applicant for this SSDA is NSW Health Infrastructure.

NSW Health Infrastructure is a public authority for the purposes of the EP&A Act. This means this SSDA is a Crown Development Application and is to be determined by the Minister for Planning.

Author of EIS

This EIS has been prepared by Jonathan Archibald, Senior Urban Planner, Urban Planning, and Jane Fielding, Senior Associate, Urban Planning.

Input has also been provided by Matthew Kelly, Urban Planner and Teasheen Chuah, Urban Planner. Quality Assurance has been provided by Michael Harrison, Director, Urban Design and Planning.
Project team

The project team is set out in Table 1 below.

Table 1  Project Team

<table>
<thead>
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<th>Role</th>
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<tr>
<td>Applicant</td>
<td>NSW Health Infrastructure</td>
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<tr>
<td>Consultant Project Manager</td>
<td>Johnstaff</td>
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<tr>
<td>Architect</td>
<td>Jacobs</td>
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<td>Urban Planner</td>
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<td>Landscape Architect</td>
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<td>Land Surveyor</td>
<td>LTS Lockley</td>
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<td>Mechanical Engineer</td>
<td>Wood and Grieve Engineers</td>
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<td>Electrical Engineer</td>
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<td>Ecological Sustainable Development (ESD)</td>
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<td>Traffic Engineer</td>
<td>Arup</td>
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<td>Acoustic and Vibration Engineer</td>
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<td>Civil Engineer</td>
<td>Taylor Thomson Whitting (TTW)</td>
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1.4  Estimated Capital Investment Value

The estimated Capital Investment Value (CIV) for the proposed concept redevelopment is $968,272,531 (excluding GST).

The estimated CIV for the proposed Stage 1 development is $357,603,191 (excluding GST).

The estimated CIV for the proposed Stage 2 development is $610,669,340 (excluding GST).

A detailed CIV Report is at Appendix K.
1.5 **Secretary's Environmental Assessment Requirements**

SEARs were initially issued for the Stage 1 redevelopment of Concord Hospital pursuant to Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) on 8 February 2018.

In April 2018, NSW Health Infrastructure applied for amended SEARs in response to the requirement to prepare a master plan under Part 4 the Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (SREP). These amended SEARs were issued on 20 April 2018 and provided for this updated scope, now comprising the Concept and Stage 1 development of Concord Hospital.

Table 2 below summarises the SEARs requirements for an EIS under the EP&A Regulations and provides references to where the various requirements are addressed in the EIS. A full copy of the SEARs and detailed response is provided at Appendix A to this report.

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**Stage 1 – Clinical Services Building and multi-storey car park**

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### Plans & Documents

All relevant plans, drawings, diagrams and documentation are to be provided within the EIS. In addition, the EIS must include the following:

- Architectural drawings including but not limited to the following requirements:
  - building envelope drawings, dimensioned and including RLs and MGA coordinates;
  - plans, sections and elevations of the proposal;
  - site and context plans that demonstrate active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links;
  - detailed annotated wall sections that demonstrate typical cladding, window and door details, including materials and general construction quality;

### Consultation

The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.

City of Canada Bay  
Transport for NSW  
Roads and Maritime Services  
Government Architect NSW (via the NSW State Design Review Panel process)
1.6 Sydney Local Health District and Concord Repatriation General Hospital

The SLHD administers all public hospitals and healthcare facilities in the Central Sydney metropolitan area and encompasses the LGAs of City of Sydney, Inner West, Burwood, Strathfield, Canada Bay and Canterbury-Bankstown.

The SLHD includes the following healthcare facilities:
- Royal Prince Alfred Hospital (RPA), a principal referral hospital;
- Concord Repatriation General Hospital (Concord Hospital (or CRGH)), a principal referral hospital;
- Concord Centre for Mental Health, a tertiary mental health facility;
- The Professor Marie Bashir Centre for Mental Health, a tertiary mental health facility;
- Canterbury Hospital, a major metropolitan hospital;
- Balmain Hospital, a sub-acute hospital with GP-led emergency;
- Sydney Dental Hospital, a tertiary, primary and secondary care centre;
- Tresillian Family Care Centre, a Schedule 3 family care hospital; and
- A comprehensive range of community-based health services, which are linked to primary care providers, general practitioners and non-government agencies.

(Source: NSW Health Infrastructure)

Concord Hospital is a Group A1 – Principal referral hospital within the SLHD, which provides for 452 inpatient beds and provides a range of tertiary and quaternary services including medical, surgical and procedural services and is a centre of excellence for burns, aged care and hematology.

The Hospital is of local heritage significance, owing to its continuing history of providing health services for returned service people and their families. Its original main building (known as the ‘multiblock’), grounds and layout are listed as a local heritage item (Reference I256) under the Canada Bay Local Environmental Plan 2013 (LEP).

Substantial growth in service demand has been projected for the hospital, as identified by the 2014 CSP, which is well beyond the Hospital’s capacity. This would require an additional 210 inpatient beds to be accommodated at the Hospital (Source: NSW Health Infrastructure). This projected growth has necessitated the need for redevelopment of the hospital and is detailed further below.
1.7 Concord Repatriation General Hospital Concept and Stage 1 redevelopment

Concord Hospital is located in a growing population corridor within inner Sydney. The proposed redevelopment is required to improve and replace outmoded facilities to meet the substantial growth in clinical service demand from across the hospital’s catchment that has occurred and will occur over the next 10 years.

A master plan for Concord Hospital was developed by the SLHD in 2015 and updated in 2017 by NSW Health Infrastructure. This report was reviewed and optimised as part of the Final Business Case and was endorsed through project governance and by the SLHD in November 2017. This master plan has been prepared to inform the future development and utilisation of Concord Hospital, to ensure it can respond to current and future needs of the population whilst providing appropriate clinical and education services. This master plan outlines the proposed redevelopment of Concord Hospital in two (2) stages.

This SSDA seeks development consent to implement this master plan (being the Concept component of this application) as well as obtain detailed approval for Stage 1 works, being the construction of a new six storey Clinical Services Building (CSB), as well as a five (5) storey car park, landscaping and associated works. At completion, the Stage 1 works will provide new aged care, chronic care and rehabilitation facilities as well as relieve demand and improve efficiencies within the existing hospital building.

The scope of the proposed future Stage 2 redevelopment is detailed within Section 3 of this report, however generally comprises the construction of a new Acute Services Building (ASB) to the east of the existing main public hospital building (known as the multiblock), as well as the provision for additional multi-storey car parking at the site. Note these Stage 2 works are identified in concept form only, with a separate, detailed Development Application (DA) to be lodged for these works once the Stage 1 works have been completed.

The new facilities delivered by the proposed redevelopment will significantly improve connections to existing services as well as increase services available to the community. The new CSB (as sought under Stage 1), will provide inpatient accommodation, rehabilitation and ambulatory care services, addressing the short-term pressures to predominantly meet Concord Hospital’s immediate 2021 demand. The Stage 1 redevelopment will also collocate cancer care facilities from several locations across the precinct to improve operational efficiency at the site.

See below for a summary of the Business Cases prepared by NSW Health Infrastructure, which informs this proposal. Refer to a detailed overview of the proposal in Section 3 of this EIS.
**Business Case**

The Preliminary Business Case (NSW Health Infrastructure, 2014) considered a range of phased infrastructure options due to an available budget of $150 million. It provided a strong recommendation for undertaking of the proposed Stage 1 redevelopment, being the construction of the proposed CSB and associated multi-storey car parking (at an estimated cost of $340 million).

In June 2017 the NSW Government announced a new budget of $341.2 million facilitating delivery of the proposed Stage 1 works.

This Final Business Case (NSW Health Infrastructure, 2017) for the project incorporates previous internal master planning, the Preliminary Business Case scope and responds to the 2017 funding announcement facilitating delivery of the proposed Stage 1 works. The proposed Concept and Stage 1 redevelopment also allows the existing buildings known as the ‘Ramp Wards’ to be demolished and will enable the delivery of Stage 2 and the multi-storey car park, which will address growth of all other services to 2026.

![Figure 3 Zonal Master Plan](image)

**Source:** Jacobs (2018)
Figure 4  Overview of proposed Stage 1 redevelopment
Source: Jacobs

Figure 5  Overview of proposed Stage 2 redevelopment
Source: Jacobs
1.8 Justification for the project

Schedule 2 Clause 7 (1)(f) of the EP&A Regulation requires that an EIS must include:

“(f) the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4)”.

Justification for the proposed development is provided below. Please refer to Section 6 of this EIS for a response to ESD principles.

Concord Hospital Redevelopment Vision

The Concord Hospital redevelopment is a critical health infrastructure project required to improve and replace outmoded facilities and to meet the substantial growth in clinical service demand from across the hospital’s catchment that has occurred and will occur over the next 10 years.

At completion, the project will provide new Aged Care, Complex Care and Rehabilitation (ACC&R) facilities replacing the 70-year-old Ramp Wards in the current General Geriatric and Rehabilitation Medicine (GGRM) precinct, located to the east of the multiblock. Notably, the existing Ramp Wards which were built during the 1940s and 1950s are at the end of their useful life.

The new facilities sought will significantly improve connections to existing services as well as increase services to the veteran community and consumers requiring networked quaternary services. The new CSB (as sought within the Stage 1 works) will provide inpatient accommodation, rehabilitation and ambulatory care services, and address the short-term pressures to predominantly meet Concord Hospital’s 2021 demand.

The project is cognizant of the need to plan for future growth, particularly for acute services that are currently accommodated in the main multiblock building. The precinct adjacent and east of the proposed CSB has been identified for further expansion under the Stage 2 redevelopment scope to meet ongoing future demand.

Project Drivers

The project drivers include:

- Demand from population growth, which will see the Canada Bay LGA experience a 31% increase in growth by 2026, with density heavily concentrated around new urban developments of Rhodes, Meadowbank, West Ryde, Top Ryde, Wentworth Point, Breakfast Point, Ashfield, Burwood, Strathfield, Concord and Epping town centres. The Concord Hospital catchment is one of the two major growth areas in the SLHD.

- A projected ageing population of SLHD residents being 70 years and above, growing by 60% by 2026. Canada Bay LGA residents over 70 years will increase by 55%. New Aged, Complex Care and Rehabilitation services will be required to meet the needs of these residents.

- New cancer cases are expected to increase by 38% towards 2026/2027 within the SLHD catchment. Ambulatory care services will increase by 38%, and outpatient clinic services are to increase by 50%.

- Integrated care for physical and mental health, and Veterans Day and Soldier On support programs are needed to meet the increasing ongoing needs of veterans. Australia now has approximately 60,000 veterans who have served over the past 15 years.

- Need for collocation of clinical research with clinical services, such as the ANZAC Institute, Alzheimer’s and Ageing Institute and Asbestos Diseases Research Institute with the Aged, Complex Care and Rehabilitation and the Comprehensive Cancer Care Centre.

- Development and delivery of new models of care to best meet the increasing and dynamic health care needs of the community.
Need to replace ‘end of life’ clinical buildings. These include the original Ramp Wards, which result in increased maintenance issues and costs and are also distant from the multiblock, giving rise to potential risks to staff and patients.

(Source: NSW Health Infrastructure & NSW Health Sydney Local Health District)

Benefits of Project

The benefits of the project include, however are not limited to:

- Developing a modern and expanded health facility to support the needs of a growing population;
- Providing the Canada Bay LGA with improved local access to health services that better meet their needs;
- Providing for better patient health and experience;
- Improved access and way-finding for patients, visitors and staff;
- Optimised service linkages and precinct integration to improve efficiency of operations; and
- Value for money for the State.

(Source: NSW Health Infrastructure & NSW Health Sydney Local Health District)

1.9 Analysis of feasible alternatives

Schedule 2 Clause 7 (1)(c) of the EP&A Regulation requires that an EIS must include: “an analysis of any feasible alternatives to the carrying out of the development, including the consequences of not carrying out the development”.

The proposed Concept and Stage 1 redevelopment is informed by the requirements of Concord Hospital and the SLHD with a number of options considered for the redevelopment of the site, including, however not limited to:

- Option 1: The proposed development as detailed within Section 3 of this report;
- Option 2: Location of proposed redevelopment and associated works elsewhere within the site (such as the location of facilities to the north of Hospital Road);
- Option 3: Construct a new hospital building outside of the bounds of Concord Hospital (i.e. at another location elsewhere within the SLHD); and
- To not redevelop the site (i.e. do nothing).

These options have been carefully considered by Concord Hospital and the SLHD and are discussed in detail in the Final Business Case (NSW Health Infrastructure, December 2017). Option 1, being the proposed development as sought under SSD 9036, was selected as the preferred option as it addresses the service priorities, is affordable and aligns with the staging required to deliver the master plan.

Contextual changes acted as a catalyst for consideration of this option, whereby the new CSB will be established in a centralised location to the rear of the existing main hospital building, rather than elsewhere to the north east of the site, as this would present further environmental, heritage and built form impacts. Additionally, the proposed ASB (sought under Stage 2) is appropriately situated to maintain physical connectivity and ensure operational efficiency with the existing multiblock.
1.10 Preferred option justification

Following consideration of alternative options above, it was determined that the proposed concept redevelopment is the most suitable for the expansion of Concord Hospital, sited for maximum operational efficiency yet with minimal environmental impact.

There are also cost efficiencies associated with the location of the proposed redevelopment and extension, given its existing proximity to the existing main hospital building, car park and associated facilities. The proposed preferred option has been identified following an assessment of the consequences of various options, as well as ensuring the conservation of biological diversity and ecological integrity. An environmental assessment of the potential or anticipated impacts of the proposed development is detailed in Section 6 of this EIS.

The proposed preferred option has been designed with careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and is considered the most appropriate location and design against the site circumstances.

1.11 Related planning applications

Development Applications

A review of SLHD and Council records indicates there are no recent nor relevant DAs which are applicable to the proposal.

Other Relevant Approvals

NSW Health Infrastructure has recently obtained approval (May 2018) for minor early works at the site, including demolition of buildings, minor alteration to buildings at the site as well as associated services adjustments. These works have been approved through a Review of Environmental Factors (REF) pursuant to Part 5 of the EP&A Act. These works are separate to the SSDA and were essential to allow for the continuous provision of essential services offered across the broader Concord Hospital Campus.

Relevant to this SSDA, this REF provided approval for the removal of buildings numbered 1A, 60 through 65 inclusive, and 70 through 73 inclusive. This REF also provides for the refurbishment of existing building number 69.

This REF also provided approval for the removal of trees numbered 31 through 38 inclusive, 53, 54, 58 through 62 inclusive, 79, 84 and 85.

This REF also provides for the construction of a temporary loading dock, located at the rear of the existing multiblock, to ensure deliveries and servicing will be maintained through the course of construction for the proposed Stage 1 works as sought under this SSDA.

These works commenced in June 2018.
2. Site and context

2.1 Site

The site is located at 1H Hospital Road, Concord West, within the Canada Bay LGA. The site is located approximately 11 kilometres west of the Sydney CBD and includes a total of eight (8) allotments (one untitled parcel of land), which comprises the broader Concord Hospital precinct. Refer to an overview of land tenure in Table 3 below.

The site is located to the north of the suburb of Concord West, occupying a large area along Hospital Road and takes up much of the Rocky Point Peninsula, located between Brays Bay and Yaralla Bay and along the Parramatta River, approximately 400 metres north-east of the existing Concord Hospital precinct.

By virtue of the site’s peninsula setting, it is uniquely positioned in a precinct comprising almost entirely of health services facilities. The Rivendell School (also known as the Thomas Walker Convalescent Hospital) and associated lands comprises the majority of the north-eastern end of the peninsula and these lands are jointly owned by NSW Health and the NSW Department of Education.

Development to the south consists of the Dame Eadith Walker Estate which occupies the entirety of the Yaralla Bay/Majors Bay peninsula. These lands are also owned by NSW Health. Surrounding development to the north-west through south-west of the site consists predominantly of established low density residential development.

The site is well connected by existing public and private transport connections. Rhodes Train Station lies approximately 1 kilometre to the north west of the site, allowing journeys to Epping and Strathfield, by which other service lines may be taken. Both Concord Hospital and Rhodes Station are also accessible by bus as detailed in Section 2.2.

Figure 6  Site context plan
Source: NearMap
Figure 7  View of existing Concord Hospital Entrance
Taken from the northern side of Hospital Road Facing south west.
Source: Architectus

Figure 8  View of existing Concord Hospital Entrance gardens
Photo taken from the southern side of Hospital Road facing south west.
Source: Architectus
Figure 9  View of Existing Concord Hospital multiblock
Photo taken from the southern side of Hospital Road facing south east.
Source: Architectus
Figure 10  View at the rear of the existing Concord Hospital multiblock
This photo shows the location of the proposed CSB, facing south west.
Source: Architectus

Figure 11  View 2 at the rear of the existing Concord Hospital multiblock
The photo shows the location of the proposed CSB, facing north west.
Source: Architectus
Figure 12  View of the existing at grade car park
The photo was taken from the eastern perimeter of the car park facing west.
Source: Architectus

Figure 13  View 2 of the existing at grade car park
The photo was taken at the location of the proposed multi-storey car park, taken centrally from within the car park facing east.
Source: Architectus
Figure 14  View of the existing Ramp Wards
The photo was taken centrally from within the site facing east.
Source: Biosis

Figure 15  View 2 of the existing Ramp Wards
The photo was taken centrally from within the site facing north east.
Source: Biosis
Existing development

The site currently accommodates eighty-eight (88) documented buildings associated with Concord Hospital. The site is largely developed with numerous hospital buildings spread across the site varying in height and scale. These buildings comprise both the main public hospital facilities, as well as a range of teaching training and research facilities. Generally, public hospital facilities are located to the south west of the site, with other facilities (teaching, training, research etc.) located to the north-east portion of the site.

The main public Concord Hospital building (known as the multiblock building) is located at the intersection of Hospital Road and Fremont Street to the south west of the site. The main entrance to Concord Hospital (including emergency) is located on Hospital Road, which intersects with Concord Road approximately 500m south west of the site.

The site also accommodates a large at grade car park, located to the north and accessible from Hospital Road. All hospital buildings are located to the south of Hospital Road, except for a small building (associated with NSW Sports Medicine) located opposite the main entrance to the multiblock and to the south west corner of the car park.

The multiblock was constructed in 1941, with further construction across the site occurring during the 1940s and 1950s, consisting predominately of single storey buildings, known as the Ramp Wards, located adjacent to the main hospital building to the north east. These existing Ramp Wards are currently used for Acute Aged Care, Aged Care and Rehabilitation and Psychogeriatric inpatient units and associated ambulatory care services.

The Ramp Wards, being located to the east of the main multiblock, are distant from acute and clinical support services such as emergency, medical imaging and operating theatres. Transfer of patients for standard tests, procedures or emergencies requires transportation outside of the buildings via a covered public walkway. As such they are considered not fit-for-purpose in line with present day standards for patient care, security nor work health and safety risks. These wards are no longer able to respond to the changing health service delivery needs. Also new building code standards, health facility guidelines and technology mean that these wards are unsuitable for clinical care.

The building infrastructure associated with these Ramp Wards is prone to failure which results in increased maintenance required and potentially compromises the quality of service which is able to be provided. During the Preliminary Business Case the SLHD confirmed that without the project the existing Ramp Wards could not continue to take patients and would have to close resulting in a net loss of 103 Beds. To achieve the required outcomes at the site, these Ramp Wards are proposed to be demolished as detailed in Section 3 of this EIS.
Legal ownership

The site is located at 1H Hospital Road, Concord in the Canada Bay LGA and has an area of approximately 24Ha. The proposed extent of works encompasses eight lots as shown in Table 3 below.

Table 3  
Overview of Legal Description and Lot Ownership

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<td>Health Administration Corporation</td>
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<td>Lot 1 DP 455866</td>
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<td>Lot 2 DP 535257</td>
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<td>Lot 117 DP 752023</td>
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<td>Lot 1 DP 166721</td>
<td>New South Wales Health Foundation</td>
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<td>Lot 7310 DP 1159928</td>
<td>The State of New South Wales</td>
</tr>
<tr>
<td>Lot 2 DP 231732</td>
<td>The Prince Alfred Hospital</td>
</tr>
<tr>
<td>Untitled Land</td>
<td>NSW Roads and Maritime Services (RMS) (refer below).</td>
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Note: The heritage listing of the site (I256) under the LEP 2013 refers to Lot 2 DP 89877. It is understood that this lot has been superseded by Lot 20 DP 1139098.

The site includes an area of untitled land located to the south of the site. This portion of land is noted as being reclaimed land from within Yaralla Bay, undertaken in the 1940s. This portion of land is owned by RMS however has been used solely for hospital purposes since reclamation. This land is untitled, on the basis that it previously formed part of the Parramatta River and that upon reclamation the Mean High-Water Mark (MHWM) was not adjusted. As such, this land technically forms part of the Parramatta River and Sydney Harbour.

Figure 16  
Lot Plan of Concord Hospital Precinct
Source: nearmap.com.au
Zoning

The site is predominantly zoned SP2 - Infrastructure (Hospital) pursuant to the Canada Bay LEP 2013. Part of the RMS land is zoned E2 - Environmental Conservation, generally comprising areas of coastal vegetation and wetlands along the coastal edges of the site under the LEP 2013.

Another part of the RMS land is zoned W2 – Environmental Protection pursuant to the SREP 2005. Refer to an extract of the Canada Bay LEP 2013 and SREP 2005 zoning maps below.

As detailed in Section 3 of this EIS, all of the proposed works are to be contained within the SP2 Zone pursuant to the LEP 2013. No works are proposed in any areas zoned E2 – Environmental Conservation under the LEP 2013 nor W2 – Environmental Protection under the SREP 2005.
Heritage

The main hospital site is identified as a local heritage item (1256) under the LEP 2013, being the ‘Concord Repatriation Hospital - original main building, grounds and layout’ (note this main building is also known as the ‘multiblock’). This heritage listing does not include the existing at grade car park to the north of Hospital Road. The site is not located within any Heritage Conservation Area under the LEP 2013. No elements of the site are heritage listed under the SREP 2005.

All buildings at the site have been individually assessed as to their condition and heritage significance, as detailed in the Conservation Management Plan (CMP), prepared by Conybeare Morrison and dated May 2015 (Appendix AE). The heritage impact of the proposed works is detailed in the Historical Heritage Assessment (HHA) prepared by Biosis at Appendix AC and is discussed further in Section 6 of this EIS.

Concord Hospital also adjoins two state heritage items located to the north and south of the site respectively, including:

- State Heritage Item SHR00115: ‘Thomas Walker Convalescent Hospital’; and
- State Heritage Item SHR00119: ‘Dame Eadith Walker Convalescent Hospital’.

These state heritage items are not located within the subject site and the proposed Concept and Stage 1 redevelopment works are not located within the vicinity of either of these state heritage items.

Please refer to an extract of the LEP 2013 heritage map provided in Figure 19 below.
2.2 Transport and access

A Transport and Parking Report has been prepared by Arup and is provided at Appendix AF of this report. This report provides an overview of traffic conditions, public and private transport, access and parking availability surrounding Concord Hospital.

Traffic Context

Located on a peninsula to the east of Concord Road, access to Concord Hospital is limited to Hospital Road via Concord Road (an RMS classified road) and from Nullawarra Avenue (a local road) from the south. Other surrounding local streets have been blocked at Concord Road to limit traffic intrusion.

The main entrance to Concord Hospital (including Emergency) is located on Hospital Road, Concord, which intersects with Concord Road approximately 500m south west of the site.

Loading and Servicing

Service vehicles access the site via an existing service entrance along Boronia Street to the south of the site. From this entrance, service vehicles then utilise the Hospitals internal road network for deliveries and servicing. Some localised areas of staff car parking also exist within Hospital Grounds. The main loading dock is located to the rear (south) of the existing multiblock building.

Public Transport

A range of public transport options are available to the site. The site is located approximately 1.0km from Rhodes railway station, located to the north west of the site.

A number of bus stops are also located along Hospital Road, serviced by routes including:

- 458 - Ryde to Burwood via Rhodes (seven days per week);
- 460 -Five Dock - Concord Hospital via Canada Bay (Monday to Friday only); and
- M41 - Macquarie Park to Hurstville (seven days per week);
It is noted that both 458 and the M41 services stop close to Rhodes train station.

Parking

Visitor car parking at the site is primarily located within the existing large at grade car park, located to the north of Hospital Road. The majority of surrounding streets also have two-hour (free) on-street parking, whilst Hospital Road allows for four-hour (metered) parking.

Car spaces with two-hour restrictions are considered to be suitable for use by hospital visitors or patients only as staff shifts are considerably longer. For example, Hospital Road (east of Fremont Street) is well used by visitors to Concord Hospital users given its close proximity to the main hospital entrance.

Limited staff parking is currently provided for within hospital grounds and the internal (private) road network. Accordingly, a permit system is in place for hospital staff. As at May 2018, there are currently 1,985 staff with approved parking permits and 550 staff on a waiting list (Source: Sydney Local Health District).

2.3 Topography

As noted on the Site Survey (Appendix B) and within the Geotechnical Investigations prepared for the site (Appendices T through W), the natural topography of the site slopes gently from the north-west to the south-east. Surface levels vary from about RL9.5m AHD in the western corner of the site (at the location of existing tennis courts to the south of the multiblock) to approximately RL3.5m AHD to the south-eastern side of the proposed CSB building, adjacent to the banks of the Parramatta River.

2.4 Vegetation & ecology

The main hospital precinct is largely developed and is generally devoid of significant vegetation within the hospital grounds, however with areas of landscaping throughout the site.

Given the peninsula setting, there are however large areas of vegetation located to the site’s coastal edges that are identified as a ‘Wetlands Protection Area’ under the SREP 2005. These areas are also identified as areas of terrestrial biodiversity under the LEP 2013.

These areas comprise estuarine mangrove forest and Estuarine Swamp Oak forest as well as a variety of other trees, native coastal shrubbery and vegetation. Please refer to an overview of vegetation and ecological matters in the Flora and Fauna Assessment, prepared by EcoLogical at Appendix AQ.

2.5 Acid sulfate soils

The site is identified as containing part Class 5 and part Class 2 Acid Sulfate Soils (ASS) across the site under the LEP 2013. Refer a further discussion of ASS within Section 6 of this EIS.

2.6 Aviation

The site accommodates a grassed helipad located to the south of the site. The proposed development does not seek any alteration to this existing helipad. No new helipads or other aviation-related facilities are proposed as part of the redevelopment.

2.7 Flooding

Section 149(2)&(5) certificates obtained for the site indicated that the site is not subject to flood related development controls. However, the site is partially flood affected with areas subject to local overland flooding.

Accordingly, a Flood Study and Infrastructure Review has been prepared by TTW (Appendix Q) which provides recommendations for flood mitigation measures at the site. Refer to a further discussion of flooding matters in Section 6 of this EIS.
2.8 Groundwater and contamination

Detailed site investigations have been undertaken for the proposed development by Douglas Partners and Coffey Geotechnics and are provided at Appendices T through W.

A preliminary geotechnical investigation for the site was undertaken by Douglas Partners in April 2016 (Appendix T) as part of preliminary design testing.

To support the proposed concept redevelopment, further geotechnical investigations have also been undertaken by Coffey Geotechnics. Given the large scale of the site, these have been undertaken in three phases, including:

- Phase 1: being the location of the (Stage 1) proposed CSB (Appendix U),
- Phase 2: being the location of the proposed (Stage 1) at grade car park and future (Stage 2) ASB (Appendix V); and
- Phase 3: being the location of multi-storey car parking (under Stages 1 and 2) (Appendix W).

Detailed site investigations have also been prepared for each phase of the development and are provided at Appendices X through Z respectively.

Based on the findings of these detailed site investigations, a Remedial Action Plan (RAP) has also been prepared (refer Appendix AA).

Clinical Services Building (Phase 1)

The Phase 1 detailed site investigation (Appendix X) concludes that the investigation area is suitable for the proposed CSB (as sought under Stage 1), subject to the recommendations of the RAP (Appendix AA).

Key findings include that the quality of fill is unlikely to pose a health risk, low likelihood of acid sulfate soils, and that concentrations of contaminants in ground water samples were below the laboratory limit of reporting. However, it was discovered the presence of an underground storage tank in the existing loading dock area. On the basis of this finding, a RAP has been developed (Appendix AA) to ensure the appropriate remediation of this portion of the site.

Acute Services Building (Phase 2)

The Phase 2 detailed site investigation (Appendix Y) concludes that the investigation area is suitable for the proposed at grade car park (as sought under Stage 1) and find the ground contamination conditions encountered are unlikely to preclude the Phase 2 site being developed as a multi-storey hospital building.

Whilst localised contamination marginally exceeded the adopted ecological criteria (that may present a potential risk to future landscaping), widespread contamination was not identified that precludes the redevelopment of the Phase 2 investigation area for both the proposed at grade car park (as proposed under Stage 1) and the future ASB (as proposed under Stage 2).

Multi-Storey Car Park (Phase 3)

The Phase 3 detailed site investigation (Appendix Z) concludes that the investigation area is suitable for both the proposed multi-storey car parking (as sought under both Stages 1 and 2), subject to the recommendations of the RAP (Appendix AA).

This investigation found evidence of fill across the site, including the presence of Asbestos Containing Material (ACM), likely associated with poor management practices during the historic demolition of structures present within the site between 1940 and 1970s. This investigation also found the likely potential for acid sulfate soils and concentrations of nickel and zinc were detected at concentrations which exceeded adopted levels for marine waters.

Refer to a further assessment of environmental impacts at Section 6, as well as proposed mitigation measures at Section 7 of this EIS.
2.9 Existing hospital operations

Established in 1941, Concord Hospital has operated for over 70 years as a principal referral group A1 hospital within the SLHD. Concord Hospital’s vision is aligned with that of the SLHD, which is “to achieve excellence in healthcare for all”.

Beginning in 2000, Concord Hospital underwent major transformation, including changes to the hospital’s physical appearance to integrate the modern extensions with the existing structure, and the addition of various specialised services and facilities.

Concord Hospital currently operates as a 452-bed teaching hospital of the University of Sydney and offers a range of specialty and sub-specialty services, including: burns, colorectal surgery, laparoscopic surgery, molecular biology and genetic laboratory, aged and extended care, gastroenterology and palliative care. Concord Hospital also provides a specialised state-wide burns service.

Concord Hospital is one of the premier teaching hospitals in NSW, providing secondary, tertiary and quaternary level services to patients and their families from across Sydney, NSW and Australia. Concord Hospital also provides a range of medical teaching facilities, with long term tertiary affiliations to the University of Sydney. Limited accommodation is also available for staff and students based at the Hospital, located within the Residential Quarters at Building 75 near the main multiblock building.

Concord Hospital employs more than 2,000 staff. As a representative overview of existing hospital operations, in 2011/2012 Concord Hospital:

- Delivered care to 48,926 inpatients;
- Performed 12,044 surgical procedures;
- Provided services to 519,732 outpatients; and
- Met the needs of 34,695 people who presented to the Emergency Department.

Concord receives patients from across NSW for specialised consultative healthcare, advanced medical investigation and treatment of complex or life-threatening conditions, with inflows to the hospital (residents of other Districts treated at Concord) being highest from the Western Sydney LHD (15.2% of total hospital separations), the Northern Sydney LHD (12.7%) and the South-Western Sydney LHD (10.4%).

The Emergency Department of Concord Hospital provides an essential public service and is open and accessible 24-hours a day, seven days per week.

Most wards within Concord Hospital are open for visitation between 9.00am – 9.00pm. Outside of these hours, access is granted by Security Services at the main gate.

(Source: Sydney Local Health District)
3. Proposed development

3.1 Summary of development

This SSDA seeks consent for the proposed redevelopment of Concord Repatriation General Hospital to improve and replace outmoded facilities to meet the substantial growth in clinical service demand across the hospital’s catchment.

This Concept SSDA is for the redevelopment of Concord Hospital, including a concept proposal for the redevelopment of the existing hospital site; and concurrent first stage of the development, comprising the detailed design and construction of a new CSB, multi-storey car park and associated works.

- Concept approval is sought for the redevelopment indicatively comprising 82,000sqm GFA, to be undertaken in two (2) stages including:
  - Clinical Services Building (CSB) and multi-storey car park (Stage 1); and
  - Acute Services Building (ASB) and multi-storey car park (Stage 2).

- Detailed approval is sought for the Stage 1 construction of the proposed CSB (44,000sqm GFA) and the construction of a multi-storey car park located to the north of Hospital Road.

Detailed development approval for the proposed Stage 2 works will be completed at a later date and does not form part of this SSDA. The Concept redevelopment will be delivered as funding is allocated and as necessary to meet SLHD needs. The Stage 1 Detailed works are estimated to be completed by 2021.

The proposed Concept redevelopment is in accordance with the concept architectural package prepared by Jacobs at Appendix C.

The proposed Stage 1 detailed development (CSB and multi-storey car park) is in accordance with the architectural drawings prepared by Jacobs at Appendices D and E.

![Figure 20: Overview of proposed Concept redevelopment](Source: Jacobs)
3.2 Development data

Built form data

Table 4 below sets out the key development data for the proposed redevelopment.

Table 4: Key Development Data

<table>
<thead>
<tr>
<th>Component</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFA (existing multiblock)*</td>
<td>34,180sqm (approximate)</td>
</tr>
<tr>
<td>GFA (proposed Stage 1 CSB)*</td>
<td>44,000sqm (approximate)</td>
</tr>
<tr>
<td>GFA (proposed Stage 2 ASB)*</td>
<td>38,000 sqm (approximate)</td>
</tr>
<tr>
<td>Building height of existing multiblock (maximum)</td>
<td>RL56.61</td>
</tr>
<tr>
<td>Building height of existing multiblock (predominant</td>
<td>RL43.5</td>
</tr>
<tr>
<td>Building height of proposed Stage 1 CSB)</td>
<td>RL43.5</td>
</tr>
<tr>
<td>Building height (proposed Stage 2 CSB)</td>
<td>RL43.1</td>
</tr>
<tr>
<td>Parking spaces (existing circumstance)</td>
<td>1,957 spaces</td>
</tr>
<tr>
<td>Parking spaces (proposed multi-storey car under</td>
<td>590 spaces</td>
</tr>
<tr>
<td>Parking spaces (total at completion of Stage 1</td>
<td>2,539 spaces</td>
</tr>
<tr>
<td>Parking spaces (total at completion of Stage 2</td>
<td>2,639 spaces</td>
</tr>
<tr>
<td>*Refer GFA Calculations in Architectural drawings.</td>
<td></td>
</tr>
<tr>
<td>**Refer car parking calculations at Section 6.8 of</td>
<td></td>
</tr>
<tr>
<td>this EIS.</td>
<td></td>
</tr>
</tbody>
</table>

Patient capacity

Table 5 below sets out bed (patient) numbers to be accommodated as part of the proposed redevelopment.

Table 5: Patient capacity – operation (FTE)

<table>
<thead>
<tr>
<th>Component</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing (December 2017) beds (Acute and Sub-Acute)</td>
<td>452</td>
</tr>
<tr>
<td>Additional beds from proposed Stage 1 development</td>
<td>111</td>
</tr>
<tr>
<td>Beds at conclusion of proposed Stage 1 development</td>
<td>563</td>
</tr>
<tr>
<td>Additional beds from proposed Stage 2 development</td>
<td>110</td>
</tr>
<tr>
<td>Beds at conclusion of proposed Stage 2 development</td>
<td>673</td>
</tr>
</tbody>
</table>

Job creation

Table 6 below sets out the key staffing data (full time equivalent (FTE)) for the proposed Stage 1 development.

Table 6: Staff numbers – operation (FTE)

<table>
<thead>
<tr>
<th>Component</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing Concord Hospital staff (overall, existing circumstance)</td>
<td>2,284</td>
</tr>
<tr>
<td>Proposed Concord Hospital staff (proposed Stage 1 CSB)</td>
<td>414</td>
</tr>
<tr>
<td>Proposed Concord Hospital staff (overall, at completion of</td>
<td>2,698</td>
</tr>
<tr>
<td>Stage 1 works)</td>
<td></td>
</tr>
<tr>
<td>Proposed Concord Hospital staff (proposed Stage 2 ASB)</td>
<td>333</td>
</tr>
<tr>
<td>Proposed Concord Hospital staff (overall, at completion of</td>
<td>3,031</td>
</tr>
<tr>
<td>redevelopment (Stage 1 and Stage 2 works)</td>
<td></td>
</tr>
</tbody>
</table>

The number of construction workers on site during the Stage 1 works will average at 727 persons (FTE). The number of construction workers for Stage 2 works will be determined as part of further detailed design processes.
3.3 Concept redevelopment

This application seeks consent for a concept proposal under Division 4.4 of the EP&A Act.

3.3.1 Key principles

The proposed concept redevelopment has the following objectives and key planning principles:

- To achieve the desired bed capacity targets as well as current and future care requirements as dictated by the SLHD;
- Connectivity with existing hospital facilities, to improve operational efficiency and integration of network services across the campus;
- Provide for a built form that is sympathetic to the existing heritage significance of the multiblock and the broader heritage significance of the site and locality;
- Provide for a built form that fits within its context, including the clear distinction and separation of health care services to the south of Hospital Road and areas of car parking to the north of Hospital Road; and
- Provide for a built form that is suitable against the peninsula setting of the site, minimising visual impact from surrounding residential areas as well as maintain and enhance the unique visual qualities of surrounding waterways.

Consistent with these planning principles, the proposed concept redevelopment will inform future development at the site, including the provision of clinical services, acute services and supporting infrastructure, including car parking. The proposed concept redevelopment reflects the opportunities and constraints of the site.

3.3.2 Key features

The key features of the concept proposal reference design include the following:

- Clearly defined development zones to the north and south of Hospital Road to demarcate health services facilities from car parking areas;
- Provide for three distinct indicative building envelopes for the proposed CSB, ASB and multi-storey car parking;
- Provide for an approximate gross floor area (GFA) of 82,000 square metres (subject to refinement as part of detailed design processes); and
- Maintain primary public access from Hospital Road, with secondary access for service vehicles only obtained from Currawang Street.

3.3.3 Built form

Overall, the proposed concept redevelopment seeks to provide a clearly defined built form for both the proposed CSB (Stage 1) and ASB (Stage 2) components, located to the south and north east of the existing multiblock respectively.

Siting of the proposed buildings is guided by the site’s peninsula setting, existing built form and heritage considerations. Specifically, the recommendations of the CMP (Appendix AE) require a visual curtilage to be maintained around the existing multiblock in order to retain the landmark significance of this building as a dominant feature of the hospital site.

Consistent with historical development patterns, the siting of the proposed CSB and ASB have sought to ensure a clear distinction and separation of health care services to the south of Hospital Road and areas of car parking to the north of Hospital Road. As such, all multi-storey car parking will be located to the north of Hospital Road.
**CSB (Stage 1)**

The siting of the proposed CSB seeks to respond to the existing built form context and environmental constraints at the site. Importantly, the existing multiblock (which has a 45-degree orientation to north), is suboptimal with regard to solar and thermal performance. However, to achieve the most efficient use of the land the siting of the proposed CSB is required to adopt this same orientation to ensure continuity in the built form across the site.

Additionally, in response to the heritage management principles and the recommendations of the CMP, the proposed CSB has been located to the rear of the existing multiblock, being below and behind this key landmark building and will not be visible from Hospital Road. This area is regular in shape and topography and will allow for maximum integration with existing facilities at the site.

The proposed CSB is also limited in height (to a maximum of six (6) storeys) so as not to detract from the existing heritage significant multiblock building. Refer to further discussion of the Stage 1 built form at Section 3.3.5 below.

**ASB (Stage 2)**

The siting of the proposed ASB (as sought under Stage 2) has been designed to maximise operational efficiency and interrelationship between the existing multiblock and proposed CSB. The proposed ASB, to be constructed at the location of the present Ramp Wards, will enable both physical proximity and operational efficiencies between clinical buildings, yet also enable optimal construction staging at the site (particularly with regards to car parking).

As detailed at Appendix C, the proposed ASB is to have an indicative built form of approximately eight (8) storeys when viewed from Hospital Road, with an approximate GFA of 38,000sqm, in order to maintain a complementary scale against surrounding buildings. The ASB is also to be set back approximately 40m from Hospital Road to maintain the visual curtilage of the multiblock as well as existing prominent landscaping and mature trees at the site along the Hospital Road frontage.

Further landscaping and public domain opportunities exist to integrate the existing multiblock with the proposed CSB and ASB and will be considered as part of subsequent detailed design processes.

**Multi-storey car parking (Stages 1 and 2)**

All multi-storey car parking will be located to the north of Hospital Road to maintain clear distinction and separation of health care services to the south of Hospital Road and areas of car parking. Consideration has been given to the scale of the proposed car parking so as to not be higher than existing coastal vegetation as well as maintain visual and acoustic amenity to nearby residential areas.

Amenity impacts associated with the proposed multi-storey car parking will be inherently greater under the proposed Stage 1 works, being closer to nearby residential properties to the east of the site. However, these impacts are considered to be acceptable under the circumstances as detailed in Section 6 of this report. Subsequently, amenity impacts of the proposed Stage 2 car parking will be lessened as this car park will be located to the north and therefore further away from residential properties, as well as shielded by the proposed Stage 1 multi-storey car park structure.

**3.3.4 Demolition**

The proposed Stage 2 works require the demolition of the Aged Care Clinics. The nature, use, heritage significance and structural condition of all existing buildings at the site have previously been assessed under the CMP, prepared by Conybeare Morrison Pty Ltd in May 2015 at Appendix AE. Built in 2007, the Aged Care Clinics building is identified as being in a fair structural condition and possessing neutral heritage significance.
3.3.5 Remediation

Overview

As noted at Section 2.8 of this EIS, detailed site investigations were undertaken for the proposed redevelopment (Appendices TX through Z). Given the large scale of the site, these investigations have been undertaken in three phases, including:

- Phase 1: being the location of the (Stage 1) proposed CSB (Appendix U),
- Phase 2: being the location of the proposed (Stage 1) at grade car park and future (Stage 2) ASB (Appendix V); and
- Phase 3: being the location of multi-storey car parking (under Stages 1 and 2) (Appendix W).

These investigations have identified evidence of contaminated soils across the site, including the presence of Asbestos Containing Material (ACM), the potential for acid sulfate soils as well as concentrations of nickel and zinc which exceed adopted Groundwater Investigation Levels (GIL) for marine waters and EPA site assessment criteria.

As noted within the detailed site investigations, identified contamination at the site is likely associated with poor management practices during the historic demolition of structures present within the site between 1940 and 1970s, as well as due to importation of uncharacterised fill.

On the basis of the findings of the Phase 1 (CSB) and Phase 3 (multi-storey car park) detailed site investigations (Appendices U and W respectively), a Remedial Action Plan (RAP) has been developed (Appendix AA) to ensure the appropriate remediation of these portions of the site.

Remediation under Stage 1 works

Remediation required under the Stage 1 works specifically includes:

- The Phase 1 area, being the location of the proposed CSB; and
- Part of the Phase 3 area, being the first portion of the proposed multi-storey car park (to be constructed under Stage 1).

Remediation works will primarily be undertaken as part of the Stage 1 redevelopment, as all areas of the site that are affected by the Stage 2 works are also subject to works within Stage 1. This specifically includes the location of the current Ramp Wards, which are to be demolished under Stage 1 for the purposes of an at grade car park, whilst also being the location of the construction of the future ASB as sought under Stage 2.

Remediation under Stage 2 works

Remediation required under the Stage 1 works specifically includes:

- Part of the Phase 3 area, being the second portion of the proposed multi-storey car park (to be constructed under Stage 2).

It is specifically noted that the Phase 2 area is excluded from this RAP, as no widespread contamination was identified that would preclude the redevelopment of the Phase 2 investigation area and the site is suitable for redevelopment as an on-grade, exterior car park in accordance with SEPP55. Further, the ground contamination conditions encountered are unlikely to preclude the Phase 2 site being developed as a multi-storey hospital building, subject to further investigations to be undertaken as part of subsequent detailed design processes. The site can be made suitable for the proposed development in accordance with SEPP55. Further sampling will be undertaken for the Stage 2 works when submitted for determination.

Remedial procedures

As detailed at Section 5 of the RAP, the preferred remedial strategy for the site comprises primarily the excavation and off-site disposal of ACM to a licensed landfill facility. Any remaining fill material will then be retained below a cover (capping) layer to restrict exposure, which will be subject to long term management of the cover layer to ensure its effectiveness.
Please refer to a detailed overview of remedial procedures at Section 6 of this EIS.

3.4 Proposed detailed stage 1 works

As detailed in Section 3.1, to implement the proposed concept redevelopment, this SSDA also seeks consent for the first stage of works, comprising the detailed design and construction of a new CSB, multi-storey car park and associated works.

The Stage 1 works will replace existing outmoded facilities and provide new aged care, chronic care and rehabilitation facilities. Funding for these works ($341m) was announced by the Minister in June 2017, and the new CSB facility will significantly improve connections to existing services as well as increase services to the community, addressing existing short-term pressures to predominantly meet Concord Hospital’s 2021 demand.

3.4.1 Demolition

The proposed Stage 1 works require the demolition of the Ramp Wards as detailed in Table 7 below.

The nature, use, heritage significance and structural condition of all existing buildings at the site have previously been assessed under the CMP, prepared by Conybeare Morrison Pty Ltd in May 2015 at Appendix AE.

Table 7 Overview of Buildings to be Demolished (as per the 2015 CMP)

<table>
<thead>
<tr>
<th>Building No.</th>
<th>Current Use</th>
<th>Year Built</th>
<th>Heritage Significance</th>
<th>Structural Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Aged Care Ward</td>
<td>1942</td>
<td>Some</td>
<td>Fair</td>
</tr>
<tr>
<td>11</td>
<td>Aged Care Ward</td>
<td>1942</td>
<td>Some</td>
<td>Fair</td>
</tr>
<tr>
<td>14</td>
<td>Rehabilitation Ward</td>
<td>1942</td>
<td>Some</td>
<td>Fair</td>
</tr>
<tr>
<td>15</td>
<td>Aged Care Ward</td>
<td>1942</td>
<td>Some</td>
<td>Fair</td>
</tr>
<tr>
<td>16</td>
<td>Aged Care Day Hospital</td>
<td>1942</td>
<td>Some</td>
<td>Unknown</td>
</tr>
<tr>
<td>17</td>
<td>Psychogeriatric Ward</td>
<td>1942</td>
<td>Some</td>
<td>Fair</td>
</tr>
<tr>
<td>18</td>
<td>Aged Care Executive and CERA</td>
<td>1942</td>
<td>Some</td>
<td>Fair</td>
</tr>
<tr>
<td>19</td>
<td>Community Aged Care</td>
<td>1942</td>
<td>Some</td>
<td>Fair</td>
</tr>
</tbody>
</table>

It is noted that whilst a number of other buildings exist at the site within the building envelope of the proposed CSB, HI has obtained separate approval for the demolition of these buildings. Refer Section 1.11 of this EIS.

As the proposed ASB (Stage 2) is to be sited within the location of the proposed at grade car park, no further demolition of buildings is anticipated to be required as part of the Stage 2 works.

For full detail please refer to the architectural drawings prepared by Jacobs at Appendices D and E. Please also refer to an overview of heritage impacts at Section 6 of this EIS.

3.4.2 Clinical Services Building

The proposed CSB is located south east of the existing multiblock building and will provide for new and expanded clinical services for Aged, Complex Care and Rehabilitation, an integrated Cancer Care Centre and National Centre for Veteran’s Healthcare.

The CSB generally comprises the following layout:

- Basement level connecting new support services with existing support service lifts in the existing multiblock building on the lower ground floor;
• A one (1) storey podium level for the provision of outpatient clinics with dedicated drop off and entry areas; and

• Two six (6) storey wings and one three (3) storey wing connected by a ‘Support Bar’ (plus rooftop plant) including ground floor day treatment centres and inpatients units. At ground level a link via a three (3) storey atrium to the existing multiblock building is created. On levels one and two overhead bridge links, within the atrium, are provided for patient movements between the new and existing multiblock building.

For full detail please refer to the architectural drawings prepared by Jacobs at Appendices D and E.

3.4.3 Vehicular Access

The Stage 1 works include the development of two roundabouts to service the multi-storey car park and new at grade car park. A new access to the Hospital Road car park is proposed off Hospital Road, a public road, directly across from the existing Gate 2 access road. A new mini roundabout is proposed at this location to control movements into and from the main car park and multi-storey car park, and the Gate 2 access road which is to accommodate drop-off activity and the new on grade car park to the south of Hospital Road. The second mini roundabout will be located adjacent to the north-west corner of the multi-storey car park on hospital land, to control the entry and exit movements from the on-grade car park to the west and the multi-storey car park entry to the east. Refer to the Transport and Parking Report at Appendix AF.

3.4.4 Parking

Car Parking

The Stage 1 works also include the construction of a new multi-storey car park, located centrally within the existing at grade car park to the north of Hospital Road. This car park is to be five (5) storeys in height with capacity for 590 car spaces.

In addition to the 590 car spaces provided within the multi-storey car park, the proposed CSB will incorporate 22 car park spaces adjacent to the ambulatory care drop off area. In addition, 20 car park spaces are provided between the loading dock and internal loop road to the south of the CSB.

To ensure no net loss of car parking during construction processes, additional temporary at grade car parking will be provided at the location of the existing Ramp Wards (which are proposed to be demolished as detailed above). This car park is to have a capacity for 300 spaces and will provide for overflow parking whilst the multi-storey car park is under construction (anticipated completion 2022).

For full detail please refer to the architectural drawings prepared by Jacobs at Appendices D and E.

Bicycle Parking

The Stage 1 development will provide approximately 40 secure and covered bicycle parking spaces with efficient access to end of trip facilities for hospital staff.

End of trip facilities will be provided in accordance with Australian standards for the new development, located at the basement level of the CSB. Bicycle parking will be covered and secure in the basement level of the CSB. Cycle access to the area will be shared with the vehicle entry to the ambulatory care drop-off at basement level.

Signage

Minor wayfinding signage is proposed as detailed within the Wayfinding Schematic Design Review report, prepared by Minale Tattersfield at Appendix AL.
3.4.5 Built form and scale

The proposed Concept redevelopment and Stage 1 works have been considered in the context of the precinct, including, however not limited to, its headland and peninsula setting, heritage significance, the existing built form context as well as surrounding residential development.

The siting and form of the proposed CSB is the result of SLHD functional requirements and to achieve physical and operational connectivity with the existing multiblock building, whilst maintaining existing access and servicing requirements to Concord Hospital overall. From a design perspective, the proposed CSB must also be respectful and complementary to the heritage significance of this multiblock and the visual relationship of the site to Sydney Harbour.

Siting and footprint

The siting of existing buildings at the site, particularly the existing multiblock (which has a 45-degree orientation to north), is suboptimal with regard to solar and thermal performance. However, to achieve the most efficient use of the land the siting of the proposed CSB is required to adopt this same orientation to ensure continuity across the site.

Additionally, with regard to the heritage context of the site, the siting of the proposed CSB is guided by the recommendations of the CMP (Appendix AE) which provides that any new built form:

- Maintain physical and visual curtilage to buildings of high heritage significance to new development areas (including the existing multiblock);
- The multiblock should retain its landmark significance as the dominant feature on the hospital site;
- Identifying areas and elements where cultural significance can be highlighted, amplified, or reinstated; and
- Any new development in proximity to any building of the original Stephenson and Turner Group should take care not to dominate or obscure the overall massing of the buildings.

In response to these principles, the proposed CSB has been located to the rear of the existing multiblock, being below and behind this key landmark building and will not be visible from Hospital Road. This area is regular in shape and topography and will allow for maximum integration with existing facilities at the site.

The building footprint is based around an 8.4 metre by 8.4 metre structural grid arrangement, which allows for maximum operational efficiency, as well as the flexibility and adaptability to accommodate all principal functions of the hospital. This footprint, along with the building siting, maximises available land at the site whilst minimising the extent of demolition and any tree removal required.

Height

The height of the proposed CSB is dictated by surrounding development, particularly heritage considerations associated with the adjoining multiblock. Consistent with the recommendations of the CMP (Appendix AE), the proposed CSB has been located to the rear of the existing multiblock, being below and behind this key landmark building and will not be visible from Hospital Road.

The proposed building has a podium extending over the lower ground and basement floors. Above that there are two six (6) storey wings and a three (3) storey wing. The existing multiblock has a maximum height of RL56.61, whilst the proposed CSB is to have a maximum height of RL43.5.

The proposed CSB is therefore significantly lower (by 13.17m) than the existing multiblock. Additionally, through stepping of the building form down to the northeast, the proposed CSB respects the form and massing of the multiblock, preserving views to and from the large curved glazed facade on its east side.
Built form and massing

The built form and massing of the proposed CSB is primarily informed by its setting against the adjoining multiblock, being a key heritage significant building at the site. As noted above, heritage considerations require that the proposed CSB be lower in height than this multiblock building. Accordingly, consideration has been given to massing options at the site to achieve the required GFA, whilst providing an articulated form which fits within the broader heritage context at the site, as opposed to a single large rectangular building.

The proposed CSB provides an articulated form through the provision of three parallel wings (two six (6) storey wings and one three (3) storey wing), which together form an ‘E’ shape and extend from the rear (south) of the existing multiblock towards Yaralla Bay. These wings are to be connected to the existing multiblock through a one (1) storey podium as well as a ‘Support Bar’ in order to attach and integrate the CSB to the existing multiblock to allow for patient movements between two buildings. Bridge links between the multiblock and CSB are also provided on levels one and two.

The result is a stepped structure that addresses both the harbour and the existing multiblock and which maximises views from patient rooms northeast towards Yaralla Bay and the Parramatta River. Given that the CSB will predominantly provide aged care and rehabilitation functions, external terraces are provided to maximise views and enhance amenity and improve the experience of patients.

Multi-storey car park

The siting of the proposed multi-storey car park is the result of existing historical development patterns at the site, with all public car parking located to the northern side of Hospital Road. The proposed multi-storey car park is to be located centrally with this existing car park, being within proximity and providing connectivity to hospital facilities, whilst ensuring sufficient separation to nearby surrounding residential areas.

The proposed multi-storey car park is limited in height to five (5) storeys, corresponding to the existing built form to the south of Hospital Road (existing multiblock building), as well as being generally consistent with the height of existing vegetation to the north of the existing car park.

3.4.6 Functional areas of new CSB

The functional relationships of services within the proposed CSB have been provided for both vertically and horizontally, through the provision of the three (3) separate wings which connect to, and will form an extension from, the existing multiblock through the proposed support bar. Connection is provided through the proposed podium, with additional bridge links proposed to levels one and two.

The functions by level in the proposed CSB are set out in Table 8 below and are further detailed in the Architectural Design Report at Appendix G.

Summary

A summary of the various functional areas of the new building is provided at Table 8 below.
Table 8  Function by level

<table>
<thead>
<tr>
<th>Level</th>
<th>South eastern wing (six storeys)</th>
<th>Central wing (six storeys)</th>
<th>North eastern wing (three storeys)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basement</td>
<td>Loading dock</td>
<td>Support services</td>
<td>Drop off</td>
</tr>
<tr>
<td></td>
<td>Plant</td>
<td>Plant</td>
<td>Plant</td>
</tr>
<tr>
<td></td>
<td>Potential radiation oncology (shell)</td>
<td>Plant</td>
<td>Storage</td>
</tr>
<tr>
<td>Lower Ground</td>
<td>Oncology clinics</td>
<td>ACC&amp;R ambulatory care</td>
<td>ACC&amp;R ambulatory care</td>
</tr>
<tr>
<td></td>
<td>Cancer offices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Level</td>
<td>Day oncology</td>
<td>DOF centre of excellence</td>
<td>IPU (psycho geriatric)</td>
</tr>
<tr>
<td></td>
<td>Satellite pharmacy</td>
<td>Soldier on</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cancer research offices</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>IPU (cancer)</td>
<td>IPU (aged care rehab)</td>
<td>IPU (aged care rehab)</td>
</tr>
<tr>
<td>Level 2</td>
<td>IPU (acute aged care)</td>
<td>IPU (acute aged care)</td>
<td>IPU (acute aged care)</td>
</tr>
<tr>
<td>Level 3</td>
<td>IPU (general rehab)</td>
<td>IPU (general rehab)</td>
<td>Plant</td>
</tr>
<tr>
<td>Level 4</td>
<td>ACC&amp;R offices</td>
<td>ACC&amp;R offices</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>ANZAC research centre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 5</td>
<td>IPU (medical/surgical)</td>
<td>IPU (medical/surgical)</td>
<td>-</td>
</tr>
<tr>
<td>Level 6</td>
<td>Plant</td>
<td>Plant</td>
<td>-</td>
</tr>
</tbody>
</table>

3.4.7 Materials and finishes

As detailed in the Architectural Design reports prepared by Jacobs at Appendices D and E, material selection for the proposed CSB has chosen using the following criteria:

- Materials and finishes of the existing multiblock (including its heritage significance);
- Durability, longevity and maintenance;
- Ease of construction; and
- Environmental sustainability.

The existing heritage significant multiblock building is constructed using warm brickwork (rich orange/red in colour), with contrasting smooth plain white and cream surfaces, as well as small highlights of aqua green. Windows in the multiblock also have prominent white framing, mullions and transom bars which provide for a distinct contrast against the brick form.

To complement the existing multiblock, the principle cladding materials proposed for the façades of the new CSB are:

- Terracotta panels are to be utilised as a contemporary equivalent to the brickwork of the multiblock, whilst providing a warm earthy traditional texture that will complement existing development at the site;
- White acrylic render is to be utilised as an aesthetic foil to the terracotta. It recalls the heroic modernism of the early to mid-twentieth century that inspired the design of the existing multiblock, and facilitates the construction of smooth flat surfaces that effortlessly bend around curves; and
- Aluminium cladding is a cost-effective solution which enables the overall cladding cost to be reduced while providing further architectural articulation to the façades. The proposed warm pale metallic bronze colour is a contemporary version of the painted cream components of the multiblock.

The materials proposed for the multi-storey car park are:

- Timber-look aluminium vertical battens are to be provided as the primary façade treatment to the car park and will complement the warm earthy colour tones of the brickwork of the multiblock building and proposed terracotta panels of the proposed CSB;
• Off-white painted off-form concrete structure to complement the white of the existing multiblock building and proposed CSB;

The main roofing material is Colourbond sheet steel, however with smaller areas of flat concrete roofs covered with a membrane and large grey pebble ballast. Pebble ballast will be used where the roof surface is highly visible from within the new or existing buildings and a steel roof would be unsightly, or where the roof shape prevents the use of a simple pitched roof (e.g. where the roof perimeter is curved).

For further detail refer to the material palette in the Architectural Design report prepared by Jacobs at Appendix G.

3.4.8 Ecologically sustainable development

The project incorporates the principles of Ecologically Sustainable Development (ESD) and aspires to achieve the equivalent of a 4 Star Green Star rating. The proposed CSB will include and maximise green initiatives where possible and appropriate, with initiatives considered across the following Green Star categories:

• Management;
• Indoor Environment Quality;
• Energy;
• Transport;
• Water;
• Materials;
• Land use and Ecology; and
• Emissions.

For further detail refer to the ecologically ESD report prepared Wood and Grieve Engineers at Appendix AH.

3.4.9 Tree Removal and Landscape works

Tree removal

Associated with the proposed Stage 1 redevelopment, the proposal will directly necessitate the removal of nine (9) trees at the site. An overview of these trees is provided in Table 9 below.

A further four (4) trees not related to the proposed works have also been identified for removal, as they are in poor health and pose an immediate safety risk. These trees are identified with an asterisk (*) in Table 9 below. Refer to a detailed assessment of tree removal within the Arborist Report at Appendix AM.
Table 9  Overview of proposed tree removal

<table>
<thead>
<tr>
<th>Tree No.</th>
<th>Botanical Name</th>
<th>Common Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Melaleuca bracteata</td>
<td>Golden Tea Tree</td>
</tr>
<tr>
<td>11</td>
<td>Melaleuca bracteata</td>
<td>Golden Tea Tree</td>
</tr>
<tr>
<td>12</td>
<td>Cupressus sempervirens</td>
<td>Mediterranean Cypress</td>
</tr>
<tr>
<td>15</td>
<td>Jacaranda mimosifolia</td>
<td>Jacaranda</td>
</tr>
<tr>
<td>17</td>
<td>Cupaniopsis anacardioides</td>
<td>Tuckeroo</td>
</tr>
<tr>
<td>68*</td>
<td>Homalanthus populifolius</td>
<td>Bleeding Heart</td>
</tr>
<tr>
<td>69*</td>
<td>Prunus sp.</td>
<td>Ornamental Cherry</td>
</tr>
<tr>
<td>70</td>
<td>Prunus sp.</td>
<td>Ornamental Cherry</td>
</tr>
<tr>
<td>71</td>
<td>Prunus sp.</td>
<td>Ornamental Cherry</td>
</tr>
<tr>
<td>72</td>
<td>Prunus sp.</td>
<td>Ornamental Cherry</td>
</tr>
<tr>
<td>75</td>
<td>Callistemon viminalis</td>
<td>Bottlebrush</td>
</tr>
<tr>
<td>87*</td>
<td>Olea europaea subsp. cuspidata</td>
<td>African Olive</td>
</tr>
<tr>
<td>91*</td>
<td>Celtis sinensis</td>
<td>Hackberry</td>
</tr>
</tbody>
</table>

Landscaping

A landscape concept plan for the proposed Stage 1 development has been prepared by Site Image at Appendix H.

The intent of the landscape design is to integrate the new CSB within the hospital grounds as well as to soften the appearance of the proposed car parking (multi-storey and at grade) when viewed from Hospital Road.

The considered use of planting, location and form of garden beds provides a substantial improvement to existing amenity and is considered to enhance the character of Concord Hospital overall.

Proposed landscape treatment aligns with existing pedestrian pathways within the hospital grounds to improve amenity for staff, patients and visitors. The landscape concept has been designed to retain and complement existing areas of coastal vegetation to the periphery of the site and along the peninsula, as well as to preserve and accentuate the heritage features of Concord Hospital.

Proposed planting is to be a mixture of native and exotic species appropriate for local conditions and with acceptable demands for water and maintenance. Irrigation shall be provided to central, high use landscape areas such as the hospital entry and courtyard areas.

The built form of the CSB has been designed to create clear access and entry points to the building’s facility wards. Wayfinding and amenity is aided by integrated landscaping, including presentational planting, and a consistent palette of materials, planting and forms.

The proposed landscape design of the CSB comprises the following areas detailed below.

**Basement drop off and undercroft**

This area consists of loading dock and ‘Soldier On’ drop off. Planting is to be shade tolerant and comprise a low garden with stepping stones, verge planting, infill tree planting to improve amenity and maintain the character of the campus.
Selective planting will be used to screen any services from the adjacent administration building, and decorative ballast will be used where turf is not appropriate due to shade or maintenance.

The drop off zone services the main reception area. The landscape design is focused on a central island with feature planting, in addition to screening planting to reduce the visual impact of the kitchen loading dock, whilst maintaining CPTED and vehicle safety sight lines.

This landscape area comprises breakout spaces from the adjacent café and physical rehabilitation therapy spaces. Raised planter beds, shading trees, walking path, respite seating and space for specialised equipment such as a therapy car.

A small garden is proposed provide an attractive and calming outlook when viewed from within the CSB.

Where possible existing trees shall be retained and enhanced through mulching and granite edge to pathways.

The intent of the landscape design is to soften the appearance of the building along Hospital Road and deter pedestrians from walking into vehicle areas.

Similar to the lower ground roof terrace, the rehab terrace includes walking tracks, therapy ramps, seating, raised planter beds with grass, shrubs, groundcovers and feature trees. Sensory planting is proposed to further enhance the amenity of this space.

An atrium space, identified as the Hospital Street comprises Various climate-appropriate plantings are proposed to provide visual interest, texture and create an attractive space.

The existing cancer care drop off area, south-west of the main multiblock building, is one of the primary public domain areas created between the existing multiblock building and the new CSB. Treatment of the area is centered by the proposed retention of existing trees, with improved landscaping to the area including a ‘waiting area garden’ to provide an attractive outlook.

In summary the proposed landscape design will assist the integration of the proposed CSB into the existing hospital campus, support an enjoyable and comforting experience for staff, patients and visitors, and soften the visual impact of the proposed multi-storey car park.

Following completion of these works, there is opportunity to provide additional landscaping works and public domain upgrades as part of the subsequent detailed Stage 2 design.

An Accessibility Design Review has been prepared for the proposed Stage 1 redevelopment by Mackenzie Group at Appendix AJ. The report assesses the design with the relevant accessibility related deemed to satisfy requirements of the Building Code of Australia (BCA) and the National Construction Code (NCC). This report finds that subject to provision of further detail at the construction design stage, the design is capable of complying with the accessibility provisions of the BCA and the NCC.
3.4.11 Structural details

Structural Schematic Design Reports have been prepared for the proposed Stage 1 development by TTW at Appendix AN (for the Stage 1 CSB) and Appendix AO (for the Stage 1 multi-storey car park). This report provides that the vertical structure for the building includes stability walls at the stair and lift locations and columns supporting the floors, designed in accordance with NSW Health Infrastructure guidelines to minimise vibration to sensitive areas (such as operating theatres).

Structural steel construction is predominately used throughout the atrium for both the vertical and horizontal structure except for the cast-in-place piles and concrete slabs. The lateral stability system for the atrium comprises steel portal frames in both primary directions and permanent movement joints to the surrounding buildings including the CSB.

The use of steel over concrete construction allows the long clear spans and tall columns that are a feature of the atrium space to be erected quickly to limit the impact on the construction programme.

3.4.12 Operational matters

The proposed CSB will operate 24 hours a day, for every day of the year.

The proposed development does not seek any alteration to existing emergency vehicle access arrangements.
4. Planning context and regulatory framework

4.1 Strategic planning context

The proposed development is consistent with strategies and policies at State, regional and local levels.

**NSW State Priorities**

The NSW State Priorities replace the NSW 2021 State Plan released by the NSW Government in September 2011. These new State Priorities include ‘Creating jobs’, ‘Building Infrastructure’, ‘Improving Government services’ and ‘Improving service levels in hospitals’.

The proposed Concord Hospital redevelopment will replace outdated facilities to meet the substantial growth in clinical service demand projected over the next 10 years within the hospital’s catchment. It will replace the existing 70-year-old Ramp Wards, which have been identified as needing critical upgrades to allow the hospital to deliver high quality service to patients. The proposal is therefore consistent with the NSW State Priorities.

**NSW State Infrastructure Strategy 2018-2038: Building Momentum**

The NSW State Infrastructure Strategy 2018-2038: Building Momentum sets out government priorities over the next 20 years. Combined with the Future Transport Strategy 2056, the Greater Sydney Region Plan and the Regional Development Framework, the Strategy brings together infrastructure investment and land-use planning across the State, with an overall objective for the Health Sector to “plan and deliver world-class health infrastructure that supports a 21st century health system and improved health outcomes for the people of NSW”.

The Strategy forecasts that demand for healthcare will grow by over 50% over the next 20 years and be required to meet demand, particularly for aged care. It also states that approximately 40% of health infrastructure is ‘over 50 years old and will struggle to accommodate newer models of care and technology’.

The proposed redevelopment of Concord Hospital is designed to replace existing outdated and outmoded facilities to deliver better health services and improved health outcomes for the State. The proposal is therefore consistent with the State Infrastructure Strategy.

**Greater Sydney Region Plan ‘A Metropolis of Three Cities’**

The Greater Sydney Region Plan ‘A Metropolis of Three Cities’ sets a 40-year vision and a 20-year plan to manage growth and change for Greater Sydney in the context of economic, social and environmental matters. The vision seeks to meet the needs of a growing and changing population by transforming Sydney into a metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City. The site is located within the Eastern Harbour City, on the eastern edge of the Harbour CBD.

The Plan establishes ten directions and accompanying objectives, with those of relevance to the proposed Concord Hospital redevelopment including:

- Objective 1: Infrastructure supports the three cities;
Objective 2: Infrastructure aligns with forecast growth – growth infrastructure compact;

Objective 3: Infrastructure adapts to meet future needs;

Objective 4: Infrastructure use is optimized; and

Objective 21: Internationally competitive health, education, research and innovation precincts.

The Greater Sydney Region Plan also specifically identifies Rhodes as one of Greater Sydney’s Health and Education Precincts, as well as identifies (at Page 116) planned Major Hospital infrastructure including the proposed Concord Hospital redevelopment. Funding for the redevelopment of Concord Hospital ($341 million) was announced by the Premier in June 2017 and the proposal is therefore consistent with the Greater Sydney Region Plan.

The Future Transport Strategy 2056 is an update of NSW’s Long-Term Transport Master Plan and sets the 40-year vision, directions and outcomes framework for customer mobility in NSW.

Concord Hospital is accessible by a variety of transport modes and connections, including bus, rail and private vehicle. The site is not subject any existing nor proposed maritime connections. The proposed redevelopment does not seek to alter any of these existing transport connections, with the exception of providing additional car parking capacity at the site to address known car parking and congestion issues.

The proposal will provide for improved access, road and pedestrian safety across the Concord Hospital site and is considered to be consistent with the Future Transport Strategy and supporting plans.

The guidelines aim to assist land-use planners and related professionals to improve consideration of walking and cycling in their work and ultimately create greater opportunities for people to live in places with easy walking and cycling access to urban services and public transport.

The guidelines have been considered in the landscape design, which has improved pedestrian circulation and amenity as a key objective.

The Healthy Urban Development Checklist was prepared by NSW Health in 2010 to inform planners, local councils and other relevant organisations on health issues in relation to development policies, plans and proposals. An overview of the key guiding principles as they apply to the proposed Concord Hospital redevelopment is provided below.

- Physical activity;
- Transport and physical connectivity;
- Community safety and security;
- Public open space;
- Social infrastructure; and
- Environment and health.

As detailed in Section 6 of this EIS, the proposed redevelopment of Concord Hospital is consistent with these principles.
**Better Placed** was released by the Government Architect NSW (GANSW) in September 2017 and responds to the NSW Priorities. The document articulates the design of good urban environments through its design principles. The proposed expansion of Concord Hospital responds to the relevant design principles as detailed below.

**Better fit: contextual, local and of its place**

As detailed in Section 3 of this report, the proposed redevelopment is appropriately sited within the Concord Hospital site and has been oriented to relate to existing buildings and the heritage significance of the site, being an appropriate contextual response and one that promotes visual continuity in the built form and intuitive wayfinding across the site.

**Better working: functional, efficient and fit for purpose**

The proposed CSB and multi-storey car park (as sought under Stage 1) are fit for purpose, having been designed to meet the hospital’s projected demand and accommodate the variety of services and facilities required. Pedestrian links and thoroughfares are proposed within the site, connecting the CSB whilst ensuring a complementary relationship to the existing multiblock building.

**Better value: creating and adding value / Better look and feel: engaging, inviting and attractive**

The proposal includes a comprehensive landscaping scheme that seeks to add value to the new building’s surrounds, by improving amenity as well as providing seating and places of passive recreation, and promotes the creation of healthy communities through design. Refer to Section 6.5 of the EIS for more detail.

Please refer to further consultation with the GANSW in Section 5.2 of this EIS.

The Eastern City District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to achieve the 40-year vision for Greater Sydney. It is a guide for implementing the Greater Sydney Region Plan at a district level and is a bridge between regional and local planning.

The suburb of Rhodes (approximately 1km to the north west of the site) is identified as a Strategic Centre which has attracted significant new housing and employment. Rhodes is also noted as having a strong healthcare presence, primarily led by the existing Concord Hospital and associated health care facilities, including the Rivendell School and the Dame Eadith Walker Estate, located to the north east and south east of the site respectively.

The Eastern City District Plan specifically identifies the Rhodes East Planned Precinct, located approximately 800m to the north of the site, as being planned for sustainable growth including the creation and retention of jobs in the area. As such, a Planning Priority for Rhodes is ‘Growing investment, business opportunities and jobs in strategic centres’, which includes the proposed Concord Hospital redevelopment and creation of new health facilities which are located within proximity to existing transport infrastructure.

The proposal will deliver new state of the art health care facilities, which are in proximity to existing transport connections and will assist in the creation of jobs within the Rhodes area (including the Rhodes
Sharing Sydney Harbour Access Plan

NSW Department of Infrastructure, Planning and Natural Resources (2003)

The proposed redevelopment is therefore consistent with the Eastern City District Plan.

The Sharing Sydney Harbour Access Plan was released in 2003 by the former NSW Department of Infrastructure, Planning and Natural Resources with an overall vision to "improve public access to, and enhance the recreational enjoyment of, Sydney Harbour and its tributaries for the people of Sydney and visitors to the city".

The Plan details the opportunities and constraints for access within Sydney Harbour, whilst also identifying a number of key 'access improvements' across the catchment. This Plan identifies existing walking tracks within the Concord Hospital site and surrounding areas, specifically the Kokoda Track Memorial Walkway, which is located to the periphery of the Concord Hospital site and the Rock Point headland. It is noted that this plan does not identify any new access improvements (such as new walking trails) within or within proximity to Concord Hospital.

The proposed redevelopment does not seek to alter nor inhibit existing public access arrangements and will continue to promote shared access, where appropriate within a hospital context, to the Rocky Point peninsula and Sydney Harbour. The proposed development is therefore consistent with the Sharing Sydney Harbour Access Plan.
4.2 Regulatory framework

The statutory planning framework comprising legislation and environmental planning instruments relevant to the proposed development are discussed below.

**Legislation**
- (Cth) Environment Protection and Biodiversity Conservation Act 1999;
- Environmental Planning and Assessment Act 1979;
- Biodiversity Conservation Act 2016;
- Contaminated Land Management Act 1997;
- Heritage Act 1977;
- Roads Act 1993; and

**Regulations**
- Environmental Planning and Assessment Regulation 2000.

**Environmental Planning Instruments**
- State Environmental Planning Policy (State and Regional Development) 2011;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No. 33 – Hazardous and Offensive Development;
- State Environmental Planning Policy No. 55 – Remediation of Land;
- State Environmental Planning Policy No. 64 – Advertising and Signage;
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005;
- State Environmental Planning Policy (Coastal Management) 2018;
- Canada Bay Local Environmental Plan 2013;
- Draft State Environmental Planning Policy Remediation of Land; and
- Draft State Environmental Planning Policy Environment

**Other**
Legislation

(Cth) Environment Protection Biodiversity Conservation Act 1999

The (Cth) Environment Protection Biodiversity Conservation Act 1999 (EPBC Act) legislates the provisions for the assessment of actions likely to have a significant impact on Matters of National Environmental Significance (MNES) listed under the Act. As such, the EPBC Act has been considered within the context of heritage and ecological protection issues. It is noted that the site is not within proximity to any items of Commonwealth or World heritage significance.

A Flora and Fauna Assessment submitted by Ecological Australia (Appendix AQ) identified the prevalence of the Grey-headed Flying-fox (Pteropus poliocephalus) within proximity of the site, which is identified as a vulnerable threatened species under the EPBC Act.

The Grey-headed Flying Fox has not been recorded on site, however is known from the locality within close proximity to Concord Hospital. Vegetation within the site provides marginal potential foraging habitat in the form exotic and native planted vegetation and is considered likely that this species would use the site and adjacent areas on occasion for foraging purposes. No roosting camps are located within the subject site.

On this basis, the Flora and Fauna Assessment has determined that the proposed works are not considered likely to have a significant impact on this (or any other) threatened species, and therefore, referral to the (Cth) Department of Environment and Energy pursuant to the EPBC Act is not required.

Environmental Planning and Assessment Act 1979 (EP&A Act)

Objects

Development under the EP&A Act 1979 must have regard to the objects of the Act as provided in Section 1.3 of the Act. A response to the objects of the Act is provided below:

(a) To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State’s natural and other resources,

The proposed development will be undertaken wholly within the Concord Hospital site (this includes untitled RMS land) and will not result in the clearing of any surrounding vegetation. Retention of existing trees on site has been sought where appropriate, and the provision of new trees and landscaping provided where this could not be achieved. Environmental impacts have been appropriately mitigated as detailed in Section 7 of this report.

(b) To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,

A response to the principles of ESD under Clause 7(4) of Schedule 2 of the EP&A Regulation is provided at Section 6 of this EIS and in the ESD Statement prepared by Wood and Grieve Engineers at Appendix A.H.

(c) To promote the orderly and economic use and development of land,

At completion the proposed concept redevelopment of Concord Hospital will deliver new state of the art health care facilities, including the construction of the proposed CSB (as sought under Stage 1), ASB (as sought under Stage 2), multi-storey car park and associated works (under both Stage 1 and Stage 2). As detailed within Section 3 and Section 4.1 of this EIS, the proposed redevelopment will provide the timely delivery of necessary infrastructure upgrades to the hospital and improve and significantly expand health care facilities within the SLHD.

(d) To promote the delivery and maintenance of affordable housing,

The provision of affordable housing is not relevant to the proposed development.

(e) To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,
Through the design of the proposed redevelopment all reasonable and practicable measures have been undertaken to protect the environment, including, however not limited to, the protection and conservation of native animals and plants including threatened species, populations and ecological communities, and their habitats.

The proposed Stage 1 works will require the removal of a small amount of planted native and exotic vegetation from within the hospital grounds. A Flora and Fauna Assessment has been prepared by Ecological Australia (Appendix A) which identifies one threatened flora species (Wallangarra White Gum) to the north of the study area at the edge of the existing car park. This species is not endemic to the area and thus an impact assessment was not required. No additional sensitive or threatened species were observed on site and the proposed redevelopment is therefore consistent with this object.

(f) To promote the sustainable management of building and cultural heritage (including Aboriginal cultural heritage),

The proposed Stage 1 redevelopment of Concord Hospital has been designed in consideration of the sustainable management of building and cultural heritage within the hospital grounds. A HHA has been prepared by Biosis at Appendix AC. The assessment concludes that the impacts of the proposed Concept and Stage 1 works are acceptable from a heritage perspective. Although some of the proposed impacts are considered to be detrimental to the heritage significance of the Concord Repatriation General Hospital, it is considered that the overall redevelopment will enable the continued function of the complex as a primary and auxiliary community healthcare facility and is therefore supported. The proposed Stage 1 works will adhere to the mitigation measures recommended by the Statement of Heritage Impact, and in doing so alleviate the requirement for further assessment.

(g) To promote good design and amenity of the built environment,

The Stage 1 redevelopment of Concord Hospital, including the siting, built form, and materiality of the proposed CSB and multi-storey car park is guided by the site’s peninsula setting, existing built form, amenity and heritage considerations. Minimising the visual impact from surrounding residential areas as well as maintaining the unique visual qualities of surrounding waterways, and heritage significance of the existing multiblock building have been key drivers of the design. Refer to Section 3 above for detailed discussion of the built form, urban design and visual impact of the proposed CSB and multi-storey car park. Also refer to the Architectural Design Report Concept Stage, and Stage 1 at Appendices F and G respectively.

(h) To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,

In accordance with the SEARs, the proposed design of the CSB and multi-storey car park is a product of extensive collaboration, technical input and assessment by leading architectural, engineering, compliance and environmental consultants. The plans and reports prepared by the consultant team have been prepared in line with relevant provisions and standards to ensure proper construction and maintenance of buildings is achievable, and to protect the health and safety of occupants, during the construction and operation phase of the hospital.

The maintenance of the completed Stage 1 buildings and services will be maintained in accordance with standards and guidelines of NSW Health and Sydney Local Health District.

(i) To promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,

Being SSD, the Minister for Planning is the relevant consent authority for the proposal. Canada Bay Council has been consulted in the preparation of the SEARs and prior to lodgment of the application as detailed at Section 5 of this EIS. Further consultation is envisaged to occur during the assessment of the SSD application at exhibition stage.
(j) To provide increased opportunity for community participation in environmental planning and assessment.

Consultation has been undertaken by NSW HI on the proposed redevelopment of Concord Hospital to date and is detailed at Section 5 of this EIS. The proposed development will be publicly exhibited in accordance with the requirements of the Act.

State Significant Development

Section 4.36 (cf Section 89C) of the EP&A Act provides that the Minister, or a State Environmental Planning Policy may declare development to be State Significant Development. Clause 14(1) of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) specifies development that has a CIV of more than $30 million for the following purposes is to be assessed as State Significant Development:

“(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)”

The proposal seeks the Concept and Stage1 redevelopment of the existing Concord Hospital, with a combined CIV of $968,272,531 (excluding GST) and therefore constitutes SSD. Please refer to the proposed QS Report at Appendix K.

Additional approvals required

The provisions of section 4.42 (cf 89K) of the EP&A Act, which lists those approvals under other legislation that must be applied consistently, are addressed below.

<table>
<thead>
<tr>
<th>Table 10</th>
<th>Response to Section 4.42 of the EP&amp;A Act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 4.42 of the EP&amp;A Act</td>
<td>Response</td>
</tr>
<tr>
<td>(1) An authorisation of the following kind cannot be refused if it is necessary for carrying out State significant development that is authorised by a development consent under this Division and is to be substantially consistent with the consent:</td>
<td>Noted</td>
</tr>
<tr>
<td>(a) an aquaculture permit under section 144 of the Fisheries Management Act 1994,</td>
<td>Not required</td>
</tr>
<tr>
<td>(b) an approval under section 15 of the Mine Subsidence Compensation Act 1961,</td>
<td>Not required</td>
</tr>
<tr>
<td>(c) a mining lease under the Mining Act 1992,</td>
<td>Not required</td>
</tr>
<tr>
<td>Note. Under section 380A of the Mining Act 1992, a mining lease can be refused on the ground that the applicant is not a fit and proper person, despite this section.</td>
<td></td>
</tr>
<tr>
<td>(d) a production lease under the Petroleum (Onshore) Act 1991,</td>
<td>Not required</td>
</tr>
<tr>
<td>Note. Under section 24A of the Petroleum (Onshore) Act 1991, a production lease can be refused on the ground that the applicant is not a fit and proper person, despite this section.</td>
<td></td>
</tr>
<tr>
<td>(e) an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act),</td>
<td>Not required</td>
</tr>
<tr>
<td>(f) a consent under section of the Roads Act 1993,</td>
<td>A Section 138 permit will be required for works Hospital Road.</td>
</tr>
<tr>
<td>(g) a licence under the Pipelines Act 1967.</td>
<td>Not required</td>
</tr>
</tbody>
</table>
Section 4.42 of the EP&A Act

<table>
<thead>
<tr>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not required</td>
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</table>

This section does not apply to or in respect of:

(a) an application for the renewal of an authorisation or a renewed authorisation, or
(b) an application for a further authorisation or a further authorisation following the expiry or lapsing of an authorisation, or
(c) in the case of an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997—any period after the first review of the licence under section 78 of that Act.

(3) A reference in this section to an authorisation or development consent includes a reference to any conditions of the authorisation or consent.

(4) This section applies to a person, court or tribunal that deals with an objection, appeal or review conferred on a person in relation to an authorisation in the same way as it applies to the person giving the authorisation.

Biodiversity Conservation Act 2016

The Biodiversity Conservation Act 2016 (BC Act) aims to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development. It relates to terrestrial and aquatic environments and includes threatened species, populations and ecological communities and critical habitat. The revised SEARs for SSD 9036 include the requirement for assessment of the proposal against the BC Act.

Accordingly, a Flora and Fauna Assessment has been prepared by Ecological Australia (Appendix AQ) which identifies the potential impact of the proposed redevelopment on any threatened species, as assessed using the ‘test of significance’ (5-part test) in accordance within Section 7.3 of the BC Act.

This Flora and Fauna assessment concludes that the proposal is unlikely to have a significant impact on threatened flora and fauna and it is unlikely that the proposal would result in significant impacts on ecological values listed under the BC Act.

In this regard, NSW Office of Environment and Heritage has granted a written waiver to the requirement for a Biodiversity Development Assessment Report (BDAR) pursuant to Section 7.7 of the BC Act. Refer to a copy of this waiver at Appendix AR.

Contaminated Land Management Act 1997

The Contaminated Land Management Act 1997 (CLM Act) applies to the process and regulation of remediation of significantly contaminated land. The operation of this Act is complemented by the State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55), which regulates the remediation of contaminated land in the context of development. The provisions of SEPP 55 are considered further within Section 4.2 of this EIS below.

Detailed Site Investigations (Phase 1, Phase 2 and Phase 3 areas) have been prepared by Coffey in relation to the proposed development. Refer to these at Appendices X, Y and Z. The reports have found areas of contamination across the site (within Phase 1 and Phase 3 investigation areas), including the presence of an underground storage tank, as well as ACM, nickel and zinc.

Accordingly, a RAP has been prepared to manage contamination and remediation at the site (refer Appendix AA), with further discussion on the recommendations at Section 6 of this EIS.
Heritage Act 1977

The Heritage Act 1977 provides for protection of State heritage in NSW (non-aboriginal). As detailed in Section 2, the site is identified as a local heritage item under the Canada Bay LEP 2013 (Item Ref. I256). The Concord Hospital site also adjoins two state heritage items to the north and south of the site respectively, including:

- State Heritage Item SHR00115: ‘Thomas Walker Convalescent Hospital’; and
- State Heritage Item SHR00119: ‘Dame Eadith Walker Convalescent Hospital’.

These state heritage items are not located within the subject site and the proposed works are not located within the vicinity nor bounds of either of these state heritage items. They are however located within the viewshed of these items.

A CMP was prepared in 2015 by Conybeare Morrison for the Concord Hospital. Refer Appendix AD. This CMP details the history of construction of buildings and use of the site for health purposes and provides a number of recommendations and conservation policies which have informed the proposed Concept and Stage 1 redevelopment.

A HHA has been prepared for the proposed development by Biosis at Appendix AE. The HHA provides that the proposed redevelopment is acceptable from a heritage perspective and that whilst some impacts are proposed which are considered to be detrimental to the heritage significance of the structure, it is considered that the overall works will enable the continued function of the complex as a primary healthcare facility.

Additionally, an Aboriginal Cultural Heritage Due Diligence Assessment (ACHDDA) has also been prepared for the proposed development by Biosis at Appendix AD. This ACHDDA has determined that there is low potential for Aboriginal sites to be located within the study area. The ACHDDA did not identify any new archaeological sites or areas of potential, which is consistent with previous studies within and bordering the study area.

Refer to a further discussion of heritage impacts at Section 6 of this EIS.

Roads Act 1993

The Roads Act 1993 sets out rights and procedures for the operation and carrying out of works to roads in NSW. Consultation has been undertaken with Transport for NSW (TfNSW), RMS and Council as to the impact of the proposed development on the surrounding road network in accordance with the Roads Act 1993. Refer to an overview of consultation at Section 5.3 of this EIS.

Advice provided has been considered in the Transport and Parking Report prepared by Arup at Appendix AF, with traffic impacts discussed further at Section 6 of this EIS.

National Parks and Wildlife Act (NSW) 1974

The National Parks and Wildlife Act (NSW) 1974 (NPW Act) regulates the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, including, but not limited to:

- Places, objects and features of significance to Aboriginal people;
- Places of social value to the people of New South Wales; and
- Places of historic, architectural or scientific significance.

An ACHDDA was prepared by Biosis for the proposed development. Refer to this at Appendix AD and a discussion of heritage impacts at Section 6.2 of this EIS.

This ACHDDA has determined that there is low potential for Aboriginal sites to be located within the study area. The ACHDDA did not identify any new archaeological sites or areas of potential, which is consistent with previous studies within and bordering the study area.

Notwithstanding, a number of mitigation measures are proposed, including unexpected finds protocols as detailed at Section 7 of this EIS.
Regulations

Environmental Planning and Assessment Regulation 2000

The EP&A Regulation complements the EP&A Act and provides specific requirements for the preparation of Environmental Impact Statements under Schedule 2. This EIS is prepared in accordance with these requirements which are integrated into the table responding to the SEARs at Table 2.

To satisfy the requirements of clause 7(1)(f) of Schedule 2 of the EP&A Regulation, the EIS must address biophysical, economic and social considerations, as well as the principles of ESD (set out in clause 7(4) of Schedule 2 of the EP&A Regulation). These considerations are assessed below, with further analysis provided at Section 6 of this EIS.

Precautionary principle

The proposed development is not considered to result in any serious or significant irreversible environmental damage. Environmental impacts have been informed on the advice of technical, qualified consultants. All technical reports provide careful evaluation and have recommended mitigation measures to manage, mitigate and where possible prevent environmental impacts as a result of the proposed development.

Various options were considered for the redevelopment of Concord Hospital. The proposed option, as sought under this application, was considered against other options to be the most superior, including in relation to its environmental impacts.

Inter-generational equity

This environmental impact assessment takes into consideration the technical and scientific input of qualified consultants and the mitigation measures made to ensure the proposed development maintains the health, diversity and productivity of the environment for future generations. It is also noteworthy that the considerations include protecting the proposed development against natural hazards and building in climate change resilience to ensure the building can continue to provide vital health care facilities to ensure the health and wellbeing of future generations.

Conservation of biological diversity and ecological integrity

Ecological impacts have been considered as part of the proposed development. It is found that the proposed development will not have a detrimental impact on the biodiversity and ecological integrity of the environment, as detailed in the Flora and Fauna Assessment at Appendix AQ.

Provide valuation, pricing and incentive mechanisms

Environmental factors (in particular inter-generational equity and ecological integrity) have been included in the valuation of assets and services for the development.

The proposed development was the subject of a Government business case and included principles and “Affordability and Value for Money” and “Sustainability”. The business case found the expansion of services capacity is critical to meeting increasing demand for SLHD services. The increased mass of services provides enhanced opportunities for specialisation, enhanced effectiveness of intervention, better patient outcomes, and broader opportunities for research to contribute to the care of the patient. This in turn supports inter-generational equity as the hospital is a public hospital.
Environmental Planning Instruments

State Environmental Planning Policy (State and Regional Development) 2011

As detailed above, the proposed development provides for the Concept and Stage 1 redevelopment of Concord Hospital. The proposed works have an overall estimated CIV of $968,272,531 (excluding GST) and therefore constitutes SSD pursuant to Schedule 1(1) of the SEPP SRD. Please refer to the QS Report at Appendix K.

State Environmental Planning Policy (Infrastructure) 2007

The State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) is applicable to the site and provides a number of aims to facilitate the effective delivery of infrastructure, including hospitals and associated health services facilities.

The permissibility of the proposed development is provided under the Canada Bay LEP 2013. Clause 57(1) of the ISEPP provides that development for the purpose of health services facilities (including a hospital) may be carried out by any person with consent on land in a prescribed zone. The site is zoned SP2 Infrastructure – Health Services Facility, being a prescribed zone under Clause 56 of the ISEPP and the proposed hospital redevelopment is therefore also permitted with consent under Clause 57 of the ISEPP.

As Hospital Road is not identified as an RMS classified road, referral to the RMS is not required pursuant to Clause 101 of the ISEPP.

Although the Stage 1 works will only result in an increase of 111 beds at the site, as the proposed overall redevelopment will result in an increase in more than 200 beds at the site (refer Section 3.1), the proposal therefore constitutes traffic generating development and is required to be referred to the RMS pursuant to Clause 104 and Schedule 3 of the ISEPP. Consultation has previously been undertaken with RMS as detailed in Section 5 of this EIS.

A Transport and Parking Report has been prepared by Arup for the proposed development. Refer to this at Appendix AF, with traffic impacts discussed further at Section 6 of this EIS.

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (SEPP 33) is applicable to the site and defines both a potentially hazardous industry and a potentially offensive industry as follows:

“Potentially hazardous industry means a development for the purposes of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would pose a significant risk in relation to the locality:

(a) to human health, life or property, or
(b) to the biophysical environment,

and includes a hazardous industry and a hazardous storage establishment”.

And:

“Potentially offensive industry means a development for the purposes of an industry which, if the development were to operate without employing any measures (including, for example, isolation from existing or likely future development on other land) to reduce or minimise its impact in the locality or on the existing or likely future development on other land, would emit a polluting discharge (including for example, noise) in a manner which would have a significant adverse impact in the locality or on the existing or likely future development on other land, and includes an offensive industry and an offensive storage establishment”.

Having regard to the above definitions, the proposed redevelopment of Concord Hospital may potentially constitute either a potentially hazardous or offensive industry on the basis of the use and storage of chemicals and gases for day to day hospital purposes (such as oxygen or nitrous
oxide or other), noting that the storage and use of such materials is strictly controlled in order to ensure compliance with Australian Standards and NSW Health requirements.

Clause 12 of SEPP 33 requires that for development types listed above, that a Preliminary Hazard Analysis (PHA) must be prepared. In response, a Hazardous Chemicals Compliance Report has been prepared by Premier Engineering at Appendix AT.

This report finds that the range of chemicals in the scope of proposed Stage 1 works are such that the proposed development will not be considered potentially hazardous and will not trigger further assessment under SEPP33, such as a PHA. Refer to a further discussion of this issue within Section 6 of this EIS.

State Environmental Planning Policy No. 55 – Remediation of Land

SEPP 55 requires that a consent authority must not consent to the carrying out of any development on land unless it has considered whether the land is contaminated. Consent can be granted for development if the land is contaminated but the consent authority must be 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. The consent authority must also be satisfied that the land will be remediated before the land is used for that purpose.

Detailed Site Investigations (Phase 1, Phase 2 and Phase 3 areas) have been prepared by Coffey in relation to the proposed development. Refer to these at Appendices X, Y and Z. The reports have found areas of contamination across the site, including the presence of an underground storage tank, as well as ACM, nickel and zinc.

Accordingly, a RAP (Appendix AA) has been prepared to manage contamination and remediation at the site, with further discussion on the recommendations at Section 6 of this EIS.

Draft State Environmental Planning Policy Remediation of Land

The Draft SEPP Remediation of Land will repeal SEPP 55 and has been prepared to better manage remediation works with NSW by aligning the need for development consent with the scale, complexity and risks associated with any required remediation works.

The Explanation of Intended Effect (EIE) for the Draft SEPP Remediation of Land was publicly exhibited during the period 31 January 2018 to 13 April 2018 and therefore constitutes a draft Environmental Planning Instrument (EPI) which must be considered pursuant to s4.15 of the EP&A Act.

With consideration to Draft SEPP 55 above, Detailed Site Investigations (Appendices X, Y and Z) have found areas of contamination and that a RAP (Appendix AA) has been prepared to manage contamination and remediation at the site.

Accordingly, the proposed development is consistent with the EIE for the Draft SEPP Remediation of Land.

State Environmental Planning Policy No. 64 – Advertising and Signage

State Environmental Planning Policy No. 64 – Advertising and Signage (SEPP 64) is applicable to the site and sets out planning controls for advertising and signage within NSW and aims to ensure that signage is compatible with the desired amenity and visual character of an area, whilst providing effective communication in suitable locations. Additionally, where signage is provided, SEPP 64 aims to ensure that it is of a high-quality design and finish.

Minor wayfinding signage is proposed as detailed within the Wayfinding Strategy, prepared by Minale Tattersfield at Appendix A. Proposed signage is located centrally within the hospital site and will generally not be visible from the public domain, except for new entry signage located along Hospital Road to clearly guide visitors.

The proposed signage is minor in scale and is designed to provide effective communication in suitable locations to visitors to the site. Th proposed signage is considered compatible with the character of the area and historical use of the site as a hospital and will not result in any view
loss, distraction to motorists or pedestrians nor detract from the presentation of the streetscape. Proposed signage is therefore consistent with SEPP 64.

Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005

The SREP 2005 (a deemed SEPP) is applicable to the site and provides a number of aims for the protection and enhancement of the Sydney Harbour Catchment. Pursuant to Clause 2(1) of the SREP 2005, these include:

“(a) to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained:

(i) as an outstanding natural asset, and

(ii) as a public asset of national and heritage significance,

for existing and future generations,

(b) to ensure a healthy, sustainable environment on land and water,

(c) to achieve a high quality and ecologically sustainable urban environment,

(d) to ensure a prosperous working harbour and an effective transport corridor,

(e) to encourage a culturally rich and vibrant place for people,

(f) to ensure accessibility to and along Sydney Harbour and its foreshores,

(g) to ensure the protection, maintenance and rehabilitation of watercourses, wetlands, riparian lands, remnant vegetation and ecological connectivity,

(h) to provide a consolidated, simplified and updated legislative framework for future planning.”

The proposed redevelopment seeks the demolition of existing buildings, construction of new buildings as well as minor alterations and additions to the existing hospital, all of which are to be located within the existing hospital footprint and will not detract from the environmental, scenic or functional quality of the Sydney Harbour Catchment.

An assessment of the proposed development against the aims and controls of the SREP 2005 are detailed in Table 11 below.

<table>
<thead>
<tr>
<th>Control</th>
<th>Compliance</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 Aims of plan</td>
<td>Yes</td>
<td>The proposal seeks the redevelopment of the existing Concord Hospital to improve and replace outmoded facilities to meet the substantial growth in clinical service demand from across the hospital’s catchment that has occurred and will continue to occur into the future. As detailed within this EIS, the proposed development is respectful to the heritage significance of the site having been sited and designed to mitigate any visual impact when viewed from Sydney Harbour and the surrounding waterways. The proposed development will not result in any loss of coastal vegetation nor impact to the function or operation of Sydney Harbour and is considered to be consistent with the aims of the SREP 2005.</td>
</tr>
<tr>
<td>5 Consent authority</td>
<td>Yes</td>
<td>As the proposed development is SSD under the SEPP SRD, the Minister is the consent authority for SSD 9036.</td>
</tr>
<tr>
<td>13 Sydney Harbour Catchment</td>
<td>Yes</td>
<td>The proposed redevelopment will not preclude waterfront access and does not directly impact watercourses, riparian lands or remnant vegetation. The proposed redevelopment will protect the visual and environmental qualities of Sydney Harbour. Specifically, the planning principles within Clause 13 are addressed in the following ways: − A stormwater plan and report has prepared for the proposed development by TTW at Appendix R. This plan details water quality improvement measures for the site that will benefit the catchment. In addition, an erosion and sediment control report and plan will control sediment runoff to the harbour. − An assessment of the potential ecological impacts of the development is discussed in the Flora and Fauna Assessment (Appendix AQ). − An assessment of the potential flood impacts is covered in the Flood Study and Infrastructure Review (Appendix Q).</td>
</tr>
<tr>
<td>Control</td>
<td>Compliance</td>
<td>Comment</td>
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<tr>
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</tr>
<tr>
<td>14 Foreshores and Waterways Area</td>
<td>Yes</td>
<td>The site is wholly situated within the foreshore area as defined under the SREP. These planning principles are addressed in relation to Clause 13 above.</td>
</tr>
<tr>
<td>15 Heritage conservation</td>
<td>Yes</td>
<td>The HHA recognises the Sydney Harbour foreshore as a place of heritage significance, with a moderate potential to contain archaeological deposits of local significance. The HHA provides that the proposed development is acceptable from a heritage perspective and that whilst some impacts are proposed which are considered to be detrimental to the heritage significance of the site, site, it is considered that the overall works will enable the continued function of the complex as a primary healthcare facility. The impacts of the development are further mitigated by the complementary built form of the proposed CSB which seeks to interpret existing heritage significant features of the site. Refer to a further discussion on heritage impacts at Section 6 of this EIS.</td>
</tr>
<tr>
<td>16 Zones indicated on Zoning Map</td>
<td>Refer</td>
<td>Coastal elements of the site are part zoned W2 – Environmental Protection pursuant to the SREP 2005, however the proposed development does not seek to undertake any works within this portion of the site. Refer to an extract of the SREP 2005 zoning map at Section 2.1 of this EIS.</td>
</tr>
</tbody>
</table>
| Zone No W2 Environment Protection                                      | Yes        | The objectives of the W2 Environment Protection Zone are as follows:  
(a) to protect the natural and cultural values of waters in this zone,  
(b) to prevent damage or the possibility of longer term detrimental impacts to the natural and cultural values of waters in this zone and adjoining foreshores,  
(c) to give preference to enhancing and rehabilitating the natural and cultural values of waters in this zone and adjoining foreshores,  
(d) to provide for the long-term management of the natural and cultural values of waters in this zone and adjoining foreshores.  

The proposed development is considered to be consistent with these objectives as it does not seek to encroach within these zone boundaries, nor result in the removal of any areas of coastal vegetation protected under this clause. |
<p>| 18 Development control in the waterways                                | N/A        | The proposal does not seek to undertake any development within the surrounding waterways.                                                                                                                  |
| 21 Biodiversity, ecology and environment protection                   | Yes        | As detailed within this EIS, a Flora and Fauna Assessment has been prepared by Ecological Australia (Appendix AQ) which provides that the proposal is unlikely to have a significant impact on threatened flora and fauna and it is unlikely that the proposal would result in significant impacts on ecological values listed under the BC Act. |
| 22 Public access to, and use of, foreshores and waterways              | Yes        | The proposed development does not seek to alter and will maintain existing public access arrangements along the Rocky Point peninsula, and therefore will not adversely impact on any waterways. |
| 23 Maintenance of a working harbour                                   | Yes        | The proposed development is to be limited to within existing hospital bounds and does not encroach, nor involve any operations within the waterways. In this regard the proposal will contribute to the maintenance of a working harbour. |
| 24 Interrelationship of waterway and foreshore uses                   | Yes        | The proposed development will not impede nor encroach on any existing foreshore or waterway uses.                                                                                                           |
| 25 Foreshore and waterways scenic quality                            | Yes        | A Visual Impact Assessment (VIA) has been prepared for the development by Jacobs at Appendix J. The VIA has taken into consideration these matters and includes a view analysis from key foreshore vantage points and nearby Strategic Foreshore Sites, including, however not limited to, Brays Bay Reserve and, the Thomas Walker Estate/Rivendell School to the north of the site and the Dame Eadith Walker Estate located to the south of the site. The proposed redevelopment is to be situated centrally within existing hospital grounds, and whilst visible from the vantage points identified above, is to be located below and behind existing heritage significant buildings at the site, as well as maintaining significant setback and separation from the coastal wetlands which surround the site. Likewise, the proposed multi-storey car park is to be located centrally within the existing at grade car parking and will be partly shielded by existing vegetation from certain vantage points. In this regard, the proposed development will maintain the scenic quality of the foreshore and surrounding waterways. Refer to a further discussion of visual impacts in Section 6 of this EIS. |</p>
<table>
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<tr>
<th>Control</th>
<th>Compliance</th>
<th>Comment</th>
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<tr>
<td>26 Maintenance, protection and enhancement of views</td>
<td>Yes</td>
<td>Further to scenic quality matters above, the proposed redevelopment will also provide for the maintenance, protection and enhancement of views to and from the site. The proposed CSB (Stage 1) development has been sited and designed to be respectful yet complementary to the existing heritage significance of the site, being located below and behind existing heritage significant multiblock, to retain views between this building and the surrounding waterways. The “E” shaped design of the proposed CSB, being three wings from a central spine, will allow for permeation of views within the new building. The design, colours and materials of the new CSB is keeping with the existing multiblock, providing visual continuity in the built form when viewed from the waterways. Refer to a further discussion of visual impacts in Section 6 of this EIS.</td>
</tr>
<tr>
<td>36 Development on land comprising acid sulfate soils</td>
<td>Yes</td>
<td>The site is identified as containing Class 5 ASS pursuant to Clause 6.1 of the Canada Bay LEP 2013. It is anticipated that standard conditions of consent will be imposed to appropriate manage ASS at the site. Refer a further discussion on ASS at Section 6 of this EIS.</td>
</tr>
<tr>
<td>41 Requirement for master plan</td>
<td>Yes</td>
<td>Requirement for a master plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The ‘Concord Repatriation General Hospital’ is identified as a Strategic Foreshore Site (Site 21) on the Strategic Foreshores Sites Map pursuant to Part 4 of the SREP 2005. Pursuant to Clause 41(1) of the SREP 2005, a master plan is therefore required to be prepared for the site.</td>
</tr>
<tr>
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<td></td>
<td>Status of the SREP 2005 and introduction of the Draft Environment SEPP</td>
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<td>The SREP 2005 (including the requirement for preparation of a master plan) is currently proposed to be repealed. Relevant provisions are to be translated into the Draft Environment SEPP. Refer to discussion of the Draft Environment SEPP further within this EIS.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The EIE for the Draft Environment SEPP provides that the current requirement for a master plan under Clause 41 of the SREP 2005 will be transferred to the new Draft Environment SEPP, however will be updated to require a site-specific Development Control Plan (DCP) in place of a master plan.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Concept DA in lieu to preparation of a DCP (or master plan)</td>
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<td>Notwithstanding the requirement for preparation of a master plan or a DCP as outlined above, Section 4.23(2) of the EP&amp;A Act provides that: “(1) If an environmental planning instrument requires the preparation of a development control plan before any particular or kind of development is carried out on any land, that obligation may be satisfied by the making and approval of a concept development application in respect of that land”</td>
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<td></td>
<td></td>
<td>Relevantly, at 4.22(2) the EP&amp;A Act also provides that: “(2) In the case of a staged development, the application may set out detailed proposals for the first stage of development.”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accordingly, given the pending introduction of the Draft Environment SEPP and subsequent requirement for a DCP, SSD 9036 seeks the approval for the Concept and Stage 1 redevelopment of Concord Hospital, as detailed within Section 3 of this EIS and therefore satisfies the requirements of Clause 41 and Part 4 of the SREP 2005 and reissued SEARs.</td>
</tr>
<tr>
<td>43 Appropriate authority</td>
<td>Yes</td>
<td>As detailed within this EIS, as the proposed development is SSD under the SEPP SRD, the Minister is the consent authority for SSD 9036.</td>
</tr>
<tr>
<td>44 Nature of master plans</td>
<td>Yes</td>
<td>As detailed at Appendix C, the proposed concept plans provide for written information, maps and diagrams that outline the reasoning, nature and staging of the proposed redevelopment. The preceding sections of this EIS address the relevant principles and matters for consideration under the SREP as well as the applicable planning framework.</td>
</tr>
<tr>
<td>45 Land for which a master plan to be prepared</td>
<td>Yes</td>
<td>As detailed above, Concord Hospital is identified as a Strategic Foreshore Site (Site 21) on the Strategic Foreshores Sites Map pursuant to Part 4 of the SREP 2005. Pursuant to Clause 41(1) of the SREP 2005, a master plan is therefore required to be prepared for the site. The proposed concept plans (Appendix C) apply to the whole of the site and as detailed within this EIS are consistent with the planning principles set out in clauses 13, 14 and 15 of the SREP 2005.</td>
</tr>
<tr>
<td>46 Preparation of master plans</td>
<td>Yes</td>
<td>This SSDA seeks consent for the proposed Concept and Stage 1 redevelopment of Concord Hospital as detailed in Section 3 of this EIS. Section 6 of this EIS and the Architectural Plans and Design Reports at Appendices C through G address the relevant matters for consideration under Clause 46(2) of the SREP 2005.</td>
</tr>
</tbody>
</table>
Draft Environment SEPP

The Draft Environment SEPP proposes to consolidate and simplify existing planning legislation relating to waterways, catchments, world heritage and urban bushland which are currently contained across seven (7) existing SEPPs (or deemed SEPPs) including the SREP 2005.

The EIE for the Draft Environment SEPP was publicly exhibited during the period 31 October 2017 to 13 April 2018 and therefore constitutes a draft EPI which must be considered pursuant to s4.15 of the EP&A Act.

Of relevance to the proposed development is that the Draft Environment SEPP will repeal the SREP 2005, however with provisions relevant to the proposed development to be carried over as detailed below:

- “Identify provisions that are unique to the Sydney Harbour catchment and those that can be more broadly applied to other catchments”;
- “Align a number of definitions with Standard Instrument definitions where possible for consistency”;
- “Update the heritage provisions and align to the Standard Instrument LEP heritage provisions”;
- “Transition the Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005 into one or more updated design guidelines”;
- “Update and modernise provisions for strategic foreshore sites by requiring a development control plan for these sites rather than a ‘master plan’ and removing provisions that are duplicate general requirements for development control plans set out in the Act”; and
- “Make amendments to allow Roads and Maritime Services to undertake its existing policy of subdivision on the Sydney Harbour foreshore for the purposes of managing lawfully reclaimed Harbour land”.

Specifically, the EIE for the Draft Environment SEPP provides that the current requirement for a master plan under Clause 41 of the SREP 2005 will be carried over, however updated to require a site-specific DCP in place of a master plan.

Having regard to an assessment of compliance against the SREP 2005 above, including the preparation of a Concept plan to satisfy the requirement for a ‘master plan’ under Clause 41, the proposed development is consistent with the EIE for the Draft Environment SEPP.

State Environmental Planning Policy (Coastal Management) 2018

The State Environmental Planning Policy (Coastal Management) 2018 (Coastal Management SEPP) commenced on 3 April 2018 and consolidates and replaces SEPP 14 (Coastal Wetlands), SEPP 26 (Littoral Rainforests) and SEPP 71 (Coastal Protection), including clause 5.5. of the Standard Instrument – Principal Local Environmental Plan. These policies are now repealed.

The site falls within the Land Application Map of the Coastal Management SEPP, which gives effect to the objectives of the Coastal Management Act 2016 by specifying how development proposals are to be assessed if they fall within the coastal zone.

Whilst Concord Hospital is identified as being located within both the ‘Coastal Use Area’ and ‘Coastal Environment Area’, as well as containing ‘Coastal Wetlands’ pursuant to Clause 6 of the Coastal Management SEPP, it is noted that Clauses 13 and 14 are not applicable to the proposed development, as they do not apply to land within the Foreshores and Waterways Area as defined by the SREP 2005. Of relevance to the proposed development are Clauses 10, 11, 15 and 16 as outlined in Table 12 below.
Table 12  State Environmental Planning Policy (Coastal Management) 2018

<table>
<thead>
<tr>
<th>Control</th>
<th>Compliance</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 Development on certain land within coastal wetlands and littoral rainforests area</td>
<td>Yes</td>
<td>The site is identified as containing areas of ‘coastal wetlands’ pursuant to Clause 6 of the Coastal Management SEPP. However, no elements of the proposed works are located within any areas of coastal wetlands and the proposal does not constitute designated development pursuant to Clause 10(2). Appropriate mitigation measures are proposed, as detailed at Section 7 of this EIS, to protect these areas during construction processes.</td>
</tr>
<tr>
<td>11 Development on land in proximity to coastal wetlands or littoral rainforest</td>
<td>Yes</td>
<td>As noted above, proposed works are located within proximity to areas of coastal wetlands. Appropriate mitigation measures are proposed, as detailed at Section 7 of this EIS, to protect these areas during construction processes and to ensure that the development will not significantly impact on the biophysical, hydrological or ecological integrity, nor impact the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland.</td>
</tr>
<tr>
<td>15 Development in coastal zone generally—development not to increase risk of coastal hazards</td>
<td>Yes</td>
<td>As detailed within this EIS, the proposed development has been carefully designed, with suitable mitigation measures proposed to ensure no increased risk of coastal hazards at the site.</td>
</tr>
<tr>
<td>16 Development in coastal zone generally—coastal management programs to be considered</td>
<td>Yes</td>
<td>Coastal areas of the site are subject to the Parramatta River Estuary Coastal Zone Management Plan (PRECZMP) which was certified in accordance with Section 55G of the Coastal Protection Act by the Minister for Planning on 31 March 2016. This document has been considered in the design of the development with appropriate mitigation measures proposed, as detailed at Section 7 of this EIS, to protect coastal areas during works.</td>
</tr>
</tbody>
</table>

Having regard to matters discussed within this EIS, it is considered that the proposed Concept and Stage 1 development is consistent with applicable provisions of the Coastal Management SEPP.

Canada Bay Local Environmental Plan 2013

The proposed development is located within the Canada Bay LGA and is subject to the provisions of the Canada Bay LEP 2013. An assessment of the proposed development against the requirements of the Canada Bay LEP 2013 is provided in Table 13 below.

Table 13  Canada Bay LEP 2013 Compliance Table

<table>
<thead>
<tr>
<th>Control</th>
<th>Compliance</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.2 Aims of Plan</td>
<td>Yes</td>
<td>The aims of the Canada Bay LEP 2013 are provided below:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“(a) to create a land use framework for controlling development in Canada Bay that allows detailed provisions to be made in any development control plan made by the Council,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(b) to maintain and enhance the existing amenity and quality of life of the local community by providing for a balance of development that caters for the housing, employment, entertainment, cultural, welfare and recreational needs of residents and visitors,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(c) to achieve high quality urban form by ensuring that new development reflects the existing or desired future character of particular localities,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(d) to promote sustainable transport, reduce car use and increase use of public transport, walking and cycling,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(e) to provide high quality open spaces and a range of recreational facilities,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(f) to conserve the environmental heritage of Canada Bay,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(g) to promote ecologically sustainable development,</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(h) to facilitate public access to foreshore land”</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The proposed redevelopment of Concord Hospital is required to improve and replace outmoded facilities to meet the substantial growth in clinical service demand from across the hospital’s catchment that has occurred and will continue to occur into the future.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>As detailed within this EIS, the proposed Concept and Stage 1 development has been designed to be respectful to the existing heritage and environmental significance of the site, whilst addressing and improving existing known transport issues. The proposed development is therefore consistent with the aims of the LEP 2013.</td>
</tr>
<tr>
<td>2.1 Land use zones</td>
<td>Refer to comment</td>
<td>As detailed in Section 2.1, the site is predominantly zoned SP2 — Infrastructure (Hospital) pursuant to the Canada Bay LEP 2013, however with part of the site zoned E2 - Environmental</td>
</tr>
<tr>
<td>Control</td>
<td>Compliance</td>
<td>Comment</td>
</tr>
<tr>
<td>-------------------------------------</td>
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<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Conservation</td>
<td></td>
<td>Conservation, generally comprising areas of coastal vegetation and wetlands along the coastal edges of the site. Part of the site is also zoned W2 – Environmental Protection pursuant to the SREP 2005. All concept and stage 1 redevelopment works are to be located within the SP2 zone pursuant to the LEP 2013.</td>
</tr>
</tbody>
</table>
| SP2 Infrastructure (Hospital)       | Yes        | Development for the purposes of a hospital, including the proposed multi-storey car park is permitted in the SP2 – Infrastructure (Hospital) zone pursuant to the land use table of the LEP 2013. The proposed development is therefore permissible. The objectives of the SP2 – Infrastructure (Hospital) zone are as follows:  
  - To provide for infrastructure and related uses.  
  - To prevent development that is not compatible with or that may detract from the provision of infrastructure.  
  - To ensure that works are compatible with and protect the biodiversity values of the natural environment.  
  The proposal seeks the concept and stage 1 redevelopment of the existing Concord Hospital, in order to improve and replace outmoded facilities to meet the substantial growth in clinical service demand from across the hospital’s catchment that has occurred and will continue to occur into the future. The proposal is therefore consistent with the objectives of the SP2 - Infrastructure (Hospital) zone. |
| E2 Environmental Conservation       | Refer to comment | The objectives of the E2 – Environmental Conservation zone are as follows:  
  - To protect, manage and restore areas of high ecological, scientific, cultural or aesthetic values.  
  - To prevent development that could destroy, damage or otherwise have an adverse effect on those values.  
  Whilst part of the site is zoned E2 – Environmental Conservation, all Concept and Stage 1 redevelopment works are to be located within the SP2 zone pursuant to the LEP 2013. |
| 4.3 Height of buildings             | N/A        | The site is not subject to a maximum building height standard. |
| 4.4 Floor space ratio               | N/A        | The site is not subject to a maximum Floor Space Ratio (FSR) standard. |
| 5.10 Heritage conservation          | Refer to comment | The site is identified as a local heritage item (I256) under the LEP 2013, being the ‘Concord Repatriation Hospital - original main building, grounds and layout’. This heritage listing does not include the existing at grade car park to the north of Hospital Road. The site is not located within any Heritage Conservation Area under the LEP 2013.  
  All buildings at the site have been individually assessed as to their condition and heritage significance, as detailed in the CMP, prepared by Conybeare Morrison and dated May 2015 (Appendix AE).  
  The Concord Hospital site also adjoins two state heritage items to the north and south of the site respectively, including:  
  - State Heritage Item SHR00115: ‘Thomas Walker Convalescent Hospital’; and  
  - State Heritage Item SHR00119: ‘Dame Eadith Walker Convalescent Hospital’.  
  These state heritage items are not located within the subject site and the proposed works are not located within the vicinity nor bounds of either of these state heritage items.  
  The HHA prepared by Biosis at Appendix AC provides that the proposed development is acceptable from a heritage perspective and that whilst some impacts are proposed which are considered to be detrimental to the heritage significance of the Concord Repatriation Hospital Heritage item, it is considered that the overall works will enable the continued function of the complex as a primary healthcare facility. Refer to a further discussion of heritage impacts at Section 6 of this EIS. |
| 7.14 Acid Sulfate Soils             | Yes        | The site is identified as containing Class 5 ASS pursuant to Clause 6.1 of the LEP 2013. Proposed works are not within 500m of any Class 1, 2, 3 or 4 land that is below 5m AHD and will not result any lowering of the water table on the subject or surrounding sites. |
| 6.2 Earthworks                      | Yes        | The proposed development will require the undertaking of earthworks to facilitate the proposed redevelopment. Detailed site investigations have been undertaken by Coffey to determine the extent of contamination on the site at Appendices X, Y and Z respectively, with a RAP subsequently prepared at Appendix AA. Please refer to a discussion of earthworks and contamination matters against the propulsions of SEPP 55 above. |
| 6.3 – Terrestrial Biodiversity      | Yes        | Part of the site contains an area of terrestrial biodiversity pursuant to Clause 6.3 of the LEP 2013, however this is not within the vicinity of the proposed works. The Flora and Fauna Assessment prepared by Eco Logical Australia Pty Ltd at Appendix AQ concludes that the proposal is unlikely to have a significant impact on any threatened fauna and flora species. |
Canada Bay Development Control Plan 2017

An assessment of the proposed hospital redevelopment against the requirements of the Canada Bay DCP 2017 has not been undertaken, as Clause 11 of the SEPP SRD provides that DCPs do not apply to SSD. Furthermore, the SEARs do not require assessment against this DCP.

Notwithstanding, the Civil Design Report includes consideration of Council’s DCP. Refer to Appendix S for details.

Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005

Notwithstanding the non-applicability of DCPs as provided under Clause 11 of the SEPP SRD, the SEARs issued for the proposed development require consideration of the Sydney Harbour Foreshores and Waterways Area Development Control Plan 2005 (SHFWA DCP).

The SHFWA DCP applies to the Foreshores and Waterways Area as defined by the SREP 2005 and therefore applies to the Concord Hospital site. The SHFWA DCP includes design guidelines for development and criteria for natural resource protection. Concord Hospital is identified as a landmark within the SHFWA DCP, with areas of saltmarsh and grassland vegetation as well as mudflats and mangroves located to the coastal edges of the site.

Figure 21 Extract of SHFWA DCP Ecological Communities and Landscape Characters map
Source: Sydney Harbour Foreshores and Waterways Area Development Control Plan (DCP) 2005

Section 2 - Ecological Assessment

Section 2 of the SHFWA DCP relates to ecological assessment with an overall aim “to conserve biological diversity within and around Sydney Harbour and its tributaries”, to ensure:

- “ecological communities, particularly those which form wildlife habitats, are protected and where feasible enhanced;
- development is sited to retain native vegetation, wetlands and natural foreshores;
- development is accompanied by revegetation and rehabilitation of degraded foreshores, where appropriate; and
- development does not impact adversely on water quality”

In response to these objectives, as detailed within this EIS, the proposed redevelopment is to be located centrally within the existing built form of Concord Hospital. Whilst the proposed development involves some removal of trees and vegetation from the site, no existing areas of coastal vegetation will be disturbed, including saltmarsh, grassland vegetation, mudflats or mangroves are to be affected by the proposed works.

A Flora and Fauna Assessment has been prepared by Ecological Australia (Appendix AQ) which identifies one threatened flora species (Wallangarra White Gum) to the north of the study area at the edge of the existing car park. No specimens of this species are to be removed from the site. This species is not endemic to the area and thus an impact assessment was not required. No
additional sensitive or threatened species were observed on site. This assessment concludes that the proposal is unlikely to have a significant impact on threatened flora and fauna and it is unlikely that the proposal would result in significant impacts on ecological values listed under the applicable legislation. The proposed redevelopment is therefore consistent with the objectives for ecological assessment under the SHFWA DCP.

Section 3 - Landscape Assessment

Section 3 of the SHFWA DCP relates to landscape assessment and contains provisions relating to the visual impact of development when viewed from the waterway and foreshores. For clarity, this section does not provide provisions relating to landscape treatment or planting, as these are covered under the preceding Section 2 (Ecological Assessment) and as well as Section 5 (Design Guidelines for Land Based Developments) below. Specifically, this section provides that development should:

- “minimise any significant impact on views and vistas from and to:
  - public places,
  - landmarks identified on the maps accompanying the DCP, and
  - heritage items;

- ensure it complements the scenic character of the area;

- protect the integrity of foreshores with rock outcrops, dramatic topography or distinctive visual features;

- provide a high quality of built and landscape design; and

- contribute to the diverse character of the landscape.”

Further to an assessment of the SREP 2005 within this EIS, a VIA has been prepared by Jacobs (Appendix J) which has taken into consideration these matters and includes a view analysis from key foreshore vantage points and nearby Strategic Foreshore Sites, including, however not limited to, Brays Bay Reserve and, the state heritage listed Thomas Walker Estate/Rivendell School to the north of the site and the state heritage listed Dame Eadith Walker Estate located to the south of the site.

The proposed redevelopment is to be situated centrally within existing hospital grounds, and whilst visible from the vantage points identified above, is to be located below and behind existing heritage significant buildings at the site, as well as maintaining significant setback and separation from the coastal wetlands which surround the site. Likewise, the proposed multi-storey car is to be located centrally within the existing at grade car parking and will be shielded by existing vegetation. In this regard, the proposed development will maintain the scenic quality of the foreshore and surrounding waterways.

The proposed redevelopment is therefore consistent with the objectives for landscape assessment (including visual impacts) under the SHFWA DCP. Refer to a further discussion of visual impacts in Section 6 of this EIS.

Section 5 - Design Guidelines for Land Based Developments

Section 5 of the SHFWA DCP provides design guidelines for land-based developments and is intended to reinforce existing controls with the specific purpose of ensuring that development is sympathetic to the natural and cultural qualities of the area covered by SREP 2005. Further to an assessment against the SREP 2005 within this EIS, relevant considerations under Section 5 of the SHFWA DCP for the proposed redevelopment include:

- Section 5.2 - Foreshore Access;
- Section 5.3 - Siting of Buildings and Structures;
• Section 5.4 - Built Form; and
• Section 5.6 - Planting.

In response to Section 5.2 relating to foreshore access, as detailed within this EIS, the proposed redevelopment does not seek to alter nor inhibit existing public access arrangements and will continue to promote shared access at the site where appropriate.

In response to Sections 5.3 and 5.4 relating to siting and built form, as detailed within Section 3 of this EIS the proposed (Stage 1) CSB has been located to the rear of the existing multiblock, being below and behind this key landmark building and will not be visible from Hospital Road. This area is regular in shape and topography and will allow for maximum integration with existing facilities at the site. The same approach has been taken for the proposed (Stage 2) ASB, which will be located along Hospital Road at the location of the present ramp wards to promote connectivity between buildings and for maximum operational efficiency.

As detailed at Section 3.3.9 of this EIS, these built form impacts will be further mitigated through the provision of new landscaping and planting at the site, which has been designed to retain and complement existing areas of coastal vegetation to the periphery of the site and is therefore consistent with Section 5.6 of the SHFWA DCP.

4.3 Development contributions

City of Canada Bay Section 7.12 Fixed Levy Development Contributions Plan applies to all land in the Canada Bay LGA, except areas which are specifically excluded. The site is not located within an excluded area and the plan therefore applies to the proposed development.

The relevant contribution payable under the Plan for cost of works over $200,001 is 1% (one percent). Therefore, based on the cost of works for the Stage 1 redevelopment being $968,272,531 million, then the contribution payable would be $9.682,725.31.

Section 7.12 of the EP&A Act provides that money raised by Section 7.12 fixed development consent levies “is to be applied towards the provision, extension or augmentation of public amenities or public services (or towards recouping the cost of their provision, extension or augmentation).”

The payment of contributions to upgrade infrastructure elsewhere in the LGA would reduce funding available to make essential upgrades to Concord Hospital.

On the basis that the proposed development will be providing a significant public benefit by providing an important public health service to the community, it is requested that the Minister waive the requirement for the payment of any development contributions in this instance.
5. Summary of consultation

5.1 Consultation overview

This section provides a summary of the consultation activities carried out to inform the design and assessment of the broader Concord Hospital redevelopment, including the detailed design for the proposed CSB as sought under Stage 1, and describes how the outcomes of these activities have been, and will continue to be considered by HI.

Community and stakeholder consultation has included:

- Detailed consultation with Concord Hospital and the SLHD to identify the long-term development master planning vision for Concord Hospital;
- Detailed consultation with a broad range of NSW Government agencies (NSW Health, Department of Planning and Environment, Roads and Maritime Services, Transport for NSW) at a whole of government level to achieve consensus of the long-term vision for the proposed Concord Hospital redevelopment;
- Detailed consultation with Concord Hospital stakeholders to define the broader project aspirations for the Concord Hospital redevelopment;
- Undertaking a comprehensive clinical consultation process to develop, review and assess service options and to define a strategic and prioritised approach to service and capital development (via staff forums, clinical division forums and professional forums);
- Regular reporting and consultation with the Project governance structures for decision making and endorsement of key deliverables;
- Regular reporting and consultation with the SLHD Executive Team to support timely critical decision making; and
- Consultation with the City of Canada Bay Council with regards to ongoing integration of the project with broader ongoing development projects within the vicinity of the site and with LGA.

Engagement of government agencies and the community will continue throughout the public exhibition of SSD 9036.

5.2 Community consultation

In accordance with the requirements of the SEARs, consultation between HI, the project team and the local community has been undertaken. Specifically, local residents were notified by mail and advertised in the local newspaper in advance of two (2) community consultation sessions which were held at Concord Hospital on:

- Tuesday 6 February 2018 (100 public attendees recorded); and
- Thursday 15 February 2018 (150 public attendees recorded).

These sessions were attended by the SLHD Chief Executive, General Manager of Concord Hospital as well as representatives of HI and the project team. During these sessions, local residents were briefed on the proposed redevelopment scheme, as well as given the opportunity to ask questions or identify issues of concern with the proposed development which could potentially be addressed in the SSDA submission or as part of ongoing detailed design processes.
Please refer to an overview of meetings held with the local community on the 6th and 15th of February 2018, including issues raised and addressed in Table 14 below.

<table>
<thead>
<tr>
<th>Issues Raised</th>
<th>Where Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clarification of the extent of the proposed Stage 1 redevelopment and the nature and scope of future developments at the site.</td>
<td>Section 3 of this EIS provides a detailed outline and discussion of the redevelopment of Concord Hospital.</td>
</tr>
<tr>
<td>Parking and traffic impacts along Hospital road and within the surrounding street network, including how many new car parking spaces will be provided at completion of the development, how many will be removed during the construction phase and where workers will park during construction processes.</td>
<td>Refer to a discussion of parking during construction and operation phases, and traffic impacts at Section 6.8 of the report and in the submitted Transport and Parking report prepared by Arup at Appendix AF.</td>
</tr>
<tr>
<td>Confirmation of additional bus services proposed to service the new building, including whether a shuttle bus is to be provided to Rhodes Station.</td>
<td>Consultation is currently being held with TfNSW and the appointed private bus operator to ensure no reduction in quality or frequency of buses servicing Concord Hospital. To date, discussions with TfNSW and the new operator indicate that frequency of service will increase. The use of a shuttle bus between the Hospital and Rhodes Station has been explored within the Green Travel Plan (GTP) at Appendix AG. It is anticipated that conditions of consent will require implementation of this GTP prior to commissioning of the CSB (anticipated completion 2021).</td>
</tr>
<tr>
<td>Visual impact of the proposed redevelopment from nearby residences, including Fremont Street to the west of the site.</td>
<td>Please refer to a discussion of visual impacts within Section 6 of this EIS and in the submitted VIA prepared by Jacobs at Appendix J.</td>
</tr>
<tr>
<td>Disruption to existing services and loss of amenity to surrounding properties generated through the construction process (including vehicle movements, dust generation and acoustic impacts).</td>
<td>Refer to a discussion of construction management measures at Section 6.14 of this EIS and the Preliminary Construction Management Plan (PCMP) prepared by Johnstaff at Appendix L to this report. The purpose of the PCMP is to minimise the impacts of construction on the existing hospital and surrounding area during the demolition, excavation and construction phases, as well as outline strategies for the management of the site during those phases. The PCMP will be finalised by the Principal Contractor appointed to the project.</td>
</tr>
<tr>
<td>Alteration to, or intensification of, existing aviation (helicopter) movements at the site.</td>
<td>The proposed redevelopment will not affect existing helicopter operations at the site. Any potential obstruction that may arise during the construction phase of the project will be managed to avoid conflict. Refer to Section 6.12 of this EIS.</td>
</tr>
<tr>
<td>Construction timeframes and when the new CSB will be open for operation.</td>
<td>It is anticipated the proposed CSB will be delivered over three (3) years, with the main construction works anticipated to occur between Q1 2019 to Q3 2021. The CSB Operational Commissioning is anticipated to take up to six (6) months between Q3 and 2021. The proposed CSB is anticipated to commence operation by the end of 2021. Refer to Section 6.14 of this EIS for an outline of proposed construction hours.</td>
</tr>
</tbody>
</table>
5.3 Consultation with Government agencies

In accordance with the requirements of the SEARs, consultation has been held with the following government agencies and organisations:

- City of Canada Bay Council;
- Transport for New South Wales;
- NSW Roads and Maritime Services; and
- Government Architect NSW.

Please refer to an overview of meetings held with each organisation, including issues raised and addressed in Tables 15 through 18 below.

City of Canada Bay Council

Meetings were held with Council and the project team on 22 February 2018 and 27 April 2018. Please refer to an overview of issues raised in Table 15 below.

Table 15 Summary of issues raised by Council at the meeting 22 February and 27 April 2018

<table>
<thead>
<tr>
<th>Issues Raised</th>
<th>Where Addressed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Council questioned the integration and relationship of the proposed development with the existing internal road network, particularly relating to an emergency response situation.</td>
<td>This issue is detailed within the submitted Traffic and Parking Report, prepared by Arup at Appendix AF.</td>
</tr>
<tr>
<td>Council indicated the intention to undertake works along Hospital Rd, in the form of a 40km/h speed limit and other speed calming devices. Council requested that further consultation be held prior to commencement of works to ensure the integration of works.</td>
<td>This item is acknowledged, with further consultation on this issue to be undertaken with Council post development consent.</td>
</tr>
<tr>
<td>Council questioned any intention to provide for additional pedestrian links through the site, including extension of the existing Kokoda Trail Memorial Walkway.</td>
<td>The proposed redevelopment does not seek any alteration to existing pedestrian links to or through the site. Specifically, the proposed redevelopment does not seek any extension of the existing Kokoda Trail Memorial Walkway. It is not considered practicable, particularly from a safety, security and operational perspective to provide additional public access to areas of operational hospital land.</td>
</tr>
<tr>
<td>Council questioned the sustainability targets of the proposed Stage 1 development, including the use of photovoltaic (PV) cells for power generation and rainwater reuse.</td>
<td>Please refer to a discussion of ESD initiatives within Section 6 of this EIS and in the submitted ESD report prepared by Wood and Grieve Engineers at Appendix AH.</td>
</tr>
<tr>
<td>Council requested that in analysis of any visual impacts, that an assessment of views from surrounding key sites be undertaken, including, however not limited to, Wangal Park at Mortlake Point and from the Ryde Road Bridge over the Parramatta River.</td>
<td>Please refer to a discussion of visual impacts within Section 6 of this EIS and in the submitted VIA prepared by Jacobs at Appendix J. However, it is noted the locations nominated by Council were not included in the VIA on the basis that other more appropriate locations were chosen which incorporated these view angles, albeit from a location closer to the proposed redevelopment (such as from Brays Bay Reserve).</td>
</tr>
<tr>
<td>Council requested clarification on proposed stormwater management and noted the requirement for a minimum 5,000L tank for rainwater capture and reuse.</td>
<td>Please refer to a discussion of drainage and flooding within Section 6.6 of this EIS and in the Flood Study and Infrastructure Review prepared by TTW at Appendix Q.</td>
</tr>
</tbody>
</table>
Transport for NSW

A meeting was held with Transport for NSW (TfNSW) and the project team on 20 March 2018. Please refer to an overview of issues raised in Table 16 below.

Table 16 Summary of issues raised by TfNSW at the meeting 20 March 2018

<table>
<thead>
<tr>
<th>Issues Raised</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>TfNSW requested that a Green Travel Plan (GTP) be prepared prior to commissioning of the CSB (anticipated completion 2021).</td>
<td>A GTP has been prepared by Arup at Appendix AG.</td>
</tr>
<tr>
<td>TfNSW advised that the recent announcement of a private bus operator in the inner west and from 1 July 2018 may alter existing bus operations.</td>
<td>Consultation is currently being held with TfNSW and the appointed private bus operator to ensure no reduction in quality or frequency of buses servicing Concord Hospital. To date, discussions with TfNSW and the new operator indicates that frequency of service will increase.</td>
</tr>
<tr>
<td>TfNSW questioned whether the existing four (4) bus stops along Hospital Road could be rationalised.</td>
<td>Refer comments above.</td>
</tr>
</tbody>
</table>

NSW Roads and Maritime Services

A meeting was held with RMS and the project team on 16 February 2018. Please refer to an overview of issues raised in Table 17 below.

Table 17 Summary of issues raised by RMS at the meeting 16 February 2018

<table>
<thead>
<tr>
<th>Issues Raised</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>RMS requested that detail be submitted relating to the proposed interaction between vehicles on Hospital Rd, pedestrians accessing Concord Hospital, vehicle access to new car park and the proposed Hospital Rd roundabout.</td>
<td>This issue is detailed within the submitted Transport and Parking Report, prepared by Arup at Appendix AF.</td>
</tr>
<tr>
<td>RMS queried the status of the existing Kokoda Trail Memorial Walkway and whether any upgrades were to be provided under the proposed redevelopment.</td>
<td>The proposed redevelopment does not seek any alteration to existing pedestrian links to or through the site. Specifically, the proposed redevelopment does not seek any extension of the existing Kokoda Trail Memorial Walkway. It is not considered practicable, particularly from a safety, security and operational perspective to provide additional public access to areas of operational hospital land.</td>
</tr>
<tr>
<td>RMS identified traffic modelling requirements for submission of the SSDA.</td>
<td>This issue is detailed within the submitted Transport and Parking Report, prepared by Arup at Appendix AF.</td>
</tr>
</tbody>
</table>
A meeting was held with GANSW and the project team on 23 May 2018. Please refer to an overview of issues raised in Table 18 below.

Table 18   Summary of issues raised by the GANSW at the meeting 16 February 2018

<table>
<thead>
<tr>
<th>Issues Raised</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>General comments relating to hospitals and master plans (not specific to the proposed Concord Hospital redevelopment)</td>
<td>The main public space has considered the NSW Government Architect’s general recommendation whereby the public realm and amenity establishes a framework for proposed and future development. The main public space in the proposal is the enclosed Hospital Street atrium which will provide a variety of amenities including food and beverage, retail, exhibition, educational and performance facilities. This space is intended to represent the spirit of the hospital, its focus on patients, veterans and the community and is intended to create a refreshed identity for the hospital. The proposed Hospital street has also considered its impact on site connections, entry points and overall precinct character as part of the NSW Government Architect’s general recommendation. The proposed Hospital Street atrium provides a major new public connection from the current main hospital entrance and the Multiblock through to the main entrance of the new building and in the future all the way through to a new main hospital entrance in Stage 2. That route will also connect to the pedestrian axis lined with Jacaranda trees that connects the acute and sub-acute facilities with the Research, Education and Mental Health precincts of the campus. With greater definition provided to the pedestrian axis, a greater emphasis will be given to pedestrian movement around the campus and the creation of shared and activated public spaces at the centre of the campus.</td>
</tr>
<tr>
<td>That project teams should generally consider the human scale of the hospital campus and how this relates to patient and visitor experience. Scale and material should be used to create a welcoming and reflective space for a sense of wellbeing and recovery. Early consideration integrated public art and landscape strategies can aid in this.</td>
<td>As part of the NSW Government Architect’s general recommendation for amenity of internal spaces and public domain, human scale and welcoming space for wellbeing, the scheme carefully considers access of natural light to the internal spaces and wherever possible extends internal corridors to end at full height windows with views to the exterior environment. The new building generally, and the principal public and entry spaces in particular, are designed to be warm and welcoming using terracotta and timber finishes, natural colours, planting and artwork. Places of respite are also incorporated, both internal and external.</td>
</tr>
<tr>
<td>Sustainability should be considered at every stage of the project development, especially as it relates to energy use and amenity of internal spaces and the public domain.</td>
<td>The proposed redevelopment has considered sustainability as detailed in Section 6.19 of this EIS.</td>
</tr>
<tr>
<td>That projects should demonstrate a response to culture and heritage through the design. The GANSW panel encourage the project team to engage and consult with the local aboriginal community to incorporate specific site histories and narratives into the design.</td>
<td>The proposed redevelopment has considered both Aboriginal and European heritage significance as detailed in Section 6.2 of this EIS.</td>
</tr>
<tr>
<td>Specific comments relating to the proposed Concord Hospital redevelopment</td>
<td>The GANSW panel noted the location of car parking and the division this creates across Hospital Road. The GANSW panel requested that further consideration should be given to The division of parking at the site already exists because the current on-grade car parking is in the same location as that proposed for the multi-storey car park.</td>
</tr>
<tr>
<td>Issues Raised</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The long-term plan for this urban form and visitor and staff access.</td>
<td>Locating the multi-storey car park on the south-eastern side of Hospital Road would constrain the future flexibility of the campus by occupying a site intended for future expansion for important health services. The Masterplan allows for the potential provision of an elevated footbridge linking the multi-storey car park to a new main public entry in the Stage 2 building. This would allow pedestrians to avoid crossing Hospital Road. The concept plan outlines a general access strategy based on creating additional public access to the Hospital through the Boronia Street entry with a link road connecting it around the perimeter of the main hospital buildings to the Hospital Road entrance.</td>
</tr>
<tr>
<td>The GANSW panel queried the rationale for building form and elevation in relation to heritage buildings on the site. The GANSW panel indicated that a more appropriate response may be for a clearly contemporary building that is differential to the existing modernist tower.</td>
<td>Consideration has been given to the detailed design of the Stage 1 CSB building to ensure that it is seen as clearly contemporary. Material selections for the facade have been carefully considered so that the detailed tectonic appearance of the building is markedly different from the multiblock, while maintaining a similarity in overall colour and form. This contrast will be highlighted at the heart of the project, the Hospital Street atrium, where the traditional brickwork and white sash windows of the multiblock will face the flush surfaces and lightweight paneling of the new building. Externally, the white acrylic render creates uninterrupted monolithic forms that are a counterpoint to the busy panel cladding of the terracotta, aluminium and glazing. To further differentiate the new building, the proposed colour of the window framing has been changed from white, which would match the multiblock to the same pale bronze colour as the aluminium cladding. This will be more recessive and subtle, giving the new building a less busy appearance. The detailed design of the drop-off and entry canopies will aim to achieve a thinner more contemporary edge profile.</td>
</tr>
<tr>
<td>The GANSW panel queried the amenity of space including natural light into the Hospital Road atrium.</td>
<td>The project architect, Jacobs, have assessed orientation and overshadowing in detail (refer Section 6.3). The building orientation is predetermined by the orientation of the existing buildings and the limited area available for the development. The orientation of the new building therefore matches that of the existing. Being to the south east of the taller multiblock, the new building is inevitably overshadowed by the multiblock during the afternoon (refer Appendix G). That is, overshadowing primarily affects the amenity of the new building itself and associated external areas, not the adjacent residential properties which are unaffected by the proposal. The external terraces are oriented towards the view and the morning sun yet are mostly in shadow later in the day. However, given the nature of the rehabilitation activities intended for the terraces, shade from direct sun is a requirement of the SLHD and so the proposed arrangement is seen as appropriate.</td>
</tr>
<tr>
<td>The GANSW panel requested further clarification from Health Infrastructure as to how the quality of design will be developed through ongoing detailed design processes, as well as confirmation of the extent of ongoing</td>
<td>NSW Health Infrastructure engage high quality, experienced architects and consultants from a selected panel of pre-qualified consultants. The consultants are engaged through a competitive tender process that places significant emphasis on the non-price submission in the tender phase.</td>
</tr>
<tr>
<td>Issues Raised</td>
<td>Response</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Involvement by the architects and landscape architects.</td>
<td>Jacobs Architects have been contracted for the complete project lifecycle of the Concord Hospital Redevelopment including an option in their contract to novate to the Principal Contractor once appointed. In addition to the above Health Infrastructure implements a governance structure which includes endorsement/approval of the design by the Project Control Group and Executive Steering Committee at each design stage and we require compliance of the design with our Engineering and Design guidelines including review of the design by the NSW Health Infrastructure Expert Reference Group. NSW Health Infrastructure is committed to maintaining design quality through ongoing detailed design processes. Any changes proposed or required will be presented or resubmitted to both DPE and the GANSW as required under the applicable legislation.</td>
</tr>
</tbody>
</table>
6. Environmental assessment

6.1 Built form, scale and siting

As detailed in Section 3 of this EIS, the proposed Concept redevelopment and Stage 1 works have been considered in the context of the precinct, including, however not limited to, its headland and peninsula setting, heritage significance, the existing built form context as well as its relationship to surrounding residential development to the east of the site.

Stage 1 CSB

As detailed in Section 3 of this EIS, the built form and massing of the proposed CSB is primarily informed by its setting against the adjoining multiblock, being a key heritage significant building at the site, as well as maintaining the visual relationship of the site to Sydney Harbour. As noted, heritage considerations require that the proposed CSB be lower in height than this multiblock building. Accordingly, consideration has been given to massing options at the site to achieve the required GFA, whilst providing an articulated form which fits within the broader heritage context at the site, as opposed to a single large rectangular building.

The existing multiblock has a maximum height of RL56.61, whilst the proposed CSB is to have a maximum height of RL43.5 (eight storeys (excluding basement)). The proposed CSB is therefore significantly lower (by 13.17m) than the existing multiblock. Additionally, through stepping of the building form down to the northeast, the proposed CSB respects the form and massing of the multiblock, preserving views to and from the large curved glazed façade to the eastern facade of the existing multiblock building.

By virtue of its location centrally within the existing Concord Hospital precinct, the proposed CSB will maintain substantial setbacks (>50m) from the closest residential receivers within Currawang Street and will not result in any unreasonable solar or visual privacy impacts to existing residential dwellings to the west of the site.

Stage 2 ASB

As detailed at Section 3 of this EIS, the siting and built form of the proposed ASB (as sought under Stage 2) has been designed to maximise operational efficiency and interrelationship between the existing multiblock and proposed CSB. The proposed ASB, to be constructed at the location of the present Ramp Wards, will enable both physical proximity and operational efficiencies between clinical buildings, yet also enable optimal construction staging at the site (particularly with regards to car parking).

As detailed at Appendix C, the proposed ASB is to have an indicative built form of approximately eight (8) storeys (RL43.1) when viewed from Hospital Road (equal to CSB height), with an approximate GFA of 38,000sqm, being lower than the existing multiblock in order to maintain a complementary scale against surrounding buildings. The ASB is also to be set back approximately 40m from Hospital Road to maintain the visual curtilage of the multiblock as well as existing prominent landscaping and mature trees at the site along the Hospital Road frontage. The final form of the ASB building will be determined through subsequent design processes, including consultation with, however not limited to, Concord Hospital staff, the SLHD, Canada Bay Council and the GANSW.

Further landscaping and public domain opportunities exist to integrate the existing multiblock with the proposed CSB and ASB and will be considered as part of subsequent detailed design processes. For further discussion on built form, scale and relationship of the building to context, refer to the proposed Concept Design Report at Appendix F and Stage 1 Architectural Design Report at Appendix G.
6.2 Heritage

As detailed in Section 2 of this EIS, the site is identified as a local heritage item under the Canada Bay LEP 2013 (Item Ref. 1256) comprising the “Concord Repatriation Hospital—original main building, grounds and layout”.

The Concord Hospital site also adjoins two state heritage items to the north and south of the site respectively, including:

- State Heritage Item SHR00115: ‘Thomas Walker Convalescent Hospital’; and
- State Heritage Item SHR00119: ‘Dame Eadith Walker Convalescent Hospital’.

These state heritage items are not located within the subject site and the proposed works are not located within the vicinity nor bounds of either of these state heritage items. They are however located within the viewshed.

A CMP was prepared in 2015 by Conybeare Morrison for the Concord Hospital. Refer Appendix AE. This CMP details the history of construction of buildings and use of the site for health purposes and provides a number of recommendations and conservation policies which have informed the proposed Concept and Stage 1 redevelopment. It should be noted that the 2015 CMP was written in consideration of the proposed redevelopment, including the demolition of buildings at the site.

**Built form impacts**

A HHA has also been prepared for the proposed redevelopment by Biosis at Appendix AC which details that there will be a direct impact to existing heritage items as a result of demolition of buildings, specifically the Ramp Wards, to facilitate the proposed redevelopment. However, the Statement of Heritage Impact within the HHA provide that these Ramp Wards can be demolished, however with any future development to maintain existing access arrangements from Hospital Road to the foreshore area. These access arrangements will be maintained through all stages of the development.

There will also be indirect impacts as a result of the proposed built form, however the proposed CSB, being below and behind the existing multiblock building will not unreasonably detract from the significance of this item. The HHA also recommends design guidelines for the future Stage 2 ASB, which will be incorporated as part of future design processes.

**Archaeological impacts**

The HHA has assessed the potential for archaeological items at the site as the association of the Military encampment with the hospital complex indicates there may be archaeological relics at the site. The location of these potential items is generally limited to the western portion of the existing at grade car park and at the location of the proposed Stage 1 multi-storey car park.

Accordingly, the recommendations of the HHA provide that an Archaeological excavation and research methodology should be developed and employed during the demolition works and prior to construction works in the areas of archaeological potential.

**Aboriginal heritage impacts**

An Aboriginal Cultural Heritage Due Diligence Assessment (ACHDDA) has been prepared for the proposed development by Biosis at Appendix AD.

As detailed at Section 3.3 of this ACHDDA, a number of previous archaeological investigations have been undertaken within the locality which indicate that although the area has been extensively modified since the commencement of European occupation in the late eighteenth century, previous research indicates that the areas along the Parramatta river were occupied by the Aboriginal Wangal clan of the Dharug people from the Pleistocene period onward. It is considered that the occupation of lands along this peninsula and within proximity to the Parramatta River were closely related to hunting, fishing and foraging.

This ACHDDA has undertaken as an archaeological survey of the study area, a review of the previous studies within the locality, as well as an extensive review of the AHIMS database. No
Aboriginal sites or areas of archaeological potential were identified during the survey. This is supported by the geotechnical testing undertaken, which reported extensive sub-surface modification to the soil profile and therefore the site unlikely to contain cultural material.

Overall, the ACHDDA has determined that there is low potential for Aboriginal sites to be located within the study area. The ACHDDA does not identify any new archaeological sites or areas of potential, which is consistent with previous studies within and bordering the study area.

The ACHDDA recommends that no further archaeological work is required in the study area due to the entire study area assessed as having low archaeological potential. Notwithstanding, a number of mitigation measures are proposed, including unexpected finds protocols as detailed at Section 7 of this EIS.

Conclusion

The HHA (Appendix AC) and ACHDDA (Appendix AD) provide that the proposed redevelopment is acceptable from a heritage perspective and that whilst some impacts are proposed which are considered to be detrimental to the (European) heritage significance of Concord Hospital, it is considered that the overall works are suitable for the site and will enable the continued function of the complex as a primary healthcare facility.

6.3 Solar access and overshadowing

In order to provide the most efficient layouts for circulation and site area, the proposal adopts a 45-degree orientation to the north, which is used by the existing multiblock building and the majority of buildings on site. This orientation is acknowledged as being suboptimal for ensuring the best reception of solar access to buildings and open spaces, however is acceptable under the site circumstances. The shadow diagrams prepared by Jacobs at Appendix D demonstrate the potential solar access impacts of the proposed development on the existing surrounding uses at the Summer Solstice and the Winter Solstice.

An assessment of shadow impacts of the proposed CSB on the winter solstice is provided below:

- At 9am, the proposed CSB will cast a shadow to the west over Buildings 70, 71 and 74. Shadows will be cast over the northern façade of Building 69, and over a small portion of Building 75 (by which there is already existing shadowing cast by the multiblock building). The proposed multi-storey car park will cast a western shadow over a portion of the existing at grade car parking.

- At midday, the proposed CSB casts shadows to the south-west over part of Building 74, and over most of Buildings 70, 71, 69 and 68. It will additionally cast shadows over Building 67 and part of Building 66. The multi-storey car park will cast shadows over a portion of the at grade car park and parts of Hospital Road.

- At 3pm, the proposed CSB will cast shadows over a small part of Building 68, and will overshadow Buildings 66, 67 and 1A, and part of the open space associated with the helipad. The multi-storey car park will overshadow parts of Hospital Road.

As detailed above and in the shadow diagrams at Appendix D, throughout the day all shadows cast by both the proposed CSB and multi-storey car park will remain wholly within hospital bounds and will not result in any overshadowing of nearby residential development.

The Concept plan considered potential impacts in the siting of the proposed multi-storey car park, including built form elements sought under both Stage 1 and Stage 2. The location and built form of the multi-storey car park is derived from minimising overshadowing of nearby residential properties to the west and south west of the site, in addition to functional requirements of the car park and hospital. The car park is therefore considered to be in the most ideal location to accommodate the proposed development.

The shadow impacts of the proposed ASB, as sought under the proposed Stage 2 works have not been determined at this time as they are subject to further design processes. However, given the location of this building form, being to the east of the existing multiblock and heritage
considerations (which would require this form to be equal or lower in height than the multiblock) will not result in any overshadowing of nearby residential development.

6.4 Visual impact and view loss

A VIA has been prepared by Jacobs at Appendix J to this EIS. The VIA has been prepared in response to the SEARs Key Issue No. 3, which states in relation to the Concept proposal:

- “Provide a Visual Impact Assessment on the proposal’s impact on the scenic quality of the Sydney Harbour foreshore and justification for any impacts having regard to the unique qualities and natural assets of Sydney Harbour.

- The Visual Impact Assessment must also identify important sight lines and visual connectivity to and through the hospital site and visual changes and view impacts to/from key vantage points and various locations along the harbour foreshore.”

The visual catchment of the site extends north, south, east and west of the site, except where obscured by the existing multiblock building. The proposed CSB building addresses all these vantage points as it does not turn its back to its surrounds from any façade. Topography and distance define the primary view lines to the proposal.

The VIA has considered a series of public and private views of the proposed development in accordance with the SEARs and the statutory planning framework. Categories of views have been selected that are representative of water, open spaces, key streets, buildings and heritage items. A total of nine (9) viewpoints have been selected including four (4) from areas of public open space, being viewpoints 1, 2, 3 and 4 (excluding roads), as well as four (4) locations representing views from heritage items as required by the SREP 2005, being viewpoints 1, 3, 8 and 9. Other viewpoints not identified below were chosen as a representative view for persons on approach to Concord Hospital, such as from Hospital Road (viewpoints 5 and 6) and Nullawarra Road (viewpoint 7).

The visual catchment of the proposal and the vantage points selected are illustrated at Figure 22 below and include:

- Viewpoint 1: Brays Bay Reserve; facing south towards Concord Hospital;
- Viewpoint 2: From Loch Maree Parade, facing south towards Concord Hospital;
- Viewpoint 3: Lovedale Place Park, facing east towards Concord Hospital;
- Viewpoint 4: At the edge of Lovedale Place Park and the rear of Fremont Street residences facing east across the existing at grade car park;
- Viewpoint 5: From Hospital Road facing east towards the existing multiblock building;
- Viewpoint 6: From Hospital Road facing west towards the existing multiblock building;
- Viewpoint 7: From Nullawarra Avenue facing north towards Concord Hospital;
- Viewpoint 8: From Dame Eadith Walker Estate near Nullawarra Avenue facing north towards Concord Hospital; and
- Viewpoint 9: From Dame Eadith Walker Estate near the Yaralla Estate Residence facing north towards Concord Hospital.

An overview of the impact of the proposed redevelopment (including Stages 1 and 2 combined) on the selected viewpoints as determined by the VIA (Appendix J) is summarised in Table 19 below.
Table 19  Summary of view impact (reproduction of Figure 22 of the VIA at Appendix J).

<table>
<thead>
<tr>
<th>Description</th>
<th>Type of Location</th>
<th>Sensitivity</th>
<th>Magnitude</th>
<th>Impact Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>Viewpoint 1: Brays Bay Reserve; facing south towards Concord Hospital</td>
<td>Heritage item (referred under the SREP 2005)</td>
<td>High</td>
<td>Low</td>
<td>Moderate</td>
</tr>
<tr>
<td>Viewpoint 2: From Loch Maree Parade, facing south towards Concord Hospital</td>
<td>Other</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Viewpoint 3: Lovedale Place Park, facing east towards Concord Hospital</td>
<td>Public place (referred under the SREP 2005)</td>
<td>Moderate</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Viewpoint 4: At the edge of Lovedale Place Park and the rear of Fremont Street residences facing east across the existing at grade car park</td>
<td>Other</td>
<td>Negligible</td>
<td>Low</td>
<td>Negligible</td>
</tr>
<tr>
<td>Viewpoint 5: From Hospital Road facing east towards the existing multiblock building</td>
<td>Other</td>
<td>Moderate</td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td>Viewpoint 6: From Hospital Road facing west towards the existing multiblock building</td>
<td>Other</td>
<td>Moderate</td>
<td>Moderate</td>
<td>Moderate</td>
</tr>
<tr>
<td>Viewpoint 7: From Nullawarra Avenue facing north towards Concord Hospital</td>
<td>Other</td>
<td>High</td>
<td>Negligible</td>
<td>Negligible</td>
</tr>
<tr>
<td>Viewpoint 8: From Dame Eadith Walker Estate near Nullawarra Avenue facing north towards Concord Hospital</td>
<td>Heritage item (referred under the SREP 2005)</td>
<td>Moderate</td>
<td>Low</td>
<td>Moderate-Low</td>
</tr>
<tr>
<td>Viewpoint 9: From Dame Eadith Walker Estate near the Yaralla Estate Residence facing north towards Concord Hospital</td>
<td>Heritage item (referred under the SREP 2005)</td>
<td>Moderate</td>
<td>High</td>
<td>High-Moderate</td>
</tr>
</tbody>
</table>
Due to existing development and the topography of the site, the proposed redevelopment will generally have a negligible, low or moderate impact from most vantage points. The exception to this is view location 9, from Dame Eadith Walker Estate near the Yaralla Estate Residence facing north towards Concord Hospital, which is subject to a high-moderate impact, resulting from the topography of the site and built form orientation of the proposed Stage 2 (ASB) envelope. However, it is considered this view impact may be mitigated or lessened as part of Stage 2 detailed design processes.

Those locations which are most visually impacted, being greater than ‘low’ impact as assessed and determined under the VIA include:

- **Viewpoint 1 (Brays Bay Reserve; facing south towards Concord Hospital):** This view will be moderately impacted as a result of the proposed development. As the proposed CSB (as sought under Stage 1) is to be located below and behind the existing multiblock, this building will not be visible from this viewpoint. Accordingly, this view impact is attributed to the proposed Stage 2 (ASB) envelope only. It is considered this view impact can be mitigated or lessened as part of Stage 2 detailed design processes.

- **Viewpoint 6 (From Hospital Road facing west towards the existing multiblock building):** This view will be moderately impacted as a result of the proposed development. As noted above, the proposed CSB will not be visible from this viewpoint and this impact is attributed to the proposed Stage 2 (ASB) envelope only. It is considered this view impact can be mitigated or lessened as part of Stage 2 detailed design processes, including the provision of additional landscaping or tree planting along Hospital Road in order to provide shielding of the built form.

- **Viewpoint 8 (From Dame Eadith Walker Estate near Nullawarra Avenue facing north towards Concord Hospital):** This view will have a moderate-low impact as a result of the proposed development. This impact is generally attributed to the topography of the site,
being visible from the surrounding headland and orientation of the proposed buildings which are to be behind the existing multiblock. This view is somewhat mitigated by the existing built form, specifically the multiblock building as well as existing residential towers within Rhodes which are visible from this location. It is noted that the proposed ASB (as sought under Stage 2) will be largely shielded by the proposed CSB (Stage 1) built form.

- **Viewpoint 9 (From Dame Eadith Walker Estate near the Yaralla Estate Residence facing north towards Concord Hospital):** This view will have a high-moderate impact as a result of the proposed development. This impact is attributed to the topography of the site, being at a high point on the headland, as well as orientation which allows for direct lines of sight to the proposed redevelopment from this location. This view is somewhat mitigated by the existing built form, specifically the multiblock building as well as existing residential towers within Rhodes which are visible from this location. It is considered this view impact can be mitigated or lessened as part of Stage 2 detailed design processes.

It is noted that views from heritage items have been assessed on anticipated visual impact. For a heritage impact assessment of views, please refer to the HHA at Appendix AC and a discussion of heritage matters at Section 6.2 of this EIS.

On balance, it is therefore the professional opinion of the authors of the VIA that (on the basis that the proposed mitigation measures are implemented through subsequent Stage 2 detailed design processes) the mostly modest scale, character and catchment of the visual impacts of this proposal are such that they would not constitute reasons to hinder planning approval on visual impact grounds.

Refer to a copy of the VIA prepared by Jacobs at Appendix J.

**Visual privacy**

Given the location of the proposed CSB and ASB buildings centrally within the existing Concord Hospital campus, it is considered there will be no visual privacy impacts to nearby residential development. Additionally, the proposed multi-storey car park is to maintain a minimum setback of 110m from the nearest residential dwellings within Fremont Street and is not considered to result in any unreasonable visual privacy impacts.

### 6.5 Landscaping and tree removal

**Landscaping**

The Concept Plan and Stage 1 landscaping scheme has been prepared by Site Image Landscape Architects, provided at Appendix H. The vision of the landscape design seeks to address and enhance general and visual amenity of the hospital campus with consideration of ecological sustainability.

In summary the proposed landscape design will assist the integration of the proposed CSB into the existing hospital campus, support an enjoyable and comforting experience for staff, patients and visitors, and soften the visual impact of the proposed multi-storey car park.

Following completion of these works, there is opportunity to provide additional landscaping works and public domain upgrades as part of the subsequent detailed Stage 2 design.

**Tree Removal**

Where possible existing trees have been retained, particularly those which the Arborist Report (Appendix AM) has identified as being of high retention value. The proposal will necessitate the removal of nine (9) trees, and the Arborist report recommends the removal of an additional four (4) due to poor health and the potential safety risk to users. The impact of tree removal will be mitigated through the provision of new high-quality landscaping.
6.6 Drainage and flooding

A Flood Study and Infrastructure Review has been prepared by TTW (Appendix Q), to identify stormwater requirements and the potential for flooding affecting the proposed Concept and Stage 1 redevelopment of Concord Hospital.

Stormwater drainage

The SEARs require that the proposed concept development address stormwater drainage at the site and a stormwater concept plan has been undertaken in accordance with Council’s DCP requirements and stormwater design criteria (Appendix R).

CSB (Stage 1)

Stormwater from the existing main building will be diverted under the CSB basement, with capacity for a 1% AEP (100-year ARI) storm event.

Given the proximity to the harbour, an onsite detention tank (OSD) is not considered necessary. The proposed stormwater systems do not discharge to Council’s stormwater system, but directly to the Parramatta River. Notwithstanding, stormwater discharging from the site will include Water Sensitive Urban Drainage (WSUD) measures, with a treatment train consisting of a gross pollutant trap (GPT), in addition to a proprietary tertiary treatment filter device. The design seeks to minimise the impact on the receiving environment. No works are proposed beyond the line of the sea wall. The treatment train at each discharge point will be designed to meet the stormwater quality targets outlined in Council’s DCP.

Furthermore, the environmental benefit of rainwater re-use at the site is outweighed by the risk of infection propagation. It is important for the hospital to minimise infection risks across all aspects of the project through both design and operational measures. Storage and reticulation of rainwater introduces an unacceptable risk to the hospital and is therefore not incorporated into the design of stormwater management.

Temporary on grade car park (Stage 1) and ASB (Stage 2)

The northern portion of the temporary on grade car park will discharge to the north to the stormwater system in Hospital Road, whilst the southern portion of the temporary on grade car park will discharge via the service road to the south of the site.

On the basis that the proposed ASB as sought under Stage 2 is to be at the same location as the proposed at grade car park (as sought under Stage 1), it is considered that the stormwater system for this building will connect and discharge to the north to the stormwater system in Hospital road. Stormwater management of this future ASB will be considered as part of further detailed design processes.

Multi-storey car park (Stages 1 and 2)

The proposed multi-storey car park will discharge to the north. The existing discharge point for the area will be used to minimise the impact on existing vegetation lining the banks of the harbour.

For further information, refer to the Flood Study and Infrastructure Review at Appendix Q.

Flooding

Modelling indicates that low lying areas of the site, including the helipad and some access road/parking is inundated in rare tidal events under future climate change scenarios. The location of the proposed ASB is not affected by any flooding. The proposed CSB is generally flood free as the basement is above the PMF level and is design is considered an appropriate response to flooding constraints at the site. The lowest point of the loading dock is 2.90 AHD, is more than 600mmm above the PMF level. Furthermore, only small pockets of the site are affected by the 100-year ARI flood level. It is considered that patients and staff can shelter safely within hospital buildings, and vehicles can exit via hospital road or drive to higher ground during this flood event. Refer to the Flood Study and Infrastructure Review at Appendix Q.
6.7 Erosion and sediment control

A Sediment, Erosion and Dust Control Report has been prepared by TTW and is at Appendix R. The key issue for the proposed development is managing water quality in a rainfall event, which may adversely impact surrounding waterways if they are not intercepted. Accordingly, care will be taken during construction to ensure that sediment and other waste is not washed into nearby water bodies. To mitigate this, appropriate sediment fences, earth bunds and sediment sumps will be installed and stormwater pits protected.

Dry and windy conditions may result in dust impacts from exposed surfaces, causing dust to become airborne. This may cause a potential nuisance to nearby residential Receivers and potentially pose a health risk to hospital patients. Accordingly, dust control measures will be implemented through the course of works, including, however not limited to:

- Application of dust suppression measures such as paving and/or promptly watering exposed areas when dust is observed, such as haul roads;
- Installation of wind fences where feasible and appropriate;
- Covering temporary stockpiles and locate away from stormwater pits/waterways; and
- Washing vehicles’ wheels before they leave the construction site.

An Erosion and sediment control design has been prepared in accordance with the Landcom ‘Blue Book’, the approved methods for the modelling and assessment of air pollutants in NSW (EPA), and guidelines for the development of adjoining land and water managed by DECCW (OEH, 2013). Refer to the Erosion and Sediment Control Plan and statement prepared by TTW at Appendix R.

6.8 Traffic, parking, access and transport

A Transport Assessment has been prepared by Arup at Appendix AF. A summary of findings and recommendations are discussed below.

Traffic generation

Traffic modelling has been undertaken to estimate the peak hour and daily traffic generation of the hospital for Stage 1 and Stage 2 respectively. The modelling forecasts the traffic generation of staff, patients and visitors and is calibrated with the existing travel patterns to the campus, including arrival and departure proportions by time of day to account for varying peaks by different users.

Stage 1 summary

Along Concord Road the increases in traffic volumes range from 1% - 4% during the AM peak hour (maximum increase of 95 vehicles) and 2% - 6% during the PM peak hour (maximum increase of 141 vehicles).

The roundabout of Hospital Road and Nullawarra Avenue is expected to increase by 12% in the AM peak hour (153 vehicles) and 21% in the PM peak hour (248 vehicles).

Stage 2 summary

Along Concord Road the increases in traffic volumes range from 2% - 5% during the AM peak hour (maximum increase of 130 vehicles) and 3% - 8% during the PM peak hour (maximum increase of 176 vehicles).

The roundabout of Hospital Road and Nullawarra Avenue is expected to increase by 17% in the AM peak hour (211 vehicles) and 26% in the PM peak hour (308 vehicles).

The capacity issues identified in the intersection modelling for both Stages 1 and 2 are predominantly due to capacity issues at the intersection of Concord Road and Homebush Drive. Queuing at this intersection impacts the performance of the upstream intersections of Concord Road and Killolua Street and Concord Road and Hospital Road (in the AM peak).
As a result, no upgrade works to these intersections are proposed given that they would be unlikely to have an impact on alleviating peak time congestion due to existing constraints and traffic volumes at these downstream intersections. It is therefore considered that travel demand management measures will be the most effective method of reducing and mitigating the traffic impact of the Stage 1 and Stage 2 development.

It is should be noted that the Stage 2 analysis did not consider the potential use of the route through the site connecting Hospital Road with Boronia Street (and Nullawarra Avenue). This route has the potential to reduce a number of trips from the intersection of Hospital Road and Nullawarra Avenue.

Please refer to a full overview of traffic generation projections at Appendix AF.

Road network improvements

On the basis of anticipated traffic generation above for both Stages 1 and 2, the following intersections were modelled to determine the impact of increased trip generation on the performance of the intersection:

- Concord Road and Hospital Road intersection;
- Concord Road, Harrison Avenue and Killoola Street intersection;
- Concord Road and Homebush Bay Drive intersection; and
- Nullawarra Avenue and Hospital Road intersection.

Following an assessment of the modelled intersection performance, no intersection upgrades are proposed as Arup have determined that upgrades would be unlikely to have an impact on alleviating peak time congestion due to existing constraints and traffic volumes at upstream and downstream intersections. Accordingly, no upgrades to public (external) roads were determined to be required and it is therefore considered that travel demand management measures will be the most effective method of reducing traffic impact of the new development.

However, a number of transport interventions are proposed to private (internal) roads as part of the Stage 1 redevelopment including a new loading dock associated with the CSB; a new ambulatory care drop-off at the CSB basement level and two new drop-off areas including south of the kitchen loading dock and cancer care centre. A mini roundabout on Hospital Road with a new raised pedestrian crossing and within the Hospital Road car park is also proposed. The roundabout is proposed to control the entry and exit movements from the on-grade car park to the west, the multi-storey car park entry, in addition to in and out movements from the Gate 2 access road.

Parking

Overall

At present there are 1,957 car parking spaces on site, comprising 1,890 standard car spaces and 67 accessible spaces. As noted at Section 2 of this EIS and at Appendix AF, parking on campus is at capacity, with the main Hospital Road car park regularly full during weekdays, between 10:00am and 4:00pm. A permit system is in place for staff, as part of car parking demand management on campus. Currently 1,985 staff with approved parking permits and 550 staff on a waiting list.

The dispersed nature of existing car parking on the hospital campus and the number of reserved spaces and specific permit spaces areas, results in inefficiencies in the provision of parking during peak demand times. The dispersed nature of existing parking throughout the campus also results in long walking distances between car parking, bus stops and hospital facilities.
Stage 1 parking provision

The proposed Stage 1 works include provision for a new multi-storey car park comprising approximately 590 spaces (580 standard parking bays and 10 DDA bays) to the north of Hospital Road and located centrally within the existing at grade car park.

During construction of the multi-storey car park, parking provision will reduce to approximately 1,949 spaces (a net loss of 8 spaces of the existing circumstance). This is achieved through the construction of a temporary carpark on the site of the demolished ramp wards (approximately 300 spaces). This will provide for overflow parking to ensure minimal net loss of car parking during these works, being the loss of 8 spaces only as detailed in Table 20 below.

At the completion of Stage 1, the provision of the multi-storey car park will increase the supply of overall campus parking provision to 2,539 spaces, being an increase of 582 spaces over the existing circumstances and addressing the predicted parking demand.

Refer to an overview of car park staging at the site in Table 20 below.

<table>
<thead>
<tr>
<th>Table 20</th>
<th>Car parking staging</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Change +/-</td>
</tr>
<tr>
<td>Existing Spaces</td>
<td>-</td>
</tr>
<tr>
<td><strong>Stage 1</strong></td>
<td></td>
</tr>
<tr>
<td>Stage 1 CSB building construction</td>
<td>-100</td>
</tr>
<tr>
<td>Ramp wards demolished and temporary on grade car park construction</td>
<td>+300</td>
</tr>
<tr>
<td>Multi-storey car park Stage 1 (during construction)</td>
<td>-208</td>
</tr>
<tr>
<td>Multi-storey car park Stage 1 (post construction)</td>
<td>+590</td>
</tr>
<tr>
<td>Total at completion of Stage 1</td>
<td>-</td>
</tr>
<tr>
<td><strong>Stage 2</strong></td>
<td></td>
</tr>
<tr>
<td>Stage 2 ASB building construction</td>
<td>-300</td>
</tr>
<tr>
<td>Multi-storey car park Stage 2 (during construction)</td>
<td>-120</td>
</tr>
<tr>
<td>Multi-storey car park Stage 2 (post construction)</td>
<td>+520</td>
</tr>
<tr>
<td>Total at completion of Stage 2</td>
<td>-</td>
</tr>
</tbody>
</table>

Stage 2 parking provision

The Stage 2 works will then subsequently provide an extension to the multi-storey car park (to be constructed under Stage 1) with an approximate capacity of 520 spaces. The Stage 2 expansion of the multi-storey car park is expected to result in a net increase of 100 parking spaces considering approximately 300 spaces in the at grade car park and 120 spaces in the Hospital Road car park will be displaced due to development. Refer Table 20 above.

Given the number of additional spaces created by the Stage 1 works (a net increase of 382 spaces), it is considered the loss of spaces during the construction phase can be adequately accommodated on site, however will be further detailed within mitigation measures and construction management processed detailed in the subsequent Stage 2 DA. Refer Table 20 above.
Stage 1 loading dock and ambulatory care drop off

A new loading dock and ambulatory car drop-off is proposed at the basement level of the CSB. The new loading dock will have capacity for 7 SRV bays and 1 larger vehicle (e.g. a MRV or HRV), in addition to a small number of parking spaces. Access to the loading dock will be off a one-way loop, located off the existing internal southern access road. Access will be restricted with boom gates proposed.

The ambulatory drop-off will cater for the new aged-care facility, providing a pull in bay for three vehicles, 22 car parking spaces and space for two mini-buses. Access to the area will be from Gate 2 access road.

In addition to the above, a new drop off area with parking for visitors/patients will be provided at the entry to the cancer care centre, with vehicular access from Currawang Street. The number of parking spaces will be confirmed at the detailed design stage. The area is expected to be lightly trafficked, with access restricted to staff, visiting medical officers, patients/visitors with swipe card access.

Travel demand management measures

A number of non-infrastructure measures are recommended to better manage staff parking, and to reduce car dependency to encourage travel to the campus by alternative modes, taking advantage of the site’s access by public transport.

Green Travel Plan

A Green Travel Plan (GTP) has been prepared by Arup at Appendix AG to promote the use of public transport, walking and cycling by patrons and employees. Measures contained within the GTP include, however are not limited to:

- Appointment of a green travel plan coordinator;
- Public transport timetables and maps;
- Key local walking and cycling routes;
- Potential for carpooling amongst staff;
- Improvement of current website detailing transport options for both staff and patients;
- Establishment of transport information packs to new staff explaining the various ways (other than motor vehicle) of travelling to the site;
- Development of a travel plan booklet for staff and visitors; and
- Liaising with staff, providing advice where needed about travelling to work (including staff induction procedures).

Car Pooling

Staff travel surveys indicate that only a small number of staff who drive to the site carry a passenger with them. The following mechanisms are recommended to encourage car pooling, to take advantage of a number of staff living in the common surrounding areas:

- Create a staff car pooling website to provide a platform for staff to connect; and
- Create a designated parking area where car pool vehicles have a guaranteed space.

Bicycle Parking and End of Trip Facilities

Currently just 1% of staff arrive to the campus via bicycle. Limited bicycle parking is currently provided.

End of trip facilities will be provided in accordance with Australian standards for the new development, located at the basement level of the CSB. Bicycle parking will be covered and secure with the location to be provided at the basement level of the CSB. Cycle access to the area will be shared with the vehicle entry to the ambulatory care drop-off at basement level.
The Stage 1 CSB development will provide approximately 40 secure and covered spaces with efficient access to end of trip facilities.

Promoting pedestrian and cycling access

A number of improvements to the pedestrian network are proposed as part of the Stage 1 redevelopment, including:

- A new crossing on Hospital Road (east of the proposed mini roundabout);
- An east-west link through temporary on grade car park and to the existing hospital building;
- A new footpath along the Gate 2 access road; and
- Opportunities for improved pedestrian amenity along Hospital Road (landscaping and footpath widening) resulting from additional off-street parking provision, provided by the multi-storey car park.

Promotion of Public Transport

Three bus routes provide direct access to Concord Hospital, 458 Ryde to Burwood (via Rhodes, Concord Hospital), 460 Five Dock to Concord Hospital (via Canada Bay), and M41 Hurstville to Macquarie Park (via Burwood Station, Concord Hospital). Both the 458 and M41 stop close to Rhodes train station. Concord Hospital is approximately 1 km (15 minute) walk from Rhodes Train Station.

Bus patronage data provided by TfNSW details the number of people using bus services which stop along Hospital Road. Approximately 850 bus trips are made each day (425 boarding and 425 alighting services) along Hospital Road. Around 40% of alighting trips occur before 9:00am, with a similar amount of boarding trips occurring between 3:00pm and 6:00pm.

Despite being located within 1km or 15-minute walking distance from Rhodes Train station, and regular bus services along Hospital Road, just 10% of staff commute via public transport. Identified reasons for this are:

- Walking distance from train station to hospital;
- Staff living in areas with poor public transport accessibility;
- Need to carry out other trips such as school runs;
- Staff working shifts which do not correlate with periods of good public transport availability; and
- Perceived safety of the walking route between Rhodes train station and the campus.

Despite these barriers it is considered there is significant scope to increase public transport patronage by staff through mechanisms identified as part of the GTP (refer Appendix AG).

Construction traffic

The Transport Assessment finds the construction works are not expected to significantly impact intersection operation or local road network. Construction traffic volumes are expected to be low and in the order of 100 vehicles per day. The traffic generation of this magnitude is less than the number of trips generated and assessed for the operational phase of the development and therefore the potential temporary impacts are anticipated to be minimal.

Notwithstanding the above, mitigation measure will be adopted during the construction phase to ensure traffic movements have minimal impact on surrounding land uses and the community in general. These measures include:

- Truck loads would be covered during transportation off-site;
- Establishment and enforcement of appropriate on-site vehicle speed limits (20km/h), which would be reviewed depending on weather conditions or safety requirements;
• Neighbouring properties would be notified of construction works and timing. Any comments would be recorded and taken into consideration when planning construction activities;
• All activities, including the delivery of materials would not impede traffic flow along local roads;
• Materials would be delivered and spoil removed during standard construction hours;
• Avoid idling trucks alongside sensitive receivers; and
• Deliveries would be planned to ensure a consistent and minimal number of trucks arriving at site at any one time.

Furthermore, prior to the commencement of construction, a Construction Traffic Management Plan (CTMP) is to be prepared by the Principal Contractor to ensure the safest possible management of construction access. The CTMP would address:
• The likely construction vehicle numbers and frequency;
• Vehicle approach and departure routes;
• Anticipated special out of hours or escorted deliveries;
• Parking access arrangements during construction; and
• Provision of acceptable pedestrian management measures.

Consultation
Consultation has been undertaken with Roads and Maritime Services, Transport for NSW and City of Canada Bay regarding the transport arrangement for the redevelopment of the Concord Hospital Campus. Refer to Section 5 of this EIS on consultation for more information.

6.9 Geotechnical
Geotechnical investigations have been prepared by Douglas Partners and Coffey and are provided at Appendices T through W. These investigations have been prepared for the broader Hospital precinct and detail the suitability of geotechnical conditions to accommodate the proposed concept redevelopment, including both Stage 1 (CSB) and Stage 2 (ASB) works.

Based on the available geotechnical information, the proposed expansion is considered feasible from a geotechnical perspective. The building presents a low risk to surrounding structures, provided that appropriate additional site investigation, design assessments and construction monitoring are carried out.

It is recommended that a geotechnical engineer be engaged to assist as detailed design progresses and/or to review designs. During construction, a geotechnical engineer should verify that conditions exposed are consistent with design assumptions.

Furthermore, no significant contamination was identified at the site by the preliminary contamination investigation. All excavated materials will, however, need to be disposed in accordance with the provisions of the current legislation and guidelines including the Waste Classification Guidelines (DECCW, 2014).

6.10 Acid sulfate soils
The site is identified as containing Class 5 ASS pursuant to Clause 6.1 of the Canada Bay LEP 2013. The presence of acid sulfate soils was assessed as part of the geotechnical investigations undertaken (refer Appendices T through W). Following detailed testing, the presence of ASS was identified in two (BH3 and BH17) out of 17 boreholes.

Following the finalisation of development plans, Coffey recommend that additional testing should be undertaken to provide further indication of the extent of ASS within the location of the proposed multi-storey carpark (Phase 3 investigation area). It is anticipated this will form
part of the conditions of consent. The development of a management plan may be required depending on the proposed works and results of any further investigation.

6.11 Contamination and remediation

Detailed site investigations have been prepared by Coffey and are provided at Appendices T through Z. Given the large scale of the site, these have been undertaken in three phases, including:

- Phase 1: being the location of the (Stage 1) proposed CSB (Appendix X),
- Phase 2: being the location of the proposed (Stage 1) at grade car park and future (Stage 2) ASB (Appendix Y); and
- Phase 3: being the location of multi-storey car parking (under Stages 1 and 2) (Appendix Z).

The reports have found areas of contamination across the site, including the presence of an underground storage tank, as well as ACM, nickel and zinc.

Accordingly, a RAP has been prepared to manage contamination and remediation within the Phase 1 and Phase 3 areas at the site (refer Appendix AA). The RAP will ensure that best practice, sustainable and fit-for-purpose remediation works are undertaken to reduce the risk posed by contamination to human health, the environment and environmental values.

Clinical Services Building (Phase 1 Detailed Site Investigation)

The Phase 1 detailed site investigation (Appendix X) found evidence of contaminated fill at the site, including however not limited to, concentrations of copper, nickel and zinc as an underground storage tank within the existing loading dock area.

Key findings of this report include that the quality of fill is unlikely to pose a health risk, with a low likelihood of acid sulfate soils and that concentrations of contaminants in ground water samples were below the laboratory limit of reporting. Accordingly, on the basis of these findings, a RAP has been developed (Appendix AA) to ensure the appropriate remediation of this portion of the site during the Stage 1 works.

The RAP concludes that the Phase 1 investigation area can be successfully remediated and be made suitable for the proposed use in accordance with SEPP 55, subject to the implementation of an Environmental Management Plan (EMP).

Proposed ASB (Phase 2 Detailed Site Investigation)

The proposed ASB is to be located in place of the current Ramp Wards, which are proposed to be demolished under the Stage 1 works. A temporary at grade car park is however to be constructed at this location under the Stage 1 works.

The Phase 2 investigation identified the existence of potentially hazardous materials including lead, petroleum hydrocarbons and carcinogenic Polycyclic Aromatic Hydrocarbons (PAH) in soil material. However, these are considered to be residual debris derived from hazardous building materials in the vicinity.

The Phase 2 investigation concludes that:

"Based on the findings of the investigation undertaken in the Phase 2 investigation area, contamination has not been identified that poses a potential risk to human health or the environment.

While localised contamination which marginally exceeded the adopted ecological criteria was identified and infers that fill may present a potential risk to future landscaping introduced as part of the development.

In completing the assessment Coffey has concluded the following:

On-grade Car Park
The site is suitable for redevelopment as an on-grade, exterior car park in accordance with SEPP55.

Multi-Storey Development Including Basement Level

The site can be made suitable for the proposed development in accordance with SEPP55. Further sampling will be undertaken for the Stage 2 works when submitted for determination.*

Accordingly, whilst localised contamination marginally exceeded the adopted ecological criteria (that may present a potential risk to future landscaping), widespread contamination was not identified that precludes the redevelopment of the Phase 2 investigation area for both the proposed at grade car park (as proposed under Stage 1) and the future ASB (as proposed under Stage 2).

Proposed multi-storey car parking (Phase 3 Detailed Site Investigation)

The Phase 3 detailed site investigation (Appendix Z) found evidence of contaminated fill at the site, including predominately ACM as well as nickel and zinc.

It is considered that the predominant presence of ACM is likely associated with poor management practices during the historic demolition of structures present within the site between 1940 and 1970s. This investigation also found the likely potential for acid sulfate soils and concentrations of nickel and zinc were detected at concentrations which exceeded adopted levels for marine waters. Accordingly, on the basis of these findings, a RAP has been developed to ensure the appropriate remediation of this portion of the site, which is to be undertaken under both the Stage 1 and Stage 2 works (for respective components of the proposed multi store car park).

The RAP concludes that the Phase 3 investigation area can be successfully remediated and be made suitable for the proposed use in accordance with SEPP 55, subject to the implementation of an EMP.

Extent of remediation

As detailed at Section 3.3.5, remediation works required under the Stage 1 works specifically include:

- The Phase 1 area, being the location of the proposed CSB; and
- Part of the Phase 3 area, being the first portion of the proposed multi-storey car park (to be constructed under Stage 1).

Remediation works will primarily be undertaken as part of the Stage 1 redevelopment, as all areas of the site that are affected by the Stage 2 works are also subject to works within Stage 1. This specifically includes the location of the current Ramp Wards, which are to be demolished under Stage 1 for the purposes of an at grade car park, whilst also being the location of the construction of the future ASB as sought under Stage 2.

Remedial procedures

As detailed at Section 5 of the RAP, the preferred remedial strategy for the site comprises primarily the excavation and off-site disposal of ACM. Any remaining fill material will then be retained below a cover (capping) layer to restrict exposure, which will be subject to long term management of the cover layer to ensure its effectiveness. A review of borehole logs from the previous detailed site investigations indicate that it is unlikely potential acid sulfate soils will be encountered during excavation works.

As detailed within the RAP, contaminated material excavated as part of the proposed development would be disposed off-site to a licensed landfill facility, with provisions for minor areas of the site to remain undisturbed or subject to minor excavation and importation of cover layer.

Where known asbestos impacted soils are capped and retained on-site, an EMP shall be prepared following installation of the capping which includes, however is not limited to, the
location, nature and extent of contamination at the site as well as a long-term maintenance and monitoring/inspection programme to maintain the integrity of the cap. The RAP recommends that this EMP then be registered as a covenant on title pursuant to Section 88B of the Conveyancing Act 1919.

Accordingly, it is recommended that this requirement for an EMP, along with all recommendations of the RAP be implemented as conditions of consent to ensure that contamination at the site is appropriately managed through the course of works and into perpetuity. Based on the implementation of the RAP, it is considered that contamination at the site can be successfully remediated and be made suitable for the proposed redevelopment.

6.12 Aviation

Concord Hospital currently accommodates an existing single helipad, located to the south east of the existing multiblock within existing grassed area. As detailed on the architectural plans (Appendix D), no works are proposed to this helipad which is located approximately 70m south east of the proposed CSB.

As detailed in Section 3 of this EIS, the height of the proposed CSB (RL43.5) is significantly lower (by 13.11m) than the existing multiblock building (RL56.61). As such, the proposed CSB and multi-storey car park (located to the north of Hospital Road) sit outside of the established helicopter flight paths, which generally occur over water within Yaralla Bay (both approach and departure).

In this regard, the proposed redevelopment will not affect existing helicopter operations at the site. Any potential obstruction that may arise during the construction phase of the project will be managed to avoid conflict.

6.13 Acoustic and vibration

Acoustic Logic has undertaken an assessment of operational and construction noise likely to be associated with the proposed Stage 1 works, including construction of the CSB and the multi-storey car park. Refer to this report at Appendix AB.

The assessment has been undertaken including both unattended noise logging and attended noise measurements undertaken in February and March 2018 in order to quantify the existing acoustic environment at the site.

Acoustic impacts (hospital operation)

An assessment of acoustic impacts as a result of hospital operations has considered the following noise sources:

- Vehicular noise on site (multi-storey car park, drop off area, loading dock);
- Noise created on public roads as a result of traffic generated by the site; and
- Noise generated by mechanical plant.

Predicted noise emissions from the above sources was found to comply with relevant EPA guidelines and in general, result in no perceptible change to existing noise levels emitted as part of the operation of Concord Hospital.

With reference to vehicular noise on site, the proposed Stage 1 development was found to be compliant with the EPA Noise Policy for Industry 2017 (NPI) across all hospital functions independently and cumulatively, such as patient drop off and vehicle movements within the site, loading and servicing (including waste removal). This is largely due to the distance of the proposed CSB to existing residential receivers as well as the orientation of the proposed building and loading dock to the east, which is away from nearby sensitive receivers.

With reference to noise created on public roads as a result of traffic generation, it was found that the resultant maximum noise increase would be 1.3dB(A) at the Hospital Road/Fremont Street intersection, which would not be perceptible, and is compliant with the EPA Road Noise
Policy requirement that the development not result in an increase in existing road traffic noise levels by more than 2dB(A).

With reference to mechanical plant, compliance with EPA INP acoustic criteria will be achievable, provided that detailed acoustic review of plant items is undertaken once plant is selected, and acoustic treatments adhere to recommendations outlined in the report. For detailed findings of the assessment, please refer to the Acoustic report at Appendix AB.

**Acoustic impacts (construction)**

Construction noise impacts associated with the proposed Stage 1 works will be greatest on existing buildings within the Concord Hospital campus. Given the location of the proposed works, particularly in regard to the proposed CSB (as it is removed from nearby residential boundaries and screened by adjacent hospital buildings), it is predicted that construction noise levels are unlikely to result in any unreasonable impact on nearby residences. In relation to construction of the CSB, the excavation/soil retention phase of works are unlikely to exceed EPA INP criteria. Following construction of the building shell, noise from hand tools will be relatively low.

Based on an analysis of typical construction methods the majority of the construction works for the multi-storey carpark will result in noise levels that are compliant. However, the use of percussive demolition equipment, and asphalting plant (if required) will result in the exceedance of the noise management level, however will not exceed the ‘highly noise affected’ threshold of 75dB(A).

Accordingly, appropriate mitigation measures will be provided to minimise the impact to surrounding residents, such as notifying residents in advance and ensuring that works are undertaken within Council’s standard construction hours. To mitigate noise impacts, Acoustic Logic has provided the following recommendations:

- Locate the static plant (concrete pumps, cranes) as far as practicable away from the southern boundary;
- The use of augured rather than driven or vibratory piling should be considered if feasible; and
- Letter box drops or similar to advise residents on Currawang Street in the event that significant excavation in rock (requiring use of hydraulic hammers) is required.

Refer to an overview of proposed mitigation measures at Section 7 of this EIS.

Acoustic impacts associated with the future Stage 2 works, including both operation and construction, will be appropriately addressed as part of subsequent Stage 2 design processes.

**Vibration impacts (construction)**

The findings of the Acoustic and Vibration Assessment (Appendix AB) anticipate that the Stage 1 construction works will result in no adverse structural or human perception vibration impacts on surrounding residential receivers. Given the distance between the site and the nearest residential buildings (Currawang Street being the nearest), it is unlikely that construction vibration will exceed EPA INP guidelines. Any vibration impacts on other buildings within Concord Hospital will be addressed through internal hospital management and construction timing.

However, the use of percussive equipment for ground slab demolition and excavation may potentially cause a minor exceedance of the EPA INP to nearby residential receivers within the Fremont Currawang Streets. However, the noise levels will not exceed the ‘Highly Noise Affected’ threshold. As a precaution, mitigation measures presented in Section 6.5.2 of Appendix AB should be met to minimise vibration impacts on adjacent areas.

Notwithstanding the predictions and findings of the assessment outlined above, it is recommended that a Construction Noise and Vibration Management Plan (CNWVP) be prepared at the detailed design stage to effectively manage noise and vibration impacts during construction. Refer to an overview of proposed mitigation measures at Section 7 of this EIS.
Vibration impacts associated with the future Stage 2 works will be appropriately addressed as part of subsequent Stage 2 design processes.

6.14 Construction management

A PCMP has been prepared by Johnstaff and is at Appendix L to this report. The purpose of the PCMP is to minimise the impacts of construction on the existing hospital and surrounding area during the demolition, excavation and construction phases, as well as outline strategies for the management of the site during those phases. The CMP will be finalised by the Principal Contractor appointed to the project.

The PCMP sets out specific works to be undertaken on the site, and management plans to be implemented to ensure minimal and managed environmental impacts of construction works on the site and surrounding area. The purpose of the PCMP and recommended works and management plans includes, however is not limited to:

- Undertake dilapidation reporting;
- Ensure the protection of trees;
- Manage any potential archaeological finds;
- Establish appropriate fencing;
- Hoarding and barriers that may be required;
- Provide required site construction services and infrastructure;
- Ensure safe and suitable access points for both staff and the public;
- Manage the location of construction vehicles and infrastructure;
- Manage the construction process and timeline;
- Ensure appropriate management of contaminated material; and
- Prepare appropriate management plans for noise and vibration, site safety, environmental and waste management.

Refer to an overview of proposed mitigation measures at Section 7 of this EIS.

Construction hours and timeframe

City of Canada Bay approved construction hours are proposed for the Stage 1 works including:

- Monday to Friday: 7:00am to 5:00pm;
- Saturdays: 7:00am to 5:00pm; and
- Sunday and Public Holidays: No Work.

It is anticipated the proposed CSB will be delivered over three (3) years, with the main construction works anticipated to occur between Q1 2019 to Q3 2021. The CSB operational commissioning is anticipated to take up to six (6) months between Q2 and Q4 2021. The proposed CSB is anticipated to commence operation by the end of 2021.

Construction traffic

For an assessment of construction related traffic impacts refer to Section 6.8 of this EIS.

Construction noise

For an assessment of construction related acoustic impacts refer to Section 6.13 of this EIS.
6.15 Safety and security

CPTED

The proposed development has been designed having regard to the principles of Crime Prevention Through Environmental Design (CPTED).

The proposed Concept Plans (Appendix C) seek to clearly define the hospital precincts and facilities, car parking areas, and areas of movement and rest across the site. The proposed Stage 1 development seeks the construction of the proposed CSB and multi-storey carpark, provides a landscaping scheme that considers safety for patients, staff and visitors of the hospital, and where possible, landscaping has been designed to help demarcate pedestrian routes and ensure clear sight lines. Refer to the Landscape Design Report at Appendix I.

Wayfinding

A wayfinding and signage strategy has been prepared for the proposal within the Wayfinding Schematic Design Review report, prepared by Minale Tattersfield. The report references best practice principles and seeks to promote well-defined pathways across the site, for pedestrian routes to have uninterrupted sightlines, and the avoidance of areas of ambiguity. Refer to the report at Appendix AL.

Lighting

External lighting to new areas, such as roads, outside car parks and pathways, have been considered as part of the proposal for the creation of a safe, well-lit environment that reduces risk of crime. A detailed lighting design will be undertaken during the design development stage and should include measures to enhance security across the site and also include access control systems to specific areas of high crime risk and CCTV cameras.

6.16 Waste

A Waste Management Plan (WMP) has been prepared for the proposed Stage 1 development by JBS&G (Appendix M). The WMP has been prepared and will be implemented in accordance with the objective of the Waste Avoidance and Resource Recovery Act 2001.

Waste Management for the operation of the proposed is informed and guided by existing NSW Health, NSW Department of Environment and Climate Change and SLHD policy documents.

Construction Waste

Waste streams and the estimated volumes of waste likely to be generated during construction are detailed in the WMP, however the final amount of waste will be determined following engagement of a construction contractor and the finalisation of the detailed design for construction.

Operational Waste

Operational waste management for the CSB will be provided in accordance with all relevant regulations, codes of practice, including infection control guidelines, Department of Environment and Conservation guidelines, and the industry Code of Practice for the Management of Clinical and Related Wastes.

On review of existing hospital operations, it is anticipated that likely waste streams will include:

- General Waste;
- Cardboard and paper (including confidential paper);
- Bottles and cans;
- Sterilisation products;
- Organic;
- Fluorescent tubes;
- Batteries;
- Clinical waste;
- Anatomical waste;
- Cytotoxic waste;
- Sharps;
- Grease; and
- Chemicals.

Concord Hospital, Health Infrastructure and the SLHD will further quantify and classify these likely waste streams into an appropriate schedule prior to hospital operations commencing.

Concord Hospital current operates in accordance with the following SLHD and NSW Health waste policies:

- Sydney Local Health District Sustainability Plan 2013-2018. The Plan has been developed in recognition of the urgent need to act on climate change, and to comply with international, national and local legislative and regulatory requirements. The Plan requires all staff to address environmental sustainability. Strategies cover issues associated with sustainable energy and water usage, transport, food, waste disposal, procurement and capital works.
• NSW Health – Clinical and Related Waste Management for Health Services – August 2017. This policy provides a minimum standard for waste management that must be achieved by health services and staff NSW, to ensure consistency, appropriate handling and containment of specific waste streams in line with NSW legislation, licensing and waste minimisation. This policy replaces the Waste Management Guidelines for Health Care Facilities – August 1998.

• NSW Government Resource Efficiency Policy (GREP). The purpose of the policy is to assist the NSW Health System reach targets for reducing greenhouse gas emissions by reducing waste and ensuring environmentally sustainable purchasing practices. The GREP requires all Government agencies to increase the sustainability of their waste generation, management and procurement. The GREP replaces the Waste Reduction and Purchasing Policy 2011-2014.

Compliance with these NSW Health and SLHD Policies will continue to be adhered to, to ensure employees, volunteers, tenants, patients/clients, and visitors of the CSB approach to waste management aligns with legislation, waste minimisation, licensing and achieve improvements in waste management.

6.17 Hazardous chemicals

Hazardous chemicals

The operation of the proposed CSB will involve the use, transport and storage of hazardous chemicals associated with the day to day operations of Concord Hospital, including, however not limited to, oxygen, nitrous oxide and other medical gases. If not transported, stored or handled correctly, there is the potential for spillage or combustion, resulting in both environmental pollution and immediate safety risk to the person handling the chemicals.

Further to legislative considerations (such as SEPP 33) within Section 4.2 of this EIS, a Hazardous Chemicals Compliance Report has been prepared by Premier Engineering at Appendix AT. This report finds that the range of chemicals in the scope of proposed Stage 1 works are such that the proposed development will not be considered potentially hazardous and will not trigger further assessment under SEPP 33, such as a PHA.

Consistent with the recommendations of this report, all hazardous chemicals will be stored and transported in accordance with the applicable Australian Standards and safety guidelines at all times, consistent with the existing hospital operations. Refer to an overview of proposed mitigation measures at Section 7 of this EIS.

Controlled materials

Provision has been made for facilities to support ongoing cancer treatment operations at the Concord Hospital, which currently provides chemotherapy and radiotherapy treatment. Accordingly, a Radiation Shielding Report has been prepared by Gammasonics, provided at Appendix AS which states that these facilities will be designed to meet the relevant legislative requirements.

6.18 Infrastructure and utilities

In accordance with the requirements of the SEARs, an overview of necessary utilities and services upgrades to facilitate the proposed redevelopment is provided below.

Telecommunications and electrical

An assessment of the impact on existing utilities and services, including telecommunications and electrical infrastructure has been undertaken by Wood and Grieve Engineers and is provided in the Infrastructure Management Plan at Appendix AP to this report.

Mechanical

An assessment of impacts on mechanical services and infrastructure has been undertaken by Wood and Grieve Engineers and is provided in the Infrastructure Management Plan at Appendix AP to this report.
**Structural**

An assessment of structural implications to existing buildings has been undertaken by TTW and is provided in the Structural Design Report at Appendix AN (CSB) and Appendix AO (multi-storey car park) to this report.

**Hydraulic**

An assessment of impacts on hydraulic services and infrastructure has been undertaken by TTW and is provided in the Civil Design Report at Appendix S to this report.

A number of services upgrades are required to adequately service the proposed extension. Once the proposed upgrade works are undertaken, the proposed development will be capable of achieving the level of service required.

**6.19 Environmental sustainability**

Environmentally Sustainable Design (ESD) principles addressing water and energy use, material selection and waste management have been incorporated into the design of the proposed development.

An ESD Report has been prepared by Wood and Grieve Engineers detailing the ESD credentials of the proposed Stage 1 works. Refer to this at the Appendix AH. In addition, refer to a detailed assessment of the proposal against ESD principles at Section 4.2 above.

The proposed CSB as sought under Stage 1 incorporates a range of ESD initiatives, including:

- Proposed building is to be located on a previously developed site;
- Suitable stormwater, erosion and sediment control measures;
- Utilisation of energy efficient chillers/boilers /heat exchangers;
- Provide a Building Management Control System (BMCS) capable of tuning the building to achieve improved energy consumption;
- Consideration of Plant Life and maintenance requirements will be given when selecting air conditioning plant;
- Variable speed drives for all major fans, pumps and other reciprocating equipment;
- Sub metering for substantive energy uses within the building (any plant greater than 100KVa);
- Optimisation of building façade in line with NCC Section J energy performance requirements;
- Building operation shall be in accordance with NSW Health Infrastructure standard operating procedure which take into account for environmental risk and mitigation measures;
- NSW Health Infrastructure Engineering Service Guidelines ensure material selection and longevity including preference for materials with low embodied energy content, high recycled material content and/or highly recyclable;
- Contractors will be requested to provide and abide by an Environmental Management Plan and Environmental Management System which are in accordance with NSW Environmental Management System Guidelines; and
- The Concord Hospital Redevelopment project will be assessed against the industry recognized Green Star scheme. The design integration of Green Star intent will ensure the project meets industry best practice standard via the inclusion of ESD initiatives. Refer to a list of initiatives contained within the ESD report at Appendix AH.

It is noted that further opportunities exist to address the principles of ESD as part of subsequent Stage 2 design processes.
6.20 Social impacts

The proposed Concord hospital redevelopment, including the CSB, ASB and multi-storey car park will have positive impacts for Eastern and Central Districts, and broader Metropolitan Sydney given the hospital’s significant contribution to healthcare.

The positive social impacts of the proposal include:

- Transforming health service delivery for a significant Local Health District population in NSW;
- Enhancing local access to services for Concord Hospital local catchment for secondary services (facilitating easier maintenance of social support for patients);
- Productivity gains for those patients who receive early treatment and return to the workforce sooner;
- Expanded employment opportunities relating directly to the Concord Hospital redevelopment and potential additional services/facilities leveraged through the Redevelopment; and
- Less waiting times through emergency department streaming models of care.

6.21 Economic impacts

The proposed development will include the following economic impacts and benefits:

- Improved capacity, operation, and efficiency in delivery of hospital services;
- An estimated Capital Investment Value (CIV) for the proposed concept redevelopment is $968,272,531 (excluding GST) including:
  - A Stage 1 CIV $356,603,191 (excluding GST), that is estimated to support around 727 full time (FTE) construction workers, apprentices and traineeships during construction and 414 FTE staff, increasing to 433 FTE by 2026 during operation of the proposed Stage 1 CSB; and
  - A Stage 2 CIV of $610,669,340 (excluding GST).

A detailed CIV Report is at Appendix K.

6.22 Cumulative impacts

The SEARs reissued for the project on 20 April 2018 (Appendix A) require “consideration of potential cumulative impacts due to other development in the vicinity (completed, underway or proposed)”. It is noted recent significant residential development within proximity of the site, particularly in the nearby suburbs of Rhodes (west) as well as future planned developments in Rhodes (east), identified by the Department as a future Priority Precinct.

Accordingly, the cumulative impacts of the proposal have been assessed and detailed within this EIS and specialist reports, including in particular the potential cumulative traffic, stormwater and visual impacts to the surrounding locality.

Traffic impacts

In relation to the potential for cumulative traffic impacts, traffic modelling has taken into account surrounding development forms and the cumulative impact on road network and intersections, in particular the Concord Road and Hospital Road intersection. Refer to a discussion of issues at Section 6.8 of this EIS and in the Transport Assessment prepared by Arup at Appendix AF.

Stormwater and flooding

In relation to flooding impacts, the civil design (Appendix R) and Flood Study and Infrastructure Review (Appendix Q) have found that cumulative stormwater and flooding impacts associated
with the redevelopment of Concord Hospital can be appropriately managed. Refer Section 6.6 of this EIS.

Visual impact

As detailed in Section 6.4 of this EIS, a VIA (Appendix J) has been prepared by Jacobs which takes into account the cumulative visual impact of the redevelopment of Concord Hospital, including the proposed CSB (Stage 1), ASB (Stage 2) and multi-storey car parking (Stages 1 and 2).

On balance, it is considered that the cumulative visual impacts of the proposed redevelopment are such that they would not constitute reasons to hinder planning approval on visual impact grounds.

6.23 Suitability of the site

The suitability of the site for the development has been determined through a master planning process for the Concord Hospital precinct which has sought to locate the proposed CSB and multi-storey car park (as sought under Stage 1), and ASB (as sought under Stage 2) within a central location so as to maintain physical connectivity and ensure maximum operational efficiency with the existing multiblock yet with minimal environmental impact.

As detailed within this EIS, the proposed preferred option has been designed with careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and is considered the most appropriate location and design against the site circumstances.

Heritage

The proposed redevelopment has been found to be acceptable from both an Aboriginal and European heritage perspective, No Aboriginal sites or areas of archaeological potential were identified during the survey, and the ACHDDA has determined that there is low potential for Aboriginal sites to be located within the study area.

Further, whilst some impacts are proposed which are considered to be detrimental to the (European) heritage significance of Concord Hospital, it is considered that the overall works are suitable for the site and will enable the continued function of the complex as a primary healthcare facility.

Contamination

Whilst evidence of contamination had been identified at the, a RAP has been prepared and it is considered that the site can be successfully remediated and be made suitable for the proposed redevelopment.

Mitigation of Impacts

The potential impacts identified can be reasonably mitigated and where necessary managed through the adoption of suitable site practices and adherence to accepted industry standards.

The site is considered to be suitable for the proposed development.

6.24 Public interest

The proposed Concept and Stage 1 redevelopment of Concord Hospital is in the public interest as it will provide for significantly improved health facilities at the site and improve and replace outmoded facilities to meet the substantial growth in clinical service demand from across the hospital’s catchment that has occurred and will continue to occur over the next 10 years.

As detailed within this EIS, the proposal will result in significant health and social benefits for Sydney, NSW and Australia. In the absence of any unacceptable environmental (and other) impacts and subject to the mitigation measures within Section 7 of this EIS, the proposed development is considered to be significantly in the public interest.
### 6.25 Environmental Risk Assessment

An environmental risk assessment has been prepared for the Proposal. This environmental risk assessment is set out at Table 21 below.

**Table 21 Environmental Risk Assessment**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Impact</th>
<th>Impact Level (low, medium, high)</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acoustic impacts</td>
<td>• Acoustic impacts during demolition and construction.</td>
<td>Medium</td>
<td>• It is recommended that a Construction Noise and Vibration Management Plan (CNWVP) be prepared at the detailed design stage to effectively manage noise and vibration impacts during construction.</td>
</tr>
<tr>
<td></td>
<td>• Acoustic impacts from plant items</td>
<td></td>
<td>• Acoustic treatment of mechanical plant to adhere to recommendations in Acoustic and Vibration Assessment at Appendix A to achieve compliance with EPA and INP acoustic criteria.</td>
</tr>
<tr>
<td>Air quality</td>
<td>• Potential for dust generation during construction</td>
<td>Low</td>
<td>• It is recommended that Section 1.10.2 and Section 1.10.3 of the PCMP at Appendix L be implemented through the course of construction phase.</td>
</tr>
<tr>
<td></td>
<td>• Exhaust from plant and machinery during construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soils</td>
<td>• Exposure of contamination during construction</td>
<td>Medium</td>
<td>• Implementation of the Remedial Action Plan (RAP).</td>
</tr>
<tr>
<td></td>
<td>• Soil erosion and sedimentation as a result of the works</td>
<td></td>
<td>• Appropriate sediment fences, earth bunds and sediment sumps should be installed, and stormwater pits should be protected in line with the recommendations in the Sediment, Erosion &amp; Dust Control Report at Appendix R.</td>
</tr>
<tr>
<td>Traffic</td>
<td>• Increased traffic on local roads</td>
<td>Medium</td>
<td>• Implementation of travel demand management recommendations contained within the Transport Assessment report prepared by Arup at Appendix AF, in addition to the construction traffic management recommendations contained with the PCMP at Appendix L.</td>
</tr>
<tr>
<td></td>
<td>• Increased parking demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Intersection performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heritage</td>
<td>• Impact to local built heritage item within site &amp; State heritage items to the north and south of the Hospital Campus</td>
<td>Medium</td>
<td>• Adherence to recommendations contained within the HHA at Appendix AC, ACHDDA at Appendix AD and the CMP at Appendix AE.</td>
</tr>
<tr>
<td></td>
<td>• Archaeological impacts</td>
<td></td>
<td>• Implementation of an Unexpected Finds Protocol</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Archaeological excavation and research methodology should be developed and employed during the demolition works and prior to construction works in the areas of archaeological potential.</td>
</tr>
</tbody>
</table>

Concord Hospital Redevelopment (Concept and Stage 1) | State Significant DA SSD 9036 | Architectus 100
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Impact</th>
<th>Impact Level (low, medium, high)</th>
<th>Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tree removal</td>
<td>Minor loss of trees within the development site</td>
<td>Low</td>
<td>• Adhere to recommendations contained within the Arborist Report at Appendix A.</td>
</tr>
<tr>
<td>Visual impact</td>
<td>Visual impacts on adjacent Local heritage item</td>
<td>Low</td>
<td>• View impact may be mitigated or lessened as part of Stage 2 detailed design processes.</td>
</tr>
<tr>
<td></td>
<td>Visual impact on views from State heritage items</td>
<td></td>
<td>• Refer to Section 6.4 above and the Visual Impact assessment at Appendix J.</td>
</tr>
<tr>
<td>Hazardous chemicals</td>
<td>The operation of the proposed CSB will involve the use, transport and storage of hazardous chemicals associated with the day to day operations of Concord Hospital</td>
<td>Medium</td>
<td>• All hazardous chemicals are to be stored and transported in accordance with the applicable Australian Standards and safety guidelines at all times, consistent with the existing hospital operations. Refer to an overview of proposed mitigation measures at Section 7 of this EIS</td>
</tr>
</tbody>
</table>
7. Mitigation measures

The Environmental Assessment (Section 6 of this EIS) and supporting reports have identified and assessed a range of issues arising from the proposed development in accordance with the applicable legislation and merit assessment.

On the basis of the assessment it is concluded that the proposed development will not have a significant impact on the environment, subject to the mitigation measures outlined below.

Table 22 Recommended Mitigation Measures

<table>
<thead>
<tr>
<th>Issue</th>
<th>Recommended Mitigation Measures</th>
</tr>
</thead>
</table>
| Acoustic impacts | That all works be undertaken in accordance with standard construction hours as detailed in Section 6.14 of this EIS.  
Additionally, that the recommendations of Section 7 and Section 8 of the Acoustic Report prepared by Acoustic Logic (Appendix AB) be implemented through the course of works, including:  
- A detailed construction noise and vibration management plan should be undertaken following preparation of the construction program. Review of the mitigation techniques including those outlined in Section 6.5 of Appendix AB should be undertaken and implemented where feasible.  
- Detailed acoustic review of all plant items should be undertaken following equipment selection and duct layout design. Initial analysis (Section 6.13) indicates that with acoustic treatment, all plant items will be capable of meeting noise emission requirements. However, this is likely to require:  
  - Noise screening (using either a dedicated noise screen or the building shell) for roof top cooling towers.  
  - A proprietary acoustic enclosure for any externally located back-up generator.  
  - Use of axial fans (as opposed to roof mounted fans) to enable in-duct acoustic lining to major external fans ducted to atmosphere.  
  - Upgrade of plant room wall construction for any plant room housing chiller plant.  
  - Detailed acoustic review of external louvres for any plant room to determine whether acoustic louvres/attenuators or blanking off of those louvres is required, particularly on the southern façade of on-floor plant rooms and the basement level chiller plant room. |
| Air quality | That the recommendations of Section 1.10.2 of the PCMP (Appendix L) be implemented through the course of works, including:  
- To control dust generation water will be sprayed where necessary at the source of origin and surrounding areas to prevent airborne dust particles migrating into the surrounding environment. Management of dust prevention is to be developed by the contractor and agreed by the project stakeholders including their infection control department.  
- Additional precautions that will be implemented during the works include the covering of all haulage trucks with tarpaulins and monitoring of weather conditions (including wind). Management and contingency plans will be developed to prevent any foreseeable impacts from dust. |
| Odour | That the recommendations of Section 1.10.3 of the PCMP (Appendix L) be implemented through the course of works, including:  
- All plant and machinery involved in the Works will be regularly serviced and checked for exhaust emissions and catalytic converters. |
| Demolition | All demolition works will be limited to those approved under SSD_9036 and are to be undertaken in accordance with AS2601 – The Demolition of Structures.  
Additionally, that the recommendations of Section 1.9 of the PCMP (Appendix L) be implemented through the course of works, including: |
Prior to commencing works onsite the Principal Contractor will complete and submit a Dilapidation report. The report should cover at a minimum the following areas:
- Existing Roads;
- Existing Footpaths;
- Trees to be retained;
- Existing storm water systems;
- Adjacent properties on Hospital Road; and
- Public assets at risk of being affected by construction activity.

That the Erosion and sediment control measures outlined in the Erosion and Sediment Control Plan will be installed prior to commencement of any work on the site and maintained throughout the duration of the works and/or until any areas that require to be turfed and landscaped have been completed.

That the recommendations of the detailed site investigations (Appendices X through Z) be adhered to through the course of works, including:
- Additional Suspension peroxide oxidation combined acidity and sulfur (SPOCAS) testing should be undertaken to provide further indication of the extent of PASS in the Phase 2 and Phase 3 investigation areas and the requirement for an acid sulfate soils management plan.

That the recommendations of the RAP (Appendix AA) shall be implemented and adhered to at all times through the course of works. Further, it is anticipated that DPE standard conditions of consent will be imposed on the approved development, including the requirement for the appointment of an EPA accredited site auditor. It is recommended that upon completion of the remediation works on the site, that a site audit report and a site audit statement be prepared by the accredited site auditor. The site audit report and site audit statement shall verify that the land is suitable for the proposed uses and should be provided prior to occupation of the building.

That all processes, procedures and protocols identified in the PCMP (Appendix L) will be implemented through the course of works. This PCMP shall be updated in response to the imposition of any conditions of consent and be finalised prior to the undertaking of any works at the site.

During construction, traffic and parking will be managed in accordance with the Preliminary Construction Traffic Management Plan prepared by Arup and Green Transport Plan.

That the recommendations of the HHA (Appendix AC) be adhered to through the course of works, including, however not limited to:
- Where avoidance of impacts to portions of the Concord Repatriation General Hospital are assessed as having moderate or high significance is not possible and the retention of highly significant original or early fabric compromises the conservation of the building, archival recording must be undertaken to document the original or early fabric intended to be removed, and an archival report prepared. As a guide for the conservation of the local heritage item, under the NSW Heritage Act 1977 items assessed as having high or moderate State significance may be removed where a CMP exists, and its recommendations and policies are taken into the consideration. The current CMP recommends, that where impacts to the following buildings and areas cannot be avoided, archival recording should take place (note: numbers after each building below refer to the map labelled Plate 17):
  - Coronary Care and Thoracic Wards (#10 and 11).
  - ICU buildings (#14 and 15).
  - Renal Cardiovascular and Cancer Services buildings (#16 and 17).
  - Neuroscience Bone Joint and Connective Tissues buildings (# 18 and 19).
Guidelines for archival recordings are set out in the NSW Heritage Office’s publication How to Prepare Archival Recordings of Heritage Items.

- Where avoidance of impacts to identified potential archaeological deposits is not possible archaeological investigations in the form of either archaeological monitoring or excavations should be undertaken. The Heritage Act 1977 protects archaeological relics where they are of local or State significance. The association of the Military encampment with the hospital complex indicates there could be relics of either local or state significance. As such archaeological investigation is warranted for these potential deposits. As part of the early works an Archaeological excavation and research methodology should be developed and employed during the demolition works and prior to construction works in the areas of archaeological potential.

- Should unanticipated relics be discovered during the course of the project, work in the vicinity must cease and an archaeologist contacted to make a preliminary assessment of the find. The Heritage Council will require notification if the find is assessed as a relic. Relics are historical archaeological resources of local or State significance and are protected in NSW under the Heritage Act 1977. Relics cannot be disturbed except with a permit or exception/exemption notification.

That the recommendations of the ACHDDA (Appendix AD) be adhered to through the course of works, including, however not limited to:

- Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the OEH and Aboriginal stakeholders.

- Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity you must:
  - Immediately cease all work at that location and not further move or disturb the remains;
  - Notify the NSW Police and OEH’s Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location; and
  - Not recommence work at that location unless authorised in writing by OEH.

Tree removal

Recommendations contained within the Arborist Report at Appendix AM are to be adhered to including:

- Only those trees specifically identified for removal be removed; and
- Protection measures are implemented at the site and to all other trees not specifically identified for removal.

Way finding

The preliminary way finding strategy prepared by Minale Tattersfield (Appendix AL) is to be further developed and integrated as part of the architectural and landscape design and implemented prior to operation.

Visual impact

That consideration be given to mitigating the visual impact of the future ASB (as sought under Stage 2) as part of subsequent detailed design processes.

Hazardous chemicals

That all Work Health and Safety Regulation Requirements be undertaken and adhered to as detailed on Page 11 of Appendix AT.
8. Conclusion

This Environmental Impact Statement has been undertaken on behalf of NSW Health Infrastructure for assessment and determination in accordance with the State Significant Development provisions outlined in Division 4.7 of the Environmental Planning and Assessment Act and in response to the amended Secretary’s Environmental Assessment Requirements, as issued on 20 April 2018.

This EIS supports a SSDA seeking consent for the proposed redevelopment of Concord Hospital to improve and replace outmoded facilities to meet the substantial growth in clinical service demand across the hospital’s catchment. The project is an important part of the long-term planning and development of health services for Concord Hospital and within the Sydney Local Health District.

- Concept approval is sought for the redevelopment indicatively comprising 82,000sqm GFA, to be undertaken in two (2) stages including:
  o Clinical Services Building (CSB) and multi-storey car park (Stage 1); and
  o Acute Services Building (ASB) and multi-storey car park (Stage 2).
- Detailed approval is sought for the Stage 1 construction of the proposed CSB (44,000sqm GFA) and the construction of a multi-storey car park located to the north of Hospital Road.

Detailed development approval for the proposed Stage 2 works will be completed at a later date and does form not part of this SSDA. The Concept redevelopment will be delivered as funding is allocated and as necessary to meet SLHD needs. The Stage 1 Detailed works are estimated to be completed by 2021.

This EIS provides a detailed analysis of the subject site, an overview of the proposed development, consideration of the legislation and policies applicable to the development, and an assessment of the environmental impacts and proposed mitigation measures to manage and protect the environment from these impacts.

The proposed development will have significant benefits for Sydney, NSW and Australia. As detailed within this EIS it is considered the environmental impacts are acceptable and any potential adverse impacts can be appropriately mitigated. The site is suitable for the proposed development. It is found on balance the development is significantly in the public interest.

Accordingly, it is recommended that the proposed development be approved by the consent authority.