URBIS

ENVIRONMENTAL IMPACT STATEMENT

Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre (SCH1/CCCC)

Prepared for

HEALTH ADMINISTRATION CORPORATION

4 May 2021

URBIS STAFF RESPONSIBLE FOR THIS REPORT WERE:

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Project Code	P0021714
Report Number	Final Submission

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CONTENTS

FIGURES

PICTURES

TABLES

SIGNED DECLARATION

SUBMISSION OF ENVIRONMENTAL IMPACT STATEMENT

Environmental Assessment prepared by:

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Address:	Urbis Pty Level 8, 123 Pitt Street Sydney NSW 2000
In respect of:	SSD-10831778 – Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre

Applicant and Land Details:

Applicant:	Health Administration Corporation (HAC)
Applicant address	1 Reserve Road, St Leonards, NSW 2065
Land to be developed:	Corner of High Street and Hospital Road, Randwick
Legal description:	Lot 100 in DP1249692, Lots 1 - 3 in DP13995, Part Lot 4 in DP13995, Lot A - D in DP304806, Lots A & B in DP303478, Lots A & B in DP102029, Lot 35 in DP7745, Lot 1, 2, 12 - 14 in DP12909, Lot A in DP167106, Part Lot B in DP167106, Part Lot 6 in DP13997, Lot 7 in DP13997, Part Lot A in DP441943, Lot B in DP441943, Lots 12-14 in DP12909 and Part Lot 1 in DP870720.
Project Summary	State significant development application for the construction and operation of the new Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre and associated public domain and landscaping works as part of the Randwick Campus Redevelopment project.

We certify that the content of the Environmental Impact Statement, to the best of our knowledge, has been prepared:

- In accordance with the Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*;
- Contains all available information relevant to the environmental assessment of the development, activity or infrastructure to which that statement relates; and
- The information contained in this statement is neither false nor misleading.

Name/Position:	**Peter Strudwick,** **Director**	**Sarah Noone,** **Senior Consultant**
Signature:		
Date:	04/05/2021	04/05/2021

GLOSSARY AND ABBREVIATIONS

Reference	Description
ACHAR	Aboriginal Cultural Heritage Assessment Report
AQIA	Air Quality Impact Assessment
ARI	Average Recurrence Interval
ASB	Acute Services Building
BAM	Biodiversity Assessment Method
BC Act	*Biodiversity Conservation Act 2016*
BC Reg	*Biodiversity Conservation Regulation 2017*
BDAR	Biodiversity Development Assessment Report
CSELR	CBD and South East Light Rail
CCCC	Children's Comprehensive Cancer Centre
CCI	Children's Cancer Institute
CEEC	Critically Endangered Ecological Community
CDA	Concept Development Application
CEMP	Construction Environmental Management Plan
CMP	Construction Management Plan
CTMP	Construction Traffic Environmental Plan
DCP	Development Control Plan
DPIE	NSW Department of Planning, Industry and Environment
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA Regulation	*Environmental Planning and Assessment Regulation 2000*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EIS	Environmental Impact Statement
EPA	NSW Environment Protection Authority
GRUM	Greater Randwick Urban Masterplan
GANSW	Government Architect NSW

Reference	Description
HIPAP	Hazardous Industry Planning Advisory Paper
HIS	Heritage Impact Statement
HTH	Health Translation Hub
IASB	Prince of Wales Hospital Integrated Acute Services Building
LEP	Local Environmental Plan
MNES	Matters of National Environmental Significance
MRI	Medical Research Institute
NRAR	Natural Resource Access Regulator
OEMP	Operational Environmental Management Plan
PBP	Planning for Bushfire Protection
PCT	Plant Community Type
POM	Plan of Management
POWH	Prince of Wales Hospital
PSI	Preliminary Site Investigation
RCR	Randwick Campus Redevelopment
RHC	Randwick Hospitals Campus
RHIP	Randwick Health & Innovation Precinct
SAII	Serious and Irreversible Impacts
SARs	Commonwealth Supplementary Assessment Requirements
SCH	Sydney Children's Hospital, Randwick
SCHN	Sydney Children's Hospital Network
SCH Stage 1 and CCCC / SCH1/CCCC	Sydney Children's Hospital Stage 1 and Children's Comprehensive Caner Centre
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SESLHD	South Eastern Sydney Local Health District

Reference	Description
Site	The site the subject of this SSDA
SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2009*
SSD	State Significant Development
SSDA	State Significant Development Application
TIA	Traffic Impact Assessment
UNSW	University of New South Wales
VIS	Vegetation Integrity Score
WMP	Waste Management Plan
WSUD	Water Sensitive Urban Design
WWTP	Wastewater Treatment Plant

EXECUTIVE SUMMARY

This Environmental Impact Statement (**EIS**) is submitted to the Department of Planning, Industry and Environment (**DPIE**) on behalf of Health Administration Corporation (**HAC, the Applicant**) and in support of SSD application SSD-10831778 for the development of Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre (**SCH1/CCCC, the Project**) at Randwick Hospitals Campus (**RHC**).

The Randwick Health & Innovation Precinct (**RHIP**) is set to become the most comprehensive and largest co-located health precinct in Australia. The Precinct brings together government, the University of New South Wales (**UNSW**), Health Infrastructure (**HI**), four hospitals and associated health services: Prince of Wales Hospital (**POWH**), Sydney Children's Hospital (**SCH**), Randwick , Royal Hospital for Women (**RHW**), Prince of Wales Private Hospital (**POWPH**), preclinical facilities and nine Medical Research Institutes (**MRIs**) spanning neuroscience, mental health, cancer, biomedical sciences, robotics, and next generation technologies, which put it at the forefront of medical innovation in Australia.

The project seeks to strengthen the precinct as a world-class centre for health, research and education- driving cutting edge, compassionate and holistic healthcare and wellness programs for the local Community and other residents of NSW. The project will deliver brand new, state-of-the-art paediatric health, medical research and education facilities and will assist in transforming paediatric services - a key step in realising the vision for the RHIP.

The SSDA seeks consent for the construction and operation of a nine (9) storey hospital building with rooftop plant and two (2) basement levels to accommodate Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre (**SCH1/CCCC**), which represents the next phase of the Randwick Campus Redevelopment (**RCR**).

The SCH is part of the Sydney Children's Hospitals Network (SCHN) formed in 2010. The SCH is the main paediatric referral hospital for Eastern Sydney and provides quality care and clinical services to approximately 155,000 sick children each year across the network.

The proposed development has an estimated capital investment value (**CIV**) exceeding $30 million and accordingly, is classified as a State significant development (**SSD**) under Schedule1, Clause 14(a) of *the State Environmental Planning Policy (State and Regional Development) 2011.*

This EIS has been prepared to support the SSDA and responds to the relevant matters listed within the Secretary's Environmental Assessment Requirements (**SEARs**) issued on 2nd December 2020 (refer to **Appendix A**).

BACKGROUND

The site forms part of the Randwick Campus Redevelopment (**RCR**) which is located within the RHIP. The RHIP includes the Randwick Hospitals Campus (**RHC**) as well as UNSW, Kensington Campus. The RHIP is one of the most comprehensive health innovation districts in Australia.

While health care at RHIP has been evolving for over 160 years, the last five years has seen a strengthening of collaboration amongst a wide range of organisations in the precinct, including with Government, Universities, and Community.

Advancing this culture of collaboration, the NSW Government has made a significant commitment to expanding and upgrading the RHIP.

Over $1.5 billion is being invested in the RHIP, of which over $1 billion is from the NSW Government, to strengthen the precinct as a world-class centre for health, research and education- driving cutting edge, compassionate and holistic healthcare and wellness programs for the local Community and other residents of NSW.

The RCR is a catalyst for realising the Greater Sydney Commission's strategic objectives for Randwick. The Project is guided by the vision to be globally renowned for excellence in health, teaching, education and delivering the highest standard of care to patients in world class facilities. The RCR includes:

- Construction of a new Prince of Wales Hospital IASB, including integration of UNSW health-related education, training, and research spaces, which gained approval in 2019 under SSD 9113 and SSD-10339 and is due to open in 2022.

- Planning for a redevelopment of the Sydney Children's Hospital (**SCH**), Randwick and Australia's first Children's Comprehensive Cancer Centre (**CCCC**) subject of this SSD application and due to open in 2025.
- Planning for the Health Translation Hub (**HTH**) in partnership with UNSW, subject of a separate SSDA being progressed concurrently (SSD-10822510), due to open in late 2026.

In early 2019 the NSW and Federal Governments announced $608 million to deliver brand new, state-of-the-art paediatric health, medical research and education facilities as part of the SCH1/CCCC.

The Project represents a fully integrated partnership between the Kids Cancer Centre (**KCC**), (**SCHN**), the Children's Cancer Institute (**CCI**), and UNSW Kensington Campus (**UNSW**) and will bring together health practitioners, researchers, academics, patients and the community to integrate patient care, research and education in Australia's first Children's Comprehensive Cancer Centre.

The co-location of paediatric healthcare, education and research environments will accelerate learning discoveries, engage clinical innovation with bedside care and meet the complex health needs of the State's growing population with a future ready workforce.

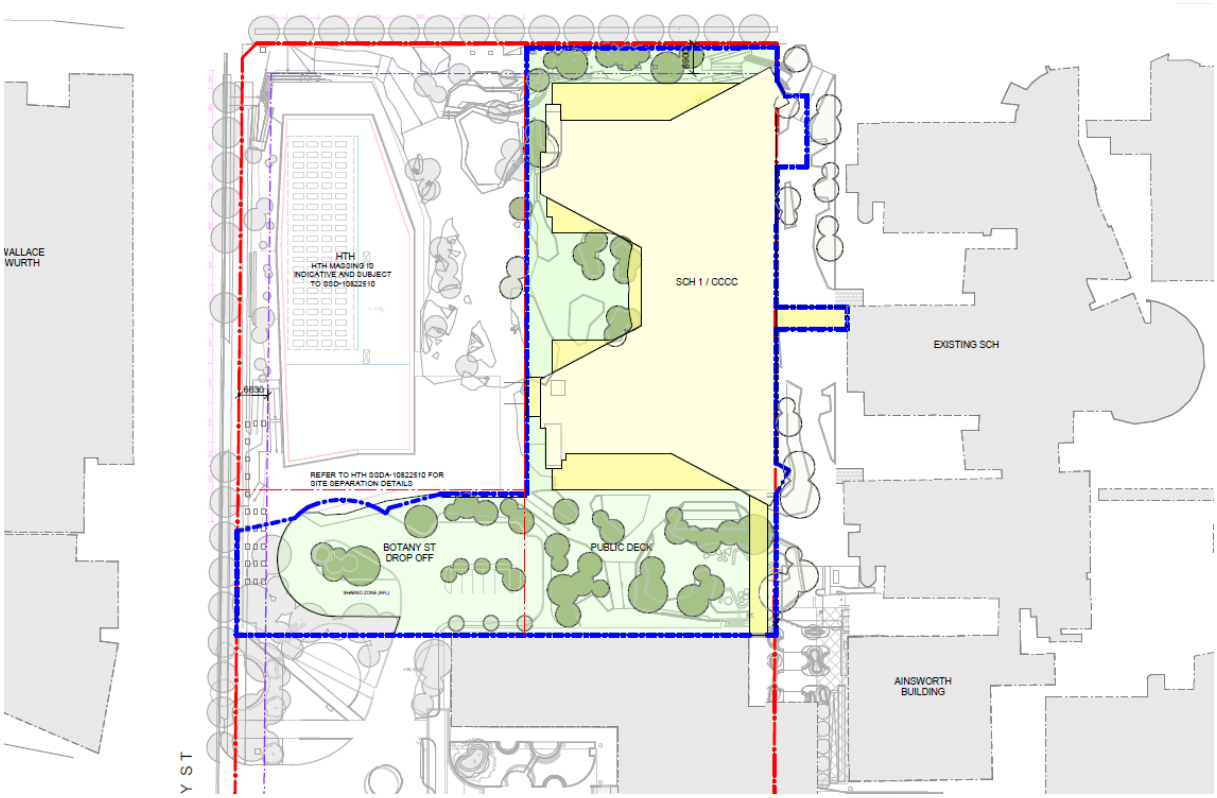
THE SITE

This SSDA relates to the land in the north-eastern corner of the RCR site, bound by High Street to the north and Hospital Road to the east.

The site boundary extends along the southern boundary of the proposed HTH site to Botany Street on the western side of the RCR site. The site boundary reflects the scope of works to be delivered as part of this SSD on the ground plane and basement levels which includes the access ramp for the SCH1/CCCC ED drop-off on Level B1 and access to visitor parking on Level B2, both accessed via Botany Street. Landscaping will be provided around the access ramp on Level 00.

Future logistics entry to the proposed HTH will be from the access ramp at Level B1, subject to separate approval under the HTH SSD application. Above the ground plane, a small portion of the southern end of the proposed HTH building will overlap with the boundary shown in blue in **Figure 1** below.

Figure 1 SSDA Site Boundary



Source: BLP

The site occupies the following allotments (in whole or part) which were previously occupied by residential dwellings and ancillary development, plus part of Eurimbla Avenue:

- Lot 100 in DP1249692,
- Lots 1 - 3 in DP13995,
- Part Lot 4 in DP13995,
- Lot A - D in DP304806,
- Lots A & B in DP303478,
- Lots A & B in DP102029,
- Lot 35 in DP7745,
- Lot 1, 2, 12 - 14 in DP12909,
- Lot A in DP167106,
- Part Lot B in DP167106,
- Part Lot 6 in DP13997,
- Lot 7 in DP13997,
- Part Lot A in DP441943,
- Lot B in DP441943,
- Lots 12-14 in DP12909, and
- Part Lot 1 in DP870720.

Eurimbla Avenue was a historical feature of the site and is a meaningful historical reference for the local community. The project team are consulting with stakeholders to agree a suitable acknowledgement of the community investment in this Project by using the name 'Eurimbla' appropriately to name a key component of the proposed built environment. This is a strong aspiration by the project team which will be progressed together with all project partners over the coming months to agree an appropriate application.

The site is located in the Randwick Local Government Area (**LGA**), approximately 6 kilometres (**km**) from the Sydney Central Business District (**CBD**) and 4km from Sydney Airport.

The site is located approximately 400m from Randwick Town Centre, 1km from Royal Randwick Racecourse and 2km from Coogee Beach.

The CBD South East Light Rail (**CSELR**) L2 Randwick Line runs in both directions along the High Street frontage of the site. The Randwick stop is located 250m to the east of the site and the UNSW High Street stop is located 150m to the west of the site.

The site is located in the RCR site which bridges the gap between the two components of the RHIP – Randwick Hospitals' Campus (**RHC**) and UNSW Kensington Campus.

The RHC includes the existing Sydney Children's Hospital (**SCH**), Randwick, Prince of Wales Hospital (**POWH**), Royal Hospital for Women (**RHW**), and the Prince of Wales Private Hospital (**POWPH**) and is located to the east of the RCR. The UNSW Kensington Campus adjoins the RCR to the west.

DEVELOPMENT DESCRIPTION

The SSD Application seeks approval for the following development:

- Construction and operation of a new 9 storey hospital, including 2 levels of basement building, plus upper plant room to provide:
  - A new children's emergency department and emergency short-stay unit, accessible from Botany Street with direct links to new and existing services
  - A new children's intensive care unit

  - New inpatient units for medical and surgical specialties
  - A new medical short-stay unit
  - A new pharmacy and pathology collection
  - Australia's first Children's Comprehensive Cancer Centre including:
    - State-of-the-art technologically advanced wet and dry laboratory spaces
    - Education, training and research spaces
    - New oncology inpatient units, and patient and family focused retreat areas
    - A new day oncology unit
  - New front of house and retail facilities; and
  - Building identification signage zones.
- New High Street visitor drop off;
- Integration via pedestrian skybridges with the Integrated Acute Services Building (approved under SSD 10339 and 9113), currently under construction and with the proposed Health Translation Hub (HTH, SSD 10822510);
- Short-stay patient parking connected to existing Botany Street intersection;
- Basement Ambulance access, loading dock, back of house and logistics services via Hospital Road;
- Public domain and associated landscaping, including tree removal; and
- Associated site preparation, civil works and utilities services.

The proposed SCH1/CCCC will operate 24 hours per day, 7 days per week.

The following services and facilities will be provided on each level:

- Level B2 – Loading Dock, Back of House and short stay patient carpark;
- Level B1 – Emergency Department;
- Level 00 – Front of House;
- Level 01 – Intensive Care Unit;
- Level 02 – Plant and Pharmacy;
- Level 03 – Medical Short Stay Unit and CCCC Research Labs, education and workspaces;
- Level 04 - CCCC Research Labs, education and workspaces;
- Level 05 – Day Oncology and CCCC Research Labs, education and workspaces;
- Level 06 – Oncology Inpatient Unit's (IPUs);
- Level 07 – Medical / Surgical IPUs;
- Level 08 – Medical / Surgical IPUs;
- Level 09 – Plant.
- Gross floor area – 36,072.08m^2

PLANNING CONTROLS

This EIS considers the relevant regulatory framework applicable to the site and the proposal and contains an assessment of the proposal against the following statutory controls and regulatory instruments:

- *Environmental Planning and Assessment Act 1979*

- *Environmental Planning and Assessment Regulation 2000*
- *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. 64 – Advertising and Signage*
- *State Environmental Planning Policy No 55 – Remediation of Land*
- *Draft State Environmental Planning Policy (Infrastructure) 2007 – Amendment – Health Services Facilities*
- *Draft State Environmental Planning Policy (Remediation of Land)*
- *Draft State Environmental Planning Policy (Environment)*
- *Randwick Local Environmental Plan 2012*

The proposal has also considered and been assessed in accordance with its consistency with the key planning objectives, priorities and actions outlined within relevant strategic land use and transport planning policies including:

- NSW State Priorities
- State Infrastructure Strategy 2018 – 2038 Building the Momentum
- Future Transport Strategy 2056
- NSW State Health Plan: Towards 2021
- Crime Prevention through Environmental Design (CPTED) Principles
- Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW, 2017)
- Sydney Green Grid (GANSW, 2017)
- Healthy Urban Development Checklist (NSW Health, 2009)
- Draft Greener Places Design Guide (GANSW)
- Greater Sydney Region Plan - A Metropolis of Three Cities
- Our Greater Sydney 2056: Eastern City District Plan
- Towards our Greater Sydney 2056
- South East Sydney Transport Strategy
- Randwick Local Strategic Planning Statement – Vision 2040
- Randwick Collaboration Area Place Strategy.

STAKEHOLDER CONSULTATION

HI's guiding communication and engagement principles for capital projects have been used to build the Communications and Stakeholder Engagement Strategy for the Project and each phase of the development. The principles include proactive stakeholder engagement, transparent communications, coordinated and accessible information and collaboration.

HI has been working closely with the below stakeholders to inform the proposed development:

- Adjoining landowners and occupants
- Government, agency and utility stakeholders listed in the SEARs.

The Consultation Report (**Appendix EE**) provides detailed information on:

- HI's strategy and approach for engaging stakeholders.
- Identification of stakeholders, their area of interest, the communication objective and typical engagement methods.
- Summary of the comprehensive stakeholder engagement and consultation activities undertaken to date and which are ongoing.
- Details of the impact of stakeholder engagement and how the outcomes of community and stakeholder engagement have been considered and incorporated into the final design of the proposed development.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

This EIS assesses the proposed development in relation to relevant planning instruments and policies and considers the likely environmental impacts of the proposal associated with the following:

- Built form design quality
- Public domain and landscaping
- Integration with the RCR and RHIP
- Environmental amenity impacts
- Access arrangements
- Construction and operational traffic and parking
- Heritage impacts
- Aboriginal cultural heritage
- Biodiversity
- Social impacts
- Ecologically Sustainable Design (ESD)
- Construction and operational noise and vibration impacts
- Stormwater drainage and flooding
- Contamination and remediation
- Waste management
- Stakeholder consultation

Each of the recommended mitigation measures has been reviewed in detail and it is considered that they can be incorporated as conditions of consent (where necessary) to address identified impacts and implemented during the demolition, construction and operational phases of the development.

CONCLUSION

The EIS demonstrates the proposal will not result in any significant departures from applicable controls or unreasonable environmental effects. The proposed development is considered appropriate and reasonable based on the following:

- The proposal will provide for greater integration of services at the RHC, create greater efficiencies by incorporating state of the art facilities and equipment and reduce waiting times by improving capacity.
- The proposal supports the co-location of health, research and education related facilities which will contribute to the RHIP’s growth.
- The co-location of health and educational facilities will also allow for a more efficient translation of education and research into patient care for patients within the RHC and wider Randwick community.

- Delivery of 36,072sqm of health services facility floor space will create 1,195 construction jobs and 516 full time equivalent (FTE) operational jobs which will contribute to Randwick LGA's job targets 32,000 – 35,500 jobs by 2036.
- The proposed development is ideally located to promote optimal use of the CBD and South East Light Rail (CSELR) infrastructure.
- The proposed development will include Australia's first Children's Comprehensive Cancer Centre (**CCCC**), bringing world-leading clinical care, research and teaching together to deliver improved models of care for sick and injured children.
- The CCCC will transform children's cancer care, delivering better health outcomes through the rapid translation of clinical research into effective treatments for patients and thereby improving the service levels that currently exist in the SCH and the wider RHC.
- The proposal will deliver high quality, new publicly accessible open space which will contribute to great place making that will bring people together.
- The high-quality architectural design fits comfortably in its context of the wider RHIP context and creates an enhanced public domain.
- The proposal incorporates sustainability initiatives to promote improved environmental performance.
- Traffic and parking impacts associated with the proposed development can be appropriately managed and sustainable transport use will be promoted.

In view of the above, it is submitted that the proposal is in the public interest and therefore SSD-10831778 should be approved subject to appropriate consent conditions.

1. INTRODUCTION

This Environmental Impact Statement (**EIS**) is submitted to the Department of Planning, Industry and Environment (**DPIE**) on behalf of Health Administration Corporation (**HAC, the Applicant**) and in support of SSD application SSD-10831778 for the development of Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre (**SCH1/CCCC, the Project**) at Randwick Hospitals Campus (**RHC**).

The Randwick Health & Innovation Precinct (**RHIP**) is set to become the most comprehensive and largest co-located health precinct in Australia. The Precinct brings together government, the University of New South Wales (**UNSW**), Health Infrastructure (**HI**), four hospitals and associated health services: Prince of Wales Hospital (**POWH**), Sydney Children's Hospital (**SCH**), Randwick, Royal Hospital for Women (**RHW**), Prince of Wales Private Hospital (**POWPH**), preclinical facilities and nine Medical Research Institutes (**MRIs**) spanning neuroscience, mental health, cancer, biomedical sciences, robotics, and next generation technologies, which put it at the forefront of medical innovation in Australia.

The project seeks to strengthen the precinct as a world-class centre for health, research and education-driving cutting edge, compassionate and holistic healthcare and wellness programs for the local Community and other residents of NSW. The project will deliver brand new, state-of-the-art paediatric health, medical research and education facilities and will assist in transforming paediatric services - a key step in realising the vision for the RHIP.

The proposed development has an estimated capital investment value exceeding $30 million. Accordingly, the proposal is classified as an SSD under Schedule1, Clause 14(a) of *the State Environmental Planning Policy (State and Regional Development) 2011* as it involves development for the purposes of a *health services facility* with a capital investment value in excess of $30 million.

The Minister is the consent authority for the proposal in accordance with section 4.5 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**).

This EIS has been prepared to support the SSDA and responds to the relevant matters listed within the Secretary's Environmental Assessment Requirements (**SEARs**) issued on 2nd December 2020 (refer to **Appendix A**).

1.1. PROJECT OVERVIEW

The SSD Application seeks approval for the following development:

- Construction and operation of a new 9 storey hospital, including 2 levels of basement building, plus upper plant room to provide:
  - A new children's emergency department and emergency short-stay unit, accessible from Botany Street with direct links to new and existing services
  - A new children's intensive care unit
  - New inpatient units for medical and surgical specialties
  - A new medical short-stay unit
  - A new pharmacy and pathology collection
  - Australia's first Children's Comprehensive Cancer Centre including:
    - State-of-the-art technologically advanced wet and dry laboratory spaces
    - Education, training and research spaces
    - New oncology inpatient units, and patient and family focused retreat areas
    - A new day oncology unit
  - New front of house and retail facilities; and
  - Building identification signage zones.
- New High Street visitor drop off;

- Integration via pedestrian skybridges with the Integrated Acute Services Building (approved under SSD 10339 and 9113), currently under construction and with the proposed Health Translation Hub (HTH, SSD 10822510);
- Short-stay patient parking connected to existing Botany Street intersection;
- Basement Ambulance access, loading dock, back of house and logistics services via Hospital Road;
- Public domain and associated landscaping, including tree removal; and
- Associated site preparation, civil works and utilities services.

The proposed SCH1/CCCC will operate 24 hours per day, 7 days per week.

The following services and facilities will be provided on each level:

- Level B2 – Loading Dock, Back of House and short stay patient carpark;
- Level B1 – Emergency Department;
- Level 00 – Front of House;
- Level 01 – Intensive Care Unit;
- Level 02 – Plant and Pharmacy;
- Level 03 – Medical Short Stay Unit and CCCC Research Labs, education and workspaces;
- Level 04 - CCCC Research Labs, education and workspaces;
- Level 05 – Day Oncology and CCCC Research Labs, education and workspaces;
- Level 06 – Oncology Inpatient Unit's (IPUs);
- Level 07 – Medical / Surgical IPUs;
- Level 08 – Medical / Surgical IPUs;
- Level 09 – Plant.

The SCH1/CCCC will operate 24 hours per day, 7 days per week. This Project represents the first stage of the Sydney Children's Hospital (**SCH**), Randwick redevelopment and the second stage of the Randwick Campus Redevelopment (**RCR**).

The site on which the proposed development is located is bound by High Street to the north and Hospital Road to the east. The site adjoins the approved Prince of Wales Hospital Integrated Acute Services Building (**IASB, SSDA 9113 and SSD 10339**) to the south, currently under construction, and the proposed future UNSW Health Translation Hub (**HTH**), located to the west (subject to a separate application, **SSD-10822510**).

1.2. PROJECT OBJECTIVES

The main objective of the Project is to deliver new, state-of-the-art paediatric health and medical research facilities as part of the first stage of redeveloping the Sydney Children's Hospital (**SCH**), Randwick.

The Project seeks to strengthen the RHIP as a world-class centre for health, research and education to drive cutting edge, compassionate and holistic healthcare and wellness programs for the local community and other residents of NSW.

Additional project objectives include:

- Build a world class hospital designed for the optimal care of children, to enable internationally recognised, innovative patient and family-centred, personalised models of specialist paediatric care.
- Deliver Australia's first Children's Comprehensive Cancer Centre (**CCCC**) that is internationally connected and world-leading, and able to deliver outstanding research, integrated with best practice research-driven healthcare and education.

- Integrate healthcare, research and education (physically and functionally, and through strategic partnerships across the RHIP, nationally and internationally), to enable best practice research-driven healthcare for children.
- Provide an outstanding new healthy environment for patients, families and the community, that is safe, accessible, age-appropriate, inclusive and family centred.
- Deliver infrastructure and services that make SCH1/CCCC sustainable, technology-enabled and future-focused.
- Support the NSW Government's planning strategies and objectives, including the *Greater Sydney Region Plan* and the *Eastern City District Plan*.

1.3. PROJECT HISTORY

1.3.1. Randwick Campus Redevelopment

The site forms part of the Randwick Campus Redevelopment (**RCR**) which is located within the RHIP. The RHIP includes the Randwick Hospitals Campus (**RHC**) as well as UNSW, Kensington Campus. The RHIP is one of the most comprehensive health innovation districts in Australia.

While health care at RHIP has been evolving for over 160 years, the last five (5) years has seen a strengthening of collaboration amongst a wide range of organisations in the precinct, including with Government, Universities, and Community.

Advancing this culture of collaboration, the NSW Government has made a significant commitment to expanding and upgrading the RHIP.

Over $1.5 billion is being invested in the RHIP, of which over $1 billion is from the NSW Government, to strengthen the precinct as a world-class centre for health, research and education- driving cutting edge, compassionate and holistic healthcare and wellness programs for the local Community and other residents of NSW in the form of the RCR.

The RCR is a catalyst for realising the Greater Sydney Commission's strategic objectives for Randwick. The Project is guided by the vision to be globally renowned for excellence in health, teaching, education and delivering the highest standard of care to patients in world class facilities. The RCR includes:

- Construction of a new Prince of Wales Hospital IASB, including integration of UNSW health-related education, training, and research spaces, which gained approval gained approval in 2019 under SSD 9113 and SSD-10339 and is due to open in 2022.
- Planning for a redevelopment of the Sydney Children's Hospital (**SCH**), Randwick and Australia's first Children's Comprehensive Cancer Centre (**CCCC**) subject of this SSD application and due to open in 2025.
- Planning for the Health Translation Hub (**HTH**) in partnership with UNSW, subject of a separate SSDA being progressed concurrently (SSD-10822510), due to open in late 2026.

The SCH1/CCCC site sits within the Northern Health and Research Zone (**NHRZ**) along with the proposed HTH, which represents a partnership between the Children's Cancer Institute (**CCI**), Sydney Children's Hospitals Network (**SCHN**), South Eastern Sydney Local Health District (**SESLHD**) and UNSW, supported by HI.

The RCR site as it sites within the wider RHIP is shown in **Figure 2** below.

In early 2019 the NSW and Federal Governments announced $608 million to deliver brand new, state-of-the-art paediatric health, medical research and education facilities as part of the SCH1/CCCC.

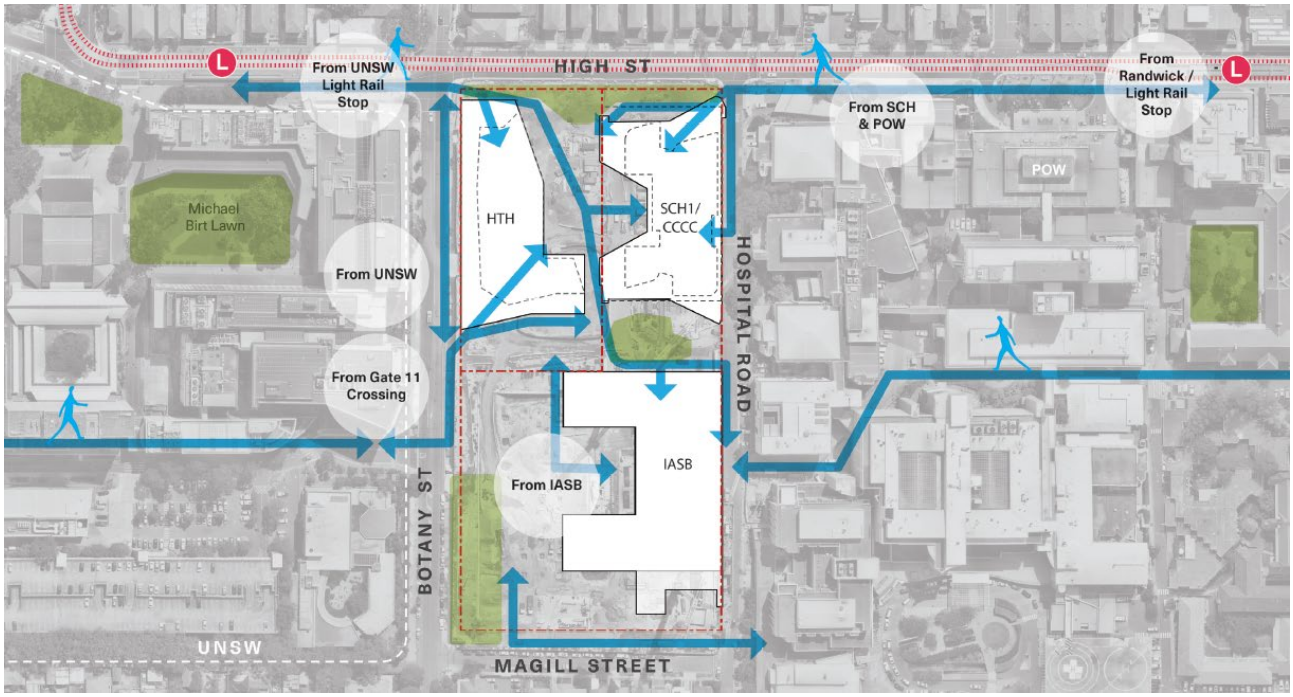
The Randwick Campus Redevelopment team is working with the Sydney Children's Hospitals Network (**SCHN**), Children's Cancer Institute (**CCI**), UNSW Kensington Campus (**UNSW**), SESLHD,staff, the community and consumers to plan and design SCH1/CCCC.

The co-location of paediatric healthcare, education and research environments will accelerate learning discoveries, engage clinical innovation with bedside care and meet the complex health needs of the State's growing population with a future ready workforce.

The SCH is part of the Sydney Children's Hospitals Network (**SCHN**) formed in 2010. The SCH is the main paediatric referral hospital for Eastern Sydney and provides quality care and clinical services to approximately 155,000 sick children each year across the network. The redevelopment provides an opportunity for the SCHN to design new and innovative models of care that have a real and positive impact on children's health in NSW.

The proposal represents a fully integrated partnership between the Kids Cancer Centre (**KCC**), SCHN, the CCI, and UNSW, bringing together health practitioners, researchers, academics, patients and the community to integrate patient care, research and education in Australia's first CCCC.

Figure 2 Randwick Campus Redevelopment site



Source: Aspect

The multidisciplinary team at the CCCC will be focussed on achieving the best outcomes for children with cancer by accelerating innovation and transferring these medical advances to the treatment delivered to patients at the bedside. Expertise and research will be shared with leading cancer institutions across Australia and the world, ensuring all children benefit from work undertaken at the Centre. By sharing knowledge more broadly, other paediatric diseases also stand to gain benefit from outputs and learnings.

1.3.2. Greater Randwick Urban Masterplan

The Greater Randwick Urban Masterplan (**GRUM**) considers the RHIP in the context of the surrounding area and supporting infrastructure at a local, city and regional level. The GRUM has been developed by the Randwick Health Collaboration (SESLHD, the SCHN and UNSW) to help identify precinct enablers, integration aspirations and resolve a high-level urban framework to guide the priorities for investment in health and education services in the precinct. The GRUM was used to guide early site masterplanning was endorsed by precinct stakeholders, with support from Randwick City Council (**RCC**).

The following Principles were developed to guide the GRUM and apply at both an urban masterplan level and a stage by stage, individual building/project level.

1. GREEN AND HEALTHY - provide and promote a healing, health promoting and ecologically sustainable environment.

2. CONNECTED - the precinct is to be well connected to both its surroundings and the wider context.

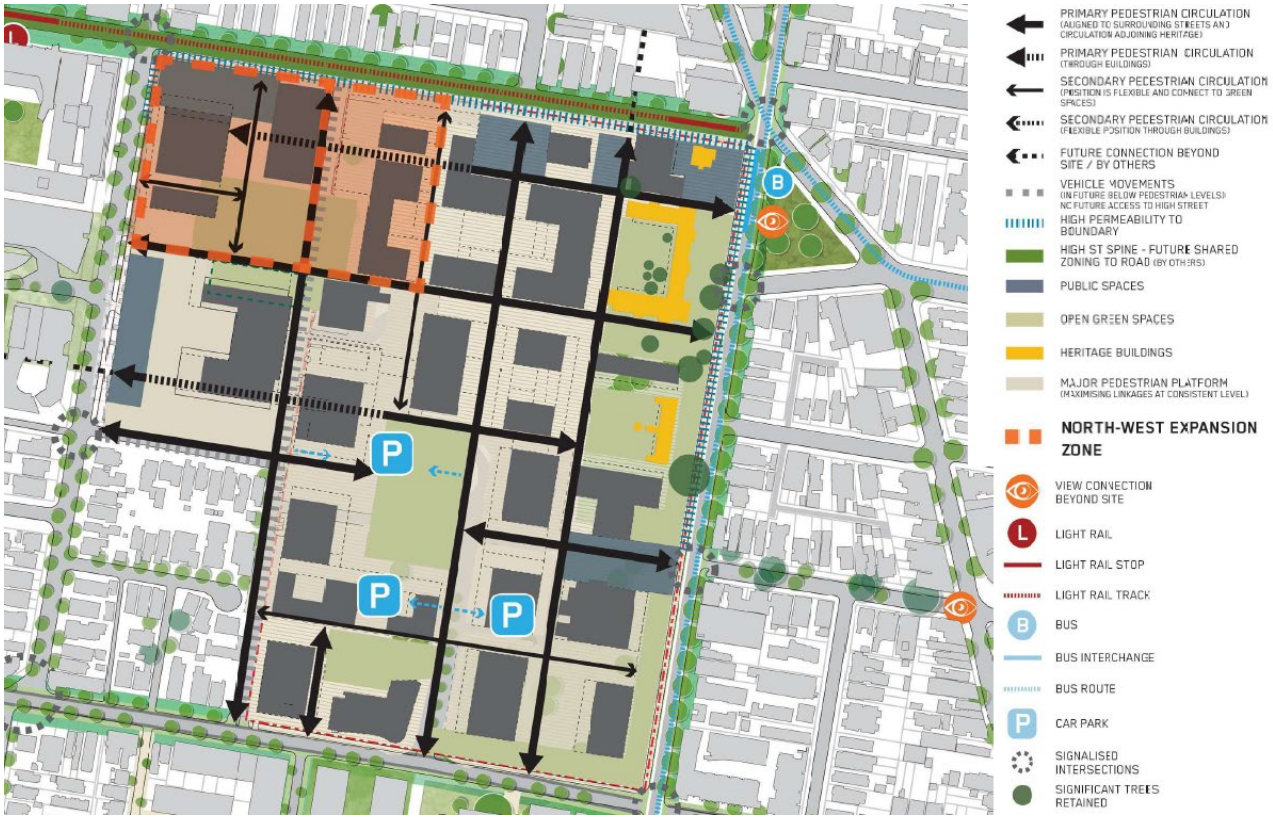
3.INTEGRATED - physically connect the University campus with the health campus and to blur the boundaries between research, education and health, creating a truly integrated academic health science centre.

4. RESPONSIVE – to be contextually responsive and enhance the existing quality natural and cultural qualities of the site.

The GRUM principles outlined above underpin the design response of the SCH1/CCCC, HTH and IASB. The three buildings establish, through a unified response to the public domain, the GRUM's intended contextual integration, urban connections and permeable open spaces.

The SCH1/CCCC realises the north-south pedestrian connection to High Street via Hospital Road. The projects collectively enable the opportunity to realise a future east-west cross campus connection.

Figure 3 GRUM Principles



Source: BLP

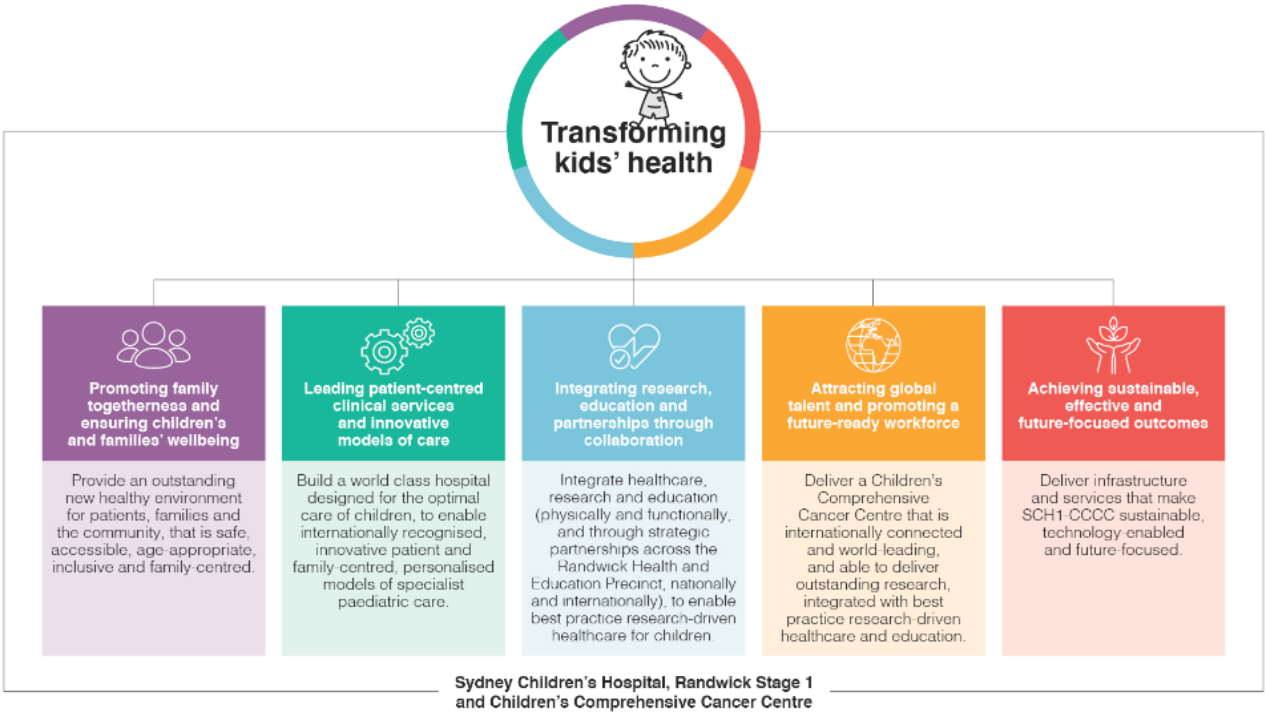
1.3.3. SCH1/CCCC Masterplan

Billard Leece Partnership (**BLP**) were engaged by HI to develop a masterplan for the SCH1/CCCC redevelopment.

Several masterplanning studies and investigations have been undertaken to date which have all helped form the framework for the development of the SCH1/CCCC project. These studies integrate the considerable work that has been undertaken over the last five years in developing the RHIP and have been in keeping with the GRUM principles already established.

The following project objectives were developed during the masterplanning phase:

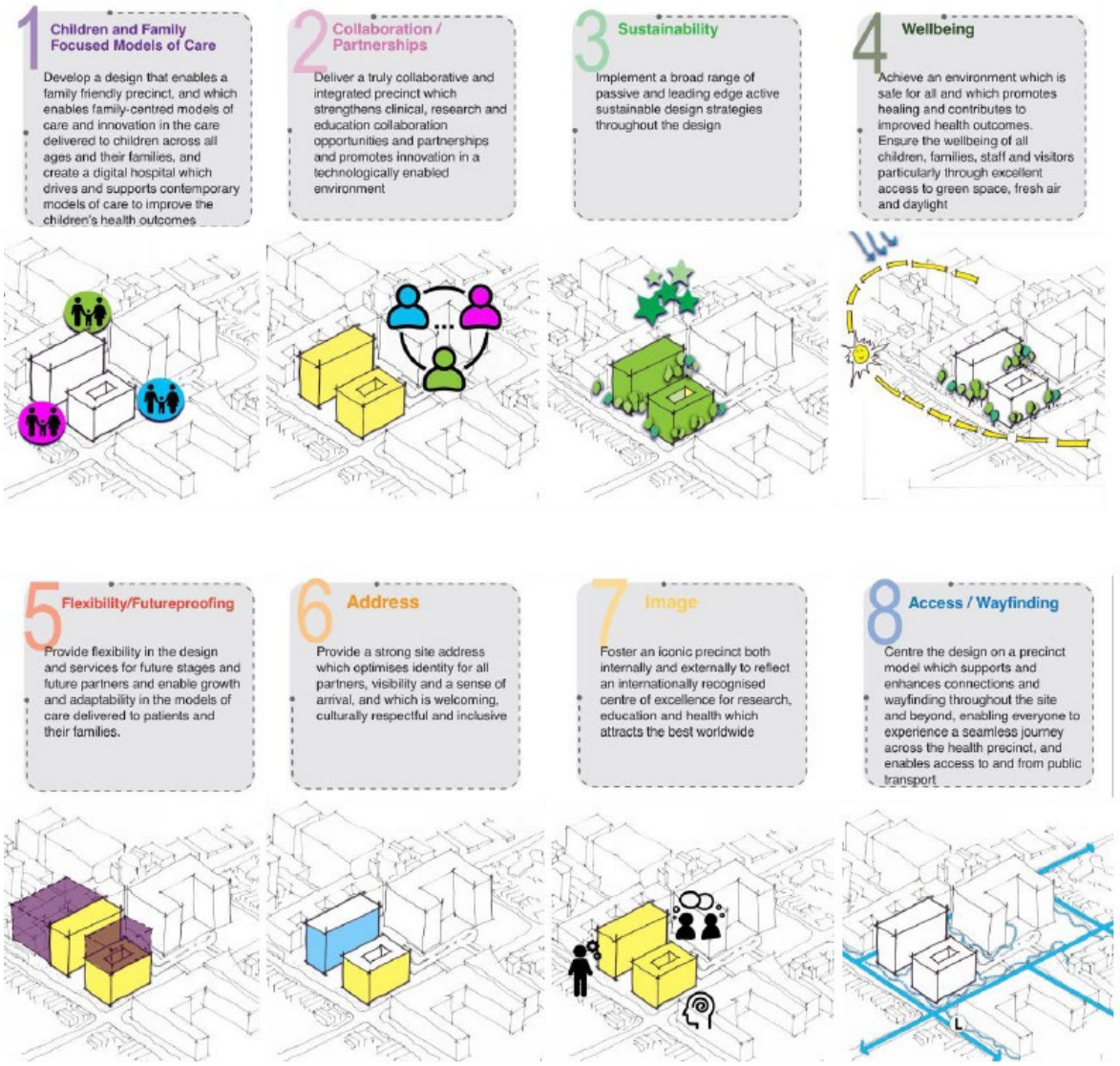
Figure 4 SCH1/CCCC Project Vision and Objectives



Source: BLP

In addition, the following eight (8) design principles were developed for the site during the masterplanning phase:

Figure 5 SCH1/CCCC Masterplan Principles



Source: BLP

1.4. PROJECT ALTERNATIVES

HI and BLP identified four (4) project alternatives during the masterplan process which were considered in respect to the identified need for the proposed health services facility. The options have varied relationships between built form, building interfaces, connections with the HTH and open space.

Table 1 Project Alternatives

Option	Assessment
Do Nothing	The 'do nothing' scenario would involve not constructing the health services facility on the site and would: 1. Result in the project objectives outlined in Section 1.2 of this EIS not being achieved. 2. Have negative implications on the RHIP and wider community as it would result in a lack of children's hospital services to the community.

Option	Assessment
	3. Compromise further research and education particularly in the field of children's cancer. 4. Result in minimal placemaking benefits as it would result in a disconnected RHIP.
Option 1A	Partial Integration with HTH This design option included two separate buildings for SCH1/CCCC and HTH. CCCC component integrated with HTH by pedestrian bridges. SCH1/CCCC taller than HTH for prominence.
Option 1B	Partial Integration with HTH This design option included two separate buildings for SCH1/CCCC and HTH. SCH1/CCCC component integrated with HTH by pedestrian bridges. HTH given prominence over SCH1/CCCC.
Option 2A	Podium Integration with HTH This design option includes a shared podium for SCH1/CCCC and HTH with centralised courtyard and two (2) individual towers.
Option 2B	Podium and Tower Integration with HTH This design option includes a connected podium and tower for SCH1/CCCC and HTH with centralised open space.

The GRUM principle and project-specific masterplan principles acted as the criteria on which all four (4) options were evaluated.

As a result of the evaluation process, two (2) refined ‘book end’ options were agreed on for further development which incorporated the positive elements of Option 2A and 2B:

- Option A – Base Case
- Option B – Integrated Podium

Option A enables development of the SCH1/CCCC to be completely independent of the UNSW HTH building.

Option B includes a fully integrated podium between the SCH1/CCCC and the UNSW HTH, whilst still enabling independent towers above.

The two (2) endorsed options provided a basis for the project team to continue to develop proposals for integration with the UNSW HTH project.

Since the completion of the masterplanning phase, ongoing design collaboration work has been undertaken through a series of co-design workshops with UNSW which enabled a set of Primary Integration Co-Design Principles to be established for the NHRZ.

These principles informed the massing response of the SCH1/CCCC. In addition, integration with the HTH, and specifically the CCCC activities located within the HTH, helped inform the preliminary departmental blocking and stacking options developed for the proposed SCH1/CCCC development.

The refined design as proposed is described in further detail in **Section 3** of this EIS.

1.5. STRUCTURE OF THE EIS

The EIS provides the following sections:

- **Section 2:** describes the site and surrounding context.
- **Section 3:** provides a detailed description of the development.
- **Section 4:** details the strategic context including the planning policies and guidelines relevant to the site and the proposal.
- **Section 5:** provides a detailed assessment of the State, regional and local strategic planning policies and the development contributions framework.
- **Section 6:** details the community and stakeholder engagement undertaken by the applicant as part of the preparation of this EIS.
- **Section 7:** provides a comprehensive assessment of the existing environment, potential impacts, and mitigation measures for each of the key criteria in the SEARs.
- **Section 8:** provides an assessment of the proposal against the matters of consideration listed in Section 4.15 of the EP&A Act 1979.
- **Section 9:** lists the recommendations and mitigation measures based on the technical studies undertaken as part of this application.
- **Section 10:** provides concluding statements and a recommendation for determination of the application.

1.6. SECRETARY'S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

The following table provides a summary of the SEARs issued 2nd December 2020 and outlines where the requirements are addressed in the main body of the report or appendices (i.e. specialist consultant report).

Table 2 Summary of SEARs

Description / Requirement	Location in EIS
GENERAL REQUIREMENTS	
The Environmental Impact Statement (EIS) must be prepared in accordance with and meet the minimum requirements of clauses 6 and 7 of Schedule 2 the *Environmental Planning and Assessment Regulation 2000* (the Regulation).	This EIS
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	Section 8 of this EIS
In addition, the EIS must include: ▪ an executive summary ▪ a complete description of the development, including: - the need for the development - justification for the development - suitability of the site - alternatives considered	Section 1 and 4 of this EIS

Description / Requirement	Location in EIS
- likely interactions between the development and existing, approved and proposed operations in the vicinity of the site - a description of any proposed building works - a description of existing and proposed operations, including staff per shift and visitor numbers	
- site survey plan, showing existing levels, location and height of existing and adjacent structures / buildings and site boundaries	Appendix B
- a detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development - plans, elevations and sections of the proposed development - cladding, window and floor details, including materials - a site plan showing all infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process) - plans and details of any advertising/business identification signs to be installed, including size, location and finishes	Appendix C
- any staging of the development - details of construction and decommissioning including timing	Appendix R
- an estimate of the jobs that would be created during the construction and operational phases of the development along with details of the methodology to determine the figures provided.	This EIS. QS Report provided under separate cover.
▪ a detailed assessment of the key issues identified below, and any other significant issues identified in the risk assessment, including: - a description of the existing environment, using sufficient baseline data and methodology to establish baseline conditions - an assessment of the potential impacts of all stages of the development on all potentially impacted environments, sensitive receivers, stakeholders and future developments. The assessment must consider any relevant legislation, policies and guidelines - consideration of the cumulative impacts due to all other developments in the vicinity (completed, underway or proposed) - identification of all proposed monitoring or required changes to existing monitoring programs - measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment and triggers for each action - details of alternative measures considered.	This EIS

Description / Requirement	Location in EIS
▪ a consolidated summary of all the proposed environmental management and monitoring measures, identifying all commitments included in the EIS	Section 8 of this EIS
▪ the reasons why the development should be approved and a detailed evaluation of the merits of the development, including consequences of not carrying out the development.	This EIS
The EIS must be accompanied by a report from a qualified quantity surveyor providing a detailed calculation of the capital investment value (CIV) (as defined in clause 3 of the Regulation) of the proposal, including details of all assumptions and components from which the CIV calculation is derived.	QS provided under Separate Cover
KEY ISSUES	
The EIS must address the following specific matters: **1. Statutory and Strategic Context** Address the statutory provisions contained in all relevant environmental planning instruments, including but not limited to: ▪ 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 64 – Advertising and Signage ▪ State Environmental Planning Policy No 55 – Remediation of Land ▪ Draft State Environmental Planning Policy (Infrastructure) 2007 – Amendment - Health Services Facilities ▪ Draft State Environmental Planning Policy (Remediation of Land) ▪ Draft State Environmental Planning Policy (Environment) ▪ Randwick Local Environmental Plan 2012. Having regard to the relevant environmental planning instruments: ▪ address the permissibility of the development, including the nature and extent of any prohibitions. ▪ identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards. ▪ adequately demonstrate and document how each of the provisions in the listed instruments are addressed, including reference to necessary technical documents.	Section 5 of this EIS
2. Policies	

Description / Requirement	Location in EIS
Address the relevant planning provisions, goals and strategic planning objectives in all relevant planning policies including but not limited to the following: ▪ NSW State Priorities ▪ State Infrastructure Strategy 2018 – 2038 Building the Momentum ▪ Future Transport Strategy 2056 ▪ Crime Prevention through Environmental Design (CPTED) Principles ▪ Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW), 2017) ▪ Sydney Green Grid (GANSW, 2017) ▪ Healthy Urban Development Checklist (NSW Health, 2009) ▪ Draft Greener Places Design Guide (GANSW) ▪ The Greater Sydney Region Plan - A Metropolis of Three Cities ▪ Eastern City District Plan ▪ South East Sydney Transport Strategy ▪ Local Strategic Planning Statement – Vision 2040 ▪ Randwick Place Strategy.	Section 4 of this EIS
3. Built Form and Urban Design	
▪ Address: - the height, density, bulk and scale, setbacks and interface of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces - design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, site levels adjoining the public domain, materials and colours - street level activation - canopy tree planting and landscaping as well as any public domain improvements that would contribute to the urban tree canopy and Sydney Green Grid - permeability across the site and the campus - how Crime Prevention through Environmental Design (CPTED) principles are to be integrated into development - how good environmental amenity would be provided, including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility	Appendix C, Appendix D, Section 7.1.

Description / Requirement	Location in EIS
- how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development. ▪ Provide: - a detailed site and context analysis to justify the proposed site planning and design approach including massing options and preferred strategy for future development - a visual impact assessment that identifies any potential impacts on the surrounding built environment and landscape including views to and from the site and any adjoining heritage items.	
4. Environmental Amenity	
▪ Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated. ▪ Provide: - shadow diagrams - a view analysis of the site from key vantage points and streetscape locations and public domain including photomontages or perspectives showing the proposed and likely future development - an analysis of proposed lighting that identifies measures to reduce spill into the surrounding sensitive receivers - details of the nature and extent of any intensification of use associated with the proposed development, particularly in relation to any increase in staff and inpatient bed numbers and detail measures to manage and mitigate any impacts - a wind impact assessment, including a wind tunnel study, prepared by a suitably qualified person that considers the impact of the proposed development having regard to the surrounding development and pedestrian amenity and comfort.	Appendix C, Appendix D, Appendix F, Appendix G and Section 7.2.
5. Transport and Accessibility	
Include a transport and accessibility impact assessment, which includes, but is not limited to the following: ▪ analysis of the existing transport network, including: - road hierarchy - pedestrian, cycle and public transport infrastructure - details of current daily and peak hour vehicle movements based on traffic surveys and / or existing traffic studies relevant to the locality	Appendix H and Section 7.3.

Description / Requirement	Location in EIS
- existing performance levels of nearby intersections utilising appropriate traffic modelling methods (such as SIDRA network modelling). ▪ details of the proposed development, including: - a map of the proposed access which identifies public roads, bus routes, footpaths and cycleways - vehicular access arrangements, including for service and emergency vehicles and loading/unloading, including swept path analysis demonstrating the largest design vehicle entering and leaving the site and moving in each direction through intersections along the proposed transport routes - car parking, bicycle parking and end-of-trip facilities - drop-off / pick-up zone(s)/arrangements - pedestrian or road infrastructure improvements or safety measures - loading and service facilities. ▪ analysis of the impacts due to the operation of the proposed development, including: - proposed modal split for all users of the development including vehicle, pedestrian, cyclist, public transport and other sustainable travel modes - estimated total daily and peak hour vehicle, public transport, freight, service vehicle, cyclist and pedestrian trip generation for staff and visitors - a clear explanation and justification of the: ▪ assumed growth rate applied ▪ volume and distribution of proposed trips to be generated ▪ type and frequency of vehicles accessing the site. - details of performance of nearby key intersections with the additional traffic generated by the development both at the commencement of operation and in a 10-year time period (using SIDRA network modelling or similar traffic model as required by TfNSW) - cumulative traffic impacts from any surrounding planned and approved development(s). - traffic and safety impacts of the proposed development on public transport (light rail and buses), pedestrian and cyclists, including at the proposed access and drop off / drop off zone(s) - adequacy of pedestrian, bicycle and public transport infrastructure (including bus network and Sydney light rail) to meet forecast demand of the development	

Description / Requirement	Location in EIS
- adequacy of car parking and bicycle parking provisions for staff and visitors when assessed against the relevant car / bicycle parking codes and standards - adequacy of the drop-off / pick-up zone(s), including any related queuing - adequacy of the existing / proposed pedestrian infrastructure to enable convenient and safe access to and from the site for all users - adequacy and loading and servicing provisions to meet estimated daily and peak hour freight and servicing demand. ▪ measures to ameliorate any adverse traffic and transport impacts due to the development based on the above analysis, including: - travel demand management measures to encourage sustainable transport (such as a Green Travel Plan and / or specific Workplace Travel Plan) - infrastructure improvements, including details of timing and method of delivery - freight and servicing management measures to minimise transport network impacts (such as a preliminary Delivery and Servicing Management Plan). ▪ a preliminary operational traffic and access management plan ▪ analysis of the impacts of the traffic generated during construction of the proposed development, including: - construction vehicle routes, types, volumes and swept path - construction program (duration and milestones) - on-site car parking and access arrangements for construction, emergency and construction worker vehicles - cumulative impacts associated with other construction activities in the locality - road safety at identified intersections near the site due to conflicts between construction vehicles and existing traffic, public transport (light rail and buses), pedestrians and cyclists in the locality - measures to mitigate impacts, including to ensure the safety of pedestrian and cyclists during construction. ▪ a preliminary Construction Traffic and Pedestrian Management Plan.	
6. Heritage	
▪ Provide a statement of significance and an assessment of the impact on the heritage significance of the heritage items adjacent to the site in accordance with the guidelines in the NSW Heritage Manual (Heritage Office and DUAP, 1996) and Assessing Heritage Significance (OEH, 2015)	Appendix I, Appendix L and Section 7.4.
7. Aboriginal Cultural Heritage	

Description / Requirement	Location in EIS
▪ Provide an outline of Aboriginal cultural heritage assessment that have been undertaken at the site and surrounding area, including identifying and describing the Aboriginal cultural heritage values that exist across the site. ▪ Include details of consultation with Registered Aboriginal Parties that have been identified as part of previous SSD and AHIP approvals for the development area undertaken and documented in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water, 2010). ▪ Identify the impacts, including possible impacts, of the project on Aboriginal cultural heritage values and outline the measures proposed to mitigate impacts. The measures need to be consistent with the previous SSD and AHIP approvals. ▪ Provide an outline of procedures to be followed if Aboriginal objects are found including Aboriginal burials or skeletal material) at any stage of the life of the project to formulate appropriate measures to manage impacts.	Appendix K and Section 7.5.
8. Biodiversity	
▪ Provide a Biodiversity Development Assessment Report (BDAR) that assesses the biodiversity impacts of the proposed development in accordance with the requirements of the Biodiversity Conservation Act 2016, Biodiversity Conservation Regulation 2017 and Biodiversity Assessment Method, except where a BDAR waiver has been issued in relation to the development or the development is located on biodiversity certified land. ▪ Where a BDAR is not required because a BDAR waiver has been issued in relation to the development, provide: - a copy of the BDAR waiver and demonstrate that the proposed development is consistent with that covered in BDAR waiver - an assessment of flora and fauna impacts where significant vegetation or flora and fauna values would be affected by the proposed development. *Note: Further guidance is provided in the Biodiversity and Conservation Division Standard Environmental Assessment Requirements attached to the SEARs.*	Appendix J and Section 7.6.
9. Tree Removal and Landscaping	
▪ Provide: - an arboricultural impact assessment, prepared by a Level 5 (Australian Qualifications Framework) Arborist in accordance with the Australian Standard 4970 Protection of trees on development sites (AS 4970), which details the number, location and condition of trees to be removed and retained and existing canopy coverage on-site - a detailed site-wide landscape strategy, that:	Appendix M, Appendix E and Section 7.7.

Description / Requirement	Location in EIS
▪ details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage ▪ considers equity and amenity of outdoor spaces, and integration with built form, security, shade, topography and existing vegetation ▪ considers impacts on utilities infrastructure ▪ demonstrates how the proposed development would: - contribute to long term landscape setting in respect of the site and the streetscape - mitigate the urban heat island effect and ensure appropriate comfort levels on-site - contribute to objectives to increase urban tree canopy cover. - a detailed landscape plan prepared by a suitably qualified person.	
10. Social Impacts	
▪ Provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020.	Appendix N and Section 7.8.
11. Ecologically Sustainable Development (ESD)	
▪ Detail: - how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) would be incorporated in the design and ongoing operation phases of the development - proposed measures to minimise consumption of resources, water (including water sensitive urban design) and energy - how the future development would be designed to consider and reflect national best practice sustainable building principles to improve environmental performance and reduce ecological impact. This should be based on a materiality assessment and include waste reduction design measures, future proofing, use of sustainable and low-carbon materials, energy and water efficient design (including water sensitive urban design) and technology and use of renewable energy. ▪ Include: - an assessment against an accredited ESD rating system or an equivalent program of ESD performance. This should include a minimum rating scheme target level - a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change	Appendix O and Section 7.9.

Description / Requirement	Location in EIS
- an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.	
12. Noise and Vibration	
▪ Provide a noise and vibration impact assessment that: - includes a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation and construction - details the proposed construction hours and provide details of, and justification for, instances where it is expected that works would be carried out outside standard construction hours - includes a quantitative assessment of the main sources of operational noise, including consideration of any mechanical services (e.g. air conditioning plant) - outlines measures to minimise and mitigate the potential noise impacts on nearby sensitive receivers - considers sources of external noise intrusion and vibration in proximity to the site (including, road, light rail and aviation operations) and identifies building performance requirements for the proposed development to achieve appropriate internal amenity standards - demonstrates that the assessment has been prepared in accordance with polices and guidelines relevant to the context of the site and the nature of the proposed development.	Appendix Q and Section 7.10.
13. Staging	
▪ Assess impacts of staging where it is proposed and detail how construction works and operations would be managed to ensure public safety and amenity on and surrounding the site.	Appendix R and Section 7.11.
14. Infrastructure	
▪ Identify the impacts of existing transport infrastructure (Sydney light rail) adjacent to the site on the proposed development, in particular on medical and laboratory equipment / apparatus, and any necessary mitigation measures.	Appendix Q and Section 7.12.
15. Utilities	
▪ In consultation with relevant service providers: - assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site - identify any infrastructure upgrades required off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained	Appendix S and Section 7.13.

Description / Requirement	Location in EIS
- provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.	
16. Stormwater Drainage	
▪ Provide: - a preliminary stormwater management plan for the development that: ▪ is prepared by a suitably qualified person in consultation with Council and any other relevant drainage authority ▪ details the proposed drainage design for the site including on-site detention facilities, water quality measures and the nominated discharge point ▪ demonstrates compliance with Council or other drainage authority requirements. - stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties. ▪ Where drainage infrastructure works are required that would be handed over to Council, provide full hydraulic details and detailed plans and specifications of proposed works that have been prepared in consultation with Council and comply with Council's relevant standards.	Appendix T and Section 7.14.
17. Flooding	
▪ Identify any flood risk on-site in consultation with Council and having regard to the most recent flood studies for the project area and the potential effects of climate change, sea level rise and an increase in rainfall intensity. ▪ Assess the impacts of the development, including any changes to flood risk on-site or off-site, and detail design solutions to mitigate flood risk where required.	Appendix U and Section 7.15
18. Soil and Water	
▪ Provide: - an assessment of potential impacts on surface and groundwater (quality and quantity), soil, related infrastructure and watercourse(s) where relevant - details of measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles - an assessment of salinity and acid sulphate soil impacts, including a Salinity Management Plan and/or Acid Sulphate Soils Management Plan, where relevant.	Appendix V and Section 7.16.
19. Waste	

Description / Requirement	Location in EIS
▪ Identify, quantify and classify the likely waste streams to be generated during construction and operation ▪ Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste ▪ Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. ▪ Provide a hazardous materials survey of existing aboveground buildings that are proposed to be demolished or altered.	Appendix W and Section 7.17
20. Contamination	
▪ Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. This must include the following prepared by certified consultants recognised by the NSW Environment Protection Authority: - Preliminary Site Investigation (PSI) - Detailed Site Investigation (DSI) where recommended in the PSI - Remediation Action Plan (RAP) where remediation is required. This must specify the proposed remediation strategy - Preliminary Long-term Environmental Management Plan (LEMP) where containment is proposed on-site.	Appendix X, Y and Z and Section 7.18
21. Hazards and Risk	
▪ Provide: - a preliminary risk screening regarding all dangerous goods and hazardous materials associated with the development - a Preliminary Hazard Analysis, if required.	Appendix AA and Section 7.19.
22. Contributions	
▪ Identify: - any Section 7.11/7.12 Contribution Plans, Voluntary Planning Agreements or Special Infrastructure Contribution Plans that affect land to which the application relates or the proposed development type - any contributions applicable to the proposed development under the identified plans and/or agreements. Justification is to be provided where it is considered that the proposed development is exempt from making a contribution - any actions required by a Voluntary Planning Agreement or draft Voluntary Planning Agreement affecting the site or amendments required to a Voluntary Planning Agreement affected by the proposed development.	Section 7.20.

Description / Requirement	Location in EIS
PLANS AND DOCUMENTS	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. Any plans and diagrams included in the EIS must include key dimensions, RLs, scale bar and north point. In addition to the plans and documents required in the General Requirements and Key Issues sections above, the EIS must include the following: ▪ Section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate) ▪ Design report to demonstrate how design quality would be achieved in accordance with the above Key Issues including: - architectural design statement - diagrams, structure plan, illustrations and drawings to clarify the design intent of the proposal - detailed site and context analysis - analysis of options considered to justify the proposed site planning and design approach - summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice - summary report of consultation with the community and response to any feedback provided. ▪ Geotechnical and Structural Report ▪ Sediment and Erosion Control Plan ▪ Accessibility Report.	Appendix GG, Appendix D, Appendix V, Appendix CC, Appendix T, and Appendix DD.
CONSULTATION	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners. In particular, you must consult with: ▪ the relevant Council ▪ Government Architect NSW (through the NSW SDRP process) ▪ Transport for NSW ▪ Sydney light rail operator.	Appendix EE and Section 6.

Description / Requirement	Location in EIS
Consultation should commence as soon as practicable to inform the scope of investigation and progression of the proposed development. The EIS must describe and evidence 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.	

2. SITE ANALYSIS

2.1. SITE LOCATION AND CONTEXT

This SSDA relates to the land in the north-eastern corner of the RCR site, bounded by High Street to the north and Hospital Road to the east.

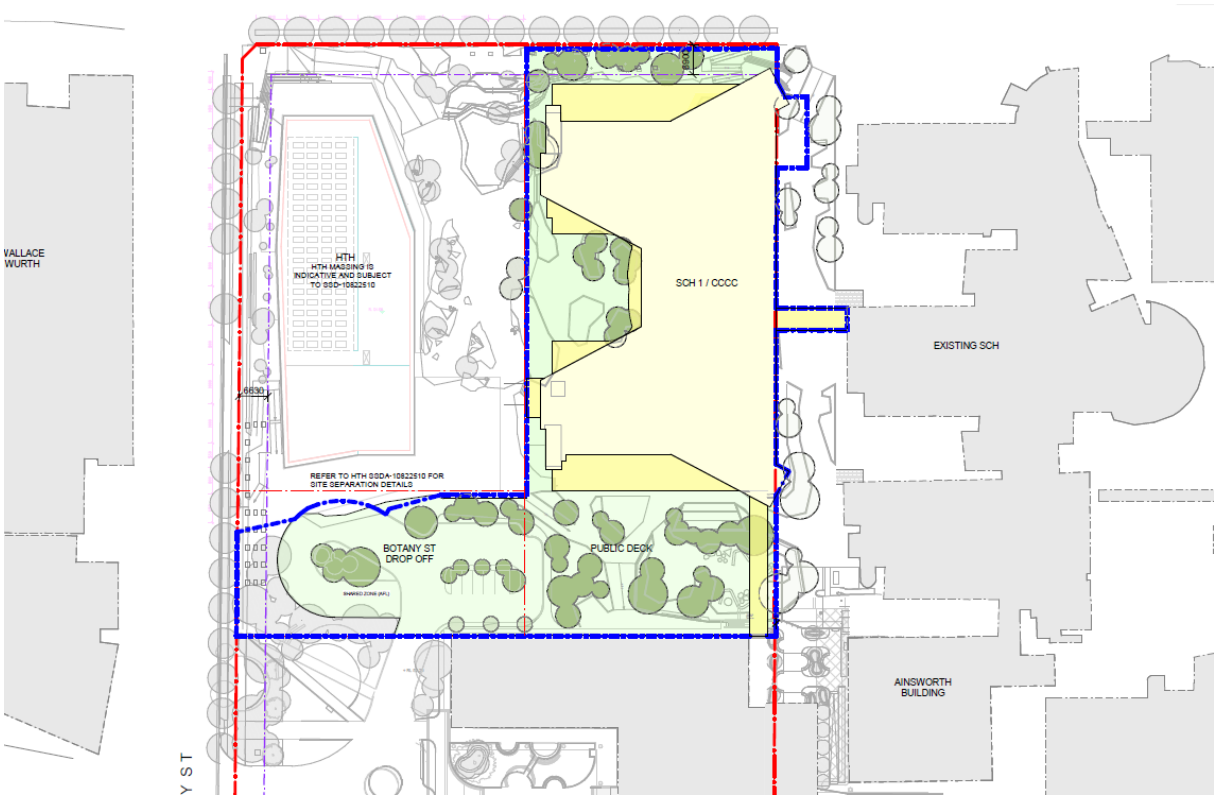
A site survey showing the geographic features and contours of the site is provided in **Appendix B**. An aerial photograph of the subject site is provided below.

Figure 6 Aerial Photo of Site

Source: Urbis

The SCH1/CCCC Project will develop only part of the RCR site totalling 9,870sqm. The development will have a building footprint of approximately 5,828sqm, whilst the remaining 4,042sqm will comprise of ground plane access, public domain and landscaping works.

Figure 7 SSDA Site Boundary



Source: BLP

The site boundary, in blue outline in **Figure 7** above, extends along the southern boundary of the proposed HTH site to Botany Street on the western side of the RCR site. The site boundary reflects the scope of works to be delivered as part of this SSD on the ground plane and basement levels which includes the access ramp for the SCH1/CCCC ED drop-off on Level B1 and visitor parking on Level B2, accessed via Botany Street. Landscaping will be provided around the Botany Street access ramp on Level 00.

Future logistics entry to the proposed HTH will be from the access ramp at Level B1, subject to separate approval under the HTH SSD application. Above the ground plane, a small portion of the southern end of the proposed HTH building will overlap with the boundary shown in **Figure 7** above.

The Site is located in the Randwick Local Government Area (**LGA**), approximately 6 kilometres (**km**) from the Sydney Central Business District (**CBD**) and 4km from Sydney Airport.

The site is located approximately 400m from Randwick Town Centre, 1km from Royal Randwick Racecourse and 2km from Coogee Beach.

Randwick is a district hub for bus services in Sydney's Eastern Suburbs. A number of bus routes provide regular services to and from Randwick. The majority of these buses provide frequent services to the CBD whilst others also provide services to surrounding areas, including Green Square, Mascot, Bondi Junction, Maroubra Junction as well as express services between UNSW and Central Station.

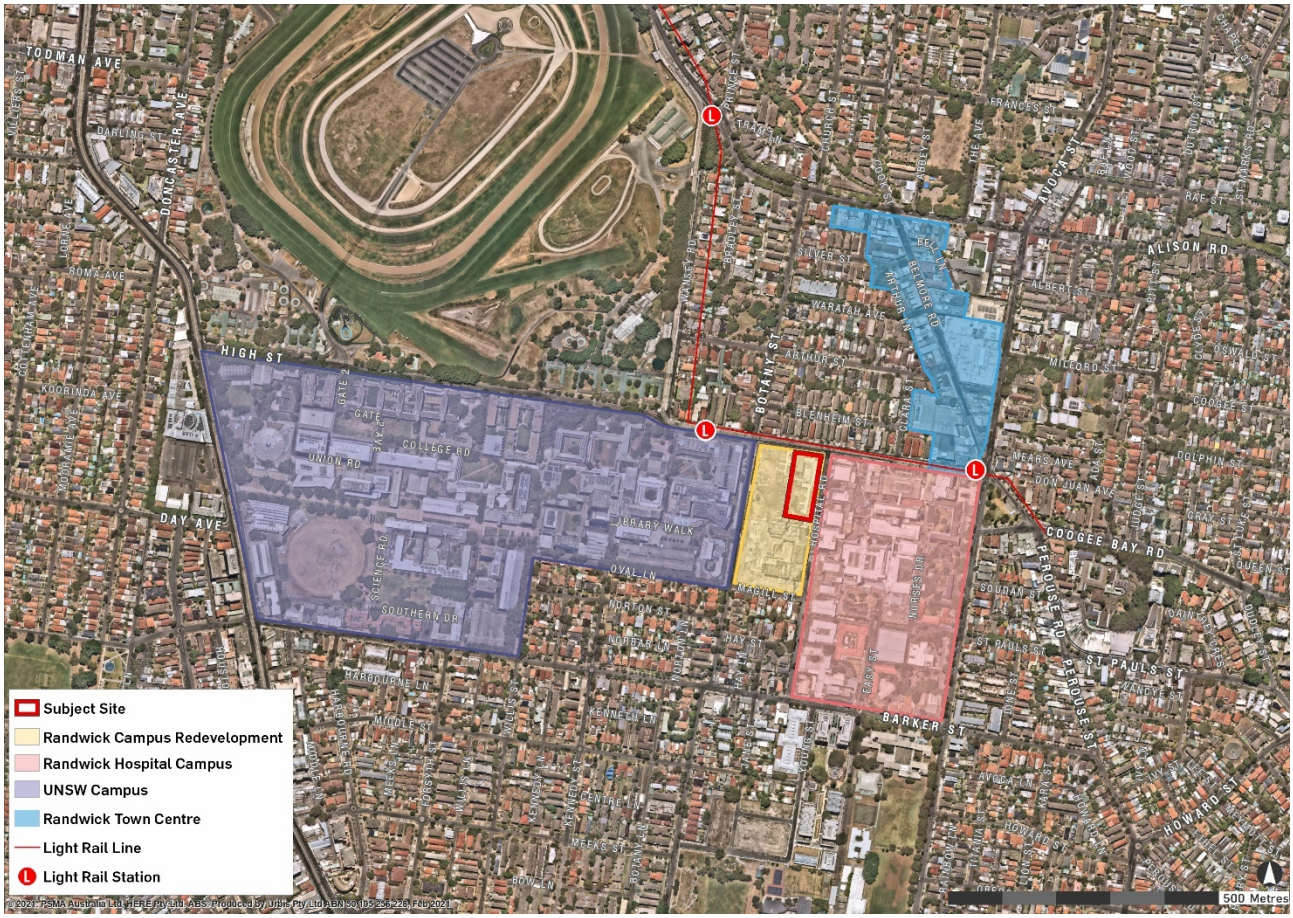
The majority of bus routes travel along Belmore Road, with some services also using Alison Road, Botany Street, Barker Street and Avoca Street.

Interfacing with the RHIP, services for the City and South East Light Rail (**CSELR**) L2 Randwick Line commenced in December 2019, running from Circular Quay in Sydney CBD to High Street in Randwick.

High Street is a major frontage for the RHIP. The Light Rail is a key driving factor for revitalising the High Street frontage and presents a major opportunity for the RHIP.

The CSELR L2 Randwick Line runs in both directions along the High Street frontage of the site. The Randwick stop is located 250m to the east of the site and the UNSW High Street stop is located 150m to the west of the site.

Figure 8 Location Map



Source: Urbis

The site is located in the RCR site which bridges the gap between the two (2) components of the RHIP – RHC and UNSW.

The RHC includes the existing SCH Randwick, Prince of Wales Hospital (**POWH**), Royal Hospital for Women (**RHW**), and the Prince of Wales Private Hospital (**POWPH**) and is located to the east of the RCR. The UNSW Kensington Campus adjoins the RCR to the west.

The RHIP employs over 22,000 people, provides over 1.8 million patient interactions and teaches over 58,000 students each year.

2.2. LEGAL DESCRIPTION

The site occupies the following allotments (in whole or part) which were previously occupied by residential dwellings and ancillary development plus part of Eurimbla Avenue:

- Lot 100 in DP1249692,
- Lots 1 - 3 in DP13995,
- Part Lot 4 in DP13995,
- Lot A - D in DP304806,
- Lots A & B in DP303478,
- Lots A & B in DP102029,
- Lot 35 in DP7745,
- Lot 1, 2, 12 - 14 in DP12909,
- Lot A in DP167106,

- Part Lot B in DP167106,
- Part Lot 6 in DP13997,
- Lot 7 in DP13997,
- Part Lot A in DP441943,
- Lot B in DP441943,
- Lots 12-14 in DP12909, and
- Part Lot 1 in DP870720.

These lots are currently in the process of being amalgamated.

2.3. EXISTING DEVELOPMENT

The site has been cleared of previous residential dwellings, ancillary structures and vegetation, and has been remediated under DA-208/2018, approved by RCC on 4th September 2018. The site is currently occupied by site sheds and construction equipment relating to the IASB that is currently under construction.

Figure 9 Site Photographs

Picture 1 Site as viewed from corner of High Street and Hospital Road, with IASB under construction in background.

Picture 2 Site as viewed from corner of High Street and Botany Street.

Source: Urbis

Current construction vehicle access to the site is via Botany Street, with pedestrian (worker) access available from High Street and Hospital Road.

2.4. SURROUNDING DEVELOPMENT

The surrounding land use activities include the following:

- **North:** Medium density residential flat development is located to the north of the site across High Street.
- **East:** Existing SCH, Randwick within the RHC adjoins the site to the east across Hospital Road.
- **South:** The IASB is currently under construction on the southern portion of the RCR site.
- **West:** The site adjoins the western portion of the RCR site which is currently vacant and will accommodate the proposed UNSW HTH building, subject to separate SSD approval. Further to the west across Botany Street is the UNSW Kensington Campus.

Figure 10 Surrounding Development

Picture 3 Medium density development to the north of the site across High Street.

Picture 4 High Street and L2 Randwick light rail line to the north of the site.

Picture 5 Existing Sydney Children's Hospital to the east of the site.

Picture 6 Hospital Road (not lowered) to the east of the site and IASB under construction to the south.

Picture 7 Vacant construction site to the west of the SCH1/CCCC site (subject site for the proposed HTH).

Picture 8 UNSW to the west of the site across Botany Street.

Source: Urbis

3. PROPOSED DEVELOPMENT

3.1. DESCRIPTION OF PROPOSAL

The SSD Application seeks approval for the following development:

- Construction and operation of a new 9 storey hospital, including 2 levels of basement building, plus upper plant room to provide:
  - A new children's emergency department and emergency short-stay unit, accessible from Botany Street with direct links to new and existing services
  - A new children's intensive care unit
  - New inpatient units for medical and surgical specialties
  - A new medical short-stay unit
  - A new pharmacy and pathology collection
  - Australia's first Children's Comprehensive Cancer Centre including:
    - State-of-the-art technologically advanced wet and dry laboratory spaces
    - Education, training and research spaces
    - New oncology inpatient units, and patient and family focused retreat areas
    - A new day oncology unit
  - New front of house and retail facilities; and
  - Building identification signage zones.
- New High Street visitor drop off;
- Integration via pedestrian skybridges with the Integrated Acute Services Building (approved under SSD 10339 and 9113), currently under construction and with the proposed Health Translation Hub (HTH, SSD 10822510);
- Short-stay patient parking connected to existing Botany Street intersection;
- Basement Ambulance access, loading dock, back of house and logistics services via Hospital Road;
- Public domain and associated landscaping, including tree removal; and
- Associated site preparation, civil works and utilities services.

The proposed SCH1/CCCC will operate 24-hours per day, seven days per week. It will generate approximately 1,195 jobs during construction and 516 full time equivalent (FTE) jobs during operation, including 372 SCH & KCC jobs, and 144 CCI jobs.

The SCH1/CCCC design focuses on contemporary models of patient-centred care. It has been functionally planned to enhance communication between the multi-disciplinary staff and to optimise clinical and research outcomes in a secure and safe environment.

The internal planning creates a strong sense of entry with easy way finding. There are strong connections to external landscaped space for respite and therapy. Perimeter windows capitalise on natural light and views.

The design provides for efficiencies and flexibility for operation and function. It also provides for longer term growth strategies.

The scale and form of the proposed development responds to the urban scale of the adjoining development, including the IASB and the proposed HTH.

3.2. NUMERIC OVERVIEW

The key features of the proposed development are summarised in the table below.

Table 3 Numeric Overview of Proposal

Descriptor	Proposed
Site Area	9,870m^2 including: 5,828m^2 building footprint 4,042m^2 ground plane access, public domain and landscaping works
Land Use	Health Services Facility
Gross Floor Area	36,072.08m^2
Height of Building	50.4m (RL102 400), 9 storeys above 2 basement levels
Transport and Access	▪ General vehicular access from High Street and Botany Street. ▪ Emergency access from Hospital Road to B1. ▪ Logistics Access from Hospital Road to B2. ▪ Pedestrian access located on Level 00.
Parking Spaces	▪ 50 Visitor Parking Spaces ▪ Ambulance bay including: - 4 ambulance spaces - 2 additional ambulance bays for ambulances to restock - 1 police parking bay ▪ Loading dock including: - 2 roll-on roll-off bays - 3 contractor bays - 3 MRV bays - 1 HRV bay
End of Trip Facilities	The SCH1/CCCC Project will utilise the proposed shared campus EOT facilities being delivered as part of the IASB Project. These facilities include: ▪ 200 bicycle spaces ▪ 350 lockers ▪ 20 showers ▪ 4 toilets
Construction Staging	Single Stage

Descriptor	Proposed
Construction Hours	▪ Monday to Friday: 7:00am to 6:00pm ▪ Saturday: 8:00am to 5:00pm ▪ Sunday and Public Holidays: No work
Operational Details	24-hours per day, 7-days per week.
Number of Employees	Approximately 516 FTE Employees

3.3. DESIGN VISION

Under the Greater Sydney Region Plan, Randwick LGA sits within the Eastern Harbour City. The SCH1/CCCC site sits between the natural surrounds of what was once the Lachlan Swamp (now Centennial Park) and the sea and sandstone cliffs of Coogee Bay - the intermediary point of where the freshwater wetland meets the saltwater seas. The original topographical nature of the site was characterised by sandhills and scrubby heath.

The design vision references the site's unique positioning between the land and the sea – the mixing of fresh and salt water – the wetland, the dunes and the sea. It celebrates the Eastern Harbour City and connects both the Indigenous and European historical landscapes.

The design vision informs:

- Building massing
- Material selection and interior palette
- Wayfinding stories
- Landscaping themes

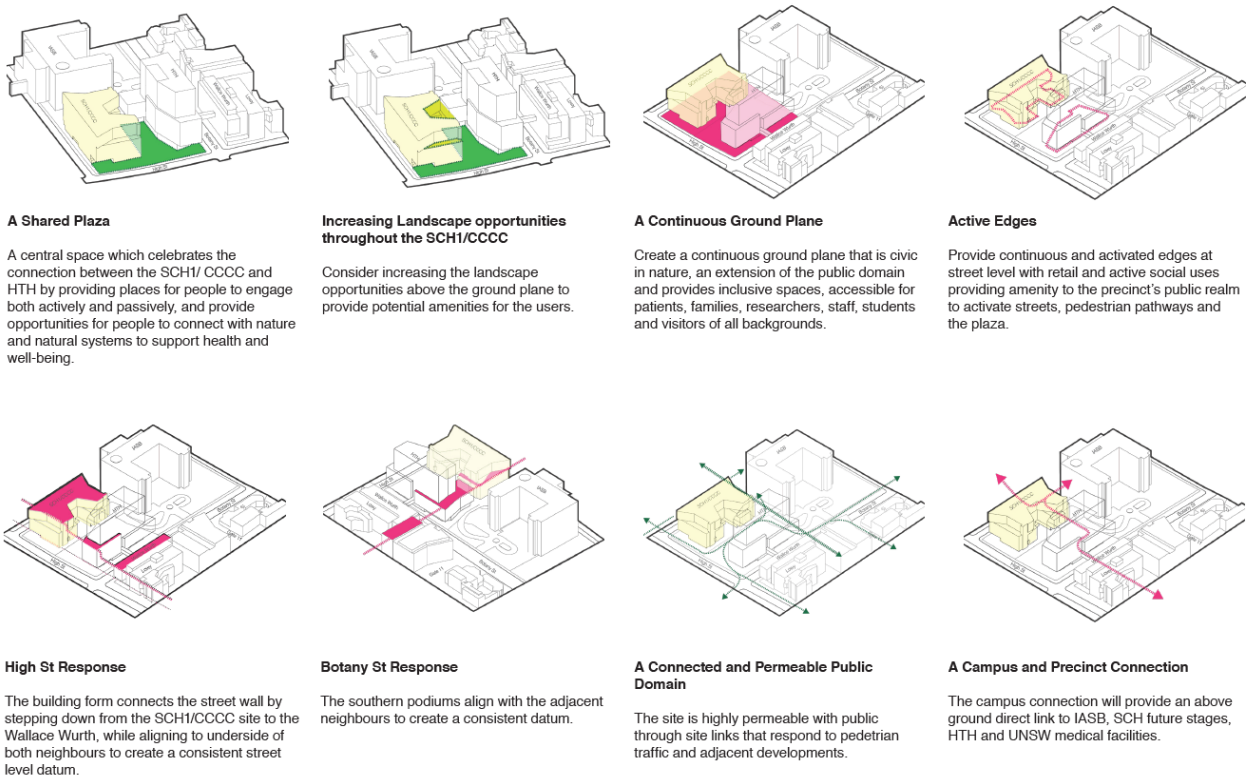
Figure 11 Design Vision

Source: BLP

The design response has also been guided by the overarching design principles and drivers developed during the initial master planning phases and identified in **Section 1.3.3** of this EIS.

The following Urban Planning Outcomes have been established to support the design vision:

Figure 12 Urban Planning Outcomes



Source: BLP

3.4. BUILT FORM

3.4.1. Building Design

The building design has been guided by the following built form principles:

- Modulation of its built form to mitigate impact of both mass and height.
- Integration with adjacent development, both existing and future.
- Presentation of a good civic façade.

The building mass is organised into three parts – the Ground Plane, Midstorey and Upperstorey. These elements have been designed to reflect the design vision and reference the site's historical ecology. In this regard, the built form and materiality have been designed to reflect the themes of Wetlands, Sand Dunes and Sea Cliffs.

The **Ground Plane** is treated as an extension of the greater Hospital and Education campuses and has been designed to be open, transparent and permeable to the north, south, east and west with access points and active edges provided on all four sides of the built form and ground level.

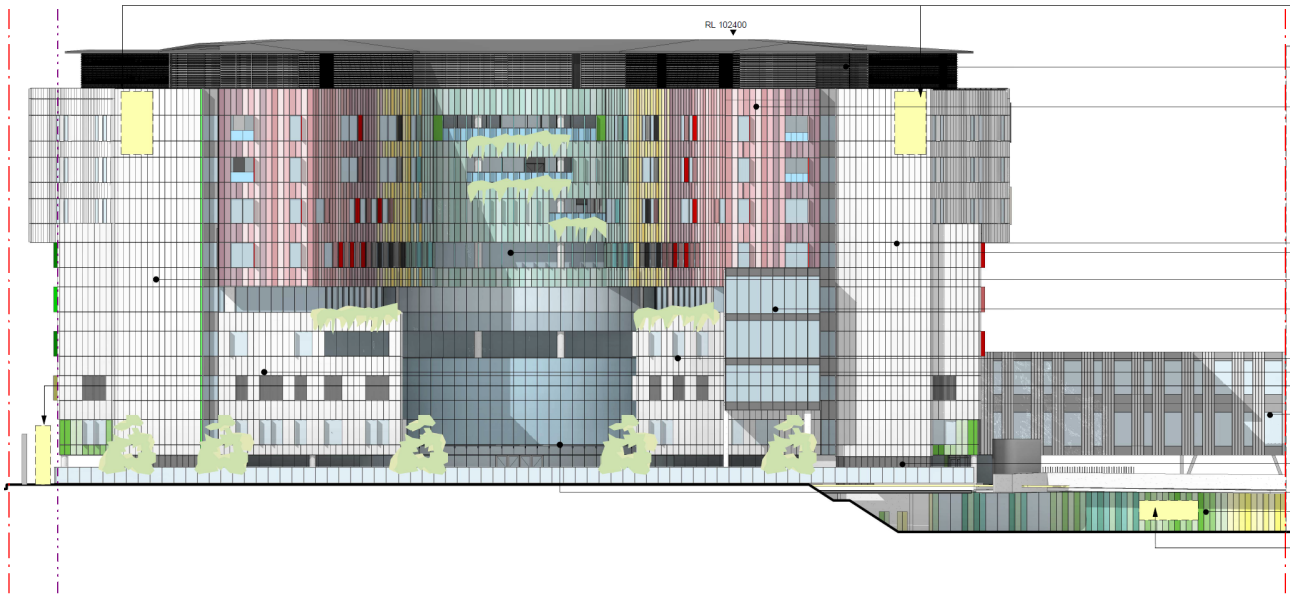
The **Midstorey** (Levels 1 to 5) is rectilinear in form and establishes the key connections to other buildings such as the IASB, HTH and existing SCH. The façade treatment will have a vertical expression referencing the shifting sands of a dunal landscape with alternating vertical banding of solid metal panels and glazing.

The **Upperstorey** (Level 6 to 8) is more sculptural in form to reference weathered sandstone cliffs. The façade will comprise a series of shimmering golden metallic finished aluminium panels of varying lengths and projections, referencing the horizontal and weathered surface of sea cliffs.

The **Central Courtyard** is located on the western side of the building where the form of the building opens up towards the shared Pedestrian Plaza with the proposed HTH. Upper levels of the façade at the central courtyard will feature cascading green terraces.

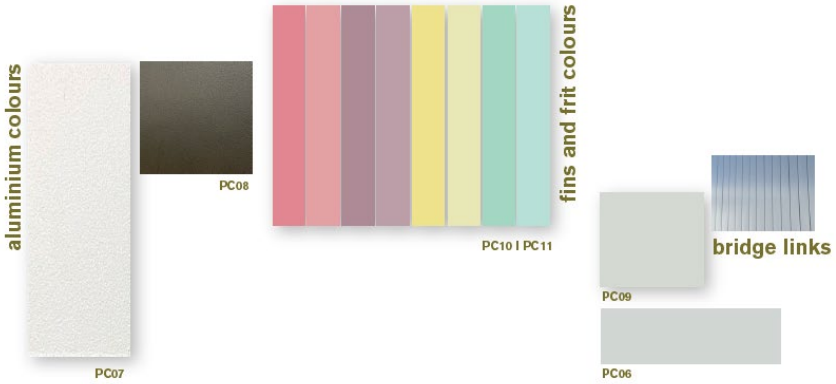
The proposed built form will also be dotted with pockets of green landscaping to allow visual or physical access to greenery throughout the building.

Figure 13 Building Design (Eastern Elevation)



Source: BLP

Figure 14 Façade materiality and colour palette (final colours subject to design development)



Source: BLP

3.4.2. Spatial Arrangement

The internal arrangement has been designed to create a collaborative clinical, research and educational environment. As a starting point, the internal arrangement has been designed to align with key service levels established by the IASB due to key clinical adjacency requirements, being:

- Level B1 at RL52.00: ED linking to IASB IMG (MRI)
- Level B2: Loading Dock / Parking
- Level 1 at RL60.5: ICU linking to IASB OTs and MRI
- Level 00: Front of House

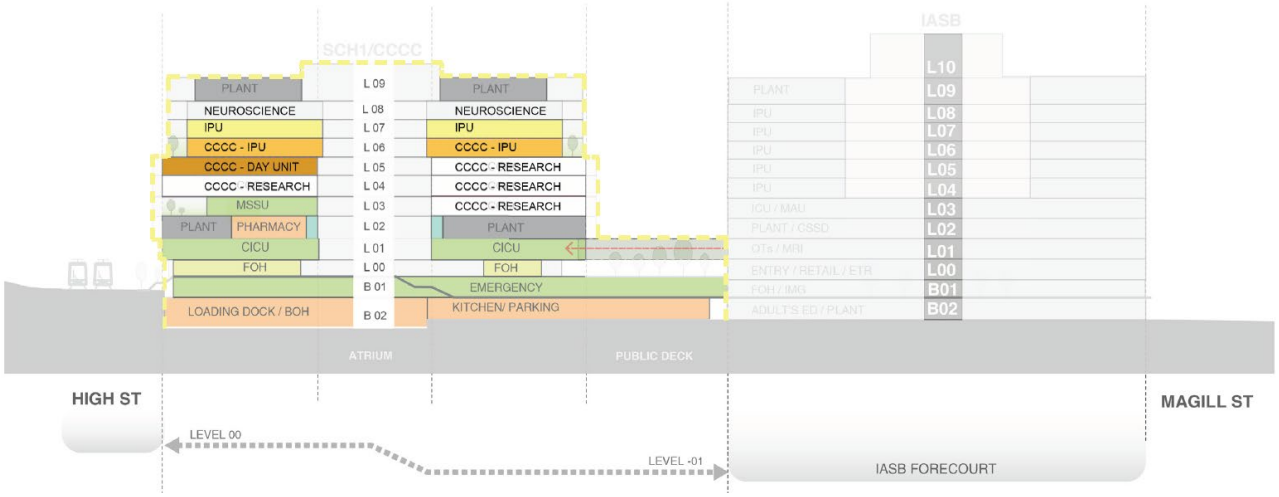
Level 2-4 links to proposed HTH have further informed blocking and stacking arrangements.

From here, the blocking and stacking of internal uses has been arranged as follows.

Table 4 Internal Arrangement

Level	Use	GFA
Level B2	Loading Dock, Back of House (BoH), Kitchen, Short Stay Patient Car Park, BoH link to IASB.	2,236.10m^2
Level B1	Emergency Department, Emergency Short Stay Unit (ESSU), Medical Imaging and Virtual Care Centre (VCC).	5,078.99m^2
Level 00	Front of House, Retail, CCCC Public Labs and Discovery Centre	2,160.72m^2
Level 01	Children's Intensive Care Unit (CICU) including Close Observation Unit (COU) and clinical link bridge to IASB.	3,523.19m^2
Level 02	Interstitial Plant, Pharmacy, Pathology, Link Bridge to existing SCH. Future HTH Connection and Interactive Spaces. Future connection to IASB.	2,115.36m^2
Level 03	Medical Short Stay Unit (MSSU) and CCCC Research Labs, education and workspaces. Future HTH connection	3,492.09m^2
Level 04	CCCC Research Labs, education and workspaces. Future HTH Connection	3,764.58m^2
Level 05	CCCC Day Oncology Centre and CCCC Research Labs, education and workspaces.	3,707.97m^2
Level 06	CCCC Oncology IPUs	3337.85m^2
Level 07	Medical/Surgical IPUs.	3,290.45m^2
Level 08	Neuroscience	3207.02m^2
Level 09	Roof Plant	157.76m^2
	Total	**36,072.08m^2**

Figure 15 Block and stack arrangement



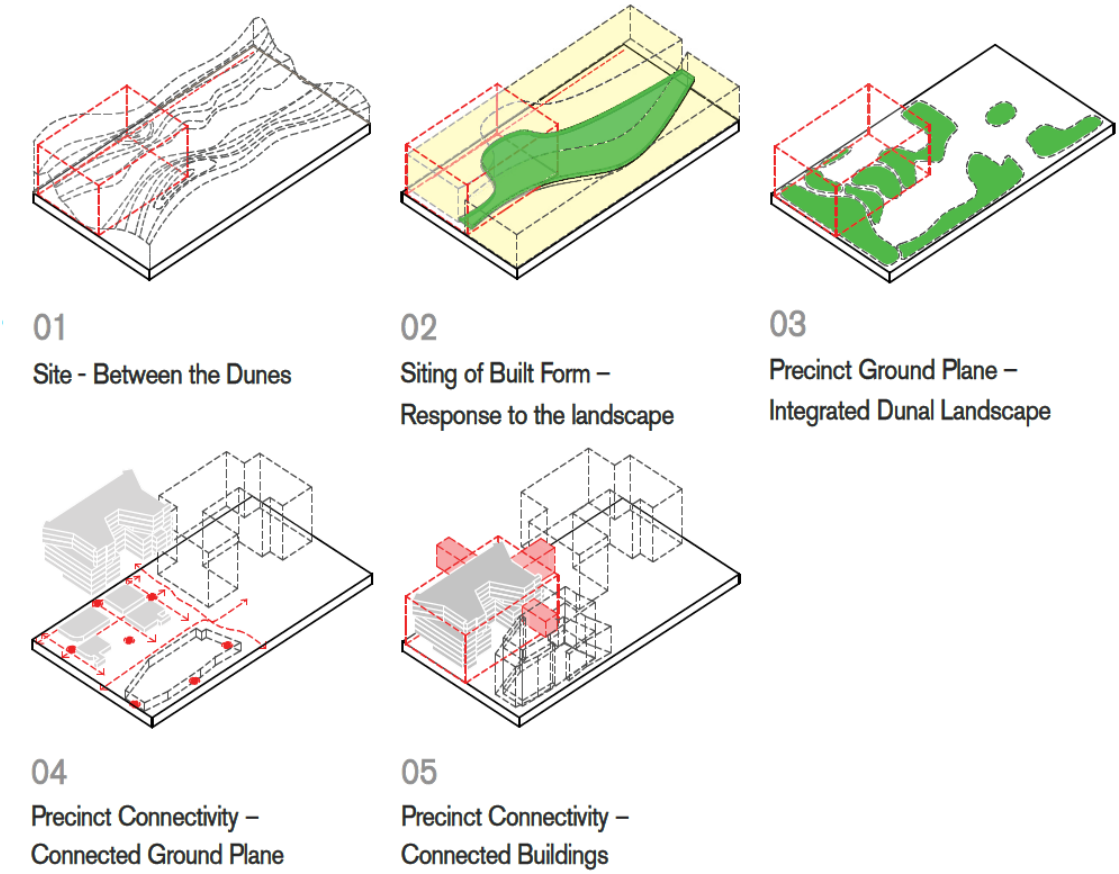
Source: BLP

3.4.3. Campus Integration

The proposed SCH1/CCCC will be well integrated with existing, approved and proposed operations in the vicinity of the site, including the existing RHC, the approved IASB to the south and the proposed HTH (and wider UNSW precinct) to the west.

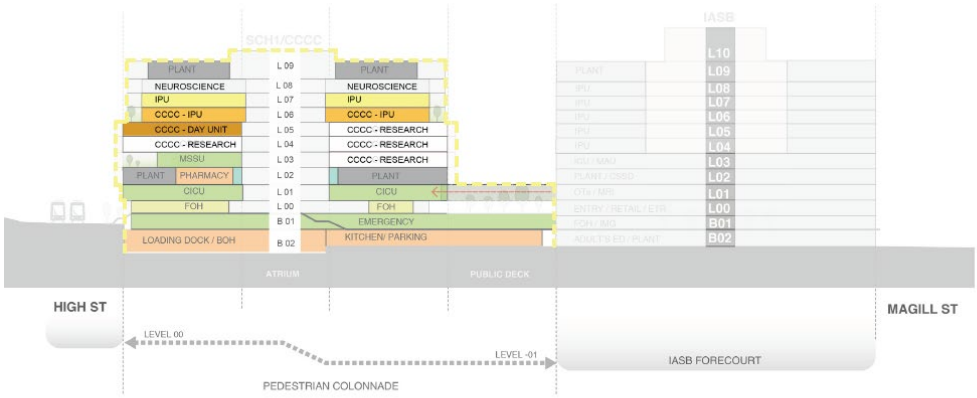
The public domain across the SCH1/CCCC and HTH sites have been designed as a consistent ground plane applying the following integration design principles.

Figure 16 Design Intent – Integrated Precinct

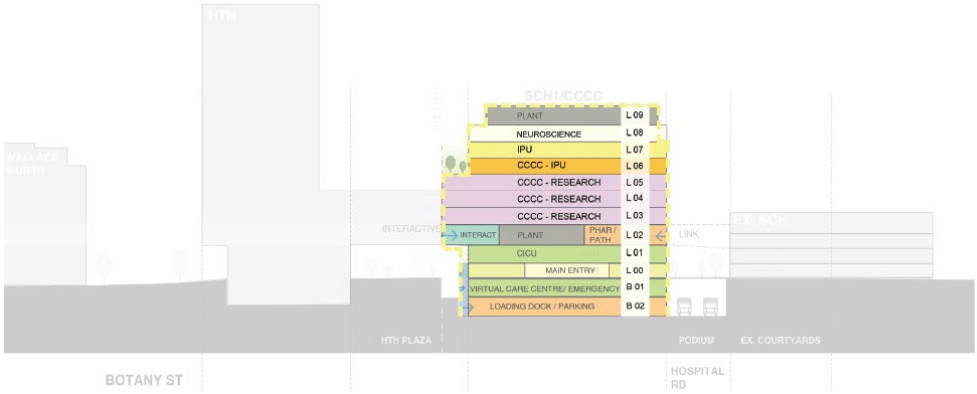


Source: BLP

Figure 17 Campus integration



igure 98 Block and Stack Section showing connection to IASB



Source: BLP

The proposed entry to the SCH1/CCCC building is located at Level 00 and will connect directly to a pedestrian podium located over the lowered Hospital Road (subject of a separate approval), which in turn will connect through to the existing SCH and wider RHC to the east. The podium will also provide connection through to Level 00 of the IASB through a landscaped courtyard space.

Building access to the new Emergency Department (ED) will primarily be via Level -01, via a vehicular access road located off the Botany Street entrance. Access to and from the IASB will also be provided at this level.

Integration will also be achieved through a number of connections and upper-level bridge links:

- Level B2 BoH link to IASB,
- Level 00 connection of all buildings across a common ground plane,
- Level 01 clinical connection to the IASB and the existing POWH beyond,
- Level 02 connection to existing SCH, and
- Levels 02-04 connection to the HTH

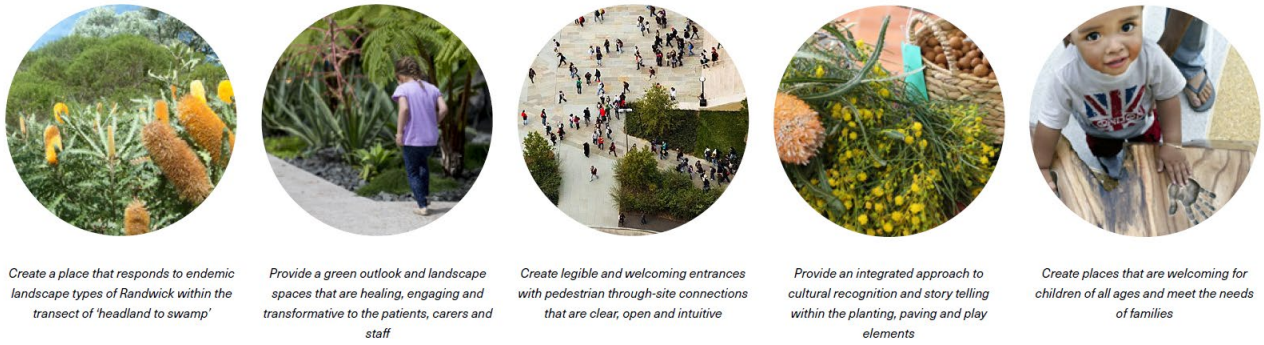
These link bridges will be constructed in the same stage as the main SCH1/CCCC hospital building. Penetrations will be made in the IASB and the existing SCH building once the connecting bridges are constructed, while the connections to the HTH Building will be not be constructed and will be closed off until the HTH is constructed.

3.5. PUBLIC DOMAIN AND LANDSCAPE

A public domain and landscape strategy masterplan has been developed by Aspect Studios for the RCR.

The following principles have been established to inform the public domain and landscape design:

Figure 18 Public Domain and Landscape Design Principles



Create a place that responds to endemic landscape types of Randwick within the transect of 'headland to swamp'

Provide a green outlook and landscape spaces that are healing, engaging and transformative to the patients, carers and staff

Create legible and welcoming entrances with pedestrian through-site connections that are clear, open and intuitive

Provide an integrated approach to cultural recognition and story telling within the planting, paving and play elements

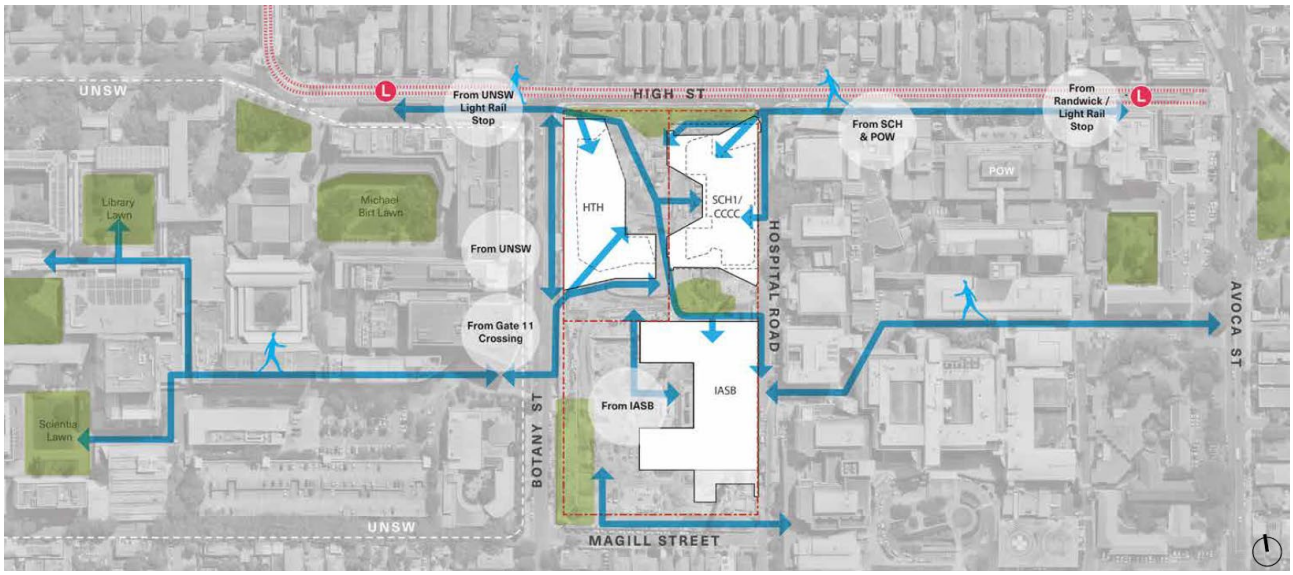
Create places that are welcoming for children of all ages and meet the needs of families

Source: Aspect Studios

3.5.1. Public Domain

The design considers the site's connectivity to the wider context of the area, focusing on pedestrian connections from the RHC, UNSW, IASB and the light rail stops along High Street.

Figure 19 Public domain precinct connections



Source: Aspect Studios

The public domain includes the following primary spaces:

- **High Street** — The High Street interface responds to the endemic and headland landscape types of Randwick. It is an opportunity for planting to soften the building edge and create a sense of respite and calmness as one enters the space. It creates legible and welcoming entrances into the SCH1/CCCC building, providing a lush, green outlook back out. Equitable access and circulation is clear, open and intuitive from High Street.
- **Pedestrian Plaza Interface** — The west side of the site meets with the edge of the adjacent UNSW Pedestrian Plaza. This edge interface has a series of mounded planting, stairs and ramps to accommodate the level change between the Pedestrian Plaza and building levels. The planting and stairs continue the forms of a natural, dunal and headland landscapes, softening the hard edge between both sites; instead providing a seamless and intuitive transition.

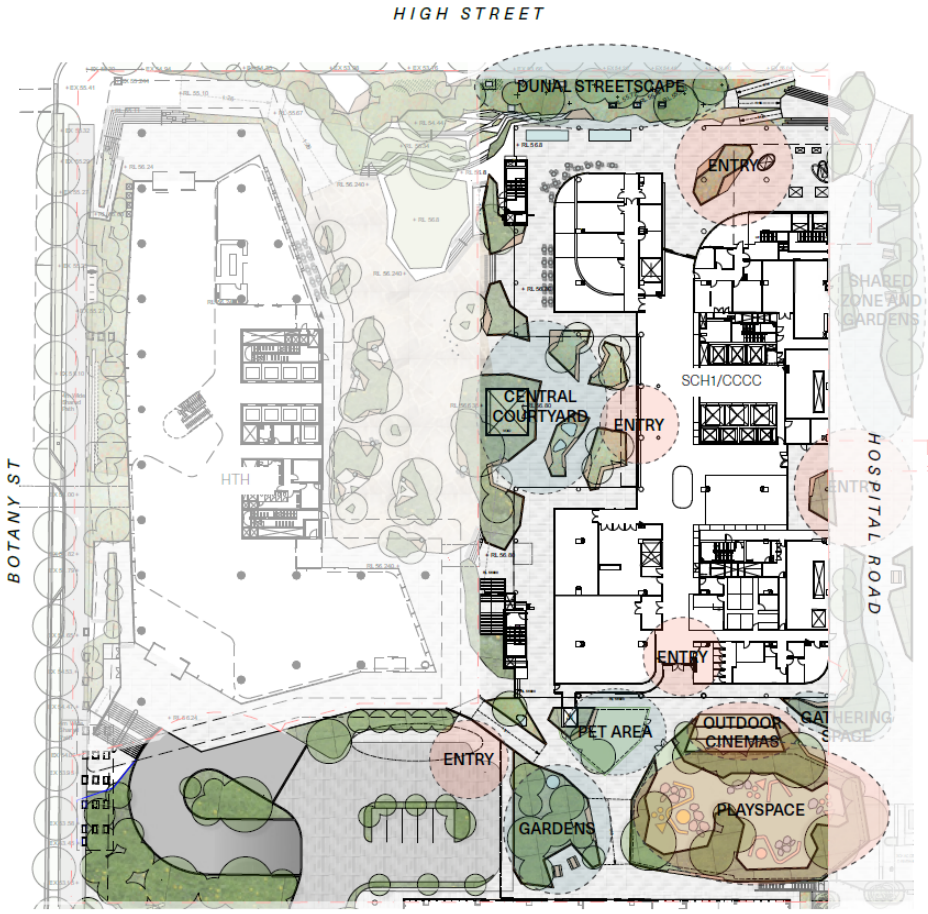
Figure 20 Public Domain and Landscape Masterplan

Source: Aspect Studios

The public domain design includes the following additional landscaped outdoor spaces:

- **Central Courtyard** — The central courtyard integrates generous planting and seating. The large, raised planters of ferns and palms create a place for respite and calmness. The palms provide a protected gully experience whilst maintaining clear sightline to the building and out.
- **Children's Play Area** — The playspace incorporates nature play experiences accessible for all users. It is a place of excitement and opportunity to play with all senses.
- **Potential Outdoor Cinema** — Terraced turfed landscaping allows for outdoor cinema opportunities or informal seating and lounging when not in use.
- **Gathering Space** – This garden wraps around the indigenous gathering space within the ground floor of the building and provides a sheltered space for families to come together indoors and outdoors. Cultural planting will be included in the raised planter bed.
- **Potential Outdoor Pet Area** — This space could be provided to allow for users of the site to interact and enjoy the company of animals and pets. Seating and planting surround the spaces to provide a secure and enclosed area.
- **Gardens** — The Garden areas offer opportunities for respite with sensory planting and seating. It creates places to dwell and enjoy the culturally rich planting and landscape.
- **Entrances** — All building entrances are accessed through the public domain and include pathways defined by low raised planters that create intuitive access and a welcoming approach to the building.

Figure 21 Landscaped outdoor spaces



Source: Aspect Studios

3.5.2. Landscape

The proposed landscape design responds to the long and layered history of the place and recognises the endemic landscape types of Randwick from protected swamp gullies to plateau banksia and eroded sandstones. The proposed landscape design articulates the landscape forms of sand dunes and eroded sandstones that were shaped by wind and water.

The planting strategy includes endemic trees, lush ferns and palms to reflect the history of place. All plantings proposed are native plants.

Landscaping is also proposed on selected terraces from level 02 to level 08 of the building. These roof terraces will provide accessible outdoor spaces for patients, staff and visitors and allow views to planting from within the building.

The proposed landscape strategy includes deep soil area along the High Street frontage and along Botany Street, creating opportunities for larger tree species and infiltration of runoff from adjacent paving into the soil.

3.6. OPERATION

3.6.1. Hours of Operation

The SCH1/CCCC will operate 24 hours a day, seven days a week.

3.6.2. Staff and Patient Numbers

The SCH1/CCCC will accommodate approximately 516 FTE employees as well as 89 overnight beds, 39 day beds and 4 clinical trial beds.

It is noted that the finalisation of bed numbers will be provided in the Final Business Case submission and therefore the above numbers are subject to change.

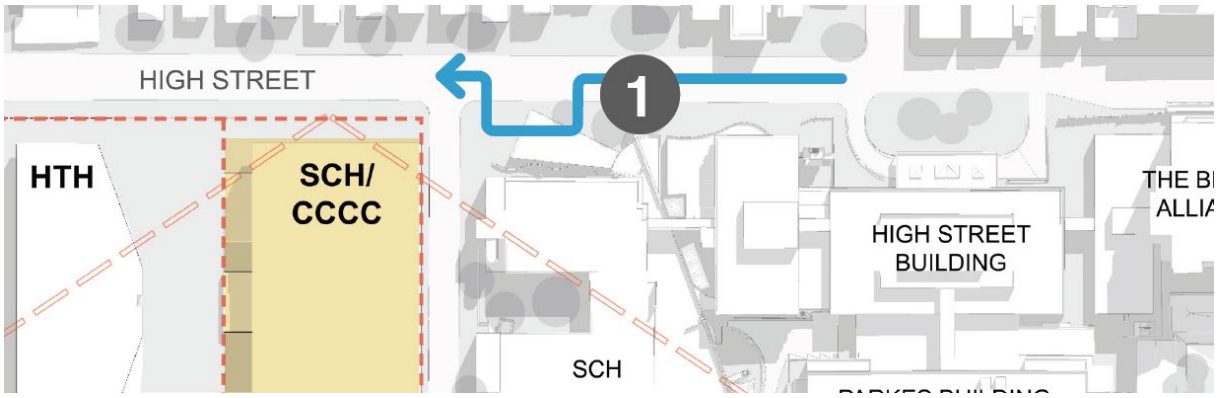
3.7. ACCESS AND PARKING

3.7.1. Vehicular Access

The major vehicular access points to the SCH1/CCCC are from High Street to the north (drop off only), and Botany Street to the west.

High Street acts as a collector road and provides access to the existing SCH drop-off facility. This drop off will be maintained and will form the main Hospital non-emergency drop off. Due to the operation of the Light Rail (CSELR), High Street is now limited to one-way movement between Wansey Road and Avoca Street, therefore access is now predominantly from Clara Street.

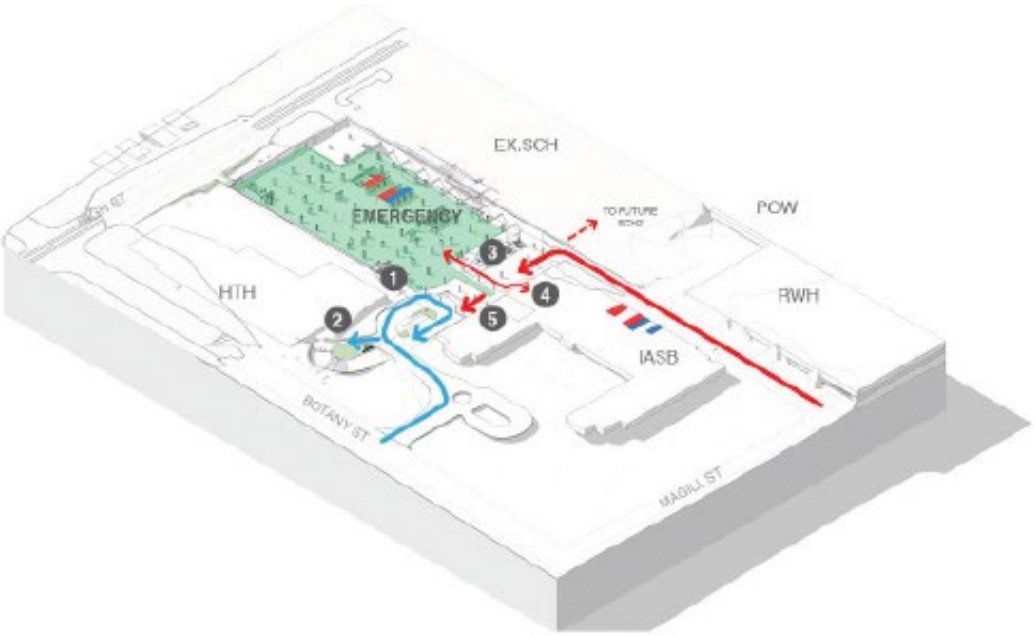
Figure 22 Existing drop off on High Street to be maintained

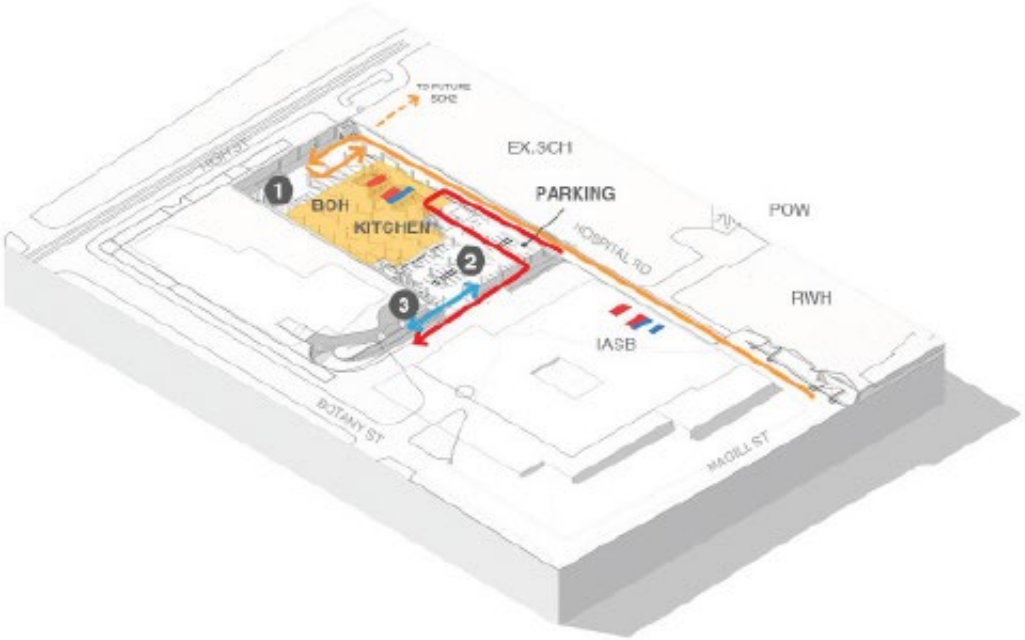


Source: BLP

Botany Street will provide the main vehicular access to the Emergency Department on Level B1 as well as access to the proposed carpark located at Level B2. The Botany Street access will also provide vehicular access to the IASB and the proposed HTH logistics access.

Figure 23 Proposed vehicular access from Botany Street





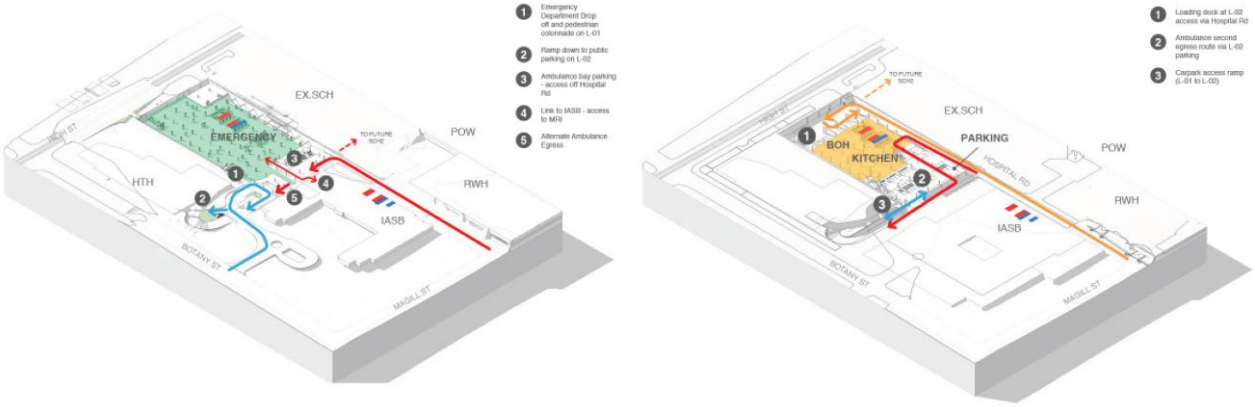
Source: BLP

3.7.2. Ambulance and Logistics Access

The southern portion of Hospital Road to the east of the site has been partially lowered as part of the approved IASB development currently under construction. The lowering of the northern portion of Hospital Road has been approved under a separate approval pathway and will service the wider RCR and RHIP.

The lowered Hospital Road will provide ambulance access to the ED and ambulance bays on Level B1, service vehicle access to the substations (new and existing) and the loading dock on Level B2, as well as access to the IASB to enable servicing of the MRI located within that building.

Figure 24 Proposed ambulance access from Hospital Road



Source: BLP

Figure 25 Proposed logistics access from Hospital Road

Source: BLP

3.7.3. Helipad Access

The RHC is a helicopter destination with the existing SCH and the POWH both using the existing Helicopter Landing Site (HLS) which is currently located on the roof of the carpark adjacent to the existing POWH Adults Emergency Department.

This will be replaced by a new HLS which is to be located on top of the northern wing of the IASB, allowing for a number of approach/departure paths depending on the prevailing wind.

The HLS located on the IASB will support the requirements of the SCH1/CCCC development, as the development will not include its own helipad.

3.7.4. Pedestrian Access

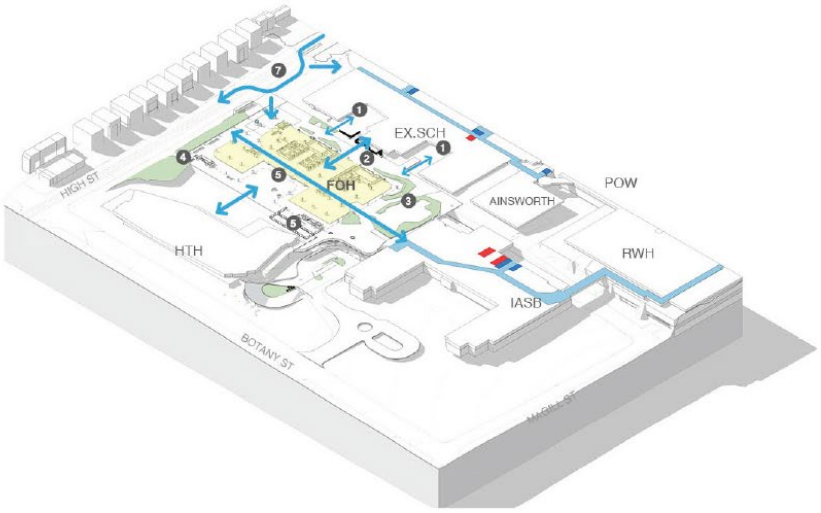
A new main public entry to the SCH1/CCCC is proposed off High Street which will have direct on-grade pedestrian access from the existing SCH vehicular drop off.

The entry will be situated at Level 00 and will also connect directly to the pedestrian podium located over the lowered Hospital Road (subject of a separate approval), which in turn will connect through to the existing SCH through the Fairy Garden and George Gregan playground. The podium will traverse the site from north to south, and connect to the Ainsworth plaza as well as providing connection through to Level 00 of the IASB through a landscaped courtyard space.

The podium will include voids to the ED located at Level B1 below, as well as providing pedestrian access through a split-level colonnade.

Equitable access to all entries and public domain spaces has been carefully considered due to the varying levels across the site. Ramps have been incorporated into the public domain design to ensure equitable access is achieved from High Street as well as throughout the RCR and broader RHIP.

Figure 26 Public pedestrian access to SCH1/CCCC



1 – Connection to existing SCH Courtyard space
2 – Future SCH2 shared atrium space
3 – Landscape space between SCH1/ CCCC , IASB and Ainsworth Plaza
4 – Ainsworth Plaza
5 – Landscaped treatment on north-western corner facing HIgh Street and HTH Plaza
7 – Natural light down to level B1. Emergency department : Skylights , voids, pedestrian colonnade.

Source: BLP

3.7.5. Parking

There are currently approximately 2,200 parking bays across the existing RHC. From this, the main hospital carpark has approximately 1,600 parking bays. This carpark has two access points – located on Easy Street and Hospital Road - and is used by visitors with restricted parking available for staff permit holders.

The following parking is proposed on site in Level B2:

- 50 visitor car parking bays that will include:
  - 1 funeral/ coroner bay;
  - 1 doctor's bay; and

  - 2 ambulance patient transfer bays.
- Ambulance parking including:
  - 4 reverse-in spaces for ambulances;
  - 2 parking spaces for ambulances to reposition and restock after offload; and
  - 1 police parking bay.
- Loading dock including:
  - 2 Roll-on Roll-off (RORO) bays;
  - 3 contractor/ FM bays;
  - 3 medium rigid vehicle bays; and
  - 1 heavy rigid vehicle bay.
- Shared access to proposed campus-wide EOT facilities being delivered as part of the IASB Project. These facilities include:
  - 200 bicycle parking bays
  - 350 lockers
  - 20 showers
  - 4 toilets

3.8. CONSTRUCTION HOURS AND STAGING

3.8.1. Site Preparation

The Principal Contractor will develop a comprehensive Construction Management Plan to detail controls and management protocols for the following:

- Dilapidation reporting;
- Site fencing, hoarding and security;
- Construction signage;
- Site amenities;
- Stakeholder management and communication;
- Construction vehicle parking;
- Site inductions; and
- Site access.

The general principle for construction works is to separate construction areas of work from the public and hospital staff and visitors. Where there is a cross-over this will be managed to ensure safety of all persons and equipment.

Construction activities will be staged to ensure continued hospital operations and distinct isolated construction zones which maximise separation between the hospital operation and construction work. Appropriate hoarding/fencing (as specified by Australian Standards and SafeWork NSW) will be installed to prevent public and staff access and to maintain security for the various areas of the works. Access disruptions to public and staff car park areas will be minimised during construction works.

Traffic controllers will be used where required to manage the interface of construction vehicles with pedestrians, and staff/visitor/patient vehicles. Pedestrian access from High Street to the existing SCH and the rest of the RHC will be maintained. This will be monitored and managed appropriately during construction.

These public and property protection measures will be reviewed at the time of contract award for the works to ensure alignment with the proposed preferred methodologies and construction staging and to ensure that the safety of the public and staff is maintained at all times during the works.

3.8.2. Construction Hours

The following construction hours are proposed:

- Monday to Friday: 7:00am to 6:00pm
- Saturday: 8:00am to 5:00pm
- Sunday and Public Holidays: No work

Construction works outside the standard hours on Saturdays is proposed between 1.00pm and 5.00pm.

The proposed construction hours are sought to align with the construction hours approved for the IASB development under SSD 9113 and SSD 10339 to provide an efficient and consistent construction program across the whole RCR site. In this regard, there will be an overlap of works that require the same construction operating hours between the approved IASB and the proposed SCH1/CCCC. It is noted that the same construction hours are also sought for the proposed HTH development under SSD-10822510.

It is considered that any works that are required to take place outside standard construction hours will align with the applicable conditions of consent that allow for this to take place under certain circumstances.

The following works may be required outside the standard construction hours and will be dependent on design finalisation and final construction staging plan with the relevant authorities.

- Service reticulation works;
- Service switch overs (including private services);
- Large deliveries;
- Road restoration works; and
- Any other works deemed necessary for safety reasons or as directed by the relevant authorities.

3.8.3. Construction Staging

The proposed SCH1/CCCC development will be undertaken in one (1) stage in accordance with the following project timeline:

Table 5 Project Timeline

Key Milestone	**Date**
SSDA Approval (estimated)	Q4 2021
Contract Evaluation and Award	Q4 2021
Construction Commencement	Q1-Q2 2022
Operational Milestone	2025

Source: PwC

4. STRATEGIC CONTEXT

The strategic planning policies and design guidelines identified in the SEARs (issued 2nd December 2020) that need to be addressed include:

- *NSW State Priorities*
- *State Infrastructure Strategy 2018 – 2038 Building Momentum*
- *Future Transport Strategy 2056*
- *Crime Prevention through Environmental Design (CPTED) Principles*
- *Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017)*
- *Sydney Green Grid (GANSW 2017)*
- *Healthy Urban Development Checklist (NSW Health, 2009)*
- *Draft Greener Places Design Guide (GANSW)*
- *Greater Sydney Region Plan: A Metropolis of Three Cities*
- *Our Greater Sydney 2056: Eastern District Plan*
- *South East Sydney Transport Strategy*
- *Randwick Local Strategic Planning Statement – Vision 40*
- *Randwick Place Strategy*

The proposal is consistent with the following planning strategies, district plans and adopted management plans as detailed below.

4.1. NSW STATE PRIORITIES

The proposed development will positively contribute to achieving the 'Improving the Health System' priority of the NSW Premier which includes:

- *Improving service levels in hospitals*

The proposed SCH1/CCCC will increase the service levels of the SCH, Randwick and will allow researchers and clinicians to work side by side to deliver world-leading clinical care.

The proposed development will connect with UNSW's proposed HTH to bring the RHC and UNSW closer together, forming an integrated RHIP.

The proposed development will include Australia's first Children's Comprehensive Cancer Centre (**CCCC**), bringing world-leading clinical care, research and teaching together to deliver improved models of care for sick and injured children.

The CCCC will transform children's cancer care, delivering better health outcomes through the rapid translation of clinical research into effective treatments for patients and thereby improving the service levels that currently exist in the SCH and the wider RHC.

4.2. STATE INFRASTRUCTURE STRATEGY 2018 – 2038

The *State Infrastructure Strategy 2018-2038* sets out the NSW Government's vision for infrastructure over the next 20 years, focusing on aligning investment with sustainable growth. The Strategy goes beyond current projects and identifies policies and strategies to provide infrastructure that meets the needs of a growing population and a growing economy. For Metropolitan NSW, the primary goal is to provide residents with access to jobs and services within 30 minutes, known as the '30-minute city' model.

The Strategy details sector-based infrastructure directions to deliver infrastructure that meets the needs of a growing population and economy.

The strategic objective for the Health sector is:

- 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 identifies that demand for healthcare will grow by over 50 per cent, compared to population growth of 28 per cent. There is a need for disruptive innovation in healthcare to manage increasing demand and deliver more affordable and sustainable long-term solutions.

The proposed SCH1/CCCC will contribute to responding to those demands by providing a purpose-built paediatric facility that integrates health-related Education Training and Research (**ETR**) with the delivery of care to provide improved public healthcare services in the region.

4.3. FUTURE TRANSPORT STRATEGY 2056

The NSW Government's *Future Transport Strategy 2056* sets the 40-year vision, directions and outcomes framework for the transport system and customer mobility in NSW, which are outlined for Regional NSW and Greater Sydney. It will guide transport investment over the longer term which will be delivered through a series of services and infrastructure plans and other supporting plans.

The Strategy acknowledges the importance of transport in supporting a productive economy, liveable communities, and more sustainable transport solutions.

The SCH1/CCCC site is highly accessible by various modes of transport including light rail, bus and private vehicle.

In particular, the additional capacity associated with the Sydney CBD and South East Light Rail service will support the additional 36,072sqm of health services facility floor space on the subject site.

4.4. NSW STATE HEALTH PLAN: TOWARDS 2021

The NSW State Health Plan: Towards 2021 (State Health Plan) provides a strategic framework to unite existing plans, programs and policies regarding State-wide health services. It sets priorities across the health system for delivering an appropriate level of patient-centred care for all NSW residents. This includes creating an integrated health system by connecting primary and acute health settings. As a result, patient outcomes will be improved, and unnecessary hospitalisations will be reduced.

The State Health Plan identifies four (4) key strategies, including:

- Supporting and developing our workforce
- Supporting and harnessing research and innovation
- Enabling eHealth
- Designing and building future-focused infrastructure.

The SCH1/CCCC supports each of the four (4) key strategies of the State Health Plan as follows:

- Operation of the SCH1/CCCC will be a catalyst for creating new jobs as well as educating and training the future health workforce.
- The SCH1/CCCC will overcome existing limitations on the ability to co-locate translational medical research activities with core clinical services.
- The partnering arrangements between SCH, CCI and UNSW for the SCH1/CCCC will provide a platform for ETR initiatives to be further integrated and expanded across the broader RHIP.
- SCH1/CCCC will utilise digitally enabled and integrated systems including electronic Medical Record (eMR), electronic Medication Record (eMR) and electronic medical management (eMM) to achieve the best healthcare outcomes for patients.

4.5. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN PRINCIPLES

Crime Prevention through Environmental Design (CPTED) Principles aim to deter criminal behaviour and crime risk through sound environmental design applied to the built environment.

The safety and security of staff, patients and visitors is of the highest priority in a hospital setting. The design of the proposed SCH1/CCCC addresses the four (4) CPTED Principles as follows:

Table 6 CPTED Design Response

CPTED Principle	Design Solution
Natural Surveillance	▪ Facilitate observation of as many spaces as possible. ▪ Provide clear line of sight wherever possible. ▪ Avoid alcoves and recesses in building façade that could facilitate concealment. ▪ Implementation of appropriate levels of security lighting to support natural surveillance of the building perimeter, public areas, entrances, exists, car parks, loading docks, circulation areas and approaches. ▪ The design focuses on the placement of physical features, activities and people to maximise visibility. This includes lighting of public spaces and walkways at night.
Access Control	▪ Segregation of public and clinical circulation ▪ At-grade entries provided. ▪ Well defined circulation paths both internally and externally, that are open and well lit. ▪ No-through access on Paediatric ward. ▪ Secure separated access and entry points. ▪ Clear, well defined entries to site and building. Minimise number of entry points. ▪ Signposting used to define staff-only areas. ▪ Provide barriers, either physical or symbolic.
Territorial Reinforcement	▪ Clear delineation between SCH1/CCCC, broader RCR boundary and surrounding area. ▪ All entry areas a situated in locations that have maximum observation. ▪ Security area located within close proximity of the ED public waiting area. ▪ Clear delineation of internal and external spaces, including usage separation of functions and transitional spaces for moving from public to semi-public/private to private. ▪ Use of physical attributes that express ownership such as fences, pavement treatment, art, signage and landscaping.
Space Management	▪ Maintain the landscape and outdoor spaces to prevent any reduction of visibility from landscape overgrowth. ▪ Maintain landscape to reduce obstruction of lighting.

CPTED Principle	Design Solution
	▪ Maintain external lighting to ensure that it is operative at all times.

4.6. BETTER PLACED: AN INTEGRATED DESIGN POLICY FOR THE BUILT ENVIRONMENT OF NEW SOUTH WALES

Better Placed is an integrated design policy for the built environment, prepared by the Government Architect NSW (GANSW). This policy seeks to create a clear approach to ensure good design outcomes are achieved, that deliver desired architecture, public places and environments throughout NSW. The policy includes seven (7) applicable objectives:

- Objective 1 - **Better fit** – contextual, local and of its place;
- Objective 2 - **Better performance** – sustainable, adaptable and durable;
- Objective 3 - **Better for the community** – inclusive, connected and diverse;
- Objective 4 - **Better for people** – safe, comfortable and liveable;
- Objective 5 - **Better working** – functional, efficient and fit for purpose;
- Objective 6 - **Better value** – creating and adding value;
- Objective 7 - **Better look and feel** – engaging, inviting and attractive.

The Architectural Design Report at **Appendix D** provides a comprehensive assessment of the proposed development against the seven (7) Better Placed objectives.

In summary, the proposed SCH1/CCCC responds to and enhances its local context. Longevity, functionality and robustness underpin the design of the proposed development. The public domain design which includes enclosed public spaces, stich the SCH1/CCCC into the overall RCR, as well as adding to the local community's access to public amenity. People's experience is at the core of the SCH1/CCCC building design.

Extensive user consultation has been undertaken to inform the design. The high-quality publicly accessible open space creates value for the wider community. The SCH1/CCCC provides an engaging, tactile and memorable experience.

4.7. SYDNEY GREEN GRID

The Sydney Green Grid policy was prepared by GANSW in 2017. The policy seeks to promote the creation of a network of open spaces which are passive and active and accommodate the growing population of Sydney.

The Sydney Green Grid Principles applicable to the proposed development include:

- Increase access to open space
- Encourage sustainable transport connections and promote active living
- Create a high quality and active public realm

Sydney Green Grid divides metropolitan Sydney into six (6) districts, with SCH1/CCCC being located within the Central district. The Central district identifies project clusters where opportunities are identified to expand the open space network. These include CD.1.4 Eastern Suburbs and CD.1.6 Randwick, Centennial Park, Eastlakes.

The proposed SCH1/CCCC development aligns with the abovementioned principles of the Sydney Green Grid and will positively contribute to achieving the objectives of the policy through the delivery of new and well-connected publicly accessible open space in the form of a landscaped central courtyard. A landscaped sharded zone and gardens along the Hospital Road pedestrian podium is proposed under a separate application and approval pathway.

4.8. HEALTHY URBAN DEVELOPMENT CHECKLIST

The Healthy Built Environment Checklist has been developed by the NSW Ministry of Health to help NSW health professionals to assess built environment factors that impact on health and engage in the planning process.

Extensive consultation has taken place with health professionals from networks such as the Ministry of Health, Sydney Children's Hospital Network, Children's Cancer Institute, Randwick Health & Innovation Precinct, and Randwick Hospitals Campus. Details of the consultation and feedback received is provided in Section 6 of this report.

Health professionals as well as other members of the public will have opportunity to provide comments on the proposal during the public exhibition period. All submissions will be reviewed and a response provided after the exhibition period has ended.

4.9. DRAFT GREENER PLACES DESIGN GUIDE

The *Draft Greener Places Design Guide* provides information on how to design, plan and implement green infrastructure in urban areas throughout NSW. The draft guide provides strategies, performance criteria and recommendations to assist planning authorities, and design and development communities to deliver green infrastructure.

The draft Greener Places Design Guide was on public exhibition from 25 June to 28 August 2020.

The major components that make up the green infrastructure network fall into the following three categories:

- **Open space for recreation:** green infrastructure for people
- **Urban tree canopy:** green infrastructure for climate adaption and resilience
- **Bushland and waterways:** green infrastructure for habitat and ecological health

The Public Domain Design Report at **Appendix E** demonstrates the proposal's consistency with the draft Greener Places Design Guide. In this regard, the proposed development a generous level of publicly accessible open space for recreation. The proposed development provides 15.5% site canopy cover.

4.10. GREATER SYDNEY REGION PLAN: A METROPOLIS OF THREE CITIES

The Greater Sydney Region Plan provides the overarching strategic plan for growth and change in Sydney. It is a 20-year plan with a 40-year vision that seeks to transform Greater Sydney into a metropolis of three cities - the Western Parkland City, Central River City and Eastern Harbour City. It identifies key challenges facing Sydney including increasing the population to eight million by 2056, 817,000 new jobs and a requirement of 725,000 new homes by 2036.

The Plan includes objectives and strategies for infrastructure and collaboration, liveability, productivity and sustainability. The following matters are relevant to the proposed development:

- *Objective 1 – Infrastructure supports the three cities.*
- *Objective 5 – Benefits of growth realised by collaboration of governments, community and business.*
- *Objective 12 – Great places that bring people together.*
- *Objective 21 – Internationally competitive health, education, research and innovation precincts.*
- *Objective 30. Urban tree canopy cover is increased.*
- *Objective 31 – Public open space is accessible, protected and enhanced.*
- *Objective 33 – A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change.*

The proposed development is consistent with the above objectives of the Greater Sydney Region Plan.

4.11. OUR GREATER SYDNEY 2056: EASTERN CITY DISTRICT PLAN

The Eastern District Plan is a 20-year plan to manage growth in the context of economic, social and environmental matters to implement the objectives of the Greater Sydney Region Plan. The intent of the District Plan is to inform local strategic planning statements and local environmental plans, guiding the planning and support for growth and change across the district.

The District Plan contains strategic directions, planning priorities and actions that seek to implement the objectives and strategies within the Region Plan at the district-level. The Structure Plan identifies the key centres, economic and employment locations, land release and urban renewal areas and existing and future transport infrastructure to deliver growth aspirations.

The Planning Priorities and actions likely to have implications for the proposed development are listed and discussed below:

- *Planning Priority E1 – Planning for a city supported by Infrastructure.*

The SCH1/CCCC site is highly accessible by various transport infrastructure. In particular, the additional capacity associated with the Sydney CBD and South East Light Rail (CSELR) service will support the additional 36,072sqm of health services facility floor space on the subject site. The location of the proposed development adjacent to the light rail infrastructure promotes optimal use.

- *Planning Priority E6 Creating and renewing great places and local centres, and respecting the District's heritage*

The proposal will deliver a generous level of high quality, publicly accessible open space which will contribute to great place making that will bring people together. The proposed landscape and public domain response reflects and responds to the environmental heritage of the area.

- *Planning Priority E8 – Growing and investing in health and education precincts and the Innovation Corridor.*

The proposal also supports the diversification and expansion of the RHIP. Provision of 36,072sqm of health services facility floor space will contribute to Randwick LGA's job targets 32,000 and 35,500 jobs by 2036.

The proposal supports the co-location of health, research and education related facilities which will contribute to the Precinct's growth, within a highly accessible location. The co-location of health and educational facilities will also allow for a more efficient translation of education and research into patient care for patients within the wider RHC.

- *Planning Priority E11 – Growing investment, business opportunities and jobs in strategic centres.*

The site is located in Randwick which is identified as a Strategic Centre (as well as a Health and Innovation Precinct). The provision of 36,072sqm of health-related GFA will support access to jobs in an identified Strategic Centre. Access to jobs is also supported by public transport infrastructure and a high-quality public domain which enhances the walkability of the area. The proposed high-quality public domain which will support activation and vibrancy while strengthening pedestrian connections between the existing RHC to the east, the proposed HTH and existing UNSW Kensington Campus to the west and the IASB to the south.

- *Planning Priority E17 – Increasing urban tree canopy and delivering Green Grid connections.*

The proposed landscape strategy incorporates deep soil areas to accommodate large trees, which will support cooling, amenity and air quality while positively contributing to the streetscape and overall character of the site and the Eastern District.

- *Planning Priority E18 – Delivering High Quality Open space.*

The public domain design has been driven by the delivery of a new centrally positioned publicly accessible Pedestrian Plaza to be integrated with the proposed HTH public domain. The mix of high-quality open spaces proposed around the site will significantly enhance the character of the Precinct, and support site permeability. Importantly, the proposed open spaces provide a green outlook offering spaces of healing and engagement for children of all ages, families, carers, patients and staff of the SCH1/CCCC.

4.12. TOWARDS OUR GREATER SYDNEY 2056

Towards our *Greater Sydney 2056* is a draft amendment to the *Greater Sydney Region Plan*. The Plan focuses on the regional significance of central and western Sydney and provides a framework that will underpin strategic planning for a more productive, liveable and sustainable city.

The Eastern City is described as an 'economic engine' comprising the established Sydney City as well as economic corridors such as Macquarie Park, Randwick Health and Innovation Precinct (RHIP), Sydney Airport and Port Botany to Kogarah. Opportunities to enhance the Eastern City include the renewal of government-owned land near Sydney City and reducing congestion to enable the continued growth of the Eastern City's global industries and branding.

The metropolitan priorities relevant to this SSDA aim to:

- Support the generation of over 817,000 additional jobs
- Increase knowledge-intensive jobs and health and education jobs
- Deliver a smart city that enables knowledge-intensive jobs to thrive
- Improve accessibility to jobs across all districts

The RHIP is set to become the largest co-located health, innovation and education zone in NSW and represents a once in a generation opportunity to develop a world-leading integrated and aligned health, education and research environment which will produce significant benefits to the broader community.

The provision of 36,072sqm of health services facility floor space will contribute to the jobs targets set out in Greater Sydney 2056 in the health and education sector in a highly accessible location.

4.13. SOUTH EAST SYDNEY TRANSPORT STRATEGY

The *South East Sydney Transport Strategy* sets out the medium and long term (2026-56) integrated transport and land use plan for South East Sydney; an area encompassing the Eastern Suburbs to the south of Bondi Junction, extending north to Central Station, west to the T4 Illawarra rail line and south to include Rockdale and Brighton Le Sands.

The Strategy articulates *Future Transport 2056* at a regional level, setting out a clear vision and objectives, and the infrastructure and services needed to achieve the vision by 2056.

The site's location adjacent to the CSELR line contributes to the liveability of South East Sydney and will encourage optimal use of transport infrastructure.

The Strategy identifies opportunities to implement the objectives of the Strategy through the application of planning policy frameworks and approvals including setting maximum parking rates for new developments and/or unbundling parking where parking is provided. This is particularly relevant to the proposed SCH1/CCCC which seeks to provide a limited number of car spaces on site to meet visitor parking demand, in combination with car parking efficiencies in the main RHC car park and a car user mode share shift of 0.9% to reduce car dependency and optimise public transport use.

4.14. RANDWICK LOCAL STRATEGIC PLANNING STATEMENT – VISION 40

Randwick Council's Local Strategic Planning Statement (**LSPS**) is a statutory document to implement actions from the Greater Sydney Region Plan and Eastern City District Plan at a local level. The LSPS outlines the future vision for planning across Randwick City and sets the direction around housing, jobs, infrastructure and open space.

The LSPS sets out 22 Planning Priorities to deliver its key vision and to manage growth and change. The specific Planning Priorities that are relevant to the RHIP and SCH1/CCCC Project include:

- Planning Priority 3 – Encourage development that responds to local character and desired future character of our neighbourhoods
- Planning Priority 7 – Provide greater access and opportunities for walking and cycling.
- Planning Priority 9 – Focus economic development, innovation and employment in our strategic centres.

- Planning Priority 14 – Provide high quality open space and recreational facilities.
- Planning Priority 15 – Implement the Green Grid.
- Planning Priority 16 – Increase tree canopy cover.
- Planning Priority 18 – Reduce the consumption of energy and water.
- Planning Priority 21 – Develop an integrated approach to more sustainable travel.

The proposed development is consistent with the above priorities of the Randwick LSPS. The proposal supports health, education and innovation uses consistent with the desired outcome for the site under the LSPS. The proposal encourages economic development and job creation in the Randwick strategic centre.

The proposal will utlise the proposed shared campus-wide EOT facilities being delivered as part of the IASB to support opportunities for walking and cycling.

The proposal includes and high-quality public domain and landscape outcome that will increase overall tree canopy cover and contribute to the Green Grid.

ESD principles have been considered in the design of the proposed development to reduce resource consumption.

The take up of the sustainable travel initiatives set out in the RHC Green Travel Plan will be encouraged by the Project and supported by the surrounding public transport infrastructure. The RHC Green Travel Plan is appended to the Traffic and Transport Assessment at **Appendix H** for reference.

4.15. RANDWICK COLLABORATION AREA PLACE STRATEGY

Collaboration Areas are identified as the first action in the Greater Sydney Region Plan. Places were identified due to their metropolitan significance and potential to grow into centres of increased productivity and innovation.

In each Collaboration Area, a Place Strategy has been jointly created by the program's partners over a 12-month period. The Place Strategy identifies impediments and opportunities and sets out a shared 20-year vision and the priorities and actions to guide the delivery of that vision.

The Randwick Collaboration Area (RCA) Place Strategy identifies a vision and shared objectives for the place and sets out priorities and actions to realise this vision.

The proposed development is consistent with the RCA Place Strategy as it supports the RCA objectives of being one of Australia's premier health, education and innovation districts, and supports formal and informal partnerships between the education, health, research and private sectors. The proposed development also prioritises walking and cycling connections and vibrant centres of activity.

5. STATUTORY CONTEXT

This section provides an assessment of the relevant statutory provisions applicable to the SCH1/CCC site contained in the relevant planning instruments, strategic guides and development control plans.

5.1. ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Pursuant to Section 4.36(2) of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**):

> *(2) A State environmental planning policy may declare any development, or any class or description of development, to be State significant development*

The proposal is classified as SSD as detailed in Section 5.4 below. In accordance with Section 4.5 of the EP&A Act, the Independent Planning Commission is designated as the consent authority if there is a Council objection to the DA or there are more than 25 submissions, unless otherwise declared by the Minister as a State Significant Infrastructure related development.

Unless otherwise declared, the Minister will be the consent authority for the detailed SSD DA (refer Clause 8A of the *State Environmental Planning Policy (State and Regional Development) 2011* (**SRD SEPP**) and Instrument of Delegation dated 11 October 2018).

Table 7 below provides an assessment of the proposal against the objectives contained within Section 1.3 of the EP&A Act.

Table 7 Objectives of the EP&A Act

Objectives	Comment/ Response
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 proposal promotes the social and economic welfare of the community and a better environment through the delivery of integrated, state-of-the-art paediatric health and medical research facilities with improved accessibility and public domain enhancements.
b. *To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about the environmental planning and assessment.*	The proposed development has high sustainable design aspirations and is committed to achieving high ecologically sustainable development (**ESD**) targets including: ▪ Exceed the requirements of Section-J of the National Construction Code (**NCC**) for energy-efficiency in building fabric and building services / systems by 10%. ▪ Achieve a 5 Star Green Star equivalent benchmark utilising the Green Building Council of Australia's (GBCA's) Design and As-built rating tool (DAB) version 1.3. The ESD strategy for the proposed development is outlined in the ESD Report at **Appendix O.**
c. *To promote the orderly and economic use and development of land.*	The proposal promotes the orderly and economic use and development of the land through the urban renewal of the site to facilitate a development aligned with strategic and statutory planning policy.

Objectives	Comment/ Response
d. To promote the delivery and maintenance of affordable housing.	Not applicable.
e. To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.	The proposed development is located within an established urban environment. A Biodiversity Development Assessment Report (**BDAR**) is provided at **Appendix J** and concludes that the proposal will not have a significant impact on any threatened species or habitats.
f. To promote sustainable management of built and cultural heritage (including Aboriginal cultural heritage).	The proposed development respects the significance of surrounding built and cultural heritage as outlined in the Heritage Impact Statement (HIS) (**Appendix I**), the Historical European Archaeology Advice (**Appendix L**) and the Aboriginal Cultural Heritage Assessment (**Appendix M**).
g. To promote good design and amenity of the built environment.	The proposed development has had regard to the design principles set out in the *Better Placed* guidelines and has been reviewed by the Government Architect NSW through the NSW State Design Review Panel (SDRP). In addition, the design has been informed by numerous masterplanning exercises and stakeholder design workshops. The resulting proposal promotes design quality and excellence and carefully considers the environmental amenity of the site and surrounding areas. Built Form and Urban Design are discussed further in Section 7.1 of this EIS.
h. To promote proper construction and maintenance of buildings, including the protection of the health and safety of their occupants.	Construction staging and impact management are discussed in Section 7.11. A preliminary Construction Management Plan is provided at **Appendix R**.
i. To promote the sharing of responsibility for environmental planning and assessment between different levels of government in the State.	Relevant Government agencies have been consulted throughout all stages of the Project. It is noted that the Minister for Planning is the consent authority as the development is considered SSD.
j. To provide increased opportunity for community participation in environmental planning and assessment.	An inclusive public consultation strategy has been implemented throughout the project conception and subsequent design stages. Refer to Section 6 and **Appendix EE** of this EIS.

5.2. ENVIRONMENTAL PLANNING AND ASSESSMENT REGULATION 2000

Section 78A(8A) of the EP&A Act requires that all development applications for SSD be accompanied by an EIS prepared by or on behalf of the proponent in the form prescribed by the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulations). Schedule 2 of the EP&A Regulations provides that environmental assessment requirements will be issued by the Secretary of the DPIE with respect to the proposed EIS.

This EIS has been prepared to address the requirements of Schedule 2 of the EP&A Regulations and the SEARs dated 2nd December 2020.

5.3. BIODIVERSITY CONSERVATION ACT 2016

The purpose of the *Biodiversity Conservation Act 2016* is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and in the future, consistent with the principles of ecologically sustainable development.

In accordance with Clause 7.9 of the *Biodiversity Conservation Act 2016*, any State Significant Development Application is to be accompanied by a Biodiversity Development Assessment Report (**BDAR**) unless the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity value.

A BDAR has been prepared by Ecological Australia and is provided at **Appendix J**. The findings of the biodiversity assessment are discussed in **Section 7.6** of this EIS.

The majority of the site has been cleared of buildings and vegetation under a previous development approval. One planted native tree, *Tristaniopsis laurina* (Water Gum) was recorded on the western side of Hospital Road and is located on the boundary of the development site, however this tree will be assessed for removal as part of a separate project under a different legislative pathway. Therefore, this SSD does not seek to remove any native vegetation.

An assessment of threatened species habitats has determined that the development site does not provide habitat for threatened species.

Prescribed impacts were assessed as part of the development and it was determined that based on an absence of vegetation and buildings that there were no prescribed impacts for the development. Additionally, the development does not impact upon Serious and Irreversible Impact (**SAII**) candidate entities.

There are no Matters of National Environmental Significance (**MNES**) within the development site affected by the proposed works. An assessment of the Commonwealth Significant Impact Criteria was not required under the *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**).

5.4. STATE ENVIRONMENTAL PLANNING POLICY (STATE AND REGIONAL DEVELOPMENT) 2011

The *State Environmental Planning Policy (State and Regional Development) 2012* (**SRD SEPP**) outlines development which is State significant development (**SSD**) and State significant infrastructure (**SSI**).

The SCH1/CCCC development is classified as SSD as it falls within the requirements of Clause 14(a) of Schedule 1 of the SRD SEPP, being:

> *(14) Development that has a capital investment value of more than $30 million for any of the following purposes –*
>
> *(a) hospitals,*
>
> *(b) medical centres,*
>
> *(c) health, medical or related research facilities (which may also be associated with the facilities or research activities of a NSW local health district board, a University or an independent medical research institute).*

The capital investment value of the proposed development is in excess of $30million and is therefore SSD.

5.5. STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007

State Environmental Planning Policy (Infrastructure) 2007 (**ISEPP**) assists the NSW Government in providing infrastructure such as hospitals, roads, railways, emergency services, water supply and electricity delivery. It provides specific planning provisions and development controls for various types of infrastructure works or facilities.

The Project site is part zoned R2 Low Density Residential and R3 Medium Density Residential under *Randwick Local Environmental Plan* (**RLEP**) 2012.

Council will soon be undertaking a review of RLEP 2012 and have indicated they are supportive of the RCR site (i.e., the area bounded by High Street, Magill Street, Botany Street and Hospital Road) being rezoned to SP2 Health Services Facility through that review.

Clause 57(1) of the ISEPP provides that '*Development for the purpose of health services facilities may be carried out by any person with consent on land in a prescribed zone'*. Clause 56(d1), (e) and (o) defines R2 Low Density Residential and R3 Medium Density Residential as 'prescribed' zones.

Therefore, the proposed development is wholly permissible with consent under the ISEPP.

5.6. STATE ENVIRONMENTAL PLANNING POLICY NO. 33 – HAZARDOUS AND OFFENSIVE DEVELOPMENT

State Environmental Planning Policy No. 33 – Hazardous and Offensive Development (**SEPP 33**) applies to development for the purposes of a potentially hazardous industry or a potentially offensive industry.

SEPP 33 defines a 'potentially hazardous industry' as:

> *"A development for the purpose of any industry which, if the development were to operate without employing any measures (including, for example, isolation from existing 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".*

A 'potentially offensive industry' is defined as:

> *"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."*

Based on the above definitions, the proposed development could be considered either a potentially hazardous or offensive industry given the use and storage of chemicals and gases for day to day hospital purposes.

Clause 12 of SEPP 33 requires that a Preliminary Hazard Analysis (PHA) is prepared for development applications for the purposes of a potentially hazardous industry.

A SEPP 33 PHA has been prepared by WSP and is provided at **Appendix AA**.

Based on the screening assessment carried out for the PHA, the proposed development is considered to be 'potentially hazardous' due to the cumulative storage quantity of medical gas and clinical waste which are likely to exceed allowable thresholds.

Subsequent preliminary hazard analysis was conducted using the Hazard Identification process in line with AS/ISO 31000:2018 Risk Management Guidelines and focused on preventing or minimising major hazardous incidents on-site, such as fire and explosion or the release of significant quantities of toxic or biologically harmful chemicals, that could result in significant off-site effects.

No hazards leading to a consequential major off-site event were found.

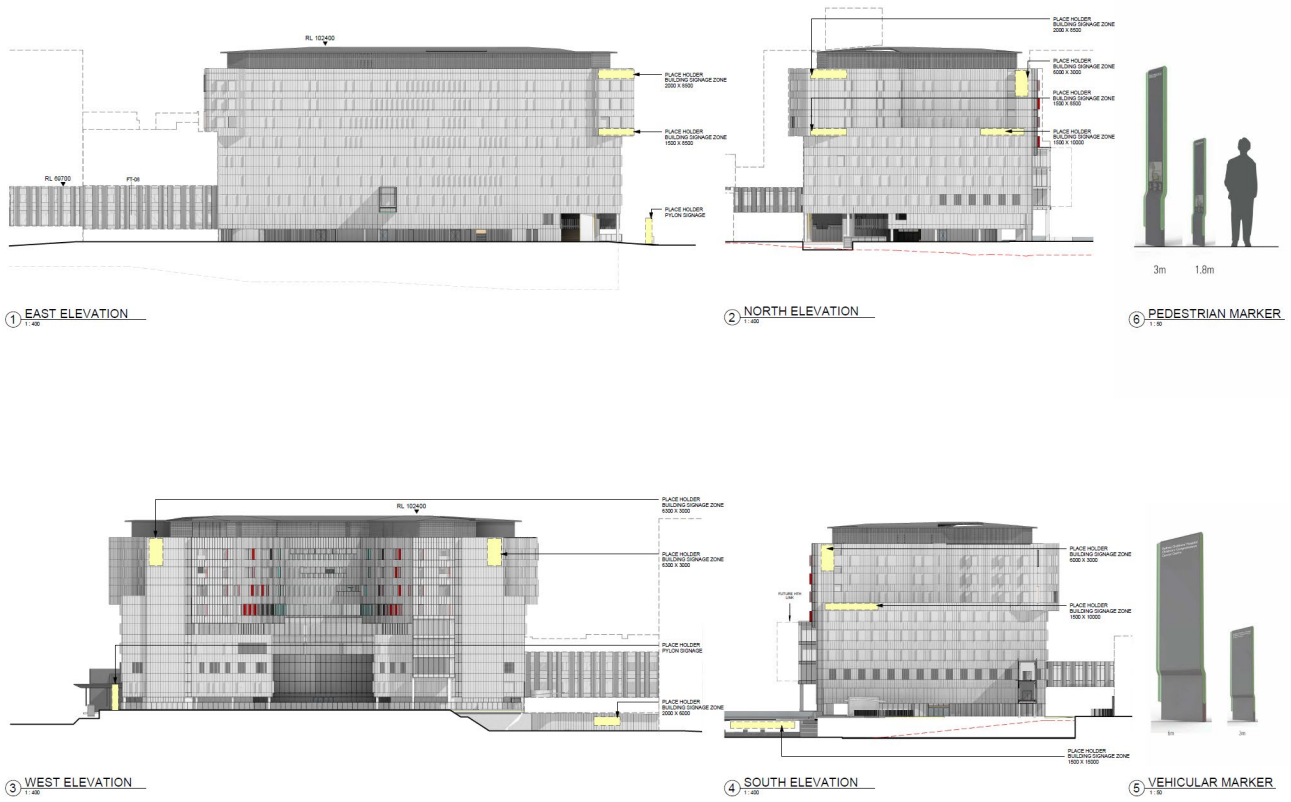
The SEPP 33 PHA Report concludes that identified hazards are minor risks (where the consequence is small quantity localised chemical spillage) which can be mitigated by engineering design or managed by procedural controls. Therefore, no further control measures are recommended at the PHA stage.

5.7. STATE ENVIRONMENTAL PLANNING POLICY NO 64 – ADVERTISING AND SIGNAGE

State Environmental Planning Policy No. 64 – Advertising and Signage (**SEPP 64**) aims to ensure that advertising and signage is compatible with the desired amenity and visual character of an area and provides effective communication in suitable locations and is of high-quality design and finish. It does not regulate the content of signs and advertisements.

A total of fourteen (14) signage zone placeholders are proposed, twelve (12) building signs on the north, east, south and western elevation, and one (2) pylon signs, as shown in **Figure 27** below.

Figure 27 Signage Zones



Source: BLP

An assessment of the proposed signage zones against the objectives and Schedule 1 of SEPP 64 is provided below to demonstrate that they are suitable for the proposal and in the context of the site.

Schedule 1 of SEPP 64 sets out assessment criteria for a consent authority to assess the proposed signage against to ensure it is consistent with the objectives of the SEPP.

Table 8 SEPP 64 – Schedule 1 Assessment

Criteria	Assessment
Character of the Area ▪ Is the proposal compatible with the existing or desired future character of	The proposed signage zones are compatible with the existing and emerging character of the RHIP which includes existing buildings with building identification signage at the tops of buildings and at the entrances to

Criteria	Assessment
the area or locality in which it is proposed to be located? ▪ Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	the buildings. For example the existing SCH, Randwick has building signs and pylon signage at the drop-off to the SCH for identification and wayfinding purposes. While no specific outdoor advertising theme applies to the area, similar outdoor building identification signage is also evident throughout the RHC and UNSW Kensington campus buildings.
Special Areas ▪ Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The proposed signage zones and any future signage will not detract from the amenity of visual quality of the locality, noting that the site is not located in an environmentally sensitive, heritage, natural or other conservation area. In addition, the site is not located in an open space area, waterway or rural landscape. While a residential area is located to the north of the proposed SCH1/CCCC, the proposed signage zones are of a suitable scale for their proposed locations, and any illumination will be carefully considered to avoid adverse light spill impacts.
Views and vistas ▪ Does the proposal obscure or compromise important views? ▪ Does the proposal dominate the skyline and reduce the quality of vistas? ▪ Does the proposal respect the viewing rights of other advertisers?	The proposed signage zones will not obscure or compromise any important views and will not dominate the skyline as they will not exceed the maximum height of the proposed SCH1/CCCC. The proposed signage zones do not impede the viewing rights of other advertisers.
Streetscape, setting or landscape ▪ Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape? ▪ Does the proposal contribute to the visual interest of the streetscape, setting or landscape? ▪ Does the proposal reduce clutter by rationalising and simplifying existing advertising? ▪ Does the proposal screen unsightliness? ▪ Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The scale and proportions of the proposed signage zones are considered appropriate for the proposed development and streetscape in the context of the RCR and the wider RHIP. The future signage will contribute to the visual interest of the streetscape without creating visual clutter. The proposed signage zones do not protrude above the building and will not require vegetation management.

Criteria	Assessment
▪ Does the proposal require ongoing vegetation management?	
Site and Building ▪ Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located? ▪ Does the proposal respect important features of the site or building, or both? ▪ Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The scale and proportions of the proposed signage zones are considered appropriate for the proposed development and is compatible with the scale of the SCH1/CCCC and the RCR. The proposed signage zones have been positioned to respect the façade design of the building.
Associated devices and logos with advertisements and advertising structures ▪ Have any safety devices, platforms, lighting, devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	Details of any safety devices and logos will be developed at a later stage.
Illumination ▪ Would illumination result in unacceptable glare? ▪ Would illumination affect safety for pedestrians, vehicles or aircraft? ▪ Would illumination detract from the amenity of any residence or other form of accommodation? ▪ Can the intensity of the illumination be adjusted, if necessary? ▪ Is the illumination subject to a curfew?	Illumination details will be developed at a later stage. Any illumination will be designed to avoid unacceptable glare or light spill.
Safety ▪ Would the proposal reduce the safety for any public road? ▪ Would the proposal reduce the safety for pedestrians or bicyclists?	The proposed signage zones will not reduce road, pedestrian or cyclist safety. The proposed pylon signs are of a height that is consistent with similar existing signage in the locality and will not obscure sightlines from public areas.

Criteria	Assessment
▪ Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?	

The assessment above demonstrates that the proposed signage zones satisfy the relevant SEPP 64 assessment criteria and is therefore consistent with the objectives of SEPP 64, set out in clause 3(1)(a) of the policy.

5.8. STATE ENVIRONMENTAL PLANNING POLICY NO 55 – (REMEDIATION OF LAND)

State Environmental Planning Policy No 55 – Remediation of Land (**SEPP 55**) outlines a state-wide planning approach to the remediation of land with the aim for remediation of contaminated land to reduce the risk of harm to human health and the environment.

Clause 7(1) requires that the consent authority consider whether land is contaminated, and if so, can be remediated to a level suitable for the intended use, prior to issuing a development consent.

A Geotechnical Report, Preliminary Site Investigation Report (PSI), Detailed Site Investigation Report (DSI) and Remediation Action Plan (RAP) have been prepared by Douglas Partners and are provided at **Appendix V, X, Y, Z,** respectively.

These reports follow previous geotechnical and contamination investigations prepared for the site and partial remediation of the wider RCR site.

The assessment in the RAP concludes that the site can be made suitable for the proposed development subject to the implementation of the recommendations provided in the RAP.

No approval is sought for remediation works. The proposed development will be undertaken in accordance with the recommendations of the RAP which includes an Unexpected Finds Protocol.

5.9. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (INFRASTRUCTURE) 2007 – AMENDMENT – HEALTH SERVICES

DPIE has developed a range of amendments to the ISEPP to facilitate broader planning pathways for health services facilities, which would allow new development types and more effective delivery of developments already permitted.

The proposed amendments to the ISEPP would make it easier for public authorities to deliver essential social infrastructure such as new facilities within existing health premises, ambulance facilities and on-site health manufacturing facilities.

The proposed amendments to the ISEPP facilitate various planning pathways for health infrastructure including:

- development with consent – development that is assessed and determined by a relevant consent authority (usually a local council),
- development without consent – development undertaken by a public authority (e.g. NSW Health, Transport for NSW) that can be self-assessed and self-determined,
- complying development – development that must comply with prescribed conditions within an Environmental Planning Instrument (EPI) and be subsequently certified by an approved authority, and
- exempt development – development of a minor nature that is not required to be assessed or provided consent to be undertaken.

Under the ISEPP amendment, the proposed development would still be required to be assessed as development with consent as it is above the amended 15m maximum height for developments considered as development without consent.

Therefore, the assessment and conclusions made in relation to the existing ISEPP remain applicable to the proposed development.

5.10. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (REMEDIATION OF LAND)

In January 2018, DPIE exhibited the *Draft Remediation of Land State Environmental Planning Policy* (**Draft Remediation SEPP**), which seeks to provide an updated framework for the management of contaminated land in NSW. It is proposed that the new draft Remediation SEPP will:

- Provide a state-wide planning framework for the remediation of land;
- Maintain the objectives and reinforce those aspects of the existing framework that have worked well;
- Require planning authorities to consider the potential for land to be contaminated when determining development applications and rezoning land;
- Clearly list the remediation works that require development consent; and,
- Introduce certification and operational requirements for remediation works that can be undertaken without development consent.

The Draft Remediation SEPP does not seek to change the requirement for consent authorities to consider land contamination in the assessment of development applications. Therefore, the assessment and conclusions made in relation to SEPP 55 are equally applicable to the Draft Remediation SEPP.

5.11. DRAFT STATE ENVIRONMENTAL PLANNING POLICY (ENVIRONMENT)

The *Draft State Environmental Planning Policy (Environment)* (**Draft ESEPP**) seeks to consolidate and simplify existing State Policy relating to NSW water catchments, waterways, urban bushland and world heritage areas.

The Explanation of Intended Effect (EIE) for the Draft ESEPP was publicly exhibited on the 31st October 2017.

The seven (7) SEPPs to be consolidated under the Draft ESEPP are:

- State Environmental Planning Policy No. 19 – Bushland in Urban Areas;
- State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011;
- State Environmental Planning Policy No. 50 – Canal Estate Development;
- Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment;
- Sydney Regional Environmental Plan No. 20 – Hawkesbury-Nepean River (No.2-1997);
- Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005; and
- Willandra Lakes Regional Environmental Plan No. 1 – World Heritage Property

The site is located in Randwick LGA. None of the above SEPPs apply to the subject site and therefore the Draft ESEPP is not applicable to the proposed development.

5.12. RANDWICK LOCAL ENVIRONMENTAL PLAN 2012

The Randwick Local Environmental Plan 2012 (RLEP 2012) is the principle environmental planning instrument that applies to the site.

An assessment of the SCH1/CCCC development against the relevant provisions of the RLEP 2012 is provided in the following subsections.

5.12.1. Zoning and Permissibility

The site is zoned part R2 Low Density Residential, part R3 Medium Density Residential and part SP2 Infrastructure zone in accordance with RLEP 2012.

The proposed development is defined as a 'health services facility' under the LEP, which has the following description:

health services facility *means a building or place used to provide medical or other services relating to the maintenance or improvement of the health, or the restoration to health, of persons or the prevention of disease in or treatment of injury to persons, and includes any of the following—*

a. a medical centre,

b. community health service facilities,

c. health consulting rooms,

d. patient transport facilities, including helipads and ambulance facilities,

e. hospital.

Development for the purpose of a 'health service facility' is permissible with consent in the SP2 Infrastructure (Health Service Facility), but is prohibited in the R2 Low Density and R3 Medium Density Residential zones under RLEP 2012. However, as noted above, a 'health service facility' is permissible in the R2 and R3 zones under the clause 57(1) of the ISEPP.

Notwithstanding the prohibition of the use in the R2 and R3 zones, the proposed development is consistent with the following objectives of the zones:

R2 Low Density Residential

- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To recognise the desirable elements of the existing streetscape and built form or, in precincts undergoing transition, that contribute to the desired future character of the area.*
- *To protect the amenity of residents.*

R3 Medium Density Residential

- *To enable other land uses that provide facilities or services to meet the day to day needs of residents.*
- *To recognise the desirable elements of the existing streetscape and built form or, in precincts undergoing transition, that contribute to the desired future character of the area.*
- *To protect the amenity of residents.*

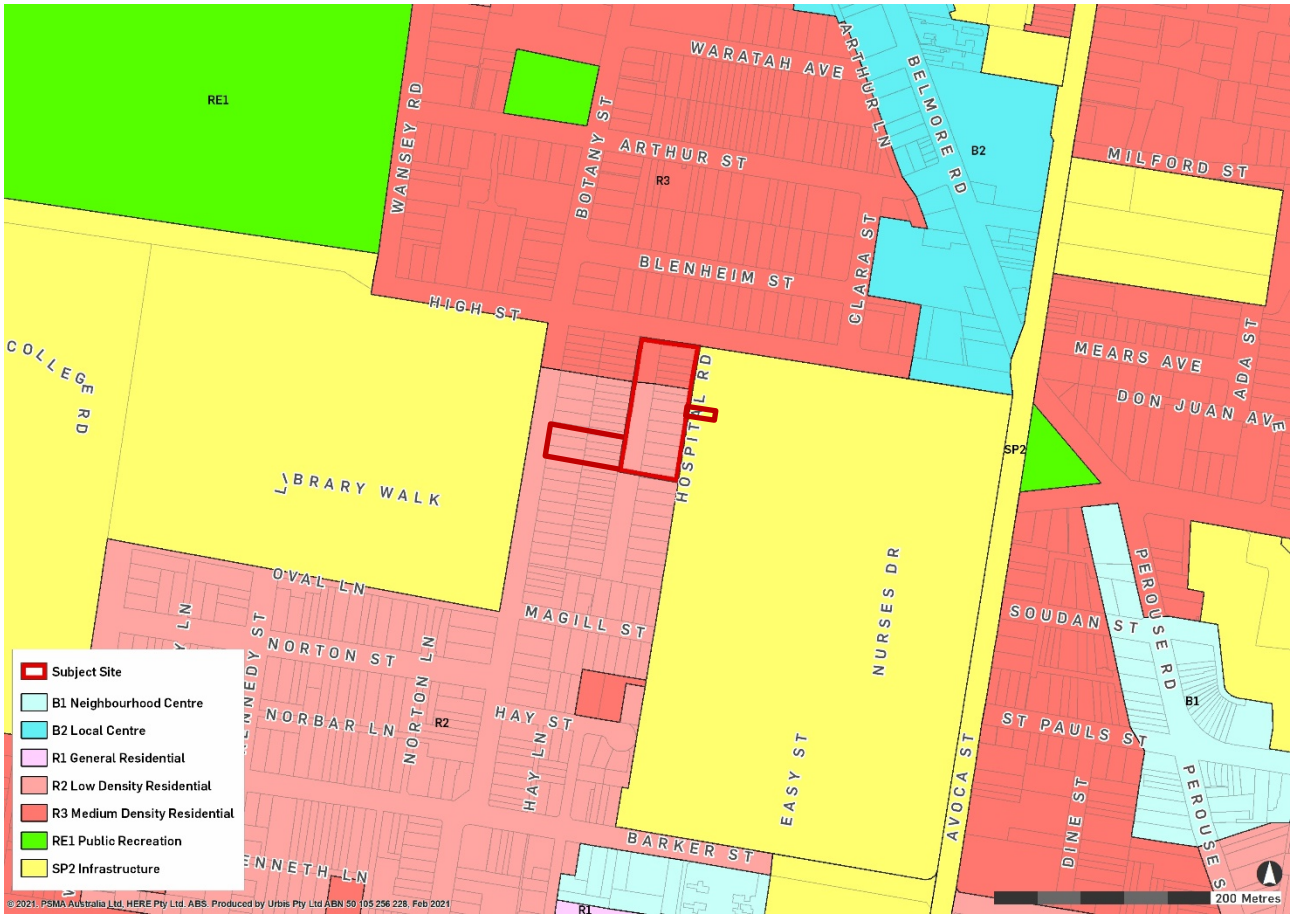
SP2 Infrastructure (Health Services Facility)

- *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 facilitate development that will not adversely affect the amenity of nearby and adjoining development.*
- *To protect and provide for land used for community purposes.*

RCC has commenced a review of their LEP and have indicated that they are supportive of the RCR site being rezoned to SP2 Health Services Facility through that review.

HI has collaborated with RCC to incorporate the proposed rezoning into their Local Strategic Planning Statement and the subsequent LEP review planning proposal process. However, it is reiterated that the permissibility (and approval) of the project does not in any way rely on the outcome of the current LEP review.

Figure 28 Zoning Map



Source: Urbis

5.12.2. Key Development Standards

The proposed development has been assessed against the relevant development standards contained within the RLEP 2012 in **Table 8** below.

Table 9 RLEP 2012 Compliance Summary

Clause	Control	Proposed
4.3 Height of Buildings	R2 Zone – 9.5m R3 Zone – 15m SP2 Infrastructure – 30m	The proposed development is not subject to these height restrictions in accordance with Section 5.12 of the LEP (refer below). The proposed development has a maximum height of 50.4m (RL102,400).
4.4 Floor Space Ratio	R2 Zone – 0.5:1 R3 Zone – N/A SP2 Infrastructure – N/A	The proposed development is not subject to these Floor Space Ratio (FSR) restrictions in accordance with Section 5.12 of the LEP (refer below). The proposed development has a maximum FSR of 3.65:1 based on the site boundary show in **Figure 7.**

Clause	Control	Proposed
5.10 Heritage Conservation	To conserve the environmental heritage of Randwick.	No heritage items identified in Schedule 5 of the RLEP 2012 are located on the site. The site is not located in a heritage conservation area. The site is located in the vicinity of a number of heritage items and heritage conservation areas. A Heritage Impact Statement (**Appendix I**) has been prepared to assess the heritage impact of the proposed development.
5.12 Infrastructure Development and Use of Existing Buildings of the Crown	This clause does not restrict or prohibit, or enable the restriction or prohibition of, the carrying out of any development, by or on behalf of a public authority, that is permitted to be carried out with or without development consent, or that is exempt development, under State Environmental Planning Policy (Infrastructure) 2007. This clause does not restrict or prohibit, or enable the restriction or prohibition of, the use of existing buildings of the Crown by the Crown.	The proposed development is not subject to restrictions in this regard.
6.1 Acid Sulfate Soils	To ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage.	The site is not known to contain any acid sulfate soils.
6.2 Earthworks	To ensure that earthworks for which development consent is required will not have a detrimental impact on environmental functions and processes, neighbouring uses, cultural or heritage items or features of the surrounding land.	Earthworks are proposed to facilitate the basement levels of the proposed development. It is considered that upon implementation of appropriate mitigation measures identified in the CMP and appropriate conditions of consent, the proposed development will not have any detrimental impacts.
6.3 Flood Planning	To minimise the flood risk to life and property associated with the sue of land.	The site is not identified as a 'flood planning area' on Council's Flood Planning Map, however the Flood Modelling Assessment Report (**Appendix U**) identifies that the site is affected by 1% Annual Exceedance Probability (**AEP**)

Clause	Control	Proposed
		and Probable Maximum Flood (**PMF**) flooding. The proposed podium level of RL56.8 is above the PMF level plus 500mm freeboard (approximately RL56.25) and therefore complies with the DCP flood planning requirement.
6.4 Stormwater Management	To minimise the impacts of urban stormwater on land to which this clause applies and on adjoining properties, native bushland and receiving waters.	The proposed development is accompanied by a Stormwater Management Plan and a Sediment and Erosion Control Plan (**Appendix T**) to manage the impacts of the development on urban stormwater and soil disturbance.
6.8 Airspace Operations	If a development application is received and the consent authority is satisfied that the proposed development will penetrate the Limitation or Operations Surface, the consent authority must not grant development consent unless it has consulted with the relevant Commonwealth body about the application.	The Aviation Impact Assessment prepared by AviPro (**Appendix BB**) confirms that the proposed development will protrude permanently into the Sydney OLS when built and will temporarily protrude into the OLS when under construction (construction cranes). Therefore, approval from the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications is required. This is a common occurrence and approval is likely as long as appropriate aviation-standard lighting is attached to construction cranes and the proposed development.
6.10 Essential Services	Development consent must not be granted to development unless the consent authority is satisfied that essential services to the development are available.	The proposed development will have sufficient arrangements for the supply of the required essential services as discussed in **Section 7.13** of this EIS.
6.11 Design Excellence	Development consent must not be granted to development to which this clause applies unless the consent authority is satisfied that the proposed development exhibits design excellence.	The proposed development is considered to exhibit the design excellence as demonstrated in the Architectural Plans (**Appendix C**) and the Architectural Design Report (**Appendix D**). In addition, the proposed development has been reviewed by the SDRP as part of ongoing consultation with the GANSW. This is considered to be a suitable means of assessing the proposed development against design excellence matters.

Clause	Control	Proposed
6.12 Development requiring the preparation of a development control plan	To ensure that development on certain land occurs in accordance with a site-specific development control plan (DCP). This applies to development on land that has a site area of at least 10,000sqm or is identified as 'DCP required' on the Key Sites Map.	The site has an area of 9,870m^2 and is not identified as 'DCP required' on the Key Sites Map.

6. COMMUNITY AND STAKEHOLDER ENGAGEMENT

Consultation with relevant local and Government authorities, service providers, community groups, specialist groups and affected landowners has been undertaken by HI in the preparation of the SSDA. This included direct engagement and consultation with the following stakeholder groups:

Sydney Children's Hospital Network ▪ Executive ▪ Board ▪ Donors ▪ Staff ▪ Patients and families ▪ Visitors ▪ Volunteers ▪ Unions ▪ Suppliers ▪ Sydney Children's Hospital Foundation	**Information and Communications Technology providers** ▪ Healthshare ▪ EHealth
Children's Cancer Institute ▪ Executive ▪ Board ▪ Donors ▪ Consumers ▪ Visitors ▪ Volunteers ▪ Unions ▪ Suppliers	**Ministry of Health**
University of New South Wales ▪ Executive ▪ Board ▪ Staff ▪ Students of UNSW	**Consumers** ▪ Members of the community actively participating in planning for the Redevelopment
Randwick Health & Innovation Precinct ▪ Executive ▪ UNSW ▪ HI ▪ South East Sydney Local Health District ▪ SCHN	**Indigenous community** ▪ La Perouse Local Aboriginal Land Council ▪ Bidjigal People ▪ Aboriginal Health Council ▪ Local Aboriginal Groups ▪ Gujaga Foundation
Randwick Hospitals Campus ▪ Royal Hospital for Women ▪ Prince of Wales Hospital ▪ Prince of Wales Private Hospital ▪ Eastern Suburbs Mental Health Service ▪ Other health and research institutions	**Community** ▪ Immediate neighbours

Randwick City Council ▪ General Manager ▪ Planning ▪ Traffic and engineering staff ▪ Communication Manager ▪ Councillors	**Local business** ▪ Commercial
Government Agencies (local and state) ▪ Transport for NSW ▪ CBD and South East Sydney Light Rail ▪ Greater Sydney Commission ▪ Heritage NSW ▪ Government Architect NSW ▪ NSW Environmental Protection Agency ▪ Ambulance NSW ▪ Ausgrid ▪ Sydney Water ▪ Sydney Airport Corporation Limited (SACL) ▪ Civil Aviation Safety Authority (CASA) ▪ Air Ambulance	**Wider Community**

Further consultation is also being undertaken regarding the appropriate incorporation of the name 'Eurimbla' into the project. Eurimbla Avenue was a historical feature of the site and is a meaningful historical reference for the local community. The project team are consulting with stakeholders to agree a suitable acknowledgement of the community investment in this Project by naming a key component of the proposed built environment after the former Eurimbla Avenue. This is a strong aspiration by the project team which will be progressed together with all project partners over the coming months to agree an appropriate application.

The community and stakeholder engagement undertaken has sought to address the requirements of the SEARs through a consultation process which is guided by the following principles:

- **Proactive stakeholder engagement** – identification and engagement of stakeholders from the outset of the project to ensure everyone is informed throughout the project lifecycle.
- **Proactive and transparent communications** – direct contact with targeted stakeholders to build relationships prior to any works commencing.
- **Coordinated information** – information is accessible to all impacted stakeholders as required in accordance with the agreed communication delivery dates.
- **Collaboration** – internal collaboration is encouraged for all members involved in the delivery of the Project to ensure a unified approach.

Details of the methods and outcomes of the community and stakeholder engagement is contained in the Consultation Report in support of the proposal and provided in **Appendix EE**.

A summary of the responses to issues raised by stakeholders during the engagement process is provided in the table below.

Table 10 Community and Stakeholder Engagement: Issues and Responses

Stakeholder	Issues Raised	Response
CCAC GANSW	Provision of a welcoming and homely hospital environment.	Consideration to create a thoughtfully designed hospital environment responds to the needs of intellectual, physical, sensory

Stakeholder	Issues Raised	Response
Local community Local residents		disability and mental illness populations and accommodates Culturally and Linguistically Diverse communities. The provision of shared family spaces, private rest zones, sibling activities, soft furnishings, age-appropriate recreation areas, and indoor and outdoor play areas are designed to create a homely feel and keep families together during often extended stays during treatment. Consistent with this approach, amenity provisions will create a more restful stay and create a sense of normalcy.
SCHN staff	Dedicated parents lounge to rest and meet other families.	A parent's lounge with a beverage bay has been incorporated into the design which is further complimented by waiting areas with play zones, parenting and interview rooms, flexible play areas, multipurpose therapy, recreation and quite study rooms.
CCAC SCHN staff CCI staff	Provision of dedicated oncology family support areas	Centralised and decentralised approach to the provision of family support areas has been adopted across the Oncology Inpatient Unit (IPU) and Day Treatment Area. This includes the provision of central family retreat zone.
CCAC	Adequate space provided for families, carers and staff in single patient rooms.	The single room has been designed with careful consideration to create dedicated zones for patients, their families and staff. The layout and spatial provisions of the room have been reviewed to optimise access to natural light, create a private family and carer zone and enable the child to personalise the room with creative built in joinery solutions. This design optimises both the patient experience and clinical efficiency and functionality.
Local community SCHN consumers SCHN staff CCI staff	Building design and features cater to children of all ages.	A diverse range of age-appropriate art forms, colours and interior design solutions have been incorporated into the overall design to enliven the hospital environment and create pleasant diversions and opportunities for community and sibling involvement and interaction.
CCAC SCHN staff CCI staff	Provision of a safe and secure hospital environment that protects	Design solutions have been incorporated to enable:

Stakeholder	Issues Raised	Response
GANSW	staff, patients, families and visitors.	- Central lockdown after hours and in emergency situations. - Lift core design has been changed to enhance security for patients and families and facilitate access to the Triage zone of Emergency Department (ED) from the basement carpark. - Measures to control access in and out of the building in pandemic situations or equivalent. - Adoption of security systems that do not impede on the functionality and optimisation of the space. - Measures taken to support security and safety in high risk areas.
SCHN Aboriginal Health Workers Aboriginal parents of children at the hospital Aboriginal community members Aboriginal members of SCHN parent group	A welcoming and culturally inclusive building, with Aboriginal Health made visible from the street frontage.	The provision of a gathering space for Aboriginal patients, families and visitors on the ground floor of the new building. Members of the SCHN Aboriginal Health Unit will also be able to work from this space.
SCHN Aboriginal Health Workers Aboriginal parents of children at the hospital Aboriginal community members Aboriginal members of SCHN parent group GANSW CCAC	Recognition of Aboriginal culture in building design and landscape.	Engagement of Aboriginal consultant Yerrabingin to advise on building design and landscaping. An Aboriginal garden will be located in close proximity to the Aboriginal Health Space within the external Front of House.
CCAC SCHN staff and executive GANSW	Wayfinding improved to reduce anxiety when moving between hospital departments.	The following design solutions have been incorporated to improve wayfinding: - Use of consistent lighting, floor coverings and architectural finishes in public circulation areas.

Stakeholder	Issues Raised	Response
		- Situating memorable landmarks and architectural features at key decision points (memorable and functional). - Distinguish public from non-public corridors by using different finishes, colours and lighting. - Providing consistent cues to assist wayfinding. - Clearly locating information desks within public entry zones.
CCAC GANSW	Green spaces to enhance wayfinding and permeability.	Seamless, interconnected green spaces will create a permeable Randwick Health & Innovation Precinct through intuitive wayfinding spanning across Hospital Road, through to the shared plaza of the Project, the IASB and the proposed HTH. Seating, shaded areas, play areas and gardens offer areas for respite, as well as providing connection for families and a healing environment through the culturally rich planting and landscape.
GANSW	Provision of landscaped areas on every level of the building.	The provision of landscape works is being explored on some roof terraces of the building in an effort to provide improved visual amenity for patients, families and staff.
CCAC	Ease of access to outdoor areas	The play, recreation, multipurpose and therapy rooms will have direct access to the outdoors, allowing play therapists and the Allied Health team to optimise the use of indoor and outdoor activities, including the Front of House plaza and playgrounds. The multipurpose nature and flexible design of those rooms will support after hours and weekend access for families.
CCI staff SCHN staff SCHN and CCI patients and consumers CCAC	Front of House designed to engage visitors of all ages	The internal Front of House aims to: - incorporate public and industry labs to showcase research - integrate clinical care, education and research through play using the Discovery Centre and Entertainment Zone

Stakeholder	Issues Raised	Response
		- enhance the user experience at arrival and throughout the patient journey.
CCI staff SCHN staff	Physical integration of education and research with clinical care	The CCCC integration model of care, education and research drove the Concept Design, delivering the CCCC over three (3) levels; enabling the physical co-location of clinical, research and education spaces.
GANSW	Consistency between the design of the UNSW HTH and the SCH1/CCCC	Ongoing design collaboration work has been undertaken through a series of co-design workshops involving the UNSW Estate Management team and their design team. This collaborative design approach has enabled a set of Primary Integration Co-Design Principles to be established for the Northern Health Research Zone. These principles have continued to inform the ongoing integration of the two projects.
CCAC SCHN staff CCI staff Local community	Provision of access to fresh, healthy and affordable food	A new food services model (based on an 'on demand' model) is currently under review which aims to improve the quality, freshness and nutritional value of the food offering for patients. Pantry and beverage bays will be provided throughout the clinical areas to offer a variety of healthy snacks through the day, as well as healthy foods options through the various retail offerings.
SCHN staff CCAC	Concerns about the transit time to the existing POWH mortuary facility and need for a dedicated viewing room in the children's hospital	A viewing room inclusive of ancillary support areas has been provisioned on Level B02.
SCHN staff	Adequate spacing of the pathology area for infectious and non-infectious patients	A separate collection space for infectious patients as well as an overflow area has been provisioned within the building.
SCHN staff	Provision of adequate space for bed storage	Bed storage has been incorporated and provisioned within the design.
SCHN staff (Allied Health Team)	Storage of therapy equipment on wards	Multipurpose therapy spaces have been incorporated into the design and allocated

Stakeholder	Issues Raised	Response
		throughout the building inclusive of equipment stow away options.

In addition to the above, a summary of feedback provided by GANSW and the NSW Design Review Panel, and a response to issues raised is provided in the Architectural Design Report provided at **Appendix D.** Feedback has just been received from SDRP #4 which the project team are currently reviewing and will provide a response in the RTS submission.

7. ENVIRONMENTAL IMPACT ASSESSMENT

This section describes the way in which the key issues identified in the SEARs have been assessed. It provides a comprehensive description of the specialist technical studies undertaken regarding the potential impacts of the proposed development and recommended mitigation, minimisation and management measures to avoid unacceptable impacts.

7.1. BUILT FORM AND URBAN DESIGN

7.1.1. SEAR

SEAR Item 3 requires that the EIS address the height, bulk and scale of the proposal, design quality, canopy tree planting and landscaping and how the proposal achieves good environmental amenity.

7.1.2. Methodology

The proposed built form and urban design response are described and illustrated in the accompanying Architectural Plans (**Appendix C**) and Architectural Design Report (**Appendix D**) prepared by BLP and the Public Domain Design Report (**Appendix E**) prepared by Aspect Studios.

The Architectural Design Report includes a detailed site and context analysis, a visual impact assessment supported by photomontages and a CPTED assessment.

7.1.3. Assessment

Height, density, bulk and scale, setbacks

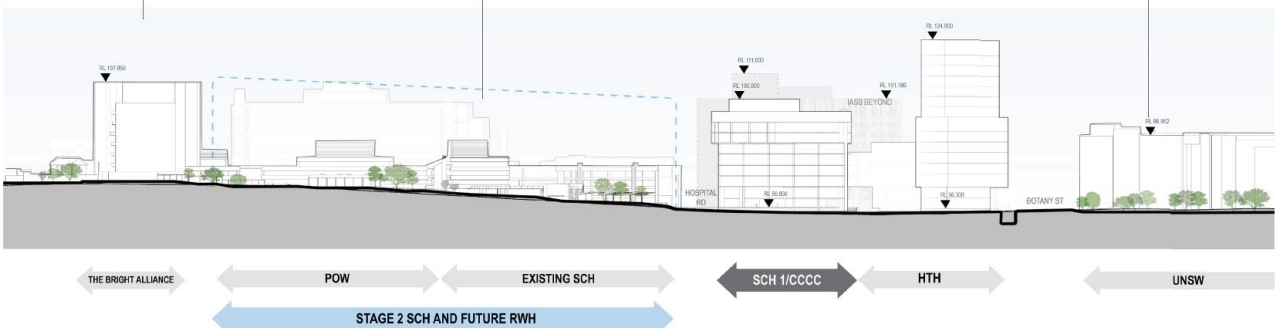
The height, bulk and scale of the proposed development has been informed by the context in which the site is located, as well as the Integration Design Principles and Urban Planning Design Principles described in the Architectural Design Report and **Section 3** of this EIS.

Figure 29 Built Form Context

Figure 14 The Bright Alliance

Figure 15 Prince of Wales Hospital

Figure 16 UNSW Wallace Wurth Building



Source: BLP

The RHIP differs in character and scale to the surrounding predominantly low-density residential context to the north and south of the site.

The proposed height, bulk and scale of the SCH1/CCCC development uses the 10-storey IASB building to the south as a key reference for defining its height and scale. The proposed development is also compatible with the height, bulk and scale of the Dickinson Building, Parkes Building and The Bright Alliance on the

RHC, as well as a number of buildings on the adjacent UNSW campus including the Lowy, Wallace Wurth and Biosciences buildings to the west of the site.

The siting of the proposed development has been informed by the street setback requirements prescribed in the Randwick DCP 2013 as well as the design strategies for setbacks identified in the GRUM.

Internally, separation distances between the proposed development and the IASB to the south and the proposed HTH to the west allow for the publicly accessible, landscaped open spaces between buildings and permeability through the RCR precinct.

Design quality and built form

The design of the proposed development has been guided by the following built form principles:

- Modulation of its built form to mitigate impact height, bulk and scale.
- Integration with adjacent development, both existing and future.
- Presentation of a good civic façade.

The building massing and height have been modulated to reduce impacts on surrounding buildings and create an articulated and appropriately scaled built form.

The built form has been organised into three (3) parts in order to minimise impacts on the residential areas to the north – the Ground Plane, Mid-storey and Upper-storey. These elements have been articulated to avoid a 'high wall' being presented on any side.

The design quality and built form references the site's historical ecology located between two sand dunes and where saltwater meets freshwater. In this regard, the built form and materiality have been designed to reflect the themes of Wetlands, Sand Dunes and Sea Cliffs.

Ground Plane and Level 01

The materiality of the ground plane and Level 01 references the site's unique wetland ecology and is designed to merge with the surrounding endemic landscape design. Coloured back glass colourations, inspired by the local wetlands will wrapped these areas. This also provides an opportunity to overlay an artist led interpretative interlay, drawing on stories of the local area. The ground plane 'pods' to the west will be clear glass to merge seamlessly with the external landscape plaza.

The entry points to the north, south and west will also have a wall of vertical green to mark the public entry points. The external soffit and internal ceiling of the ground floor will have a similar treatment to blur the line of internal and external areas.

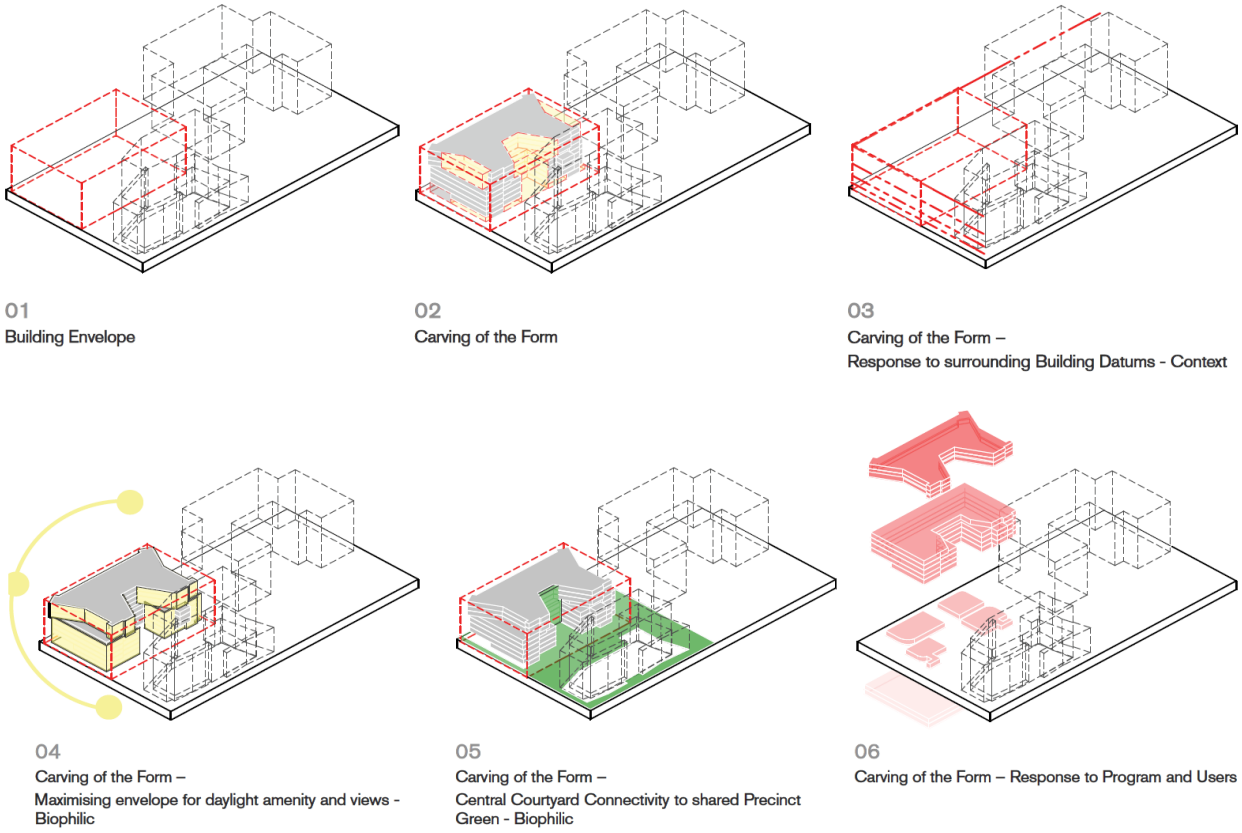
Midstorey and Upperstorey

The midstorey (L02- 05) is comprised of a simple, rectilinear form. Sitting above the midstorey is the sculptured form of the upperstorey (L06-09). To emphasis the building's unique form, a common façade approach has been adopted to the north, east, south and partially to the west. The materiality draws inspiration from the horizontal movement and shifting sand dunes and the horizontal striation of sea cliffs, characteristic of the local environment.

The façade will employ a series of shimmering white metallic finished aluminium panels folded to bounce light and create shadow play across the façade surfaces. The metal panels are organised in a series of horizontal bands, with directional changes in the folds, around the forms' perimeter to create a shifting shadow play as the sun moves across the surface, throughout the day.

A monochrome colour palette is proposed, referencing the sand dunes and sandstone sea cliffs, as well as, allowing the proposed SCH1/ CCCC to sit contextually within the surrounding building context. A secondary layer of sun shading to glazing elements is proposed for environmental control and will reference in their colouration, the paperbark 'skins' that occupy the Lachlan Swamp and add a playful colour overlay onto a neutral backdrop.

Figure 30 Built Form Massing



Source: BLP

Public domain

Continuous and activated edges at street level are proposed with retail and active social uses providing amenity to the precinct's public realm to activate the street, pedestrian pathways and the central courtyard.

The site is highly permeable with public through-site links to accommodate pedestrian traffic to the proposed development and surrounding buildings.

The proposed public domain response recognises the important role that tree canopy coverage and tree planting play to mitigate the impacts of urban heat island and their contribution to enhance biodiversity on the site.

The NSW Government has set a target of 40% for increasing tree canopy cover across Greater Sydney by 2030. To align with this target, Randwick City Council has endorsed a tree canopy target of 50% increase in total tree canopy coverage by 2030 across the LGA.

The proposed development includes **15.5%** site canopy cover.

Such outcome positively contributes to the NSW Government and Randwick Council tree canopy cover targets and represents a vast improvement on the limited trees and vegetation that exist on and surrounding the site.

Figure 31 Tree Canopy Cover

Source: Aspect

The proposed landscape response provides a green outlook offering spaces of healing and engagement for children of all ages, families, carers, patients, and staff.

Internal Amenity

The proposed development will achieve a high degree of internal amenity for patients, staff and visitors to the hospital.

The north-south orientation of the site facilitates optimum solar access and daylight to the site. Further, the built form has been designed to maximise natural daylight and sunlight to occupied areas of the hospital and public domain.

Sustainable building design initiatives have been incorporated into the design of the proposed development, as outlined in the ESD Report (**Appendix O**) which promote a high degree of internal amenity. These include:

- The promotion of natural daylight and views.
- High levels of Indoor Air Quality (IAQ).
- Creation of healing environments.
- Thermal, visual and acoustic comfort.

The landscape strategy provides a green outlook, offering spaces of healing and engagement.

A number of landscaped outdoor spaces are proposed including a central courtyard, a children's play area, potential outdoor cinemas, a shared zone and potential pet area as well as various gardens and informal play opportunities. Equitable access is provided to each of these areas from the hospital, surrounding streetscapes and other developments throughout the RHIP.

Views to planting from within the hospital are achieved through provision of roof and façade planting.

7.1.4. Mitigation Measures

No mitigation measures are required.

7.2. ENVIRONMENTAL AMENITY

7.2.1. SEAR

SEAR Item 4 requires the EIS to assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts.

7.2.2. Methodology

The following studies and reports have been prepared to address this SEAR:

- Shadow diagrams prepared by BLP included in the Architectural Plans package at **Appendix C.**
- A visual impact assessment supported by photomontages included in the Architectural Design Report and **Appendix D**.
- A Lighting Strategy prepared by JHA at **Appendix F**.
- An Environmental Wind Assessment prepared by Arup, provided at **Appendix G**.

7.2.3. Assessment

Solar Access and Overshadowing

The accompanying shadow diagrams prepared by BLP show existing and proposed shadows as a result of the proposed development at 9am, 12pm and 3pm on 21st June (worst case) and 21st December (best case).

As the site is located to the south of the residential properties addressed to High Street, these remain unaffected by shadows cast by the proposed development.

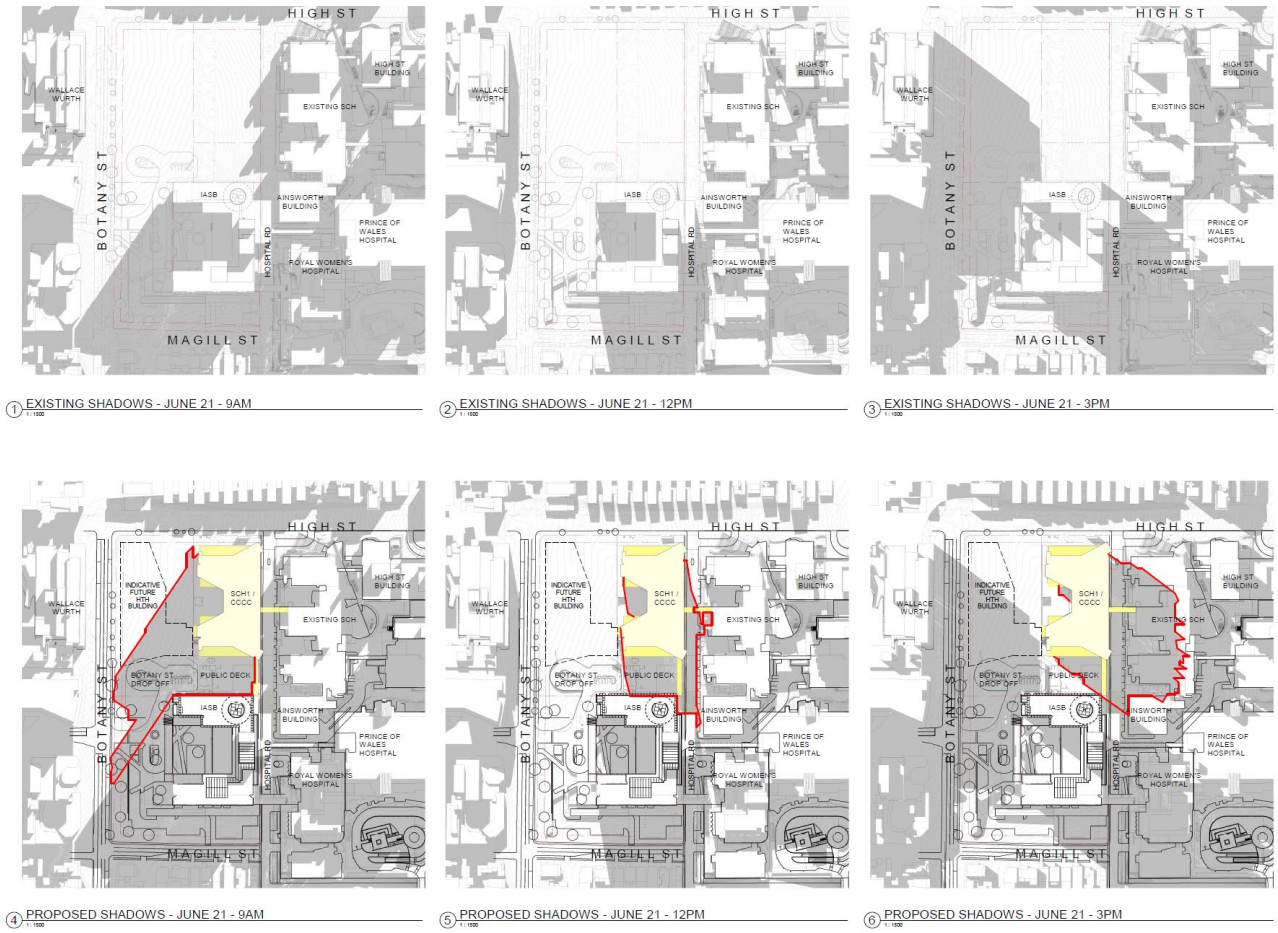
Due to the SCH1/CCCC location in the north-east of the RCR site, there will be some overshadowing of the proposed HTH and IASB in the morning hours, partial overshadowing of the IASB in the middle of the day and overshadowing of the existing SCH in the afternoon hours.

The majority of shadows to the proposed HTH will fall on the entry driveway from Botany Street and the south-eastern podium that will link to the SCH1/CCCC.

Importantly, the central Pedestrian Plaza between the subject development and the proposed HTH to the west will receive abundant solar and daylight access at midday and in the afternoon hours.

The shadows cast on the IASB in the morning and midday hours will mainly fall on the northern elevation of the building, noting that the IASB already overshadows its western forecourt at this time. Overshadowing from the SCH1/CCCC will not inhibit solar access to the central IASB courtyard in the afternoon hours.

Figure 32 Existing and proposed Shadow Diagrams at 9am, 12pm and 3pm on June 21st.



Source: BLP

Privacy

The proposed use of the development is not considered to generate any unreasonable visual privacy impacts to the residential development to the north.

The busiest public area, the ED is located at Level B1 and will therefore not create any visual privacy impacts.

The upper levels of the proposed development have specialised uses which are not considered to generate any unreasonable overlooking or privacy impacts.

Furthermore, the proposed development is separated from the residential uses to the north by over 30m. Some of these residential properties have trees within their front boundaries thereby screening the proposed development from view.

Visual Analysis

It is considered that the proposed development will have the most significant visual impact when viewed from High Street, however the visual impact is considered appropriate in the context of the RCR Project and broader RHIP and therefore compatible with the emerging character of the area.

Figure 33 Visual Impact Assessment Photomontages

Figure 74 View 01 - Existing

Figure 75 View 01 - Proposed

Figure 76 View 02 - Existing

Figure 77 View 02 - Proposed

Figure 78 View 03 - Existing

Figure 79 View 03 - Proposed

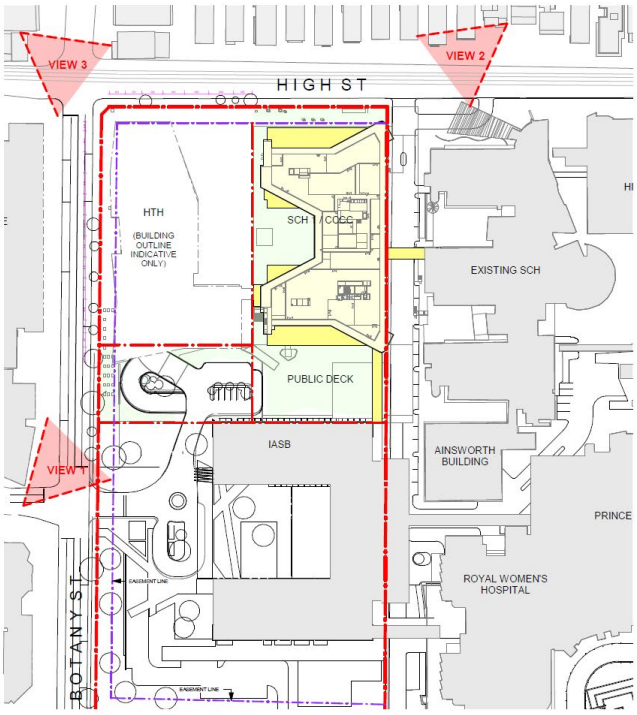


Figure 80 View 01 - Keyplan

Source: BLP

A visual analysis has been undertaken by BLP (**Appendix D**). The photomontages prepared for the visual analysis demonstrates that while the proposed development will be visually prominent when viewed from High Street, on balance the impact is considered reasonable for the following reasons:

- The 9-storey built form is compatible in scale with the 10-storey IASB under construction to the south and the proposed 15-storey HTH adjoining the site to the west.
- On completion of the proposed HTH, the proposal will not be isolated or visually prominent.
- The proposed height, bulk, scale and use is consistent and compatible with the wider RHIP and future character of this side of High Street.
- The proposal has a high-quality architectural presentation which includes quality materials and landscaping both at ground level and on the roof and facades.
- The massing of the proposed built form has been carefully considered to reduce perceived bulk and scale.
- The proposed built form will not be responsible for any unreasonable environmental impacts on sensitive uses, including the residential development to the north and heritage items in proximity to the site.
- The proposed development achieves the strategic intent for the site by promoting integration with the RHIP, creating jobs and promoting public transport patronage.

Lighting

As set out in the Lighting Strategy at **Appendix F**, external lighting will be provided to the perimeter of the SCH1/CCCC in accordance with AS/NZ 1158, Protecting People and Property (NSW Health Policy) and HI Standards. Entrances will be illuminated through carefully detailed schemes that incorporate both internal and external sources. Appropriate categories of lighting shall be selected in accordance with guidelines set out in AS1158.

Building perimeter lighting shall be controlled by an intelligent lighting control system that will interface with the other precinct partners. Controls such photo-electric cells and time clock control shall be provided.

External walkways across the podium will be illuminated to meet the requirements of AS/NZ 1158. It is proposed a mixture of pole top, bollard and wall mounted lighting shall be strategically placed and

coordinated with the landscape architect to provide the required lighting levels and also provide specialist feature lighting where needed.

Lighting across the podium shall be coordinated with the other precinct partners. This is to ensure unified changeover of the lighting and to optimize the overall lighting design.

The loading dock entrance will be designed to meeting AS1680. Lighting levels shall be carefully selected so the transition between inside and out shall reduce eye strain and glare as far as practicable and to the requirements of AS1680.

Intensification

The SCH1/CCCC will accommodate approximately 516 FTE employees as well as 89 overnight beds, 39 day beds and 4 clinical trial beds.

An assessment of the proposed intensification on the surrounding road network, public transport network and parking availability is provided in **Section 7.3** of this EIS.

In summary, the Traffic and Transport Assessment Report prepared by Arup (**Appendix H**) has determined that the traffic generation associated with the operation of the proposed development is minimal and can be accommodated by the existing intersection capacity.

Furthermore, there is sufficient public transport capacity (specifically light rail) to accommodate increased patronage.

The proposed onsite parking of up to 50 visitor bays in combination with the existing RHC parking can sufficiently accommodate the proposed outpatient/visitor demand.

No additional employee parking is proposed as part of the SCH1/CCCC development footprint due to the highly accessible nature of the site and the potential capacity within the main RHC car park. The Traffic and Transport Assessment Report determines that there is opportunity to improve the efficiency of existing RHC parking facilities to increase parking capacity. In addition, the mode-share shift to sustainable transport from car dependence promoted as part of the RHC Green Travel Plan, further supported by the provision of shared campus EOT facilities as part of the IASB Project, will ensure that there is sufficient parking capacity to meet employee demand. The RHC Green Travel Plan is appended to the Traffic and Transport Assessment at **Appendix H** for reference.

It is therefore considered that there will be no significant adverse impacts associated with the intensification of the site.

Wind Impacts

Arup has prepared a quantitative assessment of the wind impacts associated with the proposed development on the pedestrian level wind comfort in and around the site. The Environmental Wind Assessment (**Appendix G**) considers three (3) scenarios – the existing arrangement, the proposed development on its own and the proposed development with the proposed neighbouring HTH building constructed.

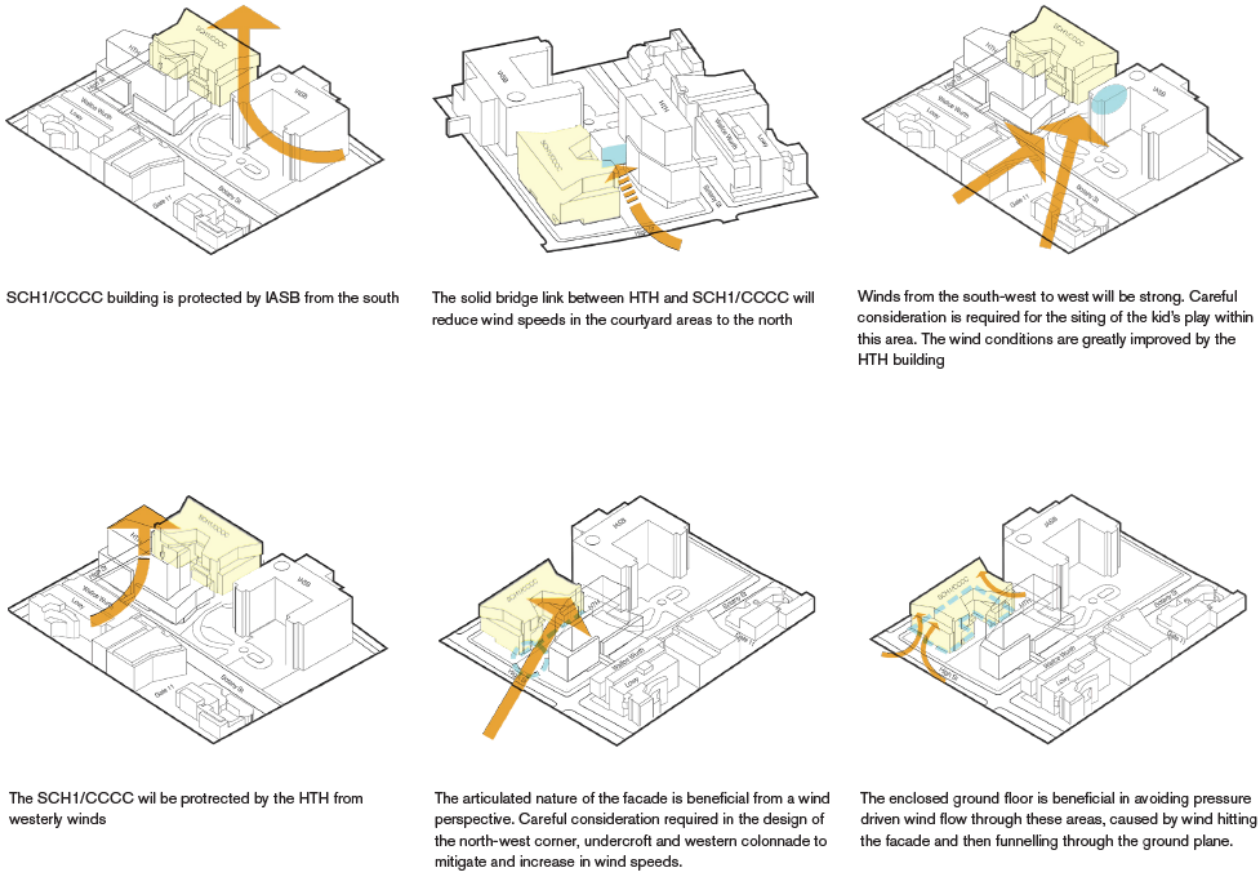
The assessment has found that from a pedestrian safety perspective, all locations pass the safety conditions in existing and proposed scenarios. In future scenarios, some localised areas exceed the safety criteria, however these areas are concentrated in the middle of Botany Street away from pedestrian footpaths, and on the raised area between the IASB and the proposed HTH building, where a solid balustrade (recommended to be 1.8m high at the corner section) would provide local amelioration to pedestrians.

In terms of pedestrian comfort, with the inclusion of the proposed and future buildings, the wind conditions around the site are generally classified as suitable for pedestrian standing and walking with areas suitable for pedestrian sitting, and smaller localised areas exceeding the walking criterion.

The wind conditions on all pedestrian accessways in the surrounding streets meet the walking criteria and are therefore considered suitable for the intended use of the space. The wind conditions at all the recessed entries are calm and suitable for the intended use.

The assessment notes that the architectural design has considered wind impacts throughout the design process and therefore most mitigation measures have already been incorporated into the design such as the U-shape built form, enclosed ground floor with recessed entries and elevated setbacks above ground level.

Figure 34 Potential wind impacts on proposed development



Source: BLP

7.2.4. Mitigation Measures

Lighting

All external lighting shall strictly comply with the requirements of AS4282 “Control of the obtrusive effect of outdoor lighting”. All external lighting shall have glare control to reduce spill lighting and shall be specified with the appropriate cut off angles to control the lighting.

Wind

Further liaison with the design team will be undertaken during the next phase of the development to incorporate further mitigation strategies as appropriate in the north-west colonnade when only the SCH1/CCCC building is constructed.

This could be ameliorated by partially blocking the colonnade along the north and west facade with the inclusion of a facia or balustrade, the inclusion of landscaping to the north and/or hanging artwork under the colonnade.

7.3. TRANSPORT AND ACCESSIBILITY

7.3.1. SEAR

SEAR Item 5 requires the EIS to include a transport and accessibility impact assessment which includes, but is not limited to the following:

- analysis of the existing transport network
- details of the proposed development
- analysis of the impacts due to the operation of the proposed development

- analysis of the impacts of the traffic generated during construction of the proposed development, including:
- a preliminary Construction Traffic and Pedestrian Management Plan.

7.3.2. Methodology

A Traffic and Transport Assessment has been prepared by Arup and is provided at **Appendix I**. The report provides an overview of the existing transport conditions associated with the site, and assessment of the proposed development in regard to traffic demand, generation, access and impact on surrounding area.

The Traffic and Transport Assessment includes a Preliminary Construction Traffic and Pedestrian Management Plan (**CTPMP**) to assess the proposed access and operation of construction traffic associated with the proposed development with regard to safety and capacity.

The Traffic and Transport Assessment considers the cumulative impact of construction traffic and operational traffic from the proposed development, the proposed HTH development and the IASB development currently under construction.

7.3.3. Assessment

Existing Transport Network

The existing transport network surrounding the site is shown on the map below:

Figure 35 Existing Transport Network

Source: Arup

Traffic surveys were undertaken by Arup in 2017 and 2019 in order to understand the current performance of roads and intersections proximate to the site. A comparison of the midblock volumes (two-way) on Botany Street and Barker Street between the two years has demonstrated there is generally a decrease in traffic volumes, as shown in the tables below.

Table 11 Existing Traffic Volumes

Road	**2017 AM Peak**	**2019 AM PEAK**	**Difference (relative)**	**Difference (%)**
Botany St	1,100	1,013	-87	-8
Barker Street	1,200	1,157	-43	-3.5
Road	**2017 PM Peak**	**2019 PM Peak**	**Difference (relative)**	**Difference (%)**
Botany Street	1,200	968	-232	-19
Barker Street	1,300	1,337	+37	+2.8

This trend is likely to reflect future travel behaviours that will see a shift to public and active transport use.

Key intersections have been modelled using SIDRA intersection analysis to determine the current performance. The modelling assigns a grade to each intersection from A (good operation) to F (unsatisfactory with excessive queuing).

Figure 36 Existing intersection volumes at AM and PM peak hour

Source: Arup

The analysis was based on traffic volumes recorded in the traffic survey undertaken in 2019.

The intersection modelling demonstrates that of the 8 intersections analysed, 3 operate well (Grade A), 1 operates well with acceptable delays and spare capacity (Grade B), 1 operates satisfactorily (Grade C), 1 operates near capacity (Grade D) and 2 operate at capacity (Grade E). None of the surrounding intersections operate unsatisfactorily with excessive queuing (Grade F).

The intersection modelling shows that the Barker Street/Avoca Street intersection is operating over capacity in both the AM and PM peak period. In PM peak, traffic queuing along Barker Street from the Avoca Street intersection affects the operation of the Easy Street roundabout.

A traffic survey of the existing SCH porte-cochere drop-off was undertaken for the Traffic and Transport Assessment. The survey established that the 7 timed parking bays could accommodate 336 vehicles during a 12-hour period based on 4 vehicles per hour per bay (15 minute time restriction).

The survey results show that 95 vehicles accessed the seven bays during the 12 hour survey time, representing an operational capacity of approximately 30%.

There is therefore opportunity to improve operational efficiency of this facility.

Proposed Access and Parking

The proposed vehicular, pedestrian and bicycle access and parking arrangements are described in **Section 3** of this EIS and in the Traffic and Transport Assessment at **Appendix H**.

The following parking is proposed on site:

- 50 visitor car parking bays will include:
  - 1 funeral/ coroner bay;
  - 1 doctor's bay; and
  - 2 ambulance patient transfer bays.
- Ambulance parking including:
  - 4 reverse-in spaces for ambulances;
  - 2 parking spaces for ambulances to reposition and restock after offload; and
  - 1 police parking bay.
- Loading dock including:
  - 2 Roll-on Roll-off (RORO) bays;
  - 3 contractor/ FM bays;
  - 3 medium rigid vehicle bays; and
  - 1 heavy rigid vehicle bay.
- Shared access to proposed campus-wide EOT facilities being delivered with the IASB that will include:
  - 200 bicycle parking bays
  - 350 lockers
  - 20 showers
  - 4 toilets

No additional staff parking is proposed as part of the SCH1/CCCC development footprint.

Parking Demand

The Traffic and Transport Assessment has assessed the existing visitor and staff parking demand to determine if the above parking provision is sufficient to accommodate the projected increase in levels of activity associated with the proposed development.

Consideration has been given to the approximately 2,300 existing on-campus car parking bays available to staff and visitors within the RHC – 1,483 staff spaces and 819 visitor spaces.

Parking occupancy surveys of the RHC main car park show an average peak occupancy rate of 91% on a weekday between 9am to 3pm, which is considered to represent maximum capacity where drivers have difficulty in locating parking spaces. The Traffic and Transport Assessment considers that a dynamic wayfinding system such as smart parking technology has the potential to increase the operational capacity to 95%. A 4% increase in efficiency for the main RHC car park could therefore provide an additional capacity of up to 65 car spaces during peak times.

Based on a forecasted increase of 70 beds for the SCH1/CCCC by 2031, visitor and outpatient parking demand has been projected at an additional 60 parking spaces required by 2031 beyond the approximate 50 spaces proposed on Level B2. The proposed improved efficiency in the main car parking would therefore cover the additional forecasted SCH1/CCCC visitor parking demand.

Staff parking demand has been assessed under three (3) scenarios to provide a holistic understanding of the project impact:

- **Scenario 1** – No additional mode shift (from 43.6%) as proposed by the IASB in the 2027 project scenario. This scenario considers the potential for staff parking demand to be accommodated within the main car park. In this scenario, 89 additional staff spaces are required to be accommodated in the main car park to offset staff parking demand.
- **Scenario 2** – Improved efficiency in the main car park. This scenario provides an additional 65 parking bays for visitor/outpatient and staff based on improvements in efficiency in the existing main car park.
- **Scenario 3** – No additional staff parking. Only visitor/ outpatient demand is accommodated.

The proposed approach for the development is the condition outlined under Scenario 2. Based on the Traffic and Transport Assessment, a reduction in staff driver mode share across the campus of 0.9% is required by 2031 to offset the increase in staff parking demand.

It can therefore be concluded that the additional parking demand associated with the proposed SCH1/CCCC can be met by:

- The provision of 50 visitor car spaces on site
- Improved efficiencies in the main car park utilising an additional 65 car spaces; and
- A driver mode shift of 0.9%.

Traffic Impacts

The key objectives of the proposed development include improving visitor experience and optimising existing parking infrastructure. Therefore, the project proposes the following:

- A new emergency drop-off facility accessed via the new road off Botany Street;
- A new car park which provides up to 50 visitor parking bays;
- Application of a mode shift campaign to encourage use of more sustainable transport modes; and
- Improve the efficiency of the existing RHC car park through wayfinding and smart parking technology to access additional parking capacity.

The total trips generated by the project have been predicted for the year 2031 and are summarised in the table below. This assessment also includes the trips generated by the IASB and proposed HTH to determine the cumulative impact.

Table 12 SCH1/CCCC Traffic Generation

Traffic Source	2031 Daily Trips (two-way)	2031 Peak Hour Trips (two-way)
Visitor/ outpatient (visitor car park)	464	32
Visitor/ outpatient (existing main car park)	52	4
Visitor/ outpatient (drop off)	166	11
Staff	284	86
SCH1/CCCC ED	360	14
SCH1/CCCC logistics	178	20

Traffic Source	2031 Daily Trips (two-way)	2031 Peak Hour Trips (two-way)
Total SCH1/CCCC	**1,504**	**167**
UNSW HTH	130	20
IASB drop-off	1,720	160
Total (SCH1/CCCC, HTH, IASB)	**3,354**	**347**

The new signalised intersection at Botany Street and UNSW Gate 11 will act as the main vehicle access for the project, the IASB and proposed HTH building.

A traffic assessment undertaken for the IASB project determined that the Botany Street and UNSW Gate 11 intersection had the capacity to accommodate an additional 360 two-way trips during peak hour for the proposed SCH1/CCCC development and proposed HTH development.

The subject Traffic and Transport Assessment prepared by Arup has determined that the proposed development combined with the HTH development will generate a total of 66 two-way daily trips during peak hour. The assessment concludes that the Botany Street and UNSW Gate 11 intersection is therefore anticipated to operate within practical capacity.

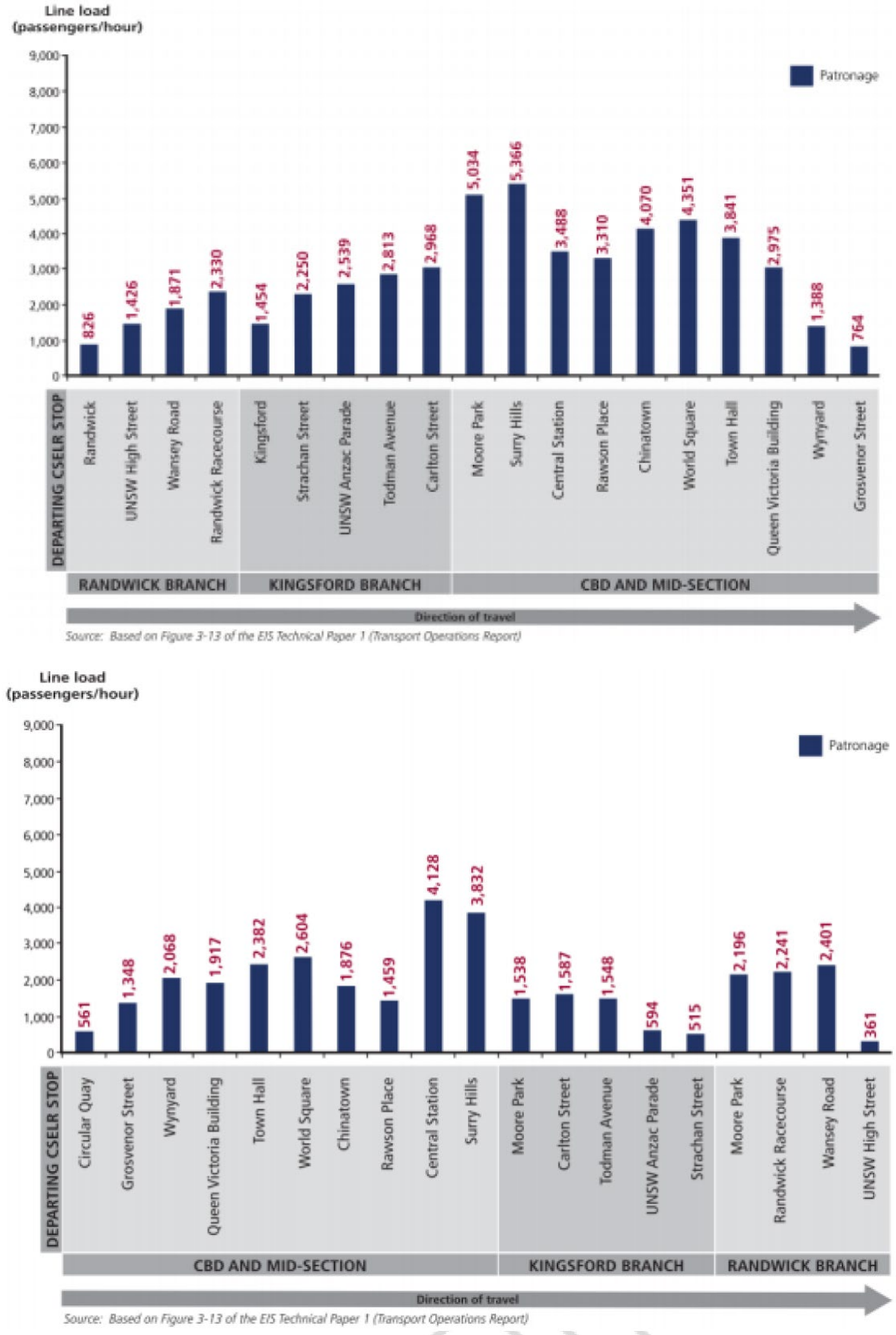
Furthermore, the intersection assessment undertaken by Arup indicates that the project will have a minimal impact on the wider road network as peak hour trips generated by the proposed development representing a 6%-7% proportion of the background traffic on Botany Street.

Light Rail Capacity

An assessment of the CSELR capacity indicates that there is sufficient forecast capacity to accept any increased patronage from staff and visitors to the proposed development.

The operational Light Rail Vehicle (LRV) has a capacity of up to 6,000 passengers per hour. The CBD bound and Randwick bound line loading for the 2021 morning inbound and outbound peak scenario is shown in **Figure 36** below.

Figure 37 CSELR peak line loading



Source: Arup

This is further supported by the fact the CSELR proposal includes the capability to increase the frequency of LRVs to an operational capacity of up to 9,000 passengers per hour if it is identified that there is sufficient demand for this level of service.

Construction Traffic and Pedestrian Management Plan

A preliminary Construction Traffic and Pedestrian Management Plan (CTPMP) is included in the Traffic and Transport Assessment which assesses the proposed access and operation of construction traffic associated with the proposed development in regard to safety and capacity.

The preliminary CTPMP identifies construction vehicle routes, types and traffic volumes.

Construction activities are estimated to occur over a three-year period, commencing in early 2022.

Existing kerbside space adjacent to work sites may be temporarily required during construction due to potential constraints on parking or unloading / pick up locations onsite. The Contractor will be required to apply for works zone from the relevant authority should this be required.

Construction parking will not be provided on site or in the immediate streets to the site and it is the responsibility of the Principal Contractor to enforce this on a day-to-day basis. Access to any of the RHC car parks is strictly prohibited. Given the site is highly accessible by public transport, construction staff will be encouraged to either car-pool or arrive to the site via public transport or active modes of transport.

The following overall principles for traffic management during construction of the proposed works have been established to minimise impacts on the locality and ameliorate cumulative impacts associated with other construction activities in the locality:

- Maintain access to properties located in the vicinity of the site at all times;
- Manage and control construction traffic movements on the adjacent road networks and vehicles movements to and from the construction site;
- Limit the interaction of construction traffic with hospital traffic, especially heavy vehicle and light vehicle conflicts;
- Trucks to enter and exit the site in a forward direction;
- Maintain traffic capacity at intersections and mid-block in the vicinity of the site;
- Restrict construction vehicle activity to designated truck routes in the area;
- Construction access driveways and on-street work zones to be managed and controlled by site personnel;
- Provide an appropriate environment for pedestrians at all times;
- Maintain convenient access and circulation for public transport;
- Pedestrian movements adjacent to construction activity and across construction access driveways will be managed and controlled by an authorised and qualified traffic controller;
- Pedestrian warning signs and construction safety signs/devices to be utilised in the vicinity of the site and to be provided in accordance with WorkCover and any applicable legislative requirements;
- Construction activity is to be carried out in accordance with RCC’s approved hours of work; and

7.3.4. Mitigation Measures

Construction Traffic Management

The Principal Contractor will prepare a comprehensive CCTPMP with Traffic Control Plans prior to commencement of works, detailing specific methods of safely managing construction vehicle traffic within the surrounding area and any required road closures for mobile crane days if required.

Mitigation measures would be adopted during the construction phase to ensure traffic movements have minimal impact on surrounding land uses and the community in general, and would include the following:

- Truck loads would be covered during transportation off-site for sensitive loads.
- Establishment and enforcement of appropriate on-site vehicle speed limits (20km/h), which would be reviewed depending on weather conditions or safety requirements.
- All activities, including the delivery of materials would not impede traffic flow along local roads.

- Neighbouring properties would be notified of construction works and timing.
- 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.

Operational Traffic Management

SCH1/CCCC will actively promote the take up of sustainable travel modes and initiatives set out in the RHC GTP which are further supported by the public transport infrastructure surrounding the site and shared access to proposed campus-wide EOT facilities for staff, being delivered as part of the IASB development. This will reduce the traffic impact to the greater traffic network.

The RHC GTP is appended to the Traffic and Transport Assessment at **Appendix H** for reference.

7.4. HERITAGE

7.4.1. SEAR

SEAR Item 6 requires the EIS to provide a statement of significance and an assessment of the impact on the heritage significance of the heritage items adjacent to the site.

7.4.2. Methodology

A Heritage Impact Statement (**HIS**) has been prepared by Urbis and is provided at **Appendix I**.

The HIS has been prepared in accordance with the NSW Heritage Division guidelines 'Assessing Heritage Significance', and 'Statements of Heritage Impact'. The philosophy and process adopted is that guided by the Australia ICOMOS Burra Charter 1999 (revised 2013).

Site constraints and opportunities have been considered with reference to relevant controls and provisions contained within the *Randwick Local Environmental Plan (LEP) 2012* and the Randwick Comprehensive Development Control Plan (DCP) 2013.

The HIS is supported by advice prepared by Casey & Lowe dated 04/08/2020 (**Appendix L**) confirming that the proposal will not impact any relics or significant historical European archaeological remains and that there will be no impact on significance.

7.4.3. Assessment

The subject site is not a listed heritage item and is not located within a conservation area. The site is located within the broader vicinity of heritage items and conservation areas as outlined below:

Table 13 Heritage items in the vicinity of the site

Item No.	Description	Heritage List
388	Prince of Wales Hospital group (Main Block, Catherine Hayes Hospital and Superintendent's residence) at 61 High Street	Schedule 5, Randwick LEP 2012
C12	High Cross Heritage Conservation Area	Schedule 5, Randwick LEP 2012
307	Blenheim House and outbuilding at 17 Blenheim Street	Schedule 5, Randwick LEP 2012
C15	Randwick Junction Heritage Conservation Area	Schedule 5, Randwick LEP 2012
316	Semi-detached pair at 17–19 Clara Street	Schedule 5, Randwick LEP 2012
387	"Cotswold", late Victorian cottage at 4 Hay Street	Schedule 5, Randwick LEP 2012

Item No.	Description	Heritage List
390	Randwick Destitute Children's Asylum Cemetery at 61 High Street	Schedule 5, Randwick LEP 2012

The site is currently a vacant plot of land following the demolition of all previous dwellings under a previous development consent. The subject site does not meet the requisite threshold for heritage listing under any of the seven (7) criteria outlined by the Heritage Council of NSW for Assessing Heritage Significance.

The following table outlines the established statements of significance for the heritage items in the broader vicinity of the subject site.

Table 14 Statement of Significance for Heritage items in the vicinity of the site

Item No.	Description	Statement of Significance
388	Prince of Wales Hospital group (Main Block, Catherine Hayes Hospital and Superintendent's residence) at 61 High Street	**Main Building:** A fine sandstone building designed by the renowned architect ET Blackett which is part of a notable group of mid-Victorian buildings with significant townscape value to High Cross Reserve in Randwick. Important associations with medical and military history in Australia. **Outpatients Building:** A fine building which forms part of the group of mid-Victorian sandstone buildings with notable townscape value to High Cross Reserve at Randwick. Important associations with the medical and military history of Australia. **Superintendent's residence:** This building designed by the architect J Horbury Hunt is one of a fine group of mid-Victorian sandstone buildings in the Prince of Wales POWH townscape. Important associations with the medical and military history of Australia.37
C12	High Cross Heritage Conservation Area	The High Cross Conservation Area consists of High Cross Park, urban areas to the north-east and south, and part of the POWH to the west.
307	Blenheim House and outbuilding at 17 Blenheim Street	The oldest residence in Randwick, built and occupied by the Father of Randwick, Simeon Henry Pearce and his family up to the First World War. It is historically a most important part of the national estate. Pearce was responsible for the establishment of Randwick as an elite suburb, and for much of its early development.
C15	Randwick Junction Heritage Conservation Area	The Randwick Junction Conservation Area is the only conservation area within the City of Randwick that is

Item No.	Description	Statement of Significance
		focused on a commercial centre. It retains a coherent streetscape character of nineteenth and early twentieth century buildings. Within the conservation area there are two distinct groupings of commercial buildings. These are Belmore Road and the Coach and Horses grouping (centred on the intersection of Alison Road and Avoca Street).
316	Semi-detached pair at 17–19 Clara Street	17 and 19 Clara Street, Randwick are examples of late Federation semi-detached cottages in the Randwick area. The dwellings are of aesthetic value as examples of substantially intact Federation semi-detached dwellings. The setting of the semi-detached cottages has been compromised by surrounding development, particularly the Coles Supermarket development adjacent. Constructed c1924, 17 and 19 Clara Street are excellent examples of Inter-War semi-detached cottages with influence of late Federation/Edwardian style illustrating the development and subdivision pattern in Randwick at the time. The cottages are substantially intact owing to their reinstated verandas featuring centrally located half-timbered roughcast gable, decorative timber veranda and joinery, and sandstone base. This semi-detached pair stands out within the streetscape of Clara Street, which is dominated by a shopping centre and apartments.
387	“Cotswold”, late Victorian cottage at 4 Hay Street	The ‘Cotswold’ at 4 Hay Street, Randwick is an example of a Victorian free-standing villa in the Randwick area. The dwelling is of aesthetic value as a substantially intact Victorian villa and is of historic value for its long association with the adjoining horse stables and for its association with the horse breeding and training activities traditionally associated with Randwick.
390	Randwick Destitute Children’s Asylum Cemetery at 61 High Street	The Randwick Children’s Asylum Cemetery Memorial Garden is an item of outstanding cultural significance. The Cemetery Memorial Garden, unlike most burial grounds in Australia, is marked not by monuments or even a developed landscape, but rather by the emotive association of its tragic history and sub-surface physical evidence provided by the remains of the children buried there. The Cemetery Memorial Garden consequently has a special sense of place and is held in high esteem by relatives of the deceased, local historians, Aboriginal people, others

Item No.	Description	Statement of Significance
		associated with the Asylum and the later Prince of Wales Hospital and the general community. The Memorial Garden has strong historic links with major development and changes regarding child welfare and the late nineteenth practise of philanthropy. The former Cemetery and the Asylum itself, typify attitudes towards welfare in general and destitute children in particular during this period. The operations of the Asylum and the experiences of the children who lived there span a crucial period encompassing moves from the establishment of such institution by concerned citizens or governments to greater emphasis on wider community care and fostering. The largest and one of only four known Children's Cemeteries in Australia that are associated exclusively with a welfare institution, the site is a rare research resource. The potential scientific data provided by the remains of this known population of deceased children, form a well-documented background, provides a rare, if not unique, physical resource for forensic and other anthropological studies and analysis. As well as this, purely scientific research, the individual graves may also provide primary evidence about the lives (and death) of the children that is separate from official reports and accounts - a unique chance for these children to reveal their own story.

The proposed development has been assessed to have no adverse impact on the significance of the heritage items and conservations in the vicinity of the subject site for the following reasons:

- All heritage items and conservation areas are to be wholly retained as is. No physical impacts are proposed as part of the subject development to any of the heritage items and conservation areas.
- The subject property is located in the broader vicinity of heritage items and conservation areas only. All heritage items are separated from the subject property by existing development and therefore there are no visual links between the subject site and vicinity heritage items. No significant views towards any of the existing heritage items will be impacted by the proposal.
- The proposal sits within an existing and expanding health and education precinct and is consistent with the existing development and character of the area, and therefore will have no negative visual impacts and will not adversely change the character of the area.
- The subject site will be developed with a fit for purpose, contemporary health facility appropriate for the health and education precinct within which it is located. The heritage items and conservation areas in the broader vicinity of the site will not be adversely impacted by the contemporary design of the proposed development.
- The proposal will expand the existing health facilities in the precinct thereby reinforcing the significance of the Prince of Wales Hospital Group heritage item in the vicinity, and supporting the precinct as an important and historic provider of health related services.

7.4.4. Mitigation Measures

No mitigation measures are required from a heritage perspective.

7.5. ABORIGINAL CULTURAL HERITAGE

7.5.1. SEAR

SEAR Item 7 requires the EIS to provide an outline of Aboriginal cultural heritage assessment that has been undertaken at the site and surrounding area and identify the impacts, including possible impacts, of the project on Aboriginal cultural heritage values and outline the measures proposed to mitigate impacts.

7.5.2. Methodology

A supplementary Aboriginal Cultural Heritage Assessment Letter dated 05/03/2021 has been prepared by Mary Dallas Consulting Archaeologist (**MDCA**) for the proposed SCH1/CCCC Project and is provided at **Appendix K**. This supplementary assessment follows a suite of Aboriginal cultural heritage assessments carried out across the site and neighbouring sites, as identified below.

7.5.3. Assessment

An Aboriginal Archaeological Assessment of the Randwick Campus Redevelopment site was prepared in June 2018 by MDCA. Associated consultation was undertaken with the La Perouse Local Aboriginal Land Council (**LPLALC**).

Furthermore, a detailed Aboriginal Cultural Heritage Assessment Report (**ACHAR**) was previously prepared by MDCA, dated Oct 2018 for the ASB (SSD 9113) and later updated by MDCA in Aug 2019 for the IASB Addition (SSD 10339). This ACHAR is provided with the supplementary Aboriginal Cultural Heritage Assessment at **Appendix K**.

The supplementary assessment letter identifies that most of the subject site has been previously assessed within the Preliminary Aboriginal Archaeological Assessment, dated June 2018. The northern portion of the site (excluding Eurimbla Avenue and including the mid-to-south end of Hospital Road) was previously investigated and assessed under a Heritage NSW Aboriginal Heritage Impact Permit (AHIP).

The portion of the subject site that was not assessed consists of the northern portion of Eurimbla Avenue, which is no longer a public road. Part of the northern portion of the road lies adjacent to a significant archaeological and Aboriginal cultural area containing stone hearths and red ocherous material.

The letter concludes that the required consultation under the Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010) has been carried out and is ongoing for the RCR site, and on this basis, can be continued with only the LPLALC for the works to the northern portion of Eurimbla Avenue.

MDCA further concludes that monitoring under an Unexpected Finds Protocol is applicable to the northern end of Eurimbla Avenue. The remainder of the SCH1/CCCC site requires no further archaeological investigation.

7.5.4. Mitigation Measures

Excavations of the northern portion of Eurimbla Avenue are to be jointly monitored by MDCA and the LPLALC under a stop work provision and Unexpected Finds Protocol in the event of an unexpected find.

7.6. BIODIVERSITY

7.6.1. SEAR

SEAR Item 8 requires the EIS to provide a Biodiversity Development Assessment Report (BDAR) that assesses the biodiversity impacts of the proposed development.

7.6.2. Methodology

A Biodiversity Development Assessment Report (BDAR) has been prepared by Eco Logical Australia and is provided at **Appendix J.**

The BDAR has been prepared to meet the requirements of the Biodiversity Assessment Method 2020 (BAM) established under Section 6.7 of the NSW Biodiversity Conservation Act 2016 (BC Act). The Streamlined assessment module for Planted Native Vegetation (Appendix D in BAM 2020) was utilised for this development

7.6.3. Assessment

Native Vegetation

The majority of the site has been cleared of buildings and vegetation under a previous development approval. One planted native tree, *Tristaniopsis laurina* (Water Gum) was recorded on the western side of Hospital Road and is located on the boundary of the development site. The native vegetation was in a highly disturbed environment between an existing urban road and construction site. It is noted that this tree will be assessed for removal as part of a separate project under a different legislative pathway. Therefore, this SSD does not seek to remove any native vegetation.

Tristaniopsis laurina is not listed as a threatened species under the BC Act or EPBC Act. This species is not considered a locally indigenous species to the development site. Furthermore, *Tristaniopsis laurina* is often utilised in horticultural plantings including street tree plantings.

A desktop review based on OEH vegetation mapping (2016) identified that there is no remnant vegetation present in the development site or surrounding the development site. A literature review based on the Mitchell Landscape identified that the pre-European vegetation may have been present as Plant Community Type (PCT) 1793 Coastal Sand Bangalay Forest. *Tristaniopsis laurina* is not listed as a component of this PCT.

Given the highly disturbed environment of the development site, the immature nature of the specimen and the fact this planted native tree is not associated with locally indigenous PCT, it is considered that *Tristaniopsis laurina* has been planted as part of road side vegetation and is not remnant vegetation, not established for the recovery of a threatened species and it is not a conservation obligation. Therefore, the planted native vegetation does not require further consideration consistent with Chapters 4 or 5 of BAM 2020 provided that the vegetation does not provide habitat for threatened fauna species.

The development site does not contain any additional native vegetation.

The assessment of the planted native vegetation determined that the vegetation did not require the retirement of ecosystem credits.

Threatened Species

The field assessment carried out for the BDAR did not record suitable habitat features such as tree hollows, intact vegetation, foraging resources (nectar producing species), logs or leaf litter around the planted native vegetation or within the development site. Furthermore, the planted native vegetation is not connected to other areas of intact native vegetation. Therefore, the planted native vegetation does not provide suitable foraging or roosting habitat for threatened species.

The field surveys did not record any incidental sightings or evidence of threatened species credit species within the development site. No additional habitat features were recorded within the development site.

An assessment of threatened species habitats has determined that the development site does not provide habitat for threatened species. The retirement of species credit species is not required.

Serious and Irreversible Impact

Prescribed impacts were assessed as part of the development and it was determined that based on an absence of vegetation and buildings that there were no prescribed impacts for the development. Additionally, the development does not impact upon Serious and Irreversible Impact (SAII) candidate entities.

Matters of National Environmental Significance

There are no Matters of National Environmental Significance (MNES) within the development site affected by the proposed works. An assessment of the Commonwealth Significant Impact Criteria was not required under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act).

7.6.4. Mitigation Measures

The BDAR includes recommended measures to mitigate and manage biodiversity impacts at the development site before, during and after construction:

- Appropriate controls are to be utilised to manage exposed soil surfaces and stockpiles to prevent sediment discharge into waterways. Soil and erosion measures such as sediment fencing, clean water diversion must be in place prior the commencement of the construction work.
- Construction lights or development lights should be positioned to prevent shine into proposed new landscaped vegetation. Noise should be limited to approved construction hours only. Dust should be managed through an appropriate dust control management plan.
- Waste bins to be present on site. Covers to be used to prevent blown litter and the entry of pest animals or rain. Removal and appropriate disposal of general waste.
- Vehicles, machinery and building refuse should remain only within the development site. Washdown protocols for vehicles should be observed to prevent the entry of soil borne pathogens such as Phytophthora. Weed management to be undertaken where required. Weeds should be removed and handled in accordance with relevant Biosecurity Act protocols if high threat weeds are present.
- Construction staff to be briefed prior to work commencing to be made aware of any sensitive biodiversity values present and environmental procedures such as:
  - Site environmental procedures (sediment and erosion control, exclusion fencing and weeds)
  - What to do in case of environmental emergency (chemical spills, fire, injured fauna)
  - Key contacts in case of environmental emergency.
- It is recommended that landscaping in the development site considers the use of locally derived native species and those found within PCT 1793.

7.7. TREE REMOVAL AND LANDSCAPING

7.7.1. SEAR

SEAR Item 9 requires the EIS to provide an Arboricultural Impact Assessment and a detailed site-wide landscape strategy.

7.7.2. Methodology

An Arboricultural Impact Assessment (AIA) has been prepared by Eco Logical Australia to identify and assess the trees within the site that are likely to be affected by the proposed development. The AIA is provided at **Appendix M.**

The AIA has been prepared in accordance with the *Australian Standard 4970 Protection of Trees on Development Sites* (AS 4970).

In addition, a detailed landscape plan has been prepared by Aspect Studios and is provided at **Appendix E.**

7.7.3. Assessment

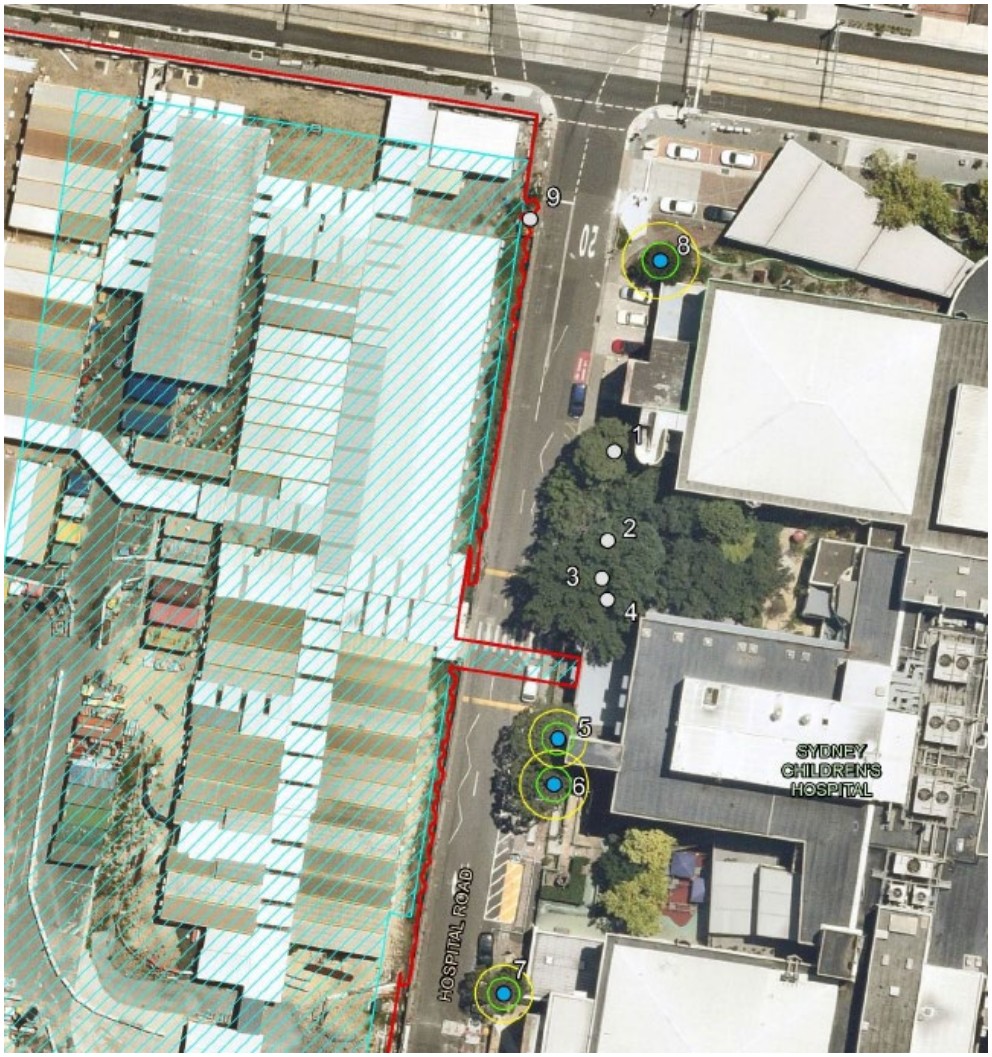
Arboricultural Impact Assessment

The site on which the proposed SCH1/CCCC is located has been previously cleared of trees and vegetation. The AIA identifies nine (9) trees in the vicinity of the site along Hospital Road for assessment. The trees are demonstrated on the map in **Figure 37** below.

The proposed development would significantly impact Tree 9 (>20% TPZ encroachment) and therefore would not be able to be retained, however it is noted that this tree is proposed to be removed as part of a separate application under a different approval pathway along with Trees 1 – 4. Therefore no trees are proposed to be removed as part of this SSD application.

The remaining trees (Trees 5, 6, 7 and 8) are subject to no impact (0% TPZ encroachment) and can therefore be retained.

Figure 38 Tree locations



Source: Eco Logical

Landscape Strategy

A public domain and landscape strategy masterplan has been developed by Aspect Studios for the RCR which results in an integrated, high-quality and consistent outcome that links the proposed SCH1/CCCC and HTH developments with the IASB and existing RHC.

The landscape strategy sets out the proposed planting across the SCH1/CCCC site, both at ground level and roof and façade planting.

The proposed landscape strategy allows for a green outlook from within the buildings, as well as providing high-quality landscaped public open spaces that reflect the history of place as well as provided spaces for healing and engagement for patients, families, staff, visitors and the public.

Access has been carefully considered in the public domain design due to the varying levels across the site. The design response achieves equitable access from the street to outdoor spaces and building entries.

The site is highly permeable with public through-site links to accommodate pedestrian traffic to the proposed development and surrounding buildings.

The proposed public domain response recognises the important role that tree canopy coverage and tree planting play to mitigate the impacts of urban heat island and their contribution to enhance biodiversity on the site.

The NSW Government has set a target of 40% for increasing tree canopy cover across Greater Sydney by 2030. To align with this target, Randwick City Council has endorsed a tree canopy target of 50% increase in total tree canopy coverage by 2030 across the LGA.

The proposed development includes 15.5% tree canopy cover on the site.

Such outcome positively contributes to the NSW Government and Randwick Council tree canopy cover targets and represents a vast improvement on the limited trees and vegetation that exist on and surrounding the site.

7.7.4. Mitigation Measures

The AIA makes the following recommendations to mitigate impacts on trees being retained:

- Stockpiling within the TPZ of Tree 5 needs to be relocated outside the TPZ. No-stockpiling of materials or contamination is to be within the TPZ or SRZ of subject trees to be retained.
- Consider some minimal pruning of overhanging branches in accordance with AS4373-2007 prior to using piling rig to avoid tearing tree branches during piling.

7.8. SOCIAL IMAPCTS

7.8.1. SEAR

SEAR Item 10 requires the EIS to provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020.

7.8.2. Methodology

A Social Impact Assessment (SIA) has been prepared by Urbis and is provided at **Appendix N.**

The SIA has been prepared in accordance with DPIE's *Social Impact Assessment Guidelines 2020* and Randwick Council's *Social Impact Assessment Guidelines for Assessing Development Applications* (2006).

7.8.3. Assessment

The potential social impacts arising from the proposed development have been assessed as being:

- **Improved medical services for children:** The new SCH will deliver a larger hospital with an expanded emergency department, new short stay unit and expanded spaces for clinical services. The new and improved services will also better connect with surrounding health and education buildings, enabling efficiencies and streamlining of services. The delivery of the new SCH building will likely have a very high positive impact on the community, and in particular on children requiring medical care.
- **Enhanced research opportunities to improve models of care:** The delivery of Australia's first CCCC will be a place for world class medical research and innovation into the treatment and prevention of childhood cancer. The centre will be a significant addition to health infrastructure in Australia, as well as a key anchor in the establishment of the Randwick Health and Education Precinct. The delivery of the CCCC will likely have a very high positive impact on the community.
- **Increased job opportunities:** The development of SCH1/CCCC will result in increased job opportunities in the health sector, both in clinical and research roles and retail. It is also likely that other key worker roles, such as cleaners and admin would be required to support the increase in floorspace and hospital staff. Increased jobs in health and education aligns with strategic goals to provide more jobs in the Randwick Health and Innovation Precinct. Increased job opportunities will likely have a high positive impact on the community.
- **Increase in open space and public domain areas:** The inclusion of multiple open and public domain spaces will provide patients and families, staff and the broader community with areas for passive recreation and respite, as well as more structured activities. Increase in open space and landscaping will likely have a high positive impact on the community.
- **Cumulative construction impacts:** It is likely that the local community immediately surrounding the site will experience cumulative construction related impacts from the development of buildings within RCR and other development projects. It is likely that cumulative construction impacts will have a short to medium term negative impact on the local community. This can be managed through implementation of site management principles, construction traffic procedures and ongoing implementation of the comprehensive communications strategy for the RHC.

- **Demand for parking:** Car parking demand at RHC is already at capacity. Without any additional staff car parking and initially similar staff travel behaviour, there is likely to be a short-term negative impact on staff and visitors. However, the implementation of the Transport Strategy which intends to shift staff travel behaviour to choose more sustainable methods of transport and potential improved efficiencies of the existing car park, lack of parking is likely to have a neutral long-term social impact.

Overall, the SIA has found that the delivery of SCH1/CCCC will likely have a very positive impact on the community. It will provide a significant addition to the RHC and health infrastructure in Australia, as well as provide a place for important innovation and research into childhood cancer.

7.8.4. Mitigation Measures

The SIA contains the following recommendations to help further manage and improve potential impacts arising from the proposal:

- Continue to communicate with the community, especially harder to reach lower socio-economic communities, during operation on the services provided at the SCH.
- Opportunities in the public and industry CCCC laboratories for patients, families, and the broader community to attend information and/or activity sessions to learn and interact with research.
- Implement the SCHN existing Indigenous Employment and Workforce Development Strategy which aims to increase the representation of Aboriginal employees to 2.6% across NSW Health.
- Prepare a workforce plan which outlines proposed staffing changes across SCH, and new roles.
- Develop relationships with local high schools to enhance knowledge of career opportunities in the health sector.
- Work with the local Aboriginal community in the final stages of design for the Indigenous gathering space.
- Continue to engage children, families and staff in the detailed design of open spaces associated with the proposal.
- Implement a landscape maintenance schedule in the Hospital's Operational Plan or Plan of Management.
- Use Council's community hub locations to distribute construction and project updates and reach communities across the LGA.
- Actively promote the take up of sustainable travel modes and initiatives set out in the RHC GTP.
- Ongoing monitoring of car park activity.

7.9. ECOLOGICALLY SUSTAINABLE DEVELOPMENT

7.9.1. SEAR

SEAR Item 11 requires the EIS to detail how ESD principles would be incorporated in the design and ongoing operational phases of the development and proposed measures to minimise consumption of resources.

7.9.2. Methodology

An Ecologically Sustainable Development (ESD) Report has been prepared by Steensen Varming and is provided at **Appendix O.** The ESD Report sets out a strategy to incorporate appropriate ESD initiates into the proposed development to reduce environmental impacts associated with the construction and ongoing operation of the proposal.

The ESD Strategy has employed the United Nations Sustainable Development Goals (UN SDGs) as the foundation for the overarching sustainability themes.

An Integrated Water Management Plan has been prepared by ARUP and is provided at **Appendix P.**

7.9.3. Assessment

ESD Initiatives

The following ESD initiatives have been considered in the design of the proposed development:

- The promotion of natural daylight – There is a direct correlation between access to daylight and patient recovery times, staff attention, productivity and general wellbeing.
- Indoor Air Quality (IAQ) – In a similar manner to daylight, there is a correlation between occupant wellbeing, patient recovery time and staff retention. Principle strategies include:
  - Mould prevention through the avoidance of thermal bridges, condensation and effective strategies in ventilation, odour and pollution control.
  - Low pollutant emitting materials selections such as low VOC paints, adhesives, sealants, composite woods etc.
- Creation of Healing Environments – Healing environments are a critical component for healthcare and hospital facilities. Healing environments with good natural daylight and thermal comfort have shown to increase patient recovery times, which is key attribute of a sustainable hospital.
- Excellent Thermal, Visual and Acoustic comfort:
  - Thermal comfort: Patients, staff and occupants are not subject to unacceptable extremes in temperatures as they recover, work and visit patients;
  - Visual comfort: Achieve a quality of natural light that supports patient recovery and staff and visitor wellbeing. In design for natural daylight, consideration must be given to daylight uniformity, penetration depth, solar heat ingress and glare control;
  - Acoustic comfort: To ensure noise from ventilation systems is eliminated, external and internal disruptive noise affecting spaces and to maintain privacy.
- Resource conservation (energy, water) and waste reduction – In delivering on the functional demands of a hospital (high levels of daylight, thermal comfort, visual comfort, and IAQ), incurs resource use through the optimisation of these attributes. Furthermore, the laboratory nature of the building will mean an energy and water intensive building.

The above initiatives will be supported by minimal consumption of energy and water resources, and the generation of waste and pollution in demolition, construction and operation of the building.

A resource hierarchy approach will be taken for resource consumption, with an emphasis on avoidance then reduction of energy, water, and materials consumption.

The resource hierarchy approach aligns with the ESD principles set out in clause 7(4) of Schedule 2 of the Regulation.

Environmental Performance and Resource Consumption

The SCH1/CCCC is designed to a 5 Star Green Star equivalent utilising the Green Building Council of Australia's (GBCA's) Design and As-built rating tool (DAB) version 1.3. A 5 Star Green Star rating is considered 'Australian excellence' level. The SCH1/CCCC aspires to a 5 Star Green Star Rating or agreed alternative methodology for ESD outcomes.

In addition, the proposed development aims to exceed the requirements of Section J of the National Construction Code (NCC) for energy efficiency in building fabric and building services/systems by 10%.

ESD strategies outlined above have been proposed to improve the environmental performance of the building. These measures will be benchmarked against the performance requirements of the equivalent/self-certified rating.

To support environmental performance, environmentally preferable building materials is a key priority for the project. Preference is given to materials that contain high recycled content and/or are highly recyclable such as:

- Sustainable timber- timber products used for concrete formwork, structure, wall linings, flooring and joinery will be considered and sourced where possible from reused, post-consumer recycled or FSC-certified, or PEFC certified timber.
- Steel – will be specified to meet specific strength grades, energy-reducing manufacturing technologies, and off-site fabrication. Steel will also be sourced with a proportion of the fabricated structural steelwork via a steel contractor accredited by the Environmental Sustainability Charter of the Australian Steel Institute.
- Recycled concrete – The project aims to reduce the use of Portland cement through substitutions. Fine and coarse aggregate inputs are to be sourced from manufactured sand or other alternative materials, and the amount of Portland cement will be reduced within the concrete mix.
- High recycled content or recyclability – Furniture items with high recycled or recyclability content have been considered.

To promote energy conservation, the following initiatives will be incorporated into the proposed development:

- Building Form has been designed with consideration of façade access for greater access to natural daylight. Daylight and views are critical for a patient recovery, and hence a large percentage of patient wards have been oriented facing north and south, which offer greater access to daylight and views without significant solar control devices required to restrict unwanted solar heat gains.
- Passive design principles will be employed to respond to environmental conditions of the building including orientation, solar access, prevailing winds, seasonal and diurnal temperatures changes.
- Building energy performance improvement - Energy modelling will be undertaken using the BCA Section J, JV3 energy modelling guidelines. The energy modelling will aim to achieve a minimum 10% energy reduction against the benchmark standard.
- Energy efficient LED lighting, zoning, controls and site co-ordination for both internal and external lighting systems are to be designed.
- Occupancy controls will be investigated for spaces so that AV, lighting and mechanical systems can be shut down both manually and automatically when unoccupied.
- High efficiency HVAC which includes chillers, boilers, fans, pumps and heat rejection.
- CO2 monitoring / Demand Controlled Ventilation will be considered.
- Metering and Monitoring will be included in the design to monitor energy consumption for ongoing building reporting and tuning.
- Fume Cupboard Management (recirculating air in fume cupboards) will be proposed for to assist with reducing HVAC energy use in laboratories.

The proposed design aims to ensure reduction of all forms of emissions, including watercourse pollution, light pollution and ozone depletion. Water Sensitive Urban Design (WSUD) will manage the impacts of stormwater run-off from the development to protect and improve waterway health. The proposed development incorporates rainwater reuse and stormwater management. In this regard, surface stormwater will be directed into landscaped beds where practical, to provide passive irrigation, reduced stormwater outflow and promote moisture retention in the soil.

Other measures intended to reduce the environmental impacts associated with the construction of the proposed development include:

- Environmental Management Plan (EMP) – The EMP will be developed and implemented for the construction stage, including demolition and excavation, to address environmental, worker health and safety and community risks. The EMP is a project specific plan and is developed using State and Federal Guidelines and standards. The Principal Contractor will implement an Environmental Management System certified to the ISO 14001 standard to ensure the objectives of the EMP are met.
- Site waste management plan. During the demolition and construction phase, a project-specific site waste management plan (WMP) will be developed and implemented, to reduce recycling of demolition and construction waste.

- Comprehensive commissioning – pre-commissioning, commissioning, and quality monitoring for all building services will be carried out.
- Dedicated Waste storage is being considered to the separation and collection of recyclable waste.
- Low emissions transport infrastructure has been considered to create a clean air zone, including electrical vehicle charging.
- Shared access to proposed campus-wide EOT trip facilities – bicycle parking racks, changing and shower facilities and lockers are being delivered by the IASB project.

Projected Climate Change Impacts

The following strategies are proposed in response to the CSIRO projected impacts of climate change:

Table 15 Climate change mitigation strategies

Climate Change Impact	Response
Hotter days and more frequent heatwave events	▪ Passive building design features to reduce/dampen the effects of increasing temperature, such as solar shading and solar control glazing. ▪ The SCH1/CCCC proposes the use of air conditioning. This is to ensure that appropriate internal conditions can be achieved and maintained as temperatures continue to rise. ▪ Landscaping has also been proposed to reduce urban heat island effect.
Extended drought periods	▪ Consideration of native, low water landscaping to reduce potable water consumption; and ▪ Recycled water and rainwater reuse and low flow fixtures and fittings.
More extreme rainfall events	▪ Consideration of increased drainage capacities to reduce flooding of roofs and hard surfaces; and ▪ Assessment of design of the building to address post development probable maximum flood (PMF) level.
Gustier wind conditions	▪ Design of windows and openings with controls to limit the impact of gustier wind conditions for internal spaces; ▪ Landscaping to buffer strong winds to outdoor areas.

Integrated Water Management Plan

The Integrated Water Management Plan details the following water management systems:

- Domestic Cold Water
- Domestic Hot Water

- Fire Hydrant and Sprinkler Systems
- Sanitary Drainage and Trade Waste
- Rainwater Drainage
- Rainwater Harvesting and Recycled Non-Potable Water
- Sanitary Fixtures and Taps

The building will be provided with a rainwater harvesting system to capture and treat rainwater landing on the building's roof areas. Rainwater will be captured from part of the roofs via a siphonic stormwater system and discharged into an above-ground rainwater tank located on Level 02. Water will be collected in storage tanks, treated and pumped into a dedicated non potable reticulation within the building to serve:

- Mechanical cooling tower top-up.
- Landscape irrigation.

The non-potable water supply will include pre-treatment via automatic backwash filtration prior to supply to cooling towers and irrigation to maintain water quality. The cooling towers are expected to utilise most of the total non-potable water harvested with the remaining supplied to irrigation.

7.10. NOISE AND VIBRATION

7.10.1. SEAR

SEAR Item 12 requires the EIS to provide a noise and vibration impact assessment that includes a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation and construction.

7.10.2. Methodology

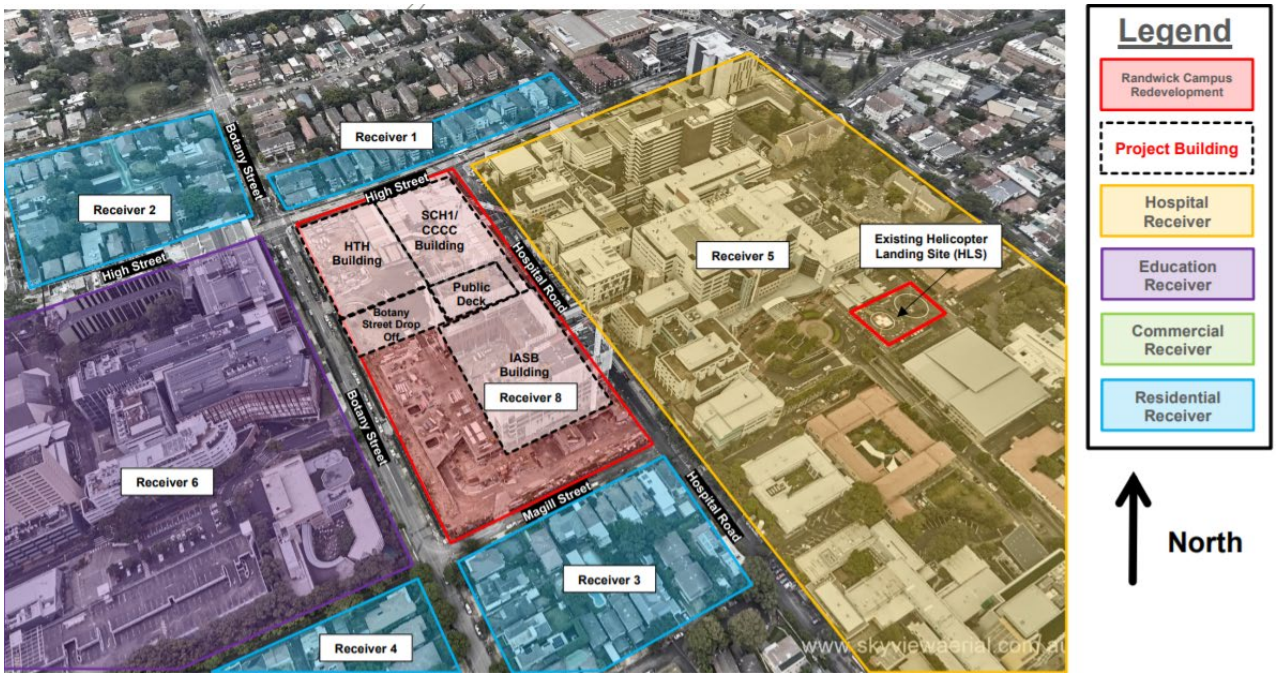
An Acoustic Assessment has been prepared by Pulse Acoustic Consultancy and is provided at **Appendix Q.**

The Acoustic Assessment addresses the following:

- Potential surrounding environmental noise and vibration intrusion impacts on the development (i.e., traffic, light rail, aircraft, and other environmental external noise sources).
- Operational noise emissions from the development to nearby receivers from building services (i.e., mechanical, hydraulic, electrical etc.) and other sources such as the use of the loading dock and vehicle entry and exit points; and
- Construction noise and vibration impacts associated with the construction of the proposed building on surrounding residential, commercial, educational and health institutions.

The nearest sensitive receivers are shown on the map below:

Figure 39 Surrounding acoustic receivers



Source: Pulse Acoustic

7.10.3. Assessment

Construction noise and vibration sources

The main noise and vibration generating sources during the construction stage are identified as follows:

Figure 40 Construction noise sources

Tasks	Equipment	Sound Power Levels (dBA re 1pW)	Aggregate Sound Power Level per Task (dBA re 1pW)
Site Establishment Works	Mobile crane	110	113
	Power hand tools	109	
	Semi Rigid Vehicle [1]	105	
Ground Works and Demolition	Excavator	112	119
	Hand held jack hammer [1]	111	
	Dump truck [1]	104	
	Concrete saw [1]	114	
	Skid steer	110	
	Power hand tools	109	
Structure	Hand held jack hammer [1]	106	117
	Concrete saw [1]	114	
	Power hand tools	109	
	Welder	101	
	Concrete pump truck	110	
	Concrete agitator truck	108	
Internal Works	Power hand tools	109	109
Common and External Works	Concrete agitator truck	108	117
	Saw cutter [1]	104	
	Dump truck [1]	104	
	Concrete saw [1]	114	
	Power hand tools	109	

Note 1: An assumed time correction has been applied, this being 5 minutes of operation in any 15-minute interval.

Source: Pulse Acoustic

The anticipated construction noise from the above sources has been predicted at the surrounding noise sensitive receivers.

Minor exceedances above noise management levels are predicted at Receivers 2 – 6 however noise will remain below the Highly Affected Noise Level. At Receiver 1, some construction noise sources have the potential to be above the Highly Noise Affected Level when working near the receiver.

The Acoustic Report recommends mitigation measures to manage these exceedances.

Compliance can be achieved with human vibration criteria if the following safe working distances are maintained:

Figure 41 Vibration safe working distances

Plant	Rating / Description	Safe Working Distances (m)	
		Cosmetic Damage (BS 7385: Part 2 DIN 4150: Part 3)	Human Comfort (AVTG)
Vibratory roller	< 50 kN (Typically 1 – 2 tonnes)	5	15 – 20
	< 100 kN (Typically 2 – 4 tonnes)	6	20
	< 200 kN (Typically 4 – 6 tonnes)	12	40
	< 300 kN (Typically 7 – 13 tonnes)	15	100
	> 300 kN (Typically more than 13 tonnes)	20	100
Small hydraulic hammer	300 kg, typically 5 – 12 tonnes excavator	2	7
Medium hydraulic hammer	900 kg, typically 12 – 18 tonnes excavator	7	23
Large hydraulic hammer	1600 kg, typically 18 – 34 tonnes excavator	22	73
Vibratory pile driver	Sheet piles	2 – 20	20
Jackhammer	Hand held	1	Avoid contact with structure and steel reinforcements

Source: Pulse Acoustic

Construction Hours

The following construction hours are proposed, as outlined in the preliminary Construction Management Plan **Appendix R.**

The following construction hours are proposed:

- Monday to Friday: 7:00am to 6:00pm
- Saturday: 8:00am to 5:00pm
- Sunday and Public Holidays: No work

Construction works will generally be undertaken during standard Interim Construction Noise Guideline (**ICNG**) hours, with the exception of Saturdays from 1.00pm – 5.00pm which are outside the standard hours on Saturdays of 8.00am – 1.00pm. The proposed construction hours are sought to align with the construction hours approved for the IASB development under SSD 9113 and SSD 10339 to provide an efficient and consistent construction program across the whole RCR site. In this regard, there will be an overlap of works that require the same construction operating hours between the approved IASB and the proposed SCH1/CCCC. It is noted that the same construction hours are also sought for the proposed HTH development under SSD-10822510.

In order to minimise disruption to surrounding sensitive receivers and the community, construction activities to take place within the extended hours will be limited to 'normal' construction activities as defined in the ICNG.

The Acoustic Assessment identifies noise criteria for construction outside standard hours (Saturday, 1pm to 6pm – 56 RBL). Some construction activities during this time could have the potential to be above the Highly Affected Level when working near Receiver 1 to 4 during this time, however mitigation measures are provided in the Acoustic Assessment to manage these exceedances.

Minor exceedances above noise management levels outside standard hours are predicted at Receivers 5 – 6, however noise will remain below the Highly Affected Noise Level.

It is considered that any works that are required to take place outside standard construction hours will align with the applicable conditions of consent that allow for this to take place under certain circumstances.

The following works may be required outside the standard construction hours and will be dependent on design finalisation and the final construction staging plan with the relevant authorities.

- Service reticulation works.
- Service switch overs (including private services).
- Large deliveries.
- Road restoration works; and
- Any other works deemed necessary for safety reasons or as directed by the relevant authorities.

Operational Noise

The primary operation noise sources identified to have a potential impact on surrounding sensitive receivers include mechanical services and vehicle movements associated with the proposed development.

The Acoustic Assessment recommends that a range of acoustic treatments be incorporated into the mechanical design to ensure compliance with the acoustic criteria outlined in the report.

Acoustic treatments include:

- Isolation of all plant.
- Plant rooms to be acoustically sealed.
- Acoustic louvers for louder plan rooms.
- VSD controllers for all plant items.
- Acoustic treatment to include 50mm thick internally lined ductwork or attenuators.

Operational road traffic associated with the increase in vehicle movements along Botany Street has been assessed against the EPA Noise Policy.

The Acoustic Assessment has determined that the increase in traffic associated with the SCH1/CCCC will not exceed a 2dBA increase which is barely perceptible to the average person and therefore considered acoustically acceptable.

External Noise Intrusion

The Acoustic Assessment considers potential acoustic and vibration impacts from external noise sources including the L2 Light Rail Corridor, aviation operations and increased traffic (assessed above).

The assessment concludes that predicted ground-borne noise levels are below the applicable criteria, therefore attenuation is not required.

The existing RHC currently operates a helipad above the ED parking station in the south east corner of the campus. A new helipad will be constructed as part of the IASB and will replace the RHC helipad once operational. Therefore, the Acoustic Assessment considers that an assessment of the IASB helipad will only need to be undertaken to ensure the façade of the SCH1/CCCC building will achieve the required internal noise objectives.

Façade and external wall construction recommendations are provided in the Acoustic Assessment to satisfy internal noise level criteria.

7.10.4. Mitigation Measures

A summary of the mitigation measures recommended for airborne noise and vibration impact is provided as follows:

- **General Management Measures** – Introduce best-practice general mitigation measures in the workplace which are aimed at reducing the acoustic impact onto the nearest affected receivers.
- **Project Notification** – Issue project updates to stakeholders, discussing overviews of current and upcoming works. Advanced warning of potential disruptions can be included.
- **Verification Monitoring** – Monitoring to comprise attended or unattended acoustic surveys. The purpose of the monitoring is to confirm measured levels are consistent with the predictions in the acoustic assessment, and to verify that the mitigation procedures are appropriate for the affected receivers.

If the measured levels are higher than those predicted, then the measures will need to be reviewed and the management plan will need to be amended.

- **Complaints Management System** – Implement a management system which includes procedures for receiving and addressing complaints from affected stakeholders.
- **Specific Notification** – Individual letters or phone calls to notify stakeholders that noise levels are likely to exceed noise objectives.

  Alternatively, contractor could visit stakeholders individually in order to brief them in regard to the noise impact and the mitigation measures that will be implemented.
- **Respite Offer** – Offer provided to stakeholders subjected to an ongoing impact.
- **Alternative Construction Methodology** – Contractor to consider alternative construction options that achieve compliance with relevant criteria. Alternative option to be determined on a case-by-case basis. It is recommended that the selection of the alternative option should also be determined by considering the assessment of on-site measurements.

The above mitigation measures are dependent on the noise and vibration impacts noted in the accompanying Acoustic Assessment (**Appendix Q**).

7.11. STAGING

7.11.1. SEAR

SEAR Item 13 requires the EIS to assess impacts of staging where it is proposed and detail how construction works and operations would be managed to ensure public safety and amenity on and surrounding the site.

7.11.2. Methodology

A preliminary Construction Management Plan (CMP) has been prepared by PwC and is provided at **Appendix R**.

The preliminary CMP will be replaced by a comprehensive CMP prepared by the Principal Contractor once appointed. The comprehensive CMP will detail the controls and management protocols for the following elements of the construction process:

- Dilapidation reporting;
- Site fencing, hoarding and security;
- Construction signage;
- Site amenities;
- Stakeholder management and communication;
- Construction vehicle parking;
- Site inductions; and
- Site access.

7.11.3. Assessment

The proposed SCH1/CCCC development will be undertaken in one stage in accordance with the following project timeline:

Table 16 Project Timeline

Key Milestone	Date
SSDA Approval (estimated)	Q4 2021

Key Milestone	Date
Contract consideration and award	Q4 2021
Construction Commencement	Q1-Q2 2022
Operational Milestone	2025

Source: PwC

The general principle for construction works is to separate construction areas of work from the public and hospital staff and visitors. Any crossovers will be managed to ensure safety of all persons and equipment.

The construction staging will be developed to ensure continued hospital operations and distinct isolated construction zones which maximise separation between the hospital operation and construction work. Appropriate hoarding/fencing (as specified by Australian Standards and SafeWork NSW) will be installed to prevent public and staff access and to maintain security for the various areas of the works. Access disruptions to public and staff car park areas will be minimised during construction works.

Traffic controllers will be used where required to manage the interface of construction vehicles with pedestrians, and staff/visitor/patient vehicles. Pedestrian access from High Street to the Sydney Children's Hospital (SCH) and the rest of the RHC will be maintained. This will be monitored and managed appropriately during construction.

These public and property protection measures will be reviewed at the time of contract award to ensure alignment with the proposed preferred methodologies and construction staging and to ensure the safety of the public and staff is maintained at all times during the works.

7.11.4. Mitigation Measures

To mitigate adverse construction impacts and protect the amenity of the locality, recommendations provided in the following technical reports should be implemented:

- Final Construction Management Plan (to be prepared by Principal Contractor),
- Acoustic and Vibration Assessment (**Appendix Q**),
- Traffic and Transport Assessment Report (**Appendix H**),
- Arboricultural Impact Assessment (**Appendix M**),
- Stormwater, Sediment and Erosion Plan (**Appendix T**),
- Waste Management Plan (**Appendix W**),
- Remediation Action Plan (**Appendix Z**).

7.12. INFRASTRUCTURE

7.12.1. SEAR

SEAR Item 14 requires the EIS to identify the impacts of existing transport infrastructure (Sydney light rail) adjacent to the site on the proposed development, in particular on medical and laboratory equipment / apparatus, and any necessary mitigation measures.

7.12.2. Methodology

The Acoustic Assessment prepared by Pulse Acoustic Consultancy (**Appendix Q**) includes an assessment of potential vibration impacts from the operation of the CSELR on sensitive science and medical equipment that will be located within the proposed SCH1/CCCC.

Vibration measurements were conducted at the existing site on 16th June 2020 from 1:30 pm to 2:30 pm. Vibration and noise levels were recorded with a Sinus SoundBook Mark II.

The accelerometer was attached to the ground using bees' wax. Light Rail Vehicle pass-bys were isolated and Lmax, slow one-third octave velocity spectra were calculated for each train pass-by. A low frequency bandwidth of 3.15 Hz to 315 Hz was used.

An additional vibration survey was conducted on Friday 26th February 2021 from 5:00am to 7:00am along the proposed High Street façade and 60m south of the High Street kerb. Vibration measurements were recorded with a Svan 958a.

7.12.3. Assessment

The following generic vibration criterion (VC) curves were adopted for the purposes of assessing impacts on scientific equipment:

Figure 42 Vibration criteria for scientific and medical equipment

Equipment	Curve
Bench microscopes up to 100× magnification; laboratory robots	0.102 mm/s
Bench microscopes up to 400× magnification; optical and other precision balances; coordinate measuring machines; metrology laboratories; optical comparators; microelectronics manufacturing equipment; proximity and projection aligners, etc.	0.051 mm/s VC-A
Microsurgery, eye surgery, neurosurgery; bench microscopes at magnification greater than 400×; optical equipment on isolation tables; microelectronic manufacturing equipment, such as inspection and lithography equipment (including steppers) to 3 mm line widths	0.025 mm/s VC-B
Electron microscopes up to 30 000× magnification; microtomes; magnetic resonance imagers; microelectronics manufacturing equipment, such as lithography and inspection equipment to 1 mm detail size	0.013 mm/s VC-C
Electron microscopes at magnification greater than 30 000×; mass spectrometers; cell implant equipment; microelectronics manufacturing equipment, such as aligners, steppers, and other critical equipment for photolithography with line widths of 1/2 µm; includes electron beam systems	0.0054 mm/s VC-D
Non-isolated laser and optical research systems; microelectronics manufacturing equipment, such as aligners, steppers, and other critical equipment for photolithography with line widths of 1/4 µm; includes electron beam systems	0.0032 mm/s VC-E

Source: Pulse Acoustic

Results of the vibration assessment indicate the following:

- Measured vibration levels in-line with the proposed High Street façade were compliant with the VC-B criteria. This result does not include any attenuation throughout the building or any isolation from manufacturers machines (i.e., isolated benches or footings).
- Measured vibration levels 60m south of the High Street kerb were compliant with the VC-B and in some cases VC-C criteria. This result does not include any attenuation throughout the building or any isolation from manufacturers machines (i.e., isolated benches or footings).

7.12.4. Mitigation Measures

The Acoustic Assessment report does not recommend any specific mitigation measures in regard to vibration impacts from the CSELR as measured vibration levels were compliant with the VC-B criteria. This will be monitored by the project team throughout the design process.

7.13. UTILITIES

7.13.1. SEAR

SEAR Item 15 requires that the EIS, in consultation with relevant service providers, assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site.

7.13.2. Methodology

An Infrastructure Management Plan (IMP) has been prepared by JHA Consulting Engineers and is provided at **Appendix S.**

The IMP summarises the existing utility infrastructure that will be affected by construction of the proposed development and specifically address:

- The location of existing major Electrical and Telecommunication infrastructure surrounding the site;
- The suitability and compliance of such identified services infrastructure to support the development; and
- The key service infrastructure works required to supply the proposed development.

7.13.3. Assessment

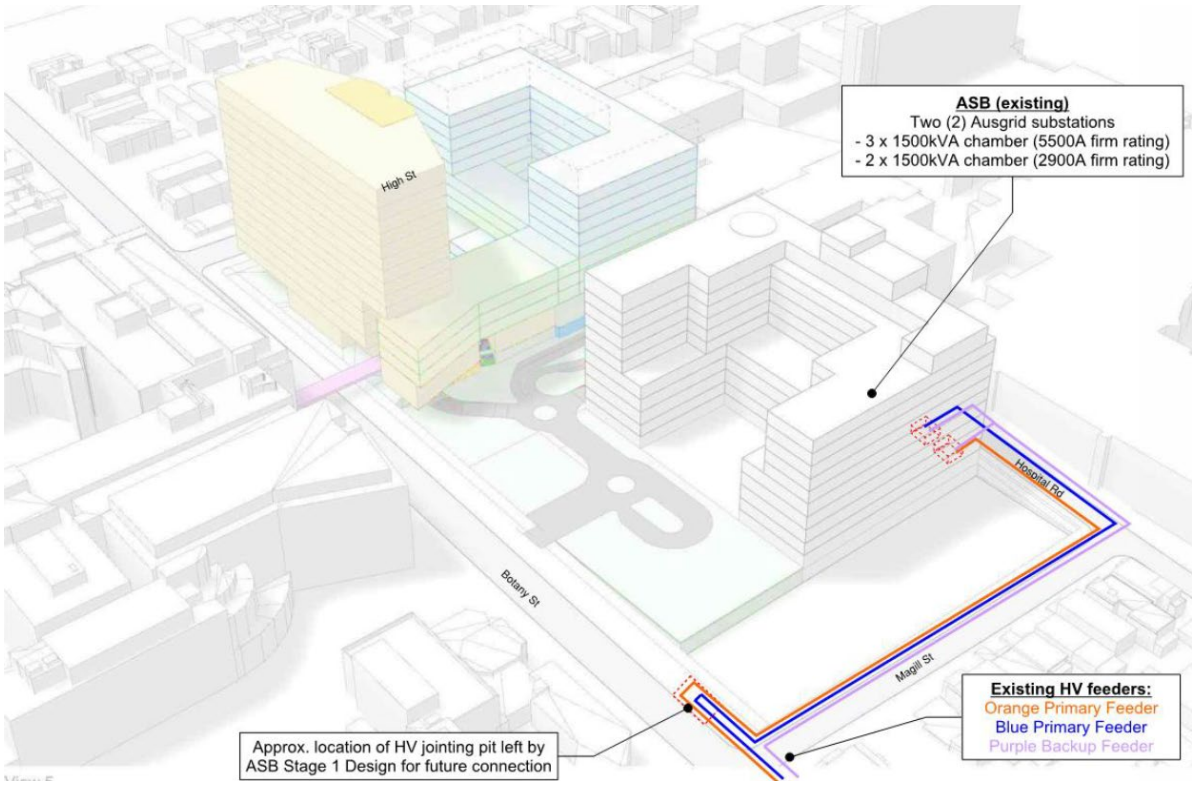
Existing Utility Infrastructure

An assessment of existing utility infrastructure and assets has been undertaken in parallel to formal discussions with respective utilities. Some adjustment and new installation to the existing external utility infrastructure are required including extension of existing Ausgrid HV feeders along Botany Street and High Street.

The current SCH1/CCCC site does not have existing utility or private electrical connections as the site has been cleared, however existing Ausgrid assets reticulate around the perimeter of the site, outside of the development boundary within public footpaths and roadways.

An overall electrical maximum demand for the RCR was completed by others at the commencement of the IASB project to the south. As a result, 2 off primary HV feeders and 1 off backup feeder, all from the Kingsford Zone Substation, were established to service the needs of the entire RCR site (IASB, SCH1/CCCC and HTH).

Figure 43 Existing HV Infrastructure



Source: JHA Services

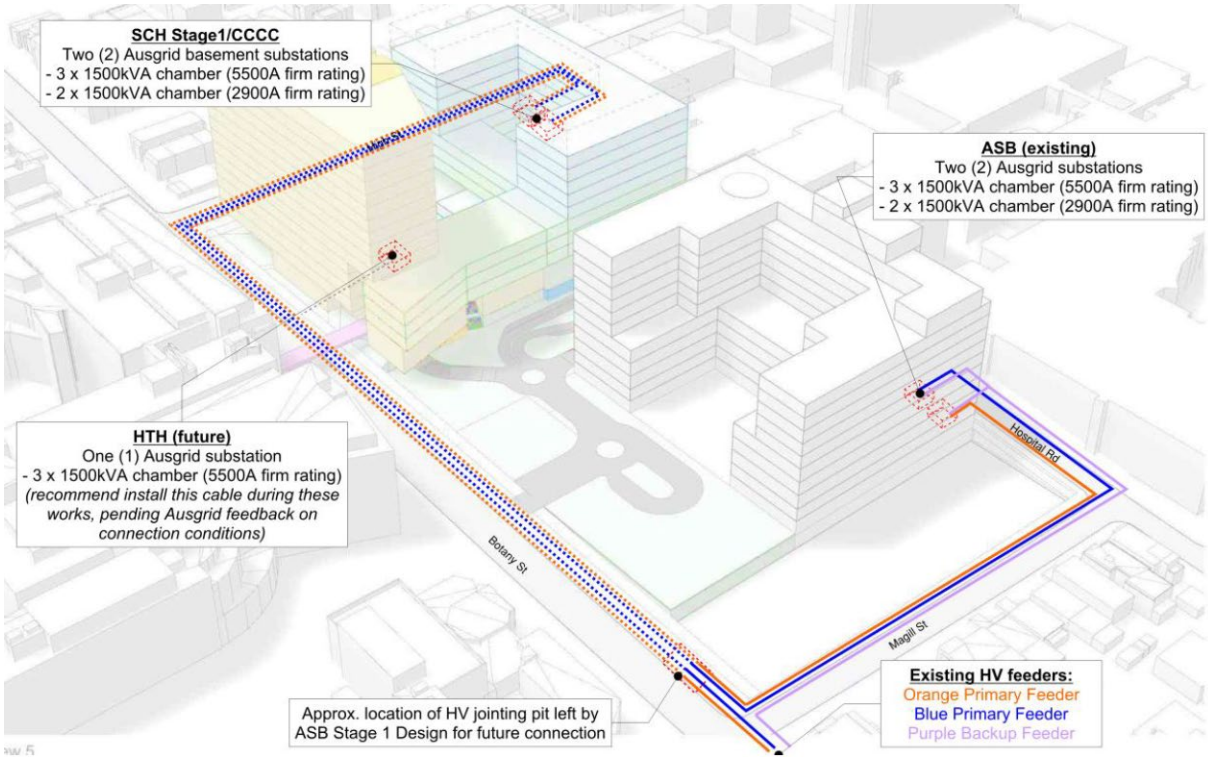
Required Infrastructure Upgrades

To provide electrical supply connections to the SCH1/CCCC development, it is proposed to extend the existing high voltage feeders established as part of the IASB works along the road reserve to the new Ausgrid basement chamber substations proposed at the north eastern corner of the site. This route will allow the proposed HTH site to connect to these feeders on Botany Street also.

Contact has been made to Ausgrid with formal responses provided initiating early works design considerations to assist with implementing upgrades in accordance with the current development program.

The Design Information Package issued by Ausgrid confirms that the existing high voltage infrastructure in the vicinity of the site is adequate to support the SCH1/CCCC development through the use of the existing IASB HV feeders and the proposed connection point at the former of Botany Street and Magill Street.

Figure 44 Proposed HV Infrastructure



Source: JH Services

In regard to communication services, the proposed development will be independently serviced from the existing street utility networks via diverse lead-in carrier feeds.

Infrastructure Delivery and Staging Plan

It is noted that an infrastructure delivery and staging plan will be developed at a later design stage through further consultation with each utility company.

7.13.4. Mitigation Measures

The following mitigation measures are recommended in the IMP:

- Develop and implement an Infrastructure Delivery and Staging Plan.
- Continue ongoing consultation with utility companies.

7.14. STORMWATER AND DRAINAGE

7.14.1. SEAR

SEAR Item 16 requires the EIS to provide a preliminary stormwater management plan for the development.

7.14.2. Methodology

A Stormwater Management Plan has been prepared by Meinhardt Bonacci and is provided at **Appendix T.** The Stormwater Management Plan includes civil plans which illustrate the proposed drainage design for the site.

The Stormwater Management Plan has been prepared in accordance with Randwick City Council Private Stormwater Code (March 2013) and Randwick City Council DCP 2013.

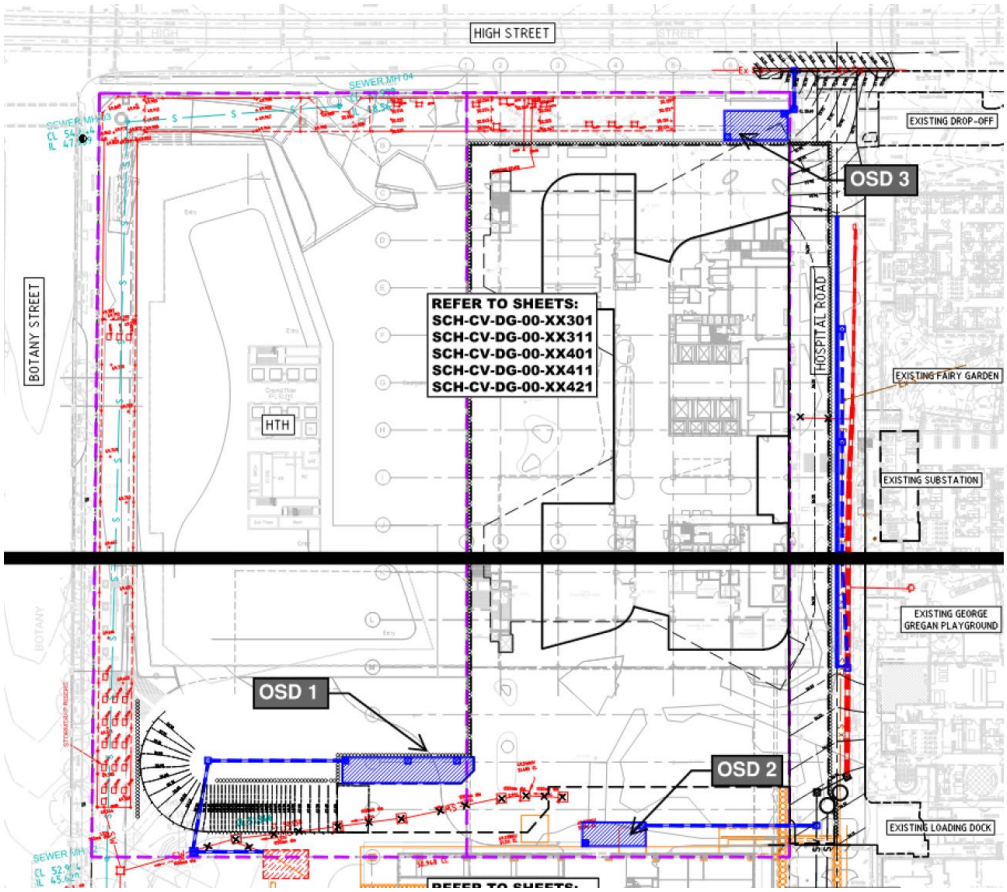
Stormwater calculations are based on the site area of the SCH1/CCCC site only.

7.14.3. Assessment

The proposed stormwater drainage design has been designed to capture and convey storm events up to 1 in 20 years. As the majority of the ground level surface within the site will be suspended, rainwater outlets and downpipes are proposed to convey stormwater to detention.

Three (3) onsite detention (OSD) systems are proposed, demonstrated in **Figure 44** below:

Figure 45 OSD and Discharge Point Locations



Source: Meinhardt Bonnaci

The nominated discharge points for each OSD is as follows:

- OSD 1 – Existing drainage south of the site running east-west towards Botany Street
- OSD 2 – Existing drainage on Hospital Road
- OSD 3 – Existing drainage on High Street

As there are no specific water quality treatment targets nominated by Randwick DCP 2013, a below pollutant reduction rate has been adopted for the proposed development.

Proposed water quality treatments include 16 stormwater cartridges and 6 enviropods which satisfy the adopted pollutant removal targets.

Sediment and erosion control measures will also be implemented.

7.14.4. Mitigation Measures

- The ground level suspended podium is to be constructed with suitable drainage and falls to ensure that freeboard is provided to entrances of the proposed development so that any overflow is discharged away from the proposed building and does not impact any downstream properties.

- Sediment and control measures are to be implemented during construction in accordance with the Landcom 'Blue Book'. The following measures are to be implemented to minimise the risk of sediment runoff being discharged from the site:
  - A sediment fence/hoarding to be provided around the site
  - Catch drain (or diversion bund) diverting external catchment away from site
  - Temporary access to site with shaker pad
  - An indicative stockpile area with sediment fence around it during construction. The stockpile must be located out of water flow paths (and be protected by earth banks/drains as required).
  - Geotextile inlet pit filters or sandbags to be placed around existing stormwater pits.
  - Water cart to spray excavated surfaces to reduce dust pollution.
  - All disturbed areas are to be stabilised within 14 working days of the completion of earthworks. All disturbed areas are to be protected so that the land is permanently stabilised within six months.
  - Sediment removed from any sediment trapping device shall be relocated where further pollution to downslope lands and waterways cannot occur.
  - Water shall be prevented from entering the permanent drainage system unless it is sediment free.
  - Drainage pits are to be protected in accordance with the final approved Sediment and Erosion Control Plan.
  - Trapped sediment shall be removed immediately from areas subject to runoff or concentrated flow.
  - Trapped sediment shall be removed where the capacity of sedimentation trapping devices fall below 60%.

7.15. FLOODING

7.15.1. SEAR

SEAR Item 17 requires the EIS to identify any flood risk on-site.

7.15.2. Methodology

A Flood Modelling Assessment Report has been prepared by Meinhardt Bonnaci and is provided at **Appendix U.**

The flood assessment results presented in the Flood Modelling Assessment Report demonstrate that the proposed development complies with the relevant requirements outlined in the NSW Floodplain Development Manual (DIPNR 2005) and Randwick DCP 2013.

Existing flooding conditions have been modelled and determined by BMT through TUFLOW modelling and incorporates modelling for the IASB to the south. The assessment has considered the cumulative impact of proposed development, the proposed HTH development and the IASB.

7.15.3. Assessment

The site is affected by 1% Annual Exceedance Probability (AEP) and Probable Maximum Flood (PMF) flooding. A major overland flow path runs in a north-south direction through the centre of the RCR site from the sag point on High St, taking a large upstream catchment from the north of the site.

The results of the modelling indicate that Hospital Road is not flood affected during the 1% AEP with the exception of localised ponding at an existing trapped low point. Flooding occurs along High Street, Botany Street and Eurimbla Avenue.

The PMF flood level on High Street is RL55.75. Randwick DCP 2013 requires a 500mm free board to be provided to the PMF for critical facilities. Therefore, the minimum level to which SCH1/CCCC and HTH sites need to be filled to provide protection for the RCR and RHC is RL56.25.

The SCH1/CCCC development proposes to construct levels below RL56.25, therefore mitigation measures are required to provide floor protection to the precinct, as outlined in the next section.

7.15.4. Mitigation Measures

The Flood Modelling Assessment Report has nominated mitigation measures in response to the cumulative impacts of the SCH1/CCCC development, the adjacent HTH development and the IASB to the south:

Both the proposed SCH1/CCCC and HTH developments seek to construct levels below RL56.25. In order to provide flood protection to the RCR and RHC, both developments should construct an impermeable barrier to RL56.25 along the full length of the High Street frontage.

It is recommended that this flood barrier be constructed prior to occupation of the IASB to provide it with flood protection in a PMF event.

On completion of the SCH1/CCC and HTH developments, the building structures can form the flood barrier along High Street.

7.16. SOIL AND WATER

7.16.1. SEAR

SEAR Item 18 requires the EIS to provide an assessment of potential impacts on surface and groundwater (quality and quantity) and soil.

7.16.2. Methodology

A Geotechnical Investigation Reported dated January 2021 has been prepared by Douglas Partners to investigate the subsurface conditions.

The Geotechnical Investigation Report follows a suite of geotechnical investigations prepared by Douglas Partners across the RHC (2016), UNSW (2010 and 2013) and more recently within the RCR (2018, 2019).

The investigation included a desktop review of previous boreholes, in situ permeability tests and laboratory data in proximity to the site from investigations for the wider RCR and IASB, together with the drilling of eight (8) boreholes on and near the site to fill in data gaps, installation of four (4) groundwater monitoring wells to monitor the groundwater levels, permeability tests in soil and rock, and laboratory tests for geotechnical purposes.

7.16.3. Assessment

Subsurface conditions

The site's subsurface conditions are expected to include sandy and crushed sandstone to depths of 1-2m, underlain with loose and medium density sand and clay, Hawkesbury Sandstone (1-3m) and then high strength sandstone.

Groundwater seepage is anticipated near the rock and soil interface, and within the rock along rock joints and extremely/highly weathered rock bands, which are located above the northern end and parts of the central area of the proposed basement. Drawdown or dewatering is not considered to be a geotechnical issue for the site.

Basement excavation will likely meet fill and natural sand, with the intersection of Hawkesbury Sandstone of variable strength at the northern end which should be readily achieved using conventional earthmoving equipment. Removal of low strength and stronger rock will require relatively large excavators fitted with hydraulic rock hammers and/or rotary rock saws.

Salinity and Acid Sulfate Soils

The site is located well beyond the mapped extent of potential saline soil areas shown in the NSW Salinity Potential Western Sydney map prepared by the former Department of Infrastructure Planning and Natural Resources (2002). Therefore, a soil salinity assessment and a soil salinity management plan are considered to be unnecessary for this development.

Similarly, in accordance with Randwick LEP 2012, the site is mapped in an area which is not known to have acid sulfate soils. Therefore, an acid sulfate soils assessment and acid sulfate soils management plan are considered to be unnecessary for this development.

7.16.4. Mitigation Measures

The Geotechnical Investigation Report provides the following mitigation recommendations:

- Additional rock-cored boreholes to confirm the depth and strength of rock for foundation design, together with additional groundwater monitoring wells are recommended to fill in data-gaps from the Desktop Assessment.
- Dilapidation (building condition) reports should be prepared for adjacent structures and infrastructure located within at least about 15 m from the site boundaries, prior to commencing excavation work on the site.
- All excavated materials will need to be disposed of in accordance with the provisions of the current legislation and guidelines including “Waste Classification Guidelines” – 2014, New South Wales Environment Protection Authority (NSW EPA). This includes fill and natural materials that may be removed from the site.
- Vibration trials should occur at the commencement of excavation in rock to determine minimum set-backs from existing buildings or sensitive areas for specific plant, whether the use of other plant or continuous vibration monitoring is required.
- During construction of the basement and any deep lift cores/stairs and service trenches, any exposed excavation faces should be inspected at regular 1.5 m depth intervals by an experienced geotechnical engineer to assess whether there are any further stabilisation requirements, such as reducing the steepness of a batter, installation of ground anchors or shotcrete protection.
- Temporary ground anchors may be required to restrict wall movements during the construction phase, with permanent support of retaining walls anticipated to be provided by the final structure.
- It is recommended that all building footings are founded on at least medium strength sandstone to reduce the risk of differential settlement.

In addition, sediment and erosion control measures as well as the preparation and implementation of a comprehensive CMP are required to minimise and manage the generation and off-site transmission of sediment, dust and fine particles.

7.17. WASTE

7.17.1. SEAR

SEAR Item 19 requires the EIS to identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.

7.17.2. Methodology

A Waste Management Plan (**WMP**) has been prepared by WSP to address construction and operational waste management and is provided at **Appendix W.** Construction waste is further addressed in the preliminary CMP prepared by PwC at **Appendix R**.

The WMP prepared by WSP has been prepared in accordance with the RDCP 2013 (Part B, Section B6) and current best practice waste management methodology and technologies commonly available in Australia.

7.17.3. Assessment

Waste Streams

The WMP identifies three (3) waste categories applying to the proposed development:

- Common waste: waste generated through the ongoing operation of the site which does not have specific disposal requirements under the *AS3816: 1998 Management of clinical and related wastes.* This waste includes garbage, commingled recycling and paper/cardboard.
- Clinical & related wastes (clinical waste): Waste which is regulated under the AS3816: 1998 *Management of clinical and related wastes*. This waste includes sharps, pharmaceutical substances and laboratory specimens / cultures.
- Construction & demolition waste: Waste generated during the construction and demolition stages prior to occupation. This waste includes concrete, aggregates, timber and glass (amongst others).

The following waste streams and quantities are included in each waste category as follows:

Figure 46 General waste streams and quantities

Equipment Information and Capacity				
Waste Stream	**Equipment**	**Collections Per Week**	**Weekly Capacity**	**Weekly Volume**
Garbage	1 x 25m^3 Compactor	(Min) 1	75,000L	66,867L
Paper / Cardboard	1 x 25m^3 Compactor	(Up to) 1	75,000L	26,491L
Commingled Recycling	4 x 660L Bins	(Min) 2	5,280L	3,184L

Use	**Storage Method**	**Area / Equipment Provided**
Secure Paper	Secure paper bins (typically 240L wheelie bins) stored internally within the office floorplates and brought to the loading zone for collection as required. No permanent storage within the common waste store.	Internal bin fitout
Pallets (Timber)	Dedicated line-marked storage area and/or cage and/or 660 litre bin within common waste store.	3m^2 line marked area
Metals	Dedicated line-marked storage area and/or cage and/or 660 litre bin within common waste store.	3m^2 line marked area
Electronics	Dedicated line-marked storage area and/or cage and/or 660 litre bin within common waste store.	3m^2 line marked area

Source: WSP

Figure 47 Clinical waste streams and quantities

Use	**Quantity / Area**	**Soft Biohazard (L/week)**	**Cytotoxic (L/week)**
Hospital Bed	239 beds	16,730	2,390
SUBTOTAL – SCH STAGE 1		**16,730**	**2,390**
Research	6,771m^2	4,401	4,401
Clinical	4,995m^2	3,497	500
SUBTOTAL - CCCC		**7,898**	**4,901**
GRAND TOTAL		**24,628**	**7,291**

Source: WSP

Figure 48 Construction waste streams and quantities

Waste Stream	C&D Waste Generation Estimate*	
	Tonnes (total)	Cubic metres (total)
Demolition Waste	n/a	n/a
Construction Waste	2,238	3,326

Waste Stream	Expected Composition	Typical Receptacle	Note
Bricks	≈ 5% of total volume	Skips	Minimum 80% recovery of these mixed waste streams targeted, to be achieved through collection by reuse and recycling waste contractors. This recovery rate should be demonstrated through provision of disposal dockets and periodic summaries from the waste contractor.
Concrete	≈ 65% of total volume		
Tiles	≈ 5% of total volume		
Timber	≈ 5% of total volume		
Plasterboard	≈ 15% of total volume		
Glass	≈ 1% of total volume (breakage only)		
Metal	≈ 5% of total volume		
Carpet	≈ 1% of total volume		
Domestic General Waste	Typical domestic waste generated from trades on site.	Bins	Regular municipal waste streams generated through activities of trades staff on site. Collection provisions through council or approved and licensed private contractor.
Domestic Commingles			
Bulk cardboard/paper waste (equipment packaging)			Store in dedicated bins and collect by paper/card recycling contractor.

Source: WSP

Waste management measures

General Waste

Ongoing operational waste management will be facilitated by appropriate provision of bin stations throughout the various spaces. Bin stations will be clearly singed so that waste stream separation is easily identifiable, and the correct use of bins will be upheld.

The use of bin stations encourages the separation of recyclable materials as they require users to make a conscious decision as to which bin they place their waste. This typically results in a reduced volume of garbage going to landfill.

Clinical Waste

Clinical waste will be sorted on-site by users as appropriate into the various streams.

Each space of the development will have provision for plastic lined recycling bins for the temporary holding of clinical waste, to have minimum cumulative holding capacities as deemed appropriate by SCH1/CCCC management.

Staff or cleaners will clear waste from these temporary holding bins into larger 660L bins (typically stored within the clinical waste stores at Level B2 in accordance with nominated cleaning procedures. The full clinical waste bins will then be held within the clinical waste stores for collection.

For ease of operations and material tracking, SCH1/CCCC will maintain separate clinical waste stores at Level B2 (total of two (2) clinical waste stores). Clinical waste storage will not be shared between uses in any capacity.

Construction Waste

A comprehensive CMP will be prepared by the Principal Contractor and will include a detailed construction waste strategy.

Most waste products generated throughout construction works can be readily recycled or reused, and include steel framing, damaged glazing, cladding and roof sheeting, plasterboard linings, timber features and framing, metals, concrete and rubble. Metal and plastic piping and conduits, cabling and floor finishes such as carpet and tiling should also be recovered.

Accurate materials estimation and ordering, offsite prefabrication of framing modules and fit out components, and monitoring and review of specifications and onsite construction and fit out operations will minimise the potential volume of construction waste to be generated in the first instance.

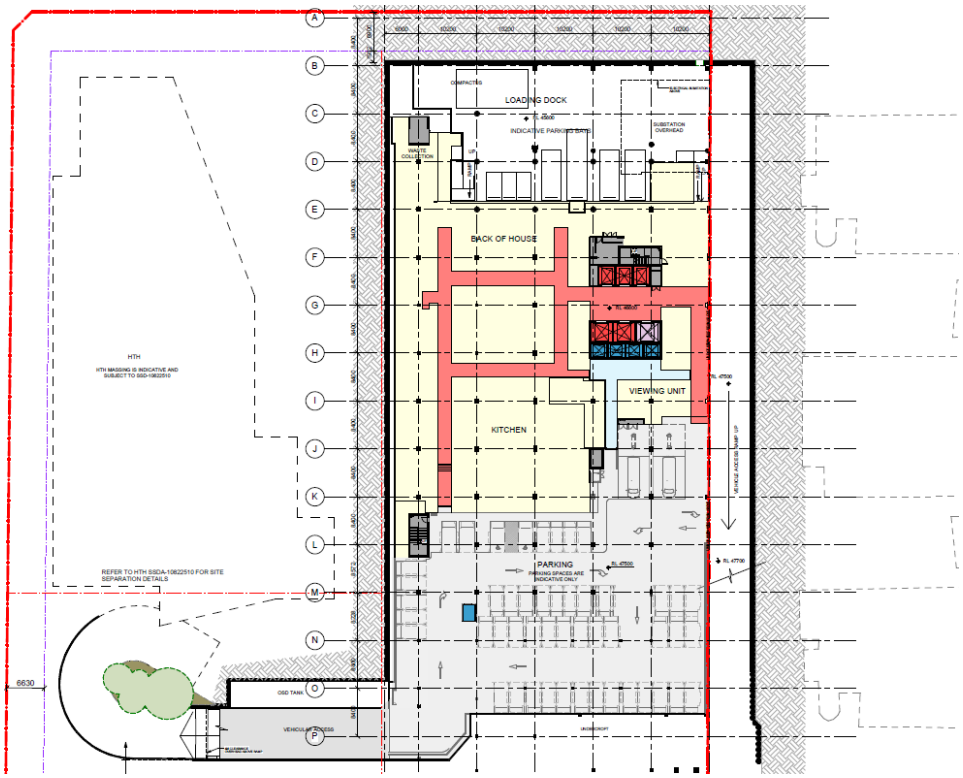
Wherever possible, construction waste will be stored and sorted on-site, including on-site collection zones for each waste stream. Any waste skips to be stored in public places will be done so in accordance with Council policy.

Subcontractors and other site personnel will be educated regarding requirements for recovery of waste. This will assist in maximising recovery of resources from construction waste on-site, and minimise the cost and environmental impacts of waste being disposed to landfill.

Service arrangements

Waste storage areas and the loading dock are located on Level B2.

Figure 49 Level B2 loading and waste storage arrangement



Source: BLP

Common waste and clinical waste will be collected by a private contractor directly from the loading zone at Level B2. Collection vehicles will access the loading zone via the basement access ramp from Hospital Road.

Swept path diagrams prepared by ARUP (dated 04/11/2020, drawing numbers SKT001 & SKT007, Issue A) demonstrate sufficient vehicle access is provided for a 12.5m HRV sized vehicle to enter and exit the site in a forward direction – this will accommodate the required waste vehicles. WSP have assessed these swept paths and consider them sufficient.

Waste equipment will not be stored outside the site boundary or presented to kerb for collection at any time. Building management will ensure sufficient access is provided for collection vehicle operators during collection times.

Mechanical plant is located on Level 09.

Aboveground Buildings

It is noted that no existing aboveground buildings are proposed to be demolished or altered as part of this SSDA.

7.17.4. Mitigation Measures

- Construction waste management is to be undertaken in accordance with the site-specific measures detailed in the WMP prepared by WSP.
- A comprehensive CWMP is to be prepared and implemented by the Principal Contractor and is to include procedures for construction waste management.

The following operational waste management mitigation measures are included in the WMP:

- Extended waste stream separation, including streams such as paper / cardboard, pallets, metals and electronics.
- The use of large waste compactors where appropriate, minimising frequency of waste collection.
- Separate waste stores for common and clinical waste volumes, as to minimise risk of inappropriate material handling.
- Separate clinical waste stores for SCH1/CCCC, as to provide for ease of individual operations.
- Separate “clean” (incoming deliveries, food, clean linen, etc.) and “dirty” (waste, dirty linen, etc.) loading bays, as to minimise risk of cross contamination.

7.18. CONTAMINATION

7.18.1. SEAR

SEAR Item 20 requires the EIS to assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. This must include the following prepared by certified consultants recognised by the NSW Environment Protection Authority:

- Preliminary Site Investigation (PSI)
- Detailed Site Investigation (DSI) where recommended in the PSI
- Remediation Action Plan (RAP) where remediation is required. This must specify the proposed remediation strategy.

7.18.2. Methodology

A Preliminary Site Investigation for Contamination Report (PSI Report, January 2021) and a Detailed Site Investigation for Contamination Report (DSI Report, January 2021) have been prepared by Douglas Partners and are provided at **Appendix X** and **Appendix Y** respectively.

The PSI and DSI reports assess the potential for contamination across the site.

A suite of site investigations have previously been carried out since 2018 for the wider RCR site. Partial remediation has also been undertaken for part of the site.

Based on the conclusions of the DSI, a Remediation Action Plan (RAP) has been prepared for the site, provided at **Appendix Z.**

The RAP:

- Establishes an appropriate remedial strategy so as to render the site suitable, from a contamination perspective, for the proposed development;
- Establishes the remediation acceptance criteria to be adopted for the remediation of the site and the validation requirements to verify the successful implementation of the remediation strategy;
- Establishes appropriate environmental safeguards required to complete the remediation works in an environmentally acceptable manner;

- Establishes appropriate occupational, health and safety (OH&S) procedures required to complete the remediation works in a manner that would not pose a threat to the health of site workers or users; and
- Establish a framework to minimise environmental risk on the site and the surrounding environment.

7.18.3. Assessment

All soil results were found to be within the adopted Site Assessment Criteria (SAC) with the exception of the detection of asbestos at one (1) test location and minor exceedances of PAH and ecological exceedances for select metals.

All groundwater results from the current investigation were within the adopted GIL with the exception of minor exceedances of copper, zinc and B(a)P:

- Copper - BH608 0.009 mg/L (GIL 0.0014 mg/L);
- Zinc - BH608 0.017 mg/L (GIL 0.008); and
- B(a)P - BD1/20200908 (BH608) 0.0003 mg/L & BH608 0.0002 (GIL 0.0001 mg/L).

Potential areas of environmental concern (AEC) have been identified as follows:

- Imported fill
- Construction support activities
- Neighbouring or nearby commercial activities.

The exceedance of B(a)P EQ is considered to be within the health investigation levels (HIL). Exceedances of metals TRH and PAH are considered to be possible within roadbase materials beneath Eurimblah Avenue. However, tthese materials were previously deemed suitable for re-use under a Resource Recovery Order, and this is considered to be a preferable disposal option under sustainability principles.

The detection of asbestos at one location indicates the potential for further asbestos to be present within fill materials elsewhere in the site. Further testing would be necessary to quantify the potential risks and to assess the suitability of these soils to remain or be reused for proposed development.

The results of groundwater monitoring indicate minor elevated levels of metals, which were previously considered to be indicative of regional, urban groundwater conditions. Minor detection of B(a)P in groundwater above the GIL are not considered to be significant, however, the detection is considered possible to be indicative of the diffusive B(a)P contamination present within fill across the larger RCR site.

Based upon the results presented within the DSI Report, Douglas and Partners conclude that there is a low to medium risk of contamination at the site, primarily related to existing fill and the (potential) presence of asbestos and PAH.

A RAP has therefore been prepared to address contamination at the site.

The RAP concludes that the site can be rendered suitable for the proposed development subject to proper implementation of the remediation procedures, unexpected finds protocols and completion of the validation assessment detailed in the RAP.

No approval is therefore sought for remediation works. The proposed development will be undertaken in accordance with the recommendations of the RAP which includes an Unexpected Finds Protocol.

It is also noted that no containment is proposed on site. In this regard, a preliminary Long-term Environmental Management Plan is not required for this project.

7.18.4. Mitigation Measures

Implementation of the remediation procedures, unexpected finds protocols and completion of the validation assessment detailed in the RAP.

7.19. HAZARDS AND RISK

7.19.1. SEAR

SEAR Item 21 requires the EIS to provide a preliminary risk screening and Preliminary Hazard Analysis regarding all dangerous goods and hazardous materials associated with the development.

7.19.2. Methodology

A SEPP 33 Preliminary Hazard Analysis Report has been prepared by WSP and is provided at **Appendix AA**.

The Report provides a SEPP 33 screening assessment and a Preliminary Hazard Analysis (PHA) for the proposed development. The report considers the cumulative hazard from other facilities within the RHC and covers acute safety impacts to the public due to the storage and handling of dangerous goods.

7.19.3. Assessment

The SEPP 33 screening assessment identifies the proposed development as 'potentially hazardous' due to the cumulative storage quantity of medical gas and clinical waste which are likely to exceed allowable thresholds.

The subsequent preliminary hazard analysis (PHA) was conducted using the Hazard Identification process in line with AS/ISO 31000:2018 Risk Management Guidelines and focused on preventing or minimising major hazardous incidents on-site, such as fire and explosion or the release of significant quantities of toxic or biologically harmful chemicals, that could result in significant off-site effects.

The PHA concludes that risks can be managed by engineering and procedural controls, therefore there is no significant off-site risk that requires further analysis.

7.19.4. Mitigation Measures

No further control measures are recommended at this stage, however, should the storage conditions or volumes change, the risks associated with any change should be assessed and controlled.

7.20. CONTRIBUTIONS

7.20.1. SEAR

SEAR Item 22 requires the EIS to identify any Section 7.11/7.12 Contribution Plans, Voluntary Planning Agreements or Special Infrastructure Contribution Plans that affect land to which the application relates or the proposed development type.

7.20.2. Assessment

Randwick Council has developed a Section 7.12 (previously Section 94A Plan) and a Planning Agreement Policy to require contributions levied on new development that are used to provide for public amenities and other infrastructure services in Randwick LGA.

The Section 7.12 Plan allows for a waiver for certain development from development contributions. Clause 13.2 of the Plan lists public hospitals as exempt from a contribution levy. Therefore, the proposed development is not subject to Section 7.12 contributions. It is noted that the IASB building was fully exempt from payment of contributions.

Special Infrastructure Contributions (SICs) have not been implemented in Randwick LGA.

7.20.3. Mitigation Measures

No mitigation measures are required.

7.21. OTHER ASSESSMENT REQUIREMENTS

The following reports have been prepared as required by the SEARs to assist with the assessment of the proposed development.

Table 17 Other Assessment Requirements

Issue	Response
Structural Report	Structural Design Certification has been provided by Meinhardt Bonacci (**Appendix CC**). The certification confirms that the design of the proposed SCH1/CCCC is in accordance with normal engineering practice and meets the requirements of the Building Code of Australia (BCA), fire safety standards and relevant Australian Standards (AS).
Sediment and Erosion Control Plan	A Sediment and Erosion Control Plan has been prepared by Meinhardt Bonacci and is included in the Stormwater Management Plan at **Appendix T**.
Accessibility Report	A BCA and DDA Compliance Statement has been prepared by Blackett Maguire & Goldsmith, provided at **Appendix DD.** The assessment concludes that the proposed development can readily achieve compliance with the relevant provisions of the BCA and DDA standards. Compliance matters noted in the assessment can be readily addressed at Crown Certificate stage.

8. ENVIRONMENTAL RISK ASSESSMENT

8.1. RISK ASSESSMENT

The SEARs require an environmental risk analysis to identify potential environmental impacts associated with the proposal.

This analysis comprises a qualitative assessment consistent with the methodology used for the concept DA and the *Australian Standard AS4369:1999 Risk Management and Environmental Risk Tools*. The level of risk was assessed by considering the potential impacts of the proposed development prior to application of any mitigation or management measures.

The significance of the impact is assigned a value between 1 and 5 based on:

- The sensitivity of the environment receiving the impact;
- The level of understanding of the type and extent of the impact;
- The likely response to the environmental consequence of the project.

The manageability of the impact is assigned a value between 1 and 5 based on:

- The complexity of mitigation measures;
- The known level of performance of the mitigation measures proposed;
- The opportunity for adaptive management.

The sum of the significance and manageability values provides an indicative ranking (between 1 and 10) of the potential residual impacts after the mitigation measures are implemented. The risk levels for likely and potential impacts were, therefore derived using the following risk matrix.

Table 18 Risk Matrix

		MANAGEABILITY OF IMPACT				
		A – COMPLEX	B – SUBSTANTIAL	C – ELEMENTARY	D – STANDARD	E – SIMPLE
SIGNIFICANCE	5	High	High	Medium	Low	Very Low
	4	High	High	Medium	Low	Very Low
	3	Medium	Medium	Medium	Low	Very Low
	2	Low	Low	Low	Low	Very Low
	1	Very Low	Very Low	Very Low	Very Low	Very Low

The results of the environmental risk assessment for the detailed SSD DA are presented in **Table 18**.

Following the application of each of the mitigation measures, only two (2) residual risks were identified as having a risk profile of 'medium' or greater, including:

- Operational traffic generation
- Parking demand

These risks can be appropriately managed through the minimisation and mitigation measures which are proposed as part of this application.

Table 19 Risk Assessment

Aspect	Potential Impact	Significance	Manageability	Risk Level
Wind Impacts	Adverse pedestrian wind environment on and surrounding the site.	3	D	Low
Transport and Accessibility	Increased construction traffic on local roads.	4	D	Low
	Increased operational traffic on local roads.	4	C	Medium
	Impacts to pedestrians and cyclists during construction.	4	D	Low
	Insufficient parking availability.	4	C	Medium
	Impacts to the operation of the light rail network.	4	D	Low
European Heritage	Impact on significance of heritage items in the vicinity of the site.	2	E	Low
Aboriginal Heritage	Impact on Aboriginal places of significance during construction.	4	D	Low
Biodiversity	Impact on biodiversity on or surrounding the site.	2	E	Low
Social Impacts	General disruption to the community associated with large scale construction.	3	D	Low
Environmental Performance/ESD	Irreversible increase in resource consumption.	3	D	Low
Noise and Vibration	Adverse external noise and vibration impacts associated with construction.	4	D	Low
	Adverse external noise and vibration impacts associated with operation.	3	D	Low
	Adverse internal noise impacts from external sources (light rail, traffic).	2	D	Low
Stormwater	Inadequate drainage on site.	3	D	Low
Flooding	Site flooding and risk to life.	4	D	Low
Soil and Water	Impact on surface and groundwater conditions.	3	D	Low

Aspect	Potential Impact	Significance	Manageability	Risk Level
Waste	Construction waste production.	3	D	Low
	Operational waste production.	3	D	Low
Contamination	Exposure of contamination or hazardous materials during construction and operation.	4	D	Low
Access	Inadequate access for people with a disability.	3	D	Low
Airspace	Adverse impacts on protected airspace.	3	D	Low
Cumulative Impact	Cumulative impacts (traffic, noise, dust etc.) associated with the concurrent construction and operation of the site and other development in the area (construction and operation).	3	D	Low

8.2. MITIGATION MEASURES

The measures identified to mitigate the potential environmental impacts of the proposed development are described in detail within **Section 7** of this EIS and summarised in the table below.

Table 20 Mitigation Measures

Aspect	Potential Impact	Mitigation Measures
Wind Impacts	Adverse pedestrian wind environment on and surrounding the site.	▪ Further liaison with the design team will be undertaken during the next phase of the development to incorporate further mitigation strategies as appropriate in the north-west colonnade when only the SCH1/CCCC building is constructed. ▪ This could be ameliorated by partially blocking the colonnade along the north and west facade with the inclusion of a facia or balustrade, the inclusion of landscaping to the north and/or hanging artwork under the colonnade.
Transport and Accessibility	Increased construction traffic on local roads.	▪ The Principal Contractor will prepare a comprehensive CTPMP with Traffic Control Plans prior to commencement of works, detailing specific methods of safely managing construction vehicle traffic within the surrounding area and any required road closures for mobile crane days if required.

Aspect	Potential Impact	Mitigation Measures
		▪ The recommendations included in the preliminary CTPMP prepared by Arup (**Appendix H**) are to be considered and incorporated where appropriate to the final CTPMP.
	Increased operational traffic on local roads.	▪ SCH1/CCCC to actively promote the take up of sustainable travel modes and initiatives set out in the RHC GTP.
	Impacts to pedestrians and cyclists during construction	▪ The Principal Contractor will prepare a comprehensive CTPMP with Traffic Control Plans prior to commencement of works, detailing specific methods of safely managing construction vehicle traffic within the surrounding area and any required road closures for mobile crane days if required. ▪ The recommendations included in the preliminary CTPMP prepared by Arup (**Appendix H**) are to be considered and incorporated where appropriate to the final CTPMP.
	Insufficient parking availability	▪ SCH1/CCCC to actively promote the take up of sustainable travel modes and initiatives set out in the RHC GTP to encourage a mode shift of 0.9%.
	Impacts to the operation of the light rail network	▪ Restrict vehicle access to the site from High Street during construction and operation.
Aboriginal Heritage	Impact on Aboriginal places of significance during construction.	▪ Excavations of the northern portion of Eurimbla Avenue are to be jointly monitored by MDCA and the LPLALC under a stop work provision and Unexpected Finds Protocol in the event of an unexpected find.
Biodiversity	Impact on biodiversity on or surrounding the site.	▪ Appropriate controls are to be utilised to manage exposed soil surfaces and stockpiles to prevent sediment discharge into waterways. Soil and erosion measures such as sediment fencing and clean water diversion must be in place prior the commencement of the construction work. ▪ Construction lights or development lights should be positioned to prevent shine into proposed new landscaped vegetation. Noise should be limited to approved construction hours only. Dust should be managed through appropriate dust control management plan.

Aspect	Potential Impact	Mitigation Measures
		▪ Waste bins to be present on site. Covers to be used to prevent blown litter and the entry of pest animals or rain. Removal and appropriate disposal of general. ▪ Vehicles, machinery and building refuse should remain only within the development site. Washdown protocols for vehicles should be observed to prevent the entry of soil borne pathogens such as Phytophthora. Weed management to be undertaken where required. Weeds should be removed and handled in accordance with relevant Biosecurity Act protocols if high threat weeds are present. ▪ Construction staff to be briefed prior to work commencing to be made aware of any sensitive biodiversity values present and environmental procedures such as: – Site environmental procedures (sediment and erosion control, exclusion fencing and weeds) – What to do in case of environmental emergency (chemical spills, fire, injured fauna) – Key contacts in case of environmental emergency. ▪ It is recommended that landscaping in the development site considers the use of locally derived native species and those found within PCT 1793.
Social Impacts	General disruption to the community associated with large scale construction.	▪ Continue to communicate with the community, especially harder to reach lower socio-economic communities, during operation on the services provided at the SCH. ▪ Opportunities in the public and industry CCCC laboratories for patients, families, and the broader community to attend information and/or activity sessions to learn and interact with research. ▪ Implement the SCHN existing Indigenous Employment and Workforce Development Strategy which aims to increase the representation of Aboriginal employees to 2.6% across NSW Health.

Aspect	Potential Impact	Mitigation Measures
		▪ Prepare a workforce plan which outlines proposed staffing changes across SCH, and new roles. ▪ Develop relationships with local high schools to enhance knowledge of career opportunities in the health sector. ▪ Work with the local Aboriginal community in the final stages of design for the Indigenous gathering space. ▪ Continue to engage children, families and staff in the detailed design of open spaces associated with the proposal. ▪ Implement a landscape maintenance schedule in the Hospital's Operational Plan or Plan of Management. ▪ Use Council's community hub locations to distribute construction and project updates and reach communities across the LGA. ▪ Actively promote the take up of sustainable travel modes and initiatives set out in the RHC GTP. ▪ Ongoing monitoring of car park activity.
Environmental Performance/ESD	Irreversible increase in resource consumption	Implement the recommendations of the ESD Report (**Appendix O**).
Noise and Vibration	Adverse external noise and vibration impacts associated with construction	▪ General Management Measures – Introduce best-practice general mitigation measures in the workplace which are aimed at reducing the acoustic impact onto the nearest affected receivers. ▪ Project Notification – Issue project updates to stakeholders, discussing overviews of current and upcoming works. Advanced warning of potential disruptions can be included. ▪ Verification Monitoring – Monitoring to comprise attended or unattended acoustic surveys. The purpose of the monitoring is to confirm measured levels are consistent with the predictions in the acoustic assessment, and to verify that the mitigation procedures are appropriate for the affected receivers. ▪ If the measured levels are higher than those predicted, then the measures will need to be
	Adverse external noise and vibration impacts associated with operation	

Aspect	Potential Impact	Mitigation Measures
		reviewed and the management plan will need to be amended. ▪ Complaints Management System – Implement a management system which includes procedures for receiving and addressing complaints from affected stakeholders. ▪ Specific Notification – Individual letters or phone calls to notify stakeholders that noise levels are likely to exceed noise objectives. ▪ Alternatively, the Contractor could visit stakeholders individually in order to brief them in regard to the noise impact and the mitigation measures that will be implemented. ▪ Respite Offer – Offer provided to stakeholders subjected to an ongoing impact. The offer could include movie tickets, meal vouchers, gift cards or equivalent measures. ▪ Alternative Construction Methodology – Contractor to consider alternative construction options that achieve compliance with relevant criteria. Alternative option to be determined on a case-by-case basis. It is recommended that the selection of the alternative option should also be determined by considering the assessment of on-site measurements.
	Adverse internal noise and vibration impacts from external sources (light rail, traffic, helicopter)	▪ Implement façade and external wall construction recommendations provided in the Acoustic Assessment to satisfy internal noise level criteria. ▪ This will be monitored by the project team throughout the design process.
Stormwater	Inadequate drainage on site	▪ The ground level suspended podium is to be constructed with suitable drainage and falls to ensure that freeboard is provided to entrances of the proposed development so that any overflow is discharged away from the proposed building and does not impact any downstream properties. ▪ Sediment and control measures are to be implemented during construction in accordance with the Landcom ‘Blue Book’.
Flooding	Site flooding and risk to life	▪ In order to provide flood protection to the RCR site and RHC, the SCH1/CCCC and HTH should

Aspect	Potential Impact	Mitigation Measures
		construct an impermeable barrier to RL56.25 along the full length of the High Street frontage. ▪ It is recommended that this flood barrier be constructed prior to occupation of the IASB to provide it with flood protection in a PMF event. ▪ On completion of the SCH1/CCC and HTH developments, the building structures can form the flood barrier along High Street.
Soil and Water	Impact on surface and groundwater conditions	▪ Implement sediment and erosion control measures provided in the Stormwater Management Plan (**Appendix T**). ▪ Additional rock-cored boreholes to confirm the depth and strength of rock for foundation design, together with additional groundwater monitoring wells are recommended to fill in data-gaps from the Desktop Assessment. ▪ Dilapidation (building condition) reports should be prepared for adjacent structures and infrastructure located within at least about 15 m from the site boundaries, prior to commencing excavation work on the site. ▪ All excavated materials will need to be disposed of in accordance with the provisions of the current legislation and guidelines including “Waste Classification Guidelines” – 2014, New South Wales Environment Protection Authority (NSW EPA). This includes fill and natural materials that may be removed from the site. ▪ Vibration trials should occur at the commencement of excavation in rock to determine minimum setbacks from existing buildings or sensitive areas for specific plant, whether the use of other plant or continuous vibration monitoring is required. ▪ During construction of the basement and any deep lift cores/stairs and service trenches, any exposed excavation faces should be inspected at regular 1.5 m depth intervals by an experienced geotechnical engineer to assess whether there are any further stabilisation requirements, such as reducing the steepness of a batter, installation of ground anchors or shotcrete protection.

Aspect	Potential Impact	Mitigation Measures
		▪ Temporary ground anchors may be required to restrict wall movements during the construction phase, with permanent support of retaining walls anticipated to be provided by the final structure. ▪ It is recommended that all building footings are founded on at least medium strength sandstone to reduce the risk of differential settlement.
Waste	Construction waste production	▪ The Principal Contractor will prepare a comprehensive CWMP prior to commencement of works and take into consideration the recommendations of the preliminary CWMP prepared by WSP (**Appendix W**).
	Operational waste production	▪ Extended waste stream separation, including streams such as paper / cardboard, pallets, metals and electronics. ▪ The use of large waste compactors where appropriate, minimising frequency of waste collection. ▪ Separate waste stores for common and clinical waste volumes, as to minimise risk of inappropriate material handling. ▪ Separate clinical waste stores for SCH1/CCCC, as to provide for ease of individual operations. ▪ Separate “clean” (incoming deliveries, food, clean linen, etc.) and “dirty” (waste, dirty linen, etc.) loading bays, as to minimise risk of cross contamination.
Contamination	Exposure of contamination or hazardous materials during construction and operation	▪ Implement the remediation procedures, unexpected finds protocols and completion of the validation assessment detailed in the RAP.
Access	Inadequate access for people with a disability.	▪ Ensure compliance with the matters identified in the BCA and DDA Compliance Assessment (**Appendix DD**) at Crown Certificate stage.
Airspace	Adverse impacts on protected airspace	▪ Maintain proposed maximum building height.
Cumulative Impact	Cumulative impacts (traffic, noise, dust etc.) associated with the concurrent construction and operation of the site and other	▪ Prepare and implement a comprehensive CMP that addresses construction traffic, waste and noise matters.

Aspect	Potential Impact	Mitigation Measures
	development in the area (construction and operation).	▪ Actively promote the take up of sustainable travel modes and initiatives set out in the RHC GTP to encourage a mode shift of 0.9%.

9. CONCLUSION AND JUSTIFICATION

This EIS has been prepared to assess the environmental, social and economic impacts of the proposed 9-storey Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre (SCH1/CCCC). The EIS has addressed the issues identified in the SEARs and has been prepared in accordance with Schedule 2 of the EP&A Regulation.

The main objective of the proposed development is to deliver new, state-of-the-art paediatric health and medical research facilities as part of the first stage of redeveloping the SCH.

The project seeks to strengthen the RHIP as a world-class centre for health, research and education to drive cutting edge, compassionate and holistic healthcare and wellness programs for the local community and other residents of NSW.

Having regard for the environmental, economic and social considerations, including the principles of ecologically sustainable development, the proposed development is justified for the following reasons:

- The proposal supports the co-location of health, research and education related facilities which will contribute to the RHIP's growth.
- The co-location of health and educational facilities will also allow for a more efficient translation of education and research into patient care for patients within the RHC and broader RHIP.
- Delivery of 36,072sqm of health services facility floor space will create 1,195 construction jobs and 516 FTE operational jobs which will contribute to Randwick LGA's job targets 32,000 – 35,500 jobs by 2036.
- The proposed development is ideally located to promote optimal use of the CSELR infrastructure.
- The proposed development will include Australia's first Children's Comprehensive Cancer Centre, bringing world-leading clinical care, research and teaching together to deliver improved models of care for sick and injured children.
- The CCCC will transform children's cancer care, delivering better health outcomes through the rapid translation of clinical research into effective treatments for patients and thereby improving the service levels that currently exist in the SCH and the wider RHC.
- The proposal will deliver a significant extent of new publicly accessible open space which will contribute to great place making that will bring people together.
- The high-quality architectural design fits comfortably in its context of the wider RHIP context and creates an enhanced public domain.
- The proposal incorporates sustainability initiatives to promote improved environmental performance.
- Traffic and parking impacts associated with the proposed development can be appropriately managed and sustainable transport use will be promoted.

Having considered all relevant matters, we conclude that the proposed development is appropriate for the site and approval is recommended, subject to appropriate conditions of consent.

DISCLAIMER

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