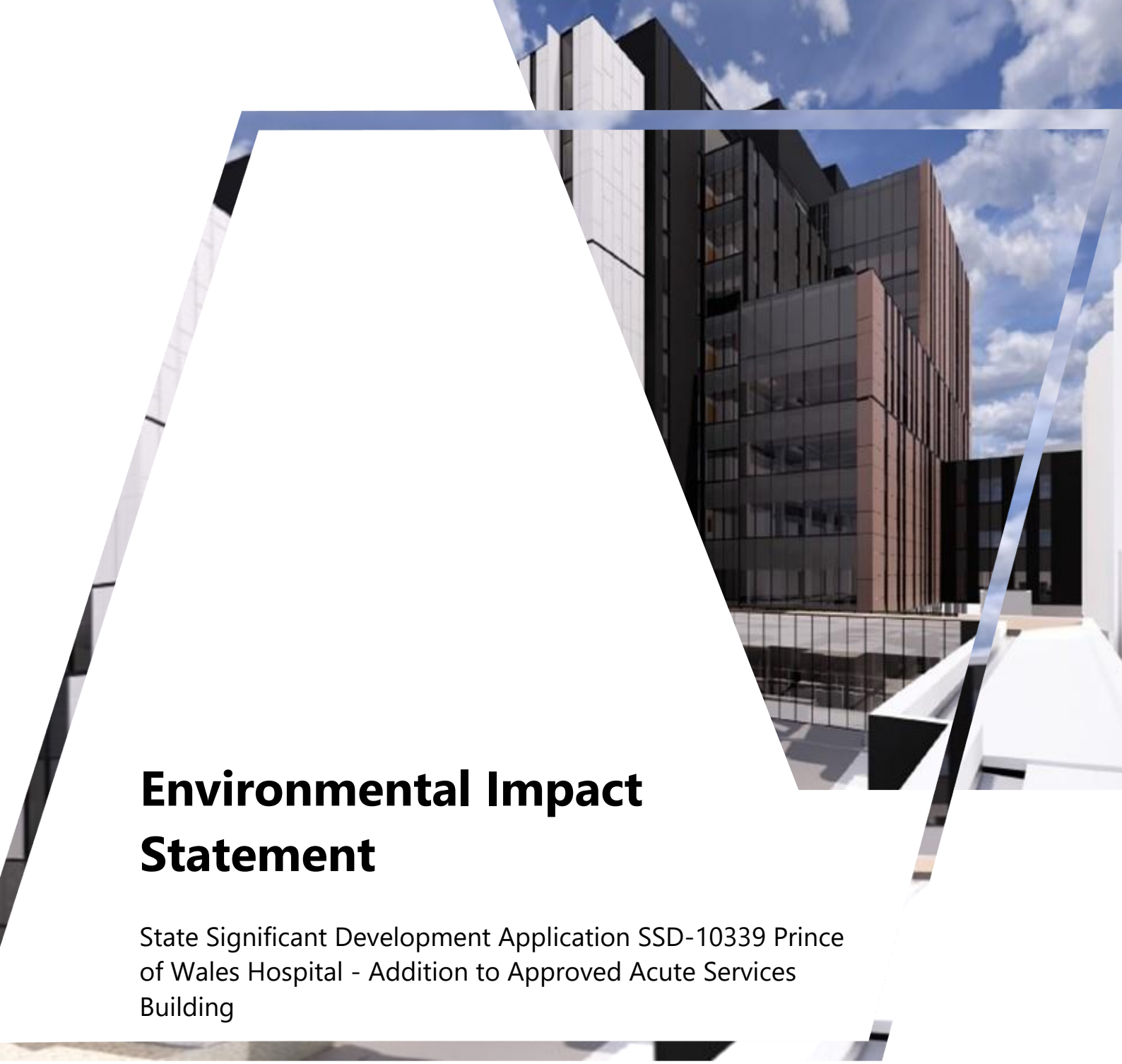

Environmental Impact Statement

State Significant Development Application SSD-10339 Prince of Wales Hospital - Addition to Approved Acute Services Building

Level 17, 141 Walker St
North Sydney NSW 2060
Australia

20 August 2019

301015-03835

NSW GOVERNMENT Health Infrastructure

Advisian
Worley Group

www.**advisian**.com

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Project No: 301015-03835 – Environmental Impact Statement: State Significant Development Application SSD-10339 Prince of Wales Hospital - Addition to Approved Acute Services Building

Rev	Description	Author	Review	Approval	Date
B	First Draft Issued for Client review	S. Khan	C. Jones	R. Power	12.07.2019
C	Final Draft Issued for Client review	S. Khan	C. Jones	R. Power	15.08.2019
D	Issued for test of adequacy	S. Khan	C. Jones	R. Power	29.07.2019
E	Re-issued for test of adequacy	S. Khan	C. Jones	C. Jones	16.08.2019
0	Final	S. Khan	C. Jones	C. Jones	20.08.2019

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State Significant Development Application Details

Applicant Name	NSW Health Infrastructure
Applicant Address	Level 14, 177 Pacific Highway, North Sydney NSW 2060
Land to be developed	Part Lots 4-11 DP 13995 and Part Lot 1 DP870720 (Prince of Wales Hospitals Campus), Hospital Road, Randwick.
Proposed Development	Prince of Wales Hospital – addition to approved Acute Services Building as described throughout this Environmental Impact Statement.

Environmental Impact Statement prepared by:

Name	Saad Khan
Qualifications	Bachelor of Science (Environmental Studies) and Master in Urban and Regional Planning
Address	Level 17, 141 Walker Street, North Sydney, NSW

Declaration

I declare that I have prepared the content of this Environmental Impact Statement and to the best of my knowledge:

(i) the statement has been prepared in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000;

(ii) the statement contains all available information that is relevant to the environmental assessment of the development to which the statement relates; and

(iii) that the information contained in the statement is neither false nor misleading.

Name	Saad Khan
Qualifications	Bachelor of Science (Environmental Studies) and Master in Urban and Regional Planning
Address	Level 17, 141 Walker Street, North Sydney, NSW

Signature  Date 20.08.2019

Acronyms and Terms

Acronym/Term	Definition
AHIMS	Aboriginal Heritage Information Management System
AHIP	Aboriginal Heritage Impact Permit
ARI	Annual recurrence interval
ASB	Acute Services Building
BCA	Building Code of Australia
BC Act	*Biodiversity Conservation Act 2016* (NSW)
BDAR	Biodiversity development assessment report
BOH	Back of house
CBD	Central Business District
CIV	Capital Investment Value
CLM Act	*Contaminated Land Management Act 1997* (NSW)
PCMP	Preliminary Construction Management Plan
CPTED	Crime Prevention Through Environmental Design
Council	Randwick City Council
CNVMP	Construction Noise and Vibration Management Plan
CSELR	CBD and South East Light Rail
CSSD	Central Sterilising Service Department
CPTMP	Construction Pedestrian and Traffic Management Plan
DA	Development Application
DCP	Randwick Development Control Plan 2013
DD Act	*Disability Discrimination Act 1992* (Commonwealth)
DP	Deposited Plan
DP&E	Department of Planning and Environment (NSW)
ED	Emergency Department
EIS	Environmental Impact Statement
EP&A Act	*Environmental Planning & Assessment Act 1979* (NSW)
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000* (NSW)
EPA	Environment Protection Authority (NSW)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth)
ESD	Ecologically sustainable development
ESMHS	Eastern Suburbs Mental Health Service
FOH	Front of house
FSR	Floor space ratio
FTS	Future Transport Strategy 2056
GFA	Gross floor area
Precinct Masterplan	Greater Randwick Urban Masterplan
GSC	Greater Sydney Commission
GSRP	Greater Sydney Regional Plan
HAC	Health Administration Corporation
HI	NSW Health Infrastructure
HIS	Heritage Impact Statement

Acronym/Term	Definition
HLS	Helicopter Landing Site
HV	High voltage
IASB Addition	Integrated Acute Services Building Addition
ICNG	Interim Construction Noise Guideline 2009
ISEPP	*State Environmental Planning Policy (Infrastructure) 2007* (NSW)
IWMP	Integrated Water Management Plan
LEP	*Randwick Local Environmental Plan 2012*
LGA	Local Government Area
LPLALC	La Perouse Local Aboriginal Land Council
MAU	Medical Assessment Unit
MNES	Matters of National Environmental Significance
NCC	National Code of Construction
NPW Act	*National Parks and Wildlife Services Act 1974* (NSW)
NSW	New South Wales
OEH	Office of Environment and Heritage (NSW)
OLS	Obstacle Limitation Surface
OSD	On-site stormwater detention
PANS-OPS	Procedures for Air Navigation Services – Aircraft Operations
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
POWH	Prince of Wales Hospital
POWPH	Prince of Wales Private Hospital
Precinct	Randwick Health and Education Precinct
Project	Randwick Hospitals Campus Redevelopment
Proposed development	Construction and operation of the IASB Addition
RAHSCM	Randwick Academic Health Science Centre Masterplan
REF	Review of Environmental Factors
RHC	Randwick Hospitals Campus
RHW	Royal Hospital for Women
RL	Reduced level
RMS	Roads and Maritime Services
SACL	Sydney Airport Corporation Limited
SCHN	Sydney Children's Hospital Network
SEARs	Secretary's Environmental Assessment Requirements
SEPP	State Environmental Planning Policy
SESLHD	South Eastern Sydney Local Health District
SHR	State Heritage Register
Site	Part Lots 4-11 DP 13995 and Part Lot 1 DP870720 (Prince of Wales Hospitals Campus), Hospital Road, Randwick.
SRD SEPP	*State Environmental Planning Policy (State and Regional Development) 2011 Development) 2011* (NSW)
SSDA	State Significant Development Application
TfNSW	Transport for NSW
UMPES	Utility Management Plan Electrical Services
UNSW	University of New South Wales
WSUD	Water sensitive urban design

Executive Summary

Purpose of the EIS

Advisian has been commissioned by NSW Health Infrastructure (HI) (the applicant) to prepare an Environmental Impact Statement (EIS) to accompany State Significant Development Application Number SSD 10339 (SSDA), pursuant to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act), to be submitted to the NSW Department of Planning, Industry and Environment (DPIE)[1].

The EIS has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the then Department of Planning and Environment (DP&E)[2], under covering letter dated 14 August 2019 (Appendix A), pursuant to Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

In combination with statutory and strategic planning framework requirements, the EIS seeks to ensure that all reasonably known environmental impacts of the SSDA have been identified, evaluated and mitigated through the adoption of the measures proposed in Section 9 and detailed in Table 9-1. Comprehensive stakeholder and community consultation has been undertaken and will be ongoing to ensure the SSDA design, construction and operation is aligned to Randwick Health and Education Precinct (the Precinct) outcomes and benefits.

Project Overview

The Randwick Hospitals Campus (RHC) Redevelopment Project (the Project) is a critically important component in the vision of the NSW Government and the Randwick Health Collaboration for the creation of the Precinct.

The NSW Government is partnering with University of New South Wales (UNSW) for this SSD so as to strengthen the RHC through the integration of additional health education, training and research with acute healthcare services - directly benefiting patients, carers and the NSW community. Under the latest partnership initiative for the Project, an extension to the approved (27 February 2019) Acute Services Building (ASB) (SSD 9113) is proposed (herein referred to as the "IASB Addition"). The Project is a critically important component in the vision of the NSW Government's vision for the creation of the Randwick Health and Education Precinct (the Precinct).

The purpose is to enable clinical innovation and research, biomedical engineering, and research laboratories to be collocated directly alongside clinical staff. By doing so, it will bring together clinicians, researchers, educators and public health professionals to drive the rapid translation of research into clinical practice, expand excellence in health teaching and education opportunities, and improve the patient care experience at Randwick.

[1] Formerly known as the Department of Planning and Environment (DP&E).
[2] As of 1 July 2019, name changed to the Department of Planning, Industry and Environment (DPIE).

The Proposed Development

The SSDA seeks development consent for the construction and operation of the IASB Addition (the proposed development). It is a 10-storey addition to the approved ASB which comprises a gross floor area of approximately 5,000 m², which equates to an approximate increase of 10% to the approved ASB. It comprises the following core elements:

- UNSW Kensington Campus Eastern Extension (excluding internal fit-out).
- Associated modifications within the approved ASB.
- Lowering of Hospital Road.
- Landscaping.

A full description of the proposed development is contained in Section 3.

Statutory and Strategic Planning Framework

Part 4, Division 4.7 of the EP&A Act establishes an assessment framework for SSDAs. The proposed development is declared to be an SSD as a "hospital" and "health, medical or related research facilities" in accordance with Clause 14 of Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* with a CIV of more than $30million. Section 4.12(8) requires the SSDA to be accompanied by an EIS, which is assessed against the provisions of Section 4.15.

The EIS has been prepared in accordance with the requirements of Part 3 of Schedule 2 of the EP&A Regulation, the relevant Commonwealth and State legislation and statutory planning controls (refer to Section 4).

The proposed development is consistent with the relevant NSW Government Policies and Plans including the *Better Placed* policy that realises the public value and long-term social, economic and environmental benefits of good design processes and outcomes for NSW.

Consultation

HI, in working closely with South Eastern Sydney Local Health District (SESLHD), Sydney Children's Hospitals Network (SCHN), UNSW and other RHC partners, has applied its guiding communications and engagement principles for the planning, design and delivery of the IASB Addition. In this regard, HI has been working closely with Government Agencies including Randwick City Council, Government Architect NSW, Transport for NSW (including Sydney Coordination Office and CBD and South East Light Rail) to inform the proposed development.

HI's guiding communications 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.

The Consultation Report (Appendix X1) provides detailed information on the following:

- 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 are ongoing.
- Details of the impact of stakeholder engagement.

Environmental Impacts

Section 7 contains: (a) the identification, analysis and assessment of environmental impacts and their planning merits; and (b) recommended mitigation measures where necessary to address identified impacts. Section 8 presents the environmental risk assessment which establishes a residual risk by reviewing and scoring the significance of the potential environmental impacts in Section 7 and the ability to manage those impacts.

The potential residual environmental impacts of the proposed development are:

- Impacts of the lowering and closure of Hospital Road – Medium.
- Generation of noise and vibration during construction activities – Medium.
- Potential archaeological relics present within the site – Medium.
- Potential Aboriginal objects present within the site – Medium.
- Reduced visual privacy for RHC buildings to the east – Low/Medium.
- Increase in construction traffic on local roads – Low/Medium.
- Potential for stormwater dewatering impacts on site – Low/Medium.
- Potential for contaminated soils to be found – Low.
- Increase in particulate matter, SO_2, NO, NO_2, O_3 and DPM generated as a result of construction vehicle and plant used for works – Low.
- Waste generation and disposal during construction – Low.
- Waste generation and disposal during operation – Low.

Justification and Conclusion

The driving factors in the formulation of the design are the recognition of benefits to patient care and the community brought about by the direct collocation of health education training and research with acute healthcare services, and to realise the vision for the RHC as signed by the SESLHD, SCHN and UNSW which states that:

> *"We will be a world renowned model for the integration of high quality primary, secondary and tertiary clinical care, innovative education programs and enabling original and translational research that supports wellness across the community."*

As such, the desired outcome is the creation of a centre of excellence in the provision of health services and care, health education and research. Further, it represents the essential need to realise the optimum use of RHC land, a critically scarce resource in a well-planned integrated Precinct.

Therefore, in particular, the following is noted:

- The EIS has addressed the SEARs issued by DP&E for SSD-10339, dated 14 August 2019.
- The EIS has been informed comprehensively by: (i) the supporting technical advice contained in the Reports in Appendices A to FF; and (ii) consideration of matters raised by the community and stakeholders through HI's ongoing consultations under its Communications and Stakeholder Engagement Strategy.
- In examining the change in land use and the consequential change in form and scale from the existing development on the site to that of the proposed development, it is considered there is satisfactory justification and planning merit for the proposed development. The grounds for justification are summarised in Section 10 and supported by consideration of the relevant objects of the EP&A Act addressed in Section 4.1.1 and relevant NSW Government Policies and Plans in Section 5.
- The justification for the development is supported by the identification and rigorous assessment of likely impacts and of appropriate sound, feasible and implementable mitigation measures as specified in Sections 7, 8 and 9 during the design, construction and operational phases of the proposed development.
- The measures arise from due consideration of the technical advice and the Reports and the matters in Section 4.15 Evaluation of the EP&A Act that is also addressed in Section 4.1.1 of the EIS.
- The potential residual environmental impacts, as identified in the summary above and assessed in Sections 7 and 8, are considered to be capable of mitigation as set out in Section 9. This conclusion is subject to the diligent implementation of the mitigation measures.

Therefore, it is **recommended** that SSD-10339 be approved.

1 Introduction

Advisian has been commissioned by NSW Health Infrastructure (HI) to prepare an Environmental Impact Statement (EIS) to accompany State Significant Development Application (SSDA) Number SSD-10339 pursuant to Part 4, Division 4.7 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The EIS has been prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning and Environment (DP&E)[3] on 14 August 2019 (Appendix A) and pursuant to Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation).

The SSDA seeks development consent for the construction and operation of the Integrated Acute Services Building (IASB) Addition (the proposed development). It is a 10-storey addition to the approved ASB which comprises a gross floor area of approximately 5,000 m², which equates to an approximate increase of 10% to the approved ASB.

It comprises the following core elements with the full description contained in Section 3:

- University of New South Wales (UNSW) Kensington Campus Eastern Expansion (excluding internal fit-out).
- Associated modifications within the approved ASB.
- Lowering of Hospital Road.
- Landscaping.

The NSW Government is partnering with UNSW Kensington for this Project so as to strengthen the Randwick Hospitals Campus (RHC) through the integration of additional health education, training and research with acute healthcare services - directly benefiting patients, carers and the NSW community. Under the latest partnership initiative for the RHC Redevelopment Project (the Project), an extension to the approved Acute Services Building (ASB) development under SSD 9113 is proposed.

The purpose is to enable clinical innovation and research, biomedical engineering, and research laboratories to be collocated directly alongside clinical staff. By doing so, it will bring together clinicians, researchers, educators and public health professionals to drive the rapid translation of research and innovation into clinical practice, expand excellence in health teaching and education opportunities, and improve the patient care experience at Randwick.

The site, the subject of the proposed development (Figure 1-1), encompasses parts of: (a) the former rear yards of Nos 35-45 Eurimbla Avenue; (b) a section of land of the RHC forming a private road known as Hospital Road; and (c) land known as Delivery Drive (vehicle entry to an existing loading dock) at Randwick, NSW, 2031.

[3] As of 1 July 2019, name changed to the Department of Planning, Industry and Environment (DPIE).

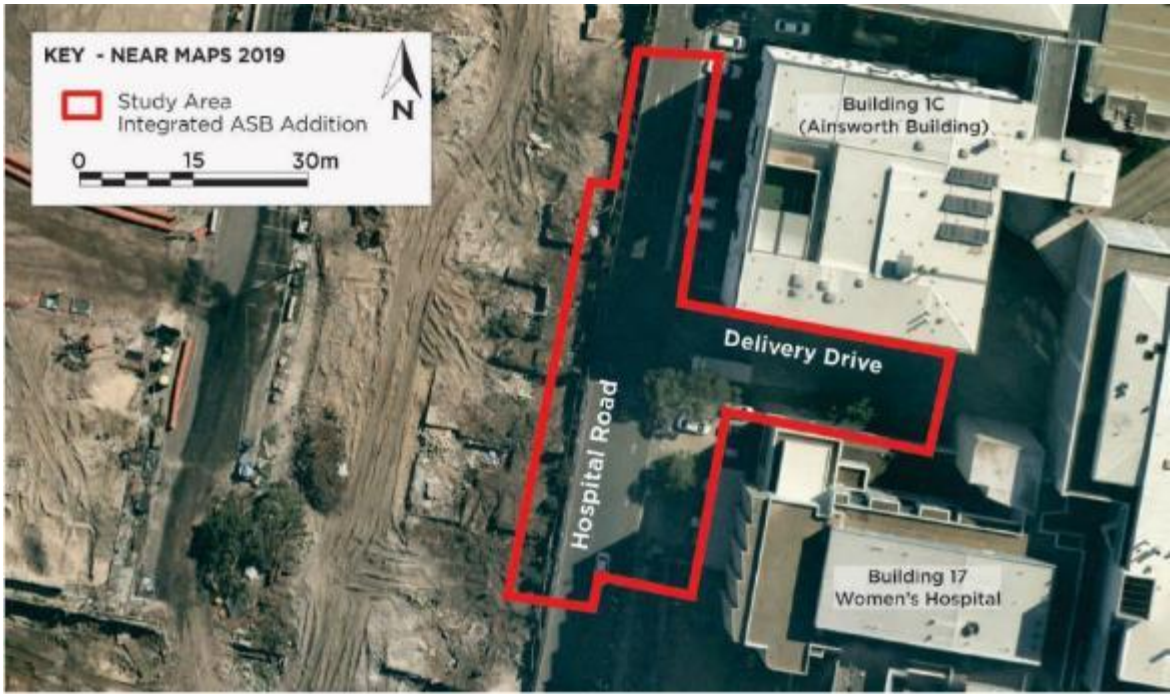


Figure 1-1 Location of the site of the proposed development (Source: NearMap, 2019)

The purpose of the EIS is to:

- Describe the site and its environs.
- Provide a full description of the proposed development.
- Identify potential environmental impacts, if any, of the proposed development and carry out an assessment of them.
- Recommend mitigation measures to manage and as far as possible minimise/ameliorate the identified potential environmental impacts.

The information relied upon in the preparation of the EIS has been sourced wherever possible from recent literature, published by specialists and government agencies. Peer-reviewed literature has also been utilised where available. The EIS and supporting specialist studies have been prepared by qualified and experienced personnel.

1.1 Project Background

The Randwick Health Collaboration is an alliance between the South Eastern Sydney Local Health District (SESLHD) which includes (Prince of Wales Hospital (POWH), Royal Hospital for Women (RHW), Eastern Suburbs Mental Health Service (ESMHS), Sydney Children's Hospitals Network (SCHN) and UNSW Kensington Campus. These institutions, together with the Black Dog Institute, Neuroscience Research Australia, the Bright Alliance and a number of other nearby research and health service providers form the Precinct (Figure 1-3).

The ASB was approved on 27 February 2019 through a separate SSDA (SSD 9113) as noted above. The approved ASB occupies a key position between the western boundary of the RHC and the eastern boundary of UNSW Kensington Campus as shown in Figure 1-2. The Project is a critically important component in the vision of the NSW Government's vision for the creation of the Randwick Health and Education Precinct (the Precinct), shown in Figure 1-4.

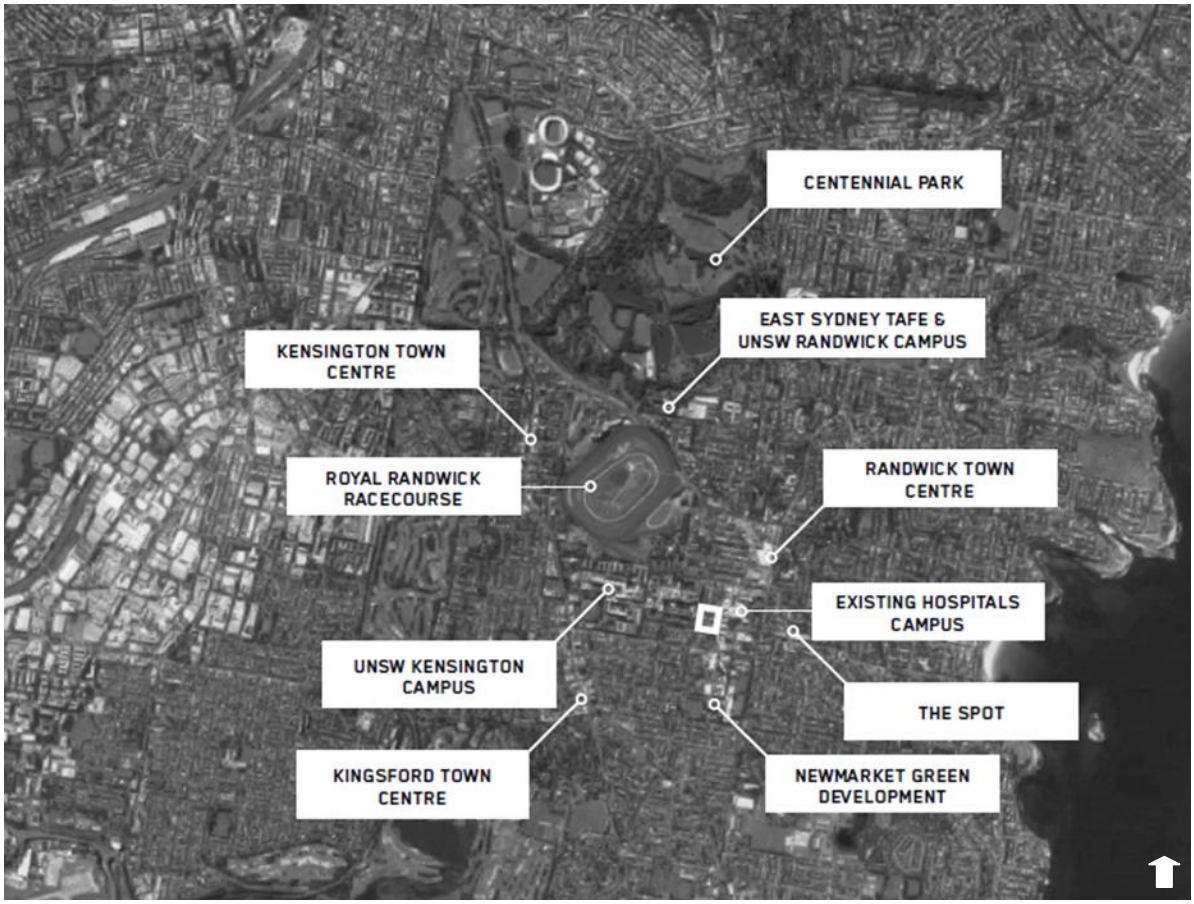


Figure 1-2 Location map with the ASB site identified in white (Source: BVN, 2019).

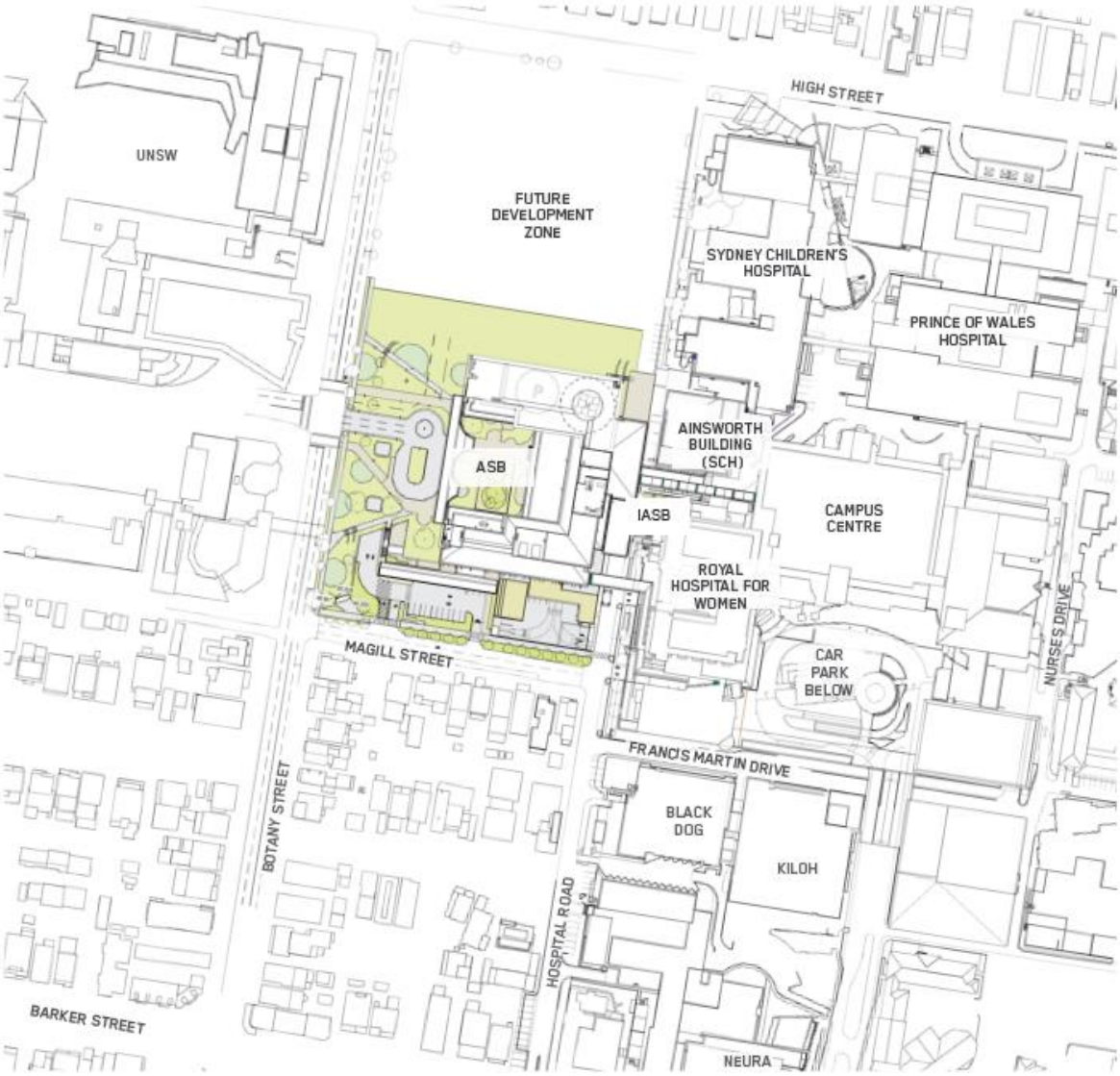
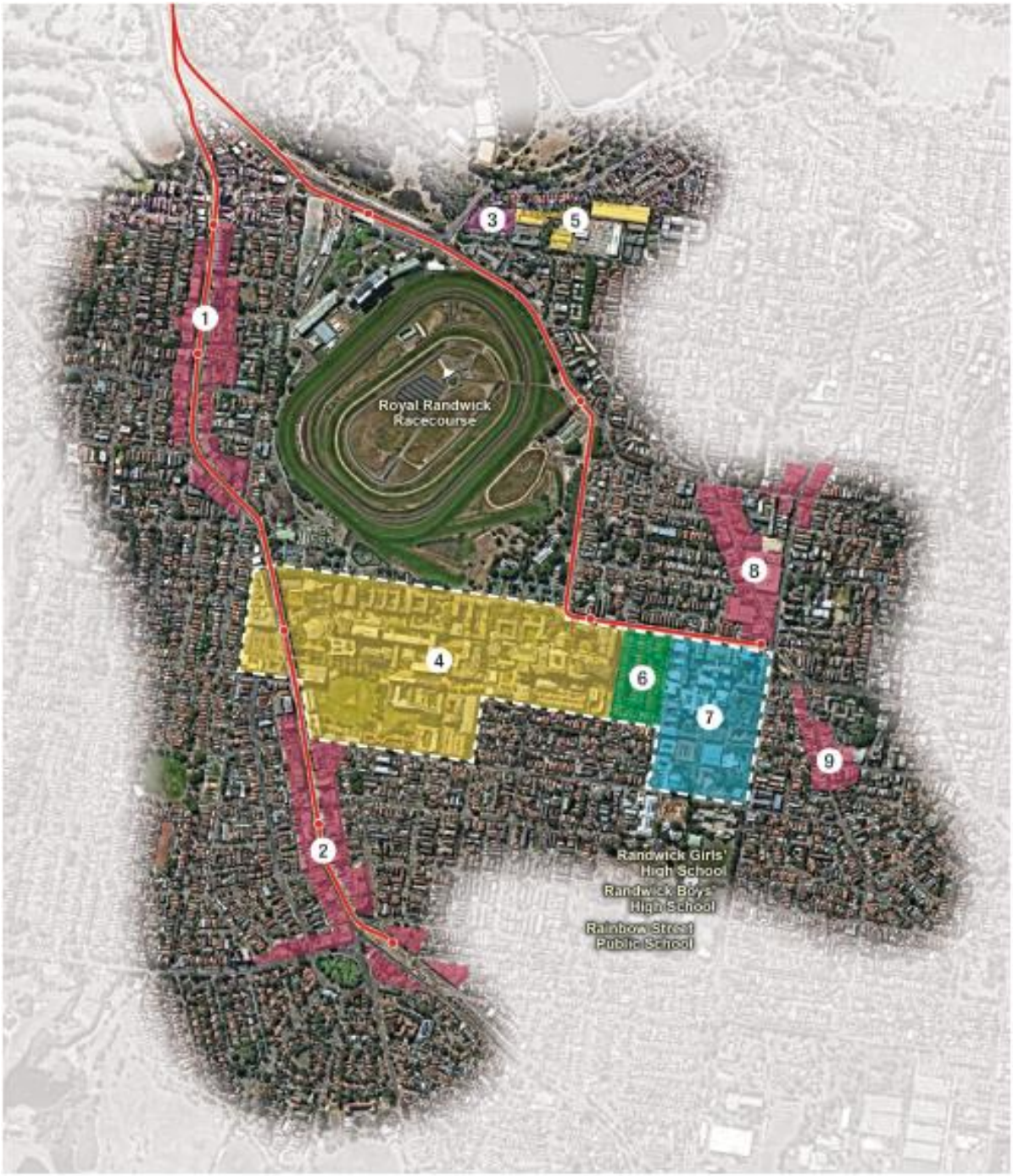


Figure 1-3 Site Plan showing the ASB, IASB Addition and future development zone to the north (Source: BVN, 2019)



1	Kensington Town Centre	5	UNSW Randwick Campus	9	The Spot
2	Kingsford Town Centre	6	Future Campus Expansion		Light rail and stations (under construction)
3	TAFE NSW Randwick	7	Randwick Hospitals' Campus		Collaboration Area
4	UNSW Kensington Campus	8	Randwick Junction Town Centre		Health and Education Precinct (core activity)

Figure 1-4 Key Randwick Collaboration Area Sites (Source: GSC, 2018).

The vision proposed within the Collaborative Framework as signed by the SESLHD, SCHN and UNSW states that:

> *"We will be a world renowned model for the integration of high quality primary, secondary and tertiary clinical care, innovative education programs and enabling original and translational research that supports wellness across the community."*

In March 2015, the then NSW Premier and NSW Minister for Health announced $500 million of funding "*to undertake the first major redevelopment of POWH in 20 years*". A further $220 million of funding was committed in June 2017 as part of the NSW Budget 2017-2018. The Project was identified as one of the primary objectives of the SESLHD *Asset Strategic Plan 2012 – 2017* and is a key enabler of the strategic priorities of the SESLHD *Journey to Excellence Strategy 2018-2021*.

Population forecasts indicate that over the next 10 years POWH faces a significant increase in demand for health services. The SESLHD predicted that with the current overnight average occupancy rate running at between 91-94%, POWH was expected to exceed 100% occupancy by 2017/18. With this projected growth in mind, it was considered that POWH needed to expand its services urgently to meet the above stated vision as an internationally recognised centre of excellence in delivering patient-centred quality healthcare, health education and research facilities and opportunities, as well as realising its potential as an important employment hub for the area.

The Precinct Masterplan, completed in 2017, demonstrated that the existing RHC was too confined and congested to meet the health needs of the community. These factors, coupled with the age, functionality and configuration of the RHC infrastructure, limited the ability of the SESLHD to fully implement its health service vision. As a consequence, the RHC would not be able to realise the full potential of the Precinct. In addition, the collocation of the RHC to physically link with the UNSW Kensington Campus is a critical consideration to realising the Precinct's employment generating potential, in line with the Eastern City District Plan.

To facilitate the delivery of the Precinct and the NSW Government's and the Randwick Health Collaboration's vision, acquisition of the land bordered by High, Botany and Magill Streets and Hospital Road and the land that constituted the former local road known as Eurimbla Avenue, Randwick (the site) was completed by the Health Administration Corporation (HAC) for the following purposes:

1. Carrying out of service relocation and early works (Precursor Works) necessary to deliver the ASB and establishing a construction site to facilitate these works. Details of the Precursor Works and their existing planning approval are set out in Section 1.2.
2. Improving and extending the RHC through the delivery of the ASB (refer Section 1.2) in Stage 1 of the multi-stage redevelopment program.
3. The construction of additional health education, training and research facilities and clinical service facilities, to be located to the north of the recently approved ASB. These additional facilities will be the subject of future planning approvals.

It is proposed that the above referred to acquired lands will be consolidated with the lands of the existing RHC, being Lot 1 DP 870720.

1.2 Site Approvals History

Planning Approvals for the site for the development of the ASB include the following:

Development Application No. DA/208/2018 under Part 4, Division 4.1 of the EP&A Act lodged by HI with Randwick City Council (the Council) on 18 April 2018 was approved by the Sydney Eastern City Planning Panel on 4 September 2018. Development consent was granted for the following works:

- Demolition of 92 buildings and ancillary structures.
- Removal of vegetation.
- Site remediation.

Review of Environmental Factors (REF) determined by HI for other components of the Precursor Works for the Project under Part 5, Division 5.1 of the EP&A Act include the following:

- REF for services diversions (sewer and stormwater) and tree removal.
- REF for demolition of Eurimbla Avenue road and pavements, tree removal and other works to Eurimbla Avenue.

It is noted that separate to the above, Ausgrid are undertaking trenching and installation for new High Voltage (HV) feeders, installation of new street lighting and other related power services under the provisions of *State Environmental Planning Policy (Infrastructure) 2007* (ISEPP).

SSD 9113 was approved by DP&E on 27 February 2019. The development consent was for the following works as described in the EIS (Advisian, 2018) and as shown in the Site Plan in Figure 1-5:

- Bulk excavation.
- Site preparation works including shoring and piling.
- Construction of a 13 level ASB comprising:
    - Level -02 Adults' Emergency Department (ED) and Back of House (BOH) services
    - Level -01 Front of House (FOH)
    - Level 00 Front of House
    - Level 01 Operating Theatres
    - Level 02 Plant, Central Sterilising Service Department (CCSD) and Logistics Interchange
    - Level 03 Intensive Care Unit (ICU) and Medical Assessment Unit (MAU)
    - Levels 04 to 08 Inpatient Units (IPU)
    - Level 09 Plant
    - Level 10 Helipad
- Loading dock and ambulance bays.

- Three level bridge over Hospital Road for clinical and operational connections to the existing hospital campus.
- One level public bridge over Hospital Road for public link connection to existing hospital campus.
- Upgraded road infrastructure at Magill Street and Botany Street including potential signalised intersection and pedestrian crossing on Botany Street.
- Capacity for a potential future pedestrian bridge link over Botany Street from the ASB to UNSW Kensington Campus.
- New circulation roads to be constructed (in the future) on the newly excavated grade to the west and south of the new building.
- Capacity for additional internal access road to be constructed to the northern part of the Project site.
- Hospital square with vehicular access and public drop off areas.
- Building services infrastructure and connections to utilities.
- Stormwater drainage infrastructure including on-site detention.
- Site landscaping.

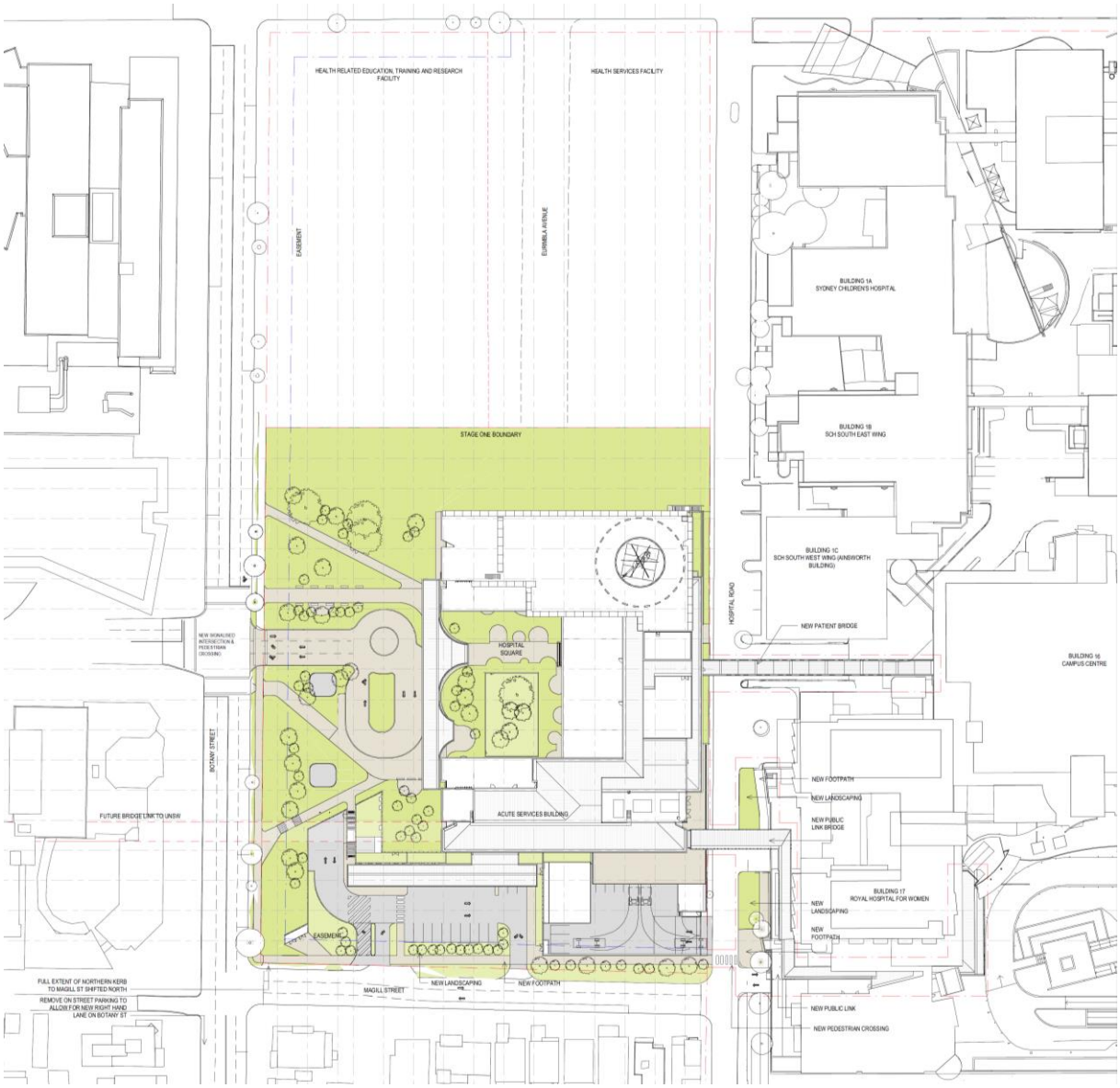


Figure 1-5 Approved ASB Site Plan (Source: BVN, 2018).

1.3 Objectives of the Proposed Development

The objectives of the proposed development are to:

- Continue the implementation of one of the primary objectives of the SESLHD's *Asset Strategic Plan 2012 – 2017* which is to urgently expand POWH to respond to a growing population, projected increase in demand for integrated health services and continue to deliver patient-centred quality care.
- Create a centre of excellence in the provision of additional health-related education, teaching and research facilities to meet professional, community and student expectations.
- Ensure that the potential environmental impacts are minimised, appropriately managed and do not adversely impact on the environment or the community.
- Facilitate the ongoing implementation of the realisation of the NSW Government and Randwick Health Collaboration's vision for the Precinct.

1.4 Estimated Capital Investment Value (CIV)

The CIV of the proposed development has been calculated by a qualified quantity surveyor, Altus Group, to be $66,710,305 (excl GST). Refer to CIV Report in Appendix B.

1.5 Construction and Operational Jobs

An estimate of the jobs that will be created by the future development during the construction and operational phases of the development was calculated by Altus Group in the CIV Report (Appendix B) that provides:

- Construction – 200 Jobs.
- Operational – nil (0) as the development will be facilitating the collocation of existing Education, Training and Research (ETR) services. The primary users of this space are employed by the UNSW and/or students of UNSW Kensington Campus are based there for the purposes of conducting research.

1.6 Analysis of Feasible Alternatives

As outlined in Section 1.1 above, the IASB Addition builds on the opportunity for the creation of the required health services and collocation of health-related education, teaching and research facilities, to meet professional, community and student expectations. The proposed IASB Addition facilitates the implementation of an important next step in the development of the RHC with a gross floor area of approximately 5,000 m^2.

In terms of alternative IASB Addition designs, the preferred design as set out in the attached Architectural Drawings (Appendix D), prepared by BVN, is the outcome of robust design testing, consultation, and careful consideration of the site's context and setting and the Precinct Masterplan. The following options were considered and discounted:

1. Southern expansion – this option was discounted for reasons including overshadowing impacts to Magill Street residences (and associated building height constraints), complex structural requirements in constructing over the ASB Emergency Department drop-off and loading dock, and distance to the ASB lift core.

2. Western expansion – this option was discounted for reasons including closing the ASB courtyard would adversely impact the Botany Street landscape zone, courtyard amenity and the ASB drop-off and arrival sequence, complex structural requirements in constructing at the main public drop-off below and distance to the IASB lift core.

3. Northern expansion – this option was discounted due to the impact on the proposed future development sites to the north of the site including functionality of the future building envelopes and uses.

It is to be noted that the positioning of the clinical core lifts and circulation of the ASB at its eastern edge minimises the distance between the IASB and the RHC and supports the creation of a spine of clinical connections running north and south from this core. The preferred IASB Addition design facilitates an eastern extension to the approved ASB. This allows for a logical and efficient expansion design which makes use of the ASB clinical core, incorporates the ASB lift core, and avoids the requirement for additional lifts or egress stairs within the footprint of the IASB Addition.

1.7 Secretary's Environmental Assessment Requirements

The SEARs were originally issued on 26 June 2019 and then re-issued on 14 August 2019. A copy of the SEARs is provided in Appendix A. The key issues identified within the SEARs have been given priority in the identification and assessment of environmental matters. Table 1-1 below outlines individual matters and the relevant Sections where they have been addressed here within.

Table 1-1 Secretary's Environmental Assessment Requirements

Requirement	Where Addressed
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 of 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
Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include: • Adequate baseline data. • Consideration of potential cumulative impacts due to other development in the vicinity (completed, underway or proposed).	Section 8

Requirement	Where Addressed
• Measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.	
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. • An estimate of the jobs that will be created by the future development during the construction and operational phases of the development. • Certification that the information provided is accurate at the date of preparation.	Section 1.4 and Section 1.5; Appendix B
Key Issues	
1. Statutory and Strategic Context Address the statutory provisions contained in all relevant environmental planning instruments, including: • State Environmental Planning Policy (State & Regional Development) 2011. • State Environmental Planning Policy (Infrastructure) 2007. • State Environmental Planning Policy No 64 – Advertising and Signage. • State Environmental Planning Policy No 55 – Remediation of land. • Draft State Environmental Planning Policy (Remediation of Land). • Draft State Environmental Planning Policy (Environment). • Randwick Local Environmental Plan 2012. *Permissibility* Detail the nature and extent of any prohibitions that apply to the development. *Development Standards* Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards. *Provisions* Adequately demonstrate and document in the EIS how each of the provisions in the listed instruments are addressed, including reference to necessary technical documents.	Section 4 Section 4.3.2 Section 4.4 Section 4
2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the following: • NSW State Priorities. • The Greater Sydney Regional Plan, A Metropolis of three cities. • Eastern City District Plan. • Future Transport Strategy 2056.	Section 5

Requirement	Where Addressed
• State Infrastructure Strategy 2018 – 2038 Building the Momentum. • Crime Prevention Through Environmental Design (CPTED) Principles. • Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017). • Randwick Development Control Plan 2013.	
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. • Address design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, colours and colours. • Where relevant, provide details of any signage, including size, layout and general finishes. • Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development. • Provide detailed site and context analysis to justify the proposed site planning and design approach including massing options and preferred strategy for future development. • Provide details of north-south permeability through the hospital campus. • Provide a detailed landscape strategy. • Provide 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. • Address CPTED Principles. • Demonstrate good environmental amenity including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility.	Section 7.2 Appendix D
4. Environmental Amenity • Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing and acoustic impacts. • Conduct a view analysis to the site from key vantage points and streetscape locations (photomontages or perspectives should be provided showing the building envelope and likely future development). • Include a lighting strategy and measures to reduce spill into the surrounding sensitive receivers. • Detailed outline of the nature and extent of the intensification of use associated with the increased floor space, particularly in relation to the proposed increase in staff numbers.	Section 7.3 Appendices D, G and H

Requirement	Where Addressed
• Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated.	
5. Staging Provide details regarding the staging of the proposed development (if any).	Section 7.4
6. Transport and Accessibility Include a transport and accessibility impact assessment, which details, but not limited to the following: • accurate details of the current daily and peak hour vehicle, existing and future public transport networks and pedestrian and cycle movement provided on the road network located adjacent to the proposed development. • details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips. • the adequacy of existing public transport or any future public transport infrastructure within the vicinity of the site, pedestrian and bicycle networks and associated infrastructure to meet the likely future demand of the proposed development. • measures to integrate the development with the existing/future public transport network and road network. • details of bicycle infrastructure and bicycle parking servicing the site. • the impact of trips generated by the development on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, including the operation of Sydney Light Rail and planned intersection improvements, and the need/associated funding for, and details of, upgrades or road improvement works, if required (Traffic modelling is to be undertaken using SIDRA network modelling for current and future years). • the identification of infrastructure required to ameliorate any impacts on traffic efficiency (including the operation of the Sydney Light Rail) and road safety impacts associated with the proposed development, including details on improvements required to affected intersections, additional school bus routes along bus capable roads (i.e. minimum 3.5 m wide travel lanes), additional bus stops or bus bays. • details of travel demand management measures to minimise the impact on general traffic and bus operations, including details of a location-specific sustainable travel plan (Green Travel Plan and specific Workplace travel plan) and the provision of facilities to increase the non-car mode share for travel to and from the site. • the proposed walking and cycling access arrangements and connections to public transport services. • the proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts	Section 7.5 Appendices I and V.

Requirement	Where Addressed
on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones. • proposed bicycle parking provision, including end of trip facilities, in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance. • proposed number of on-site car parking spaces for staff and visitors and corresponding compliance with existing parking codes and justification for the level of car parking provided on-site. • an assessment of the cumulative on-street parking impacts of cars and bus pick-up/drop-off, staff parking and any other parking demands associated with the development. • an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures and personal safety in line with CPTED. • emergency vehicle access, service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times). • the preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following: – assessment of cumulative traffic and transport impacts associated with other construction activities (if any) and details of measures to mitigate any associated traffic, pedestrian, cyclists, parking and public transport impacts – an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity – details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process – details of anticipated peak hour and daily construction vehicle movements to and from the site including measures to reduce construction vehicle movements during the defined peak periods – details of haulage routes and the locations of ingress and egress to the site – details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle – details of temporary cycling and pedestrian access during construction. Relevant Policies and Guidelines: – Guide to Traffic Generating Developments (Roads and Maritime Services) – EIS Guidelines – Road and Related Facilities (DoPI) – Cycling Aspects of Austroads Guides – NSW Planning Guidelines for Walking and Cycling	

Requirement	Where Addressed
– Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development – Standards Australia AS2890.3 (Bicycle Parking Facilities).	
7. Ecologically Sustainable Development • Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) will be incorporated in the design and ongoing operation phases of the development. • Include a framework for how the future development will 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 preliminary consideration of building performance and mitigation of climate change, including consideration of Green Star Performance. • 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. • Provide a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change, specifically: – hotter days and more frequent heatwave events – extended drought periods – more extreme rainfall events – gustier wind conditions – how these will inform landscape design, material selection and social equity aspects (respite/shelter areas). - Address the NSW and ACT Governments Regional Climate Modelling (NARCliM) climate change projects development for the Sydney Metropolitan area to inform the building design and asset life of the project. Relevant Policies and Guidelines: – NSW and ACT Government Regional Climate Modelling (NARCliM) climate change projections.	Section 7.6 Appendix J
8. Heritage • Provide a statement of heritage impact to address the impacts of the proposal on the heritage significance of the site and adjacent areas. • Provide a historical archaeological assessment to address any archaeological potential and significance on the site and the impacts the development may have on this significance.	Section 7.7 Appendices M and N

Requirement	Where Addressed
Relevant Policies and Guidelines: – NSW Heritage Manual – Heritage Division, Office of Environment and Heritage Guidelines 'Archaeological Assessment' 1996 – Assessing Significance for Historical Archaeological – Sites and Relics 2009	
9. Aboriginal Heritage • Identify and describe the Aboriginal cultural heritage values that exist across the site. • An Aboriginal Cultural Heritage Management Plan (ACHMP) must be prepared and submitted with the development application and must identify the procedure to undertake archaeological monitoring of civil works and an unexpected finds procedure prepared in consultation with relevant members of the Aboriginal Community. *Note: Relevant members of the Aboriginal Community refer to those identified in the Aboriginal Cultural Heritage Assessment Report for the New Acute Services Building for the Prince of Wales Hospital Randwick NSW prepared by Mary Dallas Consulting Archaeologists dated October 2018.*	Section 7.8 Appendices O and O1
10. Noise and Vibration • Identify and provide a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation, construction. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land. • Identify and assess operational noise, including consideration of mechanical services (e.g. air conditioning plant), ambulance movements, patient and visitor arrival/departures. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land. Relevant Policies and Guidelines: – NSW Noise Policy for Industry 2017 (EPA) – Interim Construction Noise Guideline (DECC) – Assessing Vibration: A Technical Guideline 2006 – Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008) – Australian Standard 2363:1999 Acoustics – Measurement of noise from helicopter operations.	Section 7.9 Appendix G
11. 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. Undertake a hazardous materials survey of all existing structures and infrastructure prior to any demolition or site preparation works.	Section 7.10 Appendix S

Requirement	Where Addressed
Relevant Policies and Guidelines: – Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP) – NSW EPA Sampling Design Guidelines – Guidelines for the NSW Site Auditor Scheme (3rd edition) 2017 – Guidelines for Consultants Reporting on Contaminated Sites, 2011.	
12. Contributions • Address Council's Contribution Plan and/or details of any Voluntary Planning Agreement, which may be required to be amended because of the proposed development.	Section 7.11
13. Biodiversity Assessment • Biodiversity impacts related to the proposed development (SSD-10339) are to be assessed in accordance with the Biodiversity Assessment Method and documented in a Biodiversity Development Assessment Report (BDAR). The BDAR must include information in the form detailed in the Biodiversity Conservation Act 2016 (s6.12), Biodiversity Conservation Regulation 2017 (s6.8) and Biodiversity Assessment Method. • The BDAR must document the application of the avoid, minimise and offset framework including assessing all direct, indirect and prescribed impacts in accordance with the Biodiversity Assessment Method. • The BDAR must include details of the measures proposed to address the offset obligation as follows: • the total number and classes of biodiversity credits • required to be retired for the development/project • the number and classes of like-for-like biodiversity credits proposed to be retired • the number and classes of biodiversity credits proposed to be retired in accordance with the variation rules • any proposal to fund a biodiversity conservation action • any proposal to make a payment to the Biodiversity Conservation Fund. • If seeking approval to use the variation rules, the BDAR must contain details of the reasonable steps that have been taken to obtain requisite like-for-like biodiversity credits. • The BDAR must be prepared by a person accredited in accordance with the Accreditation Scheme for the Application of the Biodiversity Assessment Method Order 2017 under s6.10 of the Biodiversity Conservation Act 2016. • Where a Biodiversity Assessment Report is not required, engage a suitably qualified person to assess and document the flora and fauna impacts related to the proposal.	Section 7.12 Appendix K

Requirement	Where Addressed
Note: Notwithstanding these requirements, the Biodiversity Conservation Act 2016 requires that State Significant Development Applications be accompanied by a Biodiversity Development Assessment Report unless otherwise specified under the Act.	
14. Utilities • Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure. • Identify any potential impacts of the proposed construction and operation on the existing utility infrastructure and service provider assets, and demonstrate how these will be protected or impacts mitigated. • Prepare 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.	Section 7.13 Appendices T, U1 and U2
15. Drainage • Detail measures to minimise operational water quality impacts on surface waters and groundwater. • Stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties. Relevant Policies and Guidelines: – Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)	Section 7.14 Appendix P
16. Flooding Identify flood risk on-site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity. If there is a material flood risk, include design solutions for mitigation.	Section 7.15 Appendix P
17. Sediment, Erosion and Dust Controls Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. Relevant Policies and Guidelines: – Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom) – Approved Methods for the Modelling and Assessment of – Air Pollutants in NSW (EPA) – Guidelines for development adjoining land and water managed by DECCW (OEH, 2013).	Section 7.16 Appendix P

Requirement	Where Addressed
18. Waste 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. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.	Section 7.17 Appendices Y, Z1 and Z2
19. Construction Hours Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.	Section 7.18
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. In addition, the EIS must include the following:	
• A section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate).	Appendix CC
• Architectural drawings showing key dimensions, RLs, scale bar and north point, including:	
– plans, sections and elevation of the proposal at no less than 1:200.	Appendix D
– illustrated materials schedule including physical or digital samples board with correct proportional representation of materials, nominated colours and finishes.	Appendix D
– details of proposed signage, including size, location and finishes.	Appendix D
– detailed annotated wall sections at 1:20 scale that demonstrate typical cladding, window and floor details, including materials and general construction quality.	Appendix D
– MGA94 coordinates. – site plans. – Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings and site boundaries. – Site Analysis Plan, including: – site and context plans that demonstrate principles for future development and expansion, built form character and open space network. – active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links.	Appendices C and D
– site and context plans that demonstrate principles for future network, active transport linkages with existing, proposed and potential footpaths and bicycle paths and public transport links. – Sediment and Erosion Control Plan.	Appendices D, E and P

Requirement	Where Addressed
– Shadow Diagrams. – View analysis, photomontages and architectural renders, including from those from public vantage points. – Landscape architectural drawings showing key dimensions, RLs, scale bar and north point, including: – integrated landscape plans at appropriate scale, with detail of new and retained planting, shade structures, materials and finishes proposed.	
– plan identifying significant trees, trees to be removed and trees to be retained or transplanted. – Design report to demonstrate how design quality will 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 including building envelope study to justify the proposed site planning and design approach.	Appendices D and E
– visual impact assessment identifying potential impacts on the surrounding built environment and adjoining heritage items.	Appendix D
• summary of feedback provided by GANSW and responses to this advice.	Appendix X1
• summary report of consultation with the community and response to any feedback provided.	Appendix X1
• Geotechnical and Structural Report.	Appendices Q and R
• Accessibility Report.	Appendix V
• Arborist Report.	Appendix L
• Schedule of materials and finishes.	Appendix D
Consultation	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with: – Randwick City Council; – Government Architect NSW; – Sydney Coordination Office within Transport for NSW; – Sydney Light Rail; and – Roads and Maritime Services.	Appendix X1

Requirement	Where Addressed
Consultation with TfNSW, GA and RMS should commence as soon as practicable to agree the scope of investigation. The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.	

1.8 Applicant and Project Team

Applicant

The applicant for this SSDA is NSW Health Infrastructure (HI).

Project Team

The project team is outlined in Table 1-2.

Table 1-2 Project Team

Discipline	Consultant
Consultant Project Manager	PwC
Consultation	HI
Architect	BVN
Town Planner	Advisian
Landscape Architect	Aspect Studios
Land Surveyor	CMS Surveyors and LTS Lockley
Quantity Surveyor	Altus Group
Electrical Engineer	Fredon Industries
Traffic and Transport Engineer	Arup
Noise and Vibration Engineer	Acoustic Studio
Civil Engineer	ACOR
Structural Engineer	Enstruct
Geotechnical Engineer	Douglas Partners
Accessibility Consultant	McKenzie Group
BCA Consultant	McKenzie Group
Hydraulic Engineer	Central Plumbing
Sustainability	LCI
Arboricultural	Eco Logical Australia

Discipline	Consultant
Biodiversity	Narla Environmental
Heritage	Advisian
Historical Archaeology	Casey and Lowe
Aboriginal Archaeology	Mary Dallas Consulting Archaeologists
Aviation Consultant	AviPro
Construction Management	Lendlease
Waste Management (construction)	Lendlease
Waste Management (operation)	SESLHD and UNSW
Contamination	Douglas Partners
Wind Engineer	Arup
Hazardous Goods and Chemicals	UNSW

2 Site Analysis

2.1 Regional Context

The site is located in the Randwick Local Government Area (LGA) and is part of the recently expanded RHC, some 6 kilometres (km) southeast of the Sydney Central Business District (CBD) and approximately 5 km from Sydney Airport. Figure 2-1 provides a regional context map of the site showing its location with regard to the Sydney CBD and nearby centres.

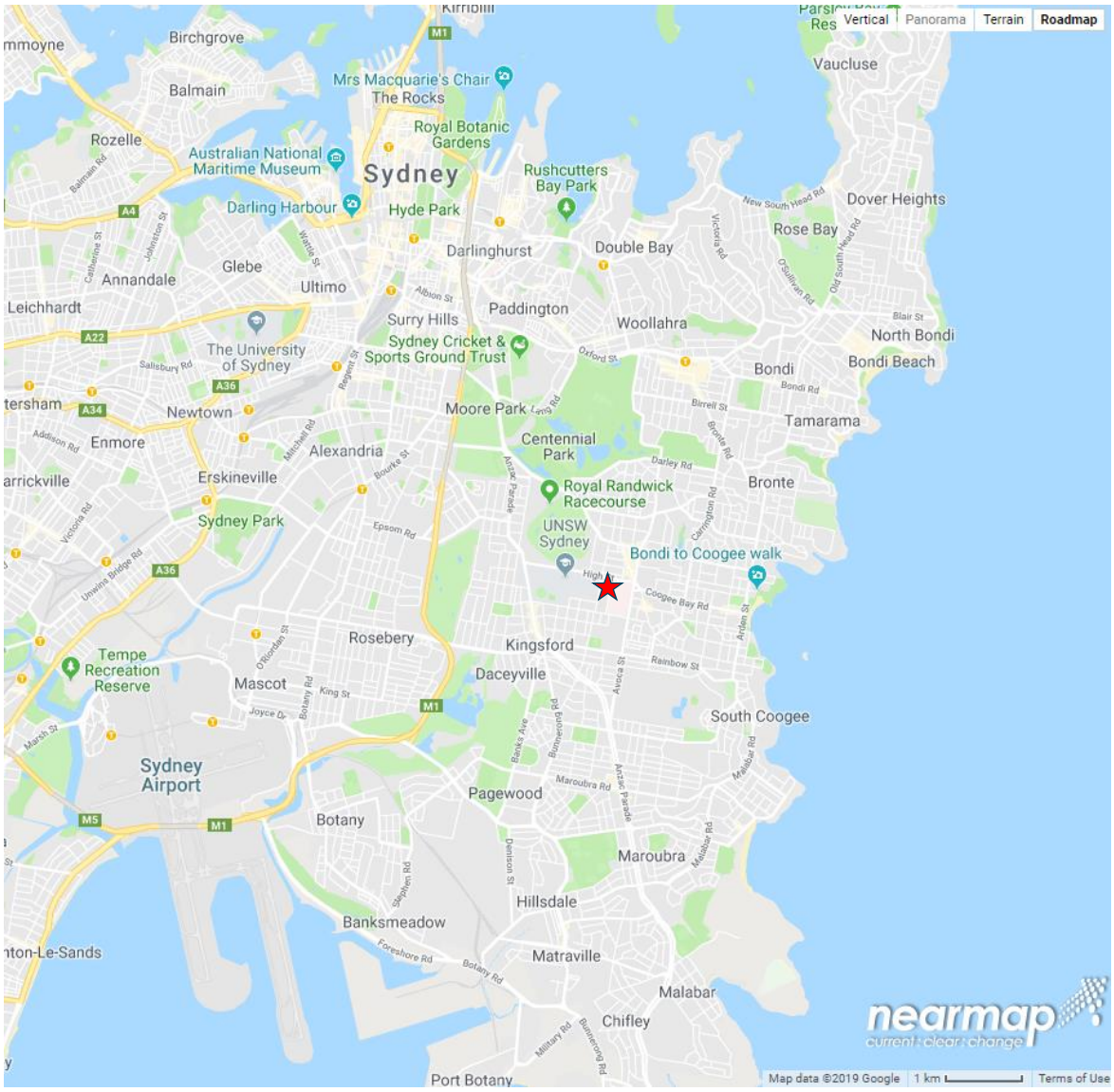


Figure 2-1 Regional context with the site indicated by red star (Base Map: NearMap)

The site is within the catchment of the SESLHD, which is one of 19 Local Health Districts and Specialty Health Networks in NSW. The SESLHD covers the LGAs of Woollahra, Waverley, Randwick, Botany Bay, the City of Sydney, Lord Howe Island, Rockdale, Kogarah, Hurstville and Sutherland

(Figure 2-2). In total, the SESLHD services approximately 830,000 people. The RHC is the primary servicing health precinct within the northern sector of the SESLHD.

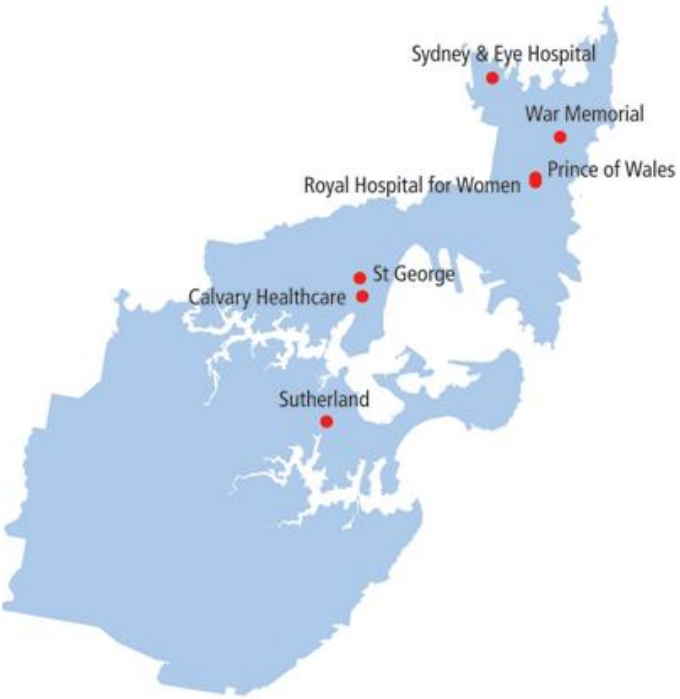


Figure 2-2 SESLHD Catchment (Source: NSW Health)

Construction of the new CBD and South East Light Rail (CSELR) along High Street is nearing completion and is anticipated to be open in late 2019. High Street is a major frontage for both the RHC and UNSW Kensington Campus. The CSELR presents a major opportunity in revitalising the High Street frontage and also the broader Precinct. Further, it will drive a change in transport modality across the Precinct and will require planning of access points for existing services, including to the Sydney Children's Hospital's Emergency Department (ED).

2.2 Local Context

The approved ASB site is known as 27 – 37 and 34 – 66A Eurimbla Avenue, 71 – 101 Botany Street, and 2 – 14 Magill Street, Randwick and also includes part of the existing RHC. The current site context of the Project site is shown in Figure 2-3. The existing RHC (prior to expansion and the ASB project) has an area of approximately 13.26 hectares (ha) and is legally described as Lot 1 DP 870720, sited immediately south of the Randwick Town Centre. UNSW Kensington Campus is located on Botany Street, west of the RHC.

Existing development within the RHC includes original sandstone Victorian buildings of exceptional heritage significance, low-rise brick structures and modern multi-storey and multi-disciplinary facilities. Figure 2-4 features a site analysis diagram.

Figure 2-3 Present site context (Source: NearMap, 2019).

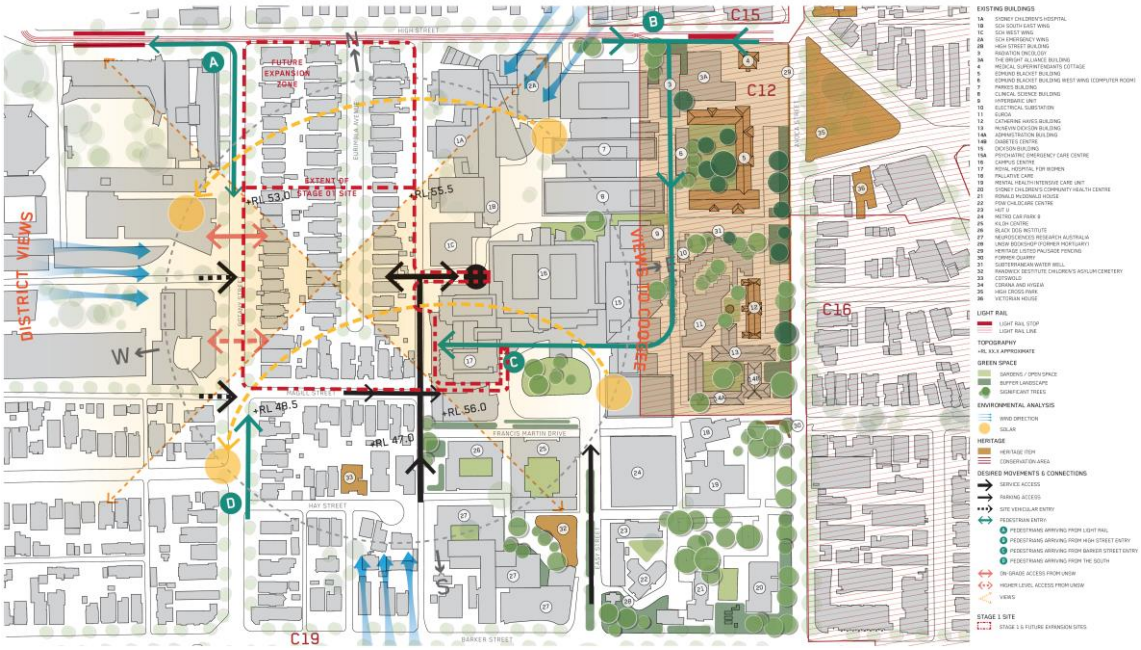


Figure 2-4 Site Analysis Diagram (Source: BVN, 2018).

Four hospitals presently share the RHC: Sydney Children's Hospital, Randwick (part of the SCHN), the Royal Hospital for Women (RHW), POW Public Hospital (POWH), and the POW Private Hospital (POWPH). Collectively, these institutions supply a variety of health services (BVN, 2019), including: Acute; Ambulatory; Community; Cancer; and Mental Health Services (including the ESMHS).

Further, three leading research institutes co-exist with the abovementioned hospitals which specialise in the following services:

- Black Dog Institute: world-leading institute for the diagnosis, treatment and prevention of mental illness.
- Neuroscience Research Australia: an independent medical research institute that specialises in research pertaining to the prevention, treatment and cure for brain and nervous system diseases, disorders and injuries.
- The Bright Alliance: Cancer research, clinical care and education facility, integrated with the Nelune Comprehensive Cancer Centre and the Scientia Clinical Research project (formerly known as the Australian Advanced Treatment Centre) and SCHN.

UNSW Kensington Campus is located directly to the west of the site across Botany Street, partly on Lot 3 DP1104617 and Lot 1 DP510271 and is zoned SP2 Infrastructure (Educational Establishment and features a range of multi-storey, multi-disciplinary facilities (BVN, 2019).

The Randwick Town Centre, located approximately 350 m north-east of the site, contains a mix of retail, commercial and civic buildings. As discussed in Section 2.1, construction of the CSELR along High Street is complete and operational testing is underway.

The ASB site has an area of approximately 3.5 ha and is bounded by Hospital Road to the east, Botany Street to the west, High Street to the north, and Magill Street to the south. Figure 2-5 provides an overview of the Randwick Collaboration Area as defined in the Greater Sydney Commission's Eastern City District Plan. The IASB Addition comprises a 10-storey addition to the eastern elevation of the approved ASB with a gross floor area of approximately 5,000 m^2.

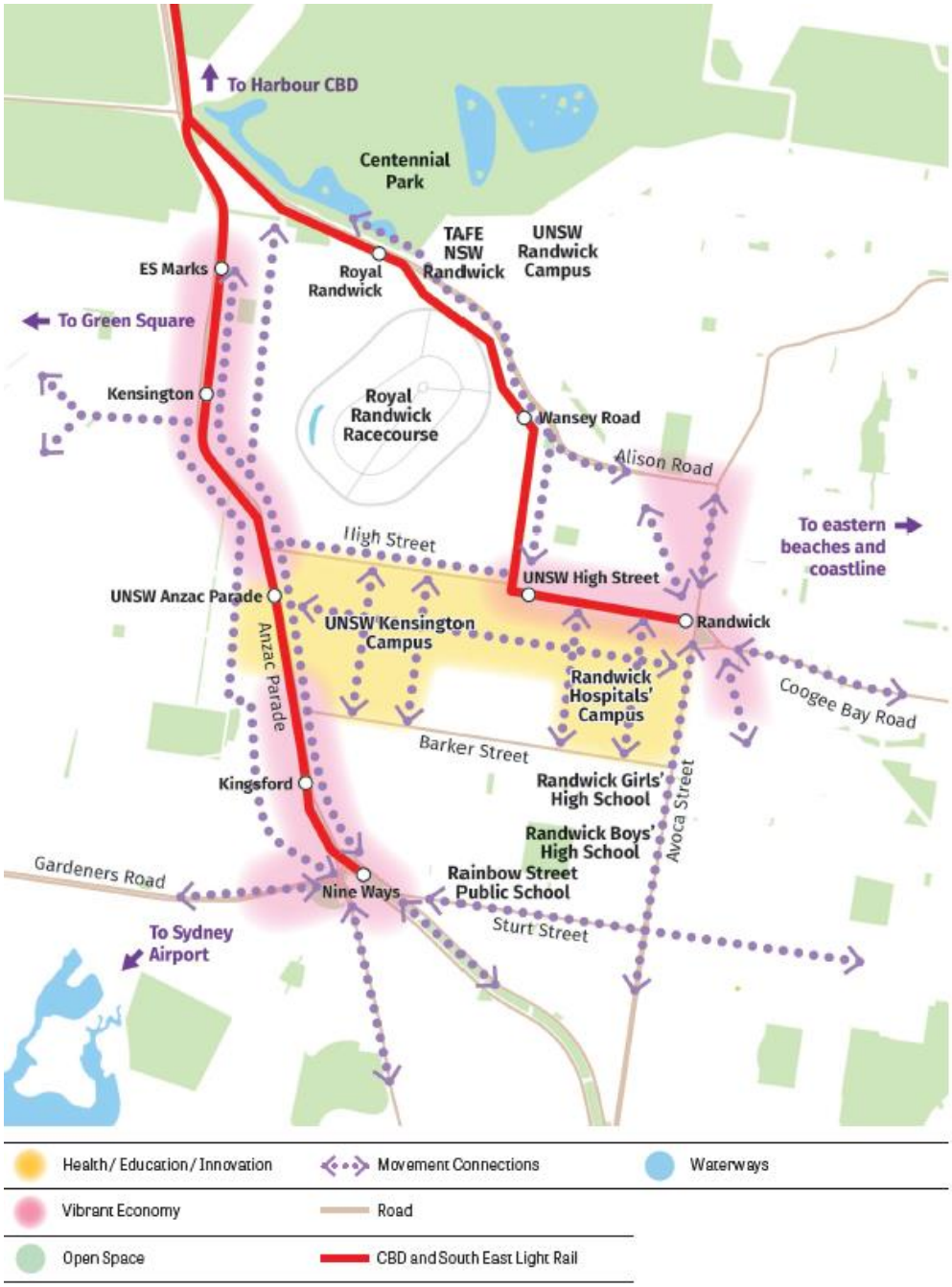


Figure 2-5 Vision for the Randwick Collaboration Area (Source: GSC, 2018).

2.3 Site Description

2.3.1 Legal Description and Ownership

The site is described as Part Lots 4-11 DP 13995 (31-45 Eurimbla Avenue) and Part Lot 1 DP870720 (RHC) at Randwick. The site is owned by HAC.

2.3.2 Existing Development

The site, shown in Figure 1-1 is characterised and comprised of the following:

- Vacant land (formerly residential and commercial buildings and Eurimbla Avenue), which is now established as the ASB project's construction zone.
- Part of the private (HAC-owned) Hospital Road and Delivery Drive located within the RHC and adjacent to Building 16 (RHC Centre), RHW (Building 17).
- Vegetation located adjacent to Hospital Road.

2.3.3 Road Network, Access and Parking

As noted above, Hospital Road is a private service road owned by HAC and travels in a north-south direction between High and Barker Streets and borders the western boundary of the RHC. Botany Street is a two-way collector road. Magill Street is a two-way, no-through local road.

There are approximately 2,300 off-street car parking bays available to staff and the public (visitor/patient) at the existing RHC, accessed via Easy Street or Hospital Road. Conversely, on-street car parking counts conducted by Arup (2018) found there to be approximately 222 car parking spaces currently available. This figure represents a mix of time restricted and unrestricted car parking options.

For further discussion on existing road network, access and parking, refer to Section 7.5.1.

2.3.4 Public Transport

Randwick is a district hub for buses 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. Some buses also provide services to surrounding areas, including Green Square, Mascot, Bondi Junction, Maroubra Junction as well as express services between UNSW Kensington Campus and Central Station. The CSELR is anticipated to be operational in late 2019 and as discussed in the Transport Assessment (Arup 2019) (Appendix I) will drive a change in transport modality across the Precinct.

2.3.5 Active Transport

Council has mapped the extent of on-road and off-road cycling and walking routes in the LGA. Figure 2-6 illustrates the current routes available to the site. The Council has also developed a network of priority cycling routes that are to be implemented as part of Randwick's 20-year City Plan. A total of eleven routes have been identified, including a route between Kensington and Coogee via High Street.

Further, the implementation of the Green Travel Plan as part of SSD 9113 will promote increased use of active transport modes.

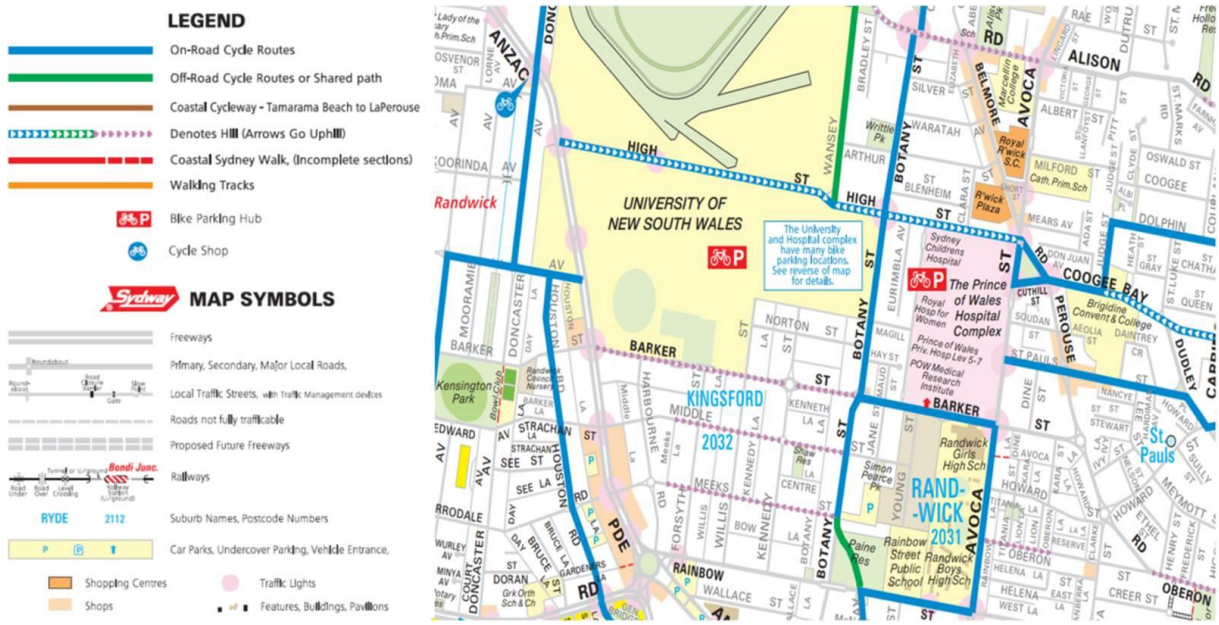


Figure 2-6 Current on-road and off-road cycling and walking routes (Source: Sydway Publishing, 2010).

2.4 Site Photos

Photographs of the site were taken by Advisian on 14 June 2019 and are provided in Figure 2-7 and Figure 2-8.

Figure 2-7 Intersection at Hospital Road and Magill Street; looking north.

Figure 2-8 Hospital Road; looking south from near Ainsworth Building and Delivery Drive.

3 Proposed Development

3.1 Overview

The IASB Addition comprises a 10-storey addition to the eastern elevation of the ASB with a gross floor area of approximately 5,000 m^2. The IASB Addition is shown in plan form in Figure 3-1. To enable the IASB Addition, services would be required to be diverted and a section of Hospital Road lowered to facilitate continued key operational functionalities and facilities such as the loading docks and ingress and egress to the hospital car park.

Hence, development consent is sought for the following:

- Bulk excavation.
- Site preparation works, including shoring and piling.
- Removal of ten trees.
- Diversion of utility services and stormwater infrastructure in Hospital Road.
- Lowering of an 80 m section of the private service road known as Hospital Road by up to 4 m and closure of that private road from its intersection with Barker Street and High Street, save for maintaining vehicular access to the loading dock and staff car park off Barker Street.
- Construction of a nine-level addition to the ASB with an approximate maximum building height of 45 m, noting that some reordering and refinement may occur during design development of the following uses:
    - Level 00 Clinical Innovation and Research Space
    - Level 01 Clinical Translational Lab Space
    - Level 02 Clinical Translational Lab Space
    - Level 03 Biomedical Engineering Innovation Space
    - Level 04 Biomedical Engineering Innovation Space
    - Level 05 Education and Research Space
    - Level 06 Education and Research Space
    - Level 07 Education and Research Space
    - Level 08 Education and Research Space
    - Level 09 Plant
- Building services infrastructure and connections to utilities.
- Stormwater drainage infrastructure.
- Landscaping.
- Opening of Magill Street.

Photomontages of the IASB Addition are presented in Figure 3-2 and Figure 3-3. It is noted that façade materiality and architectural detailing as presented in the photomontages is indicative and subject to review with the Government Architect NSW (GANSW).

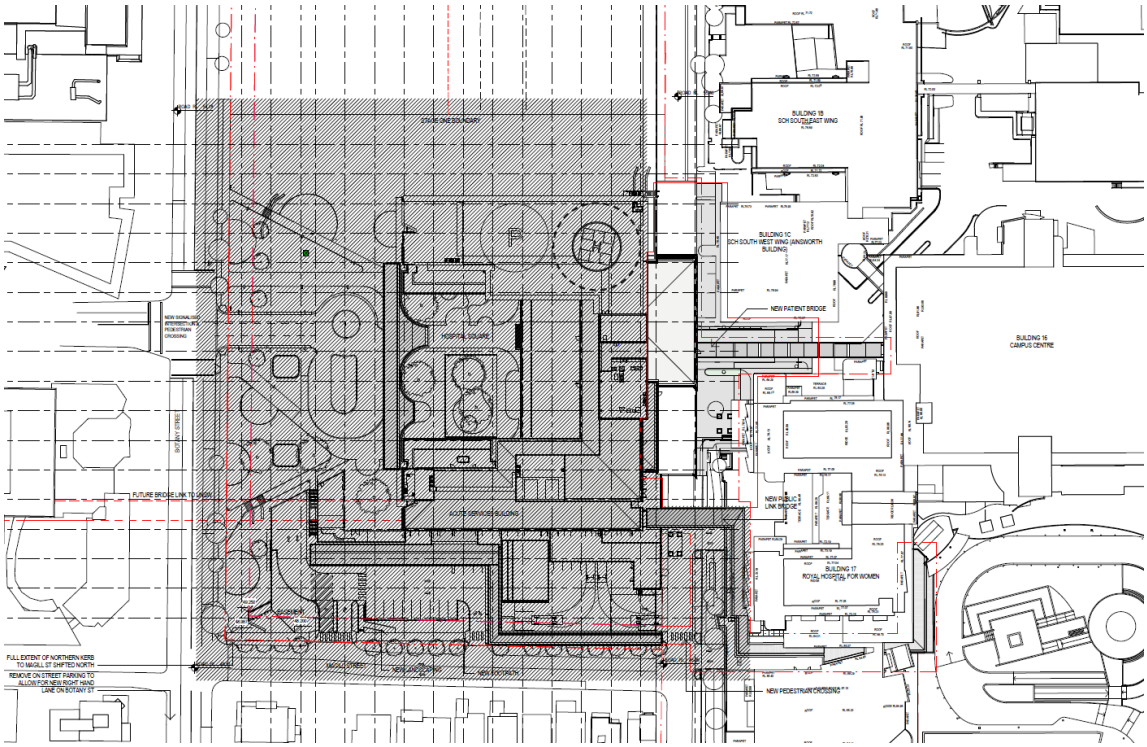


Figure 3-1 Proposed Site Plan for the IASB Addition. Note the grey shaded area represents the approved ASB (Source: BVN, 2019).

Figure 3-2 Photomontage of the proposed development, looking south along Hospital Road (Source: BVN, 2019).

Figure 3-3 Photomontage of the proposed development, looking north along Hospital Road (Source: BVN, 2019).

3.2 Design Principles

The IASB Addition is informed by a significant body of preceding work which also draws on the design framework for future development in the Precinct. This work includes the following key items:

- Precinct Masterplan – outlines urban design principles ensuring the long-term successful integration in the phasing of progressive infrastructure development within the Precinct. This integration is particularly important between the RHC and UNSW Kensington Campus, where new health and educational partnerships are expected to attract greater capital investment, research funding and commercial opportunities. These are key informing principles to realise the unique opportunity of optimum use of the land.

- Better Placed[4] – describes key qualities enabling a well-designed built environment which have been aligned to the urban design principles outlined in the Precinct Masterplan.
- The principles developed in the Randwick Academic Health Science Centre Masterplan (RAHSCM) which have guided the staged development of the RHC, with the ASB a major addition with significant education, training and research functions.
- The Integrated Planning Framework and Functional Design Brief, which synthesise the future functional requirements for health service delivery by the POWH, RHW, SCHN, POWPH and ESMHS, along with clearly defined requirements for RHC-based health education and health research facilities and opportunities.
- The Greater Randwick Integrated Health Services Plan.

The Precinct Masterplan established four overarching principles to, inter alia, guide the staged delivery of the Precinct. They are: (1) green and healthy, (2) connected, (3) integrated; and (4) responsive. These are presented in Figure 3-4.

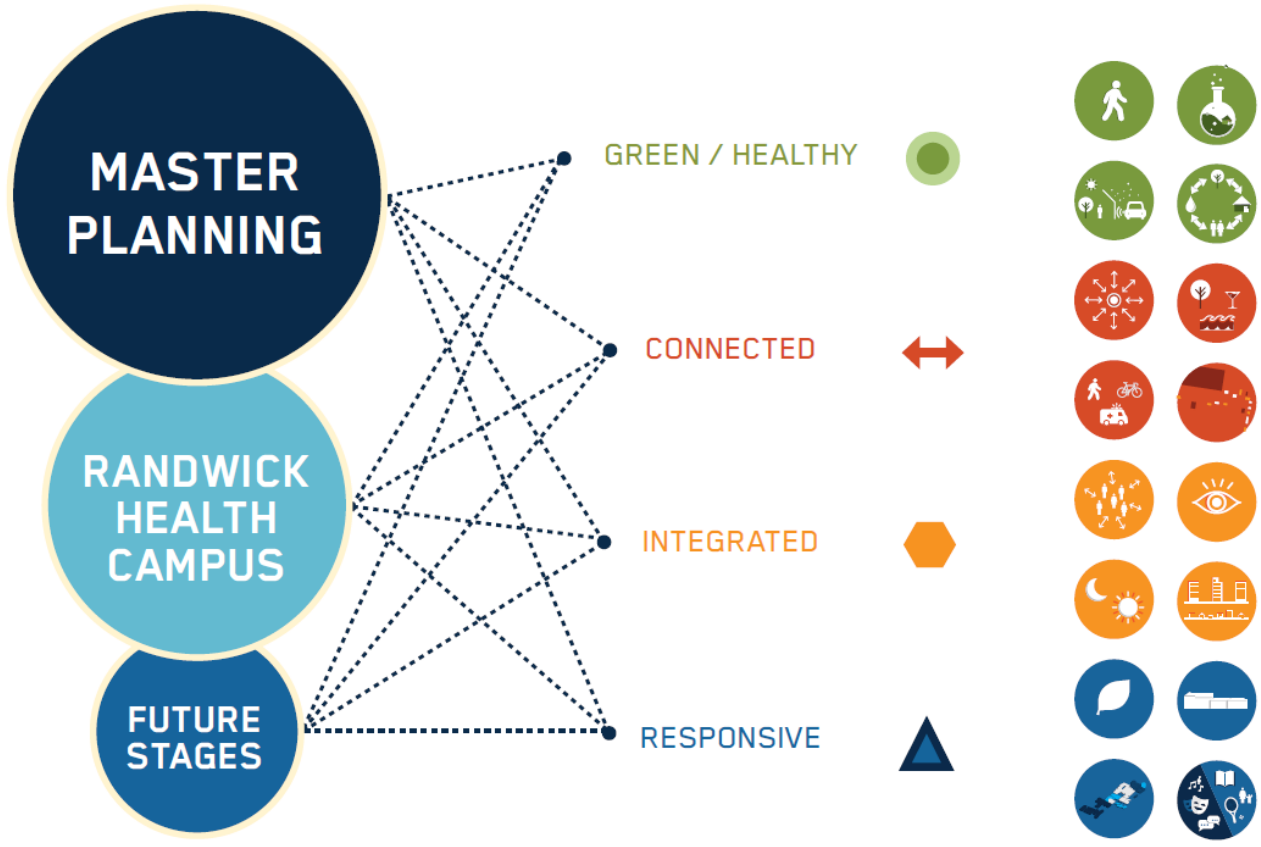


Figure 3-4 Four overarching Precinct Masterplan principles guiding IASB Addition design (Source: BVN, 2019).

[4] Government Architect NSW (2017).

Under the umbrella of each of these key principles are six (6) design principles that have directly informed the design of the IASB Addition. These are:

1. Human-centred – quality of the built environment to create a stress-free and intuitive user experience for patients, staff and visitors.
2. Sustainable – selection of building materials and elements that improve the overall energy performance of the ASB and quality of internal spaces.
3. Connected – creation of seamless connections within the ASB and IASB Addition and to the RHC, UNSW Kensington Campus, The Spot and future light rail stops.
4. Health integration – maintaining the ASB's and IASB Addition's essential clinical relationships to other departments such as new and existing operating theatres, ICU, SCHN and the Children's Emergency Department.
5. Blurred boundaries – providing physical connections and functional spaces that support collaboration between the RHC, UNSW Kensington Campus and future development zone to the north of the ASB.
6. Create identity within context – recognising and responding to the importance of Aboriginal heritage in the history of the site and the Project's strategic role in the RAHSCM and Precinct.

3.3 Development Data

The key numeric IASB Addition development information is summarised in Table 3-1.

Table 3-1 Key development information

Component	Proposal
Gross floor area (approx.)	5,000 m^2.
Effective building height (indicative)	44.9 m (RL 101.2 – RL 56.3 at Level 00).
Building height (storeys)	9 storeys above ground.
Boundary setbacks	• Approximately 6.5 m and 24 m from the southern half and northern half, respectively, of the Ainsworth Building. • 24 m (at Levels 06 – 09) from the southern portion of the ASB envelope.
Car Parking	No additional parking.

3.4 Construction Methodology and Program

A Construction Management Plan (CMP) has been prepared by Lendlease (Appendix F). The CMP provides details on the proposed construction methodology for the proposed development and outlines the proposed mitigation strategies to be implemented.

An outline of the key components of the proposed construction methodology and program are provided below.

3.4.1 Indicative Program

Table 3-2 provides a summary of the construction program. The gross finish dates represent the contingency included in the program.

Table 3-2 Indicative construction program dates

Component	Start Date	Net Finish Date	Gross Finish Date
Lowering of Hospital Road	January 2020	June 2021	August 2021
UNSW Kensington Campus Expansion Cold Shell (base building excluding internal fit-out)	April 2021	May 2022	September 2022

3.4.2 Hours of Work

The following general hours of work are proposed for the construction works:

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

As set out in Table 3-3, special construction hours will be required for the lowering of Hospital Road on selected weekends[5] so as to maintain operation of the hospital loading dock. The weekends and timings are as follows:

- Friday: 6:00 pm to 10:00 pm (limited to site establishment activities in preparation for weekend works).
- Saturday: 5:00 pm to 10:00 pm (general construction activities **excluding** excavation, sawing of rock, jack hammers, pile drivers, vibratory rollers/compactors of the like).
- Sunday: 8:00 am to 5:00 pm (general construction activities **including** excavation, sawing of rock, jack hammers, pile drivers, vibratory rollers/compactors of the like).
- Sunday: 5:00 pm to 10:00 pm (general construction activities **excluding** excavation, sawing of rock, jack hammers, pile drivers, vibratory rollers/compactors of the like).

[5] Required for a total of 29 weekends, plus 11 reserve/contingent weekends (total project duration of 130 weekends).

Table 3-3 Time motion chart (Source: Lendlease, 2019).

Activity	2019			2020											2021												2022		
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
Stage 1 – HV incoming feed	40	40	40																											
Stage 2 – Services Trenching/diversion North zone				60	60	60	60																							
Stage 3 – Services diversion South zone and part bulk								60	60	60	60	60	60	60																
Stage 4 – Shoring and Bulk excavation Hospital Road North															72	72	72	72	72											
Stage 5 – Construction UNSW Extension and Link																		40	40	90	100	100	100	100	100	100	50	40	40	40
Indicative Weekend Closures of Loading Dock																														
Piling																														
Bulk																														
										South zone					North zone															

Figure 13 – Time motion chart

Green is a place holder weekend that will be utilised only if required.

Piling activities

Civil works

Bulk excavation

Building construction works

Loading dock weekend closures

Refer to Section 7.18 for further discussion on the proposed hours of work.

3.4.3 Site Preparation

Site preparation works will involve the establishment of the site for construction works. The construction works will continue to utilise the existing two tower cranes on site being used for construction of the ASB.

3.4.4 Construction Traffic and Pedestrian Management

A comprehensive Construction Traffic and Pedestrian Management Plan (CTPMP) will be developed to ensure:

- Minimal disruption of pedestrian and traffic routes to surrounding roads and buildings with site entries and exits (Figure 3-5) to be managed by Lendlease Traffic Controllers.
- Existing vehicular and pedestrian entry and exit points to the Precinct remain unobstructed.
- 24-hour access is maintained to the ambulance drop-off area.

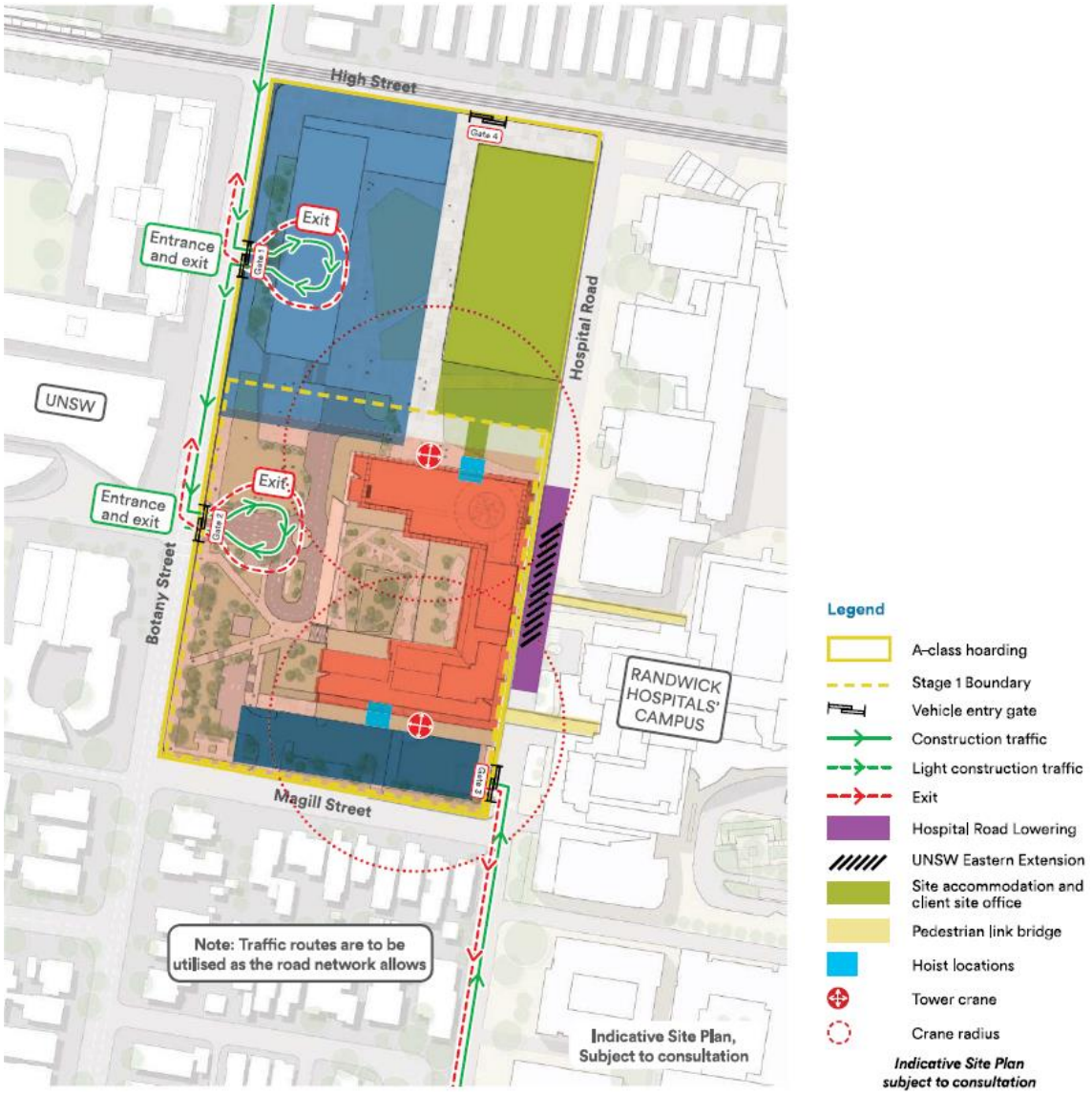


Figure 3-5 Construction traffic and pedestrian circulation routes (Source: Lendlease, 2019).

3.4.5 Bulk Earthworks

The proposed development will require the excavation of Hospital Road to an RL of approximately 51.05 AHD, totalling an excavation volume of approximately 6,900m^3.

3.4.6 Structural Details

A Structural Certification is provided in Appendix Q that confirms that the structural design will be undertaken in accordance with normal engineering practice and will meet the structural requirements of the Building Code of Australia (BCA) 2016 and relevant Australian Standards.

The Douglas Partners memorandum, dated 16 July 2019 summarises geotechnical assessments carried out to date provides details on additional detailed geotechnical investigations, required for detailed design that are specific to the IASB Addition (Appendix R).

In terms of the newly released National Construction Code (NCC) 2019, the IASB Addition is an extension to a building already under construction that is designed and approved under NCC2016. The Project was tendered before May 2019 prior to the NCC2019 coming into effect (1 May 2019).

3.5 Built Form and Scale

The highest point of the IASB Addition, to the top of the plant room, is RL 101.2. The IASB Addition will protrude from the ASB building envelope towards the RHC from the eastern elevation. Its built form and scale are guided by the multiple setbacks as described in Section 3.3.

Details of the built form and scale are provided in the Architectural Design Statement and shown in the Architectural Drawings in Appendix D.

3.6 Functional Planning and Circulation

Functional planning considers the approach to the design and integration of the ASB with the proposed development. The IASB Addition floor plate is positioned immediately east of the ASB eastern corridor and lift core which will provide direct access to vertical transport within the building. This will enable circulation into the new area via a shared corridor with no crossovers required of clinical flows to avoid any disruptions to patient treatment and clinical services.

3.6.1 Unified Approach

The IASB Addition's façade proposal builds on the ASB façade design, therefore enabling the proposed development to respond to the specific requirements and constraints impacting the expansion site and ultimately ensuring this element reads as a discreet part within a unified whole.

3.6.2 Façade Types

The proposed development adopts two (2) façade types derived from the approved scheme – a front-glazed curtain wall system applied to the northern and southern facades; and the courtyard podium curtain wall system in the eastern façade. Fully glazed facades to the north and south have been provided to enable maximal natural light. Separation at each level enables maximum flexibility for the placement of windows to limit potential overlooking and privacy film will be provided to windows on the eastern façade as required.

3.6.3 Materiality

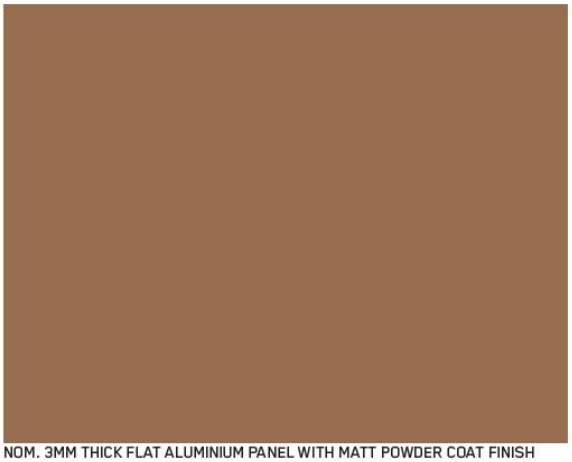
Materials have been selected to respond to the design intent of the ASB. The primary solid panel material is a flat aluminium panel with a matt powder coat finish. Figure 3-6 illustrates this material and external cladding for the proposed development.

It is noted that the facade solution for the approved ASB is currently being finalised in consultation with the GANSW as a condition of consent for SSD 9113. It is intended that any changes to facade materiality agreed with GANSW for the approved ASB will be applied to the IASB Addition.

3.6.4 Block and Stack

The IASB Addition will provide a combination of research and clinical education spaces that are co-located and will coincide with the ASB block and stack formation of the building levels. Internal spaces are to be provided as cold shell[6].

UNSW INTEGRATION - VIEW FROM NORTH



NOM. 3MM THICK FLAT ALUMINIUM PANEL WITH MATT POWDER COAT FINISH

THROUGH-COLOUR CERAMIC TILE IN DARK GREY

Figure 3-6 Cladding and colour option for the IASB Addition (Source: BVN, 2019)

3.6.5 BCA Compliance

A BCA Compliance Statement has been prepared by McKenzie Group (Appendix W) which concludes that the development adequately satisfies the intent of being able to comply with the requirements of the BCA.

3.7 Access and Traffic

3.7.1 Main Vehicle Entry

The IASB Addition utilises all ASB public access points with no change with the main vehicular entry point to the ASB is from Botany Street at Level-01. The drop-off loop is located west of the ASB,

[6] Fit-out will be subject to a future design.

providing direct access to the ASB's main entry and front of house/reception facilities via the entrance canopy and covered colonnade. This route brings visitors into the centre of the ASB providing direct access to UNSW Kensington Campus public functions on Level 00 and to other departments above.

Vehicles can recirculate around the drop-off loop if required or return to Botany Street and access the existing RHC basement car park via Magill Street. The roundabout is designed to enable an access road to be constructed for future additional health services facilities development immediately north of the ASB.

3.7.2 Logistics

The IASB Addition will utilise the existing main RHC loading dock (located off Hospital Road) for supplies and general waste on an "as needed" basis. A semi-enclosed satellite loading dock is provided at Level -02 to enable select deliveries of supplies, shuttling of general waste to the dock and the direct collection of any hazardous waste. The semi-enclosed satellite loading dock is accessed via Hospital Road from the south and enclosed to limit its visual and acoustic impact on Magill Street residences. Planting along the street edge provides additional screening. A Logistics staging area is located on Level 02. These areas are connected over Hospital Road to the existing dock via the middle level of the bridge link (Level 02).

The lowered Hospital Road will maintain access for logistics and emergency vehicles into the existing loading dock array. The current steep ramp down into the loading deck is proposed to be replaced by a level route following the lowering of the road.

Further information on Waste is provided in Section 7.17.

3.7.3 Road Infrastructure Improvements and Future Connections

The precinct master plan proposes an extensive pedestrian deck at Level 00 that would extend through future buildings to facilitate an "interconnected" and "seamless pedestrian environment" (BVN, 2019). The key pedestrian routes, including the future raised deck over Hospital Road, are shown in Figure 3-7.

Two future development opportunities to the north of the ASB have also been identified in the precinct master plan: the Sydney Children's Hospital (SCH) Stage 1 development, including Australia's first Comprehensive Children's Cancer Centre to the north-east; the UNSW Health Translation Hub development to the north-west; and the pedestrian link and pedestrian deck for the north-south link for the provision of unimpeded access. The lowered portion of Hospital Road is intended to facilitate loading dock access to both those future developments, along with ambulance access to the SCH facility.

Figure 3-7 Precinct Master Plan site plan (Source: BVN, 2019).

3.7.4 Accessibility

An Access Report has been prepared by McKenzie Group and is included at Appendix V. The Access Report provides key performance guidance on issues of technical compliance in relation to the building's design for internal and external access with regard to the relevant provisions of the (Commonwealth) *Disability Discrimination Act 1993* (DD Act), the *Disability (Access to Premises - Buildings) Standard 2010* and AS1428.

3.8 Services Infrastructure

Building services infrastructure is essential to sustain critical IASB Addition functions which will utilise the ASB services infrastructure and will also have its own plant (Level 09).

3.8.1 Civil Services

Gutters and downpipes for the IASB Addition are proposed to be connected to the main ASB drainage system. Stormwater and overland flows from the northern end of Hospital Road will be collected via rainwater outlets at surface level. A grated drain is proposed to be located along the

structural perimeter wall for stormwater covering Hospital Road pavement and near Delivery Drive. Coordination of connection points and designs are to be prepared by the hydraulics contractor and will be developed further during Design Development.

Further discussions on Civil Services can be found in Sections 7.14 and 7.15.

3.8.2 Hydraulic and Fire Services

As part of the lowering of Hospital Road, existing fire boosters currently servicing the RHW (presently located on Hospital Road) and the SCH (located on Delivery Drive) will be relocated to the eastern side of Hospital Road as circled red and presented to the south of grid line 3 in Figure 3-8.

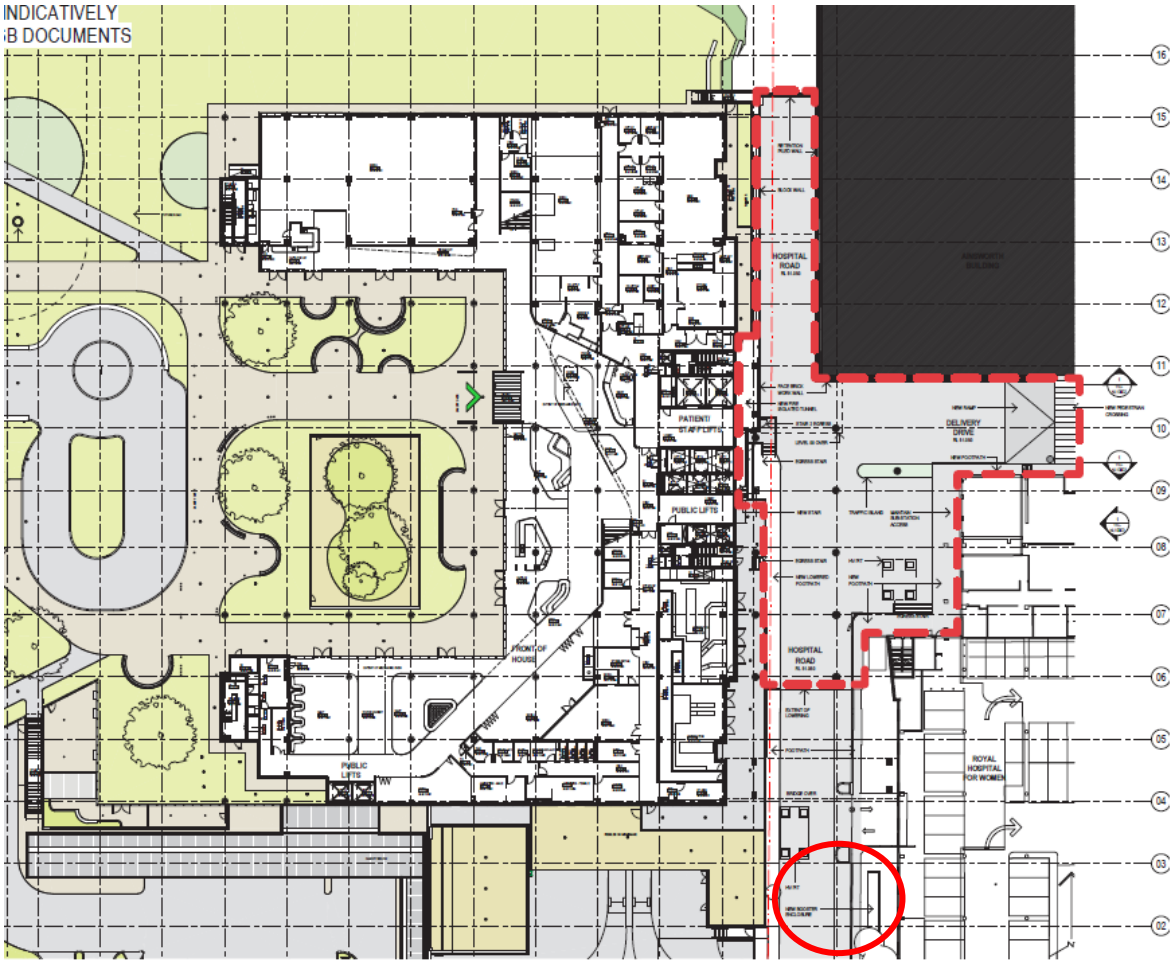


Figure 3-8 Level-01 Plan, showing relocation of fire boosters to eastern side of Hospital Road (circled red) (Source: BVN, 2019)

3.8.3 Mechanical and Vertical Transport Services

The IASB Addition will be consistent with the design of the approved ASB which will utilise and augment those key mechanical and vertical transport systems and services that are provided within the approved ASB, including (but not limited to):

- Air conditioning and ventilation systems.
- Exhaust systems.
- Smoke management ventilation systems.
- Building management and controls.
- Chilled water systems.
- Heating hot water systems.
- Lifts for all forms of foot traffic.

3.8.4 Electrical and ICT Services

The proposed scope of works includes the following electrical and communication services (Fredon, 2019):

- Relocation of existing Ausgrid HV cables in accordance with Concept DEP design documents[7].
- Provision of a new switchboard and submains to be supplied from the ASB.
- Provide a new communications rack and lead-in cable to be supplied from the ASB.
- Provision of minimum power and lighting to the covered driveway to meet BCA requirements.
- Provision of lighting and power for the pedestrian deck.
- Provision of data points to wireless access points and CCTV cameras.
- Provision of temporary builders' power and lighting.

ICT infrastructure will be consistent with the approved ASB and utilise those services.

Refer to the Utility Management Plan Electrical Services in Appendix T for further details.

3.8.5 Security services

The IASB Addition security systems will be consistent with the approved ASB.

3.8.6 Helipad services

There are no changes to the approved helipad for the ASB.

[7] The relocation of Ausgrid HV cables will be carried out under a separate approvals process and is not part of this SSDA.

3.9 Landscape

The proposed development includes new landscaping and public domain works to Level 00. The concept plan (Figure 3-9) highlights the strategic opportunities for a landscaped outlook and interface along Hospital Road and Delivery Drive (noting that the pedestrian plaza to the north is future works). Further details on landscaping can be found in the Landscape Design Report in Appendix E.

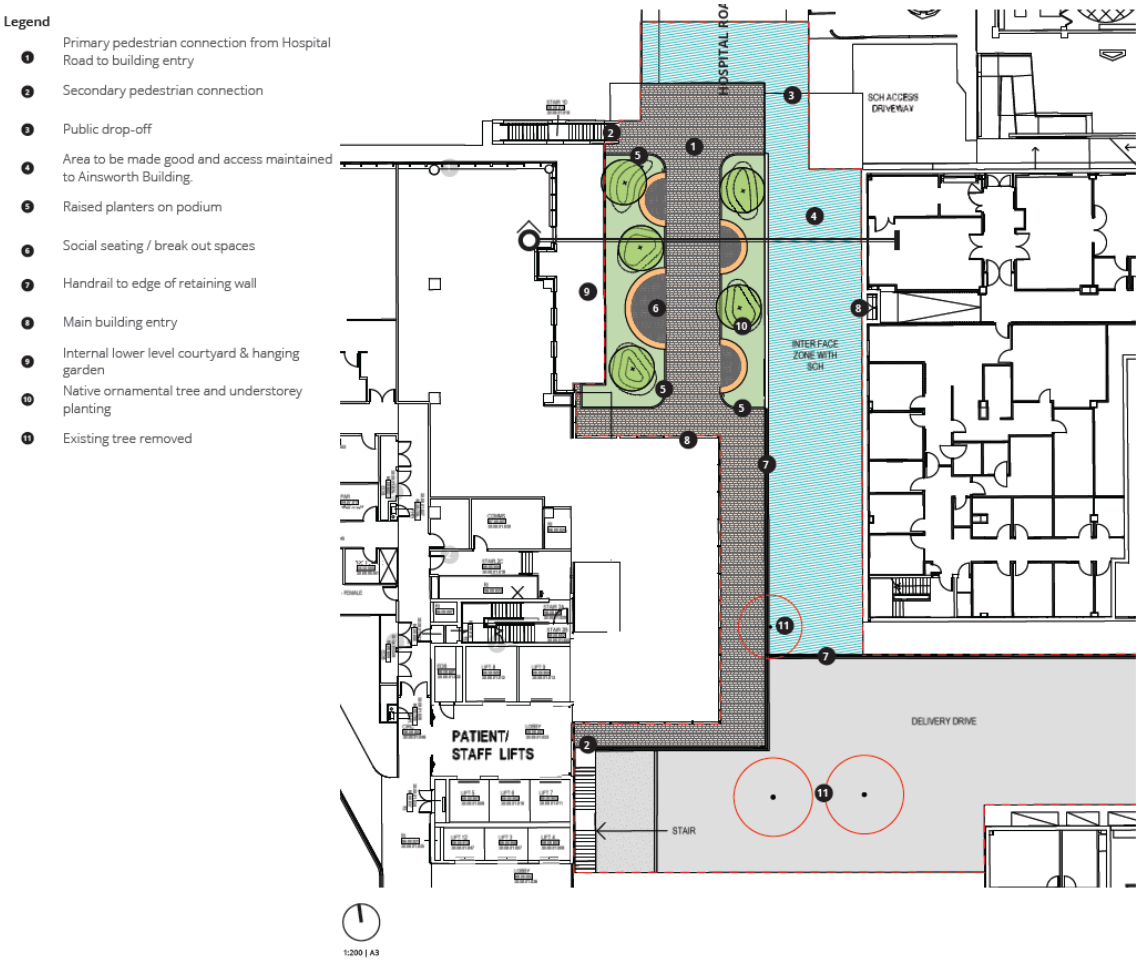


Figure 3-9 Landscape concept plan (Source: Aspect Studios, 2019)

3.10 Hours of Operation

The IASB Addition will operate 24 hours a day and 7 days a week in accordance with the existing RHC arrangements.

4 Statutory Planning Framework

4.1 NSW Legislation

4.1.1 Environmental Planning and Assessment Act 1979

Planning Approval Process

Part 4, Division 4.7 of the EP&A Act establishes an assessment framework for SSDAs. The proposed development is declared to be a SSD as a "hospital" and "health, medical or related research facilities" in accordance with Clause 14 of Schedule 1 of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) with a CIV of more than $30million. Section 4.12(8) of the EP&A Act requires the SSDA to be accompanied by an EIS, which is assessed against the provisions of Section 4.15 (refer below).

Section 1.3 – Objects of the EP&A Act

Consideration of the proposed development against the relevant Section 1.3 Objects of the EP&A Act is outlined in Table 4-1.

Table 4-1 Consideration of the proposed development against the relevant Objects of the EP&A Act

Object of the EP&A Act	Comment
a) to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources	The proposed development promotes the social and economic welfare of the community that is aligned with the broader NSW Government strategies and the Precinct Masterplan for delivering an innovative Precinct through the provision of expanded and integrated public health and education and training services. This will help cater for the predicted growth in local jobs and population in the region. The social and economic benefits of the proposed development are discussed in Section 10.1. The proposed development has been designed to promote the proper management of the environment. A detailed identification and assessment of potential environmental impacts, together with details of any appropriate mitigation measures, are detailed in Section 9.
b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment	Ecologically sustainable development (ESD) has been addressed in Sections 7.6 and 10.3. The proposed development incorporates a range of design measures to facilitate ESD during the construction and operational phases.

Object of the EP&A Act	Comment
c) to promote the orderly and economic use and development of land	The site is in a strategically close location to the RHC and UNSW Kensington Campus as outlined in Section 1.1. The IASB Addition would facilitate the provision of a centre of excellence in the delivery of additional, integrated health-related education, teaching and research facilities to meet professional, community and student expectations.
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 will have no significant impacts on threatened and other species of native animals and plants, ecological communities and their habitats. Refer to Section 7.12.
f) to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage)	The proposed development will promote the management of built and cultural heritage (including Aboriginal cultural heritage) in accordance with best practice and relevant guidelines. Refer to Sections 7.7 and 7.8 for further details.
g) to promote good design and amenity of the built environment	The proposed development has had regard to the "*Better Placed Guidelines*" by the Government Architect Office of NSW. It promotes design quality and excellence which is appropriate to its context and setting and carefully considers environmental amenity of the site and surrounding areas. Built form and urban design is addressed in detail in Section 7.2 and environmental amenity in Section 7.3.
h) to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants	The construction methodologies of the IASB Addition described in Section 3.4 and in the CMP in Appendix F will be undertaken in a manner to ensure the protection of the health and safety of its occupants. The IASB Addition will be maintained in accordance with SESLHD and UNSW policies.
j) to provide increased opportunity for community participation in environmental planning and assessment	Extensive community engagement has been carried out by HI prior to the lodgement of the SSDA and will be ongoing through the delivery of the Project (refer to Section 6). Further community engagement will also be carried out during the public exhibition of the SSDA, which is exhibited to the public for at least 30 days.

Section 4.15 – Evaluation

The proposed development has been evaluated and assessed against the relevant heads of consideration under Section 4.15(1) of the EP&A Act. Table 4-2 identifies the matters for consideration under Section 4.15 that apply to SSD, in accordance with Section 4.40 of the EP&A Act.

Table 4-2 Section 4.15(1) Matters for Consideration

Section 4.15(1) of the EP&A Act	Comment
(a)(i) any environmental planning instrument	Consideration of all relevant SEPPs (including Draft SEPPs) and the LEP is contained in Sections 4.3 and 4.4, respectively. The proposed development is considered to be consistent with all relevant provisions.
(a)(ii) any proposed instrument	Refer to Sections 4.3.7 and 4.3.8.
(a)(iii) any development control plan	Pursuant to Clause 11 of the SEPP SRD, the provisions of a Development Control Plan (DCP) do not apply to SSDAs.
(a)(iiia) any planning agreement	Not applicable.
(a)(iv) the regulations	This SSDA together with its supporting technical reports is considered to satisfactorily meet the relevant requirements of the EP&A Regulation with regard to the requirements for the preparation of the EIS in Schedule 2.
(a)(v) any coastal zone management plan	Not applicable.
(b) the likely impacts of that development	The likely impacts of the proposed development have been considered in Section 7 of this EIS.
(c) the suitability of the site for the development	The assessments carried out for the EIS, coupled with master planning established that the site is suitable for the proposed development. They include the following key considerations: • there is sufficient area within the site to enable the proposed development to be carried out; • there are no significant environmental limitations to the proposed development, provided that all mitigation measures and recommendations are adopted and followed as contained within the appended technical reports; and • the proposed development raises no adverse impacts or consequences with regards to the principles of ESD and is considered to be an appropriate use of the land in terms of social, economic and environmental criteria.
d) any submissions	Any submissions received will be considered by DPIE post-exhibition of the EIS.
(e) the public interest	The proposed development is considered to be in the interest of the public owing to the important social and economic benefits that are to be realised from the development of the RHC to meet the growing and

Section 4.15(1) of the EP&A Act	Comment
	expanding health needs of the community as discussed in Section 1.1. Further, the EIS demonstrates that the proposed development does not result in any adverse environmental impacts subject to adopting the recommended mitigation measures. On balance, the proposed development is very much in the public interest.

4.1.2 Environmental Planning and Assessment Regulation 2000

The EIS has been prepared in accordance with the requirements of Part 3 of Schedule 2 of the EP&A Regulation.

In relation to Clause 7(1) (d) (v) of Schedule 2 for approvals required for the proposed development, it is noted that Section 4.41(1) and (2) of the EP&A Act provides that the following approvals do not apply to a SSDA that is authorised by a development consent:

> *"(b) a permit under section 201, 205 or 219 of the Fisheries Management Act 1994,*
>
> *(c) an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977,*
>
> *(d) an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974,*
>
> *(f) a bush fire safety authority under section 100B of the Rural Fires Act 1997,*
>
> *(g) a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000.*
>
> *(2) Division 8 of Part 6 of the Heritage Act 1977 does not apply to prevent or interfere with the carrying out of State significant development…"*

Section 4.42 of the EP&A Act requires the following approvals to be applied consistently with a SSD development consent:

> *"(a) an aquaculture permit under section 144 of the Fisheries Management Act 1994,*
>
> *(b) an approval under section 15 of the Mine Subsidence Compensation Act 1961,*
>
> *(c) a mining lease under the Mining Act 1992*
>
> *(d) a production lease under the Petroleum (Onshore) Act 1991,*
>
> *(e) an environment protection licence under Chapter 3 of the Protection of the Environment Operations Act 1997 (for any of the purposes referred to in section 43 of that Act),*
>
> *(f) a consent under section 138 of the Roads Act 1993,*
>
> *(g) a licence under the Pipelines Act 1967."*

It is considered that there are no other approvals required to be applied consistently.

Section 7.6.1 contains an assessment of the proposed development against the principles of ESD as required in Clause 7(4).

4.1.3 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) came into force on 25 August 2017, repealing the *Threatened Species Conservation Act 1995*. The purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future consistent with the principles of ESD.

Section 7.9 of the BC Act requires a biodiversity development assessment report (BDAR) to accompany a SSDA. A BDAR has been prepared and is contained in Appendix K.

Biodiversity is addressed further in Section 7.12.

4.1.4 Heritage Act 1977

The *Heritage Act 1977* contains the provisions for listing sites or places on the State Heritage Register (SHR) and the protection of relics. There are no items on the SHR, Section 170 Heritage and Conservation Registers or covered by an Interim Heritage Order that is either within the site or located within the vicinity of the site.

The *Heritage Act 1977* defines a "relic" as follows:

> *"relic means any deposit, artefact, object or material evidence that:*
>
> *(a) relates to the settlement of the area that comprises New South Wales, not being Aboriginal settlement, and*
>
> *(b) is of State or local heritage significance."*

There are no previously recorded relics that have been identified as having State or local heritage significance within the site.

Whilst the provisions of Section 139 of the *Heritage Act* do not apply to SSD, the potential for archaeology to be present at the site has been considered. The Historical Archaeology Assessment prepared by Casey and Lowe (2019) has identified within the SSDA boundary, areas of low to moderate archaeological potential (refer Appendix N).

Non-Aboriginal heritage is considered in further detail in Section 7.7.

4.1.5 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NPW Act) provides controls in relation to the protection of land reserved under the NPW Act as well as controls in relation to the protection of items of cultural heritage. It is an offence under the NPW Act to 'harm' Aboriginal objects or sites of Aboriginal significance without an Aboriginal Heritage Impact Permit (AHIP).

There are no previously recorded Aboriginal sites that have been identified within the site. Mary Dallas Consulting Archaeologists (MDCA) (2019) has concluded that due to previous disturbance, the likelihood of buried undisturbed/intact cultural remains within the sand dune layers below Hospital Road is assessed as low (refer Appendix O).

Aboriginal heritage is considered in further detail in Section 7.8.

4.1.6 Contaminated Land Management Act 1997

The *Contaminated Land Management Act 1997* (CLM Act) establishes a process for investigating and remediating land that the Environment Protection Authority (EPA) considers to be significantly contaminated as per Division 2 of Part 3 of the CLM Act.

A Detailed Site Investigation has been prepared by Douglas Partners (2019). A search of the EPA public notices by Douglas Partners (2019) confirmed that the site is not declared a contaminated site or subject to a management order, voluntary management proposal, or a site audit statement under the CLM Act (refer Appendix S).

Contamination is considered in further detail in Section 7.10.

4.1.7 Protection of the Environment Operations Act 1997

The *Protection of the Environment Operations Act 1997* (POEO Act) is the main piece of legislation administered by the EPA. The management of environmental impacts in relation to air, noise and water quality fall under the provisions of the POEO Act. The POEO Act identifies a number of pollution offences, including offences relating to:

- Wilful or negligent disposal of waste in a manner that is likely to harm the environment.
- Wilful or negligent causing of a substance to leak, spill or otherwise escape in a manner that harms or is likely to harm the environment.
- The pollution of water.

Under the provisions of the POEO Act, HI is required to notify the EPA if a 'pollution incident' occurs that causes or threatens 'material harm' to the environment.

4.1.8 Roads Act 1993

The *Roads Act 1993* outlines the processes involved with the opening of roads, road levels, closing of public roads, roadwork and regulation of traffic by Roads Authorities, entry onto land and financial assistance to Roads Authorities.

Under Section 138, consent is required from the Council for the following:

> *"(a) erect a structure or carry out a work in, on or over a public road, or*
>
> *(b) dig up or disturb the surface of a public road, or*
>
> *(c) remove or interfere with a structure, work or tree on a public road, or*

(d) pump water into a public road from any land adjoining the road, or

(e) connect a road (whether public or private) to a classified road,"

It is not expected that any consent from the Council will be required for the proposed development.

4.2 Commonwealth Legislation

4.2.1 Commonwealth Environment Protection Biodiversity Conservation Act 1999

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), a referral is required to the Australian Government for proposed actions that have the potential to significantly impact on matters of national environmental significance (MNES) or the environment of Commonwealth land.

The proposed development is unlikely to have a significant impact on any MNES and therefore, a referral is not required.

Potential impacts to these biodiversity matters are also considered in Section 7.12.

4.2.2 Airports Act 1996 and the Airports (Protection of Airspace) Regulations 1996

Sydney Airport is located approximately 6.5 km south-west of the RHC. Flight paths dictate height limits over the site, specifically the Obstacle Limitation Surface (OLS) and Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS). The OLS varies from approximately RL 85.0 to RL 95.0 across the site. The PANS-OPS extends from approximately RL 109.0 to RL 114.0 over the site.

Consistent with the approved ASB Project, the proposed development will penetrate the primary prescribed airspace which includes Sydney Airport's OLS. Refer to statement of status in Appendix AA for details on any approval requirements.

4.3 State Environmental Planning Policies

4.3.1 State Environmental Planning Policy (State and Regional Development) 2011

The SRD SEPP identifies development which is declared to be State Significant. Clause 14 of Schedule 1 of the SRD SEPP provides that:

"Development that has a capital investment value of more than $30 million for any of the following purposes:

a) hospitals,

b) medical centres,

c) *health, medical or related research facilities (which may also be associated with the facilities or research activities of a NSW local health district board, a University or an independent medical research institute).*"

As the proposed development is for the purposes of a "hospital" and "health, medical or related research facilities" that has an estimated CIV in excess of $30 million as indicated in Section 1.4, it is considered to be an SSD.

It is noted that pursuant to Clause 11 of Part 2 of the SRD SEPP, the provisions of a Development Control Plan do not apply to SSD.

4.3.2 State Environmental Planning Policy (Infrastructure) 2007

Permissibility

The 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 25 types of infrastructure works or facilities.

The ISEPP defines (via the Standard Instrument) *"health services facility"* as:

> *"A facility 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 perrons, and includes the following:*
>
> a) *Day surgeries and medical centres,*
> b) *Community health service facilities,*
> c) *Health consulting rooms,*
> d) *Facilities for the transport of patients, including helipads and ambulance facilities,*
> e) *Hospitals".*

In accordance with Clause 57(1) of the ISEPP, "*development for the purpose of health services facilities may be carried out by any person with consent on land in a prescribed zone*."

The site is zoned part R2 Low Density Residential and part SP2 Health Services Facility under the LEP as shown on Figure 4-1. These land use zones are identified as "prescribed zones" as per Clause 56 of ISEPP.

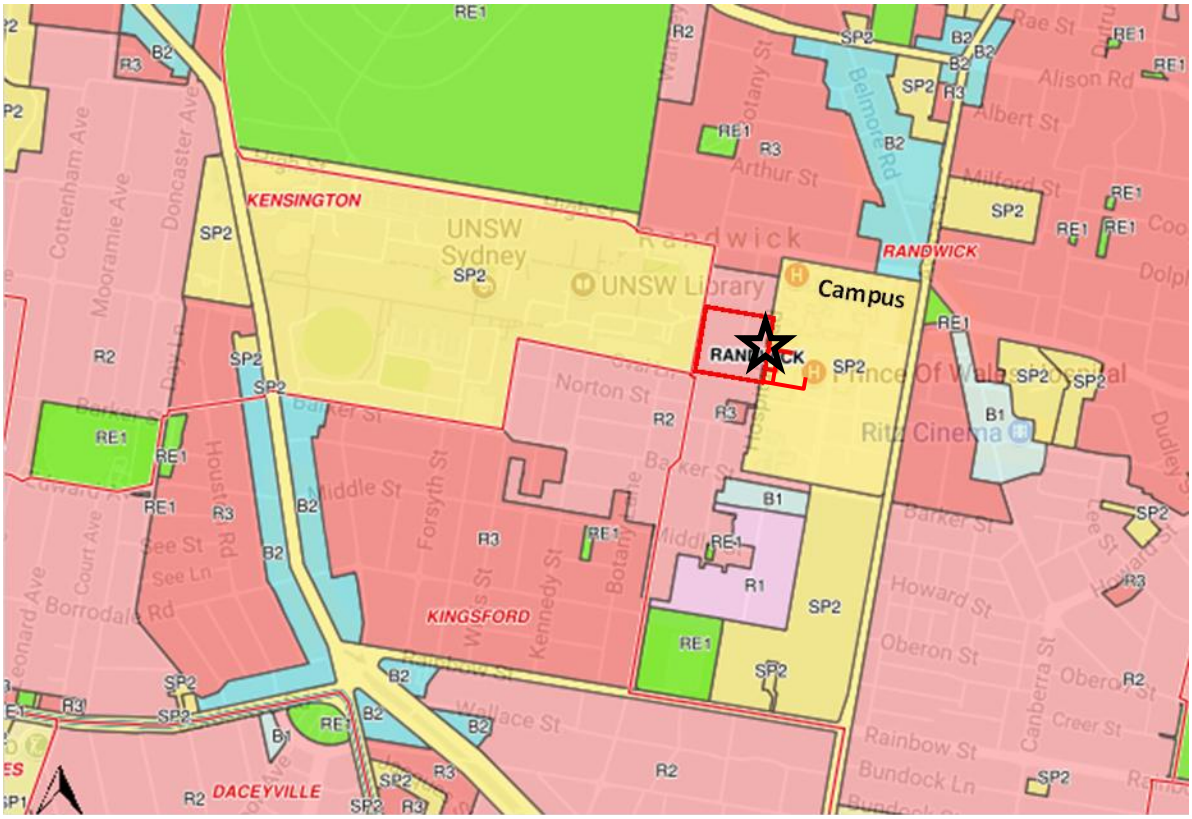


Figure 4-1 Existing zoning with the proposed development indicated by black star with ASB site shown in red (Source: Randwick Local Environmental Plan, 2012).

Traffic Generating Development

The proposed development is not considered to be "traffic generating development" under Clause 104 and Schedule 3 of ISEPP as it does not meet the criteria for the relevant size or capacity for the item.

4.3.3 State Environmental Planning Policy No. 64 – Advertising and Signage

State Environmental Planning Policy No. 64 – Advertising and Signage (SEPP 64) applies to all signage that, under an Environmental Planning Instrument, can be displayed with or without development consent and is visible from any public place or public reserve.

Development consent for building signage is not being sought under this SSDA. Accordingly, an assessment under SEPP 64 is not required at this stage.

4.3.4 State Environmental Planning Policy No. 55 – Remediation of Land

The primary objective of the *State Environmental Planning Policy No. 55 – Remediation of Land* (SEPP 55) is to provide a State-wide approach to the remediation of contaminated land. Category 1

and Category 2 of SEPP 55 specifies the type of remediation work that does and does not need consent, respectively.

Clause 7 of SEPP 55 states that:

1) *"A consent authority must not consent to the carrying out of any development on land unless:*
    a) *It has been considered whether the land is contaminated, and*
    b) *If the land is contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable, after remediation) for the purpose for which the development is proposed to be carried out, and*
    c) *If the land requires remediation to be made suitable for the purpose for which the development is proposed to be carried out, it is satisfied that the land will be remediated before the land is used for the purpose".*

As soils are removed during bulk excavation, progressive site testing of the soil and surrounding surfaces are to be undertaken to ascertain the classification of the fill material so as to ensure that the soil is taken to an appropriately licensed waste disposal facility (Lendlease, 2019). If contaminated soil is found, it will be managed in accordance with the requirements of SEPP 55, relevant legislation and the measures outlined in Section 7.10.

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

Clause 11 of *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development* (SEPP 33) applies to:

- Development for the purposes of a potentially hazardous industry.
- Development for the purposes of a potentially offensive industry.
- Development notified in the Gazette as being a potentially hazardous or potentially offensive development.

The proposed development will include laboratories which may store and handle Dangerous Goods. Any of these types of goods will be consistent with those assessed in the UNSW Biosciences South Project Dangerous Good Report, dated 24 April 2017 (Appendix BB). Estimated volumes of hazardous waste have also been provided by UNSW (Appendix BB).

The proposed development will not involve any emission of pollution discharge that would cause a significant level of offence and does not require an environment protection licence pursuant to Chapter 3 of the POEO Act. It is therefore not a "potentially offensive industry" as defined in SEPP 33.

As a consequence, being neither a potentially hazardous nor a potentially offensive industry, SEPP 33 does not apply to the proposed development and a Preliminary Hazard Analysis is not required.

4.3.6 State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017

The *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* (Vegetation SEPP) came into effect in NSW on 25 August 2017. Seven trees will be required to be removed under the SSDA. Refer to Section 7.12 for further details.

4.3.7 Draft State Environmental Planning Policy (Remediation of Land)

The proposed new *State Environmental Planning Policy (Remediation of Land)* (Land Remediation SEPP) is part of a review program, initiated by the NSW Government, and was placed on public exhibition from 31 January 2018 to 13 April 2018. Both the current SEPP 55 and its associated *Managing Contaminated Land Planning Guidelines* have been in place for almost 20 years and are required to be updated to respond to new land remediation practices.

The Land Remediation SEPP will continue to categorise remediation works in the two categories (as described in Section 4.3.4):

- Category 1: remediation works that require development consent; and
- Category 2: remediation works that can be undertaken without development consent.

For the purposes of the proposed development, any soil and bulk excavation processes would be consistent with the method(s) outlined in Sections 4.3.4 and 7.10.

4.3.8 Draft State Environmental Planning Policy (Environment)

The proposed *State Environmental Planning Policy (Environment)* (Environment SEPP) is part of a review program, initiated by the NSW Government, and was placed on public exhibition from 31 October 2017 to 31 January 2018. The Environment SEPP aims to consolidate the following seven SEPPs in an effort to reduce "unnecessary regulation" and to "transform the planning system" for ease of use and understanding:

- *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*
- *Willandra Lakes Regional Environmental Plan No. 1 – World Heritage Property*

As the proposed development falls outside of the scope of the abovementioned Environmental Planning Instruments (EPIs), it is considered that the Environment SEPP will not be applicable.

4.4 Randwick Local Environmental Plan 2012

4.4.1 Zoning and Permissibility

As confirmed by the Section 10.7(2) and (5) Planning Certificates (Appendix CC), the site is zoned part R2 Low Density Residential and part SP2 Health Services Facility under the LEP (refer to Figure 4-1).

Under the R2 zone, the proposed development is prohibited whilst it is permissible in the SP2 zone. However, in accordance with Clause 57(1) of the ISEPP, the proposed development is permissible with development consent as discussed in Section 4.3.2. Therefore, the permissibility and consent provisions of the LEP do not apply.

In the future, a Planning Proposal will be prepared by the Council which will "formalise" the zoning as SP2 (for that part of the Project site presently zoned R2 and R3 Medium Density Residential) and remove the "development standards" provisions.

4.4.2 Assessment of LEP Compliance

It is noted that while the provisions of ISEPP prevail, consideration has been given to the relevant LEP clauses. Notwithstanding, consideration has been given to the relevant LEP clauses. Table 4-3 assesses the compliance of the proposed development against those provisions of the LEP. Further, it is noted that applying the provisions of Clause 5.12 of the LEP, the proposed development is not subject to compliance with any LEP development standards.

Table 4-3 LEP Compliance

Provision	Compliance and Comment
4.3 Height of buildings (2) The height of a building on any land is not to exceed the maximum height shown for the land on the Height of Buildings Map.	**Not applicable**: The RHC does not have a maximum building height whilst land zoned R2 has a maximum height of 9.5m with setback of 30m along the Hospital Road boundary. Applying the provisions of Clause 5.12 of the LEP (refer below), the proposed development is not subject to this development standard and therefore a Clause 4.6 variation is not required as a result of the height of the proposed IASB Addition, which is no taller than the approved ASB.
4.4 Floor space ratio (2) The maximum floor space ratio for a building on any land is not to exceed the floor space ratio shown for the land on the Floor Space Ratio Map.	**Not applicable**: The RHC does not have a maximum floor space ratio (FSR) whilst land zoned R2 has a maximum FSR of 0.5:1. Applying the provisions of Clause 5.12 of the LEP (refer below), the proposed development is not subject to this development standard and therefore a Clause 4.6 variation is not

Provision	Compliance and Comment
	required as a result of the FSR of the proposed IASB Addition.
5.10 Heritage conservation (1) Objectives The objectives of this clause are as follows: (a) to conserve the environmental heritage of Randwick, (b) to conserve the heritage significance of heritage items and heritage conservation areas, including associated fabric, settings and views, (c) to conserve archaeological sites, (d) to conserve Aboriginal objects and Aboriginal places of heritage significance.	**Complies:** The proposed development will have no direct or indirect impacts on heritage items located within the vicinity of the site. Refer to Sections 7.7 and 7.8 for further discussion on Heritage and Aboriginal Heritage matters, respectively.
5.12 Infrastructure development and use of existing buildings of the Crown (1) This Plan 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. (2) This Plan does not restrict or prohibit, or enable the restriction or prohibition of, the use of existing buildings of the Crown by the Crown.	**Complies:** The proposed development is to be carried out by a public authority as development permitted with consent in accordance with Clause 57(1) of ISEPP. On this basis, the provisions of Clause 5.12 of the LEP apply to the SSDA.
6.1 Acid sulfate soils (1) The objective of this clause is to ensure that development does not disturb, expose or drain acid sulfate soils and cause environmental damage.	**Complies:** The site is not known to contain any acid sulfate soils.
6.2 Earthworks (1) The objective of this clause is 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.	**Complies:** Bulk earthworks are proposed under the SSDA. It is considered that with the implementation of appropriate mitigation measures in the CMP (Appendix F), the proposed development will not have any detrimental impacts.
6.3 Flood planning	**Complies:** the proposed development site is not on land identified as "Flood planning area"

Provision	Compliance and Comment
(1) The objectives of this clause are as follows: (a) to minimise the flood risk to life and property associated with the use of land, (b) to allow development on land that is compatible with the land's flood hazard, taking into account projected changes as a result of climate change, (c) to avoid significant adverse impacts on flood behaviour and the environment. (2) This clause applies to: (a) land identified as "Flood planning area" on the Flood Planning Map, and (b) other land at or below the flood planning level.	on Council's Flood Planning Map. However, based on previous flood studies and the Draft Birds Gully and Bunnerong Road Flood Study, the site is affected by overland flooding that is generated from the upstream catchment. Refer to Section 7.15 for further details.
6.4 Stormwater management (1) The objective of this clause is to minimise the impacts of urban stormwater on land to which this clause applies and on adjoining properties, native bushland and receiving waters. (2) This clause applies to all land in residential, business and industrial zones. (3) Development consent must not be granted to development on land to which this clause applies unless the consent authority is satisfied that the development: (a) is designed to maximise the use of water permeable surfaces on the land having regard to the soil characteristics affecting on-site infiltration of water, and (b) includes, if practicable, on-site stormwater retention for use as an alternative supply to mains water, groundwater or river water, and (c) avoids any significant adverse impacts of stormwater runoff on adjoining properties, native bushland and receiving waters, or if that impact cannot be reasonably avoided, minimises and mitigates the impact.	**Complies:** The proposed development will install a range of civil services for stormwater management purposes as described in Section 3.8.1. A discussion of potential impacts is contained in Section 7.14. The construction works will involve the disturbance to soils. To manage potential impacts from these works, a Preliminary Erosion and Sediment Control Plan has been prepared as outlined in Section 7.16.
6.8 Airspace operations (2) If a development application is received and the consent authority is satisfied that the proposed development will penetrate the	**Complies:** It is noted that under this clause, the consent authority is to consult with the relevant Commonwealth body. Refer to Section 4.2.2 and in Appendix AA. The proposed development is no taller than the

Provision	Compliance and Comment
Limitation or Operations Surface, the consent authority must not grant development consent unless it has consulted with the relevant Commonwealth body about the application.	approved ASB and, consistent with the ASB, consultation will occur.
6.10 Essential services Development consent must not be granted to development unless the consent authority is satisfied that any of the following services that are essential for the development are available or that adequate arrangements have been made to make them available when required: (a) the supply of water, (b) the supply of electricity, (c) the disposal and management of sewage, (d) stormwater drainage or on-site conservation, (e) suitable vehicular access.	**Complies:** It is considered that the proposed development will have adequate arrangements for the supply of the required essential services as discussed in Sections 3.8, 7.5, 7.13 and 7.14.
6.11 Design excellence (3) 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.	**Complies:** The proposed development is considered to exhibit design excellence through its selected siting, form, scale, materials, context and relationship to the Precinct and surrounding areas and consistency with the objectives of *Better Placed* that are designed to improve the quality of the built environment. Refer to the Architectural Design Statement in Appendix D for further details.
6.12 Development requiring the preparation of a development control plan (1) The objective of this clause is to ensure that development on certain land occurs in accordance with a site-specific development control plan. (2) This clause applies to development on land: (a) that has a site area of at least 10,000 square metres, or (b) identified as "DCP required" on the Key Sites Map.	**Not applicable**: The site area is less than 10,000 m², therefore the DCP requirement does not apply.

5 Strategic Planning Framework

5.1 NSW State Priorities

In September 2015, the then NSW Premier, Mike Baird, announced 18 State Priorities, allowing the NSW Government to monitor and deliver projects that support a stronger economy, deliver new infrastructure, protect vulnerable groups and improve health, education and public services.

In June 2019, Gladys Berejiklian, NSW's current Premier, announced 14 new social priorities that build on the existing 18 official State Priorities, with a major focus to address community challenges and improve quality of life for all citizens.

The IASB Addition is aligned with the following three key official State priorities:

- *Accelerating major project assessment:* halving assessment times for SSD applications.
- *Better government digital services:* increasing government transactions via digital (online) channels to 70% by 2018-2019.
- *Cutting wait times for planned surgeries:* increase on-time planned surgery admissions as *an important indicator of the performance of the public health system.*

Item two is aligned with the integration of new eHealth solutions into everyday models of care to create a connected healthcare system, as outlined in the *Greater Sydney Region Plan – A Metropolis of Three Cities* (refer to Section 5.3) and the *eHealth Strategy for NSW Health 2016-2026.*

5.2 The Greater Sydney Regional Plan, A Metropolis of three cities

The Greater Sydney Regional Plan (GSRP) was prepared by the Greater Sydney Commission (GSC) in October 2017 and updated in March 2018. It provides various new policy initiatives for consultation and consideration by the NSW Government. The GSRP:

- *"Sets a 40-year vision (to 2056) and establishes a 20-year plan to manage growth and change for Greater Sydney in the context of social, economic and environmental matters*
- *Informs district and local plans and the assessment of planning proposals*
- *Assists infrastructure agencies to plan and deliver for growth and change and to align their infrastructure plans to place-based outcomes*
- *Informs the private sector and the wider community of the growth management and infrastructure investment intentions of government."*

The GSRP identifies essential services, such as health and education, as key to the growth of the Sydney Region. The Precinct is recognised for its potential as a major growth industry for healthcare and education. Objective 21 of the GSRP is to provide *"internationally competitive health, education, research and innovation precincts"*. Planned investment into major health facilities across the Sydney Region, including the Project, will contribute to the productivity and development of health and education precincts supported by new and emerging technologies.

A Plan for Growing Sydney, released in 2014 prior to the GSRP, was designed to guide land use planning decisions for the next 20 years. The Plan had identified the *"Randwick Education and Health"* Precinct as one of Sydney's strategic centres.

5.3 Eastern City District Plan

The *Eastern City District Plan* was prepared by the GSC in October 2017 and updated in March 2018. It has been developed in collaboration with community, business, local Councils and State agencies and provides a 20-year plan to manage growth and achieve the 40-year vision for Greater Sydney while enhancing the liveability, productivity and sustainability of the region. It describes a framework for the management and planning of economic, social and environmental objectives in the Eastern City District, which includes the LGAs of Bayside, Burwood, Canada Bay, Inner West, Randwick, Strathfield, City of Sydney, Waverley and Woollahra.

It identifies the Precinct as a Health and Education Super Precinct and Collaboration Area (Figure 5-1). Collaboration between the RHC and UNSW Kensington Campus is part of Planning Priority E8 in the Plan which provides the opportunity for a strategic and integrated services offering. Ultimately, the Precinct would evolve into an Innovation District. The Project would enable the realisation of the Health and Education Super Precinct and Collaboration Area as it allows the genuine collaboration of health and education professionals in a collocated setting.

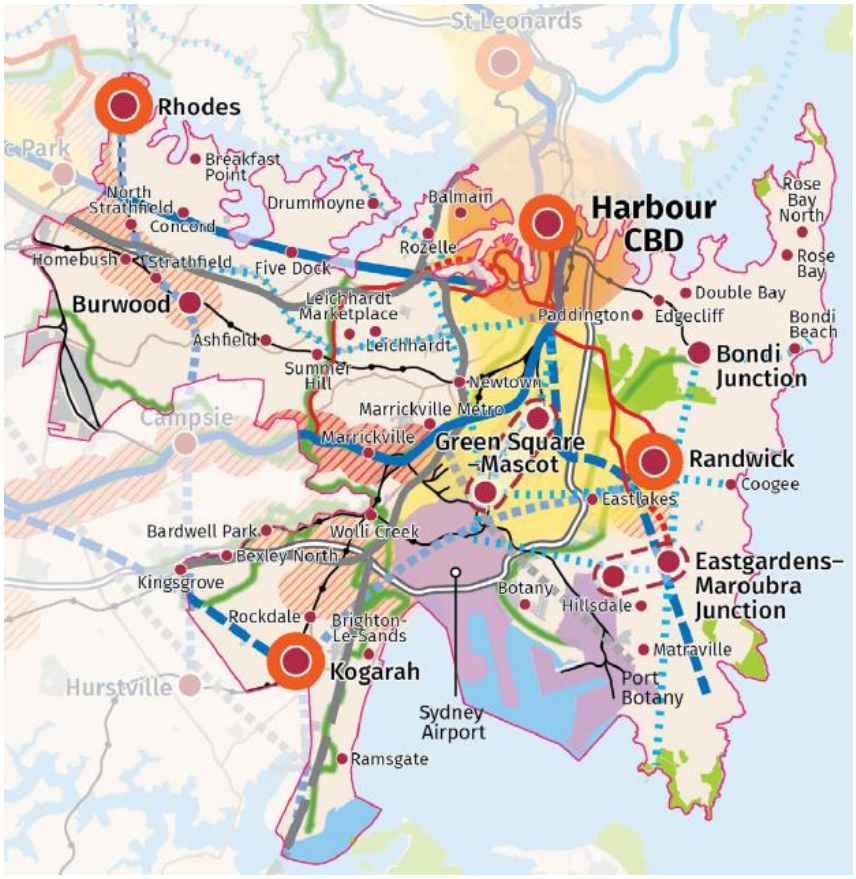


Figure 5-1 Regional context map of the site (Source: Eastern City District Plan, 2018).

5.4 Future Transport Strategy 2056

The *Future Transport Strategy 2056* (FTS) was prepared by Transport for New South Wales (TfNSW) in October 2017 and updated in March 2018. The FTS defines a 40-year vision guiding future transport investment in NSW, building upon the generational transport and infrastructure investment pipeline outlined in the *Long Term Transport Master Plan 2012,* and capitalising on the benefits of new and emerging technologies and innovation to enhance NSW. The vision is built on six state-wide outcomes to deliver transport planning and investment in a dynamic NSW transport system and to respond to technology-driven transformation. These are:

- *Customer focused:* transport through an interactive and personalised experience.
- *Successful places:* including the liveability and productivity of communities.
- *A strong economy:* enabled through transport services.
- *Safety and performance:* experienced by customers on an efficient transport network.
- *Accessible services:* to all people of NSW.
- *Sustainability:* of the transport network for customers and the environment.

Forward planning and sustainable transport investments underpin the liveability of communities and the ability of the NSW Government to respond to needs in health and other services. These investments, such as the nearby CSELR, will help to activate public spaces, broaden the economic corridor and open the transport network to the Precinct. The Project will reduce vehicular traffic onto High Street which is consistent with CSELR place making vision for High Street. The CSELR presents a major opportunity in revitalising the High Street frontage and also the broader Precinct. Further, it will drive a change in transport modality across the Precinct and interface with the proposed and existing services, including the UNSW Kensington Campus, the Sydney Children's Hospital's ED and the IASB Addition.

The implementation of the FTS will be assisted by supporting plans. These are intended to assist in the shift from individual modes of transport to integrated solutions that build community character and achieve the service outcomes defining the 40-year vision. These plans are also intended to provide strategic planning detail under the Regional NSW and Greater Sydney Services and Infrastructure Plans. Supporting plans identified in the overarching FTS include:

- *The Movement and Place Framework* to guide specific corridor and place plans to be developed as supporting plans.

- Disability Inclusion Action Plan 2018 – 2022, Older Persons Transport and Mobility Plan, and Social Access Plan which collectively aim to improve service accessibility.

5.5 State Infrastructure Strategy 2018 – 2038 Building the Momentum

The *State Infrastructure Strategy 2018 – 2038* (2018 SIS) builds on its two predecessors and was prepared by Infrastructure NSW in February 2018 for the NSW Government in accordance with the *Infrastructure NSW Act 2011*. The 20-year strategy identifies policies, strategies and recommendations to deliver and make more efficient use of highly productive new and existing

infrastructure in each of the State's key infrastructure sectors to meet the needs of a growing population and economy. The NSW population is expected to grow from about 7.7 million today to 9.9 million by 2036 and over 12 million by 2056. The 2018 SIS describes six overarching strategic directions and other geographic directions to inform Infrastructure NSW's recommendations for priority investments in the State's key infrastructure sectors in the form of sector-based infrastructure directions. Implementing the 2018 SIS would improve NSW health and education services. These infrastructure directions are expected to boost the NSW economy by $11 billion in 2036 and $45 billion in 2056.

The health and education-based infrastructure directions are designed to achieve the following strategic objectives, respectively:

- *"Plan and deliver world-class health infrastructure that supports a 21st century health system and improved health outcomes for the people of NSW.*
- *Deliver infrastructure to keep pace with student numbers, and provide modern, digitally-enabled learning environments for all students".*

The NSW government is investing $720 million in the reconfiguration and expansion of the RHC, which involves a partnership with SESLHD, SCHN, Council and UNSW to deliver the Randwick Health Collaboration Vision which will provide improvements across the Precinct.

The IASB Addition is consistent with the abovementioned 2018 SIS objectives and the vision for the Precinct as a key component of the redevelopment of the RHC, enabling NSW Health to deliver new health infrastructure facilities and services as part of an integrated health strategy including establishing partnerships to deliver value and improved outcomes for the community and shared-use opportunities. Ongoing investment in new and upgraded health infrastructure will also support the implementation and delivery of other relevant strategic planning documents such as the current Health Strategy, the *NSW State Health Plan: Towards 2021* and related *eHealth Strategy for NSW Health 2016-2026.*

5.6 Crime Prevention Through Environmental Design (CPTED) Principles

CPTED principles aim to deter criminal behaviour and crime risk through sound environmental design applied to the built-environment. The four CPTED principles are surveillance, access control, territorial reinforcement and space management. The correct implementation of these principles will ensure the safety and security of customers and the community (DUAP, 2001).

The IASB Addition has considered the CPTED principles through increasing the perception of risk to criminals and effort to commit crime, reducing the potential rewards of crime and encouraging normal social behaviour. These outcomes are critical given the development is integral to public health and education services delivery and will accommodate continuous vehicular and pedestrian movements. Refer to the Architectural Design Statement in Appendix D.

5.7 Better Placed: An integrated design policy for the built environment of New South Wales (GANSW, 2017)

Better Placed was formulated in response to amendments to the EP&A Act in late 2017 which introduced "Better Design" as an Object of the Act. The Better Placed Guidelines prepared by the NSW Government Architect's Office are the first steps to realising that Object of the Act. It realises the public value and long-term social, economic and environmental benefits of good design processes and outcomes for NSW. The overarching principles of a well-designed built environment are advocated through statutory and strategic planning processes to create more responsive, integrated, equitable and resilient communities. The Guidelines intersect state government priorities, planning mechanisms (statutory, non-statutory and regulatory) and industry expertise. The Government Architect promotes good design to address key challenges for NSW including population growth, infrastructure, urban renewal and changing lifestyles and demographics.

The IASB Addition and nearby CSELR are part of the NSW Government's infrastructure upgrade and urban renewal portfolio. Good design practices will maximise health infrastructure benefits and outcomes in accordance with the seven core 'better' design objectives to define a legacy that has NSW 'better placed'. For a more detailed consideration of the Objectives, refer to the Architectural Design Statement in Appendix D.

5.8 Randwick Place Strategy – Collaboration Area 2018

The *Randwick Place Strategy – Collaboration Area* (2018) (Place Strategy) was prepared by the GSC in December 2018. It has been developed in collaboration with stakeholders that were involved in planning for the future of the Collaboration Area and provides the following:

- *"Establishes a vision for the Randwick Collaboration Area, based on the community's vision expressed in the Eastern City District Plan*
- *Identifies impediments and opportunities*
- *Sets priorities for the Collaboration Area*
- *Identifies actions to deliver the vision."*

The shared objective of the Place Strategy is to achieve the 2036 vision, which is guided by the following six (6) principles that ascribe the Randwick Collaboration Area as:

- One of Australia's premier health, education and innovation districts
- Well connected to the rest of Greater Sydney by public transport
- Prioritises active modes of transport (cycling and walking) through suitable connections and vibrant centres of activity, including the night-time economy
- Reputable leader in renewable energy research for the provision of low-carbon, sustainable environments

- Supports forms and informal partnerships between education, health, research and private sectors
- Innovative and diverse housing provision that meet the needs of the community.

The Project will contribute to the realisation of the 2036 strategy by promoting its objectives. Figure 2-5 shows the vision for the Randwick Collaboration Area. The Place Strategy aims to inform both public and private policymaking and investment decisions by identifying opportunities and recognising complex, place-specific issues.

5.9 The Randwick City Plan: A 20 Year Plan (2017)

The Randwick City Plan (City Plan) aims to manage environmental, social and economic changes to Randwick City during the next 20 years. The City Plan reflects the community's aspirations and needs and provides clear directions to guide the City's future. A key theme of the City Plan is 'A prospering City' which denotes the following:

- Facilitation of economic development and maintaining the diversity of the local economic base, including existing commercial and industrial land
- Improving and promoting commercial centres
- Improving accessibility to and around the City and key economic centres
- Managing tourism and its environmental and social impacts.

The City Plan provides an Economic Development Strategy that entails planning strategies and controls to support the development of commercial centres and the Health and Education Strategic Centre, including the UNSW Kensington Campus and the RHC. Further, the City Plan would facilitate the realisation of the collaboration between UNSW Kensington Campus and the RHC.

5.10 UNSW 2025 Strategy: Our Strategic Priorities and Themes (2015)

The *UNSW 2025 Strategy: Our Strategic Priorities and Themes* (2015) (UNSW Strategy) was prepared to provide the foundations of a strategic 10-year plan, which is to be supported by an implementation plan, that would enable UNSW to realise its strategic priorities. The UNSW Strategy is founded on three main priorities:

1) Academic Excellence
2) Social Engagement
3) Global Impact.

Based on these priorities, the following three themes interface with the IASB Addition:

1) Theme A1: Research Quality

2) Theme C2: Partnership that facilitate our strategy

3) Enabler D3: World-class Environments.

The IASB Addition facilitates the direct collocation of health education training and research with acute healthcare services, and to realise the vision for the RHC as signed by the SESLHD, SCHN and UNSW which states that:

> *"We will be a world renowned model for the integration of high quality primary, secondary and tertiary clinical care, innovative education programs and enabling original and translational research that supports wellness across the community."*

5.11 Randwick Development Control Plan 2013

The Randwick DCP provides detailed planning and design guidance for new development, which complements the provisions of the LEP. Key objectives of the Randwick DCP include, but are not limited to, the following:

- *"Ensure quality design that reflects a site's character and context.*
- *Ensure development is economically, socially and environmentally sustainable.*
- *Ensure development demonstrates architectural merit and incorporates high quality materials and finishes."*

Part E of the Randwick DCP identifies the Randwick Education and Health Specialised Centre as a 'specified site', which includes UNSW and the RHC but does not include zone of land on which the IASB Addition is located, being the land acquired to expand RHC and implement the ASB Project.

Pursuant to Clause 11 of the SEPP SRD, the provisions of a DCP do not apply to SSDAs. However, it is considered the Project is consistent with the objectives, noting the future character of the precinct.

5.12 Planning Guidelines for Walking and Cycling

The *Walking and Cycling Program Guidelines 2019-2020* demonstrates the NSW government's commitment to work alongside local Councils in encouraging a walking and cycling culture. This is supported by the *Planning Guidelines for Walking and Cycling* (2004) to create more sustainable communities with easy walking and cycling access to urban services and public transport. To achieve this vision, it is recommended that planning instruments (i.e. LEPs and DCPs) are reviewed and updated to include applicable State, regional and local planning objectives such as those of pedestrian and bicycle plans. Contemporary neighbourhood walking and cycling design and planning principles will assist in creating urban renewal, a walking and cycling culture and new compact mixed-use centres around public transport access points. The north-south link is to be maintained. Further site linkages to and from the RHC are being explored through broader Precinct collaboration works.

These outcomes will be supported by planned investment into major health facilities at Randwick, creating an internationally competitive health and education precinct in accordance with Objective 21 of the GSRP. Walking and cycling strategic planning objectives at the Precinct are also considered to be necessary to accommodate transport infrastructure changes from the CSELR currently under operational testing.

6 Consultation

The Consultation section of the SEARs sets out the steps to be taken and matters to be addressed by HI during the preparation of this EIS which is to accompany the SSDA. Compliance with the SEARs is contained in the "Consultation Report" (the Report) (Appendix X1) prepared by HI's Communications Team. The Report simply and succinctly describes the consultation processes, the issues raised and resolved or are being resolved and where the design of the development was amended during the consultation.

HI, in working closely with SESLHD, SCHN, UNSW and other RHC partners, has applied its guiding communications and engagement principles for the planning, design and delivery of the IASB Addition. In this regard, HI has been working closely with Government Agencies including the Randwick City Council, GANSW, TfNSW (including Roads and Maritime Services, Sydney Coordination Office and CSELR) to inform the proposed development.

HI's guiding communications 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.

The Report (Appendix X1) provides detailed information on the following:

- 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 are ongoing.
- Details of the impact of stakeholder engagement.

6.1 Summary of Consultation Activities

The Project team has undertaken a wide range of activities to engage with the large and complex stakeholder groups during the preparation of the EIS as outlined in Table 6-1 below. Details for consultation activities proposed for the public exhibition period are also included.

Table 6-1 Consultation activities during preparation of the EIS for the IASB Addition

Stage and timeframe	Stakeholders	Engagement approach/ collateral
Stage 1 – Early 2019 Options and investigations into campus business continuity and logistics management on Hospital Road Key objectives: • Undertake early investigations to campus business continuity and logistics management • Build campus stakeholder relationships • Provide an avenue for feedback to be received and considered by the project team	• SESELHD (POWH and Community Health Service, RHW and ESMHS) • SCHN • HealthShare • Emergency services including NSW Ambulance and Fire and Rescue NSW	• Face-to face briefings
Stage 2 – Late May to June 2019 Early engagement during SEARs development including: • Key campus organisations • NSW Government agencies • Randwick City Council • UNSW. Key objectives: • Inform community, other stakeholders and government agencies about the proposal • Build relationships	• Executive engagement across the RHC including: SESLHD (POWH and Community Health Service, RHW and ESMHS) • SCHN • Black Dog Institute • NeuRA • RHC Corporate Services and Engineering sections • Ainsworth Building – Child Protection Unit and Mental Health Services, Surgical Short Stay • UNSW Senior Leadership • TfNSW– (including Sydney Coordination Office, Roads and Maritime Services, CSELR • Randwick Collaboration Area Councillor Sub-Committee including	• Formal and informal briefings – telephone and face to face as required

Stage and timeframe	Stakeholders	Engagement approach/ collateral
• Provide an avenue for feedback to be received and considered by the project team	Mayor and Councillors, Randwick City Council • Randwick City Council - senior planners and technical officers • NSW Ambulance and Hospital Road Depot • HealthShare • Fire and Rescue NSW • Randwick Hospitals Campus General Managers Design Forum • Civil Aviation Safety Authority (CASA) / Sydney Airport Corporation Limited (SACL)	
Stage 3 (a) – June to August 2019 Key stakeholder and community engagement during the preparation of the EIS Key objectives: • Inform community, other stakeholders and government agencies about the proposal • Build relationships • Provide an avenue for feedback to be received and considered by the project team	• TfNSW (including Sydney Coordination Office, Roads and Maritime Services, CSELR) • DPIE • Randwick City Council • Eastern Beaches Local Area Command • NPT • NETS • Emergency services including Fire and Rescue NSW, NSW Police and NSW Ambulance • Utility/ service providers including Ausgrid, Sydney Water, Jemena, Optus and Telstra • Metro Parking • CASA, SACL • HealthShare • Randwick Hospitals General Managers Design Forum • UNSW Faculty leadership engagement – Built Environment, Art and Design, Medicine and Engineering Sciences • La Perouse Local Aboriginal Land Council (LPLALC)	• Formal and informal briefings for key government stakeholders and organisational contacts • Additional technical briefing with TfNSW regarding IASB Addition, car parking, existing network conditions, traffic modelling and proposed transport options/mitigations, construction staging (30 July 2019) • Joint briefing DPIE, TfNSW, RCC regarding IASB Addition, car parking, existing network conditions, traffic modelling and proposed transport options/mitigations, construction staging (5 August 2019) • IASB Addition Statutory Planning Fact Sheet (Appendix 1) published

Stage and timeframe	Stakeholders	Engagement approach/ collateral
	• Consumer and Community Advisory Committee	on project website from 17 June 2019 • Webpage added to the Project website about the IASB Addition (www.randwickcampusredevelopment.health.nsw.gov.au) • Community Contact 1800 571 866 • Email queries via randwickcampusredevelopment@health.nsw.gov.au
Stage 3 (b) – June to August 2019 **Key objectives:** • In recognition that each residential stakeholder has their own unique set of circumstances, direct and ongoing engagement with the planning team will ensure the construction staging approach and site plan design appropriately considers residents needs and mitigates potential impacts where possible	• General community	• IASB Addition Statutory Planning Fact Sheet (Appendix 1) published on project website from 17 June 2019 • Webpage added to the Project website about the IASB Addition (www.randwickcampusredevelopment.health.nsw.gov.au) • Community Contact 1800 571 866 • Email queries via randwickcampusredevelopment@health.nsw.gov.au
	• Nearby residents in Magill Street	• Face-to-face engagement via doorknock of nearby properties on 11 June 2019 • Subsequent delivery of IASB Addition Statutory Planning Fact Sheet (Appendix 1) 8 July 2019 that provides an overview of the proposal and outlines

Stage and timeframe	Stakeholders	Engagement approach/ collateral
		the closure of Hospital Road • A further visit to residents on 23 July 2019 provided further information about proposals technical assessments, including the consideration of a wide range of traffic and transport options and mitigation measures arising from the proposal to close the privately-owned Hospital Road. The proposal to re-open Magill Street to general traffic during the day was highlighted to residents.
	• Nearby residents in Maud and Hay, Barker, High and Clara Streets	• Doorknock/letterbox delivery of IASB Planning Fact Sheet (8 July 2019)
Stage 4 – September to Late 2019 Consultation activities planned during public exhibition of the EIS	• General community • Neighbours • Randwick Hospitals Campus stakeholders • UNSW staff and students	• Community Information Session(s) – Randwick Library • Face to face and letterbox updates to local residents • Pop-up Information Stands for staff, students and community on the RHC Campus and UNSW Kensington Campus • Staff forums • RCR Community Update – distributed to 10,000 local homes and businesses

Stage and timeframe	Stakeholders	Engagement approach/ collateral
		• Newsletters to staff and students including the 'Randwick Campus Redevelopment Newsfeed' and 'Inside UNSW' – distribution of 15,000 • Advertising – Wentworth and Southern Couriers • Presentation to Randwick Precinct Committee

6.2 Key Issues Raised by Stakeholders

A summary of the issues raised to date from consultation activities and how the design of the development has been amended in response to the issue raised is presented in Table 6-2.

Table 6-2 Examples of changes to the design as a result of stakeholder engagement

Issue raised	Stakeholder group	Forum / avenue	How the design changed as a result of this feedback
Traffic volumes on Barker Street resulting from closure of Hospital Road	RHC staff Black Dog Institute NeuRA POWH SCHN RHW NSW Ambulance TfNSW	Formal and informal briefings	During the preparation of the EIS, four alternative solutions were investigated as traffic mitigations. The traffic and transport investigations and feedback from stakeholders supports the re-opening of Magill Street as the preferred solution to reduce increased traffic volumes on Barker Street. It is noted that this proposed mitigation requires an amendment to Condition A15 of SSD 9113.
Parked cars blocking access in Magill Street	Magill Street residents	Doorknock	The implementation of the approved clearway/ no parking zones in Magill Street (contained in the ASB consent) is proposed to be brought forward from operational phase to construction phase of the ASB so as to align with

Issue raised	Stakeholder group	Forum / avenue	How the design changed as a result of this feedback
			the opening of Magill Street resulting in improved access on Magill Street.
Proximity of IASB Addition to Ainsworth Building	Government Architect NSW SCHN, Randwick occupants of Ainsworth Building	Formal and informal briefings	Internal planning for facilities within the IASB will respond to proximity to adjacent buildings with windows to be positioned to avoid or minimise overlooking. Windows on the IASB Addition, Ainsworth Building and clinical link bridge will have treatments applied to manage privacy and overlooking. Window treatments will provide an opportunity for artwork developed in partnership with Sydney Children's Hospital Consumers to be incorporated into the Ainsworth School curriculum.
New ASB substation access requirements	Ausgrid	Formal briefings, correspondence	The Level 00 building form was reduced above the approved location for the ASB substation to ensure continued access for maintenance once operational.
Location of IASB Addition	RHC Executive, design experts	Formal and informal briefings	A number of site options were considered for the proposal. The East façade expansion and reduced floor plate on upper levels was selected as the preferred location to mitigate solar access impacts on Magill Street properties and ensure new ASB health services clinical flows not impacted.
Integration of new education, training and research spaces with the approved ASB	POWH	Formal and informal briefings	A number of site options were considered for the proposal. The selection of the east option as the preferred location provides the opportunity for a clear separation of clinical flows through the use of the circulation corridor to the east of the lift core and therefore does not impede on planned health services to be delivered in the ASB.

Issue raised	Stakeholder group	Forum / avenue	How the design changed as a result of this feedback
Building size and scale bearing on nearby residential properties	Engagement with Government and Authorities and community during planning for SSDA 9113	Formal and informal briefings, correspondence	The location of the extension over Hospital Road was selected to reduce impact of additional massing on nearby residents. The overall building massing for the extension was also reduced to the South on Levels 06-09 to mitigate potential solar access impacts that may result from the proposal.
View to/from adjacent services	RHW SCH Ainsworth Building	Formal and informal briefings	The IASB Addition design has been amended to address this feedback, including the considered placement of windows to the pedestrian link bridge and eastern façade and the proposed addition of window film treatments.
Design development of the façade to respond to the potential loss of amenity for clinical users	Occupants of Ainsworth Building SCH Ainsworth Building	Formal and informal briefings	Art strategy proposed for link ways, further analysis of views and daylight for key locations and design development of façade and window treatments. As part of the art strategy, window treatments provide an opportunity for artwork developed in partnership with SCHN Consumers to be incorporated into the Ainsworth School curriculum.
Maintenance of business continuity and loading dock operations for clinical support services	RHC Corporate Services and loading dock staff Consumer and Community Advisory Committee	Formal and informal briefings	The construction methodology has been planned to ensure the loading dock and Delivery Drive is accessible to vehicles and operational at nominated times (refer CMP for further discussion).
Ensuring access for critical fire assets located in the loading dock on Delivery Drive	Fire and Rescue NSW	Consultation with Fire and Rescue NSW facilitated by HI	Staging of construction activities have been designed to support ongoing access to critical fire services. A Fire Safety Strategy will be implemented prior to construction activities commencing on Hospital Road.

7 Environmental Impact Assessment

7.1 Overview

In addition to the statutory and strategic context and policies addressed in Sections 4 (SEAR 1) and 5 (SEAR 2) of the EIS, the SEARs state that the potential environmental impacts of the key issues to be considered. This section contains: (a) the identification, analysis and assessment of environmental impacts and their planning merits; and (b) recommended mitigation measures where necessary to address identified impacts. Each matter raised within the SEARs is addressed separately below.

7.2 Built Form and Urban Design (SEAR 3)

7.2.1 Assessment

As outlined in Section 3.2, the proposed IASB Addition is informed by a significant body of preceding work which also draws on the design framework for future development in the Precinct. Further, as discussed in the Architectural Design Statement (Appendix D), *Better Placed* describes a well-designed built environment as healthy, responsive, integrated, equitable and resilient. These qualities are closely aligned with the guiding principles that underpin the precinct master planning, and which form the basis of the IASB Addition design. Through this process, the built form and urban design proposed achieves design excellence, has appropriate regard to its context and setting whilst minimising environmental amenity impacts.

The below assessment provides further details on the proposed development's respective design elements.

Height, Density, Bulk, Scale, Setbacks and Interfaces

The proposed development is 9 storeys above ground and will have the following:

- An effective building height (indicatively) of 44.9 m (RL 101.2 – RL 56.3 at Level 00).
- A gross floor area (approx.) of 5,000 m^2.
- A setback (approx.) of 6.5 m and 24 m from the southern half and norther half, respectively, from the Ainsworth Building. Further setbacks include between the ASB envelope at Level 00 and upper levels as well as between Level 00 and the southern portion of the ASB envelope.

The proposed development is considered to be compatible with the character and scale of the Precinct. It is in harmony with the block form and scale of the buildings in the UNSW Kensington Campus to the immediate west and also the approved ASB. The scale of the IASB Addition is an important facet in realising the effective integration of services. The significance of this façade and integration will increase as future developments to the north are completed.

The proposed development provides a range of setbacks which meet the requirements for separation distances between hospital facilities, as illustrated in Figure 7-1 and summarised in Table 7-1.

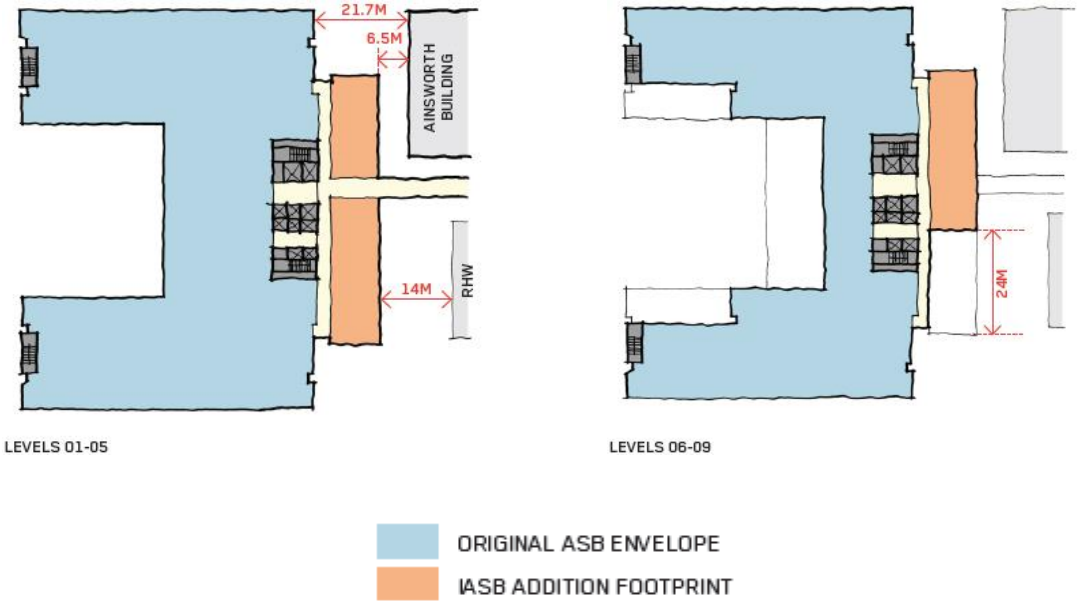


Figure 7-1 IASB Addition Set Backs (Source: BVN, 2019).

Table 7-1 Setback descriptions of the proposed IASB Addition (BVN, 2019).

Setback	Description
North-South Connection	The extent of integration footprint for the north and south, extending from Level 01 to Level 05, inclusive, is defined by the requirement to maintain windows to bedrooms within the ASB. These levels provide maximum integration footprint. The building envelope on the upper levels (Levels 06 – 09) are set back from the south by an additional 24 m. This ensures maximum solar access to the existing residential properties to the south of Magill Street.
Hospital Road (east)	A minimum 6.5 m setback is provided to the nearest building on the existing RHC, opposite to the proposed development, across Hospital Road – the Ainsworth Building. This ensures BCA compliance with regards to fire separation and amenity is maintained for existing buildings.
Hospital Road Deck (Level 00)	The envelope located at Level 00 is set back from the upper levels to maintain unimpeded pedestrian circulation along the Hospital Road future deck, consistent with the Precinct Masterplan which designates Hospital Road at this level and location as a "major pedestrian spine".
Southern Setback (Level 00)	Level 00 is set back from the south to ensure access to the ASB substations that are fronting Hospital Road. This also facilitates fire brigade vehicle access to the existing loading dock (via Delivery Drive).

Setback	Description
Eastern Setback (Level 00)	Level 00 is set back from the east to allow pedestrians to move externally along the entire extent of the Hospital Road future pedestrian deck and ensure unimpeded access. Also, the setback serves as a covered entrance zone from the deck.

Design Quality and Built Form

The design quality of developments within the Precinct is dependent on key principles identified in the Precinct Masterplan:

- Green and healthy;
- Connected;
- Integrated; and
- Responsive.

The Precinct Masterplan guiding principles and the *Better Placed* built-environment design framework are considered in the formation of the six principles underlying the approved ASB and the IASB addition design. The development will:

- Provide a **human-centred** experience that promotes healing, health and wellbeing.
- Incorporate **sustainable** elements and materials that improve building performance.
- Maximise **connectivity** across the RHC and UNSW Kensington Campus.
- Ensure **health integration** with existing RHC clinical departments.
- Respond to its core clinical functions and embody an architectural style that reflects **an identity within the greater context** of the RHC and UNSW Kensington Campus.
- Create a physical environment that **blurs boundaries** between the Project and UNSW Kensington Campus.

The proposed development is considered to exhibit design excellence through its selected siting, form, scale, materials, context and relationship to the Precinct and surrounding areas and consistency with the objectives of *Better Placed* that are designed to improve the quality of the built environment. In exhibiting design excellence, it is also noted that has occurred within the framework of meeting functional requirements for this typology of public infrastructure and review of the feedback provided by Project stakeholders. Refer to the Architectural Design Statement in Appendix D for further details on the adopted design qualities.

Signage

No signage is proposed at this stage; however, it will be developed as part of the future fit-out works. The signage types and locations are to be consistent and integrated with the ASB. Signage examples are provided in Section 5.4 of the Architectural Design Statement (Appendix D).

Services

Central plant areas are provided on Levels 05 and 09, with a series of risers provided (BVN, 2019). The ASB cooling towers and generators will serve the IASB Addition, with minimal impacts on the current spatial allowances. Lastly, the IASB Addition will utilise the current ASB waste management system.

Site and Context Analysis

The RHC is sited immediately south of the Randwick Town Centre. There are four (4) hospitals that currently share the RHC, including: the Sydney Children's Hospitals Network (SCHN); the Royal Hospital for Women (RHW); Prince of Wales Hospital (POWH); and the Prince of Wales Private Hospital (POWPH). Collectively, these institutions provided a range of services including: Acute, Ambulatory, Community, Cancer and Mental Health Services. The Hospitals are co-located with three (3) leading research institutes, including: Black Dog Institute, Neuroscience Research Australia; and The Bright Alliance.

The approved ASB is sited in the zone identified in the Precinct Masterplan for future expansion of the RHC. The expansion area is bound by High Street to the north, Magill Street to the south, Botany Street and UNSW to the west, and Hospital Road to the east. The ASB is sited in the southern portion of the expansion zone. Future expansion/development areas are located to the north.

The ASB's site occupies a key position between the RHC and UNSW Kensington Campus, thus through this application provides an additional exciting opportunity for engagement and collaboration of health and education services through the creation of shared spaces as well as physical links that would enable translation benefits direct to bedside care. The IASB Addition comprises a 10-storey addition to the eastern elevation of the approved ASB with a gross floor area of approximately 5,000 m^2. Thus, the location of the addition is considered appropriate to its site and context.

North-South permeability

Spatial planning and development of the IASB Addition design has been informed by the Precinct Masterplan and the approved ASB design and is reinforced by the quality of strengthening the identity as an inviting and permeable precinct. One of the main design principles that underpin the design of the IASB Addition is the principal theme of connectedness, which facilitates the principle of creating a permeable ground plane that extends around and within the IASB Addition and ASB.

Landscape Strategy

The landscape proposal is consistent with the materials palette and design language for the approved ASB. Curved seating areas are strategically sited amongst beds of native planting that would provide multiple opportunities for staff and members of the public to utilise the north facing deck area. Further, hanging plants along the western edge of the deck enliven the sunken courtyard located on Level -01, below. A Landscape Plan is provided in Figure 7-2 with further details in the Landscape Design Report (Appendix E).

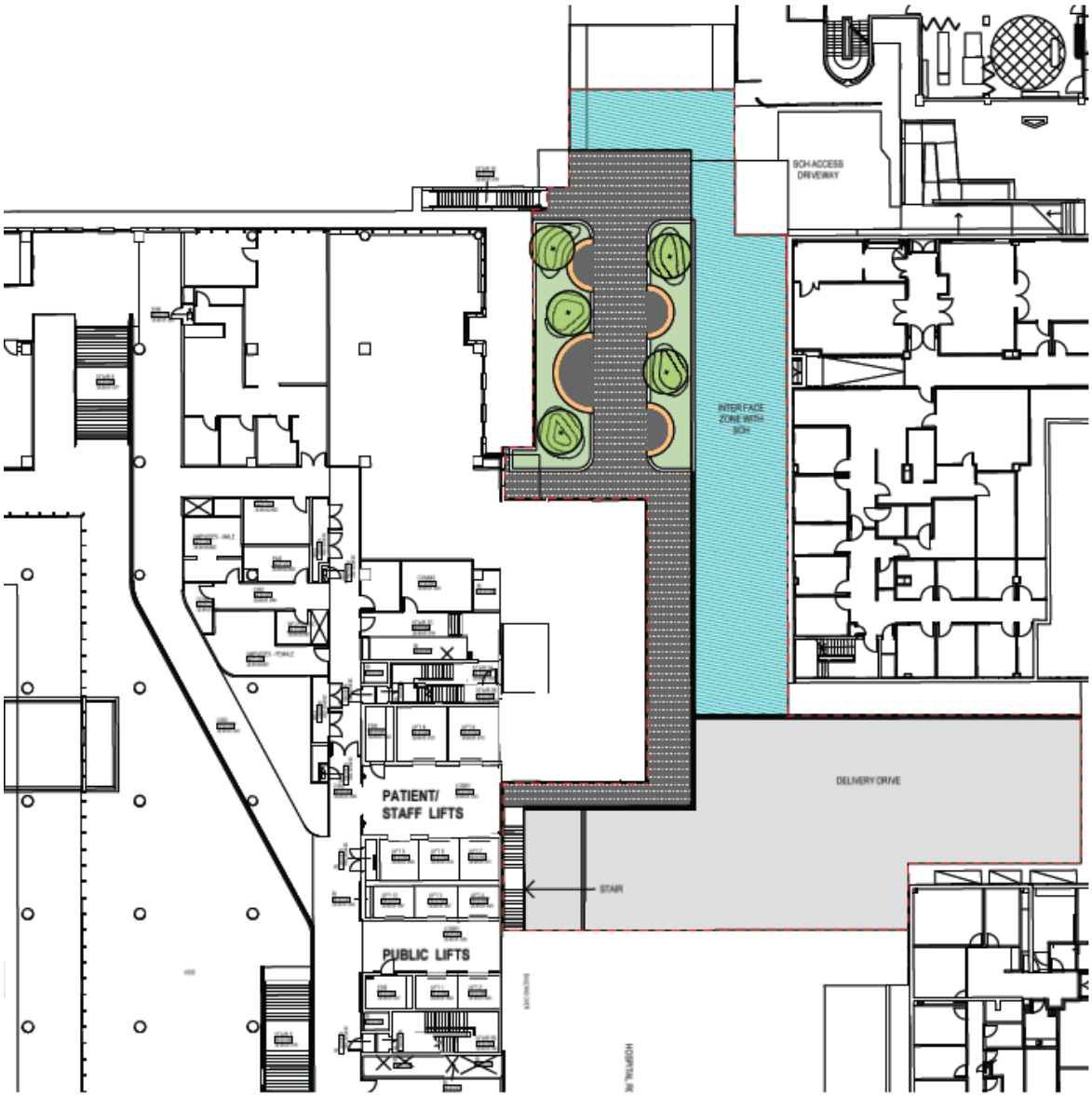


Figure 7-2 Landscape Plan (BVN, 2019).

Visual Impact

Photomontages have been prepared for the proposed development and can be found in Appendix D and Figure 3-2 and Figure 3-3. These photomontages demonstrate that the proposed development is consistent with the built environment character of the Precinct and will not generate any adverse visual impacts. Further, it is noted that the IASB Addition adopts a consistent façade type across all three elevations (i.e. north, east and south), in keeping with the established façade typology of the approved ASB – as a series of interconnected vertical solid elements.

Crime Prevention Through Environmental Design (CPTED) Principles

Strategies to promote crime prevention through environmental design (CPTED) principles, within and around the IASB Addition, are incorporated in the design language and include (BVN, 2019):

- Natural passive surveillance built into design.
- Avoidance of spaces that are disconnected from pedestrians.
- Hostile vehicle mitigation strategies through the implementation of security-by-design principles. These include pedestrian and vehicle routing.
- Implementation of integrated electronic security systems (CCTV etc).
- 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.

Environmental Amenity

The overall building performance across all elements of design is considered to provide a good level of environmental amenity through the application of the 4-Star Green star equivalency. Further, access to landscaped and outdoor spaces with natural daylight and ventilation is built into the design of the IASB Addition and is consistent with the ASB approved design.

For further discussion on environmental amenity, see Section 7.3 and Appendix D.

7.2.2 Recommended Mitigation Measures

No further mitigation measures are recommended.

7.3 Environmental Amenity (SEAR 4)

7.3.1 Assessment

Solar Access and Overshadowing

Magill Street

Shadow diagrams have been prepared by BVN (refer Appendix D) for hourly intervals between 8 am and 4 pm and 15-minute intervals between 8 am and 11 am as at 21 June (winter solstice) to assess the overshadowing impact caused by the proposed development.

As discussed in Section 5.11, pursuant to Clause 11 of the SRD SEPP, the provisions of a DCP do not apply to SSDAs. Notwithstanding, the overshadowing provisions of the Randwick DCP 2013 (DCP) have been used as a design guide to assess whether the proposed development will cause material overshadowing impacts upon the neighbouring dwellings. Section 5.1 of the DCP states the following controls for overshadowing:

"***Solar access to neighbouring development***:

iii) A portion of the north-facing living area windows of neighbouring dwellings must receive a minimum of 3 hours of direct sunlight between 8am and 4pm on 21 June.

iv) The private open space of neighbouring dwellings must receive a minimum of 3 hours of direct sunlight between 8am and 4pm on 21 June. The area covered by sunlight must be capable of supporting passive recreation activities."

"Living Areas" are defined in the DCP as "*Indoor space(s) occupied for extended periods of time such as a living room, lounge room, dining room, family room and/or other open plan living areas*".

"Private open spaces" are defined in the DCP as "*Outdoor living areas for recreational activities of residents. Private open spaces should be located and designed to maximise solar access, privacy, accessibility and useability*".

Based on the shadow diagrams in Appendix D, the period between 9am and 11am is the only time when the proposed development causes overshadowing to the north-facing windows along Magill Street.

- 9 Magill Street is affected during the period 9 am to 10 am.
- 11 and 13 Magill Street are affected during 10 am to 11 am.

Therefore, the IASB Addition does not impact upon solar access to "living areas" for 11 and 13 Magill St. Refer to further analysis below to support this conclusion.

Figure 7-3 provides further assessment of these impacts to determine whether the proposed development causes overshadowing amenity impacts to residents in 9, 11 and 13 Magill Street.

Figure 7-4 shows that 9 Magill Street affected by the proposed development for a short period of time between 9 am and 10 am. 9 Magill Street has 3.8 hours solar access to living areas during a winter solstice day after being impacted upon by the approved ASB and existing structures. Based on the 15-minute interval shadow diagrams, the property is overshadowed by the proposed development for 30 minutes during 9 am and 10 am. Therefore, 9 Magill Street windows have 3.3 hours of solar access to "living areas", which is within the DCP requirements.

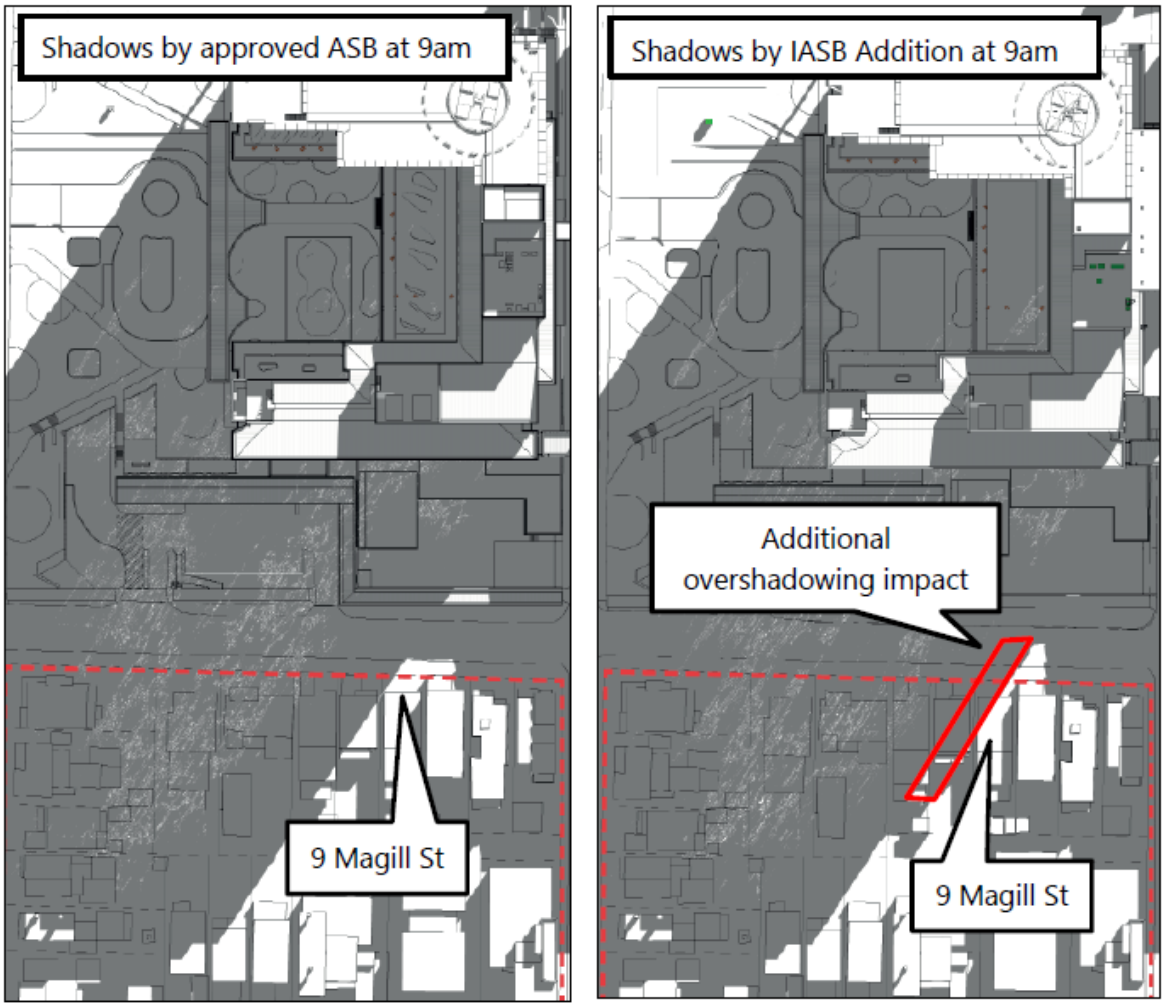


Figure 7-3 Comparison between approved ASB and IASB Addition shadows at 9am 21 June.

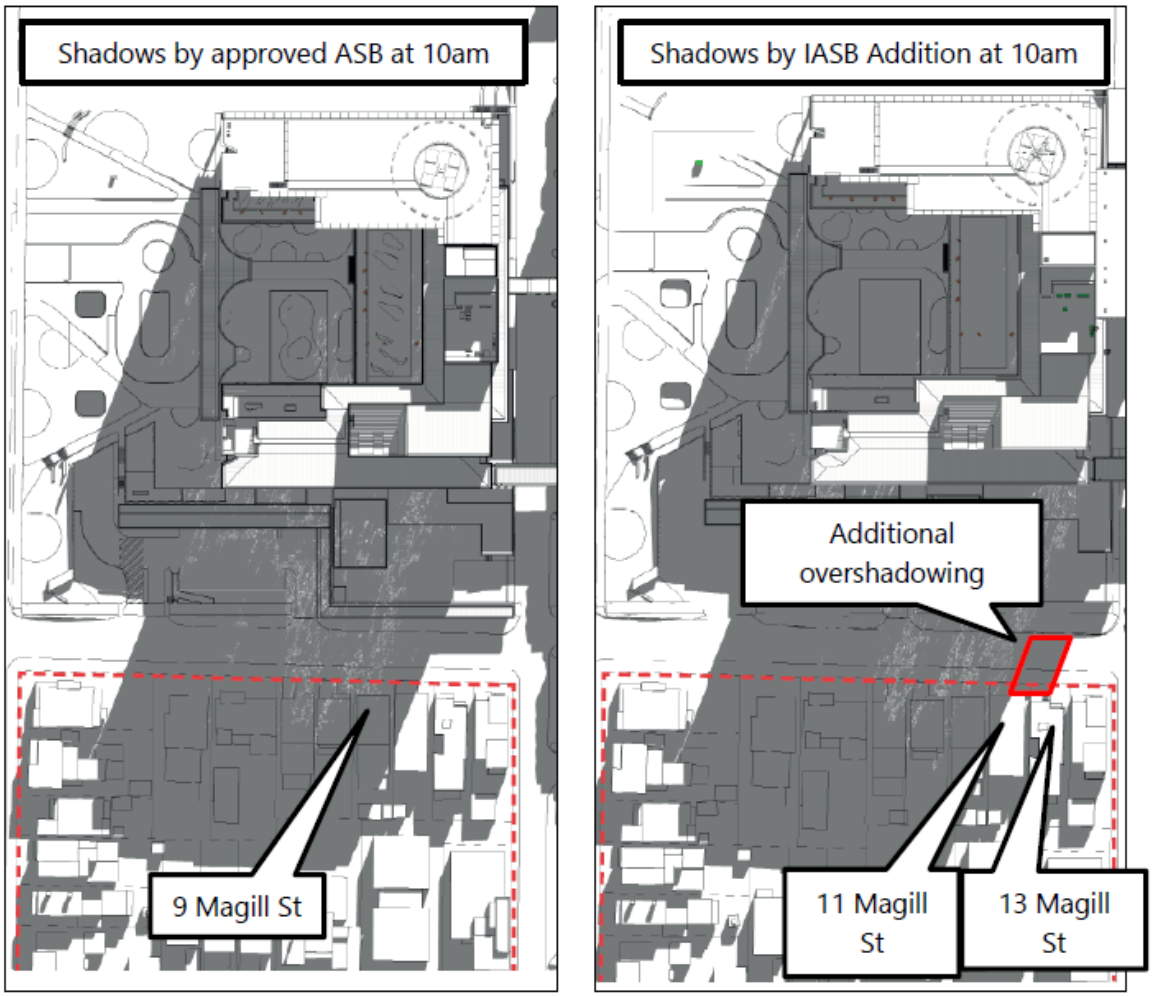


Figure 7-4 Comparison between approved ASB and IASB Addition shadows at 10am 21 June.

Figure 7-4 shows that the north-facing windows of 11 Magill Stand 13 Magill St are affected between 10 am and 11 am. However, the north facing windows of 11 Magill St do not receive sunlight into the living areas, which are located to the rear of the ground floor. Similarly, the north facing windows of 13 Magill St do not receive sunlight into the living areas, which are located to the rear of the ground floor.

Sydney Children's Hospital

The proposed development will have minor to no overshadowing impacts on the Western face of the Sydney Children's Hospital (located to the east of the proposed development).

Based on the shadow diagrams prepared by BVN in Appendix D, the western face of the Children's Hospital currently receives full solar access between the time 12 pm – 4 pm during winter solstice. The approved ASB partially overshadows the western face of the Children's Hospital from 2 pm – 4 pm. The proposed IASB addition will cause little to no additional impact to the Children's Hospital.

Table 7-2 below summarises the respective contribution of overshadowing impacts on the Sydney Children's Hospital from existing buildings, the approved ASB and the proposed development.

Table 7-2 Summary of overshadowing impacts on the Sydney Children's Hospital

Time	Approved/Existing Developments	After proposed IASB Addition
8am	No solar access	No solar access
9am	No solar access	No solar access
10am	No solar access	No solar access
11am	No solar access	No solar access
12pm	Full solar access	Full solar access
1pm	Full solar access	90% solar access **10% shadowed by the proposed IASB Addition**
2pm	70% solar access 30% shadowed by the approved ASB	65% solar access 30% shadowed by the approved ASB **5% shadowed by the proposed IASB Addition**
3pm	45% solar access 55% shadowed by the approved ASB	45% solar access 55% shadowed by the approved ASB
4pm	No solar access	No solar access
Total hours of solar access	2 hours of full solar access 2 hours of partial solar access	2 hours of full solar access 2 hours of partial solar access

Figure 7-5 and Figure 7-6 have been extracted from Appendix D to visually depict the proposed IASB Addition's impact on solar access to the western face of Sydney Children's Hospital.

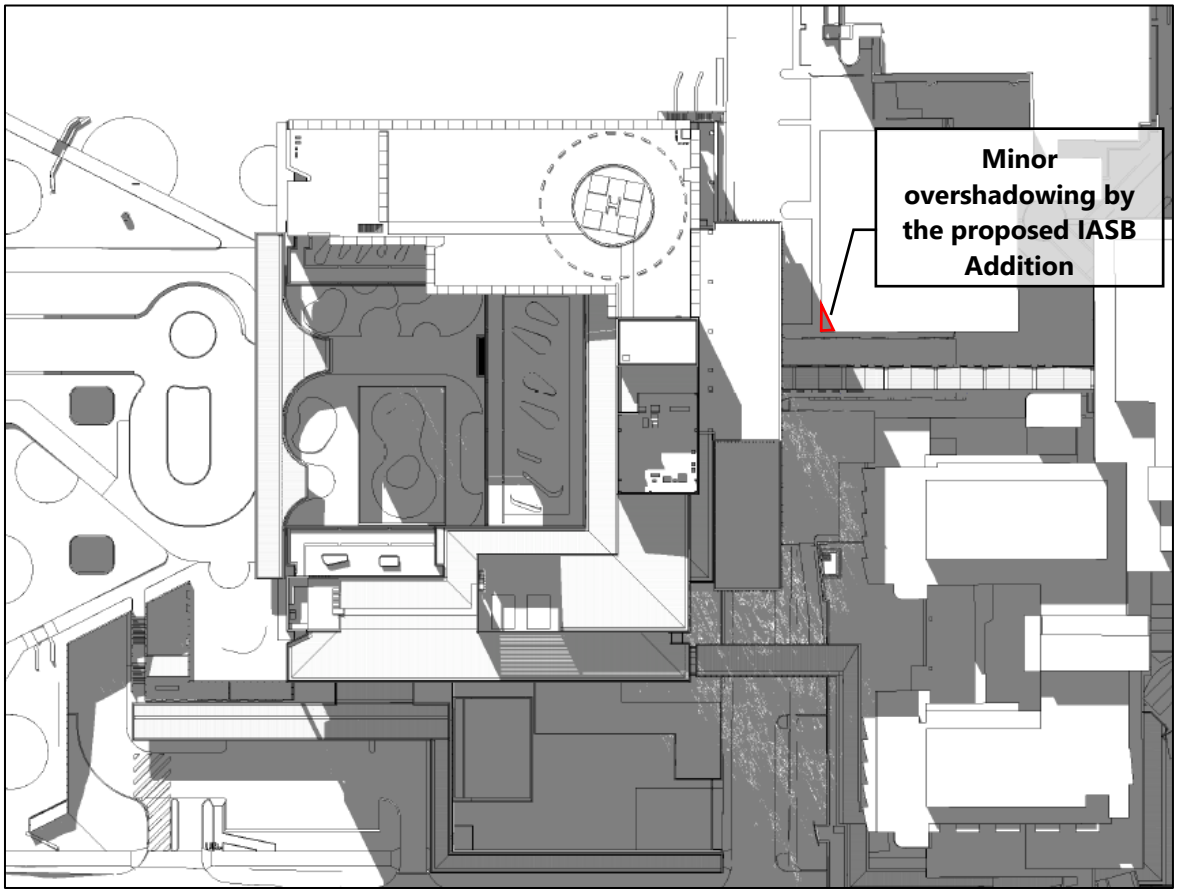


Figure 7-5 Proposed IASB overshadowing impact (in red) at 1:00 pm 21 June.

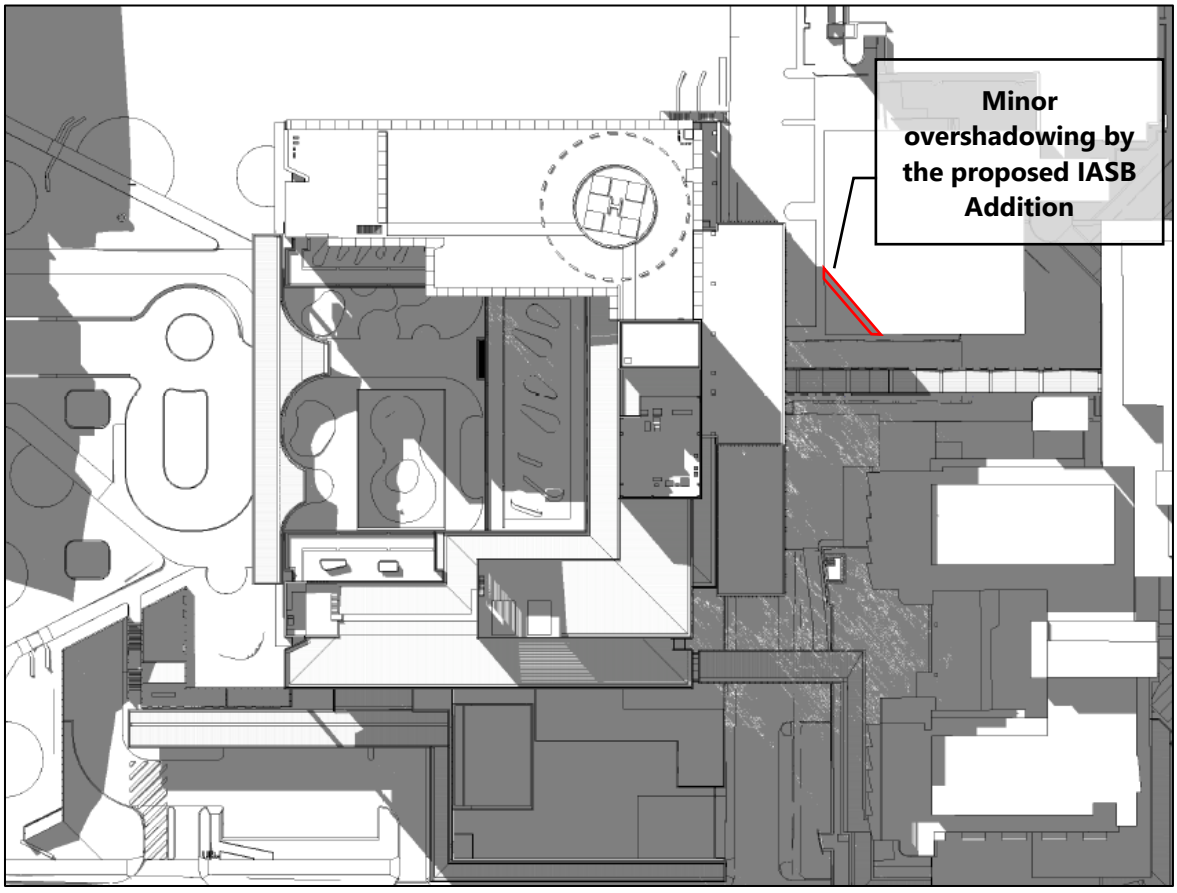


Figure 7-6 Proposed IASB Addition overshadowing impact (in red) at 2:00 pm 21 June.

Summary

The proposed IASB Addition reduces solar access to 9 Magill St by 30 minutes during the winter solstice, resulting in the property receiving a total of 3.3 hours sunlight during the day. It is therefore considered that these minor impacts are acceptable and maintain an acceptable level of environmental amenity for neighbouring dwellings.

The proposed IASB Addition causes little to no additional shadowing impact to the Children's Hospital.

Visual Privacy

The proposed development is part of the first phase of the proposed significant changes in the visual landscape of the site, its context and setting – as the site transitions from residential to hospital uses. It is noted that this change is not dissimilar to and echoes that which has occurred in the recent development in the UNSW Kensington Campus to the immediate west. In this regard, for the purposes of this assessment, impacts on visual privacy are considered on a two phased basis: Construction and Operation.

The IASB Addition adopts a consistent façade type across all three elevations (i.e. north, east and south), in keeping with the established façade typology of the approved ASB – as a series of

interconnected vertical solid elements. The separation of each level also ensures maximum flexibility for window placement to limit potential over-gazing. Privacy film treatment will be provided to the windows on the eastern façade (BVN, 2019). The building envelope on the upper levels (Levels 06 – 09, inclusive) are set back from the south by an additional 24 m to maximise solar access and minimise potential over-gazing.

Visual Amenity

Visual amenity will be maintained to occupiers of surrounding land uses, and environmental amenity will be realised, through the incorporation of design excellence in all phases of development based on the design principles discussed in Section 7.2. .

View Analysis and Loss

Consistent with the approved ASB design, the visual landscape will change from one of "low density" to "health services". Presently, construction site works are contained within the site. Once the IASB Addition is operational and the proposed development has been built, the built form would be considered consistent with the adjoining RHC as well as that in the immediately adjoining UNSW Kensington Campus to the west.

Further, as discussed in Section 7.2, the IASB Addition adopts a consistent façade type across all three elevations (i.e. north, east and south), in keeping with the established façade typology of the approved ASB – as a series of interconnected vertical solid elements – to minimise any visual impacts.

Acoustic Impacts

The acoustics component of the Noise and Vibration Impact Assessment prepared by Acoustic Studio (2019) considers noise impacts for community and land uses surrounding the site, and existing infrastructure within the RHC and UNSW. Acoustic impacts during the construction and operational phases of the development are detailed in Section 7.9 Noise and Vibration (SEAR 10) and Appendix G.

Wind Impacts

A qualitative wind engineering assessment was prepared by Arup (2019) which is provided in Appendix H. The assessment has provided qualitative advice on aspects of the IASB Addition's design related to wind engineering. It has included pedestrian wind comfort, façade and structural loading and exhaust dispersion.

Arup (2019) concluded that all locations within the proposed development would meet the pedestrian safety criterion. From a wind comfort perspective, some locations are expected to experience elevated wind speeds in comparison to the approach flow. However, comfort levels are considered suitable for the intended application and use of the space and deemed suitable for pedestrian walking.

Lighting Strategy

A detailed lighting strategy has not been developed at this stage. However, the applicant will consider the implementation of mitigation measures (such as glazing, sensor lighting) as part of the design development process to minimise impacts.

As part of the sustainable design and maintenance of good environmental amenity, the use of efficient lighting fixtures will be utilised for the IASB Addition. Further, the final fit-out may consider the use of sensor-activated lighting and the use of time-activated black-out blinds to mitigate potential light spill to sensitive adjacent areas.

Nature and Extent of the Intensification of Use

The intended uses of the spaces located in the approved ASB are to integrate the academic pursuits of education and research into clinical care. The specific spaces relate to clinical research and innovation as part of the proposed development which would aid in the integration and collocation of these spaces for researchers to effectively and efficiently develop and evaluate new models of care and treatment for clinical services. It is anticipated that there will be no net increase in the number of UNSW staff and students accessing the IASB Addition from UNSW Medicine and existing staff from the RHC.

7.3.2 Recommended Mitigation Measures

Privacy film treatment will be provided to the windows on the eastern façade.

All external lighting on the site to be implemented as part of the operation of the development is to have regard to the location of nearby residential dwellings. Lighting impacts are to be minimised so as to comply with *AS 4282:1997 – Control of the Obtrusive Effects of Outdoor Lighting* and relevant Australia Standards in the series *AS/NZ 1158 – Lighting for Roads and Public Spaces*.

Acoustic mitigation measures are detailed in Section 7.9 Noise and Vibration (SEAR 10).

7.4 Staging (SEAR 5)

7.4.1 Assessment

The CMP, prepared by Lendlease (Appendix F), provides details of the construction staging sequences and program for the proposed development. Lendlease has documented a draft set of staging plans covering the works phases that will provide the foundation for a full set of staging control plans that are to be developed in conjunction with detailed design development during the Planning Phase. HI, SESLHD and Precinct partners will be consulted during this process. Notwithstanding, the staging plans will be developed to include:

- All site establishment items.
- Any changed or modified egress paths.
- Pedestrian and vehicle circulation route changes.

- Temporary signage requirements.
- Upcoming changes to work areas, including approximated program dates.

This approach to the staging of construction is considered appropriate for the nature of the construction program that is to occur within a live hospital environment and in the vicinity of other sensitive land uses.

7.4.2 Recommended Mitigation Measures

No further mitigation measures are recommended.

7.5 Transport and Accessibility (SEAR 6)

7.5.1 Assessment

A Transport Assessment has been prepared by Arup and is included at Appendix I. It provides an assessment and high-level review of potential construction and operational traffic impacts. A Green Travel Plan for the RHC has been provided in Appendix EE. Lastly, a covering letter detailing anticipated staff and student movements to the IASB Addition has been provided by UNSW and is included at Appendix DD.

Existing Transport Context

Arup (2019) reviewed existing transport conditions by investigating current travel behaviours, relative to mode of travel, for staff, visitors and patients. Further, preference surveys were analysed to understand the travel behaviours of staff and visitors. It was ascertained that over 40% of staff live within 5 km of the RHC and 12% reside within the suburb of Randwick. The majority of those accessing the RHC utilise private vehicles as the primary mode of transport. However, it was noted that the level of use of public transport by staff is relatively high compared to other hospitals.

The RHC is bound by Avoca Street to the east, a State-owned arterial road. Barker Street is a collector road and sits to the south of the RHC, linking the main HAC owned hospital access roads on the west boundary (Hospital Road [private service road owned by HAC] and Easy Street) to the arterial road network. High Street plays a similar role and is located at the northern boundary of the RHC.

Arup found that most intersections are currently performing within practical capacity. However, the major intersections along Avoca Street (mainly Barker Street and Alison Road) are operating at capacity during peak periods.

Approximately 2,300 on-RHC car parking bays are available to staff and public. Parking demands peak during the middle of the day (11 am – 2 pm). However, outside this period, sufficient parking spaces are available.

Randwick is a district hub for buses to service Sydney's eastern suburbs. A number of bus routes frequent(s) the area. The majority of these buses provide all-day services to the CBD. Some buses also provide access to surrounding areas, including Green Square, Mascot, Bondi Junction and

Maroubra Junction. The enhancement of bus services is anticipated with the opening of the CSELR in late 2019.

Walking and cycling, as modes of active transport, currently accounts for approximately 17% of staff travel modes to and from the RHC. The review found there is potential for an increase in modal shift towards walking and cycling trips owing to the large proportion of staff living locally, which is further facilitated by the sustainable travel initiatives proposed by the Green Travel Plan, including provision of bicycle parking and end-of-trip facilities.

Other approved developments proposed within the vicinity of the site would increase traffic volumes along Botany Street and throughout Randwick, in general, with the key development being the Newmarket Green Development on Barker Street which is currently under construction.

Proposed IASB Addition Access

The IASB Addition works will utilise airspace over Hospital Road. To facilitate the proposed development, in ground engineering services would be required to be diverted and a section of Hospital Road will need to be subsequently lowered, as shown in Figure 7-7.

The proposed access to the IASB Addition encompasses the following areas:

- Provision of parking for the collocated resources to the IASB Addition who currently drive will continue to be accommodated at UNSW Kensington Campus, noting that the resources are currently working at UNSW Kensington Campus or the existing RHC. This will result in no new traffic generation by the resources. Students would access the IASB Addition in line with the current UNSW Sydney transport policy for students.
- As part of the approved SSD 9113, the provision of bicycle parking and end-of-trip facilities is proposed for the RHC.
- As an integrated facility, vehicle access concerning drop-off and pick-up for the IASB Addition will occur via the Botany Street ASB porte-cochere, which will connect to Botany Street as a new traffic signal intersection.
- For pedestrians circulating through the IASB Addition and UNSW Kensington Campus, the existing pedestrian crossings are to be utilised at traffic lights. Pedestrian connection to the existing RHC will be facilitated to include two new link bridges over Hospital Road as part of the approved SSD 9113.

The covering letter prepared by UNSW (2019) is included in Appendix DD and provides that the IASB Addition is not intended to permanently accommodate staff, rather, to allow staff and students to rotate through the spaces as required. It is anticipated that staff and students would move into the IASB Addition for a period of time to facilitate their research on specific projects which vary in length and can be as little as half a day or several months on larger projects. Lastly, there will be no net increase in the number of UNSW staff and students accessing the IASB Addition from UNSW Kensington Campus and existing staff from the RHC.

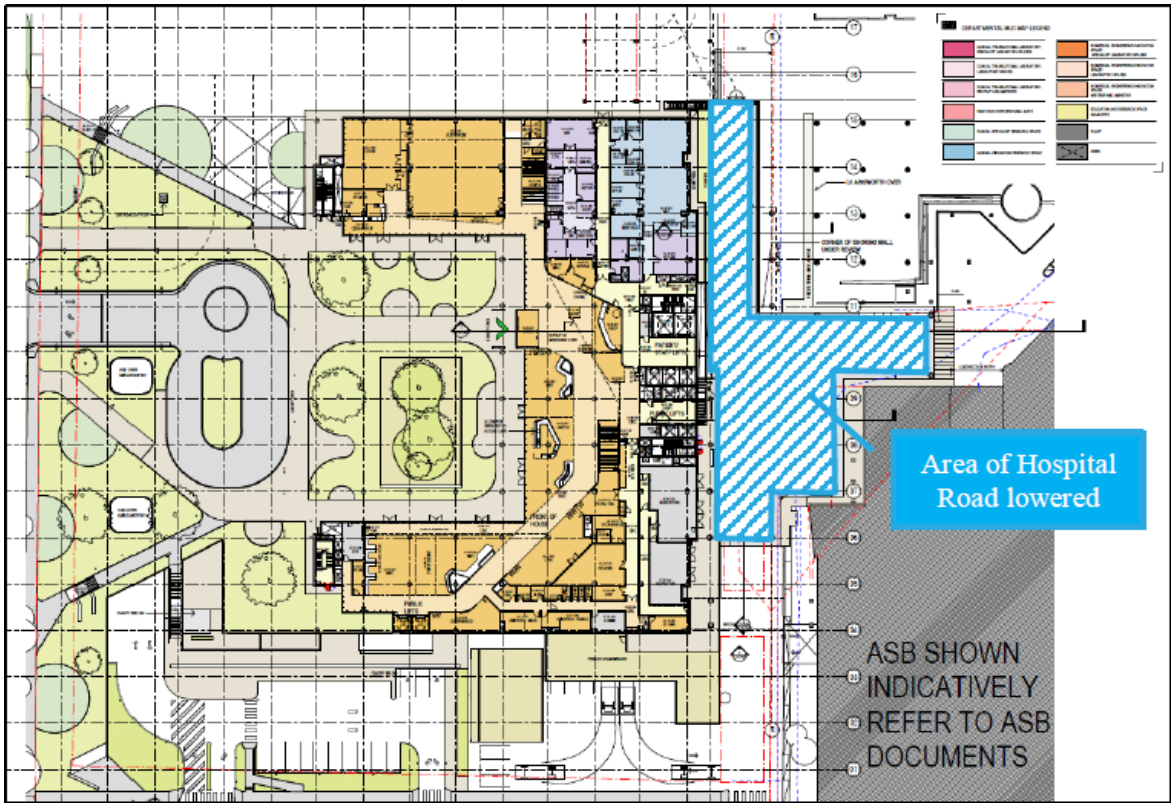


Figure 7-7 IASB Addition showing lowering of Hospital Road works (Source: Arup, 2019).

Transport Strategy

A transport strategy was prepared for the ASB as part of the Transport Assessment prepared by Arup, dated 13 July 2018, for the ASB as per the approved SSD 9113. The same strategy applies for the IASB Addition.

The SESLHD will implement and monitor the RHC Green Travel Plan which provides the strategies for travel demand management for the RHC. The growth in public transport is to be leveraged via the significant NSW Government investment in the new, integrated bus and CSELR network services and enhancements, further complemented via RHC initiatives to better effectively utilise existing car parking assets and promote staff carpooling, walking and cycling modes of transport.

Lowering of Hospital Road

Hospital Road is a privately-owned Health asset which provides a north-south service road connection between High Street and Barker Street. In addition, it serves a number of operational functions and access points for essential services such as:

- Main loading dock access to service RHC logistics.
- Car park access to two (2) levels of the main RHC car park which operates during the hours of 6 am – 6 pm.
- A number of health facilities that have limited car parks along Hospital Road.

Lendlease has developed a strategy to undertake the works in three (3) stages to maintain traffic access to the RHC loading docks (via Delivery Drive). They are as follows:

- Stage 1 – the northern side of Hospital Road will be occupied by a large 30 tonne (t) excavator which would be used to dig down and install the new sewer and stormwater pipe (using a shoring box) down to the middle of Delivery Drive.
- Stage 2 – take possession of the southern portion of Delivery Drive and Hospital Road and complete the road lowering. During Stage 2, logistics vehicles are to access the RHC docks via High Street and all traffic will access the car park via Barker Street.
- Stage 3 – take possession of the northern portion of Delivery Drive and Hospital Road and complete the road lowering. During Stage 3, logistics vehicles are to access the RHC docks via Hospital Road from the south and all traffic will access the car park via Barker Street.

An automatic traffic light system is proposed to be installed to allow the two-way truck movements along the single lane dock entry during construction.

Closure of Hospital Road

The Precinct Masterplan involves the closure of the private road (Hospital Road) and the absorption of the use of the land into the IASB Addition. This consequently involves the fundamental overhaul on the efficient and effective management of traffic in the locality. A key consideration in realising the objectives is to maintain accessibility for operational functions and essential services offered by the Precinct.

Hence, the two outcomes are as follows:

- Redirection of traffic exiting the RHC car park and RHC docks to Botany, Barker and Avoca Streets and the impact this has on intersection operations. It is noted that the Barker Street / Hospital Road intersection is already limited by its operation.
- The flexibility for route choices is limited by the only single access provided from the southern end of Hospital Road.

A number of measures were considered to reduce the impact of traffic redirected southwards during the critical periods, which have been summarised below (Arup, 2019):

<u>Closure of the loading dock during peak periods</u>

Generally, the loading dock operates between 6 am and 3 pm, 7 days a week with reduced frequencies on the weekend. Recent logistics traffic counts indicate that traffic flow is spread over these hours of operation with the busiest period being between 10 am and 12 pm. During peak road traffic periods, the loading dock traffic represented only 7 vehicle movements to Hospital Road north in the morning peak hour and 3 vehicle movements in the afternoon peak hour. However, the closure of the loading dock for any period can have a crucial impact on the delivery of critical items for necessary hospital operations. Hence, Arup did not consider the complete closure of the loading docks to be feasible.

Alternative redirection route on internal hospital roads

A disadvantage of this route is that it directs traffic towards the east when the majority of traffic exiting Hospital Road mainly travels west. Hence, Arup considered this route as being unlikely to be attractive to drivers and is further problematic as it takes additional traffic along narrow, internal roads, thus introducing safety considerations for both pedestrians and emergency vehicle access. Arup concluded this route as not being suitable for large trucks and, hence, did not consider this measure to be feasible.

Closure of the car park exits onto Hospital Road

The primary traffic generator on Hospital Road is the car park, which provides access to Basement Levels 2 and 3. Currently, these access points are closed between 6 pm and 6 am. Consideration has been given to the closure of the car park access earlier to reduce the impact on the afternoon peak. This traffic would be required to be redirected to use Easy Street access point to Barker Street. The redistributed traffic was tested at the Barker / Easy Street roundabout and was found to be causing a deterioration in the operation of the road network. Additional queuing of vehicles could also be expected at the existing entry and exit control gates at Easy Street during the afternoon peak period. Hence, Arup did not find this measure to be feasible.

Allow right turn movement from Hospital Road to Barker Street

Allowing traffic to turn right from Hospital Road into Barker Street would contribute to increased delays for exiting traffic due to the limited gaps in the Barker Street traffic flow during peak periods. Under this measure, there is minimal improvement to network performance and an increased delay for exiting traffic. Hence, Arup did not consider this measure to be feasible.

Opening of Magill Street

It is noted that Condition A15 of SSD 9113 was imposed to restrict the opening of the eastern end of Magill Street, except to allow emergency ambulance access in cases where access via Botany Street is not available.

Based on the traffic analysis, the application proposes the opening of Magill Street as none of the abovementioned measures that were investigated were deemed to be appropriate as they provide no material improvement to the network performance (Arup, 2019). A summary of the analyses is as follows:

- The Magill, Botany and Barker Streets intersections would continue to operate at a similar level to existing operation. On this note, Arup concluded that the opening of Magill Street would provide a reasonable and practical alternative for traffic access to Hospital Road.
- No additional parking demands are forecast as the IASB Addition staff already working on the UNSW Kensington Campus (and those that drive) will retain their current parking arrangements at UNSW Kensington Campus.
- With the development of the ASB, the function of Magill Street will change as new access points are provided for ambulance set-down areas and emergency department drop-offs as per the approved arrangement (SSD 9113). The forecast daily traffic volumes along Magill

Street is in the order of 2,500 vehicles per day and is anticipated to be less than the 3,000 vehicles per day local street threshold.

- The major use associated with Magill Street is from the car park access points which are closed between 6 pm and 6 am.
- The installation of a boom-gate is proposed at the end of Magill Street to close access to Hospital Road between 10 pm and 7 am. Signposts will be provided at the entry to Magill Street from Botany Street.
- Between the hours of 6 pm and 7 am, the anticipated traffic flow on Magill Street is 335 vehicles over this 13-hour night-time period. This represents 13% of the total daily two-way traffic flow.

In relation to the proposed opening of Magill Street to address the impacts of the proposed lowering of the privately-owned Hospital Road, justification for this measure is for the following reasons on planning merit grounds:

- The opening will contribute to an improvement in vehicular traffic network flow and its operation will be managed with the use of signage and a boom-gate (which will operate during specific hours) to minimise any amenity impacts to residents in Magill Street.
- Analysis of forecast daily traffic volumes along Magill Street is below local street threshold, thus has the capacity to accommodate the forecasted traffic flows.
- North-south connection will be maintained through the Campus and is underpinned by the Precinct Masterplan's objectives.

Hence, it is considered that the opening of Magill Street is a reasonable measure which will not result in any adverse impacts.

Summary

It is considered that the potential transport impacts have been appropriately identified, having regard to the location and nature of the proposed development. To alleviate the impact of the lowering of Hospital Road, a number of options were considered to reduce the impact of traffic redirected southwards during the critical periods. Reasonable and feasible mitigation measures are proposed to address the identified key impact of the proposed development being the lowering of Hospital Road. On a planning merit basis, the solution to open Magill Street is strongly supported.

7.5.2 Recommended Mitigation Measures

Prior to the commencement of construction, a CPTMP is to be prepared by the Contractor in consultation with the TfNSW Sydney Coordination Office and submitted for approval by the Council and HI.

An automatic traffic light system will be installed to allow two-way truck movements along the single lane dock entry roadway during construction.

A boom-gate is proposed to be installed at the intersection of Magill Street and Hospital Road and be in operation between 10 pm and 7 am in order to help mitigate potential noise impacts during the night-time, particularly from Magill Street through-traffic and traffic accessing the car park via Magill Street.

As cars depart the ASB drop-off to proceed to park, drivers will be advised via signage that access to the car park after 6 pm is via Barker Street and Easy Street.

Staff accessing the car park will be aware of the 10 pm to 7 am closure of the boom-gate at the intersection of Magill Street and Hospital Road and proceed as usual via Barker Street.

7.6 Ecologically Sustainable Development (SEAR 7)

7.6.1 Assessment

EP&A Regulation ESD principles

Consideration of the relevant principles of ESD from the EP&A Regulation in regard to the design and ongoing operation of the proposed development is described in Table 7-3 below.

Table 7-3 ESD principles as defined in Clause 7(4) of Schedule 2 of the EP&A Regulation

ESD principle	Comment
Precautionary principle The precautionary principle, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by: (i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and (ii) an assessment of the risk-weighted consequences of various options.	Technical specialists were engaged to carry out assessment of the likely environmental impacts caused by the proposed development. These technical reports cover a spectrum of fields including biodiversity, hydrology, environmental amenity etc. This EIS has been prepared to show that all the identified likely environmental impacts will be managed by appropriate and adequate mitigation measures.
Inter-generational equity Inter-generational equity, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.	The proposed development will contribute to the inter-generational equity by implementing several ESD strategies to ensure it improves the social, economic and environmental wellbeing of the surrounding area. Its contribution to the establishment of the Randwick Health and Education Precinct will also improve the health and social incomes of the wider state.
Conservation of biological diversity and ecological integrity Conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration.	Refer to Section 7.12.

Sustainability Framework

A Sustainability Report was prepared by LCI (2019) (Appendix J) which describes the sustainability initiatives and the key design principles of the proposed development to be followed throughout design development, construction and operation. The report outlines the NSW Health Engineering Services Guidelines to provide a framework for embedding sustainability building practices into the design of the proposed development.

Below is an extract from the Sustainability Report (2019), discussing the guiding framework:

Key Design Criteria

This sustainability report addresses the requirements of the NSW Health engineering services guidelines.

- *Sustainable Energy Hierarchy (Figure 7-8)*
  - *Sustainable initiatives and systems are analysed using the NSW Health Engineering Services Guideline's energy hierarchy as shown below.*

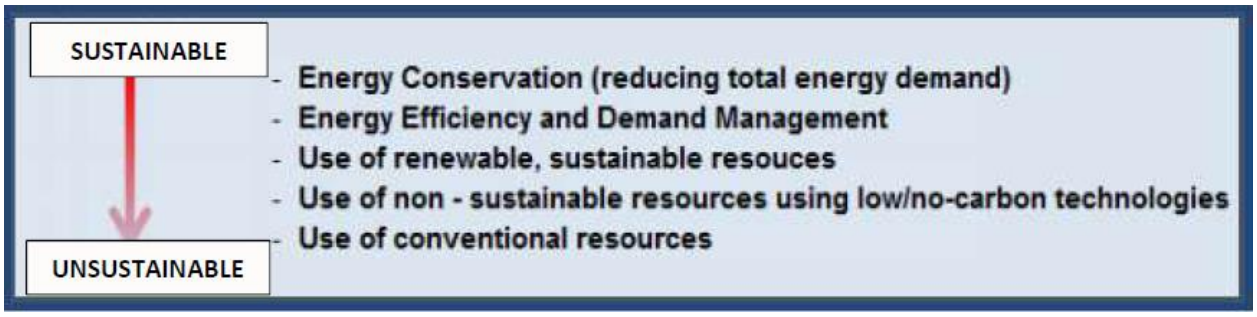


Figure 7-8 NSW Health Energy Hierarchy

UNSW have their own sustainability guidelines, however, as the IASB Addition is a small part of the overall ASB, the NSW Health Initiatives will be adopted.

- *Sustainability, Lifecycle and Waste Management*
  - *Proposed designs will include passive sustainable design strategies such as daylighting, demand management, gravity systems, energy and water efficiency and conservation techniques, use of non-toxic and environmentally sound material and finishes, and consider lifecycle sustainability and maintenance implications.*
- *Materials*
  - *Consideration to be given to materials of low embodied energy content, high recycled content and/or highly recyclable.*

Sustainability and Energy Targets

The NSW Health engineering services guidelines state the following with respect to sustainability and energy targets.

- *Green Star*
  - *All new facilities will target a Green Star Health Care 4-star equivalency rating. The IASB Addition is to comply with the relevant SSD Condition.*
- *Energy Targets*
  - *All new standalone buildings will have a mandatory requirement of delivering a 10% improvement on National Construction Code (NCC) Section J energy use.*

Building Importance Level

The ASB is classified as an Importance level four (IL4) (Buildings or structures that are essential to post-disaster recovery or associated with hazardous facilities) under BCA and AS1170 (structural design actions).

The proposed sustainability framework is appropriate having regard to the scale of the development and its physical integration with the approved ASB.

Building Performance and Green Star Rating

The proposed development will be assessed for NCC Section J compliance as part of the approved ASB base build. The Section J requirements for the approved ASB are described in Appendix J of the ASB EIS. A condition to obtain a minimum 4-star Green Star "As Built" rating or equivalent has been required from the approved ASB in its Development Consent. The proposed IASB Addition will align its approach to sustainability with the approved ASB and adhere to the 4-star Green Star requirement. This is not a formal rating and therefore no documentation or certification is required. The following general sustainability principles have been used to guide the design process:

Management and Operations:

- Recognised building commissioning and tuning process.
- Provision of building information to facilitate understanding of the building's systems, operation and maintenance requirements.
- Use of best practice environmental management procedures during construction.
- Provision of recycling facilities for operational waste.

Energy:

- Optimised building orientation.
- Good quality building envelope.
- Efficient heating, ventilation and air conditioning (HVAC) components.
- Use of efficient lighting fixtures.

Indoor Environment Quality:

- Use of materials with low or no volatile organic content (VOC) and formaldehyde.
- Mitigation of outdoor and indoor pollutants.

- Provision of appropriate and comfortable acoustic conditions for staff and patients.
- Use of refrigerants with low environmental impact.

Sustainability initiatives and design improvements have been developed in response to these sustainability principles (refer to Section 7.1 and Section 9 of Appendix J).

Climate Change

Sustainability design initiatives have been embedded into the design of the proposed development, as part of achieving the 4 Star Green rating benchmark, to address CSIRO's projected climate change impacts. These design initiatives include, but are not limited to, the following (refer to Section 9 of Appendix J for a comprehensive list):

- Electrical Services
    - Energy meters are to be linked to the Building Management System (BMS) for continual monitoring of monthly energy consumption within the building to help optimise energy performance.
    - The project will target a 10% improvement on NCC Section J minimum performance requirements for the lighting power density.
- Mechanical Services
    - Passive conditioning techniques where applicable, to reduce overall air-conditioning loads.
    - Building thermal mass and insulation combinations, avoiding thermal bridging.
- Hydraulic Services
    - Water efficient fixtures and fittings.
    - Water metering to be connected to the BMS to optimise water usage.
    - Water sensitive urban design.
- Structural
    - Designed for adaptability – adopting a higher loading allowance to avoid the need to strengthen or demolish later; adopting a sacrificial topping zone for provision of future set-downs for wet zones; adopt non-loadbearing walls as partitions which allows them to be moved around in future.

7.6.2 Recommended Mitigation Measures

- ESD principles and initiatives are embedded throughout the IASB Addition's design, construction and operational phases. Consequently, the proposed development will be adhering to industry best practice and standards to maximise sustainability performance.
- The IASB Addition achieve a 4-Star equivalent Green Star rating in accordance with the NSW Health engineering services guidelines.

7.7 Heritage (SEAR 8)

7.7.1 Assessment

A Statement of Heritage Impact (SoHI) has been prepared by Advisian (2019) (Appendix M) in response to dot point 1 of SEAR 8 above. The SoHI identified any heritage item(s) and heritage conservation area(s) (HCAs) located within the site, the RHC or within the vicinity of the site. It graded the significance of elements within the site and adjacent areas and identified and assessed the impacts, if any, of the proposed development on the conservation values that may constitute the heritage significance of any identified heritage item(s) and HCAs.

The SoHI concluded that:

- There are no heritage items or heritage conservation areas within the site.
- The proposed development will not impact on the conservation values of the heritage items and heritage conservation areas located "within the vicinity" of the site.

Accordingly, on the basis of the above, no further assessment or mitigation measures are considered to be required.

A Historical Archaeology Assessment has been prepared by Casey and Lowe (2019) (Appendix N) in response to dot point 2 of SEAR 8 above. The assessment has identified the potential for historical archaeological remains to exist within the SSDA boundary, the archaeological significance of any remains and recommendations.

The results of the assessment are summarised as follows and are depicted in the mapping of archaeological potential in Figure 7-9:

- Part of the site (west of Hospital Road) has been subject to previous archaeological excavation, demolition works and bulk excavation as part of Stage 1 of the Project in 2018-2019. There is Nil potential for archaeological remains within this area of the site.
- Much of the remaining site is expected to have been impacted by construction works associated with roadworks, services and the expansion of the Prince of Wales Hospital site in the late 20th century (1970s and 1990s).
- There is Nil to Low potential for in situ archaeological remains within the site associated with the Randwick Destitute Children's Asylum (1855-1915) and Military and Repatriation Hospital (1915-1953) phases.
- There is a Low potential for rubbish deposits from the Military and Repatriation Hospital used to backfill the WWII slit trenches.
- There is a Low to Moderate potential for remains of the WWII slit trenches only.

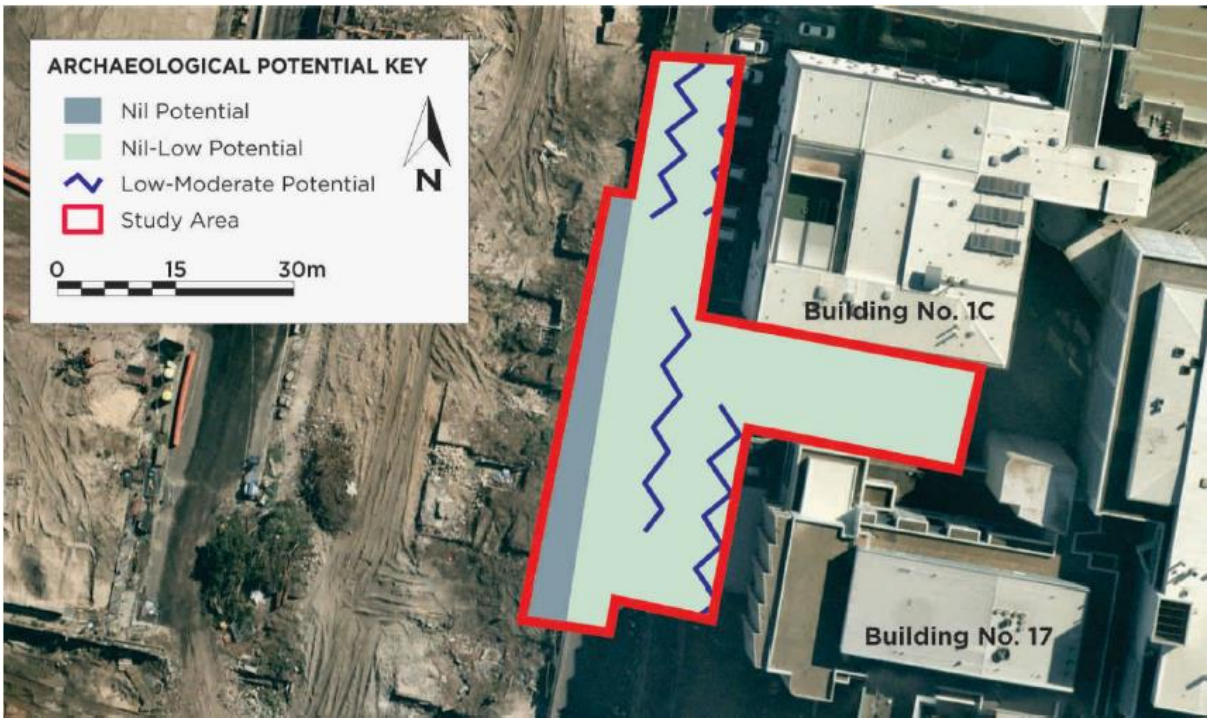


Figure 7-9 Map of archaeological potential within the SSDA boundary (Source: Casey and Lowe, 2019).

The assessed significance of the archaeological potential is described below:

- The predicted ephemeral nature of archaeological evidence associated with either the Randwick Destitute Children's Asylum (1855-1915) and the later Military and Repatriation Hospital (1915-1953) phases within the site means that they are unlikely to make any contribution and increased understanding of the site's research values.
- Any archaeological deposits (fill) associated with the later backfilling of the WWII slit trenches may provide the opportunity to answer a range of research questions associated with early 20th-century institutions and have the potential to be of local significance.
- Remains of the WWII slit trenches may have local heritage significance through their historical associations with Sydney's civil defence throughout war time. Substantial archaeological remains of the trenches may have significance to local community groups interested in the history and development of the area and hospital, and the military history of Sydney. These remains have limited archaeological research potential.

The proposed development involves ground intrusive works which would disturb any potential sub-surface archaeological remains as identified above.

7.7.2 Recommended Mitigation Measures

- Based on the limited potential for archaeological remains, no archaeological testing is seen as being necessary but archaeological monitoring is to be undertaken. When the construction works are within the vicinity of the WWII slit trenches, the site is to be subject

to archaeological monitoring by a suitably qualified archaeologist. If remains of the WWII slit trenches are observed during the monitoring program, archaeological recording is to entail, as outlined below:

  - A 10 m test trench, covering the width of a zig zag slit trench (to be determined upon excavation) and to depth of the archaeological deposit, should be exposed under archaeological supervision.
  - Where fill contains artefacts associated with the Asylum and Military Hospital, the archaeologist will recover a representative sample and record the construction material of the exposed trench.

- An Unexpected Finds Procedure be prepared to manage any relics found during works to manage relics not identified and considered in the assessment.

- The Heritage Council of NSW must be notified when relics are discovered. Additional assessment and approval may be required prior to work continuing in the affected area(s) based on the nature of the discovery.

7.8 Aboriginal Heritage (SEAR 9)

7.8.1 Assessment

An Aboriginal Heritage Assessment for the proposed development has been prepared by MDCA (2019) (Appendix O) which is contained in Appendix C to the Aboriginal Cultural Heritage Assessment Report (ACHAR) by MDCA, dated October 2018.

A summary of the findings of the assessment are provided below addressing the relevant components of the proposed development including where excavation is proposed.

Hospital Road

"The lowering of a section of Hospital Road and Delivery Drive will involve the removal of the upper layers of the sand dune. It is understood there are multiple existing underground services within the road. As such, the likelihood of buried undisturbed/intact cultural remains within these layers is assessed as low. Any remains as may be encountered could be recovered by the LPLALC.

It would be usual to undertake a preliminary Aboriginal heritage assessment, in the first instance. However, it could be argued that the existing Due Diligence for both the ASB and non-ASB lands, and the subsequent ACHAR accompanying an application for an AHIP developed for the non-ASB lands would also apply to the road in terms of archaeological potential and any required management options.

Refer:

- *Aboriginal Archaeological Assessment Stage 1 Development and Proposed Future Expansion of The Randwick Hospital Campus Randwick, NSW. Mary Dallas Consulting Archaeologists. 2018. Report to Advisian.*

- *Aboriginal Cultural Heritage Assessment Report. New Acute Services Building for The Prince of Wales Hospital, Randwick NSW. Mary Dallas Consulting Archaeologists. 2018 Report to NSW Health Infrastructure.*

Minimal management would include a provision for archaeological monitoring of civil excavations along the road as required. This would also involve the participation of the LPLALC. The likelihood of preserving any Aboriginal site as may be found in situ is also assessed as low. It has been found that the LPLALC prefer collection and, where possible, reconstruction for the purpose of community education and understanding. Their preferred treatment of human remains has been to salvage for reburial at their private repatriation grounds. I do not pre-empt the LPLALC management decisions and therefore recommend continued close consultation from the start of the project.

The OEH cannot issue an AHIP over the SSD lands as shown in the existing ASB project. It is recommended the principles and methods of investigation and community consultation as has taken place over the ASB lands to the west of Hospital Road continue and best practice maintained."

UNSW Kensington Campus Eastern Extension

"Apart from an area above [cantilevered] Hospital Road, the proposed extension includes an area within the existing ASB area. This area has been investigated through post demolition monitoring and archaeological test excavation by MDCA as part of archaeological works associated with the rear of demolished properties abutting Hospital Road. These investigations into this area of the ASB, have been sufficient to characterise the subsurface road deposits in terms of archaeological potential. The representatives of the LPLALC who participated in the investigations raised no concerns from a community cultural perspective."

In summary, the proposed development involves ground intrusive works which would disturb any potential Aboriginal objects that may exist at the site, as identified above.

A letter has been provided by the LPLALC (Appendix O1) indicating acceptance of the Aboriginal Heritage Assessment, as proposed by MDCA in Appendix O.

Ongoing consultation is being carried out by HI with the relevant members of the Aboriginal Community.

An Aboriginal Cultural Heritage Management Plan (ACHMP) will be prepared and submitted to DPIE in the response to submissions phase of the SSDA.

7.8.2 Recommended Mitigation Measures

Archaeological monitoring of civil excavations along Hospital Road and adjacent Delivery Drive, as recommended by MDCA, be undertaken in consultation with the LPLALC and as outlined in the ACHMP (to be prepared).

In the event of any materials of Aboriginal archaeological significance being discovered at the site, a minimum requirement to mitigate potential impacts is that **the following mitigation measures must be implemented**:

- If suspected Aboriginal material has been uncovered as a result of works within the site:

- Work in the surrounding area is to stop immediately.
- A temporary fence is to be erected around the site with a buffer zone of at least 10 metres around the known edge of the site. An appropriately qualified archaeological consultant is to be engaged to identify the material.
- If the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a manner as outlined in the Office of Environment and Heritage (OEH) guidelines: *Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010)*.

- Should human remains be located at any stage during works within the site, all works must halt in the immediate area to prevent any further impacts to the remains. The site is to be cordoned off and the remains themselves left untouched. The nearest police station, the LPLALC and the OEH are all to be notified as soon as possible.

7.9 Noise and Vibration (SEAR 10)

7.9.1 Assessment

A Noise and Vibration Impact Assessment (NVIA) has been prepared by Acoustic Studio (2019) for the proposed development. A copy of the NVIA is presented in Appendix G. It provides a quantitative assessment of potential construction and operational noise and vibration impacts to sensitive receivers in the vicinity of the proposed development as shown in Figure 7-10.

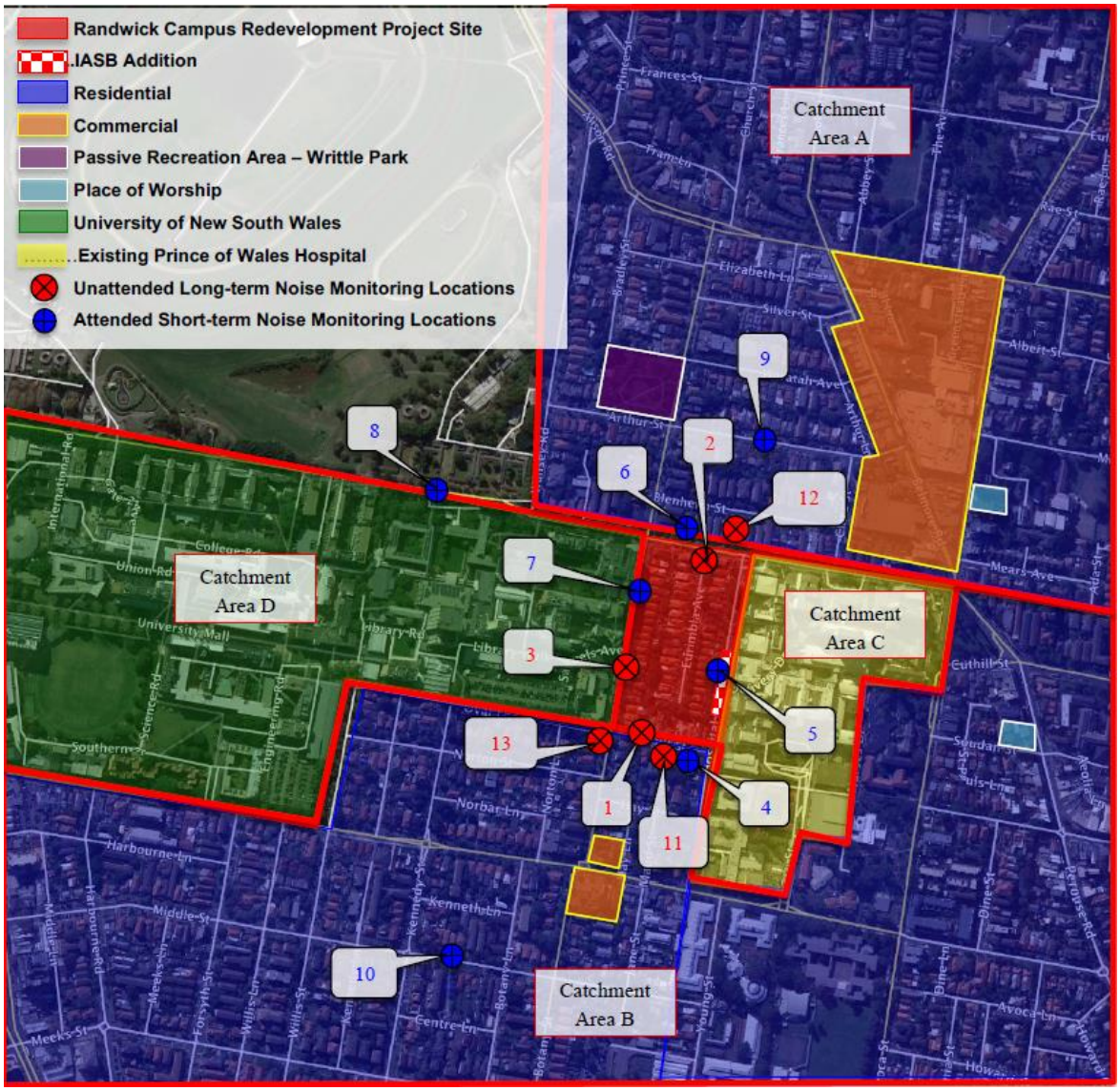


Figure 7-10 The site in relation to the location of noise-sensitive receivers. In addition to unattended long-term noise monitoring, attended short-term noise measurements were also carried out at Locations 1 to 3 (Source: Acoustic Studio, 2019).

A summary of the potential construction and operation impacts is provided below.

Potential Construction Impacts

The proposed development will contribute to an increase in noise and vibration impacts to the surrounding environment during the construction phase of the IASB Addition. Typically, this is resultant of intermittent noise generated from construction equipment and plant that are commonly used on construction sites (Acoustic Studio, 2019).

Noise

The following potential noise impacts have been noted for the construction stage of the proposed development (Acoustic Studio, 2019):

- Noise sensitive receivers at Residential Catchment B and the existing RHC buildings fronting Hospital Road (Catchment C) are the most sensitive receivers due to their proximity to the construction works. Existing buildings at UNSW Kensington Campus (Catchment D) and Residential Catchment A are also identified as sensitive receivers.
- At times, construction works are likely to exceed the stated criteria, particularly when works occur in the areas closest to the sensitive receivers. These exceedances vary depending on the nature of the activities taking place, the equipment being used plus the times and location of where the works are being carried out.
- During the recommended standard hours (refer to Section 7.18), noise level exceedances by up to 32 dB(A), and by up to 30 dB(A) when used outside these hours, are predicted for certain construction and excavation plant including excavators and the demo/circular saws. In these cases, noisy activities are to be rescheduled to less sensitive times to alleviate potential noise impacts.
- The predicted noise levels exceeding the relevant criteria is not considered unusual, given the nature of heavy plant and machinery (such as excavators) that is required to be used and the proximity to the receivers.
- Construction traffic noise levels along the roads surrounding the site will have no adverse impact on nearby receivers during all time periods.
- Noise impacts arising from the re-distribution of existing traffic, due to the closure of Hospital Road in both stages of construction, are considered to be insignificant.
- Notwithstanding, the management of timing of construction traffic movements are to be planned and managed wherever possible to: (a) avoid Magill Street and Hospital Road during early morning and out of standard hours; and (b) limit the frequency of construction vehicle movements to limit any increases in equivalent continuous traffic noise levels. Construction vehicle access is not proposed along Magill Street.
- During construction works, if an item of equipment is to exceed the stated airborne noise criteria at any sensitive location, the additional noise measures presented in Section 8.4.4 of the NVIA, together with construction best practices presented in Section 8.4.1 of the NVIA, are to be reviewed and implemented to minimise any noise impacts on the neighbourhood.
- A Construction Noise and Vibration Management Plan (CNVMP) is recommended to be prepared by the Contractor at the detailed design stage. The Contractor would be required to factor in the proposed plant, equipment and construction methodology in their CNVMP.

Vibration

The following potential vibration impacts have been noted for the construction stage of the proposed development (Acoustic Studio, 2019):

- Based on the scope of works and typical equipment required, some structural and human perception vibration impacts are expected – particularly from the use of piling rigs (during piling works) and excavators with hammers (during excavation and foundation works). Furthermore, there is potential for vibration impacts to occur on sensitive equipment within the existing RHC and UNSW Kensington Campus' buildings. The significance of these impacts is to be ascertained as part of the CNVMP.

- The CNVMP is to ensure that the equipment-specific vibration criteria are adhered to and managed accordingly at the both Catchment A and B residential receivers and the relevant UNSW Kensington Campus and RHC buildings where sensitive equipment is operated.

- The Contractor is to carry out a vibration assessment at the commencement of operations for each vibration-generating activity so as to determine whether the existence of significant vibration levels justifies a more detailed investigation. If the assessment indicates the vibration levels are to exceed the relevant criteria, then appropriate vibration mitigation measures will be required to ensure that vibration impacts are minimised using all reasonable and feasible measures and will allow for the planning of works around the use of sensitive equipment and operations within the buildings located in the RHC and UNSW Kensington Campus.

- A more detailed investigation would involve constraining activities which generate high vibration levels. Hence, a method of monitoring vibration levels could then be implemented. Vibration mitigation measures and the vibration criteria would then be needed to be reviewed.

- All practical means are to be exercised to minimise any impacts on the affected buildings and occupants resulting from activities generating significant levels of vibration on site.

Potential Operational Impacts

Once completed, the IASB Addition will operate 24 hours a day, seven days per week.

Traffic Noise Generation

No changes are proposed to the operation of the ambulance bay, loading dock / waste collection, ED drop-off area and emergency helicopters. Hence, general traffic noise impacts can be summarised as follows (Acoustic Studio, 2019):

- The car park exit at Hospital Road is presently closed between 6 pm to 6 am. A boom-gate is proposed to be installed at the intersection of Magill Street and Hospital Road and be in operation between 10 pm to 7 am in order to mitigate potential noise impacts during the night-time, particularly from Magill Street through-traffic and any traffic accessing the car park via Magill Street.

- Cars departing from the ASB drop-off that proceed to park will be advised via signage that access to the car park after 6 pm would be accessible via Barker Street and Easy Street.

- Staff proposing to access the car park will be made aware of the 10 pm to 7 am closure of the boom-gate at the intersection of Magill Street and Hospital Road and to proceed as usual via Barker Street.

- With the appropriate installation of road and site signage and given the distance between the respective ASB driveways and the Magill / Botany Street intersection, vehicle acceleration events affecting Magill Street are unlikely to increase significantly, relative to the current (pre-ASB) occurrences. Therefore, instances of vehicle accelerations events are anticipated to remain low and, in any case, the likelihood of vehicle acceleration events and associated noise impacts will be the same as the approved ASB.

  Hence, general traffic noise generated on surrounding roads as a result of the operations of the IASB Addition will be the same as the approved ASB during all time periods (day, evening and night).

Lastly, when compared to the approved ASB, traffic noise generation is summarised as follows (Acoustic Studio, 2019):

- No increase in traffic volumes are forecast during the day-time as a result of the IASB Addition. Consequently, traffic noise impacts at Magill Street residences during the day-time will be consistent with the approved ASB.

- No additional traffic increase is forecast during the night-time period (6 pm – 7 am) at Magill Street. Consequently, traffic noise impacts will be consistent with the approved ASB.

Mechanical Plant

- Recommendations have been made by Acoustic Studio (2019) for external noise controls for buildings services proposed for the IASB Addition including plant rooms, cooling towers, emergency generators and fans.

Summary

It is considered that the potential construction noise and vibration impacts have been appropriately identified having regard to the location and nature of the proposed development. Reasonable and feasible mitigation measures are proposed to address identified impacts including for works that are to occur outside of standard construction hours (refer to Section 7.18 for further assessment of this issue).

7.9.2 Recommended Mitigation Measures

A CNVMP is to be prepared by the Contractor at the detailed design stage based on the proposed plant, equipment and methodologies to be employed.

A boom-gate is proposed to be installed at the intersection of Magill Street and Hospital Road and be in operation between 10 pm and 7 am in order to help mitigate potential noise impacts during the night-time, particularly from Magill Street through-traffic and traffic accessing the car park via Magill Street.

As cars depart the ASB drop-off to proceed to park, drivers will be advised via signage that access to the car park after 6 pm is via Barker Street and Easy Street.

Staff accessing the car park will be aware of the 10 pm to 7 am closure of the boom-gate at the intersection of Magill Street and Hospital Road and proceed as usual via Barker Street.

7.10 Contamination (SEAR 11)

7.10.1 Assessment

A Detailed Site Investigation (DSI) was prepared by Douglas Partners (2019) and can be found in Appendix S. Advice from Douglas Partners in their letter of 20 August 2019 indicates that this DSI is applicable to the site as it includes three boreholes and one groundwater monitoring well within Hospital Road, in the vicinity of the proposed. Douglas Partners (2019) advise that:

- Testing on soil samples recovered from these bores did not identify any contaminants at concentrations exceeding the adopted health-based investigation and screening levels for a commercial / industrial form of land use, which is considered appropriate for the proposed land use scenario described above.
- It is likely that the footprint of the proposed development will have similar sub-surface conditions to that encountered in the three boreholes, as there is minimal encroachment into the existing Campus to the east of Hospital Road.
- Groundwater samples collected from the monitoring well within Hospital Road did not identify contaminants within groundwater that would preclude development at the site.

The Remediation Action Plan prepared by Douglas Partners has been amended to include the proposed development (refer Appendix S).

In summary, and having regard to the specialist advice of Douglas Partners, it can be concluded that:

- Remediation to be carried out following ground intrusive works at the site (including bulk excavation, piling, footings and landscaping) for the IASB Addition as part of the Project are considered ancillary to the ASB development in accordance with Clause 4.4.1 of the Managing Land Contamination Planning Guidelines and SEPP 55, and is not proposed to be carried out independently of that development. These works are therefore considered to be Category 2 works not needing consent.
- The site can be made suitable for the proposed development, subject to the implementation of the amended Remediation Action Plan, prepared by Douglas Partners (refer Appendix S).

7.10.2 Recommended Mitigation Measures

Remediation following ground intrusive works at the site is to be appropriately managed by adopting the procedures outlined in the amended Remediation Action Plan.

7.11 Contributions (SEAR 12)

7.11.1 Assessment

The Contribution Plan applicable to development of the site is the Randwick City s94A Development Contributions Plan (the Plan), effective since April 2015. The Plan allows for a waiver from contributions to be considered for a variety of public amenities and services. The proposed IASB Addition is considered exempt from the payment of a levy as a condition of development consent as a public hospital (Clause 13.2.1). It offers a public benefit by bringing together clinicians, researchers, educators and public health professionals to drive the rapid translation of research and innovation into clinical practice, expand excellence in health teaching and education opportunities, and improve the patient care experience at Randwick. Other recent projects by HI on the RHC were exempt from payment of contributions.

7.11.2 Recommended Mitigation Measures

No mitigation measures are required.

7.12 Biodiversity Assessment (SEAR 13)

7.12.1 Assessment

Ecology

A BDAR (Appendix K) was prepared by Narla Environmental, dated 17 June 2019, in accordance with the BC Act and the Biodiversity Assessment Method. The findings of the BDAR are summarised below which considers the modified nature of the site:

- The proposed development is expected to result in impacts to one (1) Plant Community Type (PCT), with the planned removal of 0.03ha of PCT *1775 - Smooth-barked Apple - Old-man Banksia - Red Bloodwood open forest on pleistocene sand dunes around Sydney and the Central Coast*. This plant community does not form part of a Threatened Ecological Community under the BC Act.
- Since the vegetation integrity score of the native vegetation proposed to be impacted is <17, no biodiversity offset credits will be required as a result of the proposed development.
- It is unlikely the proposed development will indirectly impact on adjacent fauna habitat or vegetation, considering the Subject Land and surrounded area is within a highly developed and modified landscape. Vegetation is only in the form of native and exotic garden beds.

Arboriculture

Further, an Arboricultural Impact Assessment (Appendix L) was also prepared by Eco Logical Australia. Ten (10) trees were assessed and are shown in Figure 7-11. All trees were assessed as being subject to a major encroachment (>20%) within the Tree Protection Zone (TPZ) as a result of the proposed development. These trees were assessed as being unable to be sustainably retained and demonstrate the following retention values:

- Four (4) trees with a low retention value; and
- Six (6) trees with a medium retention value.

Figure 7-11 Tree Impact Assessment Figure (Source: ELA, 2019)

7.12.2 Recommended Mitigation Measures

The following measures are to be implemented:

- Ensure all contractors employed to work within and around identified biodiversity values within the site are suitably qualified and experienced.
- Assign a Project Ecologist to be present during the clearing of all vegetation (both native and exotic) related to the proposed development to capture, treat and relocate any displaced fauna.
- Implement all relevant biological hygiene protocols and requirements as per NSW Government guidelines.
- All tree work is to be carried out by a suitably qualified arborist with a minimum AQF Level 3 qualification in Arboriculture.
- All tree work must be in accordance with the applicable *Australian Standard AS 4373-2007, Pruning of Amenity Trees* and the *NSW WorkCover Code of Practice for the Amenity Tree Industry* (1998).

7.13 Utilities (SEAR 14)

7.13.1 Assessment

In terms of infrastructure management, the EIS is informed by a Civil Report (Appendix P); a Utility Management Plan Electrical Services (UMPES) (Appendix T), an Integrated Water Management Plan (IWMP) (Appendix U1) and Sewer Diversion Plans (Appendix U2). These documents detail information on existing capacity and any augmentation and easement requirements for the provision of utilities including staging of infrastructure. It is noted that consultation with relevant authorities has been undertaken and will continue during the next phases of the development.

A summary of the proposed development's utility requirements is outlined below which confirms that the proposed development will be appropriately serviced to meet its functional requirements and be suitably integrated with the utilities of the approved ASB.

Civil Services

Section 7.14 contains details on proposed drainage infrastructure including details of any diversion works and the proposed drainage systems.

Electrical and Communications Services

The UMPES, prepared by Fredon Industries (2019), relates to electrical and communications infrastructure, a summary is provided below.

The provision of power supply is proposed to be sought from the ASB due to its proximity and the available capacity it can offer. The maximum demand for the proposed development is expected to be in the order of 100A three phase. The electrical installation is proposed to be fed from a new

switchboard rated as per the maximum demand assessment. The switchboard is proposed to be located within plant room 97.B2.013 on Level B2 and will supply a single, non-essential supply, connected off the unmetered section of the ASB's Main Switchboard: MSB-1. No essential (Generator Backup), nor critical (UPS backup) supply is proposed for the development.

Electricity consumption along Hospital Road will be metered via a private meter installed at Main Switchroom 1 in the ASB. Private power meters will be provided at the new switchboard for separate metering for lighting and general power leads.

Communications services will be provided via a single communications rack which will be installed at the Building Distributor Room (BDR), located on Level B2 at the ASB. Communications cables will also exit BDR-2 to the east and reach Hospital Road via a series of conduits installed between Levels B2 and B1.

Hydraulic Services

The IWMP, prepared by Central Plumbing Contracting (2019), addresses waste water and potable water systems for the proposed development. The plan includes a detailed assessment of the following scope:

- Sanitary and trade waste discharge.
- Roof water plumbing and drainage systems that connect to existing civil trunk stormwater.
- Domestic potable water supply systems.

The assessment of hydraulic services of the IWMP can be summarised as follows (Central Plumbing Contracting, 2019):

- Existing sewer and water mains infrastructure has been found to be in acceptable condition for connection, following consultation with the relevant utility supply agencies to verify the condition, capacity, compliance, reliability and efficiency.
- Sewer and trade waste water from the site are to discharge to Sydney Water's sewer main via a proposed internal 'house drainage' system in accordance with *AS.3500: 2015* and Sydney Water's requirements.
- Results of water pressure/flows were obtained from Sydney Water (refer Appendix A of the IWMP).
- Provision of water supply will be provided in accordance with Australian Drink Water Guidelines (2011, updated 2016, version 3.4).
- Rainwater from roof areas will be harvested, stored and re-used for landscape irrigation purposes.
- Roofwater will drain/discharge via a series of rainwater outlets and eaves gutters systems that are to be designed in accordance with *AS.3500: 2015*.

- ESD principles (as supplied in the IWMP) are to be incorporated into the designs and the construction of the proposed development.

7.13.2 Recommended Mitigation Measures

The IWMP highlights key ESD initiatives that are to be implemented into the design, including:

- Water metering.
- Increased thermal insulation thickness across all hot water piping/supplies.
- Recyclable materials selection.

The Civil Report identifies the following civil design elements that are to be considered and reviewed as the design progresses:

- The existing 750 mm diameter stormwater drainage located within Hospital Road will be required to be diverted to suit the proposed finished surface levels. The stormwater is to be coordinated with other inground services to be diverted, including sewer and HV, while coordinating with structural piles and respective column locations.
- Further flood mitigation is not required as the IASB Addition will have nil effect and is not worsening the 1% AEP storm event.
- Sediment and soil erosion measures is to be implemented during construction stage to prevent the migration of sediment entering the stormwater system.

7.14 Drainage (SEAR 15)

7.14.1 Assessment

A Civil Report has been prepared by ACOR (Appendix P) detailing the existing stormwater infrastructure services at the site, as well as the proposed stormwater design. ACOR (2019) made the following observations relating to stormwater infrastructure and drainage arrangements for the site which are appropriate for the site and meet design requirements.

Existing Stormwater Infrastructure

- Hospital Road generally drains from the higher northern end at High Street towards the lower southern end towards Magill Street.
- Hospital Road is drained by a 750mm diameter concrete pipe that is located on the eastern side of the road and is approximately 3.5m. This pipe drains both the road reserve as well as the surrounding buildings, including the Sydney Children's Hospital; the Ainsworth Building; and the Royal Hospital for Women.
- The loading dock, located at Delivery Drive, is serviced by a separate drain of 450mm diameter pipe that runs parallel to the 750mm diameter pipe and connects into the drainage system to the south of Magill Street.

Stormwater Drainage Diversions

- The lowering of Hospital Road by approximately 4m would result in the exposure of the existing stormwater drainage near Delivery Drive. Therefore, the stormwater drainage must be diverted and further lowered to allow for construction.
- The stormwater is proposed to be diverted from near the Ainsworth Building, connecting back into the existing drain located at the multi-storey carpark entrance. Once lowered, the stormwater will be located to the centre of Hospital Road to coordinate with the sewer and HV – both of which will also be required to be diverted to facilitate the proposed development – as well as the structural piles and columns required for the UNSW Kensington Campus Eastern Extension.

Proposed Site Stormwater Drainage System

- Gutters and downpipes for the extension will be designed by a building hydraulics contractor and is proposed to be connected to the main ASB drainage.
- Stormwater and overland flows on the above-ground pedestrian deck (above the lowered Hospital Road) is proposed to be collected via rainwater outlets. This scope of works will be designed and prepared by the hydraulic contractor. The rainwater outlets will penetrate the deck to connect to the underground stormwater trunk network via a system of downpipes.
- The coordination of connection points between the internal stormwater drainage system and the underground piped system is to be developed during Design Development.

Water Quality

- The existing site area for the proposed Hospital Road lowering is fully paved and consists of roads and concrete footpaths which is therefore 100% impervious.
- The proposed development does not worsen the existing conditions and therefore a Water Sensitive Urban Design will not be required to improve the stormwater quality.

7.14.2 Recommended Mitigation Measures

The potential impacts of stormwater dewatering are to be managed by the Contractor during bulk excavation.

7.15 Flooding (SEAR 16)

7.15.1 Assessment

The Civil Report, prepared by ACOR (2019) (Appendix P), notes the following in relation to the existing and post-development flooding patterns for the proposed development. Overall, it is considered that the proposed will not generate any material flood risk to the site and to surrounding catchment areas.

Existing Flood Patterns

- Tuflow modelling shows that Hospital Road is not flood-affected during storms up to and including the 1% AEP event.
- The loading dock is considered a trap low point of the site which results in localised ponding and flooding of the area. Figure 7-12 demonstrates this effect.
- Flooding occurs during the Probable Maximum Flood (PMF) as ponding water located at the loading dock topples over the crest level at the Hospital Road intersection which flows down the road towards Magill Street.

Post-Development Flooding Patterns

- Post-development flooding scenarios and modelling conducted by BMT (2019) show that there is a non-worsening effect on flooding in all rainfall events up to and including the 1% AEP event. Figure 7-13 demonstrates this effect. The flood map indicates that flooding during the 1% AEP has been improved as a result of the proposed development and that ponding depths located within the loading dock are also reduced.
- The lessening of flooding is consequential to the lowering of the surface level of both Hospital Road and Delivery Drive which results the localised trap low point in the loading dock being reduced and the overland flow being directed down Hospital Road.

Figure 7-12 Pre-development 1% AEP Flood Depth map (Source: BMT, 2019)

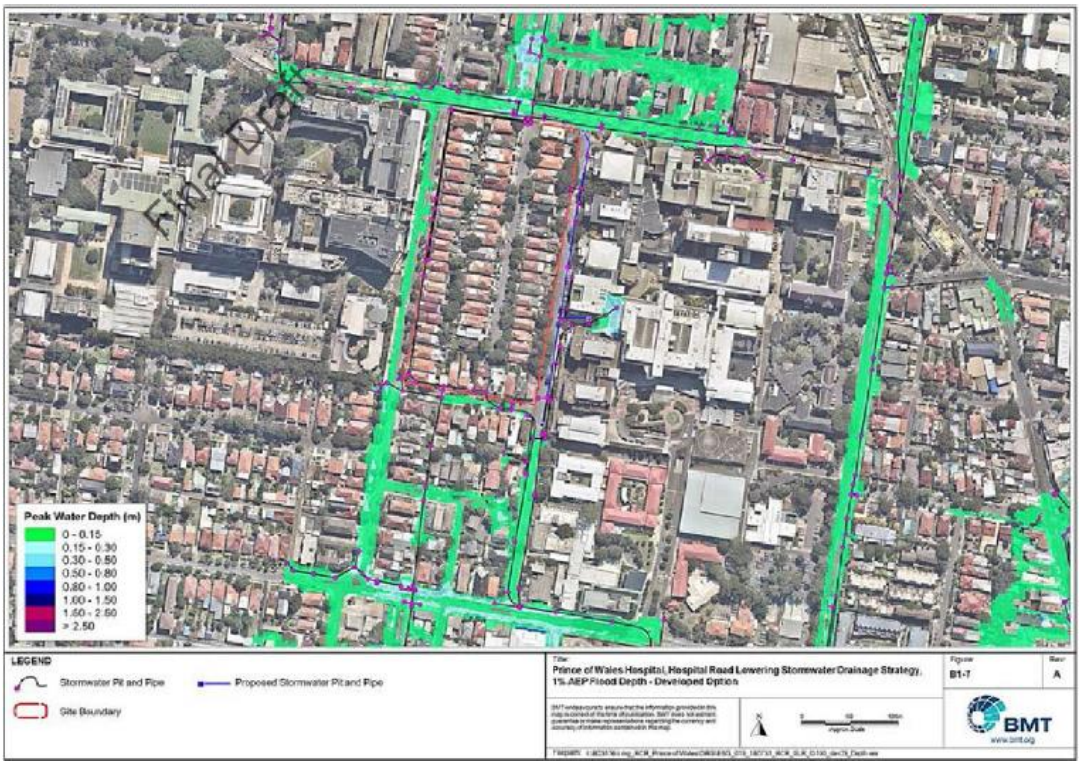


Figure 7-13 Post-development 1% AEP Flood Depth (Source: BMT, 2019)

7.15.2 Recommended Mitigation Measures

No additional flood mitigation measures are proposed.

7.16 Sediment, Erosion and Dust Controls (SEAR 17)

7.16.1 Assessment

A Soil and Water Management Plan (SWMP) is to be prepared as part of the Contractor's Construction Environmental Management Plan (CEMP). The SWMP is to include an Erosion and Sediment Control Plan (ESCP), which is to be prepared in accordance with the 'Blue Book'.

A preliminary ESCP has been prepared by ACOR and is included in Appendix P. The ESCP provides soil and water management notes in accordance with the SEAR to manage off-site transmission of sediment, dust and fine particulate matter. The preliminary ESCP includes:

- The use of sandbag sediment traps, geotextile filter fabric drop inlet sediment traps and temporary stabilised construction exits/entrances (timber sleepers or metal grid).
- The provision of adequate truck wash facilities and the treatment of trapped water to be compliant with all EPA's standards.
- The protection of stockpiles.

- The use of sediment control fences.

The Civil Report prepared by ACOR (2019) also includes details for stormwater drainage and flooding. A copy of the Report is provided at Appendix P and is discussed at Sections 7.14 and 7.15.

Stormwater dewatering may be required following significant rainfall within the excavated area and any sediment basins. Potential impacts on water quality could occur if dewatering activities are undertaken in an uncontrolled manner. Based on available data, excavation dewatering may require treatment to reduce the amount of suspended solids prior to disposal to local stormwater connections. Refer to Section 7.14 for further details.

An Air Quality Management Sub-Plan (2019) was prepared by Lendlease and is provided in Appendix FF. Dust and fine particulate matter may arise as a result of processes associated with construction works, as well as wind and airborne concentrations.

Vehicle exhaust emissions such as sulfur dioxide (SO_2), nitrogen oxide (NO), nitrogen dioxide (NO_2) and ozone (O_3) may be generated from emissions from vehicle exhausts during construction works. Further, diesel particulate matter (DPM) may also be generated by vehicles and plant during these works.

7.16.2 Recommended Mitigation Measures

Prior to the commencement of excavation works at Hospital Road, a SWMP is to be prepared as part of the Contractor's CEMP to the satisfaction of HI and in accordance with the preliminary ESCP and the *Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom)* (the 'Blue Book'). The SWMP will be implemented, and updated (as required), during construction.

The Person Conducting a Business or Undertaking (PCBU) is to prepare a Safe Work Method Statement (SWMS) for all required activities to ensure an appropriate Risk Assessment (RA) has been undertaken. The RA is to consider risks of generating airborne contaminants and the potential impacts they may have on workers, other site occupants and the general public in the vicinity. The SWMS is to identify the controls that are to be adopted to eliminate the generation of airborne contaminants or to reduce them to the fullest extent possible.

Dust monitoring measures will be implemented to manage and mitigate the impacts of airborne dust and fine particulates generated during construction on surrounding residents and nearby RHC facilities including the RHW and SCH Ainsworth Building.

7.17 Waste (SEAR 18)

7.17.1 Assessment

A Waste Management Plan (WMP) for the construction phase has been prepared by Lendlease (2019), a copy of which is in Appendix Y. The key waste streams are provided in Appendix 1 of the WMP. Activities associated with construction of the proposed development have the potential to generate liquid and non-liquid waste materials during the construction phase. No gaseous wastes are anticipated to be generated during the construction phase.

For the operational phase, the SESLHD currently implements the POWH WMP which contains procedures for disposing, storing or transporting any waste material (liquid, solid, chemical, biological, paper etc) at the POWH. A copy is at Appendix Z1. The WMP applies to all staff, contractors and volunteers at the POWH and Sydney Children's Hospital. A Preliminary Operational WMP was prepared for the UNSW Kensington Campus Biological Sciences Project, a copy of which is at Appendix Z2.

7.17.2 Recommended Mitigation Measures

For the construction phase, the Contractor is to implement the strategies in the WMP.

For the operational phase, a detailed IASB Addition WMP is to be prepared to the satisfaction of the SESLHD and UNSW prior to the commencement of operation.

7.18 Construction Hours (SEAR 19)

7.18.1 Assessment

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

- Monday to Friday: 7 am – 6 pm
- Saturday: 8 am – 1 pm
- Sunday and public holidays: No work.

Section 3.4.2 outlines the proposed general hours of work for construction and the special construction hours required on selected weekends.

The reasons for the extended general construction hours on Saturday afternoons, plus the additional selected "weekend work" outside of the "recommended standard hours", are to ensure:

a) the RHC loading dock remains 'live' (operational) during the weekdays for the delivery of critical supplies; and

b) continuity of excellence in the provision of health services and patient care in accordance with the vision of the RHC.

Critical deliveries take place during the weekdays (Monday – Friday). There are no available alternative delivery drop-off area(s) that could otherwise accommodate the long-established volume of critical daily deliveries during these days.

Notwithstanding, the following goods/services being delivered to/picked up from the loading dock are:

- Supplies (stock and non-stock – e.g. catheter tubes, dressings).
- Pharmaceuticals and Fluids:

- Pharmaceuticals**:** these cover deliveries from over 15 different suppliers of drugs including Schedule 4 and Schedule 8 drugs. Pharmaceutical goods must be accompanied by the delivery driver from the dock to the pharmacy or specific ward to which they are being delivered.
- Fluids: refers to dialysis fluids, saline and nutritional fluids which are typically delivered to the dock.

The deliveries of pharmaceuticals and fluids are absolutely critical to the continuity of excellence in the provision of health services and patient care in accordance with the vision of the RHC.

- Loan Sets (e.g. specialised surgical equipment).
- Equipment (e.g. beds).
- Gas cylinders.
- Retail tenancy deliveries.
- Diesel fuel and grease trap access is also in the loading dock area.
- Food – fresh/frozen. Food is also picked up for distribution.
- Waste:
  - General & Comingle (compactor comes in early hours of morning).
  - Cardboard/Paper.
  - Clinical.
  - Sanitary.
  - Sharps.
  - Bulk and eWaste.
- Linen.
- Stationery.
- Mail.
- Contractors conducting maintenance, repairs, inspections also use the contractor parking within the loading dock area.

The approximate number of deliveries to the loading dock are as follows:

- Approximately 210 vehicles per day (Monday – Friday), mostly between 6 am – 4 pm.
- Less than 100 vehicles per day on weekend.
- Peak arrivals: approximately 30 vehicles per hour, between 10 am and mid-day.

The analysis of the source/type of noise is set out in the Noise and Vibration Impact Assessment, prepared by Acoustic Studio, a copy of which is in Appendix G and summarised in Section 7.9. Specifically, Section 9.2.1 of the Noise and Vibration Impact Assessment identifies the source/type of noise and Sections 9.2.5 and 9.4 provide a summary of noise assessment findings, strategies and

recommendations to minimise noise impacts; these are considered to satisfy the spirit and intent of "reasonable" as per the ICNG.

Having regard to the above, it is considered that the proposed hours of work are a "reasonable" variation or departure from the "recommended standard hours". The basis for this conclusion is to be found in:

a) the definition of "reasonable" in the ICNG having regard to the nature and purpose of the proposed development.

b) the analysis of the source/type of construction work noise likely to be generated by the IASB Addition.

c) the strategies and recommended mitigation measures.

7.18.2 Recommended Mitigation Measures

All reasonable and feasible mitigation measures are required to be in place in order to reduce the construction works noise levels as far as is practicable.

Acoustic mitigation measures are detailed in Section 7.9 Noise and Vibration (SEAR 10).

8 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) establishes a residual risk by reviewing the significance of the potential environmental impacts and the ability to manage those impacts. The ERA for the proposed development has been adapted from *AS4369.1999 Risk Management and Environmental Risk Tools*.

Figure 8-1 indicates the significance of the identified impact (Sol) and assigns a value between 1 and 10 based on the following factors:

- The receiving environment.
- The level of understanding of the type and extent of impact.
- The likely community response to the environmental consequences of the proposed development.

The manageability of environmental impact (Mol) is assigned a value between 1 and 5 based on:

- The complexity of mitigation measures.
- The known level of performance of the safeguards proposed.
- The opportunity for adaptive management.

The sum of the values assigned provides an indicative ranking of potential residual impacts after the mitigation measures are implemented.

Significance of impact	Manageability of impact				
	5 Complex	4 Substantial	3 Elementary	2 Standard	1 Simple
1 – Low	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)	2 (Low)
2 – Minor	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)	3 (Low)
3 – Moderate	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)	4 (Low/Medium)
4 – High	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)	5 (Low/Medium)
5 – Extreme	10 (High)	9 (High)	8 (High/Medium)	7 (High/Medium)	6 (Medium)

Figure 8-1 Risk Assessment Matrix (Source: adapted from AS4369.1999).

The ERA for the proposed development is set out in Table 8-1.

Table 8-1 Environmental Risk Assessment

Item	Potential Environmental Impact	Phase	Recommended Mitigation Measure	SoI	MoI	RI
Environmental Amenity	Reduced visual privacy for RHC buildings to the east	O	Privacy film treatment will be provided to the windows on the eastern façade.	2	3	5 (Low / Medium)
Transport and Accessibility	Increase in construction traffic on local roads.	C	Prior to the commencement of construction, a CPTMP is to be prepared by the Contractor in consultation with the TfNSW Sydney Coordination Office and submitted for approval by the Council and HI.	3	2	5 (Low/ Medium)
	Impacts of the lowering and closure of Hospital Road	C + O	An automatic traffic light system will be installed to allow two-way truck movements along the single lane dock entry roadway during construction. Opening of Magill Street for limited hours (7 am to 10 pm) to provide alternative for traffic access to Hospital Road.	3	3	6 (Medium)
Noise and Vibration	Generation of noise and vibration during construction activities.	C	A CNVMP is to be prepared by the Contractor at the detailed design stage based on the proposed plant, equipment and methodologies to be employed. All reasonable and feasible mitigation measures are required to be in place in order to reduce the construction works noise levels as far as is practicable.	3	3	6 (Medium)
	Impacts of the lowering and	O	A boom-gate is proposed to be installed at the intersection of Magill Street and Hospital Road and be in	3	3	6 (Medium)

Item	Potential Environmental Impact	Phase	Recommended Mitigation Measure	SoI	MoI	RI
	closure of Hospital Road		operation between 10pm and 7am in order to help mitigate potential noise impacts during the night-time, particularly from Magill Street through-traffic and traffic accessing the car park via Magill Street. As cars depart the ASB drop-off to proceed to park, drivers will be advised via signage that access to the car park after 6pm is via Barker Street and Easy Street. Staff accessing the car park will be aware of the 6am to 7am closure of the boom-gate at the intersection of Magill Street and Hospital Road and proceed as usual via Barker Street.			
Heritage	Potential archaeological relics present within the site.	C	When the construction works are within the vicinity of the WWII slit trenches, the site is to be subject to archaeological monitoring by a suitably qualified archaeologist. An Unexpected Finds Procedure be prepared to manage any relics found during works to manage relics not identified and considered in the assessment. The Heritage Council of NSW must be notified when relics are discovered. Additional assessment and approval may be required prior to work continuing in the affected area(s) based on the nature of the discovery.	3	3	6 (Medium)

Item	Potential Environmental Impact	Phase	Recommended Mitigation Measure	SoI	MoI	RI
Aboriginal Heritage	Potential Aboriginal objects present within the site.	C	Archaeological monitoring of civil excavations along Hospital Road and adjacent Delivery Drive, as required, be undertaken in consultation with the LPLALC and as outlined in the ACHMP (to be prepared). Implement minimum requirements to mitigate potential impacts as outlined in Section 7.8.3.	3	3	6 (Medium)
Sediment, Erosion and Dust Controls	Increase in particulate matter, SO_2, NO, NO_2, O_3 and DPM generated as a result of construction vehicle and plant used for works.	C	The Person Conducting a Business or Undertaking (PCBU) is to prepare a Safe Work Method Statement (SWMS) for all required activities to ensure an appropriate Risk Assessment (RA) has been undertaken. The RA is to consider risks of generating airborne contaminants and the potential impacts they may have on workers, other site occupants and the general public in the vicinity. The SWMS is to identify the controls that are to be adopted to eliminate the generation of airborne contaminants or to reduce them to the fullest extent possible. Dust monitoring measures will be implemented to manage and mitigate the impacts of airborne dust and fine particulates generated during construction on surrounding residents and nearby RHC facilities including the RHW.	1	1	2 (Low)

Item	Potential Environmental Impact	Phase	Recommended Mitigation Measure	SoI	MoI	RI
Contamination	Potential for contaminated soils to be found.	C	Remediation following ground intrusive works at the site is to be appropriately managed by adopting the procedures outlined in the amended Remediation Action Plan.	1	1	2 (Low)
Drainage	Potential for stormwater dewatering impacts on site.	C	The potential impacts of stormwater dewatering are to be managed by the Contractor during bulk excavation.	3	2	5 (Low/ Medium)
Waste	Waste generation and disposal during construction.	C	For the construction phase, the Contractor is to implement the strategies in the WMP.	1	1	2 (Low)
	Waste generation and disposal during operation.	O	A detailed IASB Addition WMP is to be prepared to the satisfaction of the SESLHD and UNSW prior to the commencement of operation.	1	1	2 (Low)

Legend
Phase: C = Construction and O = Operation
SoI = Significance of Impact, MoI = Manageability of Impact, RI = Residual Impact

9 Mitigation Measures

The measures required to mitigate the potential impacts associated with the proposed development are detailed in Table 9-1. The measures have been derived from the assessments in Section 7.

Table 9-1 Summary of recommended mitigation measures

Issue	Mitigation Measure	Phase(s)	EIS Ref.
Environmental Amenity	Privacy film treatment will be provided to the windows on the eastern façade.	Construction	Section 7.3.
	All external lighting on the site to be implemented as part of the operation of the development is to have regard to the location of nearby residential dwellings. Lighting impacts are to be minimised so as to comply with *AS 4282:1997 – Control of the Obtrusive Effects of Outdoor Lighting* and relevant Australia Standards in the series *AS/NZ 1158 – Lighting for Roads and Public Spaces*.	Operation	
Transport and Accessibility	Prior to the commencement of construction, a CPTMP is to be prepared by the Contractor in consultation with the TfNSW Sydney Coordination Office and submitted for approval by the Council and HI.	Pre-Construction	Section 7.5.
	An automatic traffic light system will be installed to allow two-way truck movements along the single lane dock entry roadway during construction.	Construction	
	A boom-gate is proposed to be installed at the intersection of Magill Street and Hospital Road and be in operation between 10 pm and 7 am in order to help mitigate potential noise impacts during the night-time, particularly from Magill Street through-traffic and traffic accessing the car park via Magill Street.	Construction	
	As cars depart the ASB drop-off to proceed to park, drivers will be advised via signage that access to the car park after 6 pm is via Barker Street and Easy Street.	Construction	

Issue	Mitigation Measure	Phase(s)	EIS Ref.
	Staff accessing the car park will be aware of the 10 pm to 7 am closure of the boom-gate at the intersection of Magill Street and Hospital Road and proceed as usual via Barker Street.	Construction	
Ecologically Sustainable Development	ESD principles and initiatives are embedded throughout the IASB Addition design, construction and operational phases. Consequently, the proposed development will be adhering to industry best practice and standards to maximise sustainability performance.	Pre-Construction, Construction and Operation	Section 7.6.
	The IASB Addition achieve a 4-Star equivalent Green Star rating in accordance with the NSW Health engineering services guidelines.	Pre-Construction, Construction and Operation	Section 7.6.
Heritage	Based on the limited potential for archaeological remains, no archaeological testing is seen as being necessary but archaeological monitoring is to be undertaken. When the construction works are within the vicinity of the WWII slit trenches, the site is to be subject to archaeological monitoring by a suitably qualified archaeologist. If remains of the WWII slit trenches are observed during the monitoring program, archaeological recording is to entail, as outlined below: • A 10m test trench, covering the width of a zig zag slit trench (to be determined upon excavation) and to depth of the archaeological deposit, should be exposed under archaeological supervision. • Where fill contains artefacts associated with the Asylum and Military Hospital, the archaeologist will recover a representative sample and record the construction material of the exposed trench.	Construction	Section 7.7.
	An Unexpected Finds Procedure be prepared to manage any relics found during works to	Construction	

Issue	Mitigation Measure	Phase(s)	EIS Ref.
	manage relics not identified and considered in the assessment.		
	The Heritage Council of NSW must be notified when relics are discovered. Additional assessment and approval may be required prior to work continuing in the affected area(s) based on the nature of the discovery.	Construction	
Aboriginal Heritage	Archaeological monitoring of civil excavations along Hospital Road and adjacent Delivery Drive, as recommended by MDCA, be undertaken in consultation with the LPLALC and as outlined in the ACHMP (to be prepared).	Construction	Section 7.8.
	In the event of any materials of Aboriginal archaeological significance being discovered at the site, a minimum requirement to mitigate potential impacts is that the following mitigation measures must be implemented: If suspected Aboriginal material has been uncovered as a result of works within the site: • Work in the surrounding area is to stop immediately. • A temporary fence is to be erected around the site with a buffer zone of at least 10 metres around the known edge of the site. An appropriately qualified archaeological consultant is to be engaged to identify the material. • If the material is found to be of Aboriginal origin, the Aboriginal community is to be consulted in a manner as outlined in the Office of Environment and Heritage (OEH) guidelines: Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010).	Construction	
	Should human remains be located at any stage during works within the site, all works must halt in the immediate area to prevent any further impacts to the remains. The site	Construction	

Issue	Mitigation Measure	Phase(s)	EIS Ref.
	is to be cordoned off and the remains themselves left untouched. The nearest police station, the LPLALC and the OEH are all to be notified as soon as possible.		
Noise and Vibration	A CNVMP is to be prepared by the Contractor at the detailed design stage based on the proposed plant, equipment and methodologies to be employed.	Pre-Construction	Section 7.9
	A boom-gate is proposed to be installed at the intersection of Magill Street and Hospital Road and be in operation between 10 pm and 7 am in order to help mitigate potential noise impacts during the night-time, particularly from Magill Street through-traffic and traffic accessing the car park via Magill Street.	Construction	
	As cars depart the IASB drop-off to proceed to park, drivers will be advised via signage that access to the car park after 6 pm is via Barker Street and Easy Street.	Pre-Operation	
	Staff accessing the car park will be aware of the 10 pm to 7 am closure of the boom-gate at the intersection of Magill Street and Hospital Road and proceed as usual via Barker Street.	Pre-Construction	
Contamination	Remediation following ground intrusive works at the site is to be appropriately managed by adopting the procedures outlined in the amended Remediation Action Plan.	Pre-Construction	Section 7.10
Biodiversity Assessment	Ensure all contractors employed to work within and around identified biodiversity values within the site are suitably qualified and experienced.	Construction	Section 7.12
	Assign a Project Ecologist to be present during the clearing of all vegetation (both native and exotic) related to the proposed development to capture, treat and relocate any displaced fauna.	Construction	
	Implement all relevant biological hygiene protocols and requirements as per NSW Government guidelines.	Construction	

Issue	Mitigation Measure	Phase(s)	EIS Ref.
	All tree work is to be carried out by a suitably qualified arborist with a minimum AQF Level 3 qualification in Arboriculture.	Construction	
	All tree work must be in accordance with the applicable *Australian Standard AS 4373-2007, Pruning of Amenity Trees* and the *NSW WorkCover Code of Practice for the Amenity Tree Industry* (1998).	Construction	
Utilities	The IWMP highlights key ESD initiatives that are to be implemented into the design, including: • Water metering. • Increased thermal insulation thickness across all hot water piping/supplies. • Recyclable materials selection.	Detailed Design	Section 7.13
	The Civil Report identifies the following civil design elements that are to be considered and reviewed as the design progresses: • The existing 750 mm diameter stormwater drainage located within Hospital Road will be required to be diverted to suit the proposed finished surface levels. The stormwater is to be coordinated with other inground services to be diverted, including sewer and HV, while coordinating with structural piles and respective column locations. • Further flood mitigation is not required as the IASB Addition will have nil effect are is not worsening the 1% AEP storm event. • Sediment and soil erosion measures is to be implemented during construction stage to prevent the migration of sediment entering the stormwater system.	Detailed Design	
Drainage	The potential impacts of stormwater dewatering are to be managed by the Contractor during bulk excavation.	Construction	Section 7.14

Issue	Mitigation Measure	Phase(s)	EIS Ref.
Sediment, Erosion and Dust Controls	Prior to the commencement of excavation works at Hospital Road, a SWMP is to be prepared as part of the Contractor's CEMP to the satisfaction of HI and in accordance with the preliminary ESCP and the *Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom)* (the 'Blue Book'). The SWMP will be implemented, and updated (as required), during construction.	Pre-Construction	Section 7.16
	The Person Conducting a Business or Undertaking (PCBU) is to prepare a Safe Work Method Statement (SWMS) for all required activities to ensure an appropriate Risk Assessment (RA) has been undertaken. The RA is to consider risks of generating airborne contaminants and the potential impacts they may have on workers, other site occupants and the general public in the vicinity. The SWMS is to identify the controls that are to be adopted to eliminate the generation of airborne contaminants or to reduce them to the fullest extent possible.	Pre-Construction	
	Dust monitoring measures will be implemented to manage and mitigate the impacts of airborne dust and fine particulates generated during construction on surrounding residents and nearby RHC facilities including the RHW and SCH Ainsworth Building.	Pre-Construction	
Waste	For the construction phase, the Contractor is to implement the strategies in the WMP.	Construction	Section 7.17
	For the operational phase, a detailed IASB WMP is to be prepared to the satisfaction of the SESLHD and UNSW prior to the commencement of operation.	Operation	Section 7.17
Construction Hours	All reasonable and feasible mitigation measures are required to be in place in order to reduce the construction works noise levels as far as is practicable.	Construction	Section 7.18

10 Justification for the Development

Major investment projects are typically executed to satisfy measurable requirements that are, in essence, responses by Government to assessed community needs and Budgetary Priorities and allocations. Business case development and feasibility analyses determine whether resources committed to pursuing a project will generate benefits and rewards that exceed input costs. This is the logic behind interpreting the justification of projects.

Project justification enables investors, stakeholders and the wider community to make informed decisions given full knowledge of likely project outcomes, limitations and constraints.

The proposed development involves the design, construction and operation of the IASB Addition as an addition to the approved ASB. The assessment must therefore identify and evaluate the effects of the proposed changes within the context of an integrated Precinct.

Components of the social, economic and biophysical environments and of ESD identified and evaluated in this EIS in relation to the proposed development are summarised below.

10.1 Social and Economic

The NSW Government is partnering with UNSW for this SSDA to strengthen the RHC through the integration of additional health education, training and research with acute healthcare services - directly benefiting patients, carers and the NSW community. Under the latest partnership initiative, an expansion to the approved ASB (SSD 9113) is proposed.

The purpose is to enable clinical innovation and research, biomedical engineering, and research laboratories to be collocated directly alongside clinical staff. By doing so, it will bring together clinicians, researchers, educators and public health professionals to drive the rapid translation of research and innovation into clinical practice, expand excellence in health teaching and education opportunities, and improve the patient care experience at Randwick.

The proposed development promotes the social and economic welfare of the community, aligned with NSW Government strategies and the Precinct Masterplan through the provision of expanded public health services, collocated with health education and training services and health research facilities.

10.2 Biophysical

The environmental risk assessment in Section 8 indicates that the proposed development will not result in any environmental impacts that cannot be adequately addressed through sound, reasonable and feasible mitigation measures outlined in the preceding sections of this EIS, especially as encapsulated in Section 9.

It is considered that the environmental impact assessment for the proposed development has demonstrated that:

- All construction phase environmental impacts can be appropriately managed and thus mitigated by the proposed measures, including potential transport and accessibility, biodiversity, noise and vibration, and contamination impacts.
- An Integrated Water Management Plan, Drainage Infrastructure Management Plan and flood mitigation measures will be implemented ensuring undesirable stormwater, groundwater, drainage and water quality impacts are avoided.

10.3 Ecological Sustainable Development

The EP&A Regulation defines ESD in Clause 7(4) of Schedule 2 as part of the content of an EIS. These principles are:

- The precautionary principle.
- Inter-generational equity.
- Conservation of biological diversity and ecological integrity.
- Improved valuation, pricing and incentive mechanisms.

Analyses of these principles is provided below.

Precautionary Principle

The precautionary principle describes that in situations under threat of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. This principle is valuable when uncertainty surrounds potential environmental impacts.

The EIS has not identified any instances of scientific uncertainty or serious or irreversible environmental damage. Thus, the precautionary principle does not apply to the proposed development.

Inter-generational equity

Inter-generational equity means that the present generation is to ensure the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

The proposed IASB Addition benefits existing and future generations by enabling clinical innovation and research, biomedical engineering, and research laboratories to be collocated directly alongside clinical staff. By doing so, it will bring together clinicians, researchers, educators and public health professionals to drive the rapid translation of research into clinical practice, expand excellence in health teaching and education opportunities, and improve the patient care experience at Randwick.

The IASB Addition design and development is informed by a significant strategic planning framework (Section 5) which envisages strategic objectives that deliver long-term social, economic, environmental and ESD values to the area. The design and development of the IASB Addition will be informed by this same framework.

Conservation of biological diversity and ecological integrity

This principle states that conservation of biological diversity and ecological integrity should be a fundamental consideration.

The proposal will not have significant impacts on biological diversity and ecological integrity of the site, or the surrounding Precinct.

Improved valuation, pricing and incentive mechanisms

This final principle states that environmental factors should be included in the valuation of assets and services, particularly those directly affected by the project including air, water and biodiversity.

Exhaust flues will be fitted with emission control devices to maintain air quality during operation.

Modular façade design and use of sustainable construction materials will minimise construction material waste.

11 Conclusion

The EIS has been prepared in accordance with Part 4, Division 4.7 of the EP&A Act and other relevant legislative, statutory and non-statutory planning controls and due consideration of a substantial New South Wales Government strategic planning framework.

The driving factors in the formulation of the design are the recognition of benefits to patient care and the community brought about by the direct collocation of health education training and research with acute healthcare services, and to realise the vision for the RHC as signed by the SESLHD, SCHN and UNSW which states that:

> *"We will be a world renowned model for the integration of high quality primary, secondary and tertiary clinical care, innovative education programs and enabling original and translational research that supports wellness across the community."*

As such, the desired outcome is the creation of a centre of excellence in the provision of health services and care, health education and research. Further, it represents the essential need to realise the optimum use of RHC land, a critically scarce resource in a well-planned integrated Precinct.

Therefore, in particular, the following is noted:

- The EIS has addressed the SEARs issued by DP&E for SSD-10339, dated 14 August 2019.
- The EIS has been informed comprehensively by: (i) the supporting technical advice contained in the Reports in Appendices A to FF; and (ii) consideration of matters raised by the community and stakeholders through HI's ongoing consultations under its Communications and Stakeholder Engagement Strategy.
- In examining the change in land use and the consequential change in form and scale from the existing development on the site to that of the proposed development, it is considered there is satisfactory justification and planning merit for the proposed development. The grounds for justification are summarised in Section 10 and supported by consideration of the relevant objects of the EP&A Act addressed in Section 4.1.1 and relevant NSW Government Policies and Plans in Section 5.
- The justification for the development is supported by the identification and rigorous assessment of likely impacts and of appropriate sound, feasible and implementable mitigation measures as specified in Sections 7, 8 and 9 during the design, construction and operational phases of the proposed development.
- The measures arise from due consideration of the technical advice and the Reports and the matters in Section 4.15 Evaluation of the EP&A Act that is also addressed in Section 4.1.1 of the EIS.
- The potential environmental impacts, as identified and assessed in Section 7 and residual impacts in Section 8, are considered to be capable of mitigation as set out in Section 9. This conclusion is subject to the diligent implementation of the mitigation measures.

Therefore, it is **recommended** that SSD-10339 be approved.

12 References

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