ETHOS URBAN

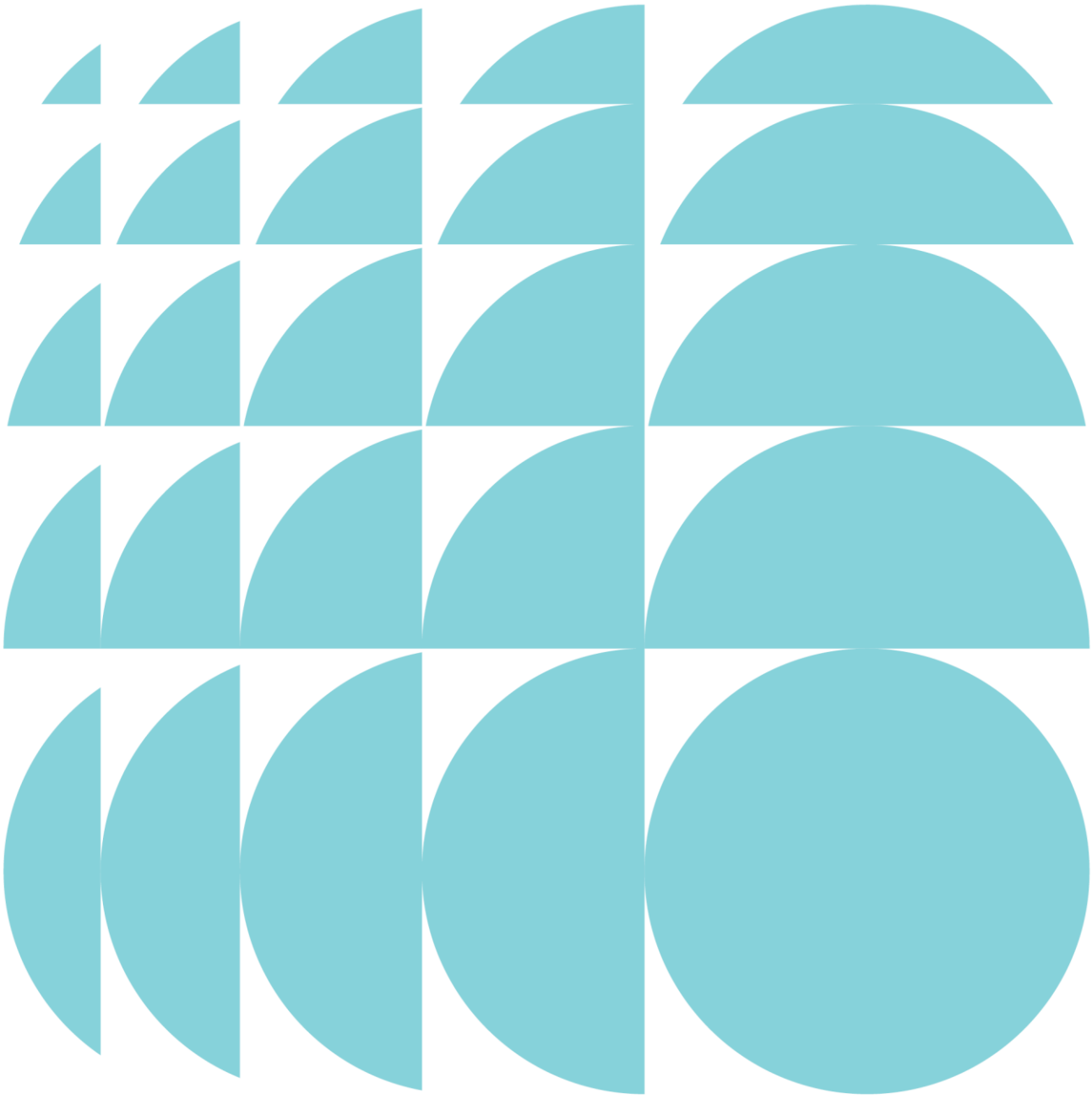
Environmental Impact Statement

Randwick Campus Redevelopment
– UNSW Health Translation Hub

Submitted to the Department of Planning, Industry and Environment

On behalf of Health Infrastructure NSW and the University of NSW

8 April 2021 | 2200223



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A	**11 12 2020**	**AA / CMC**	**KT**
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Statement of Validity

Development Application Details	
Applicant name	Health Administration Corporation
Applicant address	1 Reserve Road, St Leonards NSW 2065
Land to be developed	Randwick Hospitals Campus, corner of High Street and Botany Street, Randwick.
Proposed development	Randwick Campus Redevelopment – UNSW Health Translation Hub as described in Section 3.0 of this Environmental Impact Statement.
Prepared by	
Name	Kate Tudehope
Qualifications	BPLAN (Hons) PIA
Address	173 Sussex Street, Sydney
In respect of	State Significant Development - Development Application
Certification	
	I certify that I have prepared the content of this EIS and to the best of my knowledge: it is in accordance with Schedule 2 of the *Environmental Planning and Assessment Regulation 2000*; all available information that is relevant to the environmental assessment of the development to which the statement relates; and the information contained in the statement is neither false nor misleading.
Signature	
Name	Kate Tudehope
Date	8/04/2021

Executive Summary

Purpose of this Report

This submission to the Department of Planning, Industry and Environment (the Department) comprises an Environmental Impact Statement (EIS) for a Development Application under Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates to the construction and operation of the University of New South Wales Health Translation Hub (UNSW HTH) at Randwick Hospitals Campus (RHC). The UNSW HTH forms an extension of the existing and proposed hospital facilities at the RHC, providing a specialist health-related research and education facility on the Campus.

Health Infrastructure (HI), on behalf of Health Administration Corporation (HAC), is the landowner and applicant for the UNSW HTH State Significant Development (SSD) submission. The UNSW HTH will be delivered and operated by UNSW, to allow the University to integrate education and research to deliver translational health benefits, and to support the translation of medical research and innovation into improved patient care.

The UNSW HTH will also connect all academics on the UNSW Kensington Campus, across an array of disciplines relevant to health within the Randwick Health and Innovation Precinct (RHIP). The involvement of all faculties, Engineering, Science, Business, Law and Justice and Arts, Design and Architecture will open unique innovative opportunities.

The proposal is SSD for the purposes of the EP&A Act, and Schedule1, Clause 14(a) of the *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP) as it involves development for the purposes of a Hospital with a capital investment value (CIV) in excess of $30 million.

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought on 9 November 2020. Accordingly, the SEARs were issued on 2 December 2020. This submission is in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the SEARs.

Background

The NSW Government is partnering with UNSW to strengthen the RHIP through the integration of additional health education, training, and research with acute healthcare services - directly benefiting patients, carers, and the wider NSW community. Building on over 60 years of teaching hospital affiliations, this partnership will help grow the relationship between UNSW and the RHC, its research institutes and broader health partners.

A partnership agreement has been established between HAC and the UNSW to develop the UNSW HTH. This partnership will also enable UNSW to operate the building as well as manage its design and delivery.

The partnership will bring together educational and medical researchers, clinicians, educators, industry partners and public health officials to drive excellence, and support the rapid translation of research, innovation and education into improved patient care, delivering better health outcomes to the community. It will strengthen the symbiotic relationship between UNSW and the RHC and its research institutes and broader health partners which form part of the RHIP.

The UNSW HTH will build on the existing affiliation between UNSW and Sydney Children's Hospital Network (SCHN), HI, and the South Eastern Sydney Local Health District (SESLHD), including Prince of Wales Hospital (POWH), The Royal Hospital for Women and Eastern Suburbs Mental Health Services.

Overview of the Project

The proposal involves the expansion of RHC to provide a specialist health-related research and education facility in the form of a single building which will be physically connected (at podium level) to the neighbouring Sydney Children's Hospital Stage 1 and the Children's Comprehensive Cancer Centre (SCH Stage 1 and CCCC).

The SSD Application (SSDA) seeks approval for the following development:

- Enabling works (including interim works) including site preparation and excavation;

- Construction and operation of a new 15 storey health education and research building with a total GFA of 35,600 sqm:
  - Purpose-built spaces for health educators and researchers to work alongside clinicians;
  - Sizeable floor plates for health translation research focused work with physical connections to the SCH Stage 1 and CCCC and wider RHC;
  - Dedicated facilities for the CCCC directly linking the UNSW HTH with the SCH Stage 1 and CCCC;
  - An education hub, including education and training rooms allowing hospital staff to educate and train UNSW medical students;
  - Facilities for education, training, research, seminars and industry events;
  - Clinical schools;
  - Ambulatory care clinics including in neurosciences, public and population health; and
  - Supporting facilities including retail premises.
- Pedestrian link bridges (and associated tree pruning) connecting the UNSW Kensington Campus to the RHC, via the Wallace Wurth building to the UNSW HTH and through to the SCH Stage 1 and CCCC;
- Landscaping and public domain works, including the creation of over 2,500 sqm of new publicly accessible open space within the eastern portion of the site, sitting between the UNSW HTH and the SCH Stage 1 and CCCC redevelopment;
- Building signage;
- Stratum subdivision; and
- Services and utilities augmentation.

The Site

The site is located in the western portion of the RHC and adjacent to the SCH Stage 1 redevelopment and the Prince of Wales Hospital Integrated Acute Services Building development (IASB). The site is comprised on 36 (including the proposed stratum lot for the pedestrian footbridge) individual lots and has an area of 8,897sqm. These lots (at the time of writing) are currently in the process of being amalgamated. It is located on the corner of High Street and Botany Street within the RHIP, approximately 6 kilometres from the Sydney CBD. It is within the Randwick Local Government Area (LGA).

Planning Context

Section 6.0 of this EIS considers all applicable legislation in detail. The proposal is consistent with the requirements of all relevant SEPPs. The site is currently zoned part R2 Low Density Residential and part R3 Medium Density Residential under the *Randwick Local Environmental Plan 2012* (Randwick LEP). The proposal is defined as a hospital, and is permissible with consent by virtue of Clause 57(1) of the *State Environmental Planning Policy Infrastructure 2007* (Infrastructure SEPP).

Environmental Impacts and Mitigation Measures

This EIS provides an assessment of the environmental impacts of the project in accordance with the SEARs and sets out the undertakings made by HI and UNSW to manage and minimise potential impacts arising from the development.

Conclusion and Justification

The EIS addresses the SEARs, and the proposal provides for the construction and operation of the UNSW HTH within the RHC. The potential impacts of the development are acceptable and are able to be managed. Given the planning merits of the proposal as listed below, the proposed development warrants approval by the Minister for Planning and Public Spaces.

- The proposal will provide a significant new piece of health-related infrastructure which will bring together educational and medical researchers, clinicians, educators, industry partners and public health specialists to drive excellence, and support the rapid translation of research, innovation and education into improved patient care, delivering better health outcomes to the community.

- The area and shape of the site allows for the provision of health-related infrastructure that meets the special design requirements for the proposed uses, whilst not resulting in any significant adverse impacts on surrounding uses.
- The proposal will create a destination at ground level, enhancing the relationship with the ground plane and surrounding public domain. Leveraging off the site's scale and length of frontage to provide significant new public open space and a new and invigorated street level outcome which will support fine-grain activation and permeability.
- The proposal exhibits a high standard of architectural, urban and landscape design, and provides a recognisable and high-quality contribution to the RHIP and Eastern District more broadly.
- The proposal provides sustainability initiatives of the highest level, supporting the improved environmental performance of the RHIP.
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the *Environmental Planning and Assessment Regulation* 2000 (EP&A Regulation).
- The proposal is anticipated to generate a total 450 construction jobs and 495 operational jobs which will have broader social and economic benefits to the RHIP.
- Traffic and parking impacts associated with the proposed development can be appropriately managed and active transport will be promoted and encouraged.

1.0 Introduction

This EIS is submitted to the Department pursuant to Part 4 of the EP&A Act in support of an application for the construction and operation of the UNSW HTH at RHC. The UNSW HTH forms an extension of the existing and proposed hospital facilities at the RHC, providing a specialised health-related research and education facility on the Campus. The UNSW HTH will allow UNSW to integrate education and research to deliver translational health benefits, and to support the translation of medical research and innovation into improved patient care.
The UNSW HTH will also connect all academics on the UNSW Kensington Campus, across an array of disciplines relevant to health within the RHIP. The involvement of all faculties, Engineering, Science, Business, Law and Justice and Arts, Design and Architecture will open unique innovative opportunities.

Development for the purpose of a Hospital with a CIV of more than $30 million is identified as SSD under Schedule 1 of the SRD SEPP. A CIV Statement has been prepared by WT Partnership which confirms that the project has a CIV of greater than $30 million (provided under a separate cover) and accordingly, the proposal is declared to be SSD for the purposes of the EP&A Act.

This EIS has been prepared by Ethos Urban on behalf of HI and UNSW, and is based on the Architectural Plans provided by Architectus (refer to **Appendix A**) and other supporting technical information appended to the report (see Table of Contents).

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the EP&A Regulation, and the SEARs for the preparation of the EIS, which are included at **Appendix B**. This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

1.1 Overview of Proposed Development

The proposal involves the expansion of RHC to provide a specialist health-related research and education facility in the form of a single building which will be physically connected (at podium level) to the neighbouring SCH Stage 1 and CCCC.

The SSDA seeks approval for the following development:

- Enabling works (including interim works) including site preparation and excavation;
- Construction and operation of a new 15 storey health education and research building with a total GFA of 35,600 sqm:
  - Purpose-built spaces for health educators and researchers to work alongside clinicians;
  - Sizeable floor plates for health translation research focused work with physical connections to the SCH Stage 1 and CCCC and wider RHC;
  - Dedicated facilities for the CCCC directly linking the UNSW HTH with the SCH Stage 1 and CCCC;
  - An education hub, including education and training rooms allowing hospital staff to educate and train UNSW medical students;
  - Facilities for education, training, research, seminars and industry events;
  - Clinical schools;
  - Ambulatory care clinics including in neurosciences, public and population health; and
  - Supporting facilities including retail premises.
- Pedestrian link bridges connecting the UNSW Kensington Campus to the Randwick Hospital Campus, via the Wallace Wurth building to the UNSW HTH and through to the SCH Stage 1 and CCCC;
- Landscaping and public domain works, including the creation of over 2,500 sqm of new publicly accessible open space within the eastern portion of the site, sitting between the UNSW HTH and the SCH Stage 1 and CCCC redevelopment;
- Building signage;
- Stratum subdivision; and

- Services and utilities augmentation.

1.2 Background to the Development

1.2.1 Randwick Campus Redevelopment

The RHIP is one of the most comprehensive health innovation districts in Australia. While health care at the Precinct has been evolving for over 160 years, the last five years have seen a strengthening of collaboration amongst a wide range of organisations in the Precinct, including with government, universities and community. Advancing this culture of collaboration, the NSW Government has made a significant commitment to expanding and upgrading the Precinct.

Over $1.5B is being invested in the Precinct, of which over $1 billion is from the NSW Government and the remainder by UNSW, to strengthen the RHIP as a world-class centre for health, research and education, driving cutting edge, compassionate and holistic healthcare and wellness programs for the local community and other residents of NSW. The RHC redevelopment includes (refer to **Figure 2**):

- Construction of a new IASB. This includes an approved extension of 5,000sqm for use by UNSW, demonstrating the University's commitment to investment in the RHIP;
- Redevelopment of the SCH Stage 1 and CCCC; and
- Construction of a new UNSW HTH.

The RHC redevelopment is a critically important component in the vision of the NSW Government and the Randwick Health Collaboration (refer to **Section 1.2.2** below) for the creation of the Precinct (refer to **Figure 1**).

A partnership agreement has been established between HAC and UNSW to develop the UNSW HTH. This partnership will allow UNSW to operate the building as well as manage its design and delivery.

The partnership is intended to bring together educational and medical researchers, clinicians, educators and public health officials to drive excellence, and support the rapid translation of research, innovation and education into improved patient care. It will strengthen the symbiotic relationship between UNSW and the RHC and its research institutes and broader health partners which form part of the Precinct.

The UNSW HTH will build on the existing affiliation between UNSW and SCHN, HI, and SESLHD, including POWH, The Royal Hospital for Women and Eastern Suburbs Mental Health Services.

Figure 1 – Randwick Collaboration Area Key Sites Map (with the site identified with purple circle)

Source: Randwick Place Strategy, Greater Sydney Commission

1.2.2 Randwick Health Collaboration

The Randwick Health Collaboration is an alliance between the SESLHD which includes POWH, Royal Hospital for Women, Eastern Suburbs Mental Health Service, 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 RHIP.

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."*

1.2.3 Prince of Wales – Integrated Acute Services Building (IASB)

The IASB was approved on 27 February 2019 through a separate SSDA (SSD 9113). The approved IASB occupies a key position between the western boundary of the RHC and the eastern boundary of UNSW Kensington Campus, adjoining the UNSW HTH directly to the south. The approved IASB includes a 10 storey addition to the eastern elevation, which includes 5,000sqm of GFA for use by UNSW.

The IASB will provide infrastructure that will support new and innovative approaches to acute healthcare and provide staff with purpose-designed and built facilities that support contemporary clinical practice. It will integrate research and integration and provide health-related academic and translational research spaces which will be collocated with clinical services. These include laboratories and spaces to support collaboration and the testing and trialling of new models of care and innovative treatments.

1.2.4 Sydney Children's Hospital Stage 1 and Children's Comprehensive Cancer Centre Redevelopment

On 9 November 2020, a request was made to the Department for SEARs for the new SCH Stage 1 and CCCC at RHC. The Sydney Children's Hospital is the main paediatric referral hospital for Eastern Sydney and provides quality care and clinical services to approximately 155,000 sick children each year (across the network).

The SCH Stage 1 and CCCC is a fully integrated partnership between the SCHN and the Children's Cancer Institute. The SCH Stage 1 and CCCC will bring together health practitioners, researchers, academics, patients and the community to integrate patient care, research and education in Australia's first Children's Comprehensive Cancer Centre.

The UNSW HTH will be integrated with the SCH Stage 1 and CCCC, with the two projects being subject to a co-design process (refer to **Figure 2**).

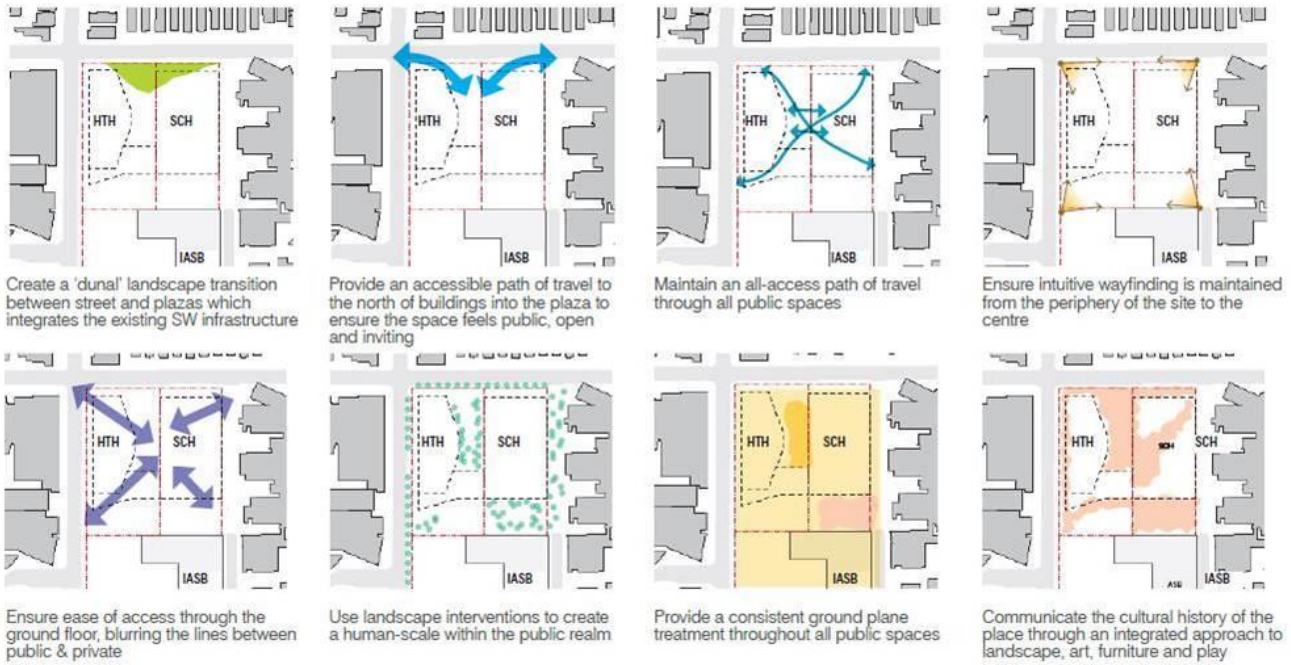

Figure 2 – HTH and SCH1 and CCCC Site Wide Principles
Source: Aspect Studios

1.3 Objectives of the Development

The objectives of the proposal are to:

- Reinforce the role of the Precinct as one of Australia's most comprehensive health precincts;
- Leverage off the site's proximity to the existing public health purposes, and its location within the existing RHIP to collocate educational and medical researchers, clinicians, educators and public health officials to support the further growth of the Precinct into an innovation district and to drive better health outcomes for the community;
- Provide a high-quality destination at ground level, by leveraging off the site's scale and length of frontage to provide significant new public open space and a completely new and invigorated public domain outcome, supporting fine-grain activation and improved permeability with the adjoining SCH Stage 1 and CCCC, IASB and broader RHIP;
- Be of the highest standard of architectural, urban and landscape design, and provide a recognisable and high-quality contribution to the RHIP; and
- Provide sustainability initiatives of the highest level, supporting the improved environmental performance of development in the RHIP.

1.4 Analysis of Alternatives

1.4.1 Strategic Need for the Proposal

The strategic need for the proposal is clearly set out in Sydney's primary strategic planning document – The Greater Sydney Region Plan (the Plan). The Plan speaks to the identification, prioritisation and delivery of collaboration areas. These areas are identified due to their metropolitan significance and ability to grow into centres of heightened productivity and innovation. The site is located within the RHIP, which forms part of the Randwick Collaboration Area (refer **Figure 1**).

The overarching vision is to support the transition of the RHIP and broader Randwick Collaboration Area into a future innovation district through a 'maturity pathway', which sees the evolution and conglomeration of health and education uses (refer to **Figure 3**).

The proposal is on land that has been identified for future expansion (refer to **Figure 1**), and is consistent with the type of uses expected in the RHIP. It is intended to support the clustering of educational, medical and research uses in line with the existing hospital and University campuses, consistent with the maturity pathway.

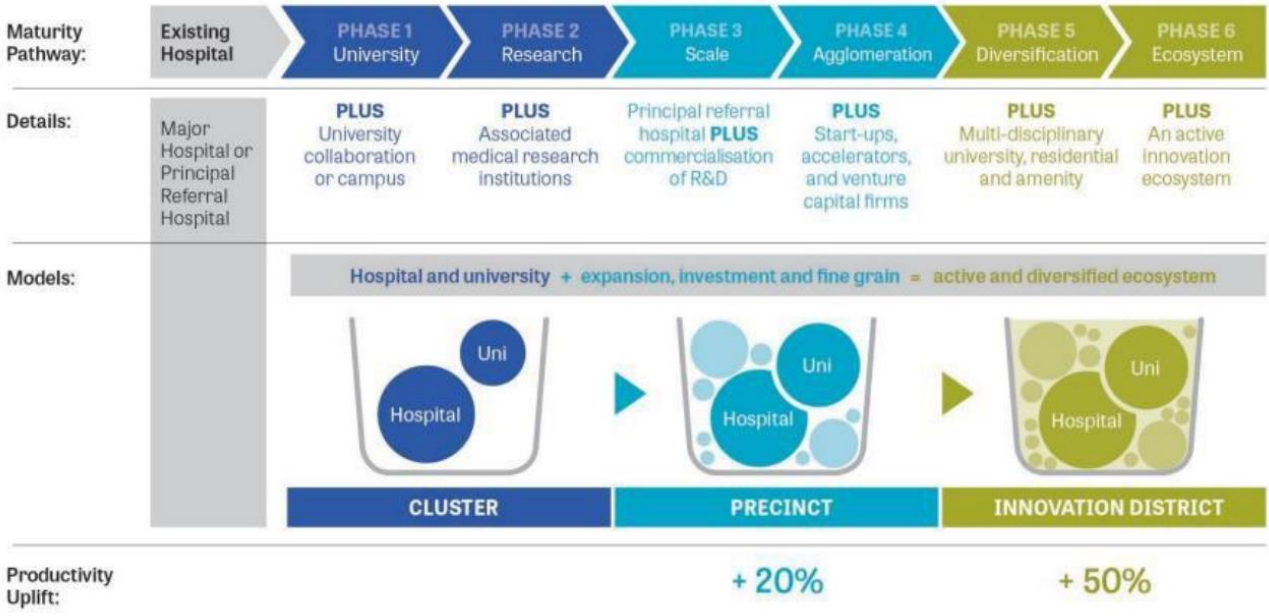

Figure 3 – Maturity pathway for Health and Education Precincts

Source: Randwick Place Strategy, Greater Sydney Commission

1.4.2 Alternative Options

Option 1 – The 'Do Nothing' Approach

The intent of the proposal is to support the redevelopment of the site for health and education purposes in accordance with the desired growth and amalgamation of service offerings within the RHIP.

Adopting the 'do nothing' approach would clearly fail to:

- Support the provision of collocated health and education related floor space envisioned for the RHIP;
- Realise the public health benefits that the co-location of clinicians, research and academics will bring; and
- Provide floor space which can contribute to Randwick's job targets (which sit between 32,000 and 35,500 by 2036 under the Eastern City District Plan).

The proposal will utilise a highly suitable site for further health-related and employment-generating floorspace. Failure to undertake the proposal under a 'do nothing approach' would be an inappropriate course of action which would be contrary to the strategic planning framework established for the site and prevent the site from being developed to its highest and best use.

Option 2 – Alternative Site Layouts

Architectus has explored different layouts and design options within the UNSW HTH footprint in consultation with the project team, and with regard to the environmental constraints within and proximate to the site.

These options were explored through the initial design development phase of the project against a set of site-specific criteria such as access arrangements from Botany Street (considering future surrounding redevelopment scenarios of the SCH Stage 1 and the IASB), flooding (considering the flood levels between the proposed UNSW HTH and SCH Stage 1 and CCCC), pedestrian, vehicle and servicing access arrangements and manoeuvrability (including pedestrian access across Botany Street and independent access arrangements during construction of the block), as well as landscaping and tree canopy coverage.

Considering the work undertaken to date, the proposal (proposed under this EIS) is considered to provide the most appropriate and workable redevelopment scenario which can meet the objectives of the project, while also mitigating adverse impacts on the surrounding environment and surrounding landowners. The proposed form also enables the realisation of significant public benefits, including the creation of over 2,500sqm of new publicly accessible open space adjacent to the new light rail node and at the heart of the UNSW and RHC.

1.5 Secretary's Environmental Assessment Requirements

In accordance with section 4.39 of the EP&A Act, the Secretary of the Department issued the requirements for the preparation of the EIS on 3 December 2020. A copy of the SEARs is included at **Appendix B**.

Table 1 provides a detailed summary of the individual matters listed in the SEARs and identifies where each of these requirements has been addressed in this report and the accompanying technical studies.

Table 1 – Secretary's Requirements

Requirement	Location in Environmental Assessment
General	
The Environmental Impact Statement (EIS) must address the *Environmental Planning and Assessment Act 1979* and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000.	Environmental Impact Statement
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 6.0
In addition, the EIS must include: • an executive summary • a complete description of the development, including: - the need for the development	Section 3.0 Section 7.0

Requirement	Location in Environmental Assessment	
- justification for the development - suitability of the site - alternatives considered - likely interactions between the development and existing, approved and proposed operations in the vicinity of the site - a description of any proposed building works - a description of existing and proposed operations, including staff and visitor numbers - site survey plan, showing existing levels, location and height of existing and adjacent structures / buildings and site boundaries - a detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development - plans, elevations and sections of the proposed development - cladding, window and floor details, including materials - a site plan showing all infrastructure and facilities (including any infrastructure that would be required for the development, but the subject of a separate approvals process) - plans and details of any advertising/business identification signs to be installed, including size, location and finishes - any staging of the development - details of construction and decommissioning including timing - an estimate of the jobs that would be created during the construction and operational phases of the development along with details of the methodology to determine the figures provided. • a detailed assessment of the key issues identified below, and any other significant issues identified in the risk assessment, including: - a description of the existing environment, using sufficient baseline data and methodology to establish baseline conditions - an assessment of the potential impacts of all stages of the development on all potentially impacted environments, sensitive receivers, stakeholders and future developments. The assessment must consider any relevant legislation, policies and guidelines - consideration of the cumulative impacts due to all other developments in the vicinity (completed, underway or proposed) - identification of all proposed monitoring or required changes to existing monitoring programs - measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for managing any significant risks to the environment and triggers for each action - details of alternative measures considered. • a consolidated summary of all the proposed environmental management and monitoring measures, identifying all commitments included in the EIS • the reasons why the development should be approved and a detailed evaluation of the merits of the development, including consequences of not carrying out the development.		
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.		
Key Issues	**Report / EIS**	**Technical Study**
Statutory and Strategic Context		
Address the statutory provisions contained in all relevant environmental planning instruments, including but not limited to: • State Environmental Planning Policy (State and Regional Development) 2011 • State Environmental Planning Policy (Infrastructure) 2007 • State Environmental Planning Policy No. 33 - Hazardous and Offensive Development • State Environmental Planning Policy No 64 – Advertising and Signage • State Environmental Planning Policy No 55 – Remediation of Land • Draft State Environmental Planning Policy (Infrastructure) 2007 – Amendment - Health Services Facilities • Draft State Environmental Planning Policy (Remediation of Land) • Draft State Environmental Planning Policy (Environment) • Randwick Local Environmental Plan 2012.	Section 5.1	
Having regard to the relevant environmental planning instruments:	Section 5.3	

Requirement	Location in Environmental Assessment	
• address the permissibility of the development, including the nature and extent of any prohibitions. • identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards. • adequately demonstrate and document how each of the provisions in the listed instruments are addressed, including reference to necessary technical documents		
Policies		
Address the relevant planning provisions, goals and strategic planning objectives in all relevant planning policies including but not limited to the following: • NSW State Priorities • State Infrastructure Strategy 2018 – 2038 Building the Momentum • Future Transport Strategy 2056 • Crime Prevention through Environmental Design (CPTED) Principles • Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW), 2017) • Sydney Green Grid (GANSW, 2017) • Healthy Urban Development Checklist (NSW Health, 2009) • Draft Greener Places Design Guide (GANSW) • The Greater Sydney Region Plan - A Metropolis of Three Cities • Eastern City District Plan • South East Sydney Transport Strategy • Local Strategic Planning Statement – Vision 2040 • Randwick Place Strategy.	Section 5.1	
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 or publicly accessible open spaces • design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, site levels adjoining the public domain, materials and colours • street level activation • canopy tree planting and landscaping as well as any public domain improvements that would contribute to the urban tree canopy and Sydney Green Grid • permeability across the site and the campus • how Crime Prevention through Environmental Design (CPTED) principles are to be integrated into development • how good environmental amenity would be provided, including access to natural daylight and ventilation, acoustic separation, access to landscape and outdoor spaces and future flexibility • how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.	Section 5.4	
Provide: • a detailed site and context analysis to justify the proposed site planning and design approach including massing options and preferred strategy for future development • a visual impact assessment that identifies any potential impacts on the surrounding built environment and landscape including views to and from the site and any adjoining heritage items • details of the proposed pedestrian bridge link including type of bridge (materials), overhead clearance and proposed maintenance details.	Section 2.0	Appendix A Appendix C Appendix O
Environmental Amenity		
Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated.	Section 5.0	
Provide: • shadow diagrams • a view analysis of the site from key vantage points and streetscape locations and public domain including photomontages or perspectives showing the proposed and likely future development		

Requirement	Location in Environmental Assessment	
• an analysis of proposed lighting that identifies measures to reduce spill into the surrounding sensitive receivers • details of the nature and extent of any intensification of use associated with the proposed development, particularly in relation to any increase in staff and inpatient bed numbers and detail measures to manage and mitigate any impacts • a wind impact assessment, including a wind tunnel study, prepared by a suitably qualified person that considers the impact of the proposed development having regard to the surrounding development and pedestrian amenity and comfort.		
Transport and Accessibility		
Analysis of the existing transport network, including: • road hierarchy • pedestrian, cycle and public transport infrastructure • details of current daily and peak hour vehicle movements based on traffic surveys and / or existing traffic studies relevant to the locality • existing performance levels of nearby intersections utilising appropriate traffic modelling methods (such as SIDRA network modelling).	Section 3.9 Section 5.7	Appendix Q
Details of the proposed development, including: • a map of the proposed access which identifies public roads, bus routes, footpaths and cycleways • vehicular access arrangements, including for service and emergency vehicles and loading/unloading, including swept path analysis demonstrating the largest design vehicle entering and leaving the site and moving in each direction through intersections along the proposed transport routes • car parking, bicycle parking and end-of-trip facilities • drop-off / pick-up zone(s)/arrangements • pedestrian or road infrastructure improvements or safety measures • loading and service facilities.		
Analysis of the impacts due to the operation of the proposed development, including: • proposed modal split for all users of the development including vehicle, pedestrian, cyclist, public transport and other sustainable travel modes • estimated total daily and peak hour vehicle, public transport, freight, service vehicle, cyclist and pedestrian trip generation for staff and visitors • a clear explanation and justification of the: - assumed growth rate applied - volume and distribution of proposed trips to be generated - type and frequency of vehicles accessing the site. • details of performance of nearby key intersections with the additional traffic generated by the development both at the commencement of operation and in a 10-year time period (using SIDRA network modelling or similar traffic model as required by TfNSW) • cumulative traffic impacts from any surrounding planned and approved development(s). • traffic and safety impacts of the proposed development on public transport (light rail and buses), pedestrian and cyclists, including at the proposed access and drop off / drop off zone(s) • adequacy of pedestrian, bicycle and public transport infrastructure (including bus network and Sydney light rail) to meet forecast demand of the development • adequacy of car parking and bicycle parking provisions for staff and visitors when assessed against the relevant car / bicycle parking codes and standards • adequacy of the drop-off / pick-up zone(s), including any related queuing • adequacy of the existing / proposed pedestrian infrastructure to enable convenient and safe access to and from the site for all users • adequacy and loading and servicing provisions to meet estimated daily and peak hour freight and servicing demand.	Section 5.7	Appendix Q
Measures to ameliorate any adverse traffic and transport impacts due to the development based on the above analysis, including: • travel demand management measures to encourage sustainable transport (such as a Green Travel Plan and / or specific Workplace Travel Plan) • infrastructure improvements, including details of timing and method of delivery • freight and servicing management measures to minimise transport network impacts (such as a preliminary Delivery and Servicing Management Plan).	Section 5.7 Section 7.0	Appendix Q
A preliminary operational traffic and access management plan		Appendix Q

Requirement	Location in Environmental Assessment	
Analysis of the impacts of the traffic generated during construction of the proposed development, including: • construction vehicle routes, types, volumes and swept path • construction program (duration and milestones) • on-site car parking and access arrangements for construction, emergency and construction worker vehicles • cumulative impacts associated with other construction activities in the locality • road safety at identified intersections near the site due to conflicts between construction vehicles and existing traffic, public transport (light rail and buses), pedestrians and cyclists in the locality • measures to mitigate impacts, including to ensure the safety of pedestrian and cyclists during construction.		Appendix Q
A preliminary Construction Traffic and Pedestrian Management Plan.		Appendix Q
Relevant Policies and Guidelines: • Guide to Traffic Generating Developments (Roads and Maritime Services, 2002) • EIS Guidelines - Road and Related Facilities (Department of Urban Affairs and Planning (DUAP), 1996) • Cycling Aspects of Austroads Guides • NSW Planning Guidelines for Walking and Cycling (Department of Infrastructure, Planning and Natural Resources (DIPNR), 2004) • Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments (Austroads, 2020) • Australian Standard 2890.3 Parking facilities, Part 3: Bicycle parking (AS 2890.3) • Australian Standard 2890.2 Parking facilities, Part 2: Off-street commercial vehicle facilities (AS 2890.2).		Appendix Q
6. Ecologically Sustainable Development (ESD)		
Detail: • how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) would be incorporated in the design and ongoing operation phases of the development • proposed measures to minimise consumption of resources, water (including water sensitive urban design) and energy • how the future development would be designed to consider and reflect national best practice sustainable building principles to improve environmental performance and reduce ecological impact. This should be based on a materiality assessment and include waste reduction design measures, future proofing, use of sustainable and low-carbon materials, energy and water efficient design (including water sensitive urban design) and technology and use of renewable energy.	Section 5.16	Appendix G
Include: • an assessment against an accredited ESD rating system or an equivalent program of ESD performance. This should include a minimum rating scheme target level • a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change • 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.		
Relevant Policies and Guidelines: • NSW and ACT Government Regional Climate Modelling (NARCliM) climate change projections.		
Heritage		
Provide a statement of significance and an assessment of the impact on the heritage significance of the heritage items adjacent to the site in accordance with the guidelines in the NSW Heritage Manual (Heritage Office and DUAP, 1996) and Assessing Heritage Significance (OEH, 2015)	Section 5.8	Appendix S
8. Aboriginal Cultural Heritage		
• Provide an outline of Aboriginal cultural heritage assessment that have been undertaken at the site and surrounding area, including identifying and describing the Aboriginal cultural heritage values that exist across the site. • Include details of consultation with Registered Aboriginal Parties that have been identified as part of previous SSD and AHIP approvals for the development area	Section 5.8	Appendix R

Requirement	Location in Environmental Assessment	
undertaken and documented in accordance with Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water, 2010). • Identify the impacts, including possible impacts, of the project on Aboriginal cultural heritage values and outline the measures proposed to mitigate impacts. The measures need to be consistent with the previous SSD and AHIP approvals. • Provide an outline of procedures to be followed if Aboriginal objects are found including Aboriginal burials or skeletal material) at any stage of the life of the project to formulate appropriate measures to manage impacts.		
9. Tree Removal and Landscaping		
Provide: • an arboricultural impact assessment, prepared by a Level 5 (Australian Qualifications Framework) Arborist in accordance with the Australian Standard 4970 Protection of trees on development sites (AS 4970), which details the number, location and condition of trees to be removed and retained and existing canopy coverage on-site • a detailed site-wide landscape strategy, that: - details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage - considers equity and amenity of outdoor spaces, and integration with built form, security, shade, topography and existing vegetation - considers impacts on utilities infrastructure - demonstrates how the proposed development would: o contribute to long term landscape setting in respect of the site and the streetscape o mitigate the urban heat island effect and ensure appropriate comfort levels on-site o contribute to objectives to increase urban tree canopy cover. • a detailed landscape plan prepared by a suitably qualified person.	Section 3.4	
10. Noise and Vibration		
Provide a noise and vibration impact assessment that: • includes a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation and construction • details the proposed construction hours and provide details of, and justification for, instances where it is expected that works would be carried out outside standard construction hours • includes a quantitative assessment of the main sources of operational noise, including consideration of any mechanical services (e.g. air conditioning plant) • outlines measures to minimise and mitigate the potential noise impacts on nearby sensitive receivers • considers sources of external noise intrusion and vibration in proximity to the site (including, road, light rail and aviation operations) and identifies building performance requirements for the proposed development to achieve appropriate internal amenity standards • demonstrates that the assessment has been prepared in accordance with polices and guidelines relevant to the context of the site and the nature of the proposed development.	Section 5.12	Appendix T
Relevant Policies and Guidelines: • NSW Noise Policy for Industry 2017 (NSW Environment Protection Authority (EPA) • Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009) • Assessing Vibration: A Technical Guideline 2006 (Department of Environment and Conservation, 2006) • Australian Standard 2363 Acoustics - Measurement of noise from helicopter operations (AS 2363).		
11. Social Impacts		
Provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020.	Section 5.15	Appendix W
Relevant Policies and Guidelines: • Draft Social Impact Assessment Guideline 2020 (Department of Planning, Industry and Environment).		

Requirement	Location in Environmental Assessment	
12. Contamination		
Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. This must include the following prepared by certified consultants recognised by the NSW Environment Protection Authority: • Preliminary Site Investigation (PSI) • Detailed Site Investigation (DSI) where recommended in the PSI • Remediation Action Plan (RAP) where remediation is required. This must specify the proposed remediation strategy • Preliminary Long-term Environmental Management Plan (LEMP) where containment is proposed on-site.	Section 5.17	Appendix K
Relevant Policies and Guidelines: • Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP, 1998) • Sampling Design Guidelines (EPA, 1995) • Guidelines for Consultants Reporting on Contaminated Sites (OEH, 2011) • National Environment Protection (Assessment of Site Contamination) Measure (National Environment Protection Council, as amended 2013).		
13. Contributions		
Identify: • any Section 7.11/7.12 Contribution Plans, Voluntary Planning Agreements or Special Infrastructure Contribution Plans that affect land to which the application relates or the proposed development type • any contributions applicable to the proposed development under the identified plans and/or agreements. Justification is to be provided where it is considered that the proposed development is exempt from making a contribution • any actions required by a Voluntary Planning Agreement or draft Voluntary Planning Agreement affecting the site or amendments required to a Voluntary Planning Agreement affected by the proposed development.	Section 5.19	
14. Staging		
Assess impacts of staging where it is proposed and detail how construction works and operations would be managed to ensure public safety and amenity on and surrounding the site.	N/A	
15. Infrastructure		
Identify the impacts of existing transport infrastructure (Sydney light rail) adjacent to the site on the proposed development, in particular on medical and laboratory equipment / apparatus, and any necessary mitigation measures.	Section 5.10	
16. Utilities		
In consultation with relevant service providers: • assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site • identify any infrastructure upgrades required off-site to facilitate the development and any arrangements to ensure that the upgrades will be implemented on time and be maintained • provide an infrastructure delivery and staging plan, including a description of how infrastructure requirements would be co-ordinated, funded and delivered to facilitate the development.	Section 5.17	
17. Stormwater Drainage		
Provide: • a preliminary stormwater management plan for the development that: - is prepared by a suitably qualified person in consultation with Council and any other relevant drainage authority - details the proposed drainage design for the site including on-site detention facilities, water quality measures and the nominated discharge point - demonstrates compliance with Council or other drainage authority requirements. • stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties.	Section 5.13	Appendix M
Where drainage infrastructure works are required that would be handed over to Council,		

Requirement	Location in Environmental Assessment	
provide full hydraulic details and detailed plans and specifications of proposed works that have been prepared in consultation with Council and comply with Council's relevant standards		
Relevant Policies and Guidelines: • Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH, 2013).		
18. Flooding		
• Identify any flood risk on-site in consultation with Council and having regard to the most recent flood studies for the project area and the potential effects of climate change, sea level rise and an increase in rainfall intensity • Assess the impacts of the development, including any changes to flood risk on- site or off-site, and detail design solutions to mitigate flood risk where required.	Section 5.13	Appendix M
Relevant Policies and Guidelines: • NSW Floodplain Development Manual (DIPNR, 2005).		
19. Soil and Water		
Provide • an assessment of potential impacts on surface and groundwater (quality and quantity), soil, related infrastructure and watercourse(s) where relevant • details of measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles • an assessment of salinity and acid sulphate soil impacts, including a Salinity Management Plan and/or Acid Sulphate Soils Management Plan, where relevant.		Appendix M
Relevant Policies and Guidelines: • Managing Urban Stormwater - Soils and Construction Volume 1 (Landcom, 2004) • Guidelines for development adjoining land managed by the Office of Environment and Heritage (OEH, 2013).		
20. Waste		
• Identify, quantify and classify the likely waste streams to be generated during construction and operation • Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste • Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. • Provide a hazardous materials survey of existing aboveground buildings that are proposed to be demolished or altered.	Section 5.14	Appendix U Appendix V
Relevant Policies and Guidelines: • Waste Classification Guidelines (EPA, 2014).		
21. Hazards and Risk		
Provide • a preliminary risk screening regarding all dangerous goods and hazardous materials associated with the development • a preliminary hazard analysis, if required.	Section 5.17	Appendix L
22. Biodiversity		
• Provide a Biodiversity Development Assessment Report (BDAR) that assesses the biodiversity impacts of the proposed development in accordance with the requirements of the Biodiversity Conservation Act 2016, Biodiversity Conservation Regulation 2017 and Biodiversity Assessment Method, except where a BDAR waiver has been issued in relation to the development or the development is located on biodiversity certified land. • Where a BDAR is not required because a BDAR waiver has been issued in relation to the development, provide: - a copy of the BDAR waiver and demonstrate that the proposed development is consistent with that covered in BDAR waiver - an assessment of flora and fauna impacts where significant vegetation or flora and fauna values would be affected by the proposed development.	Section 5.17	Appendix X
Plans and Documents		
The EIS must include all relevant plans, architectural drawings, diagrams and relevant		This EIS

Requirement	Location in Environmental Assessment	
documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents. Any plans and diagrams included in the EIS must include key dimensions, RLs, scale bar and north point.		
In addition to the plans and documents required in the General Requirements and Key Issues sections above, the EIS must include the following:		
Section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate)		Appendix EE
Design report to demonstrate how design quality would be achieved in accordance with the above Key Issues including: • architectural design statement • diagrams, structure plan, illustrations and drawings to clarify the design intent of the proposal • detailed site and context analysis • analysis of options considered to justify the proposed site planning and design approach • summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice • summary report of consultation with the community and response to any feedback provided.		Appendix C Appendix D
Geotechnical and Structural Report		Appendix Y Appendix BB
Sediment and Erosion Control Plan		Appendix M
Accessibility Report.		Appendix AA

2.0 Site Analysis

2.1 Site Context and Location

The site is located approximately 6 kilometres from the Sydney Central Business District, within the Randwick LGA and is located approximately 4km from Sydney Airport. **Figure 4** provides a regional context map of the site showing its location in relation to the Sydney CBD and surrounding centres.

The site forms part of the existing RHIP which includes the POWH and UNSW Kensington Campus. The RHIP is developing into one of Australia's leading centres for health and wellbeing with the intention of becoming an economic and innovation driver for Sydney through the integration of health, education and research.

The RHIP includes the POWH, the SCHN, the Royal Hospital for Women and Eastern Suburbs Mental Health Service, as well as ancillary and associated facilities in palliative care, mental health intensive care unit, ambulatory and community heath.

The CBD and South East Light Rail service runs along High Street directly north of the site and provides connections from the Sydney CBD to Kensington and Kingsford.

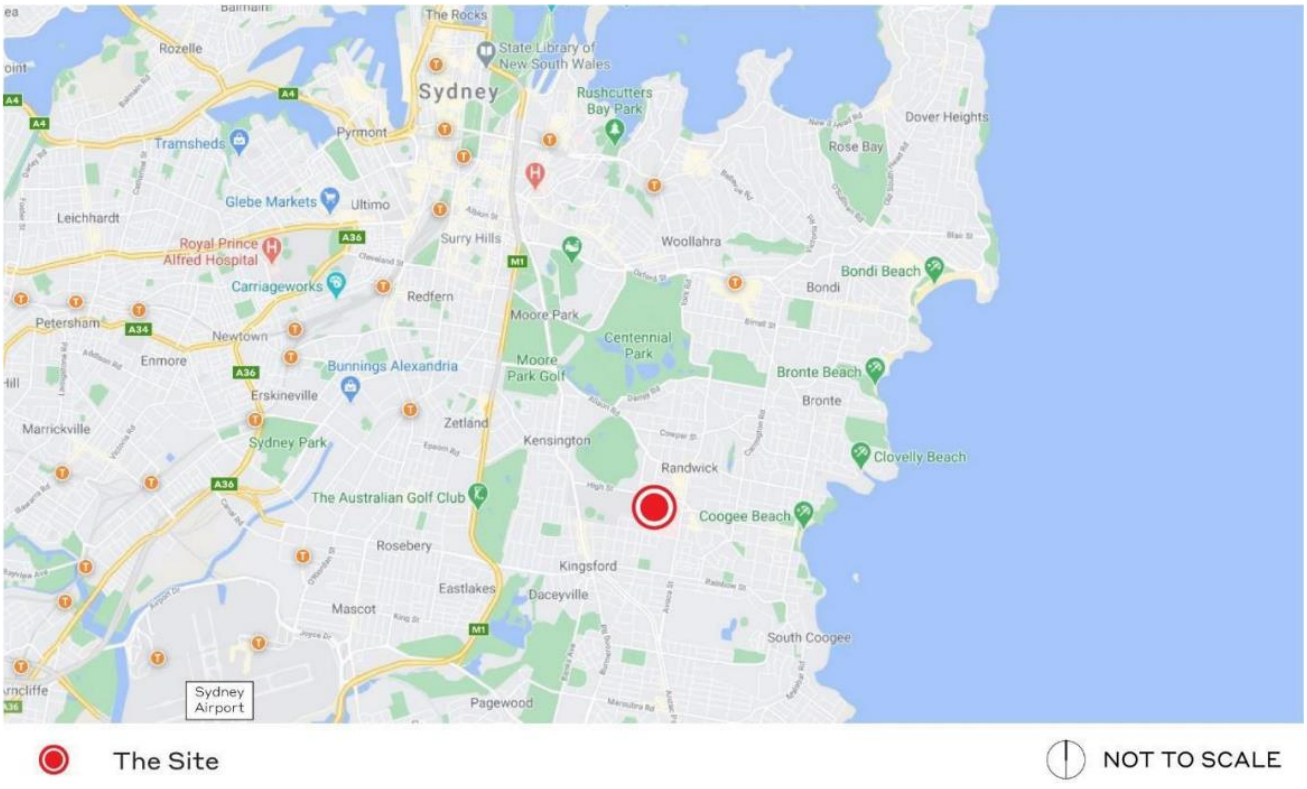

Figure 4 – Site context

Source: Google Maps and Ethos Urban

2.2 Site Description

The site is located on the corner of High Street and Botany Street. It forms the north-west portion of the block bound by High Street to the north, Hospital Road to the east, Magill Street to the south and Botany Street to the west. This block sits in between the existing POWH and the UNSW Kensington Campus (**Figure 5**).

For the purposes of this application, the site also extends to the existing Wallace Wurth Building (Lot 1 in DP 510271) which is located to the west of the site on the UNSW Kensington Campus. The proposed pedestrian footbridge will extend from the UNSW HTH over Botany Street, and will connect into the Wallace Wurth Building (refer to **Section 3.0**).

The site comprises 35 existing lots, reflecting the site's former residential use. The site is legally described as:

- Lot 1, Deposited Plan 510271
- Lots 3 – 14, Deposited Plan 12909
- Lots 1 – 7, Deposited Plan13997
- Lot 1, Deposited Plan 300666
- Lots A and B, Deposited Plan 439756
- Lots A – D, Deposited Plan 440501
- Lots X and Y, Deposited Plan 445567
- Lots 1 and 2, Deposited Plan 590480
- Lot 32, Deposited Plan 667518
- Lot A, Deposited Plan 167106
- Lot B, Deposited Plan 167106
- Lot A, Deposited Plan 441943
- Lot B, Deposited Plan 441943

We also note a draft Stratum subdivision plan has been prepared by TSS (refer to **Section 3.11** and **Appendix E**) to create a new lot within the airspace over Botany Street (bringing the total number of lots to 36). This new lot is proposed as part of this SSDA.

At the time of writing, these lots (excluding Lot 1 in DP 510271 being the Wallace Wurth Building) are in the process of being amalgamated.

The site is regularly shaped and has an area of 8,897 sqm with the following frontages (approx.):

- 62m along High Street;
- 132m along Botany Street;
- 50m along the southern boundary; and
- 135m along the eastern boundary.

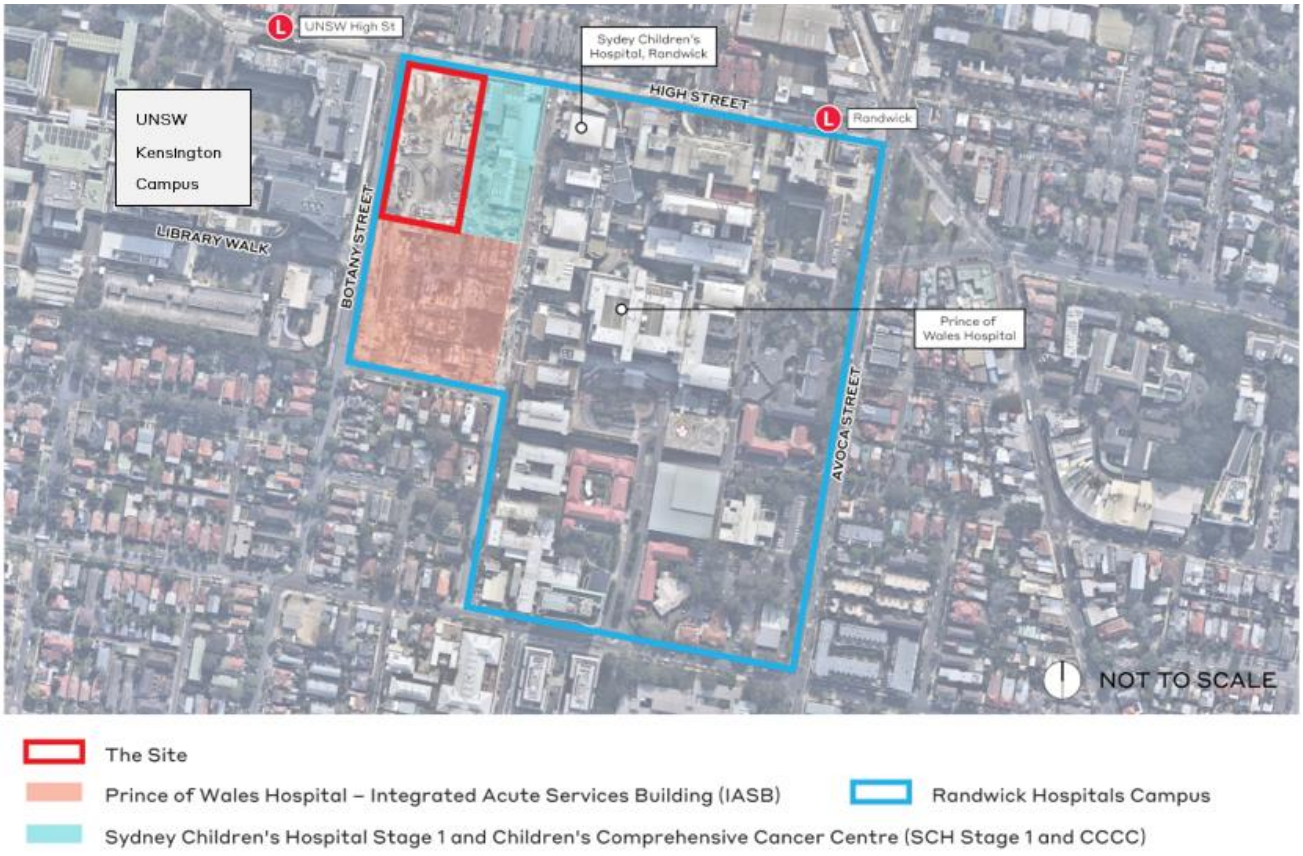

Figure 5 – Aerial photograph of the site

Source: Nearmaps and Ethos Urban

2.3 Land Ownership

The land is owned by NSW HAC.

2.4 Existing Development

The site is currently being used as a construction site compound in support the construction of the IASB to the south (which includes an approved addition of 5,000sqm for use by UNSW). The site is shown at **Figure 6**.

Figure 6 – The site (looking east)

Source: Ethos Urban

2.5 Topography

The site falls from the north-east to the south-west at an average grade of approximately 2.5%.

2.6 Vegetation

The land is significantly altered and does not contain any vegetation or habitat, having been subject to site preparation and early works as part of the wider redevelopment of the block.

2.7 Easements

Adjacent to the site, along the High Street and Botany Street frontages, runs a 6-metre wide stormwater and sewage easement.

2.8 Flooding

The site is located within a flood zone and (as part of the broader block) receives runoff from the urban area to the north, which pools at the lower eastern points of the site. The flood level on High Street is RL 55.738 and a 500mm freeboard is required to habitable spaces.

2.9 Road Network, Access and Parking

The existing hospital campus is bound by Avoca Street to the east, High Street to the north, Botany Street and Hospital Road to the west, and Magill Street and Barker Street to the south. High Street provides access to Anzac Parade to the west which allows vehicular movements north to the Sydney CBD, as well as south, east and west. Existing basement car parking is available within the RHC, accessible via Barker Street and Hospital Road. Parking is available on the UNSW Kensington Campus for staff, students and visitors.

2.10 Public Transport

The Sydney Light Rail has two stops in proximity of the site on High Street, providing frequent direct services to the Sydney CBD and Kensington.

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 and Maroubra Junction, as well as express services between the UNSW Kensington Campus and Central Station.

2.11 Surrounding Development

The land surrounding the site is predominantly urban in nature, being located in the centre of the RHIP. Further detail regarding the development surrounding the site is provided below.

- **To the North**: Land to the immediate north (across High Street) contains exiting low and medium density residential development between one and four storeys (refer to **Figure 7**).
- **To the East**: Land to the immediate east is the neighbouring SCH Stage 1 and CCCC redevelopment site which will be physically connected (at podium level) to the proposed development as well as the IASB. Like the site, this land is currently being used as a construction site compound in support the construction of the IASB to the south (refer back to **Figure 8**).
- **To the South**: Land to the immediate south is currently subject to construction works for the IASB (approved under SSD-9113 on 27 Feburary 2019 and expanded under SSD-10339 (approved 18 December 2019)). The IASB comprises a 13-storey building with overhead pedestrian links and helipad, with associated road upgrade works to Botany Street and Magill Street. Land further south beyond Magill Street contains existing low density residential housing (refer to **Figure 8** to **Figure 10**).
- **To the West**: Land to the immediate west (across Botany Street) contains the eight-storey Wallace Wurth building which forms part of the existing UNSW Kensington Campus (refer to **Figure 11**) with the remainder of the UNSW Kensington Campus beyond.

Figure 7 – Existing residential to the north (across High Street)

Source: Ethos Urban

Figure 8 – Under construction IASB (looking south east)

Source: Ethos Urban

Figure 9 – Under construction IASB (broader context, looking south east)

Source: Ethos Urban

Figure 10 – Existing low density residential housing along Magill Street

Source: Ethos Urban

Figure 11 – Existing UNSW Wallace Wurth building (looking south from High Street)

Source: Ethos Urban

3.0 Description of the Development

This section of the report provides a detailed description of the proposed development. Architectural Drawings have been prepared by Architectus and are included at **Appendix A**.

This SSDA seeks approval for the following development:

- Enabling works (including interim works) including site preparation and excavation;
- Construction and operation of a new 15 storey health education and research building with a total GFA of 35,600 sqm:
  - Purpose-built spaces for health educators and researchers to work alongside clinicians;
  - Sizeable floor plates for health translation research focused work with physical connections to the SCH Stage 1 and CCCC and wider RHC;
  - Dedicated facilities for the CCCC directly linking the UNSW HTH with the SCH Stage 1 and CCCC;
  - An education hub, including education and training rooms allowing hospital staff to educate and train UNSW medical students;
  - Facilities for education, training, research, seminars and industry events;
  - Clinical schools;
  - Ambulatory care clinics including in neurosciences, public and population health; and
  - Supporting facilities including retail premises.
- Pedestrian link bridges (and associated tree pruning) connecting the UNSW Kensington Campus to the Randwick Hospital Campus, via the Wallace Wurth building to the UNSW HTH and through to the SCH Stage 1 and CCCC;
- Landscaping and public domain works, including the creation of over 2,500 sqm of new publicly accessible open space within the eastern portion of the site, sitting between the UNSW HTH and the SCH Stage 1 and CCCC redevelopment;
- Building signage;
- Stratum subdivision; and
- Services and utilities augmentation.

Indicative concept images of the proposed development are shown at **Figure 12** and **Figure 13**.

Figure 12 – Indicative concept image of the proposed development (view looking south from High Street)

Source: Architectus

Figure 13 – View of the UNSW HTH from within the landscaped open space, looking south

Source: Architectus

3.1 Development Principles and Urban Design Principles

The principles and urban design outcomes identified by Architectus for the proposal are summarised below (refer to **Appendix A** and **Appendix C**):

3.1.1 Project Principles

- **People** – Create a place which is welcoming to all who research, teach and study which characteristics of openness, transparency and optimism;
- **Production** – Provide a construction solution which has minimal impacts on the significant functions and sensitive activities of surrounding development within the Precinct;
- **Landmark** – Design a strong architectural and landscape response to provide a distinctive and optimistic building with a landmark identity to mark the gateway between health and education uses within the Precinct;
- **Innovative** – Provide shared spaces to support collaborative work environments to promote cross pollination of knowledge;
- **Integrated and continuous** – Provide public domain and active street level uses which provide seamless and active connections to existing and proposed facilities within the Precinct;
- **Adaptable** – Create open and flexible floor plates which can adapt to changing requirements in technology, education and research;
- **Permeable, open and transparent** – Create a ground floor which will showcase health and educational activities, allowing the community to engage with the development physically and visually; and
- **Planet** – Ensure a design which minimises environmental impacts.

3.1.2 Urban Design Principles

- **Public Plaza**. A central space which celebrates the connection between the UNSW HTH and the SCH Stage 1 and CCCC by providing places for people to engage both actively and passively;
- **A continuous ground plane**. Create a continuous ground plane that is civic in nature, an extension of the public domain and provides inclusive spaces for all;
- **A connected and permeable public domain**. Create site permeability with public through-site links that respond to pedestrian traffic and future and existing neighbouring development;
- **Active edges**. Provide continuous and activated edges at street level with retail and active social uses to provide amenity and activation;
- **Key entry statements**. Develop key entry points (the north-west and south-west corner) to provide a considered, grand and recognisable entry;
- **Landmark urban design**. Create a form and design which provides a street level and regional landmark response to the RHIP;
- **Optimised core location**. Strategic positioning of the core to maximise the street activation, permeability, transparency and delivery of an exceptional plaza space;
- **High Street response**. Create a building form which connects the street wall by stepping down from the SCH Stage 1 and CCCC site to the Wallace Wurth Building, while aligning to the underside of both neighbours to create a consistent street level datum;
- **Botany Street response**. Provide a podium height which aligns with the adjacent neighbours to create a consistent datum; and
- **Isolate vehicular entry**. Limit vehicular entry for the UNSW HTH, IASB and the SCH Stage 1 and CCCC to a single shared entry to maximise street frontages for pedestrian movement.

3.2 Numerical Overview

The key numeric development information is summarised in **Table 2**.

Table 2 – Key development information

Component	Proposal
Site area	8,897 sqm
GFA	35,600 sqm
FSR	4.02:1
Maximum height	RL 125.5 (69m approx.)
Staff	495
Car parking spaces	0
Bicycle parking spaces	125 bicycle storage spaces
Loading spaces	• 5 x spaces for vans / utes; • 1 x space for 12.5m heavy rigid vehicle; and • 1 x space for 8.8m medium rigid vehicle.

3.3 Site Preparation

The site has been cleared and is devoid of any development or vegetation. It has been subject to some site preparation and early works (including heritage assessment, heritage investigations and discovery) associated with the broader development of the block.

Minor excavation works will be required (to a depth of RL 50.210) to accommodate the single basement level.

3.4 Tree Removal and Tree Planting

The site is devoid of any trees and therefore the application does not propose the removal or retention of any trees. Two existing trees are located across the site on the Botany Street frontage of the Wallace Wurth Building which is proposed to be pruned to accommodate the proposed above ground pedestrian footbridge (refer to Arborist Report at **Appendix DD** and **Section 5.17**).

Compared to current conditions, the UNSW HTH proposal will include the planting of 65 new trees, and 21 street trees, generating an overall canopy coverage of:

- 14% for within the site;
- 69% for the public domain; and
- 21% total site.

3.4.1 Remediation

No approval is sought for remediation works. Previous contamination investigations at the site have included preliminary and detailed site investigations for larger areas including the site and partial remediation has already been undertaken for part of the site.

A Preliminary Site Investigation for contamination, Remediation Action Plan and an Unexpected Finds Protocol has been prepared to guide (refer to **Section 5.17** and **Appendix K**) development on the site and development will be undertaken in accordance with the recommendations of these documents.

3.5 The Health Translation Hub

3.5.1 Built Form Outcome

Building Height and Massing

The UNSW HTH has a height of 15 storeys, or 69m (RL 125.5). The design drivers behind the proposed height and massing is elaborated below and **Appendix A**.

The building comprises a double-height ground floor, a podium form and a tower form. The massing strategy seeks to maximise the provision of a public plaza and public open space, which will unite the Precinct. To deliver this, the proposed UNSW HTH has an elegant, slender tower form that has enabled the provision of over 2,500sqm of publicly accessible open space. This form reinforces the sense of openness at the ground plane.

The podium component has a height of 6 storeys (RL 83.2) and is of a scale which responds to the surrounding height context of neighbouring development.

The proposed massing was derived from the following key principles:

- Providing an integrated and continuous public domain with a meaningful public plaza between the UNSW HTH and SCH Stage 1 and CCCC (and therefore the need to position density vertically into a slim tower form, which frees-up the ground plane);
- Supporting the creation of a landmark architectural response commensurate with the attributes of the site and significance of the RHIP;
- Providing adaptable floor plates which maximise flexibility and are malleable to different health and education related uses over time;
- Creating an overall permeable ground plane across the entire site to create a sizeable and inviting public domain for the RHIP and broader community which provides a considered response to solar access and wind;
- The need for a podium connection (to support pedestrian access) between the UNSW HTH and SCH Stage 1 and CCCC;
- To align the tower and podium heights to neighbouring development and provide an overall contextual response to existing and future planned development;

- Consolidated vehicular connections and integration with surrounding development; and
- Respecting the PAN-OPS height plane.

The abovementioned massing principles have established the key built form parameters, which have been refined through the articulation strategy and finer-grain massing of the UNSW HTH (refer to **Figure 14** and **Appendix C**).

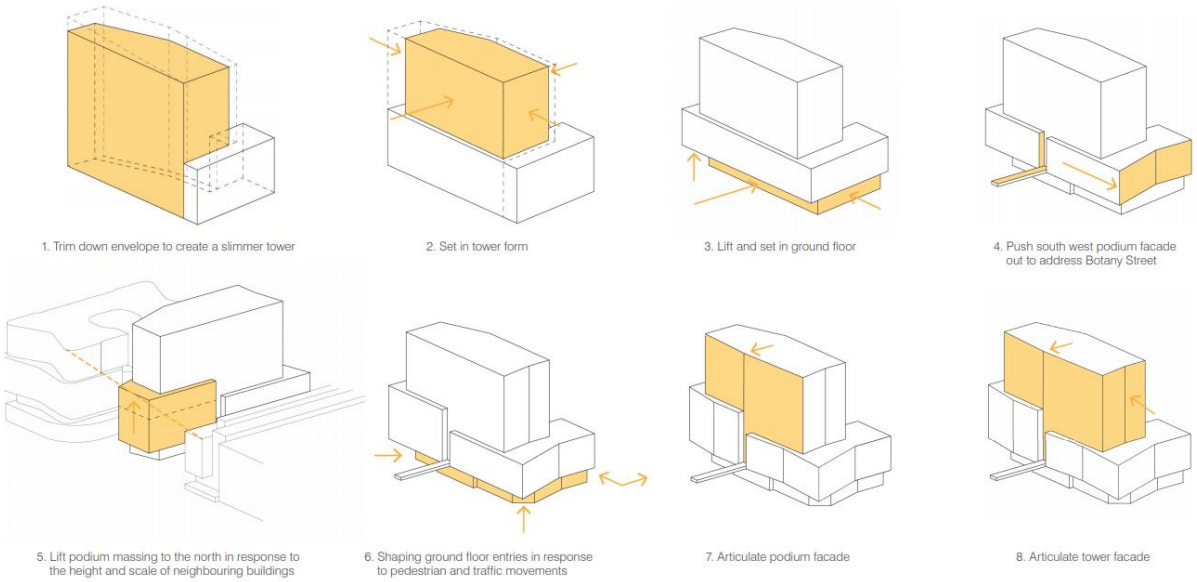

Figure 14 – Building articulation strategy

Source: Architectus

Building Setbacks

The proposed setbacks are summarised in **Table 3**.

Table 3 – Proposed setbacks

Building element	Proposed setbacks (m)			
	North	East	South	West
Ground floor	9.4m	6.8 – 26.3m	31.8m	5.9 – 9.4m
Podium	5.9m	6 – 24.1m	24.9 – 31.9m	3.6 – 7.7m
Upper building	16m	26.2 – 35.4m	40.4 – 43.1m	7.6 – 9.9m

Source: Architectus

Main Entrance and Atrium

The UNSW HTH has been designed with a permeable ground plan to encourage movement to and through the Precinct. The UNSW HTH has four distinct building entries, which have been designed to draw pedestrians into the building from primary points of approach, including:

- High Street (coming from the Light Rail stop and bus stops along High Street);
- Botany Street (coming from bus stops and UNSW Kensington Campus);
- UNSW Plaza (public domain space); and
- SCH/IASB/POWH.

The corners of the UNSW HTH have been deliberately designed to pull in at the main entries to provide a covered entrance. Generous stairs create a civic approach that negotiates level changes of the site and provides a space for sitting and gathering. Integrated ramps have been provided at key locations to facilitate through-site links and to provide equitable and accessible entry.

Starting from the ground floor, the atrium connects four levels within the UNSW HTH podium (Ground Floor to Level 03). This will provide public access to the clinical, education and research spaces via a central stair. The stairs, which will be designed as a feature within the atrium, have been intentionally located centrally on the western edge of the building to provide clear legibility for users upon entry into the UNSW HTH via the northern and southern entries (refer to **Figure 15**).

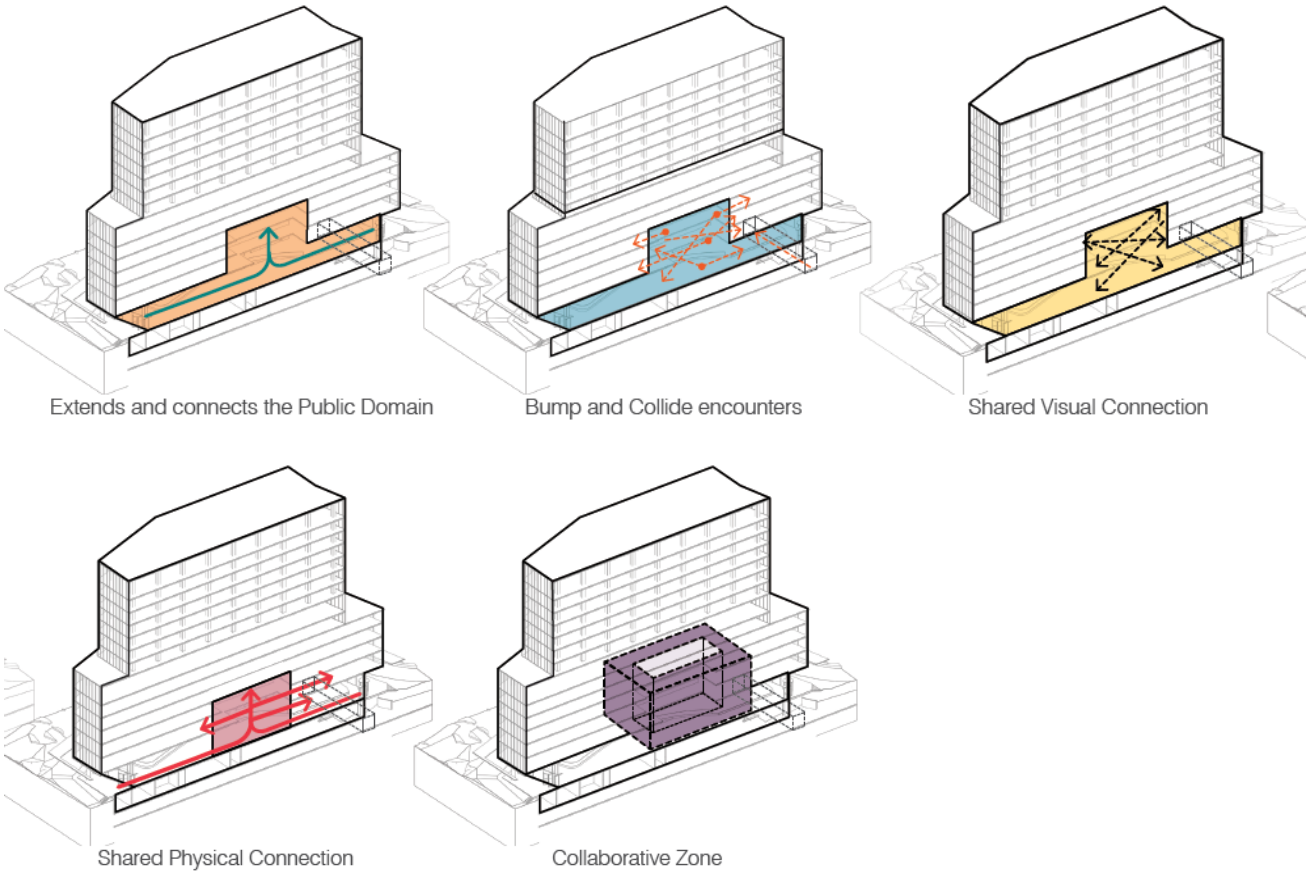

Figure 15 – Atrium design principles

Source: Architectus

Ground Floor Retail

One retail tenancy is proposed at ground level of the UNSW HTH. The tenancy is indicatively located in the north-east corner of the ground floor to support activation of High Street and the new public domain - (the UNSW Plaza).

Pedestrian Link and Botany Street Bridge

To enhance pedestrian connectivity across the RHIP, the UNSW HTH proposes raised connections to both the existing UNSW Kensington Campus to the west (across Botany Street) as well as the future SCH Stage 1 and CCCC proposed to the immediate east of the site (refer to **Figure 16** and **Figure 17**). Both will be essential in connecting education and health uses within the Precinct.

The pedestrian bridge to the UNSW Kensington Campus is proposed to extend across Botany Street from Level 2 of the UNSW HTH and will connect into the existing Wallace Wurth Building (refer to **Figure 17**). It will have a clearance height of 9m and will be enclosed by glazing.

Connections to the SCH Stage 1 and CCCC will occur between Levels 2-4 in the south-east corner of the UNSW HTH. The pedestrian link will connect the CCCC tenancies and other UNSW HTH users within both buildings.

Stratum subdivision is proposed to accommodate the new pedestrian bridge across Botany Street (refer to **Section 3.11**).

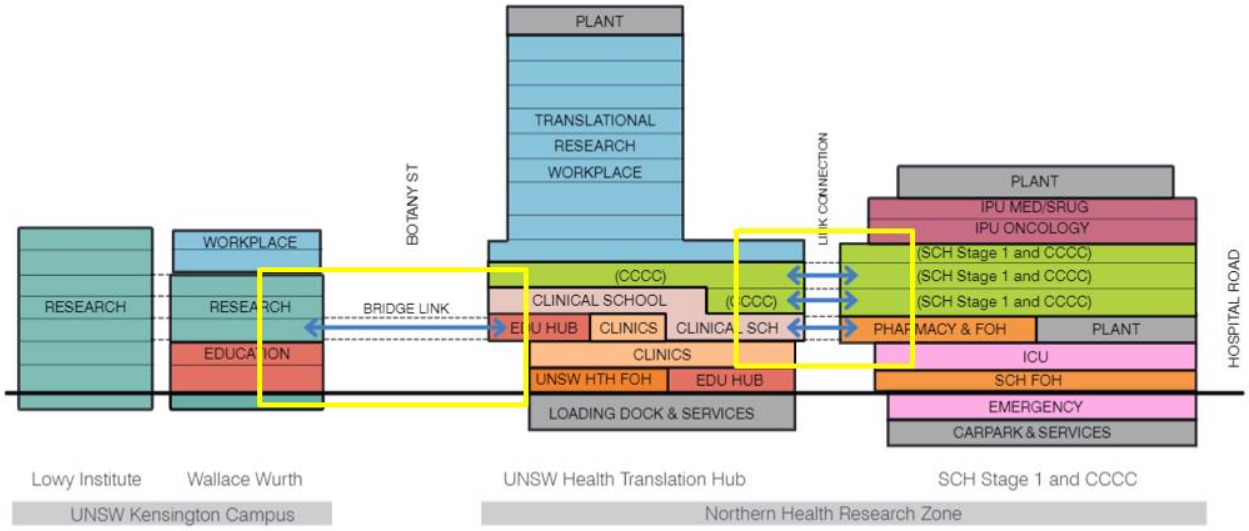

Figure 16 – Indicative campus stack diagram (pedestrian links from the UNSW HTH emphasised in yellow outline)

Source: Architectus

Figure 17 – Proposed pedestrian connections (identified in red outline)

Source: Architectus

3.5.2 Use and Operation

Hours of Operation

The UNSW HTH will operate between 8:00am to 6:00pm Monday – Friday. At other times, access will require swipe key access by UNSW authorised key holders.

Land Use and Floor Space by Level

The UNSW HTH will house a combination of academics and researchers, students, health practitioners and members of the public. The spatial arrangement of uses within the building is intended to support collaboration and the cross pollination of knowledge between the building's different users. The proposed breakdown of uses per level is shown in **Table 4** and **Figure 18**.

Table 4 – Summary of users and floor space by level

Level	Use	GFA (sqm)
Level 14	Translational Research Workplace	967
Level 13		2,045

Level	Use	GFA (sqm)
Level 12		2,045
Level 11		2,045
Level 10		2,045
Level 9		2,045
Level 8		2,014
Level 7		1,123
Level 6		2,511
Level 5		3,598
Level 4	Children's Comprehensive Cancer Centre	3,619
Level 3	Children's Comprehensive Cancer Centre, Clinical School	3,382
Level 2	Clinical School, Educational Hub, Clinics	3,388
Level 1	Clinics	1,508
Ground	Education Hub, Retail	2,658
Basement	Loading Dock, End of Trip, Plant	809

Source: Architectus

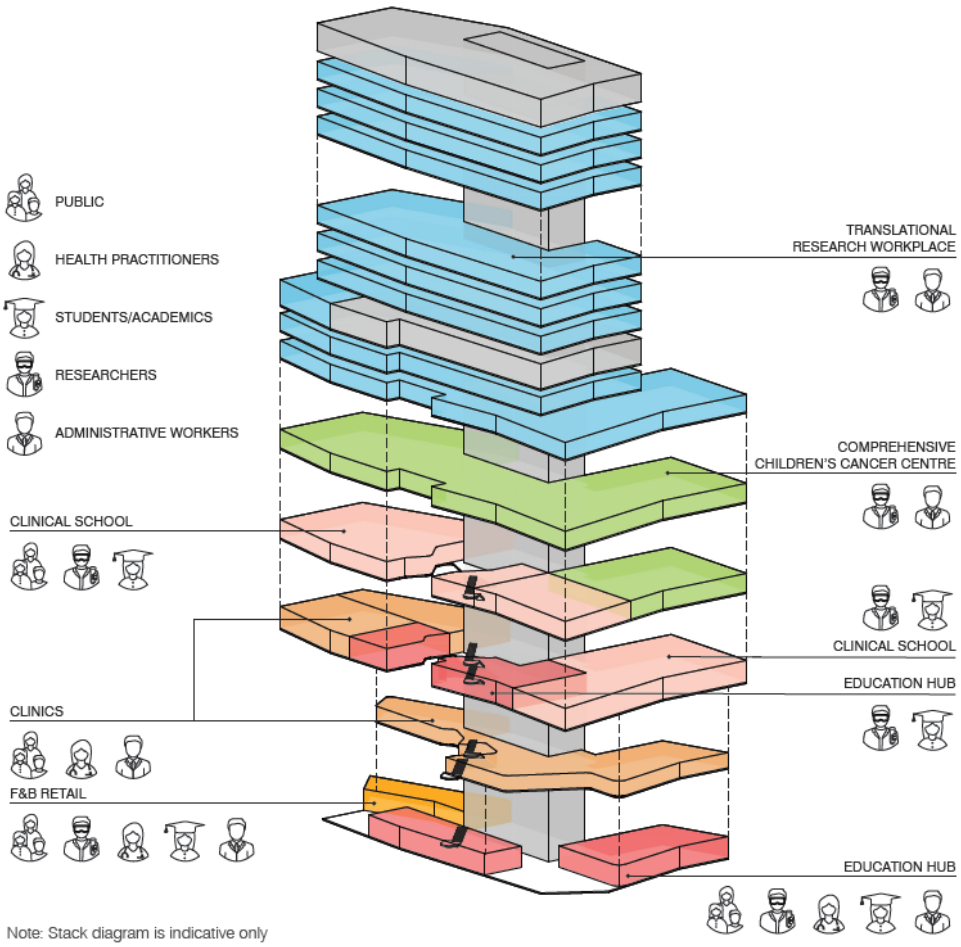

Figure 18 – Indicative building users

Source: Architectus

3.6 Façade, Materials and Finishes

The ground floor façade approach is focused on transparency and full-length glazing to support the notion of engagement, permeability and inclusion, as well as navigation through and around the building.

The podium and tower elements utilise a 'solar hood' design which includes a sculpted passive solar shading solution which includes a curved solar hood, solid panel and vision glazing (refer to **Figure 19**). The tower façade conceals the solid panels with further glazing to provide a consistent glazed form.

The proposed materiality includes a combination of light masonry finishes (aligning to the sand dunes of the Eastern Suburbs), opaque elements with an earthy toned mullion and glazing system. A summary of the location and type of materials proposed is provided in **Figure 20**.

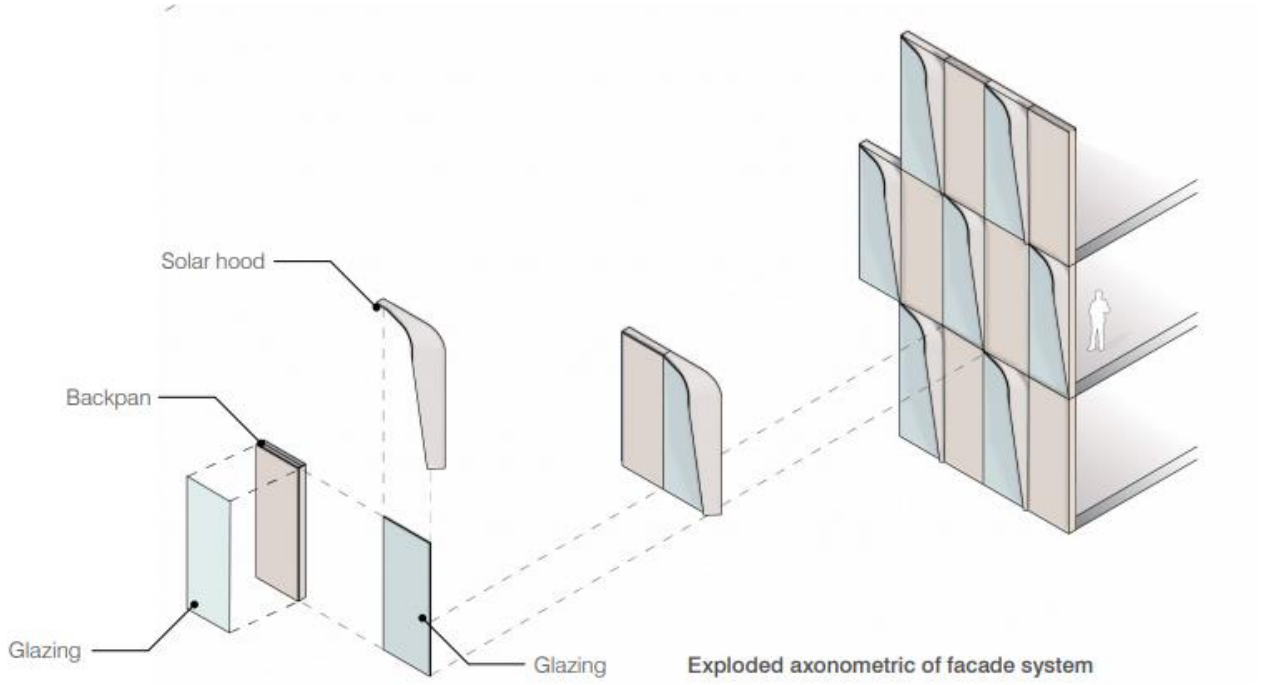

Figure 19 – Proposed façade system

Source: Architectus

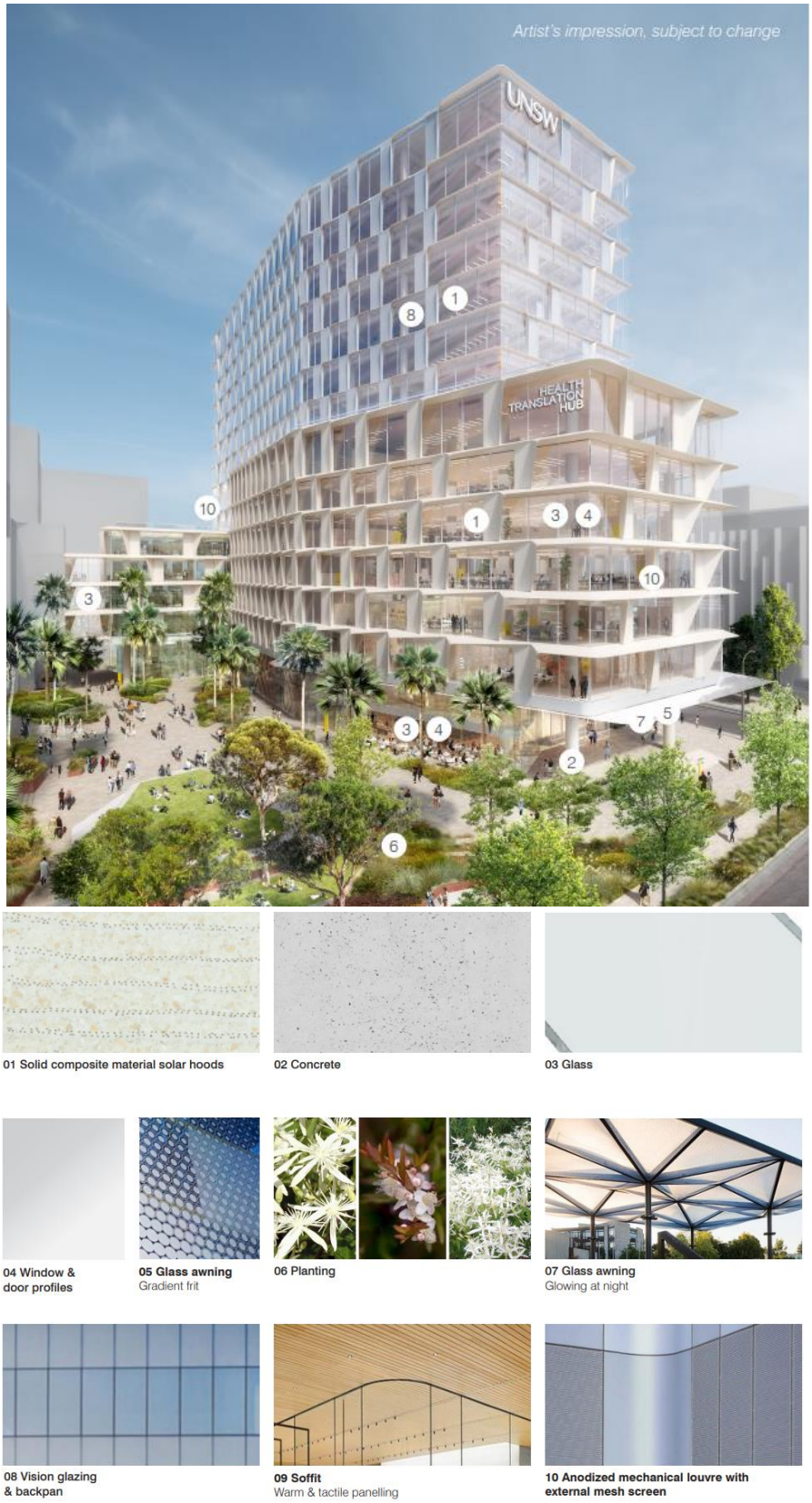

Figure 20 – Indicative materiality

Source: Architectus

3.7 Signage

A total of eight (8) signs are proposed:

- 3 x top of building signs (1625mm x 6260mm);
- 2 x podium signs (7210 x 2550mm); and
- 3 x welcome totem signs (2400mm high).

The signage has been placed at key corners of the building on the northern, western and southern façades, and will assist with regional and local wayfinding.

The signs comprise the 'UNSW' name, fabricated from individually illuminated letters. The podium sign will comprise the building name, 'Health Translation Hub', and will provide way finding for pedestrian on High Street and Botany Street. The signage will be fixed to the façade using horizontal rails, and will be integrated into the facade design to ensure legibility, ease of installation and a seamless aesthetic across all elevations.

Signage plans are provided in **Appendix A**.

3.8 Landscape and Public Domain

The landscaping and public domain has been developed by Aspect Studios (who are also designing the public domain for SCH Stage 1 and CCCC), and is based on a series of spaces to celebrate the connection between the UNSW HTH and the adjoining SCH Stage 1 and CCCC, with a series of spaces for people to engage both actively and passively (refer to **Figure 21** and **Appendix C**). This includes:

- **The UNSW Plaza,** including:
  - **Central** and **Breakout Space**. Located in between the UNSW HTH and adjoining SCH Stage 1 and CCCC, the spaces are proposed as open and flexible areas with a number of different zones to provide open and transitional space, as well more intimate spaces.
  - **The Northern Space**. Located to the north of the Central Space, the Northern Space provides a response to High Street and provides a treatment to the level change between the site and the street. The Northern Space provides raised lawn spaces, planting and embedded seating for informal meeting and rest.
- **Botany Street Interface**. This interface will provide a dense lower understorey, strappy plants and tree canopy. Private cantilevered platforms will extend outwards from the UNSW HTH adjacent the 4m wide share path and public seating.
- **Gate 11 Entry**. Providing a key entry into the UNSW HTH and UNSW Plaza, the Gate 11 entry will provide building access and access to end of trip facilities, integrated into the landscape embankment fronting Botany Street.

The proposed landscaping and public domain also includes:

- Tree canopy coverage to help mitigate the urban heat island effect and contribute to the enhanced biodiversity on the site;
- Recognition of Aboriginal Cultural Heritage through landscape design. The UNSW HTH has the opportunity to be an extraordinary healing landscape, by which it unites the precinct's public domain, responds to the site's indigenous heritage and connects the building users to and around them through using the Country as medicine. The connection to Country, the experience of a cultural landscape brings both mental and physical wellbeing, and central to this is the plant landscape containing food and medicinal species.
- Integrated deep soil zones to support a folding landscape interface between the Northern Space and the streetscape, integrated water sensitive urban design principles and soil volumes that will support generous plant and tree species;
- A consistent ground plane surface treatment, clear view lines and glazed through-building facades to support site permeability and to increase the sense of openness, publicness and accessibility; and
- A non-access controlled public domain to truly provide a public offering around the UNSW HTH.

Figure 21 – Proposed landscape site plan

Source: Aspect Studios

3.9 Access and Parking

3.9.1 Car Parking

UNSW adopts a campus wide approach to parking (as opposed to a building-by-building approach) and car parking for UNSW HTH occupants will be accommodated within the existing parking at the UNSW Kensington Campus. The proposed UNSW HTH does not include car parking for its occupants within the basement of the UNSW HTH. The HTH occupants will be accommodated on the UNSW Kensington Campus, including the UNSW Botany Street parking station directly across the road from the UNSW HTH.

3.9.2 Loading

A total of five (5) basement spaces will be provided for loading and services. In addition, the basement will also provide space for one (1) 12.5m heavy rigid vehicle and one (1) 8.8m medium rigid vehicle.

3.9.3 Botany Street Pick-up and Drop-Off Area

A short-term vehicle pick-up and drop-off area (approximately 20m long) is proposed along Botany Street (refer to **Figure 22**). It is intended to accommodate three (3) vehicles at any one time for taxi or ride-share vehicles. The bay will be signposted to mandate five minute parking and prohibit long-term parking.

The pick-up/drop-off area will be signposted and not indented from the street (so as to ensure tree retention along Botany Street), positioned at a minimum 50m from the future Botany Street/Gate 11 intersection (associated with the IASB development) so as to not interfere with its performance.

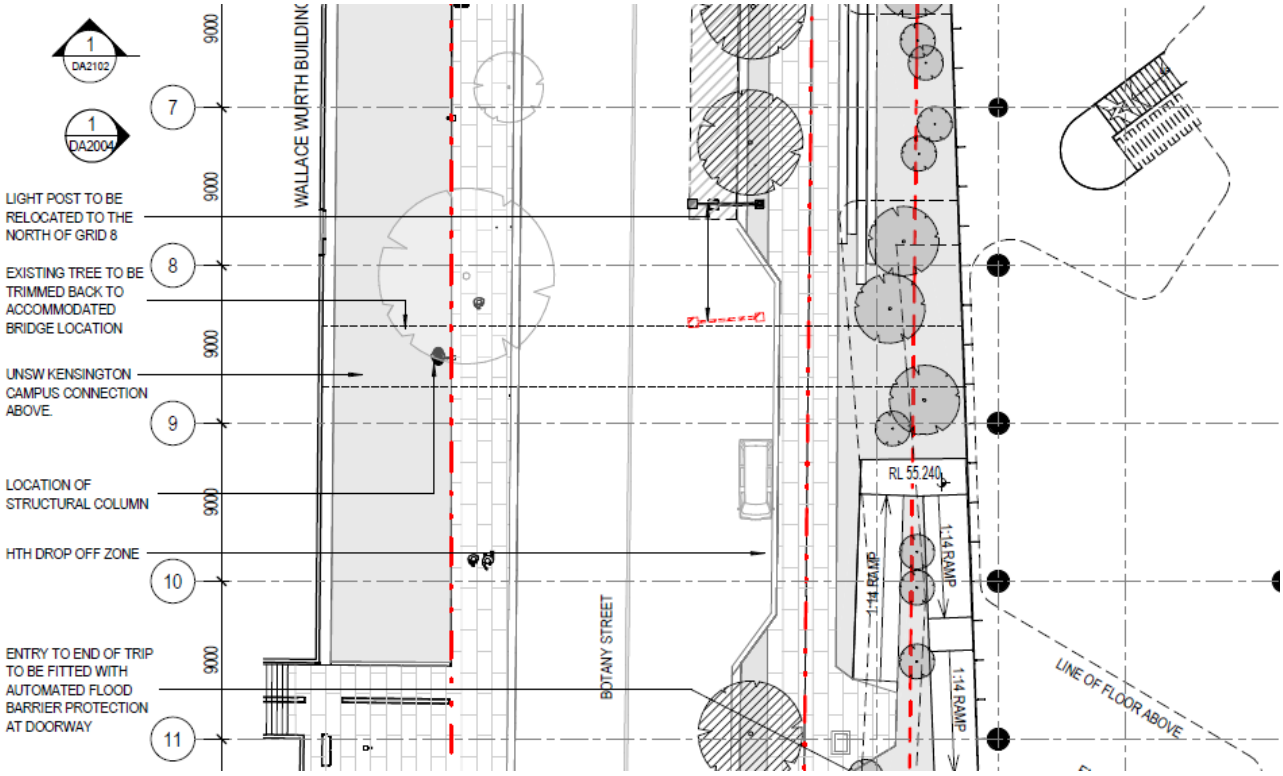

Figure 22 – Proposed Botany Street pick-up and drop-off

Source: Architectus

3.9.4 Shared Access Arrangements and Independent Access Arrangements

Vehicle Access

The new vehicle entry from Botany Street at Gate 11 (being delivered by HI as part of the IASB works currently under construction (SSD-9113)) will provide access to the UNSW HTH basement, as well as shared access to the IASB and SCH Stage 1 and CCCC (refer to **Figure 23**). It will give access to:

- The UNSW HTH basement;
- The SCH Stage 1 and CCCC Emergency Department on Level 1;
- The SCH Stage 1 and CCCC basement car park; and
- The IASB drop-off.

As a result, even though the internal roadways and ramps extend onto the UNSW HTH site, they do not form part of the scope of this SSDA and will be approved and constructed by HI as part of the SCH Stage 1 and CCCC development. It is intended that the Botany Street/Gate 11 intersection (approved under SSD 9113) will be operational by 2022, prior to commencement of construction on the UNSW HTH.

Independent Access

An independent solution has been prepared to enable access to the UNSW HTH (refer to **Appendix A**). It allows independent access to the UNSW HTH from the Botany Street entry, connecting to the internal road that is being

constructed as part of the IASB project. This has been prepared for the unlikely event that the UNSW HTH is developed prior to construction of the SCH Stage 1 and CCCC, or if construction of the SCH Stage 1 and CCCC does not eventuate. In the unlikely event that the independent access is required, it would be in place until the SCH Stage1 and CCCC is constructed. The independent access would not conflict with any features along the site boundary.

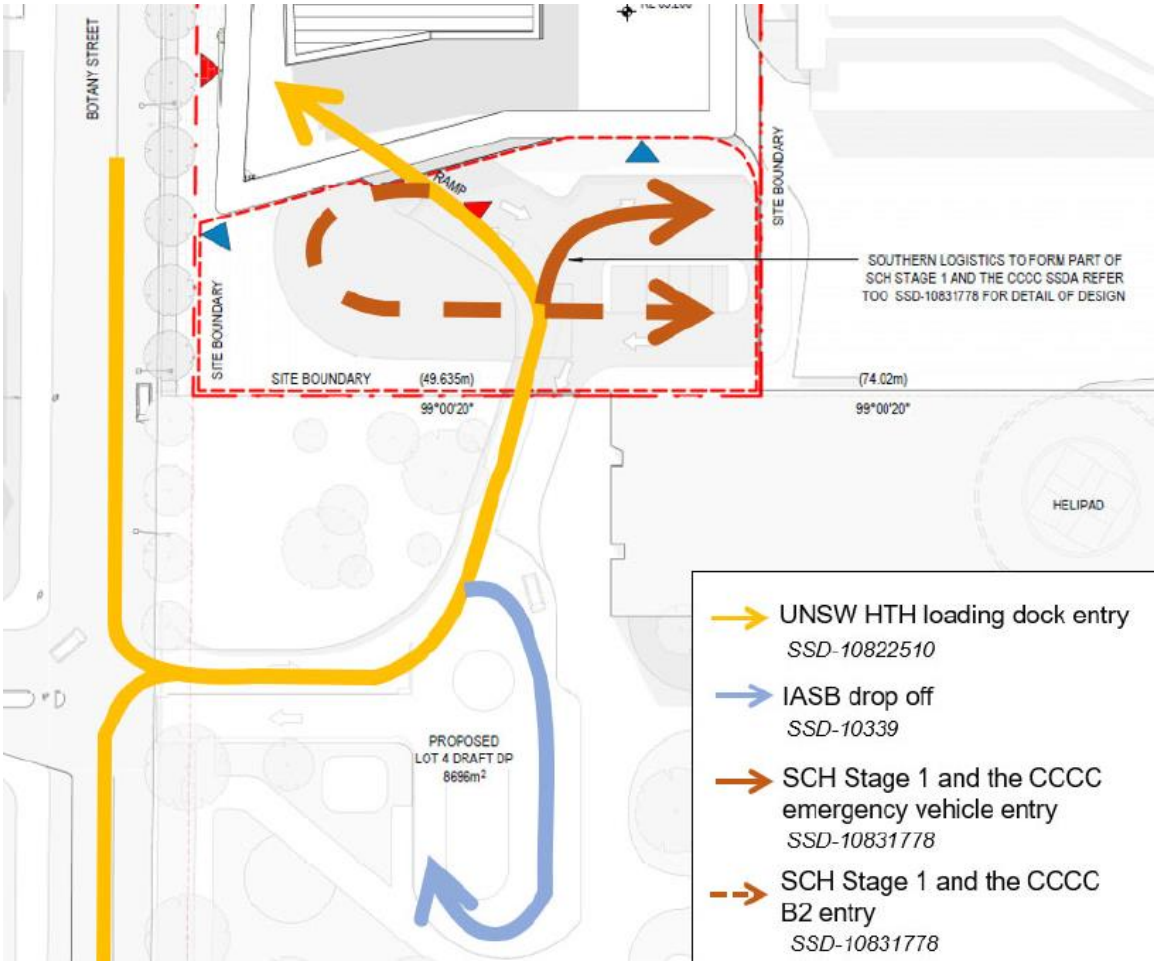

Figure 23 – Proposed access from Botany Street (to be approved and constructed by HI as part of the SCH Stage 1 and CCCC development)
Source: JMT Consulting

3.10 Bicycle Parking and End of Trip Facilities

Bike parking and end of trip facilities are provided on Basement Level 1. An internal bike ramp is accessed from Botany Street and takes riders into the Basement, where there are bicycle facilities (tire pump, workstands) and storage racks, as well as shower and change facilities.

The End of Trip and bicycle parking facilities are shown at **Appendix A** and include:

- 125 bicycle storage spaces in a variety of bike storage methods to suit all users;
- Male and female facilities with 10 showers and 120 lockers (each);
- Three (3) gender neutral facilities; and
- Male and female accessible facility.

3.11 Stratum Subdivision

A draft Stratum subdivision plan has been prepared by TSS (refer to **Appendix E**) to create a new lot within the airspace over Botany Street. The lot boundaries correspond with the location and configuration of the proposed pedestrian link. Specifically, the Stratum subdivision seeks to create a new Lot 1 with an upper limit of RL68.85 and a lower limit of RL54.9.

The proposed subdivision arrangement is shown graphically at **Figure 24**

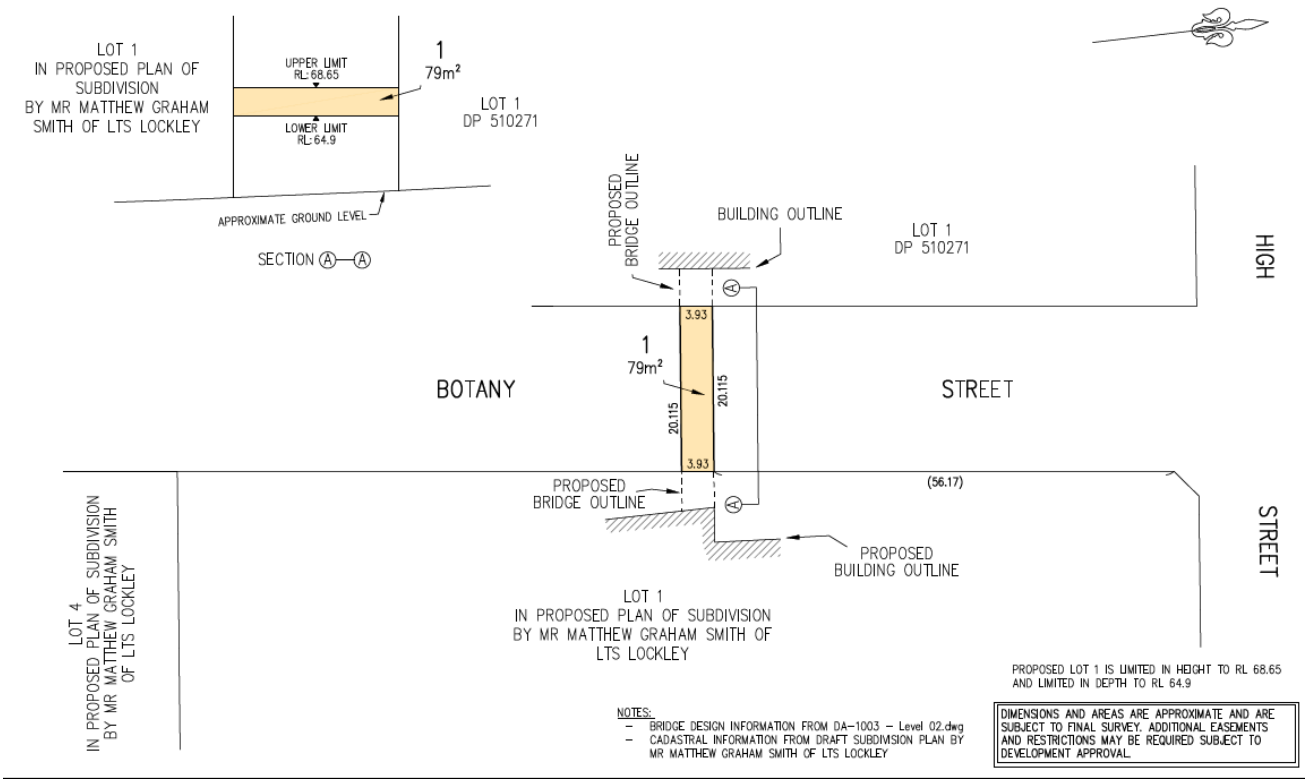

Figure 24 – Draft plan of subdivision

Source: TTS

3.12 Lighting Strategy

All external lighting will be designed and documented in accordance with Australian Standards and UNSW Design and Construction Requirements. An external Lighting Strategy has been prepared by Arup (refer to **Appendix F**) to ensure that lighting can support a safe environment in and around the UNSW HTH, while generating an elegant and interesting environment. Lighting has also been designed to minimise light spill impacts to surrounding residential uses.

The key elements of the lighting strategy include:

- Building entries will be illuminated through internal and external light schemes;
- Illumination of external walkways across the public domain through a combination of pole, wall and or bollard luminaries. Luminaries will be integrated across the boundaries of the site to the SCH Stage 1 and CCCC to provide seamless integration as well as complement the proposed landscaping scheme to create interest and encourage use after sundown;
- Decorative accent and feature lighting to improve the pedestrian experience, to assist wayfinding and provide visual cues to architectural significance; and
- Efficient LED lighting will be utilised throughout the UNSW HTH.

3.13 Environmentally Sustainable Development

The proposal will incorporate Environmentally Sustainable Development (ESD) strategies and principles (refer to **Appendix G**). The project is seeking an energy performance which is equivalent to a NABERS Energy rating of 5.5 Star and a Green Star Design and As Built 5 Star equivalency to benchmark the HTH's environmental performance against an established rating system. In particular, the following initiatives will be incorporated into the proposed development:

- Utilisation of Water Sensitive Urban Design features;

- Use of high efficiency water fittings and fixtures;
- Installation of a rainwater capture tank to retain water for non-portable uses including toilet flushing;
- Bicycle parking facilities in line with Green Star Movement and Place minimum requirements; and
- Landscape cooled naturally through vegetation, especially trees with substantial canopy.

3.14 Infrastructure and Services

An Infrastructure Management Plan has been prepared by Arup and is provided at **Appendix H**. The report finds the following relating to services for the proposal.

3.14.1 Electricity

The existing UNSW HTH site does not have existing utility electrical connections.

The UNSW HTH development will be supported by Ausgrid infrastructure. A preliminary load assessment has been undertaken, which has indicated that the UNSW HTH will require two (2) Ausgrid substations. The building will operate as an LV customer, with 400V connections being made from the utility substations to the main switch rooms in the building. The site will have a total firm capacity of 4MVA.

New incoming 11kV feeders will be reticulated in-ground from the existing conduits running in-ground north/south along Botany Street. The incoming conduits will reticulate across the UNSW HTH basement loading dock area to supply the two (2) Ausgrid substations.

A Level 3 Accredited Service Provider has been appointed and has documented and submitted a preliminary enquiry to Ausgrid. However, an application for connection has not yet been submitted to Ausgrid. It is not appropriate to apply for the connection until the next design stage.

3.14.2 ICT Services

The UNSW HTH site does not have existing utility or private UNSW ICT incoming connections.

The existing UNSW Kensington Campus has a large network of private ICT cabling pathways providing connections across the campus to all UNSW buildings.

The UNSW HTH will be supported by the existing UNSW Kensington Campus ICT infrastructure, with ICT services from the existing campus to be extended to the UNSW HTH via new dual reticulation pathways via in-road conduits. These works will be provided during the traffic signal installation / intersection works (as part of a separate package of works).

No ICT utility consultations have been undertaken as the works are interfacing with private UNSW ICT assets.

3.14.3 Hydraulic and Fire Services

Potable Water

There are Sydney Water Assets in both High Street and Botany Street, comprising:

- High Street:
  - 150mm cast iron cement lined (CICL) main.
- Botany Street:
  - 150mm cast iron cement lined (CICL) main; and
  - 750mm steel cement lined internal bitumen lined (SCL IBL) main.

The current proposal is to connect the domestic water to the 150mm water main in High Street, however there is also the option of supplying water from the Botany Street water main, if required.

Fire Services

The current proposal is to connect to Sydney Water's 150mm water main in Botany Street, near the proposed fire booster location.
While the existing water mains in High and Botany Streets appear to be adequate to service the proposal, preliminary discussions with Sydney Water have revealed some concerns regarding the age and reliability of some of the sections of the water mains in and around the site.

There is a possibility that an upgrade of the water main in High Street (from Clara Street to High Street) may be required. This will be confirmed once the Water Services Coordinator (WSC) has been engaged and a formal feasibility application has been submitted Sydney Water.

Natural Gas

The following existing Jemena gas mains surround the site:

- High Street:
  - 75mm 210kPa distribution main and 150mm high pressure 1050kPa secondary main
- Botany Street:
  - 75mm 210kPa distribution main and 150mm high pressure 1050kPa secondary main

The current proposal is to connect the 210kPa gas main in High Street. Arup expects the existing Jemena infrastructure to be of sufficient size and capacity to be able to support the natural gas loads for the UNSW HTH.

Sanitary Drainage

There is an existing Sydney Water 375mm glass reinforced plastic (GRP) sewer main extending through the site. This main was installed approximately 12 months ago as part of diversion works associated with the IASB project. A sewer sideline was provided as a future connection for the UNSW HTH and SCH Stage 1 and CCCC.

The sewer main has been recently installed and sized to cater for the proposed UNSW HTH and SCH Stage 1 and CCCC developments and therefore no upgrades are expected.

3.15 Construction Timing and Staging

The USW HTH is expected to be delivered in a single stage. Construction works are anticipated to commence 2024 (commencing with site establishment works) and completed by late 2026.

3.16 Construction Hours of Works

The preferred hours of construction are listed below. These hours are intended to mitigate impacts to surrounding hospital and university uses, mitigate traffic impacts while providing an efficient construction program.

- 7.00am to 6.00pm Monday to Friday;
- 8.00am to 5.00pm Saturday (consistent with the approved IASB and SCH Stage 1 and CCCC proposal); and
- No work on Sundays and Public Holidays.

A Preliminary Construction Management Plan has been prepared by Buildcorp and is provided at **Appendix I**.

3.17 Job Creation

During the construction phase, the UNSW HTH will generate approximately 450 jobs.

During operation, the UNSW HTH will accommodate a range of users, including UNSW staff and staff from research institutions, as well as industry partners such as The George Institute and LHD Clinicians.

Ongoing job creation associated with the UNSW HTH takes into consideration that a large number of occupants are being relocated from the Existing Kensington Campus, and in the case of research institutions and industry

partners, from other locations around Sydney. On this basis, the UNSW HTH will generate 495 full-time equivalent operational jobs.

4.0 Consultation

In accordance with the SEARs issued for this project, consultation was undertaken with relevant public authorities, the community and Council. A Consultation Outcomes Report prepared by Ethos Urban is provided at **Appendix J** and provides detail of the consultation undertaken, feedback received, and responses made by the team.

The consultation approach has aimed to deliver genuine engagement and building upon the relationships established through the ongoing delivery of the Randwick Campus redevelopment. The implementation of this approach is guided by the following objectives:

- Satisfy all statutory and stakeholder requirements with respect to public information and consultation throughout the planning process;
- Ensure UNSW acts as a 'good neighbours' delivering to high quality outcomes as part of the University's longstanding commitment to the RHC; and
- Provide clear, timely and accessible information, as well as opportunities for key stakeholders and the community to comment and provide feedback on the project.

Several consultants have undertaken additional consultation with relevant parties during the preparation of their reports. A brief summary of the consultation undertaken to-date with Council, the community and relevant agencies is provided below.

To help ensure stakeholders have the opportunity to learn more about the UNSW HTH project, as well as ask questions of the project team, further engagement activities are scheduled to be carried out in early 2021. These include, but are not limited to:

- Pop-up information sessions on the UNSW Kensington Campus and digital communications.
- Ongoing consultation and liaison with agencies and the relevant authorities.
- Pop-up information sessions within the Randwick Hospitals Campus.
- Further door-knocking to those who are located to the north of the site.
- Further engagement with local Indigenous groups and Land Council.

4.1 UNSW Community

Since late 2018, UNSW has continued to inform both staff and students on the early design and project status of the UNSW HTH.

Channels utilised include the Randwick Campus Redevelopment staff forums (attended by staff from the Prince of Wales, Sydney Children's and Royal Women's Hospital and UNSW), *Inside UNSW*- the University's all staff newsletter, faculty specific newsletters, direct email, and pop-up information sessions.

UNSW has also consulted with individuals, teams and various groups across campus to inform design, opportunity for industry engagement, integration of education, and how to enhance collaboration.

4.2 Local Residents

Understanding the close proximity of residential dwellings to the project site, UNSW, in conjunction with HI, recognise the importance of engaging neighbouring residents. The purpose of these activities is to:

- Engage local residents and capture their feedback;
- Build robust relationships with local residents, businesses and the community;
- Provide clear, timely and transparent communications to residents;
- Provide a clear pathway for engagement with key stakeholders and the community; and

- Ensure concerns and benefits that are raised are noted and appropriately addressed in a timely manner.

To help provide channels and forums in which this community can engage with the project, UNSW will work in collaboration with HI and provide the appropriate representation for their planned engagement activities.

These include:

- Regular door knocks and letterbox drops led by Health Infrastructure Community Engagement Officer and UNSW representative conducted in line with COVID 19 physical distancing measures.
- Face to face or virtual meetings by appointment with the project team
- Information booths on the Randwick Hospitals Campus and UNSW Kensington Campus (as required)
- Provision of project information factsheets
- Project updates to inform the community project update to 10,000 local residents
- Flyers
- Randwick Campus Redevelopment website – web copy, factsheets and FAQs

4.3 Wider Health Precinct – SESLHD, SCHN, MRIs and Other Key Health Partners

Recognising the crossover of audiences between the UNSW community and the wider health precinct community, UNSW understands the importance of coordination and alignment with any engagement activities to the wider health precinct.

4.4 Authorities and Agencies

Consultation has also been undertaken with:

- The Sydney Coordination Office within Transport for NSW
- Randwick City Council;
- Government Architect;
- Ausgrid;
- Heritage Council NSW; and.
- La Perouse Local Aboriginal Land Council.

In relation to the La Perouse Local Aboriginal Land Council, UNSW, as part of the broader RHIP activity, has worked alongside HI to build relationships with the La Perouse Local Aboriginal Land Council with respect to the expectations of the Indigenous Community for the construction of the UNSW HTH.

UNSW will continue to engage with the UNSW Indigenous community throughout the development of the UNSW HTH project and intends to consult in a continuous and meaningful way throughout the planning, construction and delivery phases.

4.5 Engagement Feedback

A summary of engagement is provided in **Table 5**.

Table 5 – Consultation summary

Theme	Details	Stakeholder/s	UNSW Response
Transportation / movement	Has the rise in student accommodation being provided on campus contributed to an increase in the walking mode share?	Transport for NSW	Partially yes, however the rise in walking as a mode of transport to the campus is more a result of students and staff living in surrounding suburbs compared to previous years.

Theme	Details	Stakeholder/s	UNSW Response
			It is noted that student accommodation is not proposed as part of the UNSW HTH development.
	What does the number of heavy vehicles generated by the UNSW HTH building represent as a percentage increase when compared to existing traffic movements on Botany Street?	Transport for NSW	Up to 10 heavy vehicle movements are forecast during peak hours by the UNSW HTH building. This low figure is not expected to impact the operation of the road network, however the proportional increase in heavy vehicle flows on Botany Street can be provided as part of the SSD documentation.
	Given the single traffic lane on High Street there may be a tendency for truck drivers to drift onto the tram tracks when entering or exiting the construction site. An over-sized vehicle driveway should be provided to minimise the risk of this occurring	Transport for NSW	Noted and agreed – this will be considered as part of our construction pedestrian traffic management plan to be submitted as part of the SSD application (see section 7.6 of this document)
	Travel demand (including parking demand) will have reduced due to online learning provided at UNSW, partly triggered by COVID	Transport for NSW	Noted and agreed.
	Pedestrian bridge across Botany Street should have a clearance height sufficient to accommodate buses and over-size vehicles	Transport for NSW	Noted, the current design makes provision for this by including the bridge link at Level 2 with a clearance height of approximately 9m which is more than sufficient to accommodate large vehicles.
	The resolution of levels including vehicular, service and pedestrian access at the southern end of the site remains unconvincing. Provide sections and 3D diagrams to clearly illustrate the quality of spaces, linkages, permeability and access.	Government Architect NSW	Noted.
	Demonstrate how accessibility will be achieved, indicating locations of ramps and stairs and illustrating how these will integrate with the overall landscape and central plaza.	Government Architect NSW	Noted.
	Traffic safety issue on Botany Road and Barker Street.	Local residents	Noted. Information about traffic management plan to be communicated to residents.
Parking	What is the basis for determining the number of service vehicle bays within the basement?	Transport for NSW	Surveys of similar sized buildings were used to forecast the number of service vehicle movements to the UNSW HTH building. Based on these expected movements, the number of service vehicle bays (5) was deemed to be suitable.
	How many drop off bays will be provided on Botany Street?	Transport for NSW	Current planning envisages space for approximately three vehicles within the drop off / pick up area on Botany Street
	Will the UNSW HTH provide any car parking	Randwick City Council	UNSW noted that they are adopting the same approach to parking as they do across the remainder of the UNSW Kensington Campus. I.e. not providing any additional parking. Users

Theme	Details	Stakeholder/s	UNSW Response
			will be able to use the UNSW Botany St car park.
Design	Topography of the site (which steps up from High Street and Botany Street to deal with flood levels) and how we're mitigating that both in terms of the experience at street level and how to activate the ground plane	Randwick City Council	Essentially, the public domain on High Street will be stepped up to create a 'headland' with usable spaces/seating etc. Along Botany Street, there will be a landscaped embankment. The ground plane will be activated with retail uses
	Asked about solar access impacts to the south	Randwick City Council	There will be some impact due to the orientation of the UNSW HTH. However, this space to the south is not intended as a dwell space, rather it its more of a transitory space
	Asked how high the building was in comparison to the UNSW Library	Randwick City Council	The UNSW HTH is approximately 2-3 storeys higher than the UNSW Library. The site sits at a topographic high point
	Impact to easement	Randwick City Council	UNSW noted that the design does not impact the easement on High and Botany Streets
	Ensure desired integration of the UNSW HTH and Sydney Children's Hospital projects is achieved through creation of integrated design development and masterplan drawings.	Government Architect NSW	Noted.
	Illustrate the edge conditions on either side of the central plaza, noting transparency and permeability of the building facades is required to create active edges.	Government Architect NSW	Noted.
	Clarify and illustrate the connection from the central plaza along the southern end, clearly indicating the quality of space and pedestrian amenity envisioned.	Government Architect NSW	Noted.
	Clarify and illustrate proposed security lines at all edges of the site, noting permeability and 24/7 access to public spaces should be maintained.	Government Architect NSW	Noted.
	Prioritise solar access and wind mitigation to the central plaza, potentially by sculpting the building form in response to climatic conditions.	Government Architect NSW	Noted.
Sustainability	Investigate and incorporate further opportunities for ESD such as green roofs, energy generation, water capture and reuse and demonstrate how these will drive building forms and architectural expression in a whole-of-site approach.	Government Architect NSW	Noted.
Public domain	The focus on landscape as a unifying element of the public domain is commended and should be prioritised.	Government Architect NSW	Noted.
	Clarify the proposed height, bulk, scale and massing of the development, including benchmarks for surrounding sites and	Government Architect NSW	Noted.

Theme	Details	Stakeholder/s	UNSW Response
	proposed public domain benefits in exchange for exceedance of controls		
RCR Connectivity	Questions around connections between new buildings (UNSW HTH and SCH) and UNSW HTH and UNSW campus	Randwick City Council	UNSW HTH has bridge connections to both
	Further develop and illustrate the overall vision for connectivity at the ground plane and upper levels between the UNSW HTH and the Sydney Children's Hospital building adjacent	Government Architect NSW	Noted.
	Provide large sections across the site in both East/West and North/South directions to illustrate resolution of levels and connections to ensure the permeability envisioned by the site plan can be realised.	Government Architect NSW	Noted.
	Integration between UNSW HTH and other buildings.	Randwick Campus Redevelopment Staff Forum	The UNSW HTH will functionally and physically connect from UNSW Sydney to the SCH Stage 1 and CCCC.
Aboriginal Cultural Heritage	Provide details of how the connection to Country and expression of Aboriginal Cultural Heritage will be made evident throughout and integrated with the built forms: for example, using place naming, landscape, materials, plant selection, art installations/murals, wayfinding devices, paving, colour, texture and so on.	Government Architect NSW	Noted.
Construction / Delivery	What is the overlap in construction between SCH Stage 1 and CCCC and the UNSW HTH building?	Transport for NSW	The potential overlap is yet to be determined at this stage as the detailed design and construction programs for each development under currently still being finalised. UNSW and HI will continue to work closely to discuss potential overlaps and implications around staging.
	Concerns around impact of current construction works on neighbouring residents (including vibration, dust, noise)	Local residents	Noted.
End of Trip Facilities	Strongly support the proposal for access for cyclists to bicycle parking and end of trip facilities to be separated from vehicle access	Transport for NSW	Noted – this is a core element of the building design
Project Overview	What is the Health Translation Hub?	Randwick Campus Redevelopment Staff Forum	The UNSW HTH will bring together educational and medical researchers, clinicians, educators, industry partners and public health officials to drive excellence, and support the rapid translation of research, innovation and education into improved patient care, delivering better health outcomes to the community.
	What does translation mean?	Randwick Campus Redevelopment Staff Forum	Translation refers to how health innovations and research outcomes are transformed into health care policy and practice. Translation centres or hubs such as this one (proposed in this application), are often leading centres of

Theme	Details	Stakeholder/s	UNSW Response
			excellence and exemplify collaboration in health and medical research infused with education and training. The UNSW Health Translation Hub emphasises the links between the UNSW Kensington and the Randwick Hospitals Campus and the desire to establish pathways and partnerships that accelerate the translation of research across all disciplines into new approaches of patient care.

Further discussion on the meetings held and outcomes is provided in **Appendix J**.

The proposed development will be placed on public exhibition in accordance with clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the project.

5.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the proposed SSD DA. It addresses the matters for consideration set out in the SEARs (see **Section 1.5**). The Mitigation Measures at **Section 7.0** complement the findings of this section.

5.1 Relevant EPIs, Policies and Guidelines

The relevant strategies, environmental planning instruments, policies and guidelines as set out in the SEARs are addressed in **Table 6**.

Table 6 – Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

Instrument/Strategy	Comments
Strategic Plans	
Premier's Priorities	The proposed development is consistent with the Premier's Priorities in that it: • Supports a strong economy through job growth (450 construction jobs and 495 ongoing jobs); and • Will support high quality education opportunities through the co-location of health, research and education related facilities which in turn will contribute to improved hospital treatment and service levels.
State Infrastructure Strategy 2018	The proposed development is consistent with the State Infrastructure Strategy by: • Integrating land use and infrastructure planning by providing new development which can leverage off the site's proximity to the South-East Light Rail; and • Providing state of the art facilities to create greater efficiencies and improved operation. The proposed development forms part of a coordinated investment in the growth of the RHIP, to support population growth, improved health and education outcomes and change.
Future Transport Strategy 2056	The Future Transport Strategy 2056 sets the 40-year vision, directions and outcomes framework for customer mobility in NSW, which will guide future transport investment over the long term. The supporting plans provide further detail on customer outcomes or place-based planning documents to guide the Strategy's implementation. The proposed development is consistent with the Strategy by delivering an integrated health, education and research facility in a highly accessible location. The proposal does not prevent the objectives of the Strategy from being achieved.
Sydney Green Grid	The RHIP forms part of the Randwick, Centennial Park and Eastlakes opportunity cluster (CD.1.6). Within this cluster, there is a focus on leveraging off the South East Light Rail corridor and improving the public domain, enhancing nearby open space and pedestrian connections to this rail corridor. The proposed development is consistent with this vision as it provides a new public domain plaza and publicly accessible open space in immediate proximity to this rail corridor.
Healthy Urban Development Checklist	The proposed development is consistent with the Healthy Development Checklist because: • It provides a significant area of public open space to meet the needs of future users and visitors;

Instrument/Strategy	Comments
	• It encourages alternative transport options (such as walking and cycling) by providing no additional car parking and looks to leverage off its immediate proximity to the South East Light Rail; • It provides employment which can be serviced by public transport and concentrates employment within an existing and growing employment cluster; and • Supports access to high quality education and health related services.
A Metropolis of Three Cities – Greater Sydney Region Plan	The proposed development is consistent with the following objectives of the Greater Sydney Region Plan. • *Objective 1 – Infrastructure supports the three cities* • *Objective 5 – Benefits of growth realised by collaboration of governments, community and business* • *Objective 12 – Great places that bring people together* • *Objective 21 – Internationally competitive health, education, research and innovation precincts* • *Objective 30. Urban tree canopy cover is increased* • *Objective 31 – Public open space is accessible, protected and enhanced* • *Objective 33 – A low-carbon city contributes to net-zero emissions by 2050 and mitigates climate change*
Eastern City District Plan	The Eastern City District Plan sets out the strategic direction for the Eastern District and reflects the priorities outlined in A Metropolis of Three Cities. The key planning priorities in the District Plan that are relevant to the proposed development are: • **Planning Priority E1 – Planning for a city supported by Infrastructure.** Aligning land use and infrastructure planning ensures that infrastructure is maximised, and that growth and infrastructure provision are aligned. The development of 35,600sqm of health-related GFA is aligned with additional public transport capacity that has been delivered by the State Government in the form of the Sydney CBD and South East Light Rail service. • **Planning Priority E6 Creating and renewing great places and local centres, and respecting the District's heritage** The proposal will deliver over 2,500sqm of high quality, publicly accessible open space. This will support social interaction and participation, and amenity while supporting improved walkability within the Precinct. • **Planning Priority E8 – Growing and investing in health and education precincts and the Innovation Corridor.** The proposal will support the diversification and expansion of the RHIP and provide health-related floor space that will contribute to Randwick's job targets (which sit between 32,000 and 35,500 by 2036). It will also support the co-location of health, research and education related facilities which will to support the Precinct's growth, within a highly accessible location. The colocation of health and educational facilities will support the more efficient translation of education and research into patient care for patients within the RHC. • **Planning Priority E11 – Growing investment, business opportunities and jobs in strategic centres.** The site is located in Randwick which is identified as a Strategic Centre (as well as a Health and Education Precinct). The provision of 35,600sqm of health-related GFA will support access to jobs in an identified Strategic Centre. Access to jobs is also supported (under Action 38) by quality and human-scale public domain spaces and walkability. The proposal includes a high-quality public domain plaza which will support activation and vibrancy while strengthening pedestrian connections between the existing UNSW Kensington Campus to the west and the neighbouring SCH Stage 1 and CCCC redevelopment on the RHC. • **Planning Priority 17 – Increasing urban tree canopy and delivering Green Grid connections.** The proposed open space provides deep soil areas to accommodate large trees, which will support cooling, amenity and air quality while contributing to the streetscape and overall character of the site and the Eastern District overall. • **Planning Priority E18 – Delivering High Quality Open space.** The design of the proposal has been driven by the delivery of a new centrally positioned high-quality open space in the form of the publicly accessible plaza. It will significantly enhance the character of the Precinct, and support site permeability and spaces for informal meeting.
Randwick Place Strategy	The proposed development is consistent with the Randwick Place Strategy for the reasons set out in **Section 1.1.4** and **Section 1.2.1**. In particular: • The proposed development supports campus expansion in accordance with the vision of the Randwick Collaboration Area (refer to **Figure 1**); and

<table>
<tr><th>Instrument/Strategy</th><th>Comments</th></tr>
<tr><td></td><td>• The proposed development supports the transition of the RHIP and broader Randwick Collaboration Area into a future innovation district through a ‘maturity pathway’, which sees the evolution and conglomeration of health and education uses.</td></tr>
<tr><td>South East Sydney Transport Strategy</td><td>The proposal is consistent with the South East Sydney Transport Strategy because it supports liveability by allowing transport to easily access employment, healthcare and education.</td></tr>
<tr><td>Randwick Local Strategic Planning Statement</td><td>The proposal is consistent with the Randwick LSPS as it:
• Proposes a land use involving health, education and innovation consistent with the desired outcome for the site under the Structure Plan;
• Provides high-quality end of trip and bicycle facilities to support opportunities for walking and cycling (Planning Priority 7);
• Leverages off the site’s location to the City and South East Light Rail and numerous bus stops to support the 30 minute city (Planning Priority 8);
• Supports job growth and innovation in the Randwick Strategic Centre (Planning Priority 9);
• Supports the creation of the UNSW Plaza – a new high quality open spaces for passive use (Planning Priority 14); and
• Increases planting and tree canopy coverage on the site (Planning Priority 16).</td></tr>
<tr><td>Draft Greener Places Design Guide</td><td>The draft Greener Places Policy has been prepared by the GANSW to guide the design, planning and delivery of green infrastructure across NSW. The aim is to create healthier and more liveable cities and towns by improving community access to recreation and exercise, walking and cycling connections and the resilience of urban areas. The proposed development directly aligns with the aims of the draft Greener Places Policy through the introduction of green space and new tree planting throughout the UNSW Plaza to support a healthier urban environment. It also aims to establish improved pedestrian connections to and from the UNSW Kensington Campus and broader RHIP.</td></tr>
<tr><td colspan="2">State Legislation</td></tr>
<tr><td>EP&A Act</td><td>The proposed development is consistent with the objects of the EP&A Act for the following reasons:
• The proposed development reflects the orderly and economic use of the land in line with the future vision and anticipated redevelopment of the site as part of the RHIP;
• The proposed development supports a high-quality design outcome and provides amenity in terms of design excellence and public domain outcomes to contribute to the built environment;
• It is development for public purposes and will facilitate the delivery of health and educational services to the community; and
• Opportunities for public involvement and participation will be provided.

The proposed development is consistent with Division 4.7 of the EP&A Act, particularly for the following reasons:
• the development has been declared to have State significance;
• the development is not prohibited by an environmental planning instrument; and
• the development has been evaluated and assessed against the relevant heads of consideration under Section 4.15(1).</td></tr>
<tr><td>EP&A Regulations</td><td>The EIS has addressed the specification criteria within clause 6 and clause 7 of Schedule 2 of the EP&A Regulation. Similarly, the EIS has addressed the principles of ecologically sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage (see Section 5.16).

As required by clause 7(1)(d)(v) of Schedule 2, the following additional approvals will be required in order to permit the proposed development to occur.
<table>
<tr><th>Act</th><th>Approval Required</th></tr>
<tr><td colspan="2">Legislation that does not apply to State Significant Development</td></tr>
<tr><td>Coastal Protection Act 1979</td><td>N/A</td></tr>
<tr><td>Fisheries Management Act 1994</td><td>N/A</td></tr>
<tr><td>Heritage Act 1977</td><td>N/A</td></tr>
<tr><td>National Parks and Wildlife Act 1974</td><td>N/A</td></tr>
<tr><td>Native Vegetation Act 2003</td><td>N/A</td></tr>
<tr><td>Rural Fires Act 1997</td><td>N/A</td></tr>
<tr><td>Water Management Act 2000</td><td>N/A</td></tr>
</table></td></tr>
</table>

Instrument/Strategy	Comments
	Legislation that must be applied consistently
	Fisheries Management Act 1994 — No
	Mine Subsidence Compensation Act 1961 — No
	Mining Act 1992 — No
	Petroleum (Onshore) Act 1991 — No
	Protection of the Environment Operations Act 1997 — No
	Roads Act 1993 — Yes. The provisions of Section 138 of the *Roads Act 1993* continue to apply to State Significant Development. The development involves the erection of a new pedestrian bridge over a public road, and so requires approval under Section 138(1)(a) of the *Roads Act 1993*.
	Pipelines Act 1967 — No
SEPP 55	The preliminary and detailed site investigations and Remediation Action Plan prepared for the site (see **Appendix K**) demonstrate that the site can be made suitable for the proposed development.
SEPP 33	*State Environmental Planning Policy No. 33 Hazardous and Offensive Development* (SEPP 33) is used to regulate the planning approval process for developments in hazardous and offensive industries, and potentially hazardous and potentially offensive industries. Arup has reviewed the quantities of dangerous goods to be stored in the UNSW HTH and has confirmed that they are expected to be well below the threshold quantities under SEPP 33 (refer to **Appendix L**).
SEPP (Infrastructure)	The RCH is defined as a *hospital*. By definition, a *hospital* can also include ancillary facilities for health consulting rooms, education, and research purposes (whether or not the research is carried out by hospital staff or health care workers or for commercial purposes). The RCH is proposed to be expanded to include a new health, research and education facility. This facility (being the UNSW HTH) will be operated by UNSW to deliver translational health benefits, and to translate research and education back into the hospital through improved patient care. The UNSW HTH is defined as a hospital in accordance with the definition of a hospital under the Standard Instrument. Development for the purpose of a health service facility (which includes hospitals) is permissible on the site by virtue of clause 57(1) of the Infrastructure SEPP. The clause states that development for the purpose of a *health services facility* 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 R3 Medium Density Residential under the *Randwick Local Environmental Plan 2012* (Randwick LEP), both of which are listed as prescribed zones under the Infrastructure SEPP.
SEPP (State and Regional Development)	Under Schedule 1, Clause 14(a), Development for health service facility with a capital investment value of more than $30 million is SSD. As the proposed development will have a capital investment value over $30 million it is defined as SSD.
Draft State Environmental Planning Policy (Remediation of Land)	The proposal remains consistent with the Draft policy as the proposed assessment has been undertaken in accordance with SEPP 55.
Draft State Environmental Planning Policy (Environment)	The site is not identified as being subject to the provisions for waterways, catchments, world heritage and urban bushland under the draft Environment SEPP.
Draft State Environmental Planning Policy (Health Services Facilities).	The proposed development is not affected by the proposed development without consent or development with consent provisions associated with the proposed amendments to the ISEPP.

Local Planning Instruments and Controls

Randwick Local Environmental Plan 2012

Control	Comment	Consistency
Clause 2.1 – Zone	Part R2 Low Density Residential and part R3 Medium Density Residential zone. Refer to S**ection 5.3.1** for an assessment of the proposals land use permissibility.	✓ By virtue of Clause 57(1) of ISEPP

Instrument/Strategy	Comments	
Permissibility		✓
Zone objectives	The proposal is consistent with the objectives of the R2 and R3 zone because: • It provides a new use in a precinct undergoing transition and will contribute to achieving the desired future character of the RHIP; • Will assist in meeting the day to day health, education and employment needs of residents; and • It has been designed to protect the amenity (view sharing) of existing residents (north of High Street) by being positioned on the western side of the site to minimise its elevation length in the southern view.	✓
Clause 4.3 – Height of buildings	The site has a part 9.5 metres and part 15 metres height of building standard. The proposal has a maximum height of approximately 69 metres, which is permitted in accordance with Clause 5.12 of the LEP. Refer to **Section 5.4.2** for an assessment of the proposal's height.	✓
Clause 4.4 – Floor space ratio	The site has a part 0.5:1 floor space ratio and part of the site has no floor space ratio development standard. The proposal has a floor space ratio of 4.02:1, which is permitted in accordance with Clause 5.12 of the LEP. Refer to **Section 5.4** for an assessment of the proposal's floor space ratio.	✓
Clause 5.10 – Heritage conservation	No applicable. The site is not identified as an item of heritage significance and is not located within a conservation area.	N/A
Clause 5.12 – Infrastructure development and use of existing buildings of the Crown	Refer to **Section 5.3**.	✓
Clause 6.1 – Acid sulfate soils	The site is not identified by the Acid Sulfate Soils Map.	N/A
Clause 6.2 –Earthworks	The proposal seeks approval for earthworks. An assessment of the impact of these works is provided within this EIS.	✓
Clause 6.3 – Flood planning	The site is not identified as a flooding area under the flood planning area map of the LEP however is subject to flooding within the eastern point of the site.	✓
Clause 6.4 – Stormwater management	Stormwater management is assessed at **Section 5.13**. Refer to the Civil Engineering Services Report prepared by Warren Smith and Partners (refer to **Appendix M**).	✓
Clause 6.8 – Airspace operations	The site is located in the path of the Sydney Aerodrome flight OLS which is permitted with appropriate obstruction lighting. An Aviation Impact Assessment Report has been prepared by AviPro (**Appendix N**) which concludes the UNSW HTH is not within the PAN-OPS limitation. Refer to **Section 5.9**.	✓
Clause 6.9 – Development in areas subject to aircraft noise	The site is not on land with an ANEF contour of 20 or greater.	✓
Clause 6.10 – Essential services	The proposal will be connected to essential services including water, sewer, on-stormwater drainage, electricity and vehicular access.	✓
Clause 6.11 – Design excellence	Development involving the construction of a new building of greater than 15 metres is to exhibit design excellence. The proposal exhibits design excellence as: • It is of a high standard of architectural design, with materials, detailing and articulation that are appropriate to the building type and location. The materials and the treatment of the UNSW HTH will contribute towards enhancing the character of the RHC and reaffirming the prominence of the RHIP. • The UNSW HTH is provided at a scale consistent with the surrounding built form and in keeping with the hospital. In particular, the building responds to the IASB. The materiality of the building will continue to build a distinct transformative identity for the hospital and enhance the amenity of the public domain. • The building offers a modern solution with hints of the character of the local landscape and place in the community through careful use of colour. • It has a form and external appearance that will significantly improve the quality and amenity of the public domain by: – Creating a series of unique landscaped spaces; – Providing areas of open lawn, raised planter beds and seating; and – Landscaping the entry forecourt with feature tree planting. • It does not detrimentally impact on identified view corridors or landmarks. The proposal enhances the western hospital campus and the prominent corner of High	✓

Instrument/Strategy	Comments	
	Street and Botany Street that provides a new high-quality building which enhances the setting of surrounding buildings. • The UNSW HTH is capable of addressing potential environmental impacts, such as sustainable design principles, overshadowing, visual and acoustic privacy and noise. Detailed consideration of the design response and rationale is provided by Architectus at **Appendix A**. The proposed development has undergone a number of design iterations and consultation has been undertaken with the GA NSW to ensure the proposal meets the requirements of Better Placed NSW and to ensure design excellence is achieved.	
Clause 6.12 – Development requiring the preparation of a development control plan	As the proposal has a site area less than 10,000m and is not identified on the Key Sites Map, Clause 6.12 does not apply.	N/A

5.2 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. The proposed signage meets the objectives of SEPP 64 in that it:

- Is scaled appropriately for the building and the broader site in which it is located;
- Is commensurate with the amenity and visual character of the area including the character of the existing signage;
- Does not block any significant views and will not have an adverse impact on the amenity or future character of the surrounding area;
- Will effectively communicate the presence of the building's tenant/operator and use; and
- Is of a high quality design and finish, with a discrete mounting system.

An assessment of the proposed development's compliance with the criteria as specified in Schedule 1 of SEPP 64 is detailed in **Table 7** below.

Table 7 – Assessment criteria under Schedule 1 of SEPP 64

Assessment Criteria	Comments	Compliance
Character of the Area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed signage is compatible with the desired character of the local precinct.	Yes
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	No specific outdoor advertising theme applies to the area or locality. The design of the signage is considered to be appropriate within its surrounding context which contains other various signage typologies.	Yes
Special Areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The proposed signage is located within the RHIP and therefore is not in proximity to any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas. As such, the signage does not detract from the visual quality of these areas.	Yes
Views and Vistas		
Does the proposal obscure or compromise important views?	The proposed signage does not protrude above the parapet of the proposed UNSW HTH and will not dominate the skyline and/or reduce the quality of vistas.	Yes
Does the proposal dominate the skyline and reduce the quality of vistas?		

Assessment Criteria	Comments	Compliance
Does the proposal respect the viewing rights of other advertisers?	The proposed signage is of a scale that respects the viewing rights of other signage. No top-of-building identification signage currently exists at the site and therefore the proposal will not block or obstruct any signage.	Yes
Streetscape, Setting or Landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	The scale, proportion and form of the proposed signage is considered appropriate, and will respond to the overall size of the building and broader precinct.	Yes
Does the proposal contribute to the visual interest of the streetscape, setting or landscape?	The proposal will improve the visual interest of the setting and landscape through facilitating high quality signage that integrates with the architectural characteristics of the building.	Yes
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	The proposed signage does not contain advertising content and only relates to the future significant tenant of the UNSW HTH. It is of a simple design, only comprising the UNSW logo, and will not result in unnecessary visual clutter.	Yes
Does the proposal screen unsightliness?	Although not specifically designed to screen unsightliness, the proposal will promote visual interest at the site.	Yes
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The proposed signage does not protrude above the height of the proposed building. The proposed building is of a height above existing surrounding development.	Yes
Does the proposal require ongoing vegetation management?	The proposal does not require vegetation management.	Yes
Site and Building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	The proposed signage has been carefully designed to be compatible with the scale, proportions, and presentation of the proposed building. The scale of the proposal is considered to be appropriate within the context of the site and will support the character of the area.	Yes
Does the proposal respect important features of the site or building, or both?	The proposal is respectful in design and will not dominate the surrounding locality or detract from any of the important features of the building.	Yes
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	Innovation is not considered to be appropriate as the proposed signage is only intended to identify the significant tenant of the building. It is instead of a simple design that compliments the architecture of the building.	Yes
Associated Devices and Logos with Advertisements and Advertising Structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	The logo of the building operator is central to the design of the proposed signage. It will be mounted to the façade of the building and does not rely on external structures or platforms.	Yes
Illumination		
Would illumination result in unacceptable glare?	The signage will include individually illuminated letters, designed in accordance with the Signage Plans at **Appendix A**. It has been designed to ensure even illumination, prevent light spill, and prevent unacceptable glare.	Yes
Would illumination affect safety for pedestrians, vehicles or aircraft?	The proposed signage will not affect the safety of pedestrians, vehicles and/or aircraft.	Yes
Would illumination detract from the amenity of any residence or other form of accommodation?	The proposed signage is located within the RHIP, which is generally not characterised by residential or accommodation uses. The proposed signage will not detract from the amenity of any residence.	Yes
Can the intensity of the illumination be adjusted, if necessary?	The intensity of the illumination can be adjusted, as necessary.	Yes
Is the illumination subject to a curfew?	Signage in the RHIP is not subject to a curfew. The signage is fitted with a timeclock and can be turned off as required.	Yes
Safety		

Assessment Criteria	Comments	Compliance
Would the proposal reduce the safety for any public road?	The proposed signage is located above the streetscape and therefore will not impact the safety of any road users, including drivers, pedestrians, bicyclists, or result in the obstruction of any sightlines from public areas.	Yes
Would the proposal reduce the safety for pedestrians or bicyclists?		
Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?		

5.3 Permissibility

5.3.1 Land Use

The RHC is defined as a *hospital*. The UNSW HTH will form an extension of the existing and proposed hospital facilities at the RHC, providing a specialist health-related research and education facility on the Campus that is consistent with the scope of uses identified under the definition of a hospital in the Standard Instrument.

The Standard Instrument defines a hospital as follows (**our emphasis**):

> ***hospital*** *means a building or place used for the purpose of providing professional health care services (such as preventative or convalescent care, diagnosis, medical or surgical treatment, psychiatric care or care for people with disabilities, or counselling services provided by health care professionals) to people admitted as in-patients (whether or not out-patients are also cared for or treated there),* ***and includes ancillary facilities for (or that consist of) any of the following—***
> *(a) day surgery,* ***day procedures or health consulting rooms****,*
> *(b) accommodation for nurses or other health care workers,*
> *I accommodation for persons receiving health care or for their visitors,*
> *(d) shops, kiosks, restaurants or cafes or take away food and drink premises,*
> *I patient transport facilities, including helipads, ambulance facilities and car parking,*
> ***(f) educational purposes or any other health-related use,***
> ***(g) research purposes (whether or not carried out by hospital staff or health care workers or for commercial purposes),***
> *(h) chapels,*
> *(i) hospices,*
> *(j) mortuaries.*

A hospital can include ancillary facilities for a range of uses, including health consulting rooms, education and research purposes. The UNSW HTH is therefore defined as a hospital in accordance with the Standard Instrument. Development of a *health services facility* (which includes a hospital) is permissible with consent on land in a prescribed zone in accordance with Clause 57(1) of the *State Environmental Planning Policy Infrastructure 2007* (Infrastructure SEPP). The site is zoned part R2 Low Density Residential and part R3 Medium Density Residential under the *Randwick Local Environmental Plan 2012* (Randwick LEP), both of which are prescribed zones under the Infrastructure SEPP.

5.3.2 Infrastructure Development and use of Existing Buildings of the Crown

Height and Floor Space Ratio

As outlined at **Table 6**, the proposal exceeds the provisions of Clause 4.3 (height of buildings) and Clause 4.4 (floor space ratio) of the Randwick LEP. Irrespective of this, Clause 5.12 of Randwick LEP permits the carrying out of any development by or on behalf of a public authority (irrespective of whether it is ordinarily prohibited or restricted under the LEP) if it can be carried out with or without consent under the Infrastructure SEPP (see **Section 5.3.2**).

As the proposal is permissible with consent under the Infrastructure SEPP (see **Section 5.3.1**) and because the applicant is a public authority (being HI), Clause 5.12 of Randwick LEP is applicable and the development standards (i.e. height and FSR) which would otherwise apply to development on the site do not restrict the carrying out of the proposed developmnent.

5.4 Built Form and Urban Design

As outlined in **Section 3.5** the UNSW HTH comprises and podium and tower form that has been derived from the following key principles:

- Facilitating the creation of a generous quality public domain by reducing the building footprint and allowing a permeable ground floor plane. This creates a slender, elegant building whilst still meeting the public domain aspirations of the UNSW HTH.
- The strategic importance of the RHIP. The site is located within the RHIP which is identified as a Strategic Centre and Health and Education Precinct. The intent is to increase floor space for health and education related uses and develop an overall internationally competitive district that drives economic productivity, health and education services. This by its nature, demands a greater built form outcome, commensurate with the scale of development expected to accommodate the role of a Strategic Centre.
- A tower form which can represent the landmark aspirations of the UNSW HTH and provide a distinct architectural and landscape solution which leverages off the natural topographic high point of the site and signifies the strategic importance of the RHIP.
- A built form outcome which provides a height and density that is appropriate to and can leverage off the site's proximity to the South East Light Rail Line;
- Floor plates which are flexible and adaptable over time and can accommodate a range of health and education related uses and end users.
- Providing a contextual response to surrounding existing and future development. The proposed development is tall and slender, however is not isolated or overly prominent within its immediate context. The proposed built form is supported by the scale of existing development, the proposed SCH Stage 1 and CCCC and the recently approved B22 Building, as well as the F23 Matthews and F21 Library Building on the UNSW Kensington Campus.
- A podium connection (to support pedestrian access) between the UNSW HTH and SCH Stage 1 and CCCC.
- Consolidated vehicular connection and integrated vehicle access with surrounding development.
- Respecting the PAN-OPS height plane.

The built form outcome is further assessed below.

5.4.1 Podium

The podium comprises a distinct, six-storey element with an articulated form to reduce the bulk of the massing and to provide a contextual response to the height and scale of existing and future neighbouring development to the east and west (refer to **Figure 25**).

The overall height of the podium will reach RL 93.4. The podium height fronting High Street is intended to support a transitional height between the existing Wallace Wurth Building and the proposed SCH Stage 1 and CCCC. The southern podium height (RL 83.2) is also designed to align with the SCH Stage 1 and CCCC podium to reinforce a consistency in scale and physical connection between the two developments.

The consistency of podium scale at the southern end encloses the UNSW Plaza space to create a more still air pocket within the public domain. The inward articulation to the north-east corner of the podium (along with the tower) pushes cool north easterly winds into the Plaza while the western podium façade and nil setback to High Street deflects hot western winds to the street.

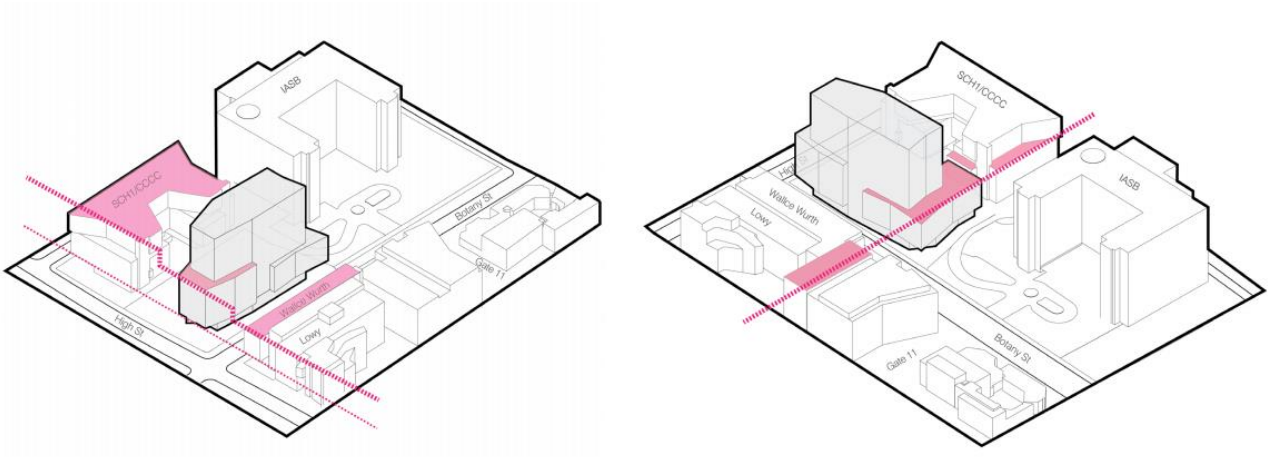

Figure 25 – Podium setback height transition principle

Source: Architectus

5.4.2 Tower Form

The tower component extends up to 15 storeys (69m) and is setback 16m from High Street and 7.6m from Botany Street. The setbacks and form of the tower is based on:

- Distributing density upwards to allow an open ground plan to support the provision of a significant public domain spaces (the UNSW Plaza) with an area of over 2,500sqm;
- Creating suitable building separation to the future neighbouring development of the SCH Stage 1 and CCCC;
- Consideration of view sharing for residents across High Street looking south. The tower form has been positioned on the western side of the site to minimise its elevation length in the southern view; and
- A response to prevailing winds and deflecting winds away from the ground plane.

In addition, the following matters support the appropriateness of the tower height proposed:

- The height proposed has been tested to ensure it provides an appropriate environmental outcome. It provides a positive urban design outcome and will not cause adverse impacts to the public domain in terms of wind, overshadowing and visual impact.
- Contextually, the tower component:
  - Like detailed above, is tall and slender, however is not isolated or overly prominent within its immediate context. This is supported by the scale of existing development, the proposed SCH Stage 1 and CCCC and the recently approved B22 Building, as well as the F23 Matthews and F21 Library Building on the UNSW Kensington Campus (refer to **Figure 26**);
  - is consistent with the general Eastern District pattern of clusters of larger, taller buildings seen above a more extensive, suburban landscape character typology (refer to the Visual Impact Assessment at **Appendix O**);
  - reflects significant growth and economic benefit envisioned for the RHIP by the NSW State and local Government. This includes (but is not limited to) the following key outcomes for the Precinct (under the District Plan) which can infer greater height:
    - protecting and supporting the growth of core health and education activity;
    - supporting the growth of innovation and advanced research industries; and
    - capitalising on the potential mass transit solution for the south east of the District, with a view to creating complementary employment opportunities, delivering affordable housing for key worker and student populations and facilitating improved connections to residential areas.

- is generally consistent with the general heights (between 9 and 18 storeys) allowed within the Kensington to Kingsford corridor (endorsed under the K2K Planning Proposal). The tower form can provide a visual and physical connection between the currently separate RHIP and K2K corridor, and enhancing their visual legibility as a key node for economic growth in the Eastern District.

- The proposed height is a direct response to the scarcity of land, yet increasing demand for additional services and facilities within the RHIP. The UNSW HTH is not a traditional hospital use (it proposes ancillary hospital uses), which are typically better suited to larger floor plates in lower buildings. The use and function of the UNSW HTH can be accommodated in tower form without unnecessarily retaining density closer to the ground.
- The taller form allows the creation of more than 2,500sqm of publicly accessible open space, which would not be possible if density was retained at the lower levels.
- The tower achieves adequate separation distances to surrounding development, which is supported by the separation provided by Botany Street and High Street.
- The tower is tapered to provide relief to its form. This helps to reduce its perceived scale and mass.
- The tower form supports a landmark response at this key corner of the RHIP.
- The proposed tower provides an acceptable visual impact from the public domain and from important viewpoints (refer to the Visual Impact Assessment at **Appendix O**).
- The proposed height does not contravene the PAN-OPS height plane.

Figure 26 – High Street context (close range and long range)

Source: Architectus

5.5 Environmental Amenity

5.5.1 Solar Access and Overshadowing

Architectus has prepared a series of Shadow Diagrams (refer to **Appendix A** and **Figure 27** to **Figure 29**). The diagrams show that on the Equinox and Summer Solstice, the UNSW HTH will result in limited overshadowing. In the morning during these periods, overshadowing is generally limited to Botany Street and the eastern façade of the Wallace Wurth Building. Shadow impacts are limited during the critical midday/lunchtime period. After 3pm, all shadows fall within the RHC, with the UNSW HTH overshadowing the SCH Stage 1 and CCCC forecourt and the access areas to the south (on the Equinox only, not on the Summer Solstice).

On the Winter Solstice, due the UNSW HTH's position in the north of the block, there will be some overshadowing to the south. In the morning, shadows extend across the Botany Street to the Wallace Wurth, Biomedical Sciences

and AGSM Buildings on the UNSW Kensington Campus. Due to the fast moving nature of the shadows, there will be no overshadowing of Botany Street or the UNSW Kensington Campus by midday. Within the RHC, shadows fall over the access driveway to the south, as well as the small open space to the south of the UNSW HTH.

At midday on the Winter Solstice, the UNSW HTH will again cast shadows to the south, however shadows are generally limited to access and circulation spaces. It is noted that the IASB already overshadows its western forecourt at this time. Further, there will be full solar access to the landscaped plaza fronting High Street at midday on the Winter Solstice.

In the afternoon on the Winter Solstice at 3:00pm, shadows will be cast over the landscaped plaza and the SCH Stage 1 and CCCC. In the afternoon, the IASB courtyard will receive full solar access.

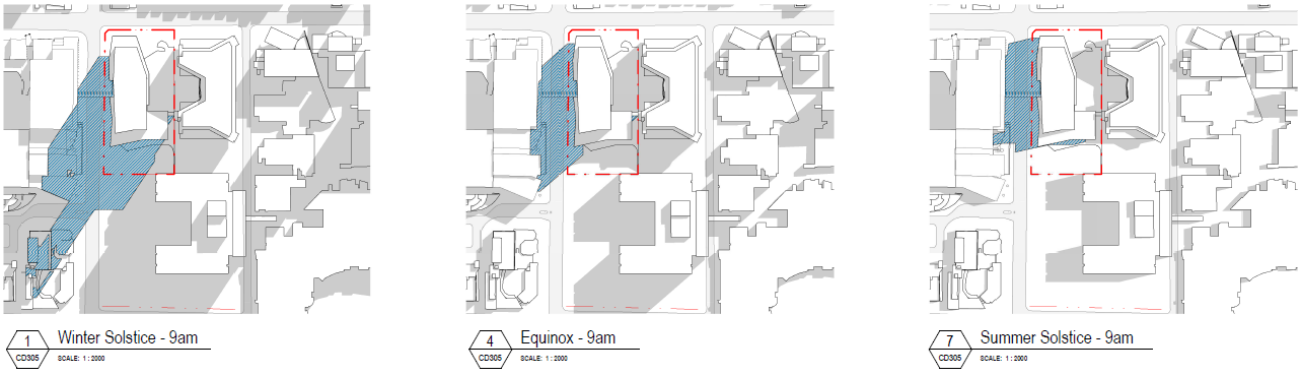

Figure 27 – Shadow diagram – 9:00am

Source: Architectus

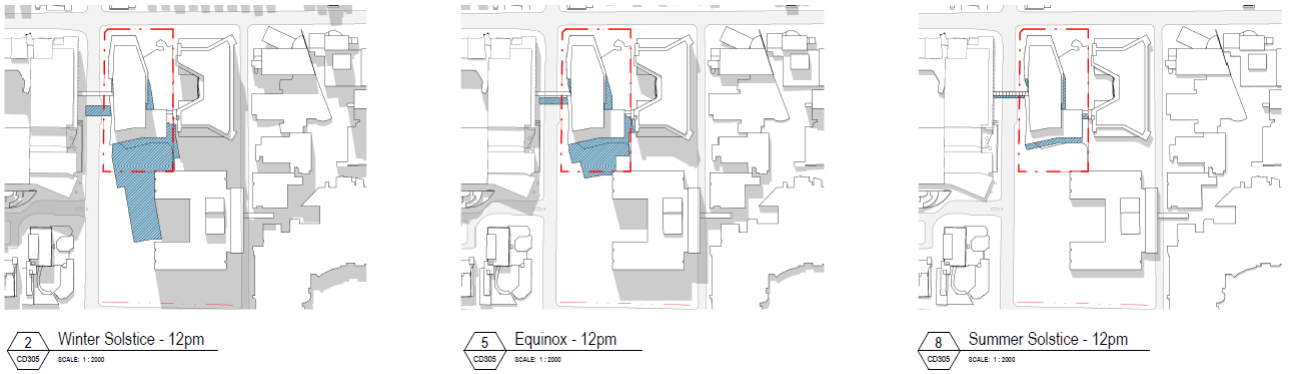

Figure 28 – Shadow diagram – 12:00pm

Source: Architectus

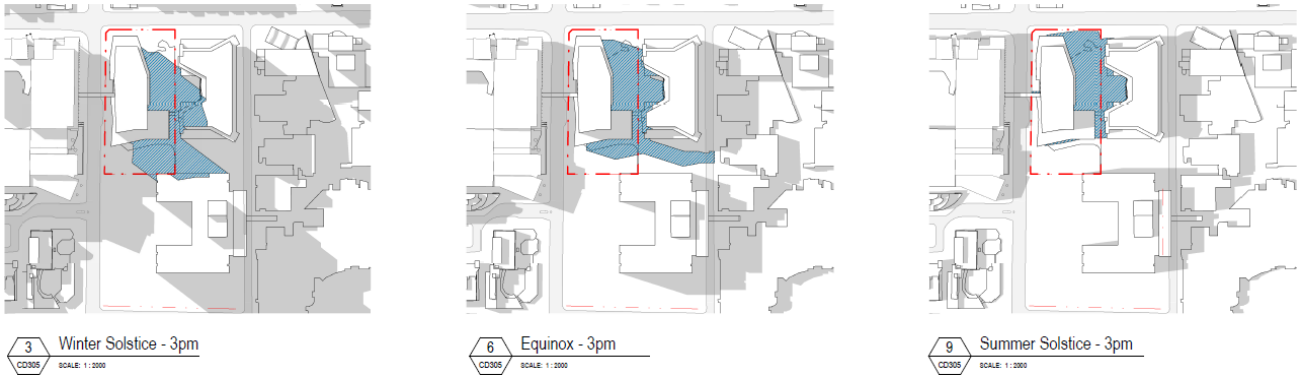

Figure 29 – Shadow diagram – 3:00pm

Source: Architectus

5.5.2 Visual Impacts

A Visual Impact Assessment has been prepared by Ethos Urban and is provided at **Appendix O**. It concludes that the proposed UNSW HTH will have a significant impact on High Street to its immediate north but overall, will have a minimal impact on its visual catchment.

Whilst the visual impact to High Street to the immediate north is considered significant, on balance it is considered reasonable because it:

- is compatible with its context, and in particular is not isolated or overly prominent in its visual context;
- is consistent with the character with the RHIP and the existing High Street streetscape;
- incorporates a number of intentional layout, form and design measures that mitigate this scale;
- has an acceptable impact on sensitive uses, including residential areas and heritage; and
- is consistent with the intent of strategic plans, and in particular, will promote the integration of the RHIP and the Kingsford and Kensington corridor.

5.5.3 Wind Impacts

The proposal has been subject to a quantitative wind assessment prepared by Arup on the pedestrian level wind comfort conditions in and around the site (refer to **Appendix P**). The assessment used Computation Fluid Dynamics and modelled existing and future conditions (with future neighbouring built form surrounding the site). The assessment concluded that:

- All locations in and around the proposed UNSW HTH will meet the required pedestrian safety criterion under current conditions;
- Under proposed and future conditions, the majority of locations around the site will be suitable for pedestrian activities. There will be minor localised exceedances to the criterion – concentrated in the middle of Botany Street, away from pedestrian footpaths. A solid balustrade would provide local amelioration to pedestrians in this instance;
- With future surrounding built form (excluding the UNSW HTH) around the site, wind speeds will increase however wind conditions around the site still remain suitable for pedestrian standing and walking with areas suitable for pedestrian sitting;
- When the massing of the UNSW HTH is included, there is a small change to the exceedance of the criterion around the north-west corner of the IASB. This however is ameliorated with the with the inclusion of the SCH Stage 1 and the CCCC;
- All pedestrian accessways along the surrounding streets meet the walking criteria and are therefore considered suitable for the intended use of the space. The wind conditions at the recessed entries of the UNSW HTH are considered suitable for the intended use.

5.5.4 Lighting Impacts

As detailed in **Section 3.0**, an External Lighting Strategy has been prepared by Arup (refer to **Appendix F**) to ensure all future lighting associated with the UNSW HTH is in accordance with Australian Standards and provides a provides a safe and interesting environment.

To reduce light spill, all proposed external and landscaping lighting will be designed in accordance with AS4282 “Control of the obtrusive effect of outdoor lighting”. Compliance will be achieved with means such as directional luminaire selection with appropriate cut off angles and additional glare shields to reduce the upward light component, and lighting control measures to optimise usage.

5.6 Construction Management

A Preliminary Construction Management Plan has been prepared by Buildcorp, and is included at **Appendix I**. The construction management measures will be formalised prior to the issue of a Construction Certificate, however, will generally comprise:

- Independent dilapidation reports will be completed and issued to all relevant parties for surrounding structures, infrastructure and roads

- The site will be appropriately secured by solid fences (wire mesh or similar), hoardings and gates during the entire duration of the construction work.
- Site amenities and facilities will be provided for work personnel including offices, toilets, lunch rooms, first aid rooms and change rooms.
- Hours of work will not extend beyond:
  - Monday to Friday inclusive: 7.00am to 6.00pm;
  - Saturday: 8.00am to 5.00pm; and
  - No work on Sundays and Public Holidays.
- an appropriate communication plan will be prepared to ensure all neighbours and relevant parties remain informed about the development;
- Contractors will be encouraged to use public transport where possible. All site personnel when inducted to the project will be informed of this requirement, including details of available services.
- All footpaths and bicycle paths surrounding the site will be kept unobstructed and free of tripping hazards from hoarding, fences or construction related items.
- All site access points shall be controlled for security and safety purposes.

These measures will be incorporated into the detailed Construction Management Plan to be prepared by the contractor prior to the commencement of works.

5.7 Traffic, Access and Parking

A Transport Impact Assessment has been prepared by JMT Consulting (JMT) and is provided at **Appendix Q**. It provides an overview of the existing transport conditions associated with the site, and an assessment of the proposed UNSW HTH from a traffic demand, traffic, trip generation and access perspective. Although the UNSW HTH will be an extension of the RHC, the building will be operated by UNSW and therefore from a traffic and transport perspective, the development has been considered as part of the broader UNSW Kensington Campus.

5.7.1 Forecast Mode Share and Demand

The predicted mode share for travel to the UNSW HTH is summarised in **Figure 30**. The forecast has considered a recent (October 2019) travel survey undertaken by UNSW, existing UNSW travel demand management policies, the CBD and South East Light Rail, and the project aspiration to provide nil car parking spaces.

Based on the expected job generation of 495 staff, travel demand has been determined from the 2019 staff travel surveys, which indicate that approximately 50% of staff arrive in the morning peak hour of 8:00am to 9:00am, with 43% departing between 5:00pm and 6:00pm. This generates an additional 248 trips in the morning peak (being 8:00am to 9:00am) and 213 additional trips in the evening peak (5:00pm and 6:00pm).

For car drivers as a mode share (being 30%, refer to **Figure 30** and **Table 8**) this would equate to 75 additional staff trips in and AM peak and 64 in the PM peak. These additional vehicles will be distributed across the road network, and are considered capable of being accommodated within the existing car parking available at the UNSW Kensington Campus.

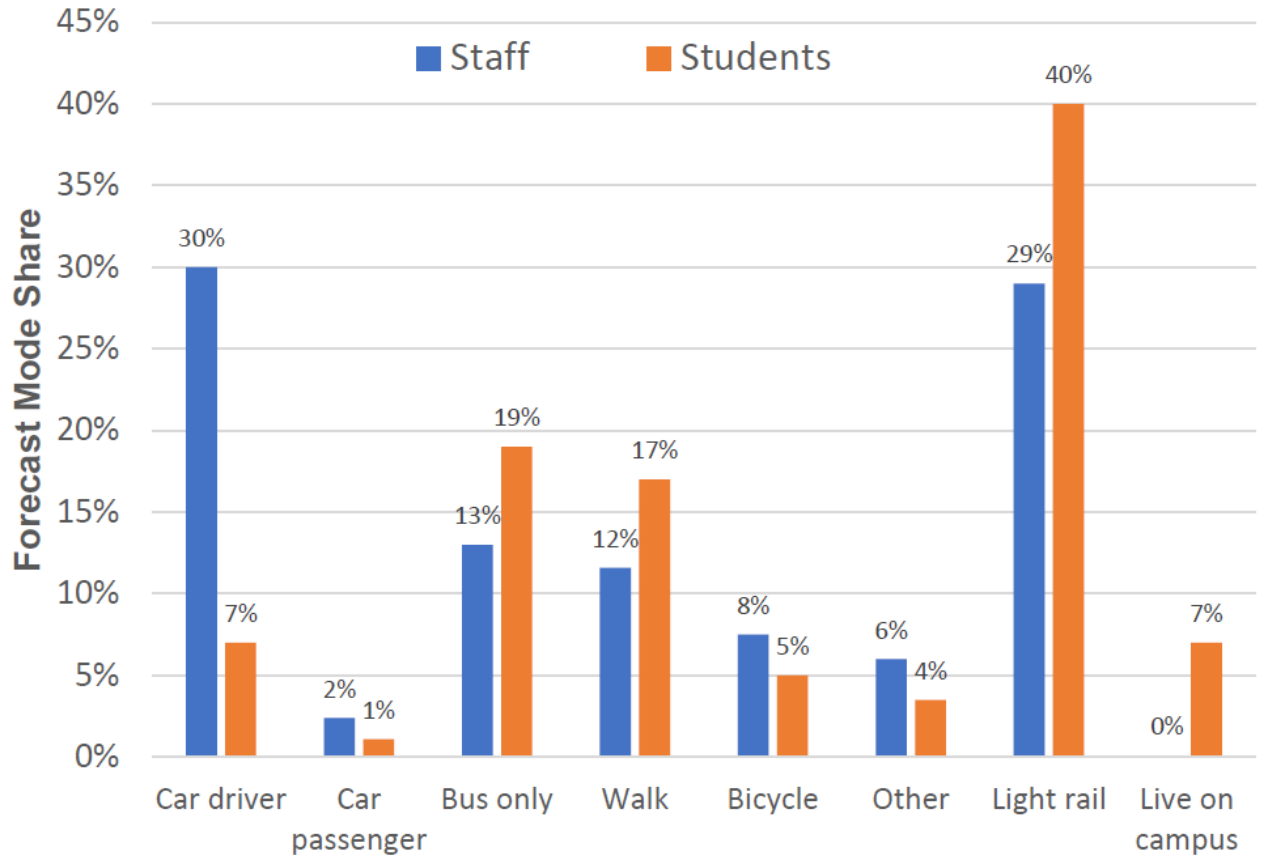

Figure 30 – Forecast mode share

Source: JMT Consulting

Table 8 – Forecast additional staff travel demand

Mode	Mode share (%)	Heading	Heading
		AM Peak (8:00am - 9:00am)	PM Peak (5:00pm - 6:00pm)
Car driver	30	75	64
Car passenger	2	6	6
Bus only	13	33	28
Walk	12	30	26
Cycle	8	20	18
Other	6	15	13
Light rail	29	72	62
TOTAL	**100**	**251**	**217**

Source: JMT Consulting

5.7.2 Pedestrian Access

JMT has forecast the pedestrian flows associated with the development. Forecasts are based on recent travel surveys (October 2019) undertaken by UNSW staff and students. The greatest forecast pedestrian flows are anticipated from the Light Rail Station across High Street (28%), followed by bus and walking flows from the UNSW Kensington Campus (refer to **Figure 31**). The location of the site within the UNSW pedestrian network and its high exposure to the Light Rail will support pedestrian access to the site.

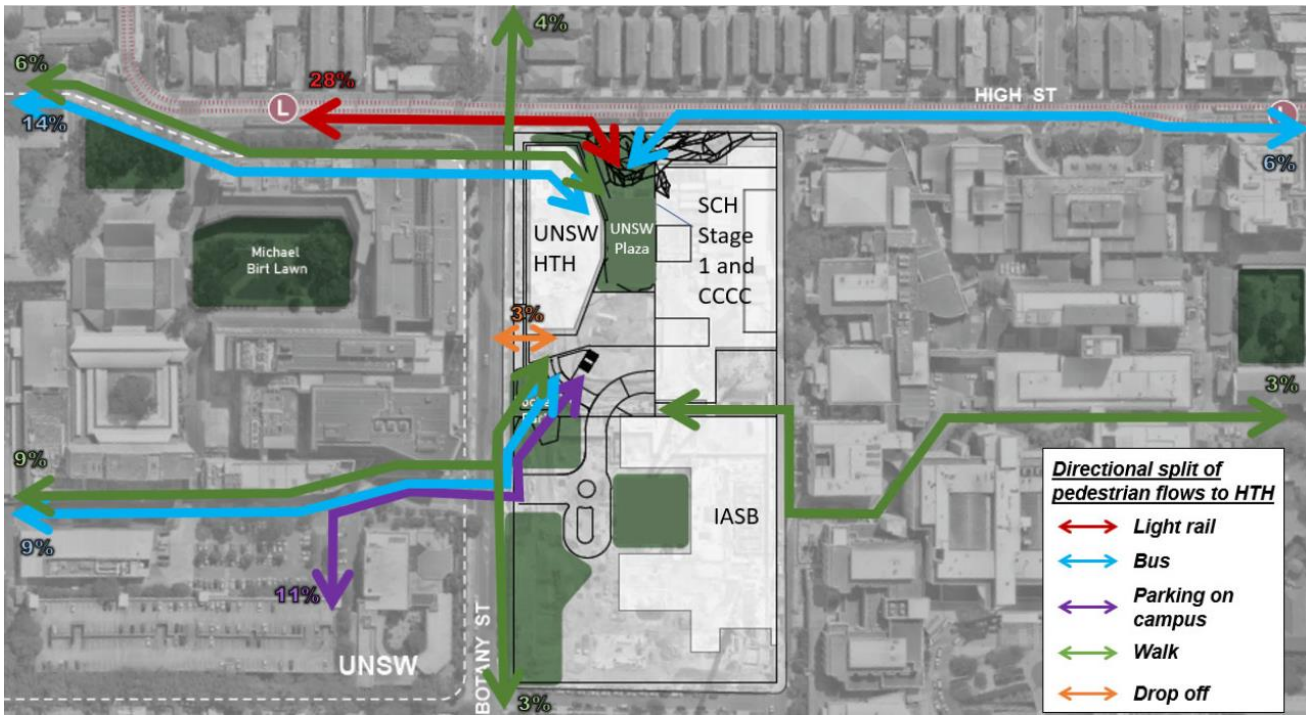

Figure 31 – Forecast pedestrian flows to the UNSW HTH

Source: JMT Consulting

5.7.3 Bicycle Parking and Access

The 125 bicycle spaces proposed, and associated end of trip facilities, are intended to support the already numerous bike and end of trip facilities within the adjacent UNSW Kensington Campus. The bicycle spaces proposed is consistent with the Green Star bicycle parking rates.

5.7.4 Vehicle Access

Vehicle access to the UNSW HTH will be via future signalised intersection on Botany Street (opposite UNSW Gate 11). This will allow vehicle access to the block, including access to the UNSW HTH and adjoining IASB and SCH Stage 1 and CCCC. As detailed previously, the intersection and internal accessways/ramps are outside the scope of this SSDA and will be designed and delivered by HI as part of the IASB (currently under construction) and SCH Stage 1 and CCCC developments.

In the event that the UNSW HTH is developed prior to construction of the SCH Stage 1 and CCCC, or if construction of the SCH Stage 1 and CCCC does not eventuate, an independent access solution has been prepared to enable access to the UNSW HTH (refer to **Appendix A** and **Section 3.9.4**). It allows independent access to the UNSW HTH from the Botany Street entry, connecting to the internal road that is being constructed as part of the IASB project.

5.7.5 Loading Dock

As detailed in **Section 3.0**, the proposed loading dock will accommodate five (5) spaces for van/ute deliveries and servicing, as well as space for one (1) medium rigid and one (1) heavy rigid vehicle. JMT has undertaken a swept path analysis (refer to Attachment A of **Appendix Q**) to confirm that the proposed basement layout is able to accommodate the anticipated service vehicles.

The number of service vehicles spaces is considered appropriate for the proposed use, and has been informed by research undertaken by Arup (in 2018) which correlates a relationship between GFA and loading dock peak period movements for office buildings. The UNSW HTH is for research and education purposes however for the purpose of loading and delivery movements, it is considered comparable to a commercial building.

Based on the proposed quantum of GFA (35,600sqm), the UNSW HTH is anticipated to generate 12 loading dock movements during the peak hour. The seven (7) loading spaces proposed is therefore considered to be more than sufficient to support the loading requirements of the UNSW HTH.

5.7.6 Car Parking

No on-site car parking is proposed for the UNSW HTH. Notwithstanding this, based on the 495 jobs generated, the UNSW HTH may generate demand for an additional 120 car parking spaces. This is based on the forecast mode share and occupancy of the building. The Botany Street Carpark provides 1,200 parking space in close proximity to the site, which the HTH users will utilise. . Further, monitoring of these existing car parking spaces during typical operation hours (in 2019) has indicated available capacity to support any demand generated by the HTH. This holistic approach to car parking across the Campus (and not providing significant amounts of additional car parking) is consistent with the recommendations of the UNSW Transport Strategy

The provision of nil new parking spaces is also acceptable because:

- There has been reduced car parking demand on the Campus due to the acceleration of online learning capabilities;
- The provision of new parking would contribute to additional traffic on an already constrained road network in the Precinct;
- The introduction of the Light Rail has significantly improved public transport access to the site and further reduced private vehicle reliance; and
- Nil carparking is consistent with other recent developments within the UNSW Kensington Campus and Precinct which has supported a significant modal shift towards public transport.

5.7.7 Road Network Impacts

Given that no car parking is proposed, on-site loading will be the only vehicle movements generated by the UNSW HTH. On a typical day, the following is anticipated:

- 12 vehicles during peak day period (9:00am to 10:00am); and
- 65 vehicles over the course of the day.

JMT considers this generation to be low in the context of movements and traffic volumes inside the RHIP and is not considered to adversely impact the existing road network.

More broadly, anticipated traffic in the Precinct (through the future anticipated road intersection on Botany Street) is summarised in **Table 9**. Note that the original modelling for the ISAB allowed for 360 two-way trips during peak to anticipate the possible expansion of the UNSW HTH and SCH Stage 1 and CCCC, however this allowance was higher than the current project peak hour movements, and as a result, ensuring the future intersection is capable of operating satisfactorily.

Table 9 – Forecast Traffic Movements

Use	AM Peak (8:00am to 9:00am)			PM Peak (5:00pm to 6:00pm)			Daily		
	General traffic	Logistics vehicles	Total vehicles	General traffic	Logistics vehicles	Total vehicles	General traffic	Logistics vehicles	Total vehicles
Acute Services Building	98	0	68	68	0	68	1580	0	1580
SCH Stage 1 and CCCC	14	0	14	22	0	22	360	0	360
SCH Stage 1 and CCCC (basement)	63	0	63	63	0	63	645	0	645
UNSW HTH	0	10	10	0	7	7	0	65	65
Total	**175**	**10**	**185**	**153**	**7**	**160**	**2585**	**65**	**2650**

Source: JMT

5.7.8 Public Transport Assessment

With respect to access to public transport, JMT concludes that:

- The site is well located with respect to nearby public transport, being within walking distance of a number of bus stops as well as two Light Rail stops;
- The proposed pedestrian bridge across Botany Street will strengthen connectivity to the main UNSW Kensington Campus, including the Anzac Parade bus corridor; and
- Internal pedestrian connections are proposed within the site to provide good levels of permeability to allow connections through to public transport stops on High Street.

On this basis, JMT considers that adequate provisions will be in place for people travelling by public transport to the development. No additional upgrades beyond those already described are considered necessary to support the development.

5.7.9 Preliminary Construction Pedestrian Traffic Management Plan

JMT has prepared a Preliminary Construction Pedestrian Traffic Management Plan (CPTMP) (refer to **Appendix Q**) to assess the access and operation of construction traffic associated with the future construction of the UNSW HTH. A detailed CPTMP will be prepared by the Contractor (once appointed).

Construction Hours

The preferred construction hours are as follows. These are considered to mitigate impacts most effectively to surrounding receivers yet support an efficient construction program.

- 7:00am to 6:00pm Monday to Friday;
- 8:00am to 5:00pm Saturday (consistent with the approved IASB and SCH Stage 1 and CCCC proposal); and
- No work Sunday and public holidays.

Construction Vehicle Volumes and Road Impacts

Based on the size of the UNSW HTH, the following construction traffic numbers are anticipated (subject to detailed confirmation with the contractor). The traffic generation of this magnitude is anticipated to have a minimal impact on the surrounding road network. Mitigation measures to ensure traffic movements have minimal impact to the community are detailed in **Section 7.0**.

- 40-50 construction vehicles per day; and
- Up to 10 construction vehicles during peak periods.

5.8 Heritage

5.8.1 Aboriginal Heritage

An Aboriginal Heritage Assessment Report has been prepared by Mary Dallas Consulting Archaeologists (MDCA) (**Appendix R**). The assessment indicates that the site has been the subject of a previous comprehensive Due Diligence survey, excavation and salvage by MDCA and the La Perouse Local Aboriginal Land Council as part of broader heritage investigations undertaken for the block. It included archaeological and Aboriginal monitoring of earthworks and a series of machine trenches and hand excavations. A significant archaeological and Aboriginal cultural area containing stone hearths and red ocherous material was identified, recorded and salvaged. They will be re-assembled, reinterpreted, documented and managed by HI and the La Perouse Local Aboriginal Land Council offsite.

MDCA has undertaken and completed the required consultation under the Aboriginal Cultural Heritage Consultation Requirements for Proponents (2010) for the site. Further consultation is not required and no further areas of archaeological or cultural significance have been identified within the site. On this basis, no further heritage investigations are considered to be required.

5.8.2 European Heritage

A Heritage Impact Statement has been prepared by NBRS Architecture (**Appendix S**). It determines the impact of the proposed UNSW HTH from a heritage perspective, especially in relation to the five surrounding State heritage listed buildings in the vicinity of the site (refer to **Figure 32**).

Overall, the proposed UNSW HTH has been assessed by NBRS Architecture to result in an acceptable impact on the heritage significance of the heritage items in the vicinity of the site. Specifically, the proposed UNSW HTH will:

- Constitute a minor and acceptable alteration to views to and from the State listed heritage items in the vicinity of the site;
- Not generate impact on any built or landscape components of the State listed heritage items in the vicinity of the site; and
- Not visually dominate any of the State listed heritage items in the vicinity, nor alter the function or amenity of these items. Their established cultural significance will be retained.

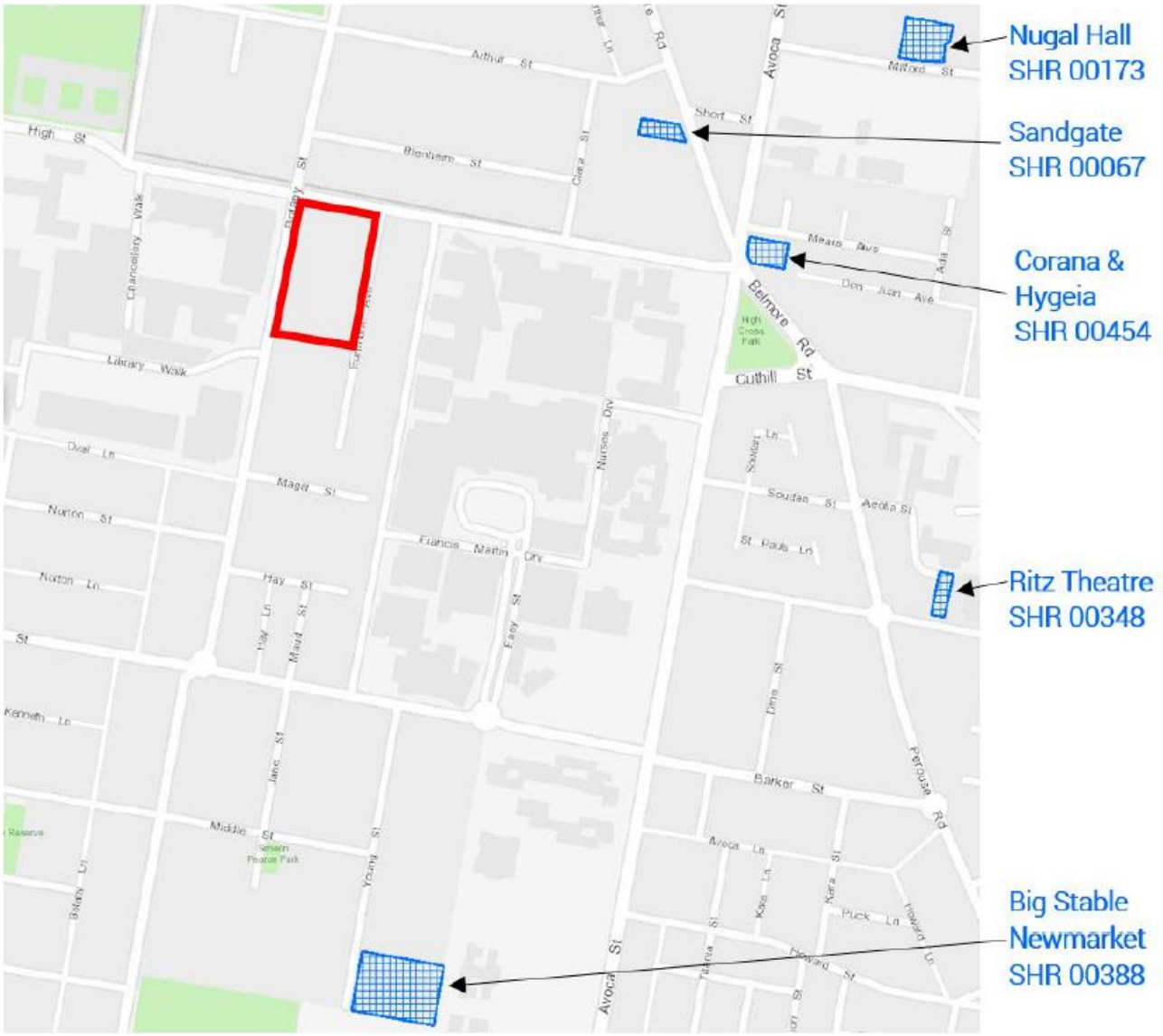

Figure 32 – State heritage listed items in the vicinity of the site

Source: NBRS Architecture

5.9 Airspace Operations

An Aviation Impact Assessment Report has been prepared by AviPro (refer to **Appendix N**). The report provides an assessment of construction impacts on the aviation operations of the Sydney Aerodrome and IASB helicopter landing site. It also assesses the impacts of the finished UNSW HTH on these same aviation activities.

The assessment identifies that:

- The UNSW HTH when constructed will protrude above the Obstacle Limitation Surface (OLS) which will require approval by Sydney Airports Corporation Limited;
- The UNSW HTH when constructed will not protrude above the PAN-OPS;
- The location and height of the UNSW HTH will not adversely impact the IASB helicopter landing site, or the approach and departure paths;
- The northern-most and southern-most construction crane will protrude the PAN-OPS for a limited period during construction of the upper levels of the UNSW HTH, and will require approval from the Commonwealth Department of Infrastructure, Transport, Regional Development and Communications; and

- The southern-most construction crane (depending on the length of the jib) may impact the departure and approach paths, and parking position of the IASB helicopter landing site and may require the preparation of a crane management plan.

5.10 Infrastructure (Light Rail and Nearby Laboratory Equipment / Apparatus)

The proposed development will provide health and education related services. It will not contain significant sensitive medical apparatus (e.g. MRI, radiography and advanced imaging and the like) and or laboratory equipment for patient treatment that would be impacted by the Light Rail.

The proposal is not anticipated to impact the operating of the CBD and South East Light Rail (refer to Section 6.8 of the Traffic Impact Assessment at **Appendix Q**). This is because:

- No operational vehicle access is proposed along the High Street frontage which would impact the Light Rail service;
- The development is forecast to generate a minor number of additional traffic movements which would have a negligible impact on the operation of surrounding intersections; and
- Construction vehicle approach and departure routes have been selected to avoid the Light Rail corridor.

5.11 Crime Prevention through Environmental Design (CPTED)

CPTED has been addressed in Section 5.1 of Architectus' Design Report (refer to **Appendix C**) using the "Safer by Design" guidelines, including the principles of territorial reinforcement, surveillance, access control and space/activity management. The assessment of each of the abovementioned principles is summarised in **Table 10**.

Table 10 – CPTED Assessment

Principle	Response
Territorial reinforcement	• Given that the UNSW HTH ground floor and public domain is elevated above natural street level, the boundaries of the site are extremely clear through the hierarchy of external circulation spaces, and physical thresholds such as stairs and ramps. • The ground floor is activated with publicly accessible activities that make the space have a civic appearance. • The space will be maintained by the UNSW, ensuring that the space is cared for, cleaned and which reinforces the requirement of respect for the territory by others. • Wayfinding signage will be introduced with the new development to ensure the campus is understood and avoids people loitering in unintended places.
Surveillance	• Clear sight lines have been provided between public and functional spaces for example, the entrances to all "public" facilities can be seen from the central courtyard, lobby and street vistas. • The façade treatment for the ground floor is one of high transparency, allowing very clear and legible views through the UNSW HTH lobby from one side of the site to the other for natural surveillance. • There has been careful consideration to remove any closed or recessed "hidy hole" spaces around the perimeter of the building, and ensure all service doors and spaces finish flush with the façade. This will also help limit 'dead end spaces' or blind spots which minimises the risk of crime and maximises the opportunities for passers-by and users to observe what happens in an area. • Areas that are deficient in natural surveillance will be supported with electronic measures such as CCTV.
Access control	• Both UNSW and the neighbouring SCH Stage 1 and CCCC development will have organised security detail supervising the site a certain times. • Access to the lobby space of the UNSW HTH will be controlled outside of working hours to restrict access within it and through it. • Vehicles and pedestrian have been very clearly and deliberately separated. All logistics are contained to the south of the site within a dedicated shared zone and pedestrians are directed and around this space with a grade separated solution.
Space/activity management	• The strong landscape concept of community engagement contributes to natural community control which will be further supported by UNSW. • Gathering spaces will be integrated into the design, minimising vandalism.

Principle	Response
	• Selection of materials, furniture, fitments and fittings will have an emphasis on reducing vandalism to assist in space management.

5.12 Noise and Vibration

An Acoustic Assessment has been prepared by Arup and is provided at **Appendix T**. The report quantifies the existing acoustic environment at relevant surrounding receivers to set acoustic targets for the project, as well as providing a preliminary quantitative acoustic assessment against these targets. The assessment also outlines mitigation measures for the control of noise and vibration during construction and operation.

5.12.1 Operational Noise

The primary operational noise sources identified to have a potential impact on surrounding sensitive receivers (refer to **Figure 33**) includes building services and vehicular movements on the site. The exact building services will be determined at Crown Certificate Stage therefore the acoustic assessment of these services can be undertaken at a later stage.

Further assessment will be required during design development to ensure the development is capable of compliance against the NSW EPA Noise Policy and project goals with regards to building services. It is anticipated that noise mitigation measures will be required (some of which are listed below).

- Specification of maximum sound power levels for all items of plant as part of the project documentation;
- Use of attenuators to control fan noise;
- Acoustic louvres to control noise from plantroom ventilation openings;
- Vibration isolators to reduce vibration input to the building structure;
- Acoustic screens around external plant, where required; and
- Incorporation of sound absorptive treatments in plantroom spaces.

Operational road traffic (taken from the expected traffic generation of the development from JMT) has been assessed against the EPA Noise Policy. Arup has determined that the generated road traffic from the operation of the UNSW HTH will generate an increase of less than 2 dB in noise level, and therefore represents an insignificant impact on the ambient noise environment.

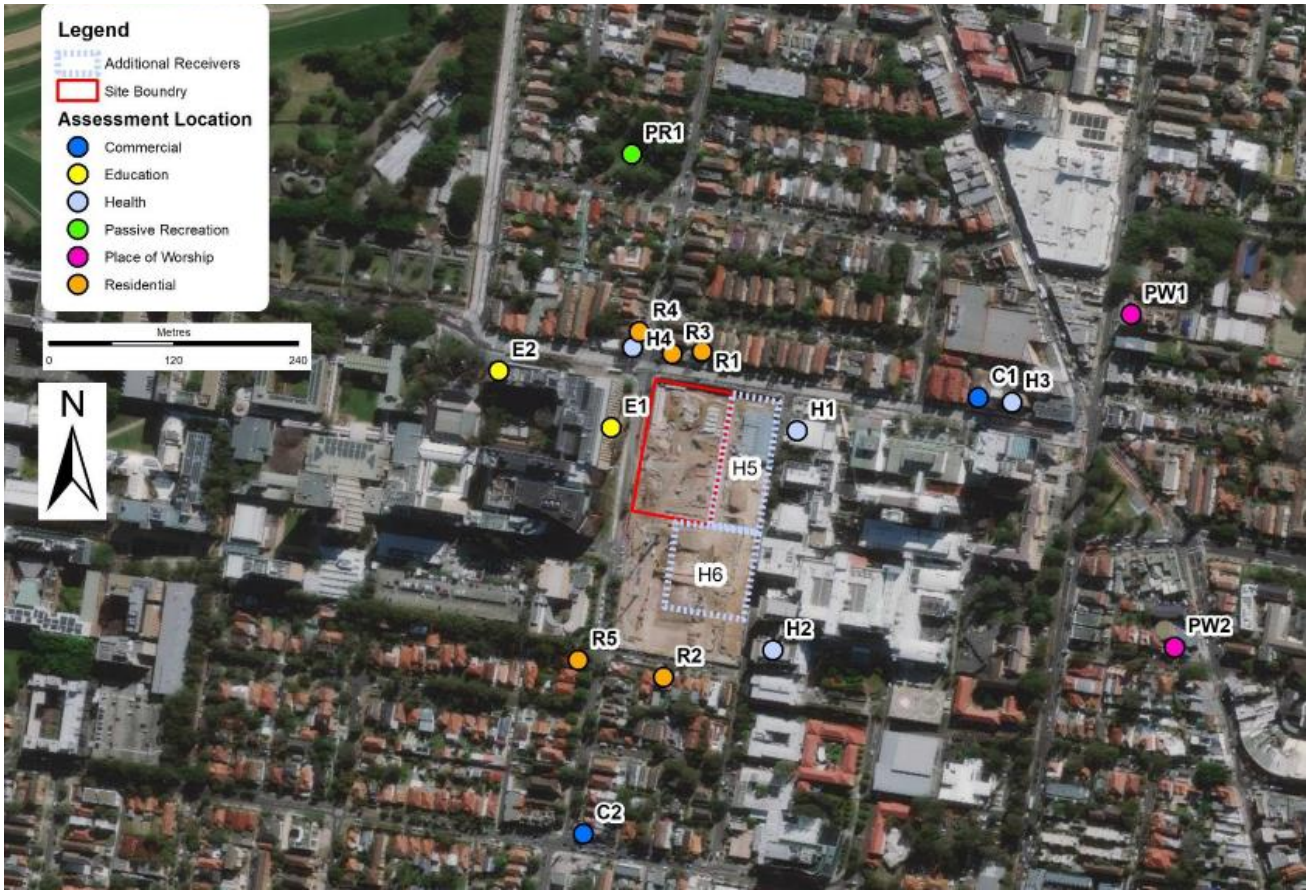

Figure 33 – Surrounding sensitive receivers

Source: Arup

5.12.2 Impact upon the Development

Potential noise and vibration impacts from the Light Rail and traffic from Magill and Botany Streets has been assessed, with the measured noise levels being moderate. Internal noise criteria within the UNSW HTH can be achieved with a sealed façade.

5.12.3 Construction Noise and Management

The anticipated construction noise has been predicted at the surrounding noise sensitive receivers. Construction associated noise and vibration may result is exceedances to noise management levels, and mitigation measures will need to be considered to manage these exceedances. These measures include:

- The preparation of a detailed Construction and Noise Vibration Management Plan in detailed mitigation measures, monitoring methodology and community engagement strategy;
- Dedicated staffing to manage noise and vibration on the site by ensuring good work practices are adopted, and the implementation of 'Toolbox Talks' with contract workers to discuss noise and vibration mitigation, monitoring and assessment;
- Scheduling high noise activities to occur in daytime hours wherever possible;
- The positioning of stationary plant (concrete pumps, air-compressors, generators, etc) as far away as possible from sensitive receivers;
- Using site sheds and other temporary structures or screens and or hoarding to limit noise exposure where possible;
- Sealing of openings in the building (temporary or permanent) prior to commencement of internal works to limit noise emission;

- The use of audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers;
- The appropriate choice of low-noise construction equipment and/or methods;
- Modifications to construction equipment, construction methodology or programme to align activities concurrently where a noisy activity will mask a less noisy activity, or at different times where more than one noisy activity will significantly increase the noise;
- Community consultation during construction including the provision of advance notification of planned activities and expected disruption/effects, construction noise complaints handling procedures; and
- For out of hours work:
  - Verification – measure background noise levels and construction noise to confirm that construction noise and vibration from the site are consistent with the predictions in the noise assessment and that mitigation and management of construction noise and vibration is appropriate for receivers affected by the works;
  - Periodic Notification – providing an overview and advanced warning of current and upcoming works and notice of potential disruptions to assist in reducing impacts to stakeholders; and
  - Specific Notification -personalised letter or phone call to identified stakeholders no later than seven calendar days ahead of construction activities that are likely to exceed the noise objectives.

5.12.4 Construction Hours

The proposed construction hours for the project include extended construction hours outside the Interim Construction Noise Guideline (ICNG) standard hours on Saturday. The proposed hours are summarised in **Table 11**.

Table 11 – Proposed construction hours

Day	Standard hours	Proposed construction hours
Monday to Friday	7:00am to 6:00pm	**7:00am to 6:00pm**
Saturday	8:00am to 1:00pm	**8:00am to 5:00pm**
Sunday and public holiday	No work	**No work**

The extended construction hours on Saturdays are intended to be consistent with the approved IASB, as well as the SCH Stage 1 and CCCC proposal.

In order to minimise the disruption to the community, the above extended hours are proposed for normal construction activities. These works are critical to support the extension of the RHIP and provide essential health and education uses for the SESLHD, and will:

- Reduce the length of the project to meet the critical project delivery timeframes driven by:
  - The scarcity of land and increasing demand for additional services and facilities within the RHIP; and
  - Progression of the State Government's and UNSW's significant commitment to expanding and upgrading the RHIP as a world-class centre for health, research and education (over $1.5B).
- Allow construction vehicles to avoid peak road network times and shift change over times to reduce the impact on the surrounding road network; and
- Minimise the impacts on the existing nearby hospital operations during core business hours such as planned surgery and outpatient clinics.

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

- The definition of ‘reasonable’ in the ICNG having regard to the nature and purpose of the proposed development;
- The analysis of the source/type of construction work noise likely to be generated by the UNSW HTH; and
- The proposed construction management and recommended mitigation measures.

5.13 Water Cycle Management

A Civil Engineering Services Report has been prepared by Warren Smith and Partners (refer to **Appendix M**). The Report provides an outline of existing drainage infrastructure, the stormwater management strategy to support the proposed development (in accordance with the drainage and retention requirements) and relevant sediment and erosion control.

5.13.1 Stormwater Management System

On-site Detention

An on-site detention tank is proposed within the basement of the UNSW HTH (refer to **Figure 34**). The tank is proposed to be 300 sqm (in accordance with Randwick Council requirements).

Figure 34 – Proposed location of on-site detention tank

Source: Warren Smith and Partners

Drainage

The proposed drainage system has been modelled on Drains to ensure a system which can meet the stormwater requirements of Council and the ESD framework. The drainage design has been designed to ensure post-development stormwater runoff does not exceed pre-development stormwater runoff and that stormwater discharged to Council's drainage system cannot exceed the permissible site drainage for the site for all storms up to and including the 5% AEP storm event.

Water Quality Treatment

The proposed development will include treatments to ensure stormwater runoff has been treated to remove suspended soils, hydrocarbons and nutrients prior to being discharged from the site. The performance of the stormwater treatment systems (Oceanguard and PSORB storm filter) has been assessed using MUSIC modelling.

OceanGuards will be the first treatment. It intercepts surface water at the out grates and filters the runoff prior to entering the piped stormwater system. The Guard contains a 200 micron pore size filter bag to collect pollutants. The second proposed treatment is a Psorb StormFilter cartridge system which will remove remaining suspended sediments, hydrocarbons and nutrients that have entered the stormwater system.

Sediment and Erosion Control

Warren Smith and Partners have provided general requirements for the provision of sediment and erosion control measures for the contractor to follow for the future construction of the UNSW HTH. The measures relate to site protection, site access, sediment control, temporary stormwater systems and are outlined in **Section 7.0**.

Flooding

The site is on land subject to flooding which will require the 500mm freeboard requirements to habitable spaces of the proposed development. The PMF flood level on High Street is 55.738, therefore with the 500mm freeboard requirement, the lowest FFL for the proposed development is RL56.24. The nominated FFL level for the proposed UNSW HTH is RL56.24 and all external levels have been designed to grade away from the development entries to minimise the risk of flooding

5.14 Waste Management

Elephants Foot has prepared a Construction Waste Management Plan (**Appendix U**) and Operational Waste Management Plan (**Appendix V**) to determine the construction-related and operational waste streams associated with the proposed development. The Plans also outline the relevant waste management and minimisation techniques recommended for the proposed development.

5.14.1 Construction Waste

Waste Volumes and Management

The construction of the proposed development is anticipated to generate 13,170 tonnes of waste. This will include 11,400 cubic metres of excavation material. Management of all waste will be given to the contractor and sub-contractors.

Generated construction waste will either be reused on-site, recycled or placed in landfill. With recycling and re-use, 99.3% of waste will be diverted from landfill (refer to **Table 12**).

Waste storage areas are proposed on the northern and southern site boundaries to allow sufficient spaces for skip bins and servicing. Skip bins will be monitored on a daily basis and the frequency of the waste removal will be determined by the volume of deposited materials.

Table 12 – Anticipated construction waste and management

Generated waste	Estimated tonnage	Waste management			Tonnage diverted from landfill
		Re-use on site	Recycle	Landfill	
Excavation material	11,400		Y	Y	11,371.5
Green waste	-	-	-	-	-
Bricks	58.8	Y	Y		58.8
Tiles	6.5		Y		6.5
Concrete	1597.5	Y	Y		1597.5
Timber	72.9		Y	Y	24.1
Plasterboard	26.8		Y	Y	13.4
Metals	4.1		Y		4.1
Asbestos	-	-	-	-	-
Other	4.2			Y	0

Source: Elephants Foot

5.14.2 Operational Waste

Waste Generation

The estimated volume of waste associated with the operation of the UNSW HTH is summarised in **Table 13**. The necessary bin and collection requirements are also outlined.

Table 13 – Operational waste management

	General waste	Recycling
L/week waste generation	20,234	29,387
Bin size (L)	660	660
Required bins per week	31	45
Collection per week	7	7
Bins required	**5**	**7**

Source: Elephants Foot

In addition to the above, clinical related waste is anticipated to generate waste equivalent to 2 x 660L mobile garbage bins collected three times weekly. Laboratory managers will be responsible for the overseeing of all clinical related waste including any hazardous or controlled waste.

Operational Waste Storage and Collection

Elephants Foot note the following in relation to waste storage and collection:

- The primary waste room is to be contain garbage and recycling only treated clinical waste is to be kept in the clinical waste room. The required waste storage rooms recommended by Elephants Foot included:
  - Basement 1 main waste room – 35 sqm; and
  - Clinical waste room – 3 sqm.
- A private contractor will be engaged to collect garbage and recycling waste streams and the waste collection vehicle will enter the basement to undertake waste collection via the basement waste room.
- A specialist private contractor will be engaged to collect clinical waste from the UNSW HTH. Collection of waste will be undertaken internally within the basement via the clinical waste collection room.
- Other potential hazardous or uncontrolled waste will be collected in situ from their storage location within the laboratory areas.

5.15 Social Impact

A Social Impact Assessment has been prepared by Ethos Urban (refer to **Appendix W**). Overall, the assessment determines that the level of impact of the proposed development ranges from low to moderate, with no major significant negative impacts identified that cannot be effectively mitigated.

The most significant social benefits of the proposal relate to:

- Supporting the planned transformation of RHIP into an “innovation district” delivering significant economic value and employment opportunity for Greater Sydney residents, and driving productivity and international competitiveness.
- Positive impacts to community cohesion associated with increased opportunities for social interactions between workers and students in the RHIP. The proposed development co-locates health and education uses at a single site that is well integrated within the broader precinct, to foster collaboration between sectors and enable research translation.
- Potential benefits to community cohesion associated with provision of 2,500sqm of quality public space, which would provide a new public plaza for people to meet and gather, and would contribute to the improved activation and amenity of the RHIP as a whole.

- Social benefits associated with the delivery of education and health uses at an accessible location, close to the Light Rail terminus and within walking distance of daily living needs in Randwick Junction town centre. This supports State and local strategic policy which prioritises delivery of a '30-minute city'.
- Improvements to accessibility and way of life associated with enhanced walkability and connectivity of the site, associated with physically connected health and education use buildings (via link bridge to UNSW Kensington Campus, and podium level connection to the SCH Stage 1 and CCCC) as well as improved access and wayfinding integrating the site within the broader campus. Community and stakeholder consultation undertaken by HI has highlighted that improving wayfinding within the new buildings and the precinct is a priority.

Key challenges identified with the proposed development relate to:

- Temporary impacts to surroundings and amenity during the construction phase of the development. Changes to amenity may relate to environmental factors such as noise, traffic and parking, vibration, views and air quality. As the surrounding context of the development is also undergoing significant redevelopment activity, users of this site may be more sensitive to cumulative impacts to surroundings. These impacts will be managed in accordance with legislation and regulation, through a Construction Management Plan.
- Temporary impacts to accessibility and way of life associated with disruption due to the construction phase, such as changes to wayfinding, pedestrian accessibility and daily routines for workers, students and users of the site. As the site is located adjacent to a hospital, some visitors to the site may be experiencing illness, disability or distress that may make them more sensitive to changes to accessibility and routines.

The proposed mitigation measures to mediate these key challenges are outlined in **Section 7.0**. These measures include the implementation of a robust Construction Management Plan and ongoing consultation with the local community and relevant stakeholders.

5.16 Ecologically Sustainable Development

The environmental performance of the development has been assessed by using Clause 7(4) of Schedule 2 of the EP&A Regulations and the EIS is accompanied by an ESD Statement prepared by Atelier Ten at **Appendix G**.

The development is seeking an energy performance which is equivalent to a NABERS Energy rating of 5.5 Star and a Green Star Design and As Built 5 Star equivalency to benchmark the UNSW HTH's environmental performance against an established rating system. The UNSW HTH will be designed with the provision to use all electric systems for heating and hot water and allowing for the transition to a Net Zero Carbon building as the electricity network in NSW transitions to carbon free energy generation.

The UNSW HTH envelope will surpass the 2019 NCC energy performance requirements by a margin of 4% when assessed using the same mechanical services. In relation to water, the UNSW HTH will achieve a significant reduction in water consumption when measured against a comparable building. This will be resultant of highly efficient fixtures and fittings, the use of UNSW bore water, the integration of water capture and reuse and the use of adiabatic heat rejection systems.

The proposed sustainable design measures and inclusions are tabulated in Section 6 of **Appendix G**.

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

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

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental change, lack of full scientific certainty should not be

used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

This EIS has not identified any serious threat of irreversible damage to the environment and therefore the precautionary principle is not relevant to the proposal.

Intergenerational Equity

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

- Implementing safeguards and management measures to protect environmental values;
- Facilitating job creation in close proximity to homes and public transport and other related services; and
- Improving the public domain and amenity in the RHIP.

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

Conservation of Biological Diversity and Ecological Integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration. Notwithstanding this, the site is devoid of any vegetation and does not contain any biological diversity or ecological value. This principle is not therefore relevant to the proposal.

Improved Valuation, Pricing and Incentive Mechanisms

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

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

5.17 Other Assessment Issues

An assessment of the other impacts of the development has been undertaken by the relevant specialist consultants and are appended to this EIS. A brief description of each other assessment issue is provided in **Table 14**.

Table 14 – Other assessment issues

Issue	Consultant	Summary	Reference
Infrastructure Management	Arup	The required infrastructure augmentation is outlined in **Section 3**. Existing utility services at the perimeter of the site will be retained and augmented as far as possible to support the proposed development.	**Appendix H**
Biodiversity	Evolve Ecology	A Biodiversity Assessment Report has been prepared to address the SEARs and assess the potential impacts of the proposed development on the site. Evolve Ecology concludes that because the site does not support any native vegetation, a detailed assessment of native vegetation, threatened ecological communities and vegetation integrity in accordance with the Biodiversity Assessment Method (BAM) is not required. Evolve Ecology also concludes that the site does not support any threatened species habitat and as such, an assessment of habitat suitability for threatened species in accordance with the BAM is not required. The UNSW HTH has been determined not to result in direct, indirect or prescribed impacts to biodiversity values.	**Appendix X**

Issue	Consultant	Summary	Reference
Geotechnical	Douglas Partners	A Desktop Geotechnical Assessment has been undertaken. It includes a review of previous boreholes, in situ permeability tests and laboratory data within and in proximity to the site from geotechnical investigations undertaken for the SCH Stage 1 and CCCC , IASB development and Biological Sciences, and Wallace Wurth Building. The assessment identifies that: • The site is located well beyond the mapped extent of potential saline soil areas shown in the NSW Salinity Potential Western Sydney map. • The site has a site classification of 'Class P' in accordance with AS 2870 - 2011 "Residential slabs and footings'. • The site is located in an area which is not known to have Acid Sulfate Soils, and therefore, an Acid Sulfate Soils assessment or management plan is not required for this development. • The site's subsurface conditions are expected to include sandy and crushed sandstone to depths of 1-2m, underlain with loose and medium density sand and clay, Hawkesbury Sandstone (1-3m) and then high strength sandstone. • Groundwater seepage is anticipated near the rock and soil interface, and within the rock along rock joints and extremely/highly weathered rock bands, which are located above the northern end and parts of the central area of the proposed basement. Drawdown or dewatering is not considered to be a geotechnical issue for the site. • Basement excavation will likely meet fill and natural sand, with the intersection of Hawkesbury Sandstone of variable strength at the northern end which should be readily achieved using conventional earthmoving equipment. Removal of low strength and stronger rock will require relatively large excavators fitted with hydraulic rock hammers and/or rotary rock saws.	**Appendix Y**
Contamination	Douglas Partners	A Preliminary Site Investigation (PSI) for contamination has been undertaken for the site. A Remediation Action Plan has also been prepared. Overall, it has been concluded that the site can be made suitable for the proposed development provided the recommended data gap investigation, remediation procedures, unexpected finds protocols and completion of the validation assessment within the RAP is followed. More specifically, • Previous contamination investigations at the site have included preliminary and detailed site investigations for larger areas including the site. partial remediation has also been undertaken for part of the site. • Areas of potential concern which have been identified through a review of the site's history and previous investigations included: - imported fill; - demolition of dwellings containing asbestos and / or lead paint; - construction support activities; and - neighbouring or nearby commercial activities. - Previous investigations within the site and the larger block have identified the following key contaminants which hold potential health implications: - polycyclic aromatic hydrocarbons (PAH), - asbestos; and - petroleum hydrocarbons (TPH) (to a less extent). • Minor exceedances of ecological criteria have previously been noted, however, they are not considered to be a significant risk factor. • The site can be made suitable for the proposed development subject to the development of a Remediation Action Plan (provided with the PSI) and preparation of a gap investigation to determine the possible changes in site conditions since the previous investigations arising from ongoing construction support activities. • This data gap investigation will inform the need for any future targeted investigations and may also inform any changes to the RAP depending on the sequence undertaken. • It is recommended the data gap investigation is conducted prior to commencement of construction and is reported separately in a supplementary contamination report.	**Appendix K**

Issue	Consultant	Summary	Reference
Hazardous and Offensive Development	Arup	*State Environmental Planning Policy No. 33 Hazardous and Offensive Development* (SEPP 33) is used to regulate the planning approval process for developments in hazardous and offensive industries, and potentially hazardous and potentially offensive industries. Arup has reviewed the quantities of dangerous goods to be stored in the UNSW HTH and has confirmed that they are expected to be well below the threshold quantities under SEPP 33	**Appendix L**
BCA Compliance	Steve Watson and Partners	The proposed development and performance solutions will be capable of achieving compliance with the Building Code of Australia 2019, subject to normal design development and re assessment required at the next stage of documentation (between the SSDA and the issue of the relevant Crown Certificate).	**Appendix Z**
Access	Morris Gooding	An assessment of the proposed architectural plans indicates that the accessibility requirements relating to linkages, building access, sanitary facilities, common areas and parking can be readily achieved. Ongoing consultation is recommended to ensure appropriate accessibility outcomes are achieved in the detailed building and public domain design.	**Appendix AA**
Structural	Arup	The primary construction methodology of the UNSW HTH is post-tensioned band beam floors, supported on reinforced concrete columns and a cast in-situ reinforced concrete stability core. The core and columns are to be supported on spread pad footings and founded in the sandstone sub-strata. The design will be designed to comply with the National Construction Code (NCC 2019) and the relevant Australian loading and design standards, including: • AS/NZS 1170.0/2002 – Part 0: Structural design actions; • AS/NZS 1170.1/2002 – Part 1: Permanent, imposed and other actions; • AS/NZS 1170.2/2011 – Part 2: Wind actions • AS/NZS 1170.4/2007– Part 4: Earthquake actions; • AS1720.1 – Timber Structures: Design Methods; • AS3600: 2001 Concrete structures; • AS3700: 2001 Masonry structures; • AS4100: 1998 Steel structures; and • AS 2121 Cold Formed Steel Structures Code.	**Appendix BB**
Fire	Warrington Fire	The proposed development is capable of developing performance solutions to ensure compliance with the performance requirements of National Construction Code Volume One - Building Code of Australia (NCC) 2019 Amendment 1. The performance solution will be developed as part of ongoing design and development.	**Appendix CC**
Arboriculture	TLC Tree Solutions	An Arboricultural Assessment Report has been prepared to assess the impact of two existing trees located on the Botany Street frontage of the Wallace Worth Building, which may be potentially impacted by the proposed footbridge. TLC consider pruning of Tree 267 should be limited to 15% to accommodate the footbridge. In the case that additional space is needed to accommodate the footbridge (i.e., pruning greater than 15% which would exceed the tolerance of the tree). TLC recommend the tree be removed entirely. Tree 268 is to be retained and TLC recommend that the proposed footbridge can be approved.	**Appendix DD**

5.18 Public Benefit

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

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

development of the UNSW HTH. The assessment must therefore focus on the identification and appraisal of the effects of the proposed development, particularly given the demand for upgraded health services within the broader region.

Social Impact

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

- A development that will provide a significant piece of social infrastructure, increasing the integration of health and education services. The spaces and colocation of services will drive excellence, and support the rapid translation of research, innovation and education into improved patient care.
- Infrastructure provision which will support healthcare and quality of life outcomes for broader Sydney.
- Providing additional social benefits for the region in terms of providing additional public open space and employment in the area.

Economic Impact

The economic impacts and benefits of the proposed development include:

- The proposed development is anticipated to create additional employment in consultancy, construction and operation.
- The creation of ongoing jobs in research, teaching and administration.
- Providing additional educational capacity in Sydney that will contribute to higher rates of education and training across the region, strengthening the local and regional economy.

Biophysical

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

- The development will generate limited environmental impacts, as it is located in a highly urbanised area on land already subject to site preparation works.
- The development will not have a significant impact on any threatened flora or fauna species.

5.19 Development Contributions

The relevant contributions plan is the Randwick Section 94A Development Contributions Plan. The purpose of the plan is to enable Council to levy a contribution towards the provision, extension, or augmentation of public amenities and public services that will or are likely to be required as a consequence of development within the LGA.

The UNSW HTH forms an extension of the existing and proposed hospital facilities at the RHC and the Contributions Plan allows for a waiver from contributions to be considered for a variety of uses, including public hospitals (which the UNSW HTH is part of) (refer to clause 13.2). The proposed development will clearly provide a public benefit by facilitating an important public future service. Therefore, an exemption to the developer contributions is appropriate, under the Contributions Plan and consistent with the Department's Circular D6 (elaborated below) which applies to Crown Developments.

5.19.1 Circular D6 – Crown Development Application and Conditions of Consent

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

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

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

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

6.0 Environmental Risk Assessment

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

In accordance with the SEARs, the ERA addresses the following significant risk issues:

- The adequacy of baseline data;
- The potential cumulative impacts arising from other developments in the vicinity of the site; and
- Measures to avoid, minimise, offset the predicted impacts where necessary involving the preparation of detailed contingency plans for managing any significant risk to the environment.

Figure 35 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

- The receiving environment;
- The level of understanding of the type and extent of impacts; and
- The likely community response to the environmental consequence of the project;

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

- The complexity of mitigation measures;
- The known level of performance of the safeguards proposed; and
- 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 35 – Risk Assessment Matrix

				Risk Assessment		
Item	**Phase**	**Potential Environmental Impact**	**Proposed Mitigation Measures and / or Comment**	**Significance of Impact**	**Manageability of Impact**	**Residual Impact**
Traffic and Parking	C / O	• Increased pressure on street loading zones in the vicinity of the Site. • Impacts to the operation of the nearby light rail network. • Increased traffic congestion on the surrounding road network. • Impacts to pedestrians, cyclists and general traffic during construction. • The proposal will inhibit future vehicle access to adjacent buildings. • The proposal will generate additional demand for bicycle parking facilities.	• The design proposes to provide a total of seven service vehicle bays within the loading dock. Based on surveys of similar sites, this provision is sufficient to accommodate the loading and servicing demands entirely within the site and not on surrounding streets. • So as to not impact the light rail service operational vehicle access is not proposed along the High Street frontage of the site, while an over-sized vehicle driveway will be provided during the construction phase to minimise the risk of construction vehicles veering onto the light rail tracks. • No car parking is being provided as part of the development and therefore, the traffic impact will be negligible, with the main traffic generation related to servicing and deliveries. • A preliminary Construction Pedestrian and Traffic Management Plan has been prepared, describing how it is proposed to manage the impacts to traffic, pedestrians, cyclists and public transport users during the construction stage. A more detailed CPTMP will be prepared prior to the commencement of construction. • The proposed access arrangements have been coordinated in order to provide appropriate access to the IASB as well as a future SCH Stage 1 and CCCC building (subject to a separate approval). • The proposal will include a large bicycle parking and end of trip area to provide 125 bicycle parking spaces as well as supporting lockers and showers.	C = 3 O = 3	C = 2 O = 3	C = 5 (low/medium) O = 6 (medium)
Waste Management	C / O	• Increased waste generation during construction. • Increase waste generation during operation.	• A detailed Construction Waste Management Plan will be developed to manage the generation and disposal of construction waste, in accordance with the principles outlined in the Waste Management Plan. • Operational waste management will be undertaken in accordance with the methodology detailed in the Operational Management Plan prepared by Elephants Foot.	C = 3 O = 1	C = 2 O = 2	C = 5 (low/medium) O = 3 (low)
Contamination	C	• Unexpected finds of contaminated material during construction	• The development will be carried out in accordance with the recommendations of the Preliminary Site Investigation and Remediation Action Plan.	C = 2	C = 2	C = 4 (low/medium)
Noise	C	• Increases in noise and vibration levels during construction activities. • Increase in noise levels during operation.	• Ongoing acoustic testing during design development and the implementation of mitigation measures where required will be required to ensure the operation of the development (including building services) complies with the standard NSW EPA noise policy and noise goals established for the project.	C = 2	C = 2	C = 4 (low/medium)

				Risk Assessment		
			• Implementation of mitigation measures (where relevant) and the preparation of a detailed Construction Vibration Management Plan will be required to manage construction related noise and vibration to surrounding sensitive receivers.			
Flooding	C / O	• Flooding during Probably Maximum Flood event.	• The development will be carried out in accordance with the Flood Assessment.	C = 3 O = 3	C = 2 O = 2	C = 5 (low/medium) O = 5 (low/medium)
Heritage	C + O	• Impact on heritage listed buildings in the vicinity of the site. • Impact on Aboriginal Cultural Heritage/social significance during construction	• The development will be carried out in accordance with the recommendations contained in the Heritage Impact Statement. • The development will be carried out in accordance with the recommendations contained in the Aboriginal Cultural Heritage Assessment Report.	C = 2 O = 2	C = 2 O = 1	C = 4 (low/medium) O = 3 (low)

7.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 15** below. These measures have been derived from the previous assessment in **Section 5.0** and those detailed in appended consultants' reports.

Table 15 – Mitigation Measures

Mitigation Measures
Construction Pedestrian Traffic Mitigation Measures • Manage and control construction traffic movements on the adjacent road network and vehicle movements to and from the site; • Trucks to enter and exit the site in a forward direction; • No provision of vehicle parking for construction workers; • Restrict construction vehicle activity to designated truck routes; • Construction access from the external road network to mainly occur as signalised intersection; • Pedestrian movements adjacent to demolition activity will be managed and controlled by site personnel where required; • Pedestrian warning signs and construction safety signs/devices to be utilised in the vicinity of the site and to be provided in accordance with WorkCover requirements; • Construction activity to be carried out in accordance with the approved hours of work; • Truck loads would be covered during transportation off-site; • Establishment and enforcement of appropriate on-site vehicle speed limits which would be reviewed depending on weather conditions or safety requirements; • Activities related to the construction works would not impede traffic flow along local roads; • Materials would be delivered, and spoil removed during standard construction hours; • Construction vehicles not to queue on adjacent roads and be wholly accommodated within the site or the nominated Botany Street works zone; and • Minimal construction traffic movements to/from the site will be made during peak hours where practical to minimise the impact on the wider road network.
Geotechnics • Additional rock-cored boreholes to confirm the depth and strength of rock for foundation design, together with additional groundwater monitoring wells are recommended to fill in data-gaps from the Desktop Assessment. • Dilapidation (building condition) reports should be prepared for adjacent structures and infrastructure located within at least about 15 m from the site boundaries, prior to commencing excavation work on the site. • All excavated materials will need to be disposed of in accordance with the provisions of the current legislation and guidelines including "Waste Classification Guidelines" – 2014, New South Wales Environment Protection Authority (NSW EPA). This includes fill and natural materials that may be removed from the site. • Vibration trials should occur at the commencement of excavation in rock to determine minimum set-backs from existing buildings or sensitive areas for specific plant, whether the use of other plant or continuous vibration monitoring is required. • During construction of the basement and any deep lift cores/stairs and service trenches, any exposed excavation faces should be inspected at regular 1.5 m depth intervals by an experienced geotechnical engineer to assess whether there are any further stabilisation requirements, such as reducing the steepness of a batter, installation of ground anchors or shotcrete protection. • Temporary ground anchors may be required to restrict wall movements during the construction phase, with permanent support of retaining walls anticipated to be provided by the final structure. • It is recommended that all building footings are founded on at least medium strength sandstone to reduce the risk of differential settlement.
Sediment and erosion control • Site access shall be established from Botany Street. Construction vehicles leaving the site shall be required to pass over a Temporary Construction Vehicle Entry consisting of a 1.5m long by 3m wide 'cattle rack'. • All exposed earth areas where it may be possible for runoff to transport silt down slope shall be protected with a sediment and erosion control silt fence generally installed along the boundaries of the site. The fence will be constructed in accordance with details provided by the Department of Conservation and Land Management incorporating geotextile fabric which will not allow suspended particles greater than 50mg/L non-filterable solids to pass through, and as such comply with the appropriate provisions of the Clean Waters Act 1970. • Existing stormwater infrastructure is also to be protected from incoming sediment using – Any Council owned road kerb entry and/or gully pits will be protected by Filter Bales and EcoSocks; and – Internal site drainage pits protected by Sediment Traps consisting of hay bales.

Mitigation Measures

- Site runoff within the zones of the excavation will be drained into a central holding well within the excavation. Runoff will be allowed to settle out suspended particles and debris, and an acceptable water of 50mg per litre of Non Filterable Residues (NFR) is required to be achieved prior to discharge.
- Dust control, including:
  - Loose loads entering or leaving the site will be securely covered by a tarpaulin or like material in accordance with RMS and local Council Guidelines.
  - Soil transport vehicles will use the single main access to the site.
  - There will be no burning of any materials on site.
  - Water sprays will be used across the site to suppress dust. The water will be applied either by water sprinklers or water carts across ground surfaces whenever the surface has dried out and has the potential to generate visible levels of dust either by the operation of equipment over the surface or by wind. The watercraft will be equipped with a pump and sprays.
  - Spraying water at the rate of not less than three (3) L/s and not less than 700kPa pressure. The area covered will be small enough that surfaces are maintained in a damp condition and large enough that runoff is not generated. The water spray equipment will be kept on site during the construction of the works.
  - During excavation all trucks/machinery leaving the site will have their wheels washed and/or agitated prior to travelling on Council Roads.
  - Fences will have shade cloth or similar fabric fixed to the inside of the fence.
- General construction maintenance measures, including:
  - Prior to the closing of the site each day, the road shall be swept, and materials deposited back onto the site.
  - Gutters and roadways will be kept clean regularly to maintain them free of sediment.
  - Appropriate covering techniques, such as the use of plastic sheeting will be used to cover excavation faces, stockpiles and any unsealed surfaces;
  - If dust is being generated from a given surface, and water sprays fail;
  - If fugitive emissions have the potential to cause the ambient as quality to foul the ambient air quality;
  - The area of soils exposed at any one time will be minimised wherever possible by excavating in a localised progressive manner over the site; and
  - Materials processing equipment suitably comply with regulatory requirements. The protection will include the covering of feed openings with rubber curtains or socks.

Visual Impact

- Ensure detailed design measures, including line, shape, form, colour and texture, are compatible with the prevailing character of the Randwick health and education precinct.

Construction hours

- 7.00am to 6.00pm Monday to Friday.
- 8.00am to 5.00pm Saturday.
- No work on Sundays and Public Holidays.
- A detailed Construction Management Plan is to be prepared by the contractor prior to the commencement of works.

Contamination

- Preparation of a data gap investigation to determine the possible changes in site conditions since the previous investigations arising from ongoing construction support activities.
- This data gap investigation will inform the need for any future targeted investigations and may also inform any changes to the RAP depending on the sequence undertaken.
- It is recommended the data gap investigation is conducted prior to commencement of construction and is reported separately in a supplementary contamination report.
- Proper implementation of the remediation procedures, unexpected finds protocol and completion of the validation assessment detailed in the Remediation Action Plan.

Light spill

- All external and landscape lighting to be designed to AS4282 “Control of the obtrusive effect of outdoor lighting**”.**
- Implementation of lighting techniques such as directional luminaire selection with appropriate cut off angles and additional glare shields to reduce the upward light component, and lighting control measures to optimise usage to meet compliance.

Flooding

- Ensure 500mm freeboard requirements to habitable spaces of the development are achieved.

Noise and Vibration

- Ongoing acoustic testing during design development and the implementation of mitigation measures where required (as listed below) will be required to ensure the operation of the development (including building services) complies with the standard NSW EPA noise

Mitigation Measures

policy and noise goals established for the project. Noise mitigation measures will likely be required to ensure building services can meet the SW EPA noise policy and noise goals established for the project are listed as follows.

- Specification of maximum sound power levels for all items of plant as part of the project documentation;
- Use of attenuators to control fan noise;
- Acoustic louvres to control noise from plantroom ventilation openings;
- Vibration isolators to reduce vibration input to the building structure;
- Acoustic screens around external plant, where required; and
- Incorporation of sound absorptive treatments in plantroom spaces.

- Implementation of the following mitigation measures will be required (where relevant) to manage construction related noise and vibration to surrounding sensitive receivers.
  - The preparation of a detailed Construction and Noise Vibration Management Plan in detailed mitigation measures, monitoring methodology and community engagement strategy;
  - Dedicated staffing to manage noise and vibration on the site by ensuring good work practices are adopted, and the implementation of 'Toolbox Talks' with contract workers to discuss noise and vibration mitigation, monitoring and assessment;
  - Scheduling high noise activities to occur in daytime hours wherever possible;
  - The positioning of stationary plant (concrete pumps, air-compressors, generators, etc) as far away as possible from sensitive receivers;
  - Using site sheds and other temporary structures or screens and or hoarding to limit noise exposure where possible;
  - Sealing of openings in the building (temporary or permanent) prior to commencement of internal works to limit noise emission;
  - The use of audible movement alarms of a type that would minimise noise impacts on surrounding noise sensitive receivers;
  - The appropriate choice of low-noise construction equipment and/or methods;
  - Modifications to construction equipment, construction methodology or programme to align activities concurrently where a noisy activity will mask a less noisy activity, or at different times where more than one noisy activity will significantly increase the noise;
  - Community consultation during construction including the provision of advance notification of planned activities and expected disruption/effects, construction noise complaints handling procedures; and
  - For out of hours work:
    - Verification – measure background noise levels and construction noise to confirm that construction noise and vibration from the precinct are consistent with the predictions in the noise assessment and that mitigation and management of construction noise and vibration is appropriate for receivers affected by the works;
    - Periodic Notification – providing an overview and advanced warning of current and upcoming works and notice of potential disruptions to assist in reducing impacts to stakeholders; and
    - Specific Notification -personalised letter or phone call to identified stakeholders no later than seven calendar days ahead of construction activities that are likely to exceed the noise objectives.

Social Impact

- Mitigation measures set out in the Construction Management Plan (prepared by the contractor) will be implemented to reduce the impacts associated with noise and vibration and visual amenity during the construction phase.
- Develop a communications and engagement strategy to communicate with surrounding residents, workers, students and visitors to ensure that all stakeholders are made aware of the timing and likely impact of the construction period. Any opportunities to coordinate construction impacts with other construction projects in the area should be explored to reduce cumulative impacts. Opportunities for feedback and to ask questions should also be provided.
- Consider opportunities to enhance pedestrian connections between the site and surrounding health and education infrastructure to ensure that workers, students and visitors are able to easily access surrounding facilities (e.g. ensuring surrounding walking paths are level and well-maintained, safe, well-sign posted).
- Consider opportunities for new accessways and connection points to the site to be designed to enhance the connectivity to the surrounding neighbourhood (e.g. light rail stops along High Street, Randwick Junction, surrounding Health and Education precinct).
- Public plaza has been designed to encourage community interaction by providing space for seating, events and "hanging out". Explore opportunities to maximise the value of this space through programming and activation that invite workers, students, visitors to the precinct and the broader community (e.g. markets).
- Explore opportunities for sustainable travel plans for future tenants of the UNSW HTH, including UNSW.
- Continue to undertake collaborative and shared governance of the Randwick health and education precinct, and strengthen ongoing partnerships between UNSW, Health Infrastructure and SESLHD to identify opportunities to enhance positive benefits to way of life.

Waste Management

- Construction waste will be undertaken in accordance with the site-specific operational measures detailed in the Construction and Demolition Waste Management Plan prepared by Elephants Foot at **Appendix U**.

Mitigation Measures

- Operational waste management will be undertaken in accordance with the methodology detailed in the Operational Management Plan prepared by Elephants Foot at **Appendix V**.

Structural Engineering

The detailed design of the UNSW HTH will be designed to comply with the National Construction Code (NCC 2019) and the relevant Australian loading and design standards, including:

- AS/NZS 1170.0/2002 – Part 0: Structural design actions;
- AS/NZS 1170.1/2002 – Part 1: Permanent, imposed and other actions;
- AS/NZS 1170.2/2011 – Part 2: Wind actions
- AS/NZS 1170.4/2007– Part 4: Earthquake actions;
- AS1720.1 – Timber Structures: Design Methods;
- AS3600: 2001 Concrete structures;
- AS3700: 2001 Masonry structures;
- AS4100: 1998 Steel structures; and
- AS 2121 Cold Formed Steel Structures Code.

8.0 Conclusion

This EIS has been prepared to consider the environmental, social and economic impacts of the proposed construction and operation of the University of New South Wales Health Translation Hub (UNSW HTH) at the Randwick Health and Innovation Precinct (RHIP). The UNSW HTH forms an extension of the existing and proposed hospital facilities at the Randwick Hospitals Campus, providing a specialist health-related research and education facility on the Campus.

The EIS has addressed the issues outlined in the SEARs (**Appendix B**) and accords with Schedule 2 of the EP&A Regulation with regards to consideration of relevant planning instruments, built form, social and environmental impact including traffic, noise, construction impacts and stormwater.

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

- The proposal will provide a significant new piece of health-related infrastructure which will bring together educational and medical researchers, clinicians, educators, industry partners and public health officials to drive excellence, and support the rapid translation of research, innovation and education into improved patient care, delivering better health outcomes to the community. It will also be an integral building to realise the vision of the RHIP.
- The area and shape of the site allows for the provision of health-related infrastructure that meets the special design requirements for the proposed uses, whilst not resulting in any significant adverse impacts on surrounding uses.
- The proposal will create a destination at ground level, enhancing the relationship with the ground plane and surrounding public domain. Leveraging off the site's scale and length of frontage to provide significant new public open space (2,500 sqm) and a new and invigorated street level outcome which will support fine-grain activation and permeability.
- The proposal exhibits a high standard of architectural, urban and landscape design, and provides a recognisable and high-quality contribution to the RHIP and Eastern District more broadly.
- The proposal provides sustainability initiatives of the highest level, supporting the improved environmental performance of the Randwick Health and Education Precinct.
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the EP&A Regulation.
- The proposal is anticipated to generate a total 450 construction jobs and 495 ongoing jobs which will have broader social and economic benefits to the RHIP.
- Traffic and parking impacts associated with the proposed development can be appropriately managed and active transport will be promoted and encouraged.

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