



Prepared for
Health Infrastructure NSW

Date
29 March 2021

Environmental Impact Statement (SSD-10349252)

Paediatric Services Building

The Children's Hospital at Westmead

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Revision history

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-	25 January 2021	Draft
A	10 February 2021	Test of Adequacy
B	18 February 2021	Updates
C	19 March 2021	Final
D	6 April 2021	Updates

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- A Secretary's Environmental Assessment Requirements**
*Issued by the Department of Planning, Industry and Environment,
20 November 2020 (SSD-10349252)*
- B Detailed Site Survey**
Prepared by LTS
- C Section 10.7 Planning Certificate**
Issued by City of Parramatta Council
- D Social Impact Assessment**
Prepared by Ethos Urban
- E Drawings Approval List**
Prepared by Architectus
- F Architectural Plans**
Prepared by Billard Leece Partnership Pty Ltd
- G Architectural Design Report**
Prepared by Billard Leece Partnership Pty Ltd
- H Landscape Plans**
Prepared by McGregor Coxall
- I Landscape Strategy**
Prepared by McGregor Coxall
- J Heritage Impact Assessment**
Prepared by Jacobs Group
- K Aboriginal Cultural Heritage Assessment Report**
Prepared by Jacobs Group
- L Flood Impact Assessment**
Prepared by Arup
- M Consultation Meeting Minutes**
Prepared by various consultants
- N Transport Assessment**
Prepared by WSP
- O Preliminary Green Travel Plan**
Prepared by WSP
- P Geotechnical Investigation Report**
Prepared by JKGeotechnics
- Q Detailed Site Investigation – Children's Hospital at Westmead Stage 2 Redevelopment**
Prepared by JBS&G
- R Detailed Site Investigation - Children's Hospital at Westmead Forecourt Stage 2 Redevelopment**
Prepared by JBS&G

S	Remediation Action Plan <i>Prepared by JBS&G</i>
T	Civil Services Report <i>Prepared by Arup</i>
U	Preliminary Hazard Analysis <i>Prepared by Arup</i>
V	SEPP 33 Requirements <i>Prepared by Arup</i>
W	Infrastructure Management Plan Hydraulic and Fire Services <i>Prepared by Arup</i>
X	Infrastructure Management Plan Electrical Services <i>Prepared by Stantec</i>
Y	Construction Waste Management Plan <i>Prepared by JBS&G</i>
Z	Structural Report <i>Prepared by Arup</i>
AA	Building Code of Australia Compliance Assessment <i>Prepared by Blackett Maguire + Goldsmith</i>
AB	Ecological Sustainable Development Report <i>Prepared by Steensen Varming</i>
AC	BDAR Waiver Request <i>Prepared by Cumberland Ecology</i>
AD	BDAR Waiver Approval <i>Prepared by DPIE and EESG</i>
AE	Noise and Vibration Report <i>Prepared by Stantec</i>
AF	Wind Impact Assessment <i>Prepared by Arup</i>
AG	Arboricultural Assessment <i>Prepared by Birds Tree Consultancy</i>
AH	Preliminary Construction Management Plan <i>Prepared by PWC</i>
AI	Lighting Strategy <i>Prepared by Stantec</i>

Statement of veracity

This Environmental Impact Statement (EIS) has been prepared in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000, This Environmental Impact Statement (EIS) has been prepared by:

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In respect of:

State Significant Development Application (SSD-10349252) for the proposed construction of a new Paediatric Services Building with ancillary works to adjoining buildings (CHW Forecourt, Kids Research and Central Acute Services Building), a pedestrian canopy link, landscaping and tree removal (as described in **Section 3** of this EIS).

Applicant:

Health Infrastructure NSW
C/- Architectus Australia Pty Ltd

Land to be developed:

Part of the Westmead Health Precinct, at the eastern side of Redbank Avenue, Westmead 2145. The site is described as Lot 101 DP 1119583.

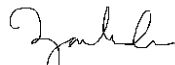
Declaration:

It is declared to the best of my knowledge that:

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



Jane Fielding
06/04/2021



Jasmine Bautista
06/04/2021

Executive summary

Preliminary

This Environmental Impact Assessment (**EIS**) has been prepared by Architectus on behalf of the Health Infrastructure NSW (the applicant) in support of a State Significant Development (**SSD**) Application (SSD-10349252) for the construction of a new Paediatric Services Building (**PSB**) for The Children's Hospital at Westmead (**CHW**), including redevelopment of the CHW Forecourt and access links.

This EIS should be read in conjunction with the Secretary's Environmental Assessment Requirements (**SEARs**) issued by the Department of Planning, Industry and Environment (**DPIE**) on 20 November 2020 and attached at **Appendix A**, and the supporting technical documents provided at **Appendix B – Appendix AI**.

Site

The proposed development is located at corner of Hawkesbury Road and Hainsworth Street, Westmead 2145, and forms part of CHW within the broader Westmead Health Precinct. The site falls within the Parramatta Local Government Area (**LGA**).

The site was previously occupied by the P17 car park, the existing CHW Forecourt and a small link area through the existing Kids Research (**KR**) building. The P17 car park and KR link have recently been decommissioned and demolished. The CHW Forecourt will be redeveloped as part of this application.

The land subject to the proposed works is legally referred to as Lot 101 in Deposited Plan 1119583.

Proposed development

The Project proposes the construction of a new PSB located adjacent to the Central Acute Services Building (**CASB**), and on the site of the former P17 car park, including redevelopment of the CHW Forecourt and access links. The CHW Forecourt works on Hawkesbury Road include improved community amenity in the form of a new front entry, enhanced green space, improved street frontage and presence, and to enable a more cohesive main entrance connecting existing CHW, adjoining research facilities, and the new PSB.

The proposed works will enable the expansion and replacement of the existing paediatric services at CHW, providing additional surgery, inpatient and critical care services in the Sydney Children's Hospitals Network (**SCHN**).

The PSB will help deliver on the NSW Government's vision for the Westmead Health and Innovation District to be Australia's premier health and innovation district that has an ecosystem for new discoveries, economic growth and global recognition.

The PSB will enhance the provision and quality of paediatric health services to the growing Western Sydney population and beyond. It will contribute to the NSW Government's focus on delivering exceptional place outcomes for the Central River City, with enhanced heritage and environmental assets, activated places, connected communities and housing choice.

The scope of the proposed works the subject of this SSD application includes the following:

- Construction of the PSB:
 - The PSB will contain the following uses: perioperative and interventional services, neonatal and paediatric intensive care units, cancer centre, acute inpatient beds, back of house and parent facilities; and

- Alterations and additions to existing KR and CASB buildings adjoining the PSB to create a connected ground plane and bridge links to the PSB
- Extension of the existing CHW medical gas compound
- Construction of a new pedestrian canopy link across the CHW Forecourt, connecting the PSB with the existing hospital entrance
- CHW Forecourt works to provide a redeveloped ground plane / forecourt landscaped area extending from Hawkesbury Road to the PSB entrance
- Tree removal to enable construction of the project
- Pathology expansion and refurbishment.

Consultation

The proponent team has undertaken consultation with Departments, agencies, service providers and stakeholders, as required by the SEARs and consultation with the local community. The issues discussed and raised during these consultations have been addressed as part of the proposed development. Consultation and outcomes have been addressed in detail at **Section 4** of the EIS.

Planning Framework and Assessment

The proposed development is classified as SSD on the basis that it falls within the requirements of Clause 14 of Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP), being development for the purpose of a hospital that has a Capital Investment Value (CIV) of over \$30 million.

The proposed development has been assessed against the SEARs issued for the project and the planning framework. In summary:

Statutory and strategic planning context

The proposed development has been assessed against relevant strategic policies and planning controls and is found to be generally consistent with these, as detailed within **Section 5** of this EIS. Additionally, the proposed development satisfies the SEARs as demonstrated in this EIS.

Local impacts

The proposed development will not cause unacceptable impacts on neighbouring residential properties or the public domain. Subject to the various mitigation measures recommended at **Section 8**, the proposed development will not have unreasonable traffic, heritage, economic, social and environmental impacts on adjoining or surrounding properties or the public domain.

Suitability of the site

- CHW is an existing operating hospital within the Westmead Health Precinct. The proposed development will ensure the longevity of CHW as it will provide contemporary clinical spaces to meet the substantial growth in clinical service demand across the Hospital's catchment, and will ensure synergies with related medical and health services at Westmead Health Precinct.
- There are no known site conditions which would prevent the development including geotechnical conditions, contamination, flooding, biodiversity, Aboriginal cultural heritage, or other.
- The site is well serviced by public transport.
- Where there are environmental impacts, these can be sufficiently ameliorated through mitigation measures and design development.

The site is therefore suitable for the proposed development.

Public interest

The proposed PSB offers significant public benefits to the broader community. Key benefits of the project are:

- A more research-intensive hospital leading to improved health and well-being outcomes for children and young people
- Improved health and well-being outcomes for children and young people through greater capacity / access to services
- Equity of access and improved quality of care through service models that meet consumers' expectations and provides choice
- An improved and safer environment / experience for children, young people, and their families/carers
- Increased safety, productivity and efficiency of resources and maximising the capability and utilisation of the CASB
- Facilitates further connection to the community and green spaces, including Toongabbie Creek and Burramatta – Place of Eel
- Generates construction and additional operational jobs, and together with the value of the project to the economy, will stimulate the economy.

On balance, accounting for site suitability, environmental impacts including cumulative impacts, the principles of Ecologically Sustainable Development (**ESD**), the risk assessment and key benefits, the proposed development is in the public interest.

Given the above it is considered that the SSD Application has merit and can be supported by DPIE and the Minister for Planning and Public Spaces.

Secretary's Environmental Assessment Requirements

SEARs for the project were issued under Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation) by the NSW Department of Planning, Industry and Environment (**DPIE**) on 20 November 2020. Refer to the SEARs in full at **Appendix A**.

Table 1 below provides a summary of the SEARs and identifies the section of the report where the relevant requirement is addressed and/or the appendix reference for the specialist consultant's report associated with that requirement.

Table 1 Secretary's Environmental Assessment Requirements

Item/ Description	Document Reference
General Requirements	
<u>Clause 6 of Schedule 2 of EP&A Regulation</u> An EIS must contain the following:	
6(a) EIS author	<i>Statement of veracity</i>
6(b) contact details of the responsible person	<i>Statement of veracity</i>
6(c) the address of the land	<i>Statement of veracity</i>
6(d) development description	<i>Section 3: Proposed development</i>
6(e) assessment of impact	<i>Section 6: Environmental Assessment</i>
6(f) author's declaration	<i>Statement of veracity</i>
<u>Clause 7 of Schedule 2 of EP&A Regulation</u> An EIS must also include:	
(1)(a) summary of EIS	<i>Executive Summary</i>
(1)(b) EIS objectives	<i>Section 1: Introduction</i>
(1)(c) analysis of feasible alternatives	<i>Section 3: Proposed development</i>
(1)(d) analysis of development	<i>Section 3: Proposed development</i>
(d)(i) full description	<i>Section 3.1: Project description</i>
(d)(ii) general description of the environment likely to be affected	<i>Section 1.2: Project overview</i> <i>Section 2: Site analysis</i> <i>Section 3: Proposed development</i>

Item/ Description	Document Reference
	<i>Section 6: Environmental Assessment</i>
(d)(iii) likely impact on the environment	<i>Section 6: Environmental Assessment</i>
(d)(iv) mitigation measures	<i>Section 8: Recommendations and Mitigation measures</i>
(d)(v) approvals required	<i>Section 5: Statutory and strategic planning context</i>
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	<i>Section 6: Environmental Assessment</i> <i>Section 7: Environmental Risk Assessment</i> <i>Appendix G – Appendix AI</i>
<p>In addition, the EIS must include:</p> <ul style="list-style-type: none"> – An executive summary – A complete description of the development, including: <ul style="list-style-type: none"> ○ the need for the development. ○ 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. ○ 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. 	<i>Section 1: Introduction</i> <i>Section 3: Proposed development</i> <i>Section 6: Environmental Assessment</i> <i>Appendix F</i> <i>Appendix G</i> <i>Appendix AH</i> <i>Capital Investment Value Estimate (provided under separate cover)</i>
<ul style="list-style-type: none"> – a detailed assessment of the key issues identified below, and any other significant issues identified in the risk assessment, including: <ul style="list-style-type: none"> ○ 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. 	<i>Section 2: Site Analysis</i> <i>Section 6: Environmental assessment</i> <i>Section 8: Recommendations and Mitigation Measures</i>

Item/ Description	Document Reference
<ul style="list-style-type: none"> o 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. o details of alternative measures considered. 	
<ul style="list-style-type: none"> – 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. 	<p><i>Section 3.17 Consequences of not carrying out the development</i></p> <p><i>Section 6: Environmental assessment</i></p> <p><i>Section 8: Recommendations and Mitigation Measures</i></p>
<ul style="list-style-type: none"> – 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. 	<i>Provided under separate cover</i>
Key Issues <i>The EIS must address the following specific matters:</i>	
1. Statutory and Strategic Context	
<p>Address the statutory provisions contained in all relevant environmental planning instruments, including but not limited to:</p> <ul style="list-style-type: none"> – <i>State Environmental Planning Policy (State and Regional Development) 2011</i> – <i>State Environmental Planning Policy (Infrastructure) 2007</i> – <i>State Environmental Planning Policy No. 33 - Hazardous and Offensive Development</i> – <i>State Environmental Planning Policy No 64 – Advertising and Signage</i> – <i>State Environmental Planning Policy No 55 – Remediation of Land</i> – <i>Draft State Environmental Planning Policy (Remediation of Land)</i> – <i>Draft State Environmental Planning Policy (Environment)</i> – <i>Parramatta Local Environmental Plan 2011.</i> 	<i>Section 5: Statutory and Strategic Planning context</i>
<p><u>Having regard to the relevant environmental planning instruments:</u></p> <ul style="list-style-type: none"> – 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. 	<i>Section 5: Statutory and Strategic Context</i>
2. Policies	
<p>Address the relevant planning provisions, goals and strategic planning objectives in the following:</p> <ul style="list-style-type: none"> – <i>NSW State Priorities</i> – <i>State Infrastructure Strategy 2018 – 2038 Building the Momentum</i> – <i>Future Transport Strategy 2056</i> – <i>Crime Prevention through Environmental Design (CPTED) Principles</i> – <i>Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW), 2017)</i> – <i>Healthy Urban Development Checklist (NSW Health, 2009)</i> – <i>Draft Greener Places Design Guide (GANSW)</i> – <i>The Greater Sydney Region Plan - A Metropolis of Three Cities</i> – <i>Sydney's Cycling Future 2013</i> – <i>Sydney's Walking Future 2013</i> – <i>Sydney's Bus Future 2013</i> – <i>Central City District Plan</i> – <i>Westmead Health Core Master Plan</i> – <i>Draft Westmead Place Strategy</i> 	<p><i>Section 5: Statutory and strategic planning context</i></p> <p><i>Appendix G</i></p> <p><i>Appendix I</i></p> <p><i>Appendix N</i></p>

Item/ Description	Document Reference
– <i>Local Strategic Planning Statement City Plan 2036.</i>	
3. Built Form and Urban Design	
<ul style="list-style-type: none"> Address: <ul style="list-style-type: none"> the height, density, bulk and scale, setbacks and interface of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces. design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials and colours. 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. 	<p><i>Section 3: Proposed Development</i></p> <p><i>Section 6: Environmental Assessment</i></p> <p><i>Appendix G</i></p>
<ul style="list-style-type: none"> Provide: <ul style="list-style-type: none"> 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. 	<p><i>Section 2: Site Analysis</i></p> <p><i>Section 6: Environmental Assessment</i></p> <p><i>Appendix F</i></p>
4. Tree Removal and Landscaping	
<ul style="list-style-type: none"> Provide: <ul style="list-style-type: none"> 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. 	<p><i>Section 3: Proposed development</i></p> <p><i>Appendix AG</i></p>
<ul style="list-style-type: none"> a detailed site-wide landscape strategy, that: <ul style="list-style-type: none"> 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. demonstrates how the proposed development would: <ul style="list-style-type: none"> contribute to long term landscape setting in respect of the site and the streetscape. mitigate the urban heat island effect and ensure appropriate comfort levels on-site. contribute to objectives to increase urban tree canopy cover. a detailed landscape plan prepared by a suitably qualified person. 	<p><i>Section 3: Proposed development</i></p> <p><i>Appendix H</i></p> <p><i>Appendix I</i></p>
<u>Relevant Policies and Guidelines:</u>	<i>Section 5: Statutory and Strategic Planning Context</i>
<ul style="list-style-type: none"> Draft Greener Places Design Guide (GANSW) Objective 30 of The Greater Sydney Region Plan - A Metropolis of Three Cities Technical Guidelines for Urban Green Cover in NSW (Office of Environment and Heritage (OEH), 2015). 	<i>Appendix I</i>
5. Environmental Amenity	
<ul style="list-style-type: none"> 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. 	<p><i>Section 6: Environmental Assessment</i></p> <p><i>Appendix G</i></p>
<ul style="list-style-type: none"> Provide: <ul style="list-style-type: none"> shadow diagrams. 	<i>Section 6: Environmental Assessment</i>

Item/ Description	Document Reference
<ul style="list-style-type: none"> ○ a view analysis of the site from key vantage points and streetscape locations and public domain including photomontages or perspectives showing the proposed and likely future development. ○ an analysis of proposed lighting that identifies measures to reduce spill into the surrounding sensitive receivers. ○ details of the nature and extent of any intensification of use associated with the proposed development, particularly in relation to any increase in staff and inpatient bed numbers and detail measures to manage and mitigate any impacts. ○ a wind impact assessment, including a wind tunnel study, prepared by a suitably qualified person that considers the impact of the proposed development having regard to the surrounding development and pedestrian amenity and comfort. 	<p><i>Appendix G</i></p> <p><i>Appendix AI</i></p> <p><i>Section 3.3: Numerical overview</i></p> <p><i>Section 6: Environmental Assessment</i></p> <p><i>Section 8: Recommendations and Mitigation Measures</i></p> <p><i>Appendix AF</i></p>
6. Transport and Accessibility	
Include a transport and accessibility impact assessment, which details, but not limited to the following:	<i>Appendix N</i>
<ul style="list-style-type: none"> – analysis of the existing transport network, including: <ul style="list-style-type: none"> ○ 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). 	<i>Appendix N</i>
<ul style="list-style-type: none"> – details of the proposed development, including: <ul style="list-style-type: none"> ○ 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. 	<p><i>Appendix N</i></p> <p><i>Section 2.7 Transport, parking and access</i></p>
<ul style="list-style-type: none"> – analysis of the impacts due to the operation of the proposed development, including: <ul style="list-style-type: none"> ○ 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 vehicular trip generation. ○ a clear explanation and justification of the: <ul style="list-style-type: none"> – assumed growth rate applied. – volume and distribution of proposed trips to be generated. – type and frequency of design vehicles accessing the site. ○ details of performance of nearby 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). ○ cumulative traffic impacts from any surrounding approved development(s). ○ adequacy of pedestrian, bicycle and public transport infrastructure to accommodate the development. ○ adequacy of car parking and bicycle parking provisions when assessed against the relevant car / bicycle parking codes and standards. ○ adequacy of the drop-off / pick-up zone(s), including assessment of any related queuing during peak-hour access. 	<p><i>Section 6: Environmental Assessment</i></p> <p><i>Appendix N</i></p>

Item/ Description	Document Reference
<ul style="list-style-type: none"> ○ adequacy of the existing / proposed pedestrian infrastructure to enable convenient and safe access to and from the site for all users. 	
<ul style="list-style-type: none"> – measures to ameliorate any adverse traffic and transport impacts due to the development based on the above analysis, including: <ul style="list-style-type: none"> ○ 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. 	<i>Section 8: Recommendations and Mitigation Measures</i>
<ul style="list-style-type: none"> – operational traffic and access management plan. 	<i>Appendix N</i>
<ul style="list-style-type: none"> – analysis of the impacts of the traffic generated during construction of the proposed development, including: <ul style="list-style-type: none"> ○ construction vehicle routes, types and volumes. ○ 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 (if any). ○ road safety at identified intersections near the site due to conflicts between construction vehicles and existing traffic in the locality. ○ measures to mitigate impacts, including to ensure the safety of pedestrian and cyclists during construction. 	<i>Appendix N</i> <i>Appendix AH</i>
<ul style="list-style-type: none"> – a preliminary Construction Traffic and Pedestrian Management Plan. 	<i>Appendix N</i> <i>Appendix AH</i>
<u>Relevant Policies and Guidelines:</u> <ul style="list-style-type: none"> – <i>Guide to Traffic Generating Developments (Roads and Maritime Services, 2002)</i> – <i>EIS Guidelines - Road and Related Facilities (Department of Urban Affairs and Planning (DUAP), 1996)</i> – <i>Cycling Aspects of Austroads Guides</i> – <i>NSW Planning Guidelines for Walking and Cycling (Department of Infrastructure, Planning and Natural Resources (DIPNR), 2004)</i> – <i>Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments (Austroads, 2020)</i> – <i>Australian Standard 2890.3 Parking facilities, Part 3: Bicycle parking (AS 2890.3).</i> 	<i>Appendix N</i>
7. Ecologically Sustainable Development	
<ul style="list-style-type: none"> – Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) will be incorporated in the design and ongoing operation phases of the development. 	<i>Section 5.4: Regulation</i> <i>Appendix AB</i>
<ul style="list-style-type: none"> – proposed measures to minimise consumption of resources, water (including water sensitive urban design) and energy. 	<i>Appendix AB</i>
<ul style="list-style-type: none"> – 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. 	<i>Appendix AB</i>
<ul style="list-style-type: none"> – Include: <ul style="list-style-type: none"> ○ 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. 	<i>Section 5.2: Strategic Planning</i> <i>Appendix AB</i>
<u>Relevant Policies and Guidelines:</u>	<i>Appendix AB</i>

Item/ Description	Document Reference
– NSW and ACT Government Regional Climate Modelling (NARClIM) climate change projections.	
8. Heritage	
<ul style="list-style-type: none"> – Provide a Statement of Heritage Impact (SOHI) prepared by a suitably qualified heritage consultant in accordance with the guidelines in the NSW Heritage Manual (Heritage Office and DUAP, 1996) and Assessing Heritage Significance (OEH, 2015). The SOHI is to address the impacts of the proposal on the heritage significance of the site and adjacent areas and is to identify: <ul style="list-style-type: none"> o all heritage items (national, state and local) within the vicinity of the site including built heritage, landscapes and archaeology, detailed mapping of these items, and assessment of why the items and site(s) are of heritage significance o compliance with the relevant Conservation Management Plan o the impacts of the proposal on heritage item(s) including visual impacts, required BCA and DDA works, new fixtures, fittings and finishes, any modified services o include a view and visual assessment to illustrate how the proposal impacts on the wider visual setting of the site including on the adjacent heritage items o the attempts to avoid and/or mitigate the impact on the heritage significance or cultural heritage values of the site and the surrounding heritage items. o justification for any changes to the heritage fabric or landscape elements including any options analysis. 	Appendix J
<ul style="list-style-type: none"> – If the SOHI identifies impact on potential historical archaeology, an historical archaeological assessment should be prepared by a suitably qualified archaeologist in accordance with the heritage guidelines 'Archaeological Assessment' 1996 and 'Assessing Significance for Historical Archaeological Sites and Relics' 2009. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential archaeological resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. If harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations or salvage programme. 	Appendix J
9. Aboriginal Cultural Heritage	
<ul style="list-style-type: none"> – Provide an Aboriginal Cultural Heritage Assessment Report (ACHAR) that: <ul style="list-style-type: none"> o identifies and describes the Aboriginal cultural heritage values that exist across the site. o includes surface surveys and test excavations where necessary. o has been prepared in accordance with the Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW (OEH, 2011) and Code of Practice for Archaeological Investigations of Aboriginal Objects in NSW (OEH, 2010). o incorporates consultation with Aboriginal people in accordance with o Aboriginal Cultural Heritage Consultation Requirements for Proponents (Department of Environment, Climate Change and Water, 2010). o documents the significance of cultural heritage values of Aboriginal people who have a cultural association with the land. o identifies, assesses and documents all impacts on the Aboriginal cultural heritage values. o demonstrates attempts to avoid any impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the ACHAR and EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to the Environment, Energy and Science Group of the Department of Planning, Industry and Environment. 	Appendix K
<ul style="list-style-type: none"> – Any Aboriginal objects recorded as part of the Aboriginal Cultural Heritage Assessment must be documented and notified to the Aboriginal Heritage Information Management System (AHIMS) within Heritage NSW of the Department of Premier and Cabinet. 	Appendix K

Item/ Description	Document Reference
10. Social impacts	
<ul style="list-style-type: none"> Provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020. 	<i>Appendix D</i>
<u>Relevant Policies and Guidelines:</u> <ul style="list-style-type: none"> draft Social Impact Assessment Guideline 2020 (Department of Planning, Industry and Environment) 	<i>Appendix D</i>
11. Noise and Vibration	
<ul style="list-style-type: none"> Provide a noise and vibration impact assessment that: <ul style="list-style-type: none"> 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 in proximity to the site (including, road 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 policies and guidelines relevant to the context of the site and the nature of the proposed development. 	<i>Appendix AE</i>
<u>Relevant Policies and Guidelines:</u> <ul style="list-style-type: none"> <i>NSW Noise Policy for Industry 2017 (NSW Environment Protection Authority (EPA))</i> <i>Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009)</i> <i>Assessing Vibration: A Technical Guideline 2006 (Department of Environment and Conservation, 2006)</i> <i>Australian Standard 2363 Acoustics - Measurement of noise from helicopter operations (AS 2363).</i> 	<i>Appendix AE</i>
12. Biodiversity	
<ul style="list-style-type: none"> Provide a Biodiversity Development Assessment Report (BDAR), prepared by a person accredited in accordance with section 6.10 of the <i>Biodiversity Conservation Act 2016</i> that assesses the biodiversity impacts of the proposed development in accordance with the requirements of the <i>Biodiversity Conservation Act 2016</i>, <i>Biodiversity Conservation Regulation 2017</i> 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. 	<i>Appendix AC</i> <i>Appendix AD</i>
<ul style="list-style-type: none"> Where a BDAR is not required because a BDAR waiver has been issued in relation to the development, provide: <ul style="list-style-type: none"> 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. 	<i>Appendix AC</i> <i>Appendix AD</i>
13. Contributions	
<ul style="list-style-type: none"> Identify: <ul style="list-style-type: none"> 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. 	<i>Section 5.8:</i> <i>Parramatta</i> <i>Section 94A</i> <i>Contributions Plan</i> <i>2011</i>

Item/ Description	Document Reference
14. Staging	
<ul style="list-style-type: none"> 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. 	<p><i>Section 6: Environmental Assessment</i></p> <p><i>Section 8: Recommendations and Mitigation Measures</i></p> <p><i>Appendix AH</i></p>
15. Utilities	
<p>In consultation with relevant service providers:</p> <ul style="list-style-type: none"> assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site. identify any infrastructure upgrades required on-site and 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. 	<p><i>Section 6: Environmental Assessment</i></p> <p><i>Appendix G</i></p>
16. Stormwater drainage	
<p>Provide:</p> <ul style="list-style-type: none"> a preliminary stormwater management plan for the development that: <ul style="list-style-type: none"> 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. 	<p><i>Section 6: Environmental assessment</i></p> <p><i>Appendix T</i></p>
<ul style="list-style-type: none"> Where drainage infrastructure works are required that would be handed over to Council, provide full hydraulic details and detailed plans and specifications of proposed works that have been prepared in consultation with Council and comply with Council's relevant standards. 	<i>Appendix T</i>
<p><u>Relevant Policies and Guidelines:</u></p> <ul style="list-style-type: none"> Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH, 2013) 	<i>Appendix T</i>
17. Flooding	
<ul style="list-style-type: none"> 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 onsite or off-site, the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event and detail design solutions to mitigate flood risk where required. Include details of the developments flood risk emergency management, contingency measures, evacuation and access arrangements. 	<p><i>Section 6: Environmental Assessment</i></p> <p><i>Appendix L</i></p>
<p><u>Relevant Policies and Guidelines:</u></p> <ul style="list-style-type: none"> NSW Floodplain Development Manual (NSW Government, 2005). 	<i>Appendix L</i>
18. Soil and Water	
<p>Provide:</p> <ul style="list-style-type: none"> an assessment of potential impacts on surface and groundwater (quality and quantity), soil, hydrology, related infrastructure, groundwater dependent ecosystems, adjacent licensed water users, riparian land 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. 	<p><i>Section 6: Environmental assessment</i></p> <p><i>Appendix T</i></p>

Item/ Description	Document Reference
<ul style="list-style-type: none"> an assessment of salinity and acid sulphate soil impacts, including a Salinity Management Plan and/or Acid Sulphate Soils Management Plan, where relevant. 	
<u>Relevant Policies and Guidelines:</u> <ul style="list-style-type: none"> 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). 	Appendix T
19. Waste	
<ul style="list-style-type: none"> Identify, quantify and classify the likely waste streams to be generated during construction and operation. Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. Provide a hazardous materials survey of existing aboveground buildings that are proposed to be demolished or altered. 	Appendix Y
<u>Relevant Policies and Guidelines:</u> <ul style="list-style-type: none"> Waste Classification Guidelines (EPA, 2014) 	Appendix Y
20. Contamination	
<ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> Preliminary Site Investigation (PSI). Detailed Site Investigation (DSI) where recommended in the PSI. Remediation Action Plan (RAP) where remediation is required. This must specify the proposed remediation strategy. Preliminary Long-term Environmental Management Plan (LEMP) where containment is proposed on-site. 	Appendix Q Appendix R Appendix S
<u>Relevant Policies and Guidelines:</u> <ul style="list-style-type: none"> 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). 	Appendix Q Appendix R Appendix S Appendix V
21. Hazards and Risk	
Provide: <ul style="list-style-type: none"> a preliminary risk screening indicating class (and any subsidiary hazard), quantity and location of all dangerous goods and hazardous materials associated with the development. a Preliminary Hazard Analysis be prepared if the preliminary risk screening indicates that the development is "potentially hazardous". 	Appendix U Appendix V
<u>Relevant Policies and Guidelines</u> <ul style="list-style-type: none"> State Environmental Planning Policy No. 33 – Hazardous and Offensive Development Applying SEPP 33: Hazardous and Offensive Development Application Guidelines Hazardous Industry Planning Advisory Paper No. 6 Multi-Level Risk Assessment. 	Appendix U Appendix V
<u>Plans and Documents</u>	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents.	
In addition to the plans and documents required in the General Requirements and Key Issues sections above, the EIS must include the following:	
<ul style="list-style-type: none"> A section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate) 	Appendix C

Item/ Description	Document Reference
<ul style="list-style-type: none"> – Design report to demonstrate how design quality would be achieved in accordance with the above Key Issues including: <ul style="list-style-type: none"> o architectural design statement o diagrams, structure plan, illustrations and drawings to clarify the design intent of the proposal o detailed site and context analysis o analysis of options considered to justify the proposed site planning and design approach o summary of feedback provided by GANSW and NSW State Design Review Panel (SDRP) and responses to this advice o summary report of consultation with the community and response to any feedback provided. – Geotechnical and Structural Report – Accessibility Report. 	<p><i>Appendix G</i></p> <p><i>Appendix P</i></p> <p><i>Appendix Z</i></p> <p><i>Appendix AA</i></p>
Consultation	
<p>During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners. In particular, you must consult with:</p> <ul style="list-style-type: none"> – the relevant Council – Government Architect NSW (through the NSW SDRP process) – Transport for NSW. <p>Consultation should commence as soon as practicable to inform the scope of investigation and progression of the proposed development.</p> <p>The EIS must describe and evidence the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.</p> <p>Targeted consultation in accordance with the draft Social Impact Assessment Guideline 2020 (Department of Planning, Industry and Environment) must also occur where there is a requirement to prepare and submit a Social Impact Assessment.</p>	<i>Section 4: Consultation</i>
Further consultation after 2 years	
If you do not lodge a development application and EIS for the development within two years of the issue date of these SEARs, you must consult further with the Planning Secretary in relation to the preparation of the EIS	
References	
The assessment of the key issues listed above must consider, but not be limited to, relevant guidelines, policies, and plans as identified.	

1. Introduction

1.1 Preliminary

This Environmental Impact Statement (**EIS**) has been prepared by Architectus Australia Pty Ltd (**Architectus**) on behalf of Health Infrastructure NSW to accompany an SSD Application for the construction of a new Paediatric Services Building (**PSB**) for The Children's Hospital at Westmead (**CHW**), including redevelopment of the CHW Forecourt and access links.

1.2 Project overview

The site

The site forms part of the CHW Campus within the broader Westmead Health Precinct. The proposed development is located at the corner of Hawkesbury Road and Hainsworth Street, Westmead 2145. The site is within the Parramatta Local Government Area (**LGA**).

The site was previously occupied by the P17 car park, the existing CHW Forecourt and a small link area through the existing KR building. The P17 car park and KR link have recently been decommissioned and demolished. The CHW Forecourt will be redeveloped as part of this application.

The land subject to the proposed works is legally referred to as Lot 101 in Deposited Plan 1119583. The three lots are all owned by Health Administration Corporation (**HAC**).

Please refer to a detailed overview of the site at **Section 2** of this EIS.



Figure 1 Site Context
The indicative site is outlined in red
Source: Metro Map with Architectus overlay (2021)

Proposed development

Health Infrastructure NSW proposes to undertake the CHW Stage 2 redevelopment works. The proposed PSB will facilitate the vision for the CHW Stage 2 project in **Transforming Kids Health** which is underpinned by the following project objectives:

- **For the community and family togetherness** – providing a positive environment that supports the needs of the whole family and is welcoming and open to the community.
- **Integrated research and education** – enabling the integration of research and education, by fostering and growing strategic partnerships, to achieve clinical excellence in paediatric care at Westmead.
- **Specialist role of CHW** – enabling the hospital fulfil its tertiary and quaternary role of delivering health care which is responsive to outcomes that matter to children and their families.
- **World leading** – furthering CHW as a world leading facility to train and attract the best at Westmead.
- **Sustainability & Future focused** – providing infrastructure and services which are sustainable, agile and technology-enabled to support current and evolving models of care.

This EIS seeks development consent for the following works:

- Construction of the PSB:
 - The PSB will contain the following uses: perioperative and interventional services, neonatal and paediatric intensive care units, cancer centre, acute inpatient beds, back of house and parent facilities; and
 - Alterations and additions to existing CHW KR and CASB buildings adjoining the PSB to create a connected ground plane and bridge links to the PSB
- Extension of the existing CHW medical gas compound
- Construction of a new pedestrian canopy link across the CHW Forecourt, connecting the PSB with the existing hospital entrance
- CHW Forecourt works to provide a redeveloped ground plane / forecourt landscaped area extending from Hawkesbury Road to the PSB entrance
- Tree removal to enable construction of the project
- Pathology expansion and refurbishment.

A detailed description of the proposed development is provided at **Section 3.1** of this EIS. Refer also to the architectural plans prepared by Billard Leece Partnership Architects and landscape plans prepared by McGregor Coxall at **Appendix F** and **Appendix H** respectively.

Site Constraints

The proposed development presents the following key site constraints:

- **Aboriginal Heritage:** The site proposed for the new PSB is part of the traditional lands of the Burramatta people, a clan of the Darug nation. It is on a gentle rise approximately 240 metres south of Toongabbie Creek and 600 metres south west of that creek's confluence with the Parramatta River
- **European Heritage:** Following colonisation, the study area formed part of the Government Domain, with the world heritage listed Government House as its main dwelling. The area of Westmead was the western meadow of the Government Domain, and was used for agricultural purposes, mainly cropping, which was undertaken by convicts.

- Flooding: The site is positioned close to the point where three waterways converge and is affected by a 100-year Average Recurrence Interval flood (although no new works are proposed in this flood prone area).
- Wayfinding: The PSB site is positioned central to the Westmead Health Precinct without a direct street frontage, which is provided by the CHW Forecourt and improvement works, including the proposed entry canopy.
- Contamination: the north-western portion of the site is identified as having bonded and friable asbestos impacts in fill materials at multiple locations.

1.3 Project objectives

The PSB will be an important addition to the Westmead Health Precinct. Along with the recently constructed CASB, the PSB will deliver further renewal and expansion of acute paediatric services to support contemporary models of care, further embed education and research into clinical practice and enhance the provision and quality of paediatric health care across Western Sydney, New South Wales, Australia and Internationally.

The PSB will help deliver on the NSW Government's vision for the Westmead Health and Innovation District to be Australia's premier health and innovation district that has an ecosystem for new discoveries, economic growth and global recognition.

It will contribute to the NSW Government's focus on delivering exceptional place outcomes for the Central River City, with enhanced heritage and environmental assets, activated places, connected communities and housing choice.

The proposed development will provide improved community amenity in the form of a new front entry canopy, improved street frontage and enable a more cohesive main entrance connecting the new PSB with the existing CHW and adjoining research facilities.

The proposed development forms part of the CHW Stage 2 redevelopment project. The CHW Stage 2 project is informed by a significant body of master planning work which sets the framework for future development of the CHW and wider Westmead Health Precinct.

The Master Planning Principles for Stage 2 of the CHW redevelopment are outlined in **Section 3.2** of this EIS.

1.4 Report Structure

This EIS provides the following:

- Section 1: an overview of the site, proposed development, project objectives and project team
- Section 2: a detailed description of the site and surrounding context, and summary of site constraints
- Section 3: a detailed description of the proposed development
- Section 4: a description of the consultation undertaken for the project, including the consultation process, issues raised and how the design of the development has responded to these issues
- Section 5: an assessment of the proposed development against relevant strategic and statutory planning controls
- Section 6: an assessment of key issues and impacts generated by the proposed development
- Section 7: an environmental risk assessment
- Section 8: recommended mitigation measures
- Section 9: conclusion.

This EIS should be read in conjunction with the SEARs attached at **Appendix A**, and the supporting technical documents provided at **Appendix B – Appendix AI**.

1.5 Project Team

The project team is set out in **Table 2** below.

Table 2 Project team

Discipline	Consultant
Applicant	Health Infrastructure NSW
Quantity Surveyor	Altus Group
Surveyor	LTS Lockley
Architect	Billard Leece Partnership Pty Ltd
Landscape Architect	McGregor Coxall
Urban Planner	Architectus Australia Pty Ltd
Heritage Consultant	Jacobs Group
Aboriginal Cultural Heritage Consultant	Jacobs Group
Traffic Consultant	WSP
Contamination Consultant	JBS&G
Geotechnical Engineer	JK Geotechnical
Arboricultural Consultant	Cumberland Ecology and Tree Management Strategies
Civil Engineer	Arup
Ecological Consultant	Steensen Varming
Accessibility Consultant	BM+G
Structural Engineer	Arup
Acoustic Consultant	Stantec
BCA Consultant	BM+G
Waste Management Consultant	JBS&G
Water Management Consultant	Arup
Infrastructure Management Consultant	Stantec
Construction Management Consultant	PwC
Social Impact Consultant	Ethos Urban
Wind Impact Consultant	Arup
Flood Impact Consultant	Arup

1.6 Estimated Capital Investment Value (CIV)

The proposed development has an estimated CIV of greater than \$30 million, hence it qualifies as SSD. A CIV Statement has been prepared by Altus Group and is included under separate cover.

2. Site analysis

2.1 Site context

The site forms part of the CHW Campus within the broader Westmead Health Precinct. The proposed development is located at the corner of Hawkesbury Road and Hainsworth Street, Westmead 2145.

The site was previously occupied by the P17 car park, the existing CHW Forecourt and a small link area through the existing KR building. The P17 car park and KR link have recently been decommissioned and demolished. The CHW Forecourt will be redeveloped as part of this application.

Locality

CHW is located within the Westmead Health Precinct which spans over 75 hectares, comprising over 400,000m² of high-end health related developments, including four major hospitals, four medical research institutes and two university campuses. The Westmead Health Precinct stretches from Westmead Railway Station in the south to Toongabbie Creek and Parramatta River in the north and north-east.

The Westmead Health Precinct is located approximately 1.5km north-west of the Parramatta Central Business District (CBD), the primary metropolitan centre of Western Sydney, and approximately 26km west of the Sydney CBD. The surrounding areas include Northmead, North Parramatta, Wentworthville, and Constitution Hill.

Major health and education facilities, including CHW, Westmead Hospital and the Westmead Campus of Western Sydney University, are all accessible from Hawkesbury Road, which acts as the main public thoroughfare of the Precinct.

Stage 1 of Parramatta Light Rail, currently under construction with a projected completion date of 2023, will connect the Westmead Health Precinct with Parramatta and beyond to Carlingford. CHW will have access to its own light rail stop to be located along Hainsworth Street. Sydney Metro has also recently announced plans to complete a metro line in the late 2020s connecting Westmead Railway Station with Parramatta, Olympic Park and beyond to Sydney CBD.

Refer to the local and regional context plans at **Figures 2 and 3** below, and the site context plan at **Figure 1** above.

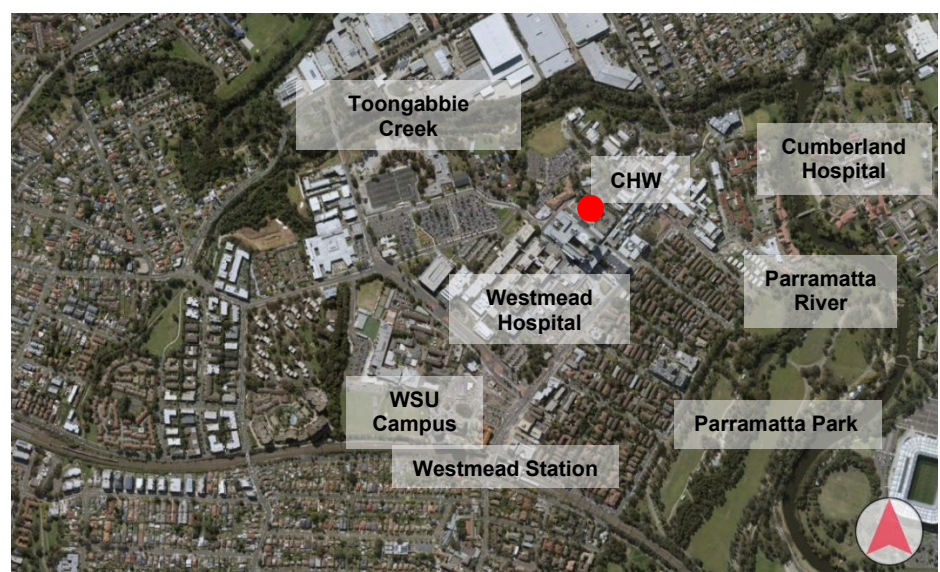


Figure 2 Local context of the site
The indicative location of the site is shown with a red dot.
Source: Metro Map with Architectus edits (2020)

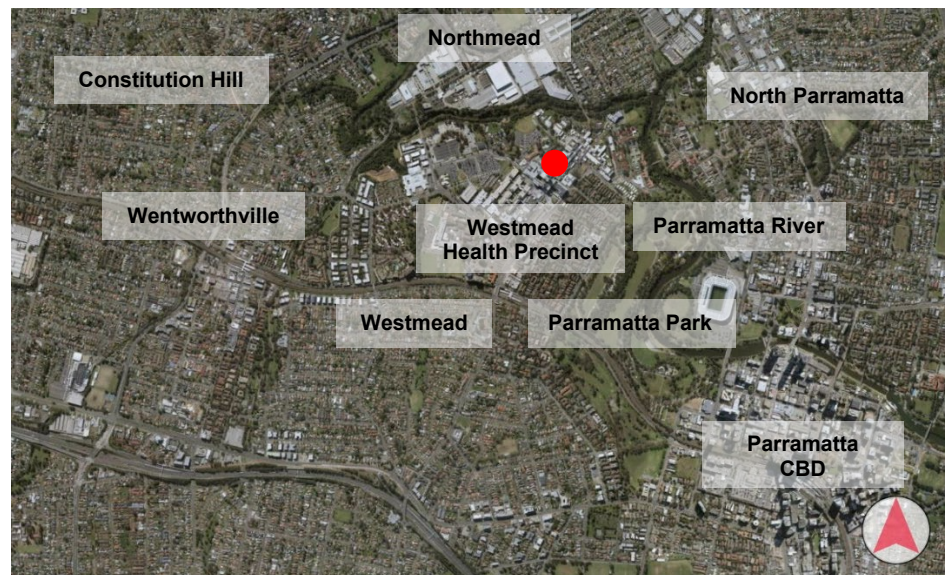


Figure 3 Regional context of the site
The indicative location of the site is shown with a red dot.
Source: Metro Map with Architectus edits (2020)

Legal Description and Ownership

The site falls within Lot 101 in Deposited Plan 1119583 as illustrated in **Figure 4** below. The lot is under the ownership of the NSW Health Administration Corporation (**HAC**).



Figure 4 Aerial photo of Lot Plan of Westmead Health Precinct
Lot 101 in Deposited Plan 1119583 is shaded in blue and the indicative area of proposed works is outlined in a red dashed line.
Source: Metro Map with Architectus edits (2020)

2.2 Existing development

The site was previously occupied by the P17 car park, the existing CHW Forecourt and a small link area through the existing KR building. The P17 car park and KR link have recently been decommissioned and demolished. The CHW Forecourt will be redeveloped as part of this application.

The site is located on the eastern side of Redbank Avenue, where the former P17 car park had been situated. The demolition of the P17 car park was assessed via a Review of Environmental Factors (**REF**) and approved in May 2020, under Part 5 of the Environmental Planning and Assessment Act 1979 (**EP&A Act**), as part of broader Campus wide improvements. Demolition was completed in December 2020.

A 479 space interim car park accessible from Mons Road on Lot 4 DP 1077852 was also approved under Part 5 of the EP&A Act (Approval No. 24/2019). This interim car park acts as a temporary parking solution to replace the loss of car parking from the demolition of the P17 car park. The interim car park has been operating since October 2020.

A long term multi storey car park subject to approval under a separate SSD application (SSD-10434896) will provide permanent staff and visitor car parking to service the CHW and broader Westmead Health Precinct. This is to be positioned east of the proposed development.

The site is located adjacent and to the north of the CASB, of which construction is completed and operations due to commence in early 2021. Other adjoining buildings to the site include the KR building, The Children's Medical Research Institute (CMRI) and CHW Blocks 5, 6 and 8. Redbank Road is located along the north-western boundary of the site and served as the P17 car park's only vehicular access point.

The existing CHW Forecourt is a green space that accommodates the main pedestrian entrance to the existing CHW, as well as an ambulance access point. The ambulance access point will be decommissioned following the opening of the CASB in early 2021, which includes new ambulance bays to support the new CHW Emergency Department located in the CASB.



Figure 5 Photograph of P17 multi storey car park prior to demolition, looking south east towards the KR building.
Source: Billard Leece Partnership Architects



Figure 6 Photograph of vacant site adjacent to former P17 multi storey car park, looking south east.
Source: Billard Leece Partnership Architects



Figure 7 Existing forecourt fronting CHW, looking west towards CASB.
Source: Billard Leece Partnership Architects



Figure 8 Existing forecourt fronting CHW, looking north west to the KR building.
Source: Billard Leece Partnership Architects

2.3 Surrounding built form and land use

The Westmead Health Precinct is largely developed with numerous buildings of heights and scales, including the complex of buildings that comprise Westmead Hospital and CHW. Numerous at-grade parking lots are scattered around the site, particularly along Hawkesbury Road, Darcy Road and Dragonfly Drive. The recent completion of the CASB has brought the Precinct up to its tallest height, at 14 storeys / RL 89.1.

The built form in the immediate vicinity of the proposed PSB is outlined in **Table 3**.

Table 3 Surrounding built form

Building name	No. of storeys	Year of completion
CASB	14	2020
CMRI	7	2014
Kids Research	4	1995
Block 6 CHW (Main building)	4	1995
Block 5 CHW (Diagnostics)	3	1995
Block 8 CHW (Outpatients)	3	1995
Childcare centre	1	1995

2.4 Site considerations

The Section 10.7 (2) & (5) Planning Certificate for the site (Certificate no. 2019/1523) at **Appendix C** dated 12 March 2020 identifies that Lot 101 in DP 1119583 is:

- Zoned SP2 - Infrastructure under the PLEP 2011
- NOT in a heritage conservation area
- Does NOT comprise an item of environmental heritage
- NOT affected by section 38 or 39 of the Coastal Protection Act 1979
- NOT proclaimed to be in a mine subsidence district
- NOT affected by a road widening or road realignment
- NOT affected by a policy that restricts development of land due to the likelihood of landslip, bushfire, tidal inundation, subsidence, or any other risk.
- Identified as Class 5 on the Acid Sulphate Soils map
- NOT affected by any acquisition of land provision
- NOT biodiversity certified land
- NOT subject to any bio-banking agreement
- NOT bushfire prone
- NOT affected by any property vegetation plan
- NOT significantly contaminated
- Is affected by the 100-year Average Recurrence Interval flood

2.5 Zoning

The subject site is zoned SP2 – Infrastructure pursuant to Parramatta Local Environmental Plan 2011 (LEP). Refer to an extract of the LEP 2011 at **Figure 9**.

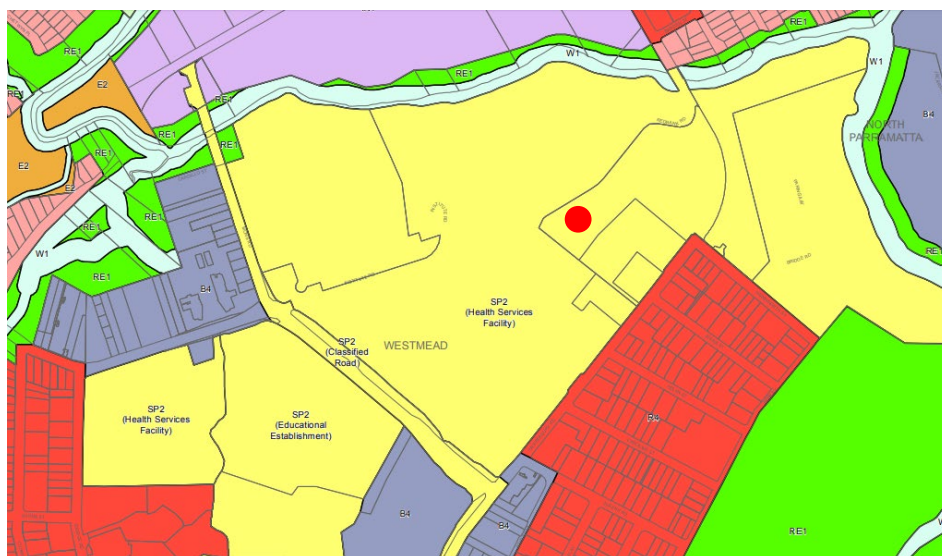


Figure 9 Extract of zoning map of Parramatta Local Environmental Plan 2011
The indicative location of the site is shown with a red dot.
Source: PLEP 2011, 6250_COM_LZN_002_010_20150122, with Architectus edits (2020)

2.6 Heritage

Aboriginal Cultural Heritage

A search of the Aboriginal Heritage Information Management System (**AHIMS**) was undertaken for the site on 31 August 2020 (refer to Aboriginal Cultural Heritage Assessment Report prepared by Jacobs at **Appendix K**).

No Aboriginal heritage sites were identified within the extent of proposed works. The nearest item of Aboriginal Heritage is a set of grinding grooves in the creek bed of Toongabbie Creek (AHIMS ID# 45-5-1110) which is within 190m to the north east of the site. It should be noted that although that site is still on the AHIMS database, it has been assessed twice before as not being an Aboriginal site. All other sites are in Parramatta Park and Cumberland Hospital, at least 200 metres to the east of the development site.

The study area is heavily disturbed from historical land use for farming and agricultural purposes, and from more recent development associated with the hospital.

Further discussion of Aboriginal heritage is provided in **Section 6** of this EIS.

European Heritage

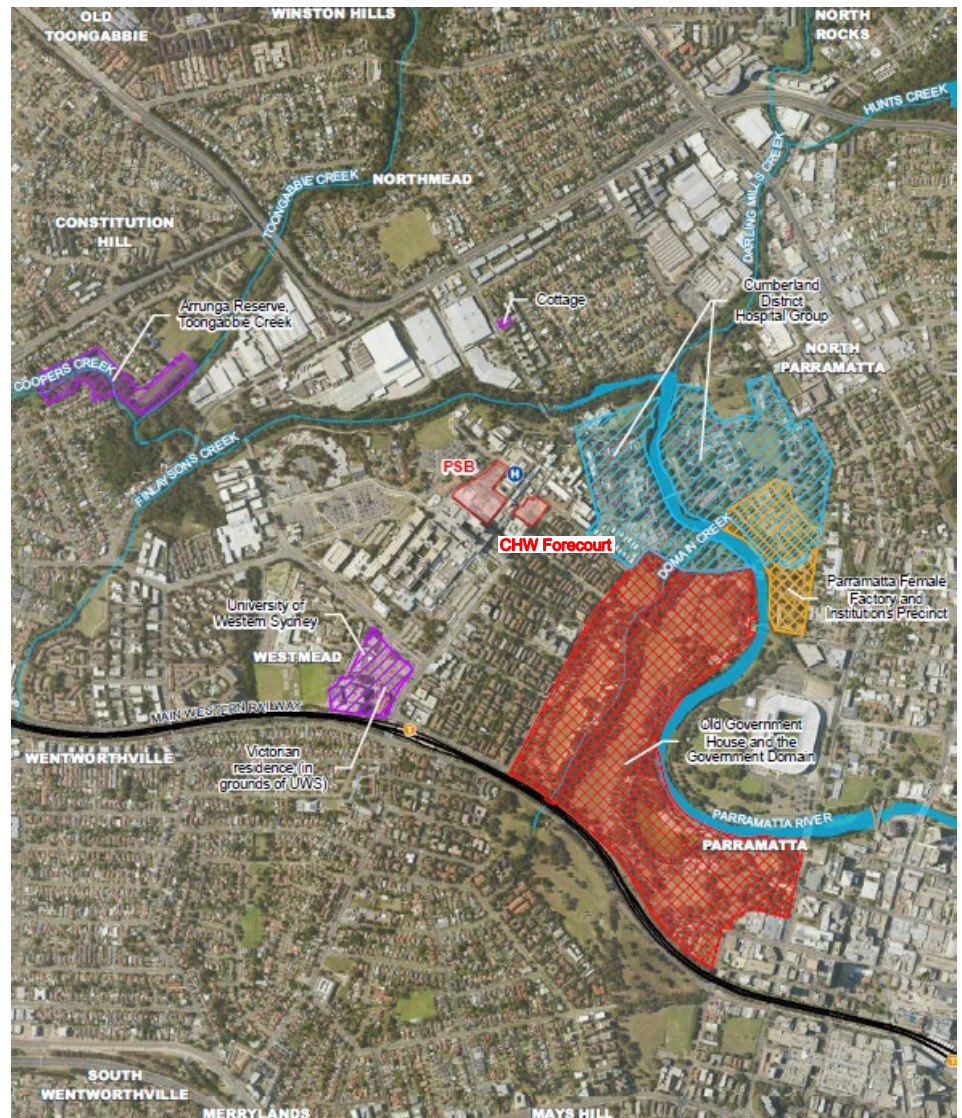
Searches of National, State, and local heritage databases were undertaken. No heritage items were identified within the development site.

Under the Parramatta LEP 2011, Lot 101 in Deposited Plan 1119583 is not identified as a heritage item, nor is it within a heritage conservation area. However, the adjacent lot to the east (Lot 1 in Deposited Plan 808447) contains State heritage item no. I00820 'Cumberland District Hospital (including Wisteria Gardens)'.

The study area is within the Parramatta Archaeological Management Unit (**AMU**) 3070, which has recognised potential for archaeological evidence relating to convict huts, maize farming, and the former Government Domain.

A search of the Australian Heritage Database has indicated that there are no items within the development site included on the National Heritage List or Commonwealth Heritage List. However, there are two listed heritage items of National heritage significance located within the vicinity of the study area:

- Old Government House & Government Domain/Parramatta Park and Old Government House (World/State)
- Parramatta Female Factory and Institutions Precinct, located within the Cumberland District Hospital Group (National)



Legend

- Study area
- Heritage - World, national, state & local significance
- Heritage - National significance
- Heritage - State & local significance
- Heritage - Local significance

Figure 10 Built heritage items in the vicinity of the study area

Source: Paediatric Services Building - Heritage Impact Assessment by Jacobs (2021)

At the time of writing there were no Interim Heritage Orders applying to the subject lot, and the site was not listed on the NSW Government Heritage and Conservation Register under Section 170 of the Heritage Act 1977.

The heritage impact of the proposed works is discussed further in **Section 6** of this EIS.

2.7 Transport, parking and access

A Transport Assessment has been undertaken by WSP and is provided at **Appendix N** of this report.

Surrounding Network

The site's location and surrounding transport network comprises of:

- North-west transit way (T way) with Darcy Road stops located approximately 500m to the south
- Westmead railway station is located approximately 950m to the south

- Public access to CHW is generally via Hawkesbury Road and Hainsworth Street to the south east
- Staff access is generally via Institute Road and Dragonfly Drive to the north west and Redbank Road to the north east
- Active transport facilities along the south west periphery, providing linkage to Parramatta CBD and via a mixture of on road and off-road paths.



Figure 11 Existing transport context

Source: The Children's Hospital at Westmead Redevelopment Stage 2, Paediatric Services Building Transport Assessment, WSP (2020)

It is noted that Parramatta Light Rail Stage 1 is currently under construction on Hawkesbury Road and Hainsworth Street, along the south east boundary of the CHW Campus (and development site). It is expected that services will commence in 2023.

Sydney Metro has also recently announced plans to complete Sydney Metro West line in the late 2020s, connecting Westmead Railway Station with Parramatta, Olympic Park and beyond to Sydney CBD.

Parking

On-site parking

Car parking facilities servicing the Westmead Health Precinct are largely concentrated west of CHW and north of the Westmead Hospital. CHW has a total parking supply of 1,547 spaces spread across the following main car parks (shown in **Figure 12**):

- P6 visitor car park fronting Hainsworth Street and accessed via a roundabout on Hainsworth Street;
- P14 staff (oval) car park located within the precinct and accessed via Redbank Road, Institute Road and Dragonfly Drive;
- P17 staff car park which was located within the precinct and accessed via Redbank Road, Institute Road and Dragonfly Drive and has recently been demolished (subject of a Review of Environmental Factors that was approved in May 2020) and replaced by a temporary interim car park located north of Dragonfly Drive.

The former P17 car park accommodated up to 679 vehicles (555 actual spaces and 124 spaces in stacked arrangement). These spaces are temporarily provided in an interim car park (interim P17 replacement), accessible from Mons Road, and additional stacking of the existing P14 Oval Car Park. The loss of staff and visitor parking spaces from the demolition of the former P17 car park are to be provided permanently within a new multi-

storey car park (**MSCP**) at CHW, over the site of an existing CHW building called The Lodge. This is subject to a separate development approval (SSD-10434896).

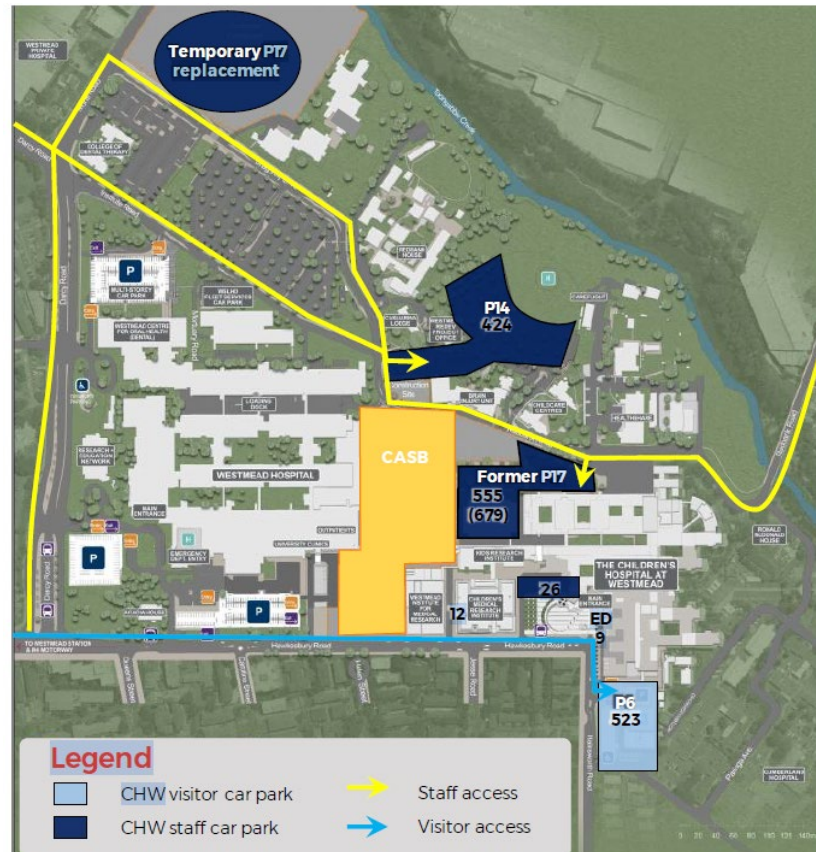


Figure 12 Existing traffic access plan

Source: The Children's Hospital at Westmead Redevelopment Stage 2, Paediatric Services Building Transport Assessment, WSP (2020)

2.8 Topography

The development site is situated on relatively flat, low-lying land. The CASB and CHW are situated on land sloping gently downwards to the north and north west from Hawkesbury Road towards Toongabbie Creek.

Refer to Detailed Survey Plans attached at **Appendix B**.

2.9 Vegetation & ecology

The Westmead Health Precinct is largely developed and is generally devoid of significant vegetation, however there are some areas of landscaping throughout the Precinct.

The development site is an artificial landscape with planted garden beds and planted trees (exotic, non-endemic natives, and locally endemic natives), with remnant trees absent from the subject land. Planted native vegetation occurs throughout the garden beds present within the subject land and has a total planting area of 0.463 ha.

The BDAR Waiver Request for the proposed development (**Appendix AC**) concluded that the site is not considered to conform to any threatened ecological communities listed under the *Biodiversity Conservation Act 2016*, nor are there any threatened flora specific likely to occur naturally within the site.

There is a limited number of threatened fauna species known to occur within the locality of the subject land, such as:

- the Grey-headed Flying-fox (*Pteropus poliocephalus*);
- the Powerful Owl (*Ninox strenua*); and
- microchiropteran bats.

However, it is unlikely that these species are dependent on the habitat present in the subject land due to the fairly low levels of foraging opportunities, and minimal breeding/roosting/sheltering habitat.

The ecological impact of the proposed works is detailed in the BDAR Waiver Request prepared by Cumberland Ecology at **Appendix AC** and is discussed further in **Section 6** of this EIS. The BDAR waiver request was approved by DPIE on 25 November 2020.

2.10 Acid sulfate soils

The land is identified as Class 5 on the Acid Sulfate Soils (ASS) map under Parramatta LEP 2011.

2.11 Groundwater and Contamination

JBS&G were commissioned to prepare a Detailed Site Investigation for the PSB and CHW Forecourt. The review of historical site use information and inspection of site conditions identified potential Areas of Environmental Concern (**AEC**) and associated Contaminants of Potential Concern (**COPC**), which were associated with potential importation of fill materials from unknown origins and former use of the site for agricultural purposes. Additionally, the site has historically been subject to asbestos containing material (**ACM**) dumping by the former operations of James Hardie Industries.

There were several types of fill materials encountered across the site, with the dominant fill consisting of brown to dark brown heterogenous sandy clay/silty sandy clay to depths ranging from 1.5 m bgs to 6.2 m bgs, with anthropogenic inclusions of asbestos, plastic, metal fragments, bricks, concrete fragments, igneous gravels, trace bitumen and glass.

Bonded ACM and fibrous asbestos were found, and it is anticipated that the asbestos in soils will impact on all fill materials at the site.

A Remediation Action Plan (**RAP**) was prepared for the works. An accredited Site Auditor has been appointed for Stage 2 of the CHW Redevelopment Project to investigate, remediate and validate work conducted by contaminated land consultants for progressive remediation of the Precinct.

Refer to **Section 5** on the Contaminated Land Management Act 1997 and State Environmental Planning Policy No. 55 – Remediation of Land.

2.12 Flooding

As indicated by the Section 10.7 (2) & (5) Planning Certificate for the site (**Appendix C**), Lot 101 DP 1119583 is affected by a 100-year Average Recurrence Interval flood.

The City of Parramatta Council has identified the northern edge of the site as having low risk flood impacts through their FloodSmart interactive map. Council defines 'Low Risk' land as, "flooding is extremely rare but when this happens flooding will cover a large area with dangerous water in many places" and is the area between 1% AEP and the Probable Maximum Flood (**PMF**).

Figure 13 below identifies areas subject to flooding in context of the proposed works. No new works are proposed in the areas indicated as flood prone.

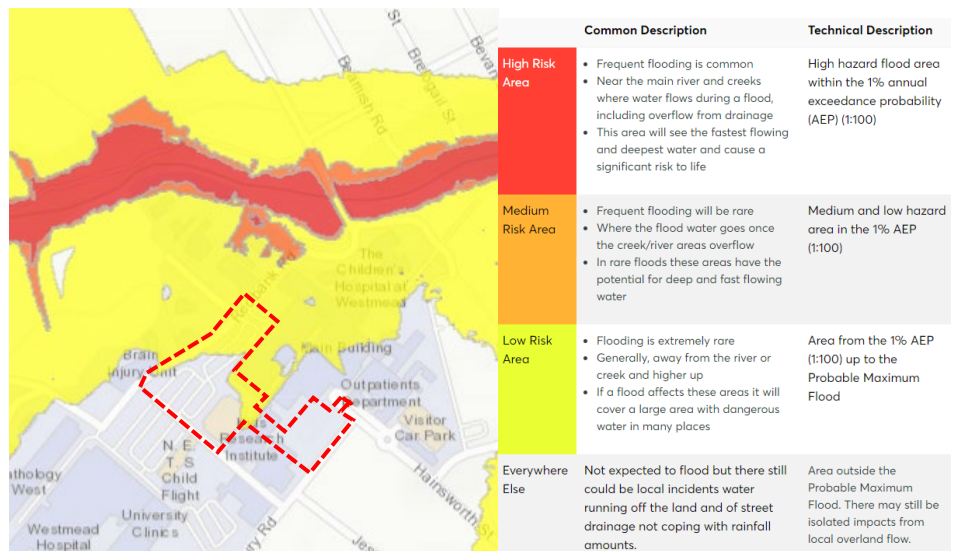


Figure 13 Site is identified as low flood risk

The indicative location of the site is outlined in a red dashed line.

Source: City of Parramatta's FloodSmart interactive map with Architectus edits (2020)

3. The proposed development

3.1 Project description

The proposed development includes the construction of a new PSB at the CHW, including development of the CHW Forecourt and access links. The proposed works are proposed as part of Stage 2 of the redevelopment of the existing CHW.

A new PSB will enable the expansion and replacement of the existing paediatric services at CHW, providing additional surgery, inpatient and critical care services in the Western Sydney Local Health District.

The PSB will help deliver on the NSW Government's vision for the Westmead Health and Innovation District to be Australia's premier health and innovation district that has an ecosystem for new discoveries, economic growth and global recognition.

The PSB will enhance the provision and quality of paediatric health services to the growing Western Sydney population and beyond. It will contribute to the NSW Government's focus on delivering exceptional place outcomes for the Central River City, with enhanced heritage and environmental assets, activated places, connected communities and housing choice.

The proposed works to the CHW Forecourt will provide improved community amenity in the form of a new front entry canopy, improved street frontage and enable a more cohesive main entrance connecting the new PSB with the existing CHW and adjoining research facilities.

The scope of the proposed works the subject of this SSD application includes the following:

- Construction of the PSB:
 - The PSB may contain the following uses: perioperative and interventional services, neonatal and paediatric intensive care units, cancer centre, acute inpatient beds, back of house and parent facilities; and
 - Alterations and additions to existing CHW, KR and CASB buildings adjoining the PSB site area to accommodate floor realignment and movement corridors.
- Extension of the existing CHW medical gas compound.
- Construction of a new pedestrian canopy link through KR, connecting the PSB with the Hawkesbury Road forecourt and existing hospital entrance.
- The canopy link is to be lifted above the CHW forecourt.
- A new ground plane / forecourt landscaped area extending from Hawkesbury Road to the proposed PSB.
- Tree removal to accommodate the construction of the PSB.
- Pathology expansion and refurbishment.

3.2 Justification for the proposed development

CHW plays an important role in the delivery of paediatric healthcare not only within Western Sydney but across NSW, Australia and internationally. Since its establishment, CHW has experienced significant and rapid changes in clinical care, growth in the

number, range and complexity of services and associated increase in both inpatient and non-inpatient activity and in its workforce.

Given the significant paediatric population growth expected in Western Sydney (an additional 57,000 children aged 0-15 years between 2011 and 2031) and the increasing demand for acute paediatric services arising from the changing health profile of the paediatric population and the increasing complexity of care required, there will be additional demand for services, particularly acute services at CHW. The CHW Clinical Services Plan 2018-2031 projects 51 per cent growth in day only and 39 per cent growth in overnight activity at CHW by 2031-32.

As it continues to experience increasing demand for services associated with growth in the paediatric population, the changing health profile of children and the increasing complexity of care, CHW needs to be responsive to provide the very best of clinical care for children and their families.

The proposed PSB will provide advances in paediatric health care, in response to the anticipated significant paediatric population growth and the increasing demand for paediatric services.

3.3 Masterplanning principles

The Architectural Design Report at **Appendix G**, prepared by Billard Leece Partnership Architects identifies the following masterplanning principles which have informed the design:

- **Parents and Families:** Enable excellent delivery of paediatric health services for patients and their families.
- **Presence:** Enhance presence on Hawkesbury Road through a visible and identifiable street frontage for health and research.
- **Movement:** Enable movement through the site to support the integration of health, research, and education through flexible and adaptable spaces.
- **Connections:** Promote connections to public transport on Hawkesbury Road and ambulance, logistics and staff car parking to Redbank Road.
- **Green Community:** Facilitate further connection to the community and green spaces, including Toongabbie Creek and Burramatta – Place of Eel.

3.4 Numerical Overview

The key numerical information for the proposed development is summarised in **Table 4** below.

Table 4 Numerical overview

Development element	Data
Gross Floor Area*	59,207 sqm
Building height	
Storeys	15
Highest RL	86.450
Parking spaces (total)	50
Jobs	
Construction (estimate)	1,872
Operational (estimate)	600

*Refer GFA calculations in Architectural drawings at **Appendix F**.

3.5 Construction Staging

The indicative time frame for this stage will be from Q1 2022 to Q4 2024.

The PSB will be constructed in one stage with the potential of combining the PSB and MSCP (subject of a separate planning application) civil works concurrently as one early

works package. This is subject to market procurement assessment, providing budget and environmental controls de-risking the project and the campus.

It should be noted that the application does not seek approval for staging. Construction is anticipated to occur as per the below:

Stage 1:

- Earthworks, remediation and inground structure and infrastructure

Stage 2:

- Construction of PSB and CHW forecourt

3.6 Building height

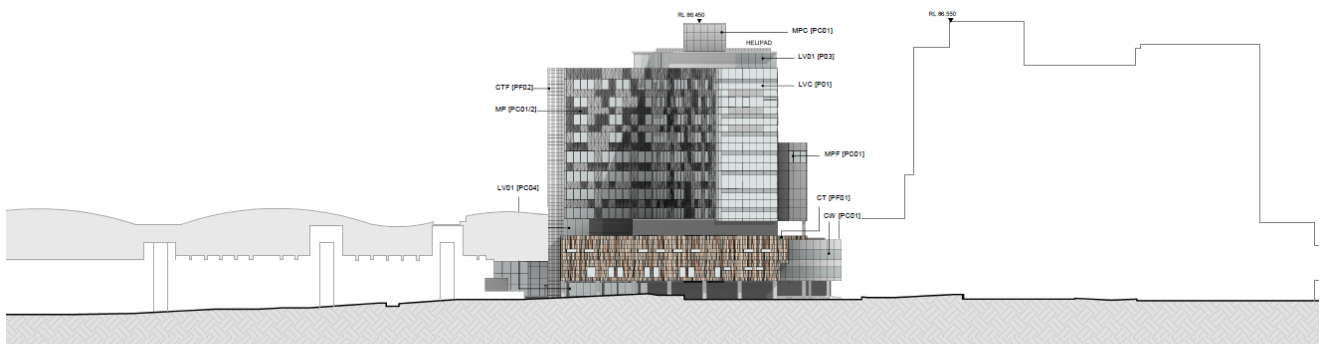
The proposed maximum height for the new PSB is RL 86.450m.

No maximum building height applies to the site under Parramatta LEP 2011.

The proposed development has been strategically established by the site's built form context and locality. The Westmead Health Precinct comprises an array of health and research buildings and parking structures ranging from 3 to 8 storeys.

The adjacent 14-storey CASB has a maximum building height of RL 89.1m and is set back 100 metres from Hawkesbury Road. The CASB will be the immediate neighbour of the proposed PSB, thus provides a key reference for defining the PSB's height limit.

Refer to elevation plans prepared by Billard Leece Partnership Architects at **Appendix F, Figure 14** and **Figure 16** which demonstrate the relationship of the proposed development with the existing CASB.



① NORTH WEST ELEVATION - PROPOSED

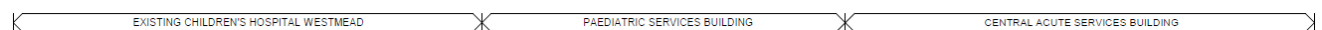
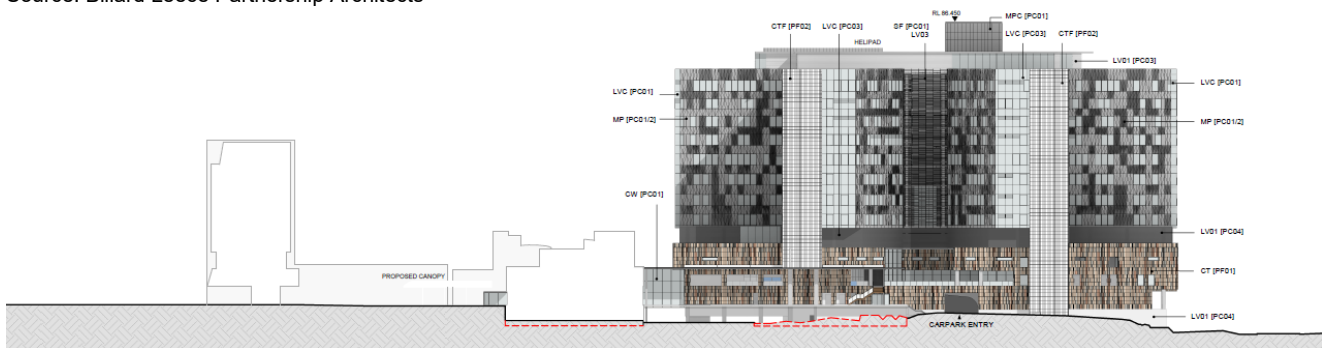


Figure 14 North west elevation

Source: Billard Leece Partnership Architects



② NORTH EAST ELEVATION - PROPOSED



Figure 15 North east elevation

Source: Billard Leece Partnership Architects

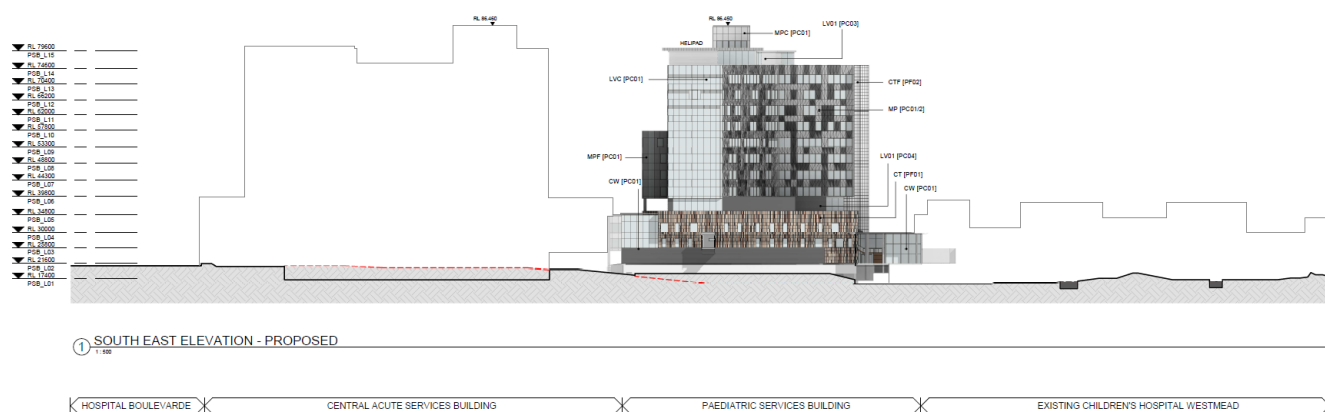


Figure 16 South east elevation
Source: Billard Leece Partnership Architects

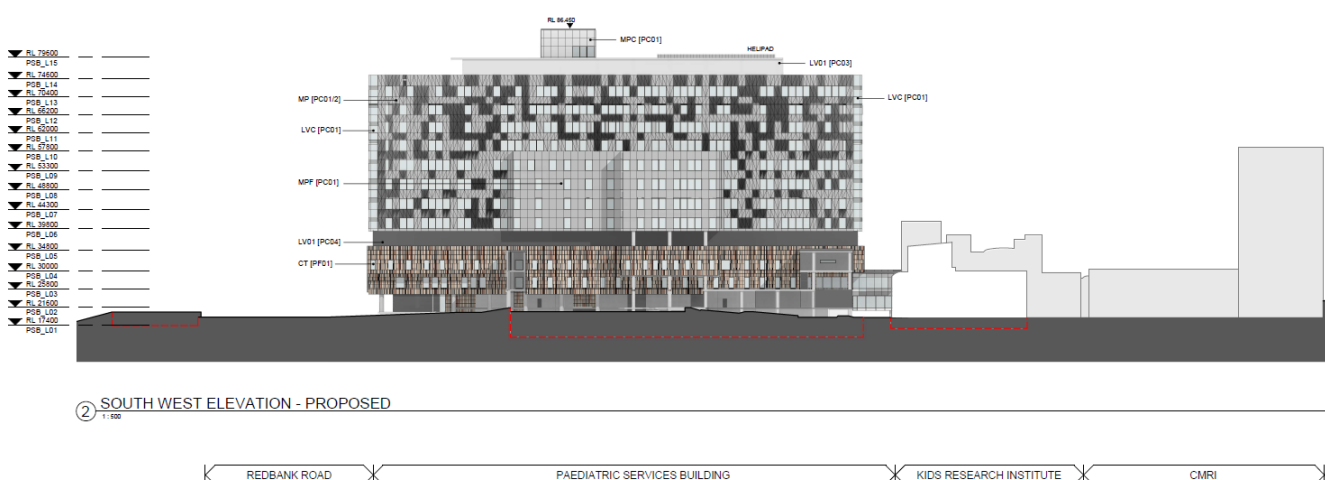


Figure 17 South west elevation
Source: Billard Leece Partnership Architects

3.7 Built form and scale

The siting of the proposed PSB has been carefully considered to respect the surrounding site and context. The siting and form of the proposed development provides clinical links and adjacencies between Stage 1 and Stage 2 services of the CHW Redevelopment project. The PSB also provides physical and operational connectivity with the CASB and existing CHW.

The proposed height of the PSB is in keeping with the recently constructed CASB and the anticipated built form profile of the Westmead Health Precinct, as demonstrated in the elevation plans above at **Figures 14 to 17**. Furthermore, once the development of Parramatta North Urban Renewal area is realised which is next to Westmead Health Precinct, the urban renewal area will contain some taller buildings up to 20 storeys.

The proposed setback from the PSB to Hawkesbury Road is approximately 120m. The substantial setback will minimise overshadowing and privacy impacts on residential dwellings adjacent to Hawkesbury Road. Refer to the Architectural Design Statement at **Appendix G**.

The new public domain and landscaping as part of the proposed development will also help soften the appearance of the new PSB.

3.8 External materials and finishes

The selection of materials chosen for the proposed development were influenced by the site's unique positioning between three river network convergences – where saltwater meets freshwater. The three overarching design principles that have guided the proposed choices in materiality and finishes are:

1. River Life;
2. River Places; and
3. River Story.

The Rectilinear Form – the Podium

Levels 4 and below of the PSB are considered to form part of the Rectilinear Form (the 'podium'). The materiality of its façade uses profiled ceramic tiles, providing a highly textured, natural 'solid element'. A warm colour palette of various textures and nature finishes are proposed for the rectilinear form, imitating the textures of pebbles surrounding the river's edge.

Sculptured Form – the Tower

Levels 6 and above of the PSB are considered to form part of the Sculptured Form and hover above a recessed plant floor on Level 5. This form utilises shimmering materials, reflective of sunlight refracting light over a river's surface. The façade will employ a series of shimmering metallic finished, diagonally folded aluminium panels (inward and outward folding) to allow the light to bounce across the façade surfaces. This will create a dynamic and ever-changing materiality.

Refer to **Figure 18** below.

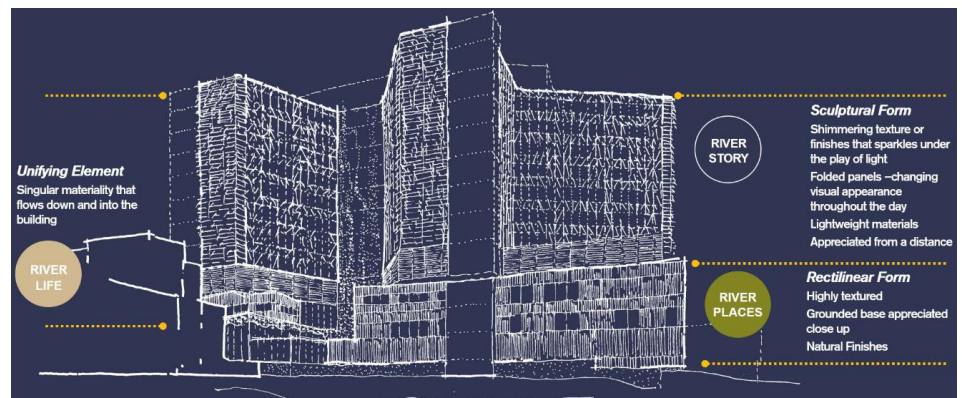


Figure 18 The proposed PSB materiality – Rectilinear Form and Sculptural Form
Source: Billard Leece Partnership Architects

For further details on external materials and finishes, refer to the Architectural Design Report and the External Finishes Schedule prepared by Billard Leece Partnership Architects at **Appendix G** and **F** respectively.

3.9 Tree removal

As identified in the Arboricultural Impact Assessment Report prepared by Tree Management Strategies at **Appendix AG**, a total of seventy-seven (77) trees (Trees 10-37, 43-59, 62-90, 93, 99, 100, 102 and 122-130) are proposed to be removed are part of the proposed development. Refer to **Figures 19 and 20** for the location of the proposed tree removal.

The total Canopy Cover of the proposed development prior to tree removal is estimated at 5562m². The tree removal canopy is estimated at 4075m² with a total remaining canopy of 1487m². The proposed tree canopy cover as part of landscaping works is 2,475m².



Figure 19 Proposed tree removal – Proposed PSB footprint
Source: Tree Management Strategies (2020)

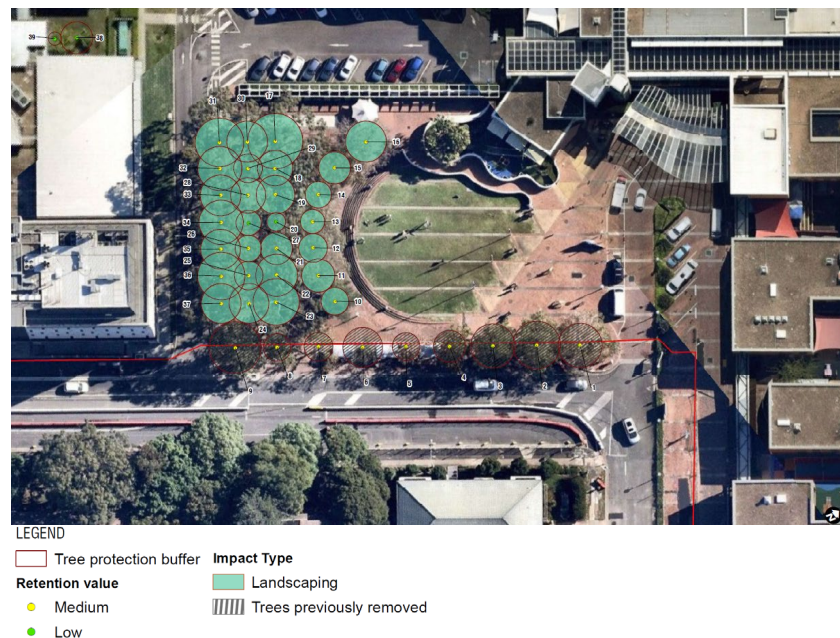


Figure 20 Proposed tree removal – Proposed CHW Forecourt
Source: Tree Management Strategies (2020)

Further discussion of tree removal and ecological impacts is provided at **Section 6**.

3.10 Landscaping and open space

Landscape Plans and a Landscaping Strategy Report have been prepared for the proposed development by McGregor Coxall. Refer to these at **Appendix H** and **I**, respectively.

The landscaping works include:

- CHW Forecourt (“KIDSPARK”) – a rebranded forecourt clearly articulated as the main point of entry for the PSB and current CHW that provides a variety of spaces for the Westmead Health Precinct and surrounding community.
- PSB – indoor and outdoor landscape areas that support the users within the building by providing visual and physical access to landscape.

The proposed landscaping has been influenced by the following design objectives:

- Create interconnected green environment enhancing both mental and physical health.
- Provide intimate spaces for families and carers.
- Spark interest and engagement through the use of interactive elements.
- Provide safe and inclusive open spaces catering to the needs of diverse audiences
- Provide age appropriate and diverse play spaces.
- Create Smart, multi-functional spaces to bring the life of the hospital outside.

These design objectives have been used to influence the proposed landscape design of the CHW Forecourt, and Levels 2, 3, 6 and 10-13 of the proposed PSB. Level 2 of the PSB is to feature a courtyard, Level 3 is to act as the main outdoor terrace, Level 6 is to be an extensive rooftop garden with seating and shade, and Levels 10-13 are to feature semi-outdoor terraces providing intimate spaces for hospital users.

A total of forty-three (43) trees are proposed to be planted, comprising twenty (20) exotic and twenty-three (23) native trees.

3.11 Traffic, parking, access, and transport

A Transport Assessment has been prepared by WSP for the proposed development at **Appendix N**.

The proposed development includes elevated pedestrian connections into the CHW and CASB to allow visitors and staff to easily navigate their way to/from the PSB irrespective of the key Precinct access point that they enter or exit at.

The proposed PSB design includes 55 car parking spaces provided on Level 02 and additional on grade spaces. PSB car parking would be accessed from Redbank Road via the boomgate access used to enter/exit the recently demolished P17 carpark.

The proposed development includes a loading dock with the following:

- One substation maintenance bay
- Three loading bays designed to accommodate for vehicles up to 12.5 heavy rigid vehicles (HRV), including one side loading bay
- Two waste compactors and associated waste vehicle bays
- Three courier bays for vans/utes.

The loading dock is proposed on Level 02 of the proposed PSB, with a ramp accommodating vehicle access to/from Redbank Road.

3.12 Accessibility

The proposed development includes construction of a new pedestrian canopy link through KR, connecting the PSB with the CHW Forecourt and existing CHW entrance.

The PSB also includes elevated pedestrian connections between the CHW and CASB to allow visitors and staff to easily navigate their way to/from the PSB irrespective of the key Precinct access point that they enter or exit at.

3.13 Hours of Operation

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

3.14 Staging, Construction Hours and Duration

Staging

The PSB will be constructed in one stage with the potential of combining the PSB and MSCP (subject of a separate planning application) civil works concurrently as one early

works package. This is subject to market procurement assessment, providing budget and environmental controls de-risking the project and the campus.

It should be noted that the application does not seek approval for staging. Construction is anticipated to occur, as per below:

Stage 1:

- Earthworks, remediation and inground structure and infrastructure

Stage 2:

- Construction of PSB and CHW forecourt

Construction Hours

As stated in the Preliminary Construction Management Plan (CMP), appended at **Appendix AH**, the proposed development will have the following construction hours:

Standard hours	Day	– Monday to Friday: 7:00am to 6:00pm
		– Saturdays: 8:00am to 5:00pm
		– Sundays and Public Holidays: No work
Out of Hours Work Period 1	Day	– Sundays and Public Holidays: 8:00am to 6:00pm
		– Saturday: 7:00am to 8:00am
	Evening	– Monday to Friday: 7:00pm to 10:00pm
		– Saturday: 6:00pm to 10:00pm
Out of Hours Work Period 2	Evening	– Sunday and Public Holidays: 6:00pm to 10:00pm
	Night	– Monday to Saturday: 10:00pm to 7:00am
		– Saturday to Sunday: 10:00pm to 8:00am

Details of construction hours are provided in **Section 6.20**.

Construction Duration

The Preliminary Construction Management Plan (CCTMP) prepared by PwC provides that the total construction of the SSD scope of work will be approximately 2 years.

Construction is expected to commence in Q1 2022 and complete in Q4 2024.

3.15 BCA

A Building Code of Australia Compliance Report is appended at **Appendix AA**.

3.16 Feasible Alternatives

The Westmead Health Core Master Plan was prepared by Billard Leece Partnership Architects for the Westmead Health Precinct. It includes a Structure Plan for the Health Precinct which distinguishes proposed land use within the Precinct, and provides options for expansion of CHW within the “Health Core” portion of the site. This is largely consistent with the expansion opportunities identified in the CHW Master Plan (BLP 2020). The rationale for this is to allow for synergies and expansion opportunities of health core facilities centrally within the precinct, while supporting uses are located to the periphery which are less sensitive to flooding constraints and which will not hinder future health core demand.

The Westmead Health Core Master Plan includes a Zonal Masterplan which nominates three options for future CHW expansion, (identified as the ‘CHW Expansion’), as shown in **Figure 21**.

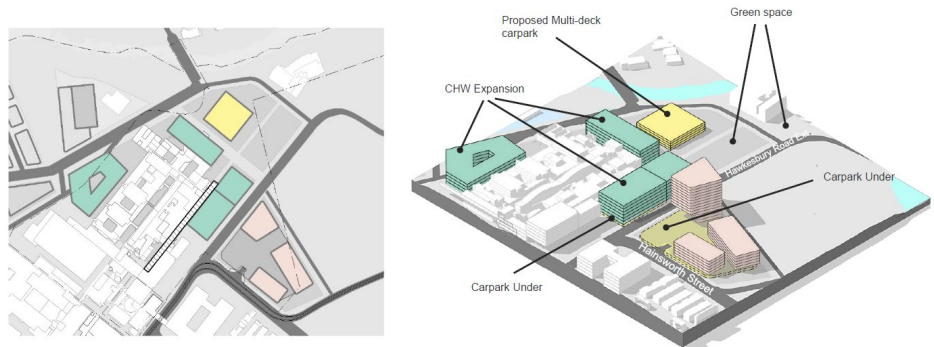


Figure 21 'Lot 3 CHW Expansion' Zonal Masterplan
Source: Westmead Health Core Master Plan

The CHW Stage 2 Master Plan was prepared by Billard Leece Partnership Architects concurrently to the Westmead Health Core Master Plan. In response to the key site challenges and constraints, and to enable the translation of the project vision and aspirations into a physical form, five (5) master plan principles were developed. These principles, as shown in **Figure 22**, in addition to the Westmead Health Core Master Plan principles guided the development of the proposed PSB.

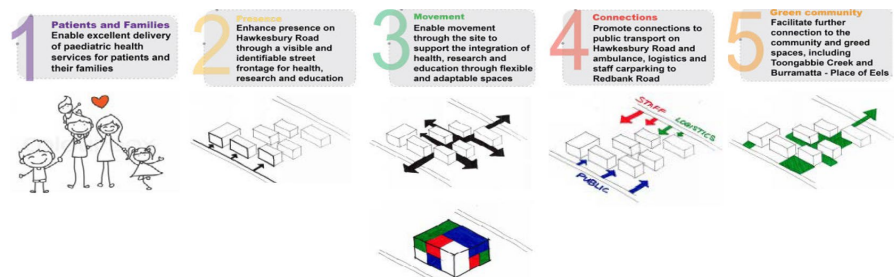


Figure 22 Master plan principles
Source: Westmead Health Core Master Plan

The proposed PSB is to be located centrally to the Westmead Health Precinct enabling key functional connections between the CASB and the existing CHW facility. The following functional relationships were considered:

- Operational efficiency and clinical compliance: Provide key clinical connections, including direct links between CHW ED and the CHW and CASB Operating Suites and bed transfers between the CASB, PSB and existing CHW facility.
- Key public connections: Support the extension of public circulation and connections, including public linkages between the CHW and CASB and north-south links from Hawkesbury Road to the proposed PSB.
- Logistics links: Enable the PSB and CASB to be serviced from the existing CHW loading docks.

3.17 Consequences of not carrying out the development

The consequences of not carrying out the development would be forecast demand for paediatric health services in the hospital catchment and broader local health district not being accommodated.

CHW is currently operating at an average occupancy level of 94 per cent. The CHW Clinical Services Plan 2018-2031 projects 51 per cent growth in day only and 39 per cent growth in overnight activity at CHW by 2031-32. Given the significant paediatric population growth expected in Western Sydney (an additional 57,000 children aged 0-15 years between 2011 and 2031) and the increasing demand for acute paediatric services arising from the changing health profile of the paediatric population and the increasing complexity of care required, there will be additional demand for services, particularly acute services at CHW.

As the proposed PSB will provide greater and improved paediatric health care, the consequences of not carrying out the development would result in:

- insufficient capacity to meet future demand for paediatric health services in the local health district and hospital catchment, leading to poorer health outcomes for children due to:
 - increased waiting times for services;
 - increased travel costs where patients are required to seek access to services further from their home; and
- reduced access to specialised care.

4. Consultation

This section provides a summary of the consultation activities carried out to inform the design and assessment of the CHW Stage 2 Redevelopment, and describes how the outcomes of these activities have been, and will continue to be considered by Health Infrastructure NSW.

Engagement of government agencies and the community will continue throughout the public exhibition of the environmental impact statement.

4.1 Council and Agency Consultation

City of Parramatta Council (CoPC)

Extensive consultation with the City of Parramatta Council ('Council') including meetings held on 4 November 2019 (face to face), 24 July 2020 (video conference) and 27 November 2020 (video conference).

Please refer to an overview of issues raised and responses in **Table 5** below

Table 5 Overview of issues raised by CoPC

City of Parramatta Council Comment - 4 November 2019	Response
<p>Council noted the following should be considered as part of the CHW Stage 2 project:</p> <ul style="list-style-type: none"> – Hawkesbury Road activation; – Provision of improved connection(s) to green space; and – Opportunities for collaboration with the Powerhouse museum. 	<p>The CHW Stage 2 Masterplan was developed based on the following design principles:</p> <ul style="list-style-type: none"> – Patients and Families: Enabling excellent delivery of paediatric health services. – Presence: On Hawkesbury Road visible and identifiable street frontage (set back using the KIDSPARK) – Movement: Enabling movement through the site, supporting the integration of health, research, and education. – Connections: Promoting public transport, logistics – Green Community: Enabling Permeability and green connection throughout the site. <p>Opportunities for collaboration will be explored as part of the retail strategy.</p>
City of Parramatta Council Comment - 24 July 2020	Response
<p>Consideration of renewable energies and recycle water</p>	<p>ESD strategies have been proposed in improving the environmental performance of the building, such as improved indoor environment quality, energy and water conservation, renewable energy, waste reduction, management processes, ecology and landscaping and water sensitive urban design. The measures will be benchmarked against the performance requirements of the equivalent/self-certified rating.</p>

City of Parramatta Council Comment - 27 November 2020	Response
Westmead Campus flood mapping	The proposed flooding and stormwater strategy were presented to Council on 1 February 2021 and is further detailed in the Flood Impact Assessment. No major concerns were raised.
City of Parramatta Council Comment - 1 February 2021	Response
The stormwater and flood mapping for the Westmead Health Precinct was presented to CoPC.	Noted.
CoPC noted that the overland flow-path will impact the existing CHW fire egress pedestrian pathway and recommended the review of the velocity and depth in that location.	Civil engineer to review the velocity and depth at the existing CHW fire egress path during Design Development.
CoPC was generally in support of the below although queried the regulation of water quality. <ul style="list-style-type: none"> – Stormwater strategy which included direct connections into the existing stormwater network to discharge flow before river peak. – No requirement for OSD tanks at the PSB and MSCP since the current site conditions are marginally impacted. 	Civil engineer to proceed with the design and modelling presented to CoPC but will investigate water quality as design progresses.

Transport for NSW

Extensive consultation was undertaken with Transport for NSW (TfNSW) with meetings held on 4 November 2019 (face to face), 22 July 2020 (video conference) and 27 November 2020 (video conference). Please refer to an overview of issues raised and responses in **Table 6**.

TfNSW have also reviewed the transport assessment and analysis prepared for the proposed development.

Table 6 Overview of comments raised by TfNSW

TfNSW Comments - 4 November 2019	Response
GTA Car Parking Demand Study completed for the Central Acute Services Building (CASB - SSD 7642) to be issued to TfNSW to assist with the upgrade analysis.	GTA Car Parking demand study issued to TfNSW in November 2019.
TfNSW Comments - 22 July 2020	Response
Issue WSP's SIDRA files to TfNSW. TfNSW to provide PLR's comments on the Preliminary Traffic Assessment submitted and advise HI on any comments to be accounted for.	WSP's issued SIDRA files to TfNSW on 23 July 2020 with the following comments received on 21 August 2020: <i>"The preliminary modelling is satisfactory (there is scope for base models to be calibrated with on-site observations, for instance queue lengths and/or delays) and</i>

	<i>there are no specific requirements in relation to the PLR. Upon receipt of DA plans and a detailed transport impact assessment TfNSW will provide further review and comment."</i>
Preliminary Traffic Assessment issued to TfNSW.	TfNSW advised that there were no particular issues or concerns.
TfNSW Comments - 22 July 2020	Response
<p>Draft Transport Impact Assessment issued to TfNSW on 14 December 2020 and 21 December 2020 with the following comment received on 21 January 2021:</p> <p>"Generally, the methodology appears satisfactory and the following additional comments are provided for your consideration:</p> <p>Transport for NSW has been working with Westmead Children's Hospital (WCH), NSW Health and NSW Health Infrastructure on aspects of the Westmead Redevelopment for a number of years, including on a precinct-wide Green Travel Plan in association with SSD-7642. There is recognition between all parties of the need to collectively address transport challenges in the Precinct and to encourage the use of sustainable transport modes for travel to the Precinct, particularly among staff that have more ability to travel by those modes. This should include commitment of funds and a delivery strategy for those actions for which Health Infrastructure and WCH have responsibility.</p>	<p>The Westmead Sustainable Travel Plan prepared for Westmead Hospital Central Acute Services Building (SSD-7642) will be updated and developed to include the Children's Hospital Stage 2 Redevelopment.</p>
<p>Draft Transport Impact Assessment issued to TfNSW on 14 December 2020 and 21 December 2020 with the following comment received on 21 January 2021:</p> <p>"Generally, the methodology appears satisfactory and the following additional comments are provided for your consideration:</p> <p>It is recommended that the proponent should prepare a Parking Management Strategy for the MSCP that identifies how parking will be managed, and that identifies and implements strategies to encourage staff with the capacity to travel by sustainable modes of travel to do so, and that prioritises car-parking capacity at the site for patients and visitors with less ability to travel by those modes.</p>	<p>The recommendation of a Parking Management Strategy may be prepared by SCHN prior to operationalizing the MSCP.</p>
<p>Draft Transport Impact Assessment issued to TfNSW on 14 December 2020 and 21 December 2020 with the following comment received on 21</p>	<p>Although no end-of-trip facilities or bike parking are proposed within the PSB, the Transport Assessment (Appendix N) notes that there are sufficient bike parking</p>

January 2021:
“Generally, the methodology appears satisfactory and the following additional comments are provided for your consideration:

It is also recommended that the proponent consider providing dedicated End of Trip (EoT) facilities for employees of WCH and/or NSW Health, in the MSCP, to encourage the use of sustainable transport to the site, and to include the provision of secure bicycle parking within the MSCP and in close proximity to the EoTs.

facilities offered across the Westmead Health Precinct, such as within the CASB and KR building.

KR bike parking facilities are planned to have capacity for around 50 bicycles (an increase of 10 bicycles), subject of a Review of Environmental Factors that was approved in May 2020.

Staff and visitors to the CHW could also use alternative bike parking facilities that are provided across the campus including those within the CASB for staff, the bike loops located within the CASB forecourt and the CHW forecourt fronting Hawkesbury Road.

It is noted that a significant number of showers and change room facilities will be located within the PSB and existing CHW. These facilities combine to provide considerable end-of-trip facilities for those arriving to the site via bicycle or by foot.

Therefore, the KR bike parking, the CASB bike parking, and the precinct's existing bike parking areas and end-of-trip facilities would be well placed to encourage sustainable transport use to/from the CHW. There is sufficient capacity to accommodate the existing and future bicycle parking demands at the CHW.

Refer to **Section 6.7** for more detail.

4.2 Local Aboriginal Land Council

An Aboriginal Cultural Heritage Assessment Report (**ACHAR**) has been prepared for the PSB. Refer to the ACHAR at **Appendix K**.

The assessment process is being undertaken in accordance with the Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (OEH 2011), the Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW 2010) and the Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW 2010). Stage 1 consultation for the current Aboriginal Cultural Heritage assessment was completed on 4 November 2020. Stage 2 and 3 were completed, with the archaeological methodology sent to Registered Aboriginal Parties (**RAPS**) on 17 December 2020 and the RAP site inspection undertaken on 28 January 2021. Stage 4 is predicted to be completed on 3 May 2021.

4.3 Government Architect NSW / State Design Review Panel

A meeting regarding the Children's Hospital Stage 2 redevelopment works was held with the Government Architect NSW Office (**GANSW**) on three (3) occasions on 20 May 2020, 18 November 2020, and 10 February 2021 as part of the GANSW State Design Review Process (**SDRP**). An additional meeting is scheduled for 7 April 2021.

Please refer to an overview of issues raised and responses in **Table 7**.

Table 7 Overview of matters raised by GANSW at the SDRP

GANSW Comment	Response
Session 1 First Review – SDRP #54 on 20 May 2020	
<i>Integration of the proposal with the Structure Plan currently under</i>	The proposed development has been informed by the CHW 2 Zonal Master Plan,

<p><i>development by BLP and various other masterplans under development by others is crucial. Implementation of a stakeholder engagement process to facilitate coordination across the various plans under preparation is essential to achieve an integrated design as part of a broader masterplanning process.</i></p>	<p>Westmead Health Core Structure Plan, and Westmead Place Strategy.</p> <p>The built form of the proposed development was also developed in alignment with the parameters confirmed in the CHW 2 Zonal Master Plan.</p> <p>A Consumer and Community Engagement process was undertaken to ensure the project meets the needs of patients, families, staff, and the community.</p> <p>Refer to the Architectural Design Report at Appendix G.</p>
<p><i>The focus on landscape as the interface between the hospital, patients, visitors and the community is commended and should continue to be prioritised through design development.</i></p>	<p>The landscape design of the proposed development has continued to use landscape as the interfaces of the CHW to ensure the legibility of the entry, as well as the precinct as a whole.</p> <p>Visual and physical access to landscaped areas have been provided at the PSB through terraces and outdoor courtyards. These spaces contribute towards enhancing the user experience as people move through the CHW.</p> <p>Refer to Landscape Strategy at Appendix I.</p>
<p><i>Closely map the likely built form and microclimate consequences around the Integrated Front Entry Building (IFEB) and design Kids Park to provide the best amenity achievable within these parameters. Seek expert advice on wind behaviour around buildings and within open spaces, in particular.</i></p>	<p>The IFEB is no longer part of the proposed development.</p>
<p><i>Clarify and detail how a sense of welcome and spatial scale appropriate to children will be achieved in the double-height undercroft of the IFEB. Investigate extension of the front entry both visually and physically from the IFEB to Hawkesbury Rd.</i></p>	<p>The IFEB is no longer part of the proposed development.</p>
<p><i>Clarify and illustrate how the edge along Hawkesbury Rd will be treated to create safety without requiring the use of physical barriers such as fences, bollards, etc.</i></p>	<p>A Water Sensitive Urban Design (WSUD) rain garden is proposed on the southern end of the site to create a sense of safety and seclusion, and provide a buffer from the surrounding environment. Refer to the Landscape Strategy at Appendix I for further detail regarding the WSUD rain garden.</p>
<p><i>Clarify and illustrate the edge conditions to all buildings and spaces all around the IFEB, including details of the proposed treatment to the area between the IFEB and Hawkesbury</i></p>	<p>The IFEB is no longer part of the proposed development.</p>

<i>Rd, noting hard paved surfaces and vehicular areas should be minimised.</i>	
<i>Explain how activation and enlivening of Kids Park is envisioned within its built context.</i>	<p>The proposed works to the CHW Forecourt (which forms part of the KIDSPARK) has been designed to be open and engaging to the broader local community, with 24/7 access.</p> <p>It has been designed to: encourage play by all age groups and levels of accessibility; respects and promotes local community diversity; promotes healing and is therapeutic; and educational.</p> <p>It also has been designed to be flexible – with the ability to be programmed for a variety of events to occur.</p> <p>The design team is currently exploring potential retail opportunities which could be included within KIDSPARK to service the hospital and wider community.</p>
<i>Illustrate potential future development to the south of Hawkesbury Rd and how this is envisioned to integrate/interface with the entry zone.</i>	<p>This is subject to further collaborative design with DPIE and the Cumberland campus Stakeholders.</p>
<i>Landscaped areas such as roof terraces, light wells, courtyards should be integrated into every level of the proposed buildings. Provide details of the location, amenity and accessibility of these landscaped areas.</i>	<p>Access to green is woven throughout the building.</p> <p>An accessible roof terrace has been incorporated at level 3, adjacent to highly public active areas. The proposed canopy link through KR at level 2, has access to green along its eastern face.</p> <p>All inpatient levels have been designed with access to one or more semi-enclosed wintergardens. The level of required enclosure is under review with the SCHN to ensure safety isn't compromised.</p> <p>Refer to the Landscape Strategy at Appendix I for further detail regarding landscaped areas.</p>
<i>Look for opportunities to bring landscape INTO the buildings, understanding some patients and most staff will have minimal opportunity for exploring the proposed outdoor spaces.</i>	<p>All inpatient levels have been designed with access to one or more semi-enclosed wintergardens, accessible to patients, visitors, and staff.</p> <p>All patient rooms and most communal areas are located along the perimeter of the building to promote connection to the outside, taking advantage of long-range vistas from the upper levels.</p>
<i>Provide details of how the connection to Country and expression of Aboriginal Cultural Heritage will be made evident throughout the hospital campus and integrated with the built forms: for example, using place</i>	<p>The key design principles for the architectural, interior and landscape design are derived from site's unique qualities – the convergence of three rivers. This also acknowledges the river setting's importance</p>

<i>naming, landscape, materials, plant selection, art installations/murals, wayfinding devices, paving, colour, texture and so on.</i>	<p>as a 'meeting place' for the traditional owners.</p> <p>To date extensive and ongoing consultation has taken place with various local Aboriginal representatives to inform the design – focussed on creating spaces that are welcoming for both the local community and regional kids and families.</p> <p>An Arts and Play Working group with Aboriginal representation has been established and is ongoing inclusive of the incorporation of indigenous content throughout the public domain and the PSB, that can be appreciated by a broader indigenous community – “see the sky, touch the earth”.</p> <p>A wayfinding strategy will be developed that provides multiple cues (text, colour, and imagery) to allow for ease of navigation by all. This will include investigating the incorporation of aboriginal language and/ or imagery.</p>
<i>An Indigenous spatial designer should be engaged to work together with the design team and turn ideas of cultural heritage into physical and spatial expressions, integrated within the overall and detailed architectural proposal.</i>	The project team is the process of engaging an indigenous spatial designer.
<i>Clarify how site topography will be incorporated into the east/west connections and spatial opportunities optimised.</i>	The east west connection occurs primarily on LO2 – RL 21.6 through the proposed canopy and the existing CHW Galleria (walkway from the CHW Forecourt to Labyrinth Way). This public access transitions to Level 01 – RL 17.4 via the existing galleria ramp to connect to the eastern green, MSCP and Ronald McDonald House.
<i>Clarify how the proposed link to Toongabbie Creek will be incorporated into the massing of existing buildings.</i>	KIDS Way has been designed to accommodate future expansion to the north. This allows the realisation of the Masterplan vision of a future connection to Toongabbie Creek.
<i>Illustrate key vantage points both within and outside of proposed buildings where a view of the sky can be captured.</i>	<p>KIDSPARK has been designed to be open to the sky. The level 3 terrace off main public functions is also open to the sky.</p> <p>All inpatient levels have been designed with one or more semi-enclosed wintergardens that have sky views. These have been located at the ends of corridors or directly off the main public lifts to maximise external views as one navigates the building.</p>
<i>Illustrate how the project has considered and capitalised on opportunities specific to the site: for example district views from rooftops,</i>	All inpatient levels have been designed with access to one or more semi enclosed

<i>activation of the carpark at ground and roof levels, etc.</i>	<p>wintergardens, which maximise distant views and their known therapeutic benefits.</p> <p>All patient rooms and the majority of lounge areas are located along the perimeter of the building to maximise access to distant views.</p> <p>The multistorey carpark does not form part of this application.</p>
<i>Illustrate the sequence of movement from future public transport nodes to entry points and across and through the site along the proposed axial connections.</i>	Refer to the Architectural Design Report at Appendix G .
<i>Provide large sections across the site to illustrate resolution of levels and connections to ensure the permeability envisioned by the site plan can be realised.</i>	Large scale site sections were presented as part of SDRP Session 2.

Session 2 Second Review – SDRP #6 on 2 November 2020

<i>The size and width of the proposed canopy over the 'Kids Park' may be over scaled, impeding the successful growth of good planting. Further studies are required to demonstrate appropriate scale, light quality and shadow impacts.</i>	<p>SDRP comments were noted and the entry canopy has been redesigned with a reduced footprint.</p> <p>The canopy has broken down in scale into several elements to: provide a shaded cover over the east-west pedestrian connection from the existing gallery to the main entrance to the new PSB; to provide shade on entry approach from the diagonal axis across (KIDSPARK) and north south axis from Hawkesbury Road.</p> <p>The canopy will be designed to have a mix of solid and translucent elements to allow light to penetrate along its extent.</p>
<i>Covered walkways appear overscaled, requiring further revision and articulation. Illustrate their impact on useable open spaces.</i>	Refer to above.
<i>For the next SDRP, please provide a series of light quality studies for the campus circulation areas and shadow studies: sequential sketches / basic 3d models of key external spaces as one moves along, indicating how they are linked to the environment and their light quality.</i>	<p>This will be provided at the next SDRP session.</p> <p>Shadow studies from part of this application. Refer to the Architectural Drawings – SSD040 and SSD041 at Refer to the Architectural Design Report at Appendix G.</p>
<i>Further link the green spaces between the Kids Way and the Kids Park.</i>	The journey between KIDSPARK and Kidsway (between greened spaces) is via a new entry canopy and a lower volume existing building. This journey sequence has been designed as a series of thresholds to calm people entering the building. A unifying element will be used to pull people into and through the building.
<i>Upper levels and the façade design should enhance and exhibit green</i>	All inpatient levels have been designed with one or more semi-enclosed wintergardens

<i>spaces, as well as spaces that are clearly for human habitation used for healing. Avoid the use of long expanses of uninterrupted reflective glazing on the façade.</i>	<p>which will incorporate green. These have been located at the ends of corridors or directly off the main public lifts – to maximise green (visual and physical).</p> <p>The façade incorporates a mixture of materiality of either porcelain tiles or folded aluminium panelling, with a series “punched” windows. Long expansive “reflective glazing” has been minimised.</p> <p>Larger areas of glazed panelling have been used, with care, in areas where connection to the outside and associated therapeutic benefits are maximised, for example, to inpatient wintergardens and the public space of KIDS Way.</p>
<i>The extent of ‘soft fall’ surfaces to be kept to a minimum. Provide porous landscaping elements to help the land retain rainfall.</i>	<p>The public domain (KIDSPARK) has extensive deep soil planting, with a mix of endemic native and exotic plant species proposed.</p> <p>Along KIDSPARK’s southern interface, with Hawkesbury Road, a WSUD rain garden has been incorporated to collect additional tool for visitors.</p> <p>Paving treatment will be minimised to areas that are required and will be porous.</p> <p>Softfall will be shaded and kept to areas that are required, such as Kid’s play areas.</p>
<i>The expanded carpark is closer to the river’s edge than previously illustrated– examine possible reconfigurations to allow larger green spaces at ground level.</i>	Refer to MSCP SSD Application.
<i>Entrance 6 should be expanded to feel generous and not secondary to other entrances on the site.</i>	<p>The main pedestrian movement through KIDSPARK will be diagonal, from the future light rail stop, drop off and main carpark.</p> <p>The Entrance 6 (north-south path) is generous in width. The entrance is also via bridge structure over the WSUD Rain Garden – a playful approach to the main hospital entry.</p>
<i>Within the proposed new building, all corridors where possible should lead to light (a window) or an open public usable space, as to provide respite and encourage wellbeing.</i>	Refer to floor plans, this has been adopted as a key planning principle.
<i>Where possible, provide natural ventilation / operable windows to common areas, wards and patient rooms.</i>	<p>Due to the hospital setting and infection control requirements, this is difficult to achieve in clinical areas. The wintergardens located in the inpatient areas are semi enclosed, with external operable louvres – to provide access to fresh air.</p> <p>During design development, further exploration will be made to potential</p>

	incorporate natural ventilation or a mixed mode approach to KIDS WAY.
<i>In the next SDRP, present the proposed sustainability initiatives and how these have been incorporated into the building and will enhance user experience.</i>	<p>High level ESD project aspirations were presented to the SDRP, with the project targeting 5-star green rating.</p> <p>As part of the Design Development phase of the project, ESD initiative will be further refined and developed. This will be presented at the SDRP session.</p>
<i>Explore and illustrate proposal for the building to provide education opportunities to showcase sustainability, Aboriginal culture, art programs, architecture as wellbeing etc. – especially as this is a children's hospital.</i>	<p>As part of the design Development phase of the project, this will be further developed and incorporated into the design and presented at the next SDRP session.</p> <p>An Arts and Play Working Group has been established, with ongoing input thought the whole of the design phase of the project. This includes a focus of arts and play (physical elements, design elements and programmed activities) to engage, heal and educate children, carers, families, visitors, and staff.</p>
<i>Amenity for the Kids Park: clearly indicate the scale and feel of the spaces for the (proposed) 2 stage development. Through sketches or diagrams, indicate how the space will be developed and change over time, including changes to landscape and architecture.</i>	<p>As part of the Design Development phase of the project, this will be further developed and incorporated into the design and presented at the next SDRP session.</p> <p>Refer to the Landscape Strategy at Appendix I for the landscape concept design.</p>
<i>Incorporate design guidelines into the masterplan to protect open spaces over time and mitigate potential negative effects such as wind and overshadowing.</i>	<p>The SDRP and SSDA application is limited to the PSB and associated public domain. Overshadowing and wind studies will be presented at the next SDRP.</p> <p>Refer to the Architectural Design Report at Appendix G, for analysis of the impacts for this application.</p>
Session 3 Third Review – SDRP #1 on 10 February 2021	
<i>Aspects of the masterplan concept are supported, in particular, the key open spaces linked via walkways and the covered entry space which may be used as a multi-function platform for outdoor activity and performances.</i>	Noted.
<i>The location of the Paediatric Services Building (PSB) and its relationship to the neighbouring buildings was difficult to understand without clear plans or sections at a suitable scale. The relationship of open green space to the PSB and internal courtyards, balconies and amenity was also not clearly communicated in the presentation. We strongly recommend this project returns to the SDRP with detailed</i>	Comments provided by the panel regarding site context are appreciated, and the further development of design be presented at the SDRP session on 7 April 2021. Refer to Section 2.2 and Section 4.3 of the Architectural Design Report at Appendix G .

<i>plans and sections, 3 dimensional sketches and perspectives explaining the key spatial moves.</i>	
<i>The strategy to link the carpark, forecourt and PSB entry along an experiential pathway is supported. The connection of this axis to adjacent green open areas could not be fully understood with the material presented at SDRP 03. The experience along the pedestrian axis of light, space, volume, sound, materiality, outlook, topography all need to be developed and clearly explained in terms of the user experience; particular reference should be made to the projected experiences of children, young adults and families, requiring ease of access and often experiencing the spaces while in distress.</i>	The Schematic Design was developed based on various patient, staff and carer journey scenarios. A Consumer & Community Advisory Committee has been formed to deeply understand the experience of consumers of the hospital, and how design can respond. Key themes from this consultation include the need for distraction and play, whilst providing safe spaces for rest and calm. These principles have been identified in the Architectural Design Report at Appendix G .
<i>The core design moves of the PSB are only partially evident at this stage making it difficult to provide comprehensive comments on the building and its relationship to adjacent built form and open spaces. The size and scale of the canopy over the CHW Forecourt was questioned with the panel recommending a further reduction in height and overall scale to in response to its role in shaping a place for children.</i>	As part of the Design Development, further consideration will be given as to better present the translation of the design intent of the overall building and its relationship to adjacent building forms and open spaces. The canopy design is under review in relation to size shape and form to ensure it achieves its purpose of providing a clear presence to the PSB entry, provides appropriate shade and weather protection, whilst remaining playful and interactive for children and their families. Updates to the design will be presented at the SDRP 4 session on 7 April 2021.
<i>Concerns were raised regarding the material density, visual heaviness, and overall hospitableness of the podium. Further examination of its materiality and connection to nearby landscape is recommended during the next phase of design development with key opportunities expected to emerge from engagement with the project Indigenous Culture and Heritage consultant. The expression of the façade offers an opportunity to reflect the unique physical and climatic character of the site and also to respond to the challenge of creating a place for children; opportunities for views out, connection to Country and landscape should be developed and integrated. Further development and consideration of these opportunities will imbue the campus with its own</i>	The materiality and extent along the podium are being refined, in particular in the context of the Kidsway interior design. Refer to Section 4.8 of the Architectural Design Report at Appendix G . The Project has undertaken design consultation sessions with the Parramatta City Council Aboriginal Advisory Committee and Aboriginal families connected with the CHW. Key outputs from this consultation have flowed into the architectural concept and design response thus far. As part of Design Development, this will be explored in greater detail. The façade design is reviewed with particular focus on better translating key elements of the concept responding to the uniqueness of the location of the site. Refer to Section 4.8 of the Architectural Design Report at Appendix G .

<i>identity and help strengthen its place in the community.</i>	View opportunities to Country and landscape have been part of the floor plan design and will be developed further.
<i>The landscape concept, while generally supported, did not include sufficient detail for the Panel to comprehensively comment. Detail treatment of landscape spaces including planting types and densities, retained mature trees with canopies, materiality of surfaces, hard and soft, furnishings and proposed overall amenity should be developed and presented at the next SDRP.</i>	<p>The landscaping strategy seeks to:</p> <ul style="list-style-type: none"> – Create an interconnected green environment enhancing both mental and physical health. – Provide intimate space for families and carers. – Spark interest and engagement through the use of interactive elements. – Provide safe and inclusive open spaces catering to the needs of the diverse audiences. – Provide age appropriate and diverse play spaces. – Create Smart, multi-functional spaces to bring the life of the hospital outside. <p>For further information regarding landscape strategy also refer to landscape design report.</p> <p>Comments provided by the panel regarding further detailing of the landscape design are noted and will be presented at the SDRP session on 7 April 2021</p>
<i>The design and amenity within the landscape of Kidspark is key to the success this project. The journey between buildings, along the Kidsway through the CHW Forecourt, to the carpark through a sequence of distinct green links has strong potential. The overall strategy for retail and food and beverage should consider the activation of all green spaces including those adjacent to the proposed carpark; this will ensure the masterplan delivers active and engaging spaces for the use of visitors, patients and staff while taking advantage of the site's natural quality and amenity.</i>	The overall retail strategy has been embedded within the visitor experience strategy, and seeks to promote spaces that are engaging, playful and peaceful for visitors and staff. The overall retail strategy is currently under review by the retail consultant to explore opportunities to further activate green spaces and pedestrian journeys throughout the redevelopment.
<i>The project is at a critical stage for integrating an Art Strategy and responding, in collaboration with your ICH consultant, to the Draft Connecting with Country Framework. It is recommended this process be accelerated and evidence of this be presented at the next SDRP.</i>	The Arts & Play Strategy has been developed which seeks to have arts and play opportunities inherent within the design of the building and its surrounds. The Arts and Play Strategy will be presented at the next SDRP session on 7 April 2021.
<i>It is recommended this project returns for another meeting with SDRP and that the following be included in that presentation:</i> <ul style="list-style-type: none"> – Plans, sections and 3d sketches of key areas to explain the 	For further information refer also to the Architectural Design Report (Appendix G). Comments provided by the panel regarding the design intent are noted and will be presented at the SDRP session on 7 April 2021.

relationship of the built forms to each other and the adjacent spaces

- *Internal plans and layouts*
- *3D views explaining the overall volumes of buildings across the campus, and their relationship to landscape and to the ground plane*
- *Light and spatial quality studies for the campus circulation areas: sequential sketches / basic 3D views/sketches of key external spaces experienced as one moves along the circulation journey*
- *Explanation of how these spaces are linked to the broader campus environment and beyond – views, outlooks, light quality, sound, volume, space, landscape, materiality, uses and activation.*
- *Concept strategy for retail and food and beverage across the whole Kidspark quarter*
- *Details of consultation with Indigenous consultants and design collaborators*
- *Public art strategy for internal and external spaces*
- *Detailed design development of landscape concepts*

4.4 Community Consultation

Community feedback and consultation has been integral to the proposed development and the broader CHW Stage 2 redevelopment.

Consumer and Community Engagement has been undertaken to gather feedback and insights from key stakeholders to ensure the project meets the needs of patients, families, staff, and the community now and into the future. Consultation has included:

- Six workshops - a total of 20 families participated;
- Meetings with up to 15 families in group and one-on-one situations;
- A children's and adults' survey - A total of 888 survey responses;
- Children's activity sheet - 50 activity sheets completed;
- Establishment of Consumer and Community Advisory Committee (CCAC), inclusive of 14 members with monthly meetings;
- Attendance at Parramatta City Council Aboriginal and Torres Strait Islander Advisory Group Meeting in June 2020, and follow up sessions with members in August 2020 and February 2021;
- Drop-in session with staff and families in the main entry of the Hospital, with up to 50 attendees, having conversations about the new building;

- Social media engagement;
 - Launch of children's and adults' survey 4307;
 - Naming the demolition machine reached 8349 people;
 - Demolition of the site and scope for PSB reached 6387 people;
 - Launch of fly through video reached 6744 people;
 - Findings of children's activity sheet reached 3690 people;
- Fortnightly emails throughout 2020 on project updates to Network staff; and
- Survey to staff, patients and families on retail in the new building with 430 responses received.

The key themes that emerged following consultation include:

- Outdoor access – ability to see the sky, indigenous & multicultural spaces;
- Access to fresh air and natural daylight – windows and views;
- Accessibility - ease of access to space, night time access, leaving children;
- Art and play;
- Design for the full age spectrum - age-appropriate spaces, indoor & outdoor;
- Community & communication - Spaces to talk to other parents, social aspect;
- Family spaces - indoor & outdoor spaces for families – close and extended;
- Mental and physical health of parents and siblings;
- Consideration of long stays - quiet spaces, family spaces, ability to sleep;
- Availability of normal - ability to exercise, Healthy food options, facilities and home like qualities, spaces for families and siblings, Softening of space;
- The spaces in between - Waiting spaces while children are in treatment, quiet spaces for a phone call, separated tables in communal areas; and
- Spaces that are culturally appropriate – welcoming and safe.

5. Statutory and strategic planning context

5.1 Overview

This EIS includes an assessment of the proposed development against the following strategic plans, policies, and guidelines, in accordance with the issued SEARS.

The proposed development has been assessed and found to be generally consistent with strategies, policies, priorities and strategic land use planning at State, local and precinct levels.

5.2 Strategic Planning

Table 8 Consistency with relevant strategic plans, policies, and guidelines

Strategic Planning policy	Response
NSW State Priorities	<p>NSW State Priorities are fourteen priorities unveiled by the NSW Premier, in a commitment to making a significant difference to enhance the quality of life. Relevant State priorities are:</p> <ul style="list-style-type: none"> – Improving service levels in hospitals; – Improving outpatient and community care; – Greener public spaces; – Greening our city; – Government made easy; and – World class public service. <p>The proposed development will improve service levels in hospitals, by facilitating the expansion of Westmead Health Precinct with improved paediatric health services. Thus, the proposed development aligns with the NSW State Priorities, seeking to enhance the quality of life through quality health care and services in NSW.</p>
NSW State Infrastructure Strategy 2018-2038: Building Momentum	<p>The State Infrastructure Strategy 2018-2038, released in February 2018 by Infrastructure NSW, is a 20-year strategy that outlines the NSW Government's major long-term infrastructure plans across all key sectors – transport, energy, water, health, education, justice, social housing, culture, sport and tourism.</p> <p>The Strategy notes the demand for healthcare will grow by over 50 per cent by 2036, highlighting that there is a need to expand and deliver more health infrastructure and services to support the State's medical needs. A strategic objective for health is included in the Strategy to 'Plan and deliver world-class health infrastructure that supports a 21st century health system and improved health outcomes for the people of NSW'.</p> <p>The proposed development aligns with the strategic objectives of the Strategy as the proposed scope of works will contribute to the redevelopment and expansion of the Westmead Health Precinct. The PSB will contain several health services, such as perioperative and interventional services, neonatal and</p>

paediatric intensive care units, cancer centre, acute inpatients beds, and back of house and parent facilities.

Future Transport Strategy 2056

The Future Transport Strategy 2056 provides a framework for delivery of integrated and modern transport systems. The plan acknowledges the vital role transport plays in the land use, tourism, and economic development of towns and cities.

The Future Transport Strategy 2056 addresses Transport's role in moving towards sustainability by achieving reductions in emissions. The proposed development supports more environmentally sustainable travel as it is situated near to several public transport services, including the North-west Transitway, Westmead railway station and the future Parramatta Light Rail. The availability of public transport connections to the CHW encourages visitors, staff, and patients to utilise sustainable transport methods when accessing the site, and overall reduces the need to rely on private motor vehicles.

As part of the Vision for Transport, the Strategy highlights an aim towards encouraging active transport by providing better connections and improving amenity of places through the development of an active transport network. The proposed development enhances active travel such as walking, shown through the elevated pedestrian connections into the CHW and CASB. These improved pedestrian connections allow visitors and staff to easily navigate their way to/from the PSB irrespective of the key Precinct access point that they enter or exit at. This is of particular importance, given that the PSB wouldn't have a direct frontage to Hawkesbury Road, where most visitors would arrive from.

Healthy Urban Development Checklist

To support the development of NSW Health staff's capacity to influence healthy design and the built environment the Healthy Urban Development Checklist (HUD) was created. The purpose of the checklist is to assist health professionals to provide advice on urban development policies, plans and proposals.

Physical activity – response:

- Enhancement of connectivity between facilities through new pedestrian pathways and links to the CASB and existing CHW.
- Enable movement through the site to support the integration of health, research, and education through flexible and adaptable spaces.

Transport and physical connectivity – response:

- Future public transport improvements (separate to this proposed development) will encourage greater public transport patronage.
- The proposed development will encourage the use of public transport because of the site's position near the north west transitway (T-way), Westmead Station, and future Parramatta light rail, and future Sydney Metro West project.
- Encouragement of active transport through improved site connectivity and pedestrian links across the Westmead Health Precinct.

Quality employment – response:

- The proposed development enables an increase in jobs in the area close to housing and transport options.

Community safety and security – response:

- The design satisfies and enhances sense of community safety and security.
- External lighting will be provided to the CHW Forecourt, to meet the Australian Standard for lighting for crime prevention.
- The operation of the PSB will be 24 hours 7 days a week. This allows for natural passive surveillance of spaces and provides security due to the constant presence of staff, patients, and visitors.

Public open space – response:

- Improved links and landscape changes to the CHW Forecourt will increase access to green space for use by staff, patients, and visitors.

Social infrastructure – response:

- The proposed development will directly improve the accessibility and quality of public health services.
- The proposed development provides access to a range of facilities to attract and support a diverse population, as the development will provide public health care services, and provide educational and training facilities.
- The development responds to current and projected community needs in terms of health care provision, and provides for early delivery of social infrastructure.
- It also encourages active transport use in its co-location with proposed light rail node/infrastructure.

Environment and health – response:

- Air quality will be enhanced because the development will integrate well with the proposed Parramatta Light Rail. There is also a bus T-way in close proximity to the site.
- Provides for an environmentally responsible response to water, energy, and non-renewable resources use.
- Noise impacts have been addressed in a noise impact assessment.

**Draft Greener
Places Design
Guide GANSW
2020**

The Draft Greener Places Design Guide provides information on how to design, plan and implement green infrastructure in urban areas throughout NSW.

The PSB will include indoor and outdoor landscape areas that will support the users within the building by providing visual and physical access to the landscape. Outdoor terraces and courtyards are incorporated into the design of PSB, providing opportunity for visitors, patients, and staff to interact with nature. These areas will be of high quality, to encourage people to gather whilst relaxing and healing during their stay at the Hospital.

The proposed development also seeks to improve access to open green space by improving connectivity to the CHW Forecourt, south east of the site. The CHW Forecourt is

activated through a series of permeable programmed spaces anchored by a central green area, which can be used for recreation and respite by both staff and visitors. The proposed development will reduce the urban heat island effect by increasing vegetation and tree canopy coverage in open spaces to shade buildings and floorspaces. This will in turn decrease the surface temperature of the microclimate within the CHW area, and also contribute to the wider tree canopy coverage.

The proposed development expands the urban tree canopy in the public realm by redefining the green character of the Hospital forecourt, creating an interconnected green environment contributing towards future climate resilience. A target has been set to increase tree canopy coverage to 40% in Greater Sydney. This proposed development contributes to this target and assists Health Infrastructure NSW in supporting the expansion of the urban tree canopy at the Westmead Health Precinct. Refer to **Section 6** on landscaping for details on canopy cover.

Overall, the proposed development seeks to improve access to high-quality green landscaped spaces. Therefore, the proposed development is considered consistent with the Draft Greener Places Design Guide.

The Greater Sydney Region Plan – A Metropolis of Three Cities (2018)	<p>The Greater Sydney Region Plan – A Metropolis of Three Cities, was released by the Greater Sydney Commission in March 2018 and is the NSW Government's 40-year vision (to 2056) and establishes a 20 year plan of Greater Sydney to become a city where people will live within 30 minutes of jobs, education and health facilities, services and great places.</p> <p>The proposed development is consistent with the vision of the Greater Sydney Region Plan as the proposed scope of works will facilitate the Stage 2 redevelopment of CHW and reinforce the Westmead Health Precinct as a significant employment, education, and health services hub.</p> <p>As the site is located within the Central River City, the proposed development will contribute to rebalancing opportunities across the Greater Sydney Region, and support the delivery of a 30-minute city, where families are able to access world-class medical support within a reasonable timeframe.</p> <p>The Plan identifies that the role of Westmead Health Precinct is to be an economic catalyst for Greater Parramatta and the Greater Parramatta and the Olympic Peninsula (GPOP) Economic Corridor. It states that improved and enhanced access to the Precinct will help boost the success of Parramatta in becoming stronger and better connected. The Plan also notes that by 2036, 21 per cent of all jobs in Greater Sydney are projected to be in the health and education sectors, up from 19 per cent in 2016. As the proposed development is part of the Stage 2 redevelopment of the CHW, the proposed scope of works will facilitate the growth of health facilities in the Precinct and provide more jobs in the health sector, ultimately contributing to the economic productivity of the area.</p>
Central City District Plan	<p>The Central City District Plan was released in March 2018 to support the role of the Greater Sydney Commission and the implementation of the 'Greater Sydney Region Plan'. The Plan</p>

proposes a 20-year vision for the District and provides directions for the District's infrastructure and collaboration, liveability, productivity, and sustainability.

The following planning priorities are of relevance to the proposed scope of works:

- *Planning Priority C1 – Planning for a city supported by infrastructure*

The proposed development will facilitate the success of the CHW to provide health services to children who are sick and require access to clinical services. Ultimately, this will ensure that children within the SCHN NSW catchment are supported by, and have access to, essential infrastructure, such as health facilities and services.

- *Planning Priority C3 – Providing services and social infrastructure to meet people's changing needs*

The proposed development seeks to expand health services to meet the growing health demands that accompany an increasing population. The proposed landscaped areas, such as the courtyards and CHW Forecourt will also deliver social infrastructure to visitors, patients, and staff of the CHW.

- *Planning Priority C4 – Fostering healthy, creative, culturally rich and socially connected communities*

The proposed CHW Forecourt and PSB aligns with Planning Priority C4 as it creates a network of indoor and outdoor open spaces that will improve connections across the Precinct, and also deliver areas for social interaction amongst the community. Furthermore, the proposed development fosters healthy communities by expanding paediatric health services at the CHW.

- *Planning Priority C7 – Growing a stronger and more competitive Greater Parramatta*
- *Planning Priority C8 – Delivering a more connected and competitive GPOP Economic Corridor*

The Plan identifies the Westmead Health Precinct as one of the key components to growing a stronger and more competitive Greater Parramatta. Westmead is identified as having the potential to become an Innovation District, and capable of providing 50,000 jobs.

The proposed development is consistent with Planning Priority C7 and Planning Priority C8 as it facilitates the redevelopment of Westmead in becoming a world-class health precinct, which in turn will increase job opportunities and support improved job containment within the District. This will support economic growth in Greater Parramatta and the GPOP Economic Corridor.

Parramatta Local Strategic Planning Statement City Plan 2036

The Local Strategic Planning Statement City Plan 2036 sets out a 20-year land use planning vision for the City of Parramatta.

The site is part of the Westmead Health Precinct within the Greater Parramatta to Olympic Peninsula (GPOP) area. The Westmead Health Precinct is envisioned to be a world-class innovation district with a conglomeration of health, research, and medical services. The proposed development aligns with the strategic vision of the Westmead Health Precinct, as the

new PSB will foster improved world-class health care for children in need.

The LSPS notes that employment in Westmead is expected to increase by over 50% from 2016 to 2036. The proposed development aligns with these growth projections, as it enhances productivity and increased employment density within the Parramatta LGA. The proposed development will offer employment opportunities within the health sector.

**Westmead Health
Core Master Plan**

The Westmead Health Core Master Plan was established to guide development and provide a structure to accommodate upcoming projects and future development on the site with an agreed approach between the Western Sydney Local Health District and the Sydney Children's Hospital Network.

The positioning of the proposed PSB was established within the Westmead Health Core Master Plan.

Key organising principles of the Plan to the proposed development include:

- Implements accessible green spines and spaces which will be protected as building free zones.
- Formalising public domain spaces will be established to provide crucial connections between private buildings and public streets.

The proposed development seeks to enhance landscaped green spaces at the CHW, such as the CHW Forecourt. These landscaping works will establish a high quality public domain, and also facilitate greater connectivity across the hospital campus.

**Westmead 2036 –
Draft Westmead
Place Strategy**

Westmead 2036 is a key document that outlines the vision and future planning needs of the Westmead Health Precinct to meet its vision to be Australia's premier health and innovation district, providing new jobs in health, education, and innovation.

The Strategy outlines the importance of providing opportunities for increased open space, active transport, tree planting and sustainability.

The proposed development delivers new green open spaces as part of the CHW Forecourt and also throughout the PSB with new courtyards and terraces.

Supporting active transport is reflected in the proposed development through the improved pedestrian canopy and connections to other related health facilities and buildings at Westmead Health Precinct. Refer to **Figure 23**.

Sustainability is reflected through the proposed development, as discussed with the consideration of ESD principles in **Section 5.4** of this EIS.



Figure 23 Proposed pedestrian circulation at the CHW
Source: Billard Leece Partnership Architects (2020)

**NSW and ACT
Government
Regional Climate
Modelling
(NARClIM) climate
change
projections.**

A climate adaptation study will be undertaken to identify the climate risks in response to CSIRO projected impacts. Actions and design strategies will be identified to lower the impacts and the associated risk levels. The Climate Adaptation study will be undertaken during end of Schematic or early Design Development phase of the project.

At the current stage, the proposed PSB proposes the following strategies in response to the CSIRO projected impacts of climate change:

Hotter days and more frequent heatwave events:

- Passive building design features to reduce/dampen the effects of increasing temperature, such as solar shading and solar control glazing.
- The PSB proposes the use of air conditioning. This is to ensure that appropriate internal conditions can be achieved and maintained as temperatures continue to rise.
- Landscaping has also been proposed to reduce urban heat island effect.

Extended drought periods:

- Consideration of native low water landscaping to reduce potable water consumption; and
- Recycled water and rainwater reuse and low flow fixtures and fittings.

More extreme rainfall events:

- Consideration of increased drainage capacities to reduce flooding of roofs and hard surfaces; and
- Assessment of design of the building to address post development probable maximum flood (PMF) level.

Gustier wind conditions:

- Design of windows and openings with controls to limit the impact of gustier wind conditions for internal spaces;
- Landscaping to buffer strong winds to outdoor areas.

Material selection:

- Use of durable façade materials and materials to improve building thermal performance such as insulation and thermal mass; and
- Covered/shaded outdoor respite areas.

5.3 Legislation

Environmental Planning and Assessment Act 1979

Objects

Development under the EP&A Act 1979 must have regard to the objects of the Act as provided in Section 1.3 of the Act. A response to the relevant objects of the Act is provided below in **Table 9**.

Table 9 Objects of the EP&A Act 1979

Objects of the EP&A Act 1979	Response
a) <i>to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources,</i>	<p>The proposed development seeks to promote the social welfare of the community by providing sick children with the public health care they need.</p> <p>The environmental impacts have been appropriately mitigated as detailed in Section 7 of this report.</p>
b) <i>to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,</i>	<p>The response to the principles of ecologically sustainable development (ESD) under Clause 7(4) of Schedule 2 of the EP&A Regulation is provided at Section 5.4 of this EIS.</p> <p>The proposed PSB incorporates a range of ESD initiatives as outlined in the ESD Report prepared by Steensen Varming at Appendix AB.</p>
c) <i>to promote the orderly and economic use and development of land,</i>	<p>The proposed development seeks to deliver necessary infrastructure upgrades to the hospital to improve and significantly expand health care facilities within the Sydney Children's Hospital Network.</p>
d) <i>to promote the delivery and maintenance of affordable housing,</i>	<p>The provision of affordable housing is not relevant to the proposed development.</p>
e) <i>to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats,</i>	<p>The proposed development has sought to retain existing trees on site where appropriate and provides new landscaping in areas where this could not be achieved.</p> <p>The BDAR Waiver Request prepared for the proposed development (Appendix AC) has concluded that it is highly unlikely to have significant impacts upon defined biodiversity values as impacts are limited to highly modified areas. It is also unlikely that there will be significant impact to threatened species as a result of the proposed development.</p> <p>The BDAR Waiver was approved by DPIE on 20 November 2020.</p>

<p>f) <i>to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),</i></p>	<p>The proposed development has been designed in consideration of the sustainable management of building and cultural heritage of the site.</p> <p>A Heritage Impact Assessment has been carried out by Jacobs (Appendix J) and has concluded that there is likely to be a low-moderate impact by the proposed development on Glengariff/Wisteria Gardens, that can be substantially mitigated or eliminated by the planting of appropriate trees. Additionally, it is considered unlikely that the proposed development will cause any adverse impact to the Old Government House Group or the Parramatta Archaeological Management Unit 3070.</p> <p>An ACHAR has been prepared by Jacobs (Appendix K), and concludes that the area does not have likelihood of containing Aboriginal objects, as it has been heavily disturbed from historical land use of the region for farming and agricultural purposes, and from recent development associated with the hospital.</p>
<p>g) <i>to promote good design and amenity of the built environment,</i></p>	<p>The proposed development, including the siting, built form and materiality of the proposed PSB is guided by the site's existing surroundings and built form, topography, surrounding landscape, views, and solar access.</p> <p>Maintaining and improving amenity at the CHW has been a key driver of the design. Refer to the Architectural Design Report at Appendix G.</p>
<p>h) <i>to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,</i></p>	<p>The plans and reports prepared by the consultant team have been prepared in line with relevant provisions and standards to ensure proper construction and maintenance of buildings is achievable, and to protect the health and safety of occupants, during the construction and operation phase of the hospital.</p> <p>The proposed development will be maintained in accordance with standards and guidelines of Health Infrastructure NSW and the SCHN.</p>
<p>i) <i>to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State,</i></p>	<p>Being SSD, the Minister for Planning and Public Spaces is the relevant consent authority for the proposed development. City of Parramatta Council has been consulted in the preparation of the SEARs and prior to lodgement of this SSD application as detailed at Section 4 of this EIS.</p>
<p>j) <i>to provide increased opportunity for community participation in environmental planning and assessment.</i></p>	<p>Consultation has been undertaken by Health Infrastructure NSW on the proposed development and the wider CHW Stage 2</p>

redevelopment works. Refer to **Section 4** of this EIS.

State Significant Development

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

“(a) hospitals,

(b) medical centres,

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

The proposed development has an estimated CIV of greater than \$30 million, hence it qualifies as SSD. A CIV Statement has been prepared by Altus Group and is included under a separate cover.

Additional approvals required

The provisions of section 4.42 (cf 89K) of the EP&A Act 1979, which lists those approvals under other legislations that must be applied consistently, are addressed below.

Table 10 Response to Section 4.42 of the EP&A Act 1979

Section 4.42 of the EP&A Act	Response
(1) An authorisation of the following kind cannot be refused if it is necessary for carrying out State significant development that is authorised by a development consent under this Division and is to be substantially consistent with the consent:	Noted
(a) an aquaculture permit under section 144 of the <i>Fisheries Management Act 1994</i> ,	Not required
(b) an approval under section 15 of the <i>Mine Subsidence Compensation Act 1961</i> ,	Not required
(c) a mining lease under the <i>Mining Act 1992</i> , <u>Note.</u> Under section 380A of the <i>Mining Act 1992</i> , a mining lease can be refused on the ground that the applicant is not a fit and proper person, despite this section.	Not required
(d) a production lease under the <i>Petroleum (Onshore) Act 1991</i> , <u>Note.</u> Under section 24A of the <i>Petroleum (Onshore) Act 1991</i> , a production lease can be refused on the ground that the applicant is not a fit and proper person, despite this section.	Not required
(e) an environment protection licence under Chapter 3 of the <i>Protection of the Environment Operations Act 1997</i> (for any of the purposes referred to in section 43 of that Act),	Not required
(f) a consent under section of the <i>Roads Act 1993</i> ,	Not required
(g) a licence under the <i>Pipelines Act 1967</i> .	Not required
(2) This section does not apply to or in respect of: (a) an application for the renewal of an authorisation or a renewed authorisation, or (b) an application for a further authorisation or a further authorisation following the expiry or lapsing of an authorisation, or (c) in the case of an environment protection licence under Chapter 3 of the <i>Protection of the Environment Operations Act 1997</i> —any period after the first review of the licence under section 78 of that Act.	Not relevant
(3) A reference in this section to an authorisation or development consent includes a reference to any conditions of the authorisation or consent.	Not relevant

Section 4.42 of the EP&A Act	Response
(4) This section applies to a person, court or tribunal that deals with an objection, appeal or review conferred on a person in relation to an authorisation in the same way as it applies to the person giving the authorisation.	Not relevant

Commonwealth Environment Protection and Biodiversity Conservation Act 1999

The *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) contains the provisions for the assessment of actions likely to have a significant impact on Matters of National Environmental Significance (**MNES**) listed under the Act. Part 3 of the EPBC Act provides requirements for environmental approvals where there is significant impact.

A BDAR Waiver Request was prepared by Cumberland Ecology and is provided at **Appendix AC**. It concludes that the project is highly unlikely to have significant impacts upon defined biodiversity values as impacts are limited to highly modified area. Moreover, it is considered unlikely that a significant impact to threatened species would occur as a result of the proposed development.

It is noted that approval to waive the need for a BDAR report as part of the SSD application has been provided by the Directors within the Planning and Assessment Division of DPIE on 25 November 2020. Additionally, the delegated *Environmental Agency Head* in the Environment, Energy and Science Group of DPIE has also granted a waiver on 2 November 2020. Refer to **Appendix AD**.

The EPBC Act also includes World Heritage as a Matter of National Environmental Significance and protects listed places to the fullest extent under Australian Law. The site is within the vicinity to a World heritage item, namely 'Old Government House and the Government Domain, Parramatta'. However, it is not anticipated that there will be any direct impact on these items given that it is located a considerable distance away (approximately 1.3 kilometres). Additionally, the SoHI prepared by Jacobs (**Appendix J**) concludes it unlikely that the proposed development will cause any adverse impacts to this item of heritage significance. Refer to **Section 6.12** of this report for further detail of heritage impacts.

Contaminated Land Management Act 1997 (CLM Act)

The aim of the CLM Act 1997 is to establish a process for investigating and (where appropriate) remediating land that the Environment Protection Authority (EPA) considers to be contaminated significantly enough to require regulation under Division 2 of Part 3.

The Section 10.7 Planning Certificate at **Appendix C** does not regard the site to be significantly contaminated land.

The broader Westmead Health Precinct, including the site, has been subject to a range of previous investigations that have identified asbestos impacted fill across the Precinct. A Remedial Action Plan (RAP) (**Appendix S**) has been prepared to ensure that the land can be remediated for the proposed use. Refer **Section 6.17** below.

National Parks and Wildlife Acts 1974 (NP&W Act)

The objects of the NP&W Act are the conservation of nature and the conservation of objects, places or features (including biological diversity) of cultural value within the landscape, fostering public appreciation, understanding and enjoyment of nature and cultural heritage and their conservation, and providing for the management of land reserved under this Act in accordance with the management principles applicable for each type of reservation. An ACHAR is provided at **Appendix K**, noting that Stages 1 to 3 of the ACHAR have been completed, with Stage 4 predicted to be completed on 3 May 2021. The ACHAR will be reissued following EIS submission to incorporate RAP consultation results.

The ACHAR concludes that the proposed development is unlikely to further harm Aboriginal objects, if present, given it is located within an already highly disturbed and impacted area. Refer to **Section 6.13** below for details.

Heritage Act 1977

Historical archaeological relics, buildings, structures, archaeological deposits, and features are protected under the Heritage Act 1977 (and subsequent amendments) and may be identified on the State Heritage Register (SHR) or by an active Interim Heritage Order.

A SoHI was prepared by Jacobs to accompany this SSDA (**Appendix J**). This concludes that there are no built heritage items in the Westmead Health Precinct. The site is within the Parramatta Archaeological Management Unit 3070 (**AMU 3070**) and has been assessed as having “moderate” archaeological research potential and being of local heritage significance. However, given the nature of previous land use, in particular the construction of the recently demolished P17 car park, it is considered unlikely that any archaeological deposits remain. Refer to **Section 6.12** below for details.

5.4 Regulation

Environmental Planning and Assessment Regulation 2000

The EP&A Regulation supports the EP&A Act and provides specific requirements for the preparation of Environmental Impact Statements under Schedule 2.

The ESD principles include:

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

A response against the ESD principles is detailed below.

Precautionary principle

The proposed development is not considered to result in any serious or significant irreversible environmental damage:

- The BDAR Waiver Request (**Appendix AC**) found no significant or threatened flora or fauna species, communities, or habitat to be present on the subject site and no remnant vegetation. However, compensatory measures in the form of tree and other planting will be provided as part of the landscaping for the proposed development, and this vegetation will provide similar habitat values to that removed. It is concluded unlikely that a significant impact to threatened species would occur as a result of the proposed development.
- The land is impacted by asbestos contamination and this will be remediated.
- There will be suitable stormwater quality and erosion and sediment control measures in place.

Inter-generational equity

The proposed PSB will ensure that the health, diversity, and productivity of the environment will be enhanced for future generations as the proposed development is for a public health building for provision of paediatric health care services.

Conservation of biological diversity and ecological integrity

Ecological impacts have been considered as part of the proposed development as detailed in the BDAR Waiver Request at **Appendix AC**. Refer to response at ‘Precautionary Principle’ above.

Improved valuation, pricing, and incentive mechanisms

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

The proposed development was the subject of a Government business case and included principles of “Affordability and Value for Money” and “Sustainability”. The

business case found the expansion of services capacity is critical to meeting increasing demand for local health District services. The increased mass of services provides enhanced opportunities for specialisation, enhanced effectiveness of intervention, better patient outcomes, and broader opportunities for research to contribute to the care of the patient. This in turn supports inter-generational equity as the hospital is a public hospital.

5.5 Environmental Planning Instruments

The proposed development has been considered against the relevant environmental planning instruments (EPIs) in accordance with the issued SEARS. The proposed development has been assessed and found to be generally consistent with these, as detailed within **Table 11** below.

Table 11 Response to relevant State Environmental Planning Policies

Environmental Planning Instrument	Response
State Environmental Planning Policy (State and Regional Development) 2011	<p>Under Schedule 1, Clause 14 of SEPP SRD, development that has a capital investment value (CIV) of more than \$30 million for hospital purposes can be assessed as State Significant Development. The CIV of the development more than \$30 million (a CIV Statement has been prepared by Altus Group and is included under a separate cover). 'Hospital' use is permissible with development consent on the land which is under zone SP2 Infrastructure.</p> <p>Clause 11 of SEPP SRD states that development control plans (DCPs), whether made before or after the commencement of this Policy), do not apply to State Significant Development. Furthermore, the SEARs issued for the project do not reference the DCP as a requirement. Therefore, no assessment has been made of the compliance of the proposed development with Parramatta DCP 2011.</p>
State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)	<p>The ISEPP is applicable to the site and provides several aims to facilitate the effective delivery of state infrastructure, including hospitals and associated health services facilities.</p> <p>Clause 57(1) of Division 10 of ISEPP provides that development for the purpose of health services facilities (including a hospital) may be carried out by any person with consent on land in a prescribed zone.</p> <p>The site is zoned SP2 Infrastructure – Health Services Facility, being a prescribed zone under Clause 56 of the ISEPP and the proposed development is therefore also permitted with consent under Clause 57 of the ISEPP.</p> <p>Note that subject to Clause 58B (b) and (c) of the ISEPP, all wayfinding signage will be undertaken as exempt development, as it is:</p> <p><i>(b) development for the purposes of information boards and other information facilities (except for visitors' centres),</i></p> <p><i>(c) development for the purposes of lighting, if light spill and artificial sky glow is minimised in accordance with the Lighting for Roads and Public Spaces Standard.</i></p>
State Environmental Planning Policy No. 33 (Hazardous)	<p>Clause 11 of SEPP 33 applies to:</p> <ul style="list-style-type: none"> – Development for the purposes of a potentially hazardous industry;

and Offensive Development)	<ul style="list-style-type: none"> – Development for the purposes of a potentially offensive industry; – Development notified in the Gazette as being a potentially hazardous or potentially offensive development. <p>A Preliminary Hazard Analysis has been prepared for the proposed development in accordance with Clause 12 of SEPP 33 (Appendix U). This assessment concluded that the cryogenic oxygen storage tanks, compressed oxygen and nitrous oxide cylinders will exceed the screening threshold of SEPP 33. Due to this, a detailed qualitative analysis was conducted to determine the risk to off-site populations. It was concluded that the cryogenic oxygen tanks, compressed oxygen and nitrous oxide cylinders while exceeding the Applying SEPP 33 threshold quantities, do not pose a significant off-site risk to the surrounding residential areas.</p> <p>Refer to a further discussion of this issue within Section 6 of this EIS.</p>
State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)	<p>SEPP 55 requires that a consent authority must not consent to the carrying out of any development on land unless it has considered whether the land is contaminated.</p> <p>The proposed remediation works are considered to be classified as 'Category 2' Remediation Works – i.e., not requiring consent. The notification requirements of SEPP 55 require the consent authority to be notified 30 days before Category 2 remediation works commence, providing the consent authority with the information needed to verify the work is not Category 1 by reference to various criteria.</p> <p>It is considered that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment, such that the site can be made suitable for the proposed hospital use.</p> <p>Detailed Site Investigations for Stage 2 of the CHW Redevelopment project and the CHW Forecourt, and a Remedial Action Plan have been prepared by JBS&G for the proposed development at Appendix Q, Appendix R and Appendix S respectively. These reports document that the development site can be made suitable for the purposes of a hospital, subject to remediation.</p> <p>Refer to Section 6.17 below on contamination and remediation.</p>
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Sydney Harbour SREP)	<p>The CHW is shown mapped within Sydney Harbour Catchment according to the SREP (Sydney Harbour Catchment) 2005 map and is therefore subject to the SREP, a deemed SEPP. The SREP contains aims, objectives, and planning principles to ensure that the catchment, foreshores, waterways and islands of Sydney Harbour are recognised, protected, enhanced and maintained.</p> <p>The site is not situated in a Foreshore and Waterways area and does not contain heritage items under the SREP.</p> <p>The site is within the bounds of an existing health services facility, and will not detract from the environmental, scenic or functional quality of the Sydney Harbour Catchment. The proposed development is therefore consistent with SREP.</p>

State Environmental Planning Policy No 64— Advertising and Signage	<p><u>Way finding signage</u></p> <p>Wayfinding signage will accompany the proposed development works. Information boards and other information facilities are Exempt Development in accordance with Clause 58B (1) (b) of the Infrastructure SEPP. Notwithstanding wayfinding plans are included at Appendix G. These will be subject to further design development. Note that it is expected there will be condition of consent put in place to ensure wayfinding signage for pedestrians and cyclists are installed prior to the operation of the PSB.</p> <p>The proposed wayfinding signage will be designed in response to the architectural and visual character of the PSB and surrounding precinct. The proposed signage will enhance legibility across the CHW, and will ensure the proposed PSB can be identified from the street.</p> <p><u>Building identification signage</u></p> <p>Five (5) building identification “zones” are nominated on the following building elevations with dimensions:</p> <ul style="list-style-type: none"> – North-east elevation: placeholder building signage 6000 x 6000 – North-east elevation: placeholder building signage 3000 x 21000 – North-west elevation: placeholder building signage 3600 x 3600 – North-east elevation: placeholder building signage 3000 x 3000 – South-west elevation: placeholder building signage 2400 x 24000 <p>Clause 8 of SEPP 64 requires the signage is consistent with the objectives of that Policy and satisfies the assessment criteria in Schedule 1 of that Policy. Each are addressed in turn below.</p>
<i>Objectives</i>	<p>The signage is compatible with the desired amenity and visual character of an area. It is in keeping with the signage of the CASB, providing effective communication all directions to provide way finding and identification to this important building. It will have high quality design and finish that integrates with the building façade.</p>
<i>Character of the Area</i>	<p>The signage reflects the character of the hospital precinct, with the recent completion of CASB with similarly placed identification signage at top of building elevations for way finding and identification purposes.</p>
<i>Special Areas</i>	<p>A view analysis has been completed of the proposed building from prominent public domain locations and adjoining areas of heritage significance. Refer to Section 6.2 below. This finds that there is limited visibility of the building from most of these vantage points. Typically, only the upper-most signs will be visible, with the south-west elevation signage zone of the greatest dimensions. View 1 of the view analysis shows this elevation will be partially obscured by vegetation.</p>
<i>Views & Vistas</i>	<p>Refer above response.</p>

<i>Streetscape, Setting or Landscape</i>	The smaller identification signage zones are affixed to the protruding part of those elevations and the longer signage is in scale with proposed window proportions. The signage does not extend beyond the building facades and is in keeping with the form and scale of the building. Signage is limited on each elevation. Overall, the signage is in keeping with the hospital precinct and in particular, the placement and style of the CASB building identification signage.
<i>Site & Building</i>	Refer above response.
<i>Associated devices and logos with advertisements and advertising structures</i>	Details of any safety devices and logos will be developed at a later stage.
<i>Illumination</i>	Illumination details will be developed at a later stage. Any illumination will be designed to avoid unacceptable glare or light spill.
<i>Safety</i>	The proposed signage zones will not reduce road, pedestrian or cyclist safety.

The above analysis provides that the proposed building identification signage zones are consistent with the objectives and assessment criteria of SEPP 64.

Draft State Environmental Planning Policy (Remediation of Land)	Draft SEPP 55 contains content that is not dissimilar to the gazetted SEPP 55. The proposed development aligns with the aims and objectives of Draft SEPP 55. Refer to attached Detailed Site Investigations at Appendix Q and R .
Draft State Environmental Planning Policy (Environmental)	<p>The Draft Environment SEPP is a proposed new SEPP that will form part of the broader land use planning framework in NSW. The proposed new SEPP aims to deliver a planning framework that protects a number of water catchments, waterways, urban bushland, and Willandra Lakes World Heritage Property.</p> <p>The Draft Environment SEPP contains provisions that are not dissimilar to the gazetted Sydney Harbour SREP.</p>

5.6 Parramatta Local Environmental Plan 2011

Table 12 Parramatta Local Environmental Plan 2011

Provision	Consistency	Response
1.2 Aims of Plan	Yes	The proposed development is in accordance with the aims of the Parramatta LEP 2011, as it will foster economic, social, and physical wellbeing in Parramatta.
2.2 – Zoning of land to which Plan applies – SP2 Infrastructure	Yes	<p>The proposed development is permissible with development consent in the SP2 zone as it is for the purpose shown on the land zoning map, i.e. health services facility.</p> <p>The proposed works are consistent with the objectives of the SP2 Infrastructure as it will provide a new health services facility within the Westmead Health Precinct. The PSB been designed to support and expand on existing paediatric health services within the CHW.</p>

5.10 – Heritage Conservation	Yes	<p>The proposed works are not directing land with heritage encumbrances. There are five (5) items of local heritage significance under Schedule 5 of the Parramatta LEPE 2011 within the vicinity of the site.</p> <p>The Heritage Assessment at Appendix J finds that the proposed development will have unlikely heritage impact to nearby items, except to Glengariff/Wisteria Gardens precinct which is 600 metres distance away. Refer to Section 6.12 below.</p>
6.1 – Acid Sulfate Soils	Yes	<p>The site is identified as containing Class 5 acid sulfate soils (ASS) pursuant to Clause 6.1 of PLEP 2011. Substantial ground works are not proposed. Further, the works are not within 500m of any Class 1 – 4 land that is below 5m AHD and will not result any lowering of the water table or surrounding sites.</p> <p>Refer to Geotechnical Investigation Report at Appendix P.</p>
6.2 - Earthworks	Yes	<p>A RAP was prepared for the proposed development by JBS&G at Appendix S. The RAP documents the procedures and standards to be followed in order to address the identified asbestos impacted soils and make the site suitable for the proposed development.</p> <p>Refer to the Civil Report and at Appendix T.</p>
6.3 Flood Planning	Yes	<p>As indicated by the Section 10.7 (2) & (5) Planning Certificate for the site (Appendix C), Lot 101 DP 1119583 is affected by a 100-year Average Recurrence Interval flood event.</p> <p>Refer to an assessment of flood impacts at Section 6.14.</p>

5.7 Parramatta Development Control Plan 2011

An assessment of the proposed hospital redevelopment against the requirements of the Parramatta DCP 2011 has not been undertaken, as Clause 11 of SEPP State and Regional Development provides that DCPs do not apply to SSD and the SEARs do not include the DCP as a relevant policy for consideration.

5.8 Parramatta Section 94A Contributions Plan 2011

Local infrastructure contributions are legislated under the provisions of Section 7.12 of the EP&A Act and authorise the City of Parramatta Council to levy a monetary contribution which is used towards the provision of public amenities and services.

Health Infrastructure NSW, as a public authority does not agree to a condition of consent requiring it to pay developer contributions under section 7.11 or 7.12 of the Environmental Planning and Assessment Act 1979. The following planning policies support the best practice of exempting community infrastructure from paying contributions:

- 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.” Health Infrastructure is a Government agency which relies on government grants to provide new facilities for the local community. The levying of a development contribution would divert a portion of these public funds, which have been specifically provided to fund a hospital redevelopment, to local services without any direct nexus to the impact of those services.

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

On the basis that the proposed development will be providing a significant public benefit by providing an important public health service to the community, it is considered that the Minister should waive the development contribution in this instance.

6. Environmental Assessment

6.1 Built form and scale

The proposed development has been considered in the context of the Westmead Health Precinct, which differs greatly in character and scale from the surrounding low to medium density residential area. The siting and form of the proposed PSB was designed in response to the envisaged future density of the precinct under the CHW 2 Zonal Master Plan.

The height of the proposed PSB, being RL 86.450m, is derived from the following considerations:

- To establish a contextual relationship with the scale and height, and required clinical service connectivity of the adjoining CHW buildings, particularly the recently built CASB with its height at RL 89.1m;
- To provide legibility and wayfinding from Hawkesbury Road and Redbank Road, given that the proposed PSB does not have a street frontage;
- To establish a framework for future scale; and
- To deliver sufficient capacity to accommodate the growth of paediatric services in the CHW.

The proposed PSB is substantially setback >50m from Hawkesbury Road and will not result in any unreasonable overshadowing and privacy impacts on the residential dwellings adjacent to Hawkesbury Road

For further discussion on built form, scale, and relationship of the building to context, refer to the Architectural Design Report at **Appendix G**.

6.2 Visual

The massing, proportions, and façade design of the PSB have been designed to respond to the site's context, and the scale and height of the adjoining buildings, these being:

- CASB;
- CHW Block 5; and
- KR Block 3 & 4

The PSB is located centrally to the Westmead Health Precinct and is set back >50m from residential properties on Hawkesbury Road. The location of the building will result in negligible privacy impacts on residential dwellings, as views will generally look over the dwellings rather than directly at the properties.

The proposed development incorporates greenery and landscaping into the design of the PSB to enhance visual amenity on site. Courtyards and terraces are proposed to deliver visual access and glimpses to nature, enhancing aesthetic interest in the PSB.

Existing visual environment

The study area for the visual assessment comprises land surrounding the site that may be impacted by some aspect of the PSB. The visual environment of the study area includes main roads and heritage items.

Public viewpoints

- Viewpoint 1: Redbank Road, facing south west towards the proposed PSB.
- Viewpoint 2: The bridge at Bridge Road, facing north west towards the proposed PSB.

- Viewpoint 3: Glengariff House, facing north west towards the proposed PSB.
- Viewpoint 4: Cnr of Hawkesbury Road and Hainsworth Street, facing north west towards the proposed PSB.
- Viewpoint 5: Bridge Road, facing north west towards the proposed PSB.

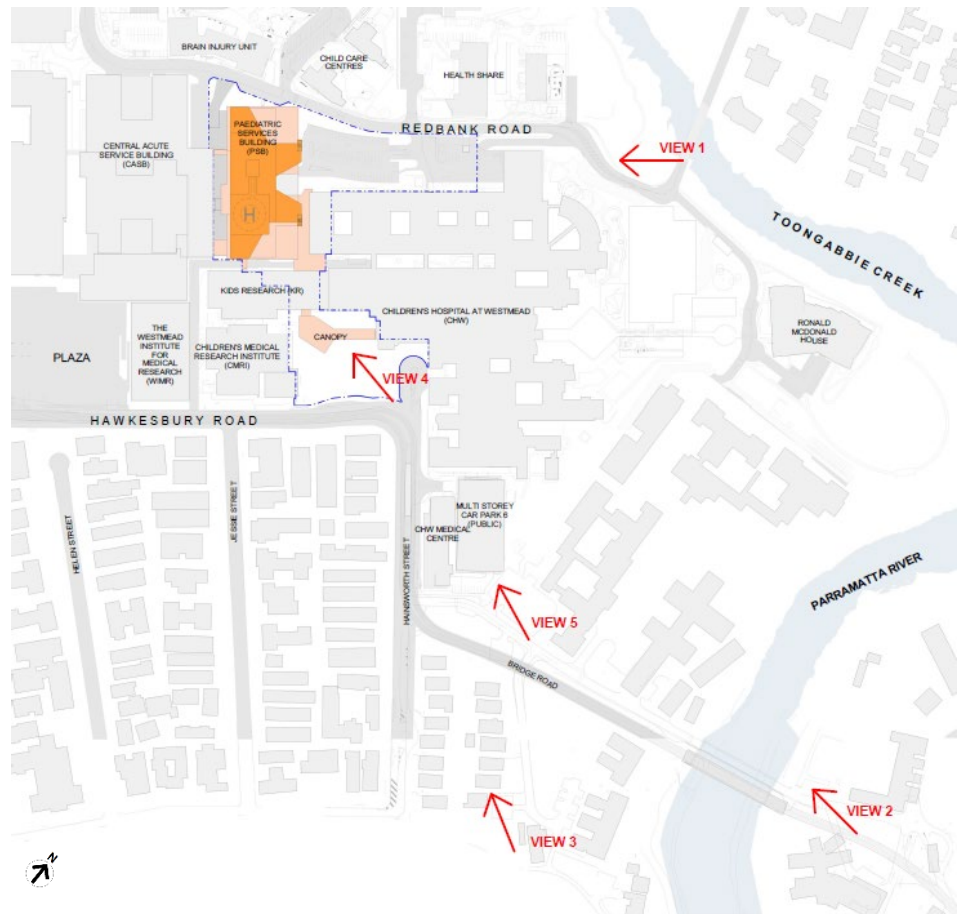


Figure 24 Public viewpoints location plan
Source: Billard Leece Partnership Architects (2020)

View Analysis

The following section assesses the visual impact of the PSB from each of the selected viewpoints (shown in **Figure 24**). The analysis includes a description of the view from each viewpoint and a discussion of the potential visual impacts of the PSB on that view.

Each viewpoint comprises a photo of the current view and a photomontage of the PSB to indicate the anticipated view when the project is complete.

Viewpoint 1: Redbank Road, facing south west towards the proposed PSB



Figure 25 Redbank Road viewpoint, facing south west towards the proposed PSB
Source: Billard Leece Partnership Architects

As shown in **Figure 25**, the viewpoint along Redbank Road looking south west to the proposed PSB, is dominated by trees in the mid-ground.

The PSB will be partially visible along Redbank Road, fulfilling a key objective to improve way finding in the Westmead Health Precinct.

A low/moderate visual impact is expected in this location.

Viewpoint 2: The Bridge at Bridge Road, facing north west towards the proposed PSB



Figure 26 The bridge at Bridge Road viewpoint, facing north west towards the proposed PSB
Source: Billard Leece Partnership Architects

As shown in **Figure 26**, the viewpoint looks north west towards the project site from the bridge at Bridge Road. The proposed development will be entirely obscured from this viewpoint by mid-ground vegetation. There is zero scale of change to this viewpoint.

Overall, **zero** impact on visual amenity is expected from this location.

Viewpoint 3: Glengariff House, facing north west towards the proposed PSB



Figure 27 Glengariff House viewpoint, facing north west towards the proposed PSB
Source: Billard Leece Partnership Architects

As shown in **Figure 27**, this viewpoint looks north west, dominated by low rise built structures in the mid-ground, and built forms part of the Westmead Health Precinct in the background.

The top of the PSB will be visible above the roof line of existing buildings, although the scale of change is minor.

The PSB fits within the context of existing built environment at Westmead Health Precinct, as it appears to be of similar scale as existing built forms.

Viewpoint 4: Cnr of Hawkesbury Road and Hainsworth Street, facing north west towards the proposed PSB



① Existing View 04



② Proposed View 04

Figure 28 Cnr of Hawkesbury Road and Hainsworth Street viewpoint, facing north west towards the proposed PSB

Source: Billard Leece Partnership Architects

As shown in **Figure 28**, this viewpoint looks north west towards the project site from the CHW Forecourt area at the corner of Hawkesbury Road and Hainsworth Street.

The canopy link is proposed in this area, with the proposed PSB visible in the background near existing built forms of Westmead Health Precinct. The PSB is visible from this viewpoint, fulfilling a key objective to improve way finding in the Precinct.

Overall, a moderate visual impact is expected in this location.

Viewpoint 5: Bridge Road, facing north west towards the proposed PSB



③ Existing View 05



④ Proposed View 05

Figure 29 Bridge Road viewpoint, facing north west towards the proposed PSB

Source: Billard Leece Partnership Architects

As shown in **Figure 29**, the proposed development will be entirely blocked by the existing multi-storey carpark.

In summary, while the proposal will result in visual impacts, these impacts range from negligible to moderate, and is largely in keeping with the prevailing built form context from most vantage points, and is therefore acceptable.

6.3 Visual privacy

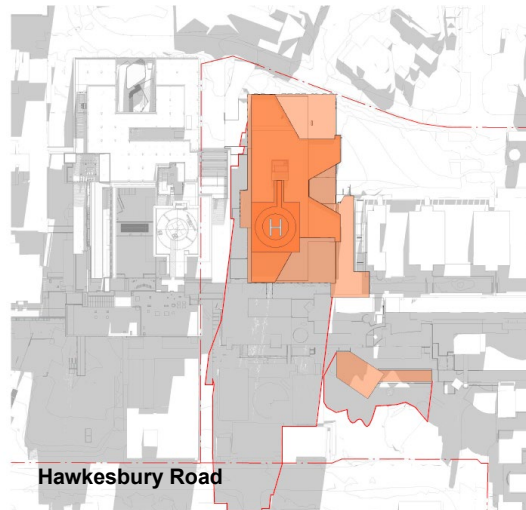
The proposed PSB is well setback from adjacent streets and there is adequate separation between the PSB and the closest residential uses south east of the site along Hawkesbury Road.

6.4 Solar access and overshadowing

A Solar Study has been carried out by Billard Leece Partnership Architects and is at **Appendix F**. These demonstrate the potential solar access impacts of the proposed development on the existing surrounding uses at the Summer Solstice and the Winter Solstice.

The shadow diagrams highlight that at 3pm of the winter solstice (21st of June), the proposed PSB will have its greatest overshadowing impact, casting a shadow over a small portion of residential properties to the south east of the site across Hawkesbury Road. Other than this, all shadows cast by the proposed PSB will remain wholly within

the Westmead Health Precinct, largely attributable to the proposed PSB being significantly setback from Hawkesbury Road.



⑥ PROPOSED 3PM - JUNE 21st
1:1000

Figure 30 Proposed solar impact to residential properties across Hawkesbury Road. The proposed development is to have its greatest solar impact at 3pm of the winter solstice (21st June).

Source: Billard Leece Partnership Architects with Architectus edits (2021)

6.5 Wind

Arup were commissioned to undertake an environmental wind assessment for the proposed development, to assess any impacts to pedestrian level wind conditions for comfort, and safety in and around the site (refer to **Appendix AF**). CFD modelling was selected over wind-tunnel testing because it assesses the wind conditions through the entire volume, rather than at discrete measurement points.

The wind assessment notes that the proposed development is expected to have an impact on the local wind conditions due to the height and massing of the PSB being generally greater than surrounding developments, with the exception of the south west where the adjacent CASB is of similar height.

From a pedestrian safety perspective, all locations pass the safety conditions for the proposed development.

In terms of pedestrian comfort, the wind conditions around the site are generally classified as suitable for pedestrian standing and sitting, with some smaller localised areas suitable for pedestrian walking.

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 all the entries are calm and suitable for the intended use.

6.6 Acoustic and vibration

Certain uses, such as residences, childcares, health receivers and an Animal Housing Facility, may be sensitive to noise generated from the proposed development. Stantec Australia Pty Ltd has undertaken an Acoustic Report to discuss the likely noise impact on the potentially nearest most-affected receivers (residential and surrounding Hospital buildings) from the proposed development. Refer to this report at **Appendix AE**.

Acoustic Impacts (Hospital operation)

As assessment of acoustic impacts as a result of Hospital operations has considered the following noise sources:

- Continuous noise from mechanical plant such as cooling towers, air handler units (AHU), chillers, condenser units and fans.

- Noise associated with back-up electrical system such as emergency diesel generators.
- Intermittent traffic noise from light weight trucks entering the loading dock delivering various type of goods.
- Intermittent traffic noise from car movement entering and exiting the carparks located on site.
- Intermittent noise from ambulances accessing the emergency department unit.
- Intermittent noise from operational filling of the bulk oxygen tank and associated enclosure.

Indicative assessments carried out for the proposed development are provided in **Table 13**:

Table 13 Indicative noise assessment

Noise source	Comment
Mechanical Plant and Equipment Impact Assessment	<p>This assessment has considered the noise emissions from the mechanical plant serving the internal spaces of the development.</p> <p>An assessment of the noise generated by the mechanical plant and equipment showed that the predicted noise levels at the surrounding noise-sensitive receivers are expected to comply with the relevant project noise trigger levels established in the <i>NSW EPA Noise Policy for Industry (2017)</i> upon implementation of the mitigation measures outlined in the Acoustic Report and in Section 8 of this EIS.</p>
Emergency Generator Noise Impact Assessment	<p>A preliminary assessment has been conducted for the proposed (3x) generators using worse-case noise levels from the nominated equipment. The assessment concluded that acoustic silencers will be required to meet external noise emissions established in the <i>NSW EPA Noise Policy for Industry (2017)</i>.</p> <p>Acoustic silencers are recommended to achieve external noise emissions established in the <i>NSW EPA Noise Policy for Industry (2017)</i>.</p>
Loading Dock and Waste Collection Noise Emissions	<p>The predicted noise levels of the loading dock activities at the surrounding noise-sensitive receivers are expected to comply with the project noise trigger levels, with the mitigation measures outlined below and in Chapter 8 of this EIS.</p> <p>It is recommended that the activities shall be conducted with the implementation of the following management practices:</p> <ul style="list-style-type: none"> – Not operating before 7am or after 10pm (7 days per week) – Maintaining rubbish trucks and braking materials to minimize or eliminate noise such as squeaky brakes – Educating drivers and collectors to be careful and to implement quiet work practices
Helicopter Noise Impact Assessment	<p>A future helipad will be provided to the south of the Level 15 PSB roof. Note the helipad is part of future works however approval is sought as part of this application. There is no adverse noise impact as a result of the proposed development.</p>

With reference to operational noise impacts, compliance with the *NSW EPA Noise Policy for Industry (2017)* acoustic criteria will be achievable, provided that acoustic treatments adhere to recommendations outlined in Acoustic report.

Construction Noise

There is no exceedance in the highly noise noise-affected level (75 dB(A) at any receivers surrounding the proposed construction works (upon implementation of the mitigation measures outlined in **Section 8**). It is not expected there will be significant construction noise impacts on the surrounding noise-sensitive receivers. Refer to **Section 20** for further detail.

Construction Vibration

The proposed development is expected to make use of concrete vibrators and excavators in close proximity to the hospital receivers. It is anticipated that the proposed development will not exceed the project vibration requirements outlined in the NSW DEC *Assessment Vibration: A Technical Guideline (2006)*, subject to the implementation of vibration monitors during construction stages near to the KR Block 4 and CASB.

6.7 Traffic, parking, and access

A Transport Assessment has been prepared by WSP. Refer to this report at **Appendix N**. A summary of the findings is discussed below.

Traffic

Traffic generation and impact on intersections

The traffic modelling assessment indicates that the anticipated traffic volumes associated with the development's traffic generation would have marginal impact on the surrounding road network.

Most intersections would operate with the same level of service with or without the development. However, the level of service at the intersection of Darcy Road, Institute Road and Mons Road would change from a level of service D to E during the PM peak hour. As the intersection is currently operating at capacity (degree of saturation 1), a minor increase in traffic volumes would alter the level of service. However, the development's overall impact to the Darcy Road, Institute Road and Mons Road intersection and the Darcy Road corridor is minor. Further, there are limited physical intersection improvements available at this intersection, recognising the extent of improvements investigated and implemented as part of the CHW Stage 1 Redevelopment project. Instead, CHW would continue to actively encourage sustainable and public transport modes, in consultation with TfNSW.

Based on a new car parking supply of an additional 280 spaces (approximately 110 staff spaces and 170 visitor spaces), the development would generate an additional 89 vehicles in the AM peak hour and an additional 76 vehicles in the PM peak hour. Peak traffic volumes would occur in the CHW peaks of 7:00am-8:00am and 4:00-5:00pm. In addition, a minor increase in set-down and pick-up activity is expected to occur along Hawkesbury Road. The existing drop-off activity could increase by 25%. By applying this to the existing set-down/pick-up activity that occurs during the assessed peak hours, the development's set-down/pick-up activity could generate an additional 23 vehicle trips (two-way) and 29 vehicle trips (two-way) during the AM and PM peak hours, respectively.

Given the development has a marginal impact on the existing traffic conditions of the arterial roads, this requires mitigation and improvement measures to be undertaken at a whole-of-government level, with consideration of the wider road network. TfNSW and DPIE are leading the development of a Place-Based Transport Strategy, that will consider government investments in the Westmead Health and Innovation District, growth and development over the coming years. Health Infrastructure NSW is part of the Steering Committee for this work, due to be undertaken in 2021 and will consider the initiatives within traffic and transport required to support future developments within a zone inclusive Briens, Darcy and Hawkesbury Roads, which are all arterial road access to the Precinct.

Health Infrastructure NSW is also involved in the Parramatta Outer Ring Road Strategic Corridor Plan, which aims to develop a strategic corridor plan for targeted future infrastructure upgrades and improvements within a larger zone bordered by James Ruse

Drive, Briens Road, Cumberland Highway and the M4 Motorway. Targeted meetings will be held with Health Infrastructure NSW in 2021 specific to the Health Precinct, with the whole plan due for completion in 2022.

Loading facilities

The proposed development includes a loading dock with the following:

- One substation maintenance bay;
- Three loading bays designed to accommodate for vehicles up to 12.5 heavy rigid vehicles (HRV), including one side loading bay;
- Two waste compactors and associated waste vehicle bays; and
- Three courier bays for vans/utes.

The delivery activity would predominantly occur on weekdays between 7.30am and 4pm.

The PSB loading dock would be incorporated into the CHW operational loading dock management systems and management plans, as required. The operational systems would ensure that the existing and PSB loading docks combined can adequately cater for the loading and servicing requirements for CHW, with minimal vehicle queuing or storage requirements to avoid any impacts on the Precinct road network and the surrounding external road network.

Parking

A Car Parking Demand Study (GTA Consultants, 2019) was completed for the CHW Stage 2 Redevelopment, which determined that an additional 280 spaces would be required to:

- accommodate the 2031/32 demands of the CHW Stage 2 Redevelopment adopting some private vehicle mode share reduction; and
- to account for the expected increase in public transport uptake once Parramatta Light Rail (**PLR**) and Sydney Metro West are completed.

Peak parking demand occurs in the middle of the day, between 11:00am and 2:00pm, where staff parking demand ranges from 650 to 750 vehicles and visitor parking demand ranges from around 430 to 500 vehicles.

The proposed development seeks to provide 50 car parking spaces at Level 02 of the PSB, for both staff and visitors of the CHW. The remainder of the in demand car parking spaces are to be provided in the new multi-storey car park, which will be delivered as part of the CHW MSCP (subject to a separate but concurrent SSDA). The MSCP will be constructed and operational prior to the PSB becoming operational.

There will be a minimum one disabled car parking space provided in the car parking area of the PSB, satisfying the BCA disabled parking requirements of a Class 9A building. It is noted that most of the disabled parking provision associated with the development would be accommodated in the proposed MSCP (subject to a separate planning application).

Additionally, at least one motorcycle parking space will be provided in the PSB, complying with Control 6(C.6) of the Parramatta DCP 2011.

End of trip facilities

The proposed PSB includes six (6) showers available for staff use, and change rooms available throughout the building, co-located with clinical departments. Although no bike parking is proposed within the PSB, the Transport Assessment (**Appendix N**) notes that there are sufficient bike facilities offered across the Westmead Health Precinct.

The bicycle parking facility that was provided on site (within the recently demolished P17 car park) is to be relocated to an unused undercroft area located in the KR building, adjacent to the proposed PSB (subject of a Review of Environmental Factors that was approved in May 2020). This bike facility could be accessed via Redbank Road and Hawkesbury Road via Kids Research Lane. The new bicycle parking would have capacity for up to 50 spaces (an increase of 10 bicycles), generally set out with the Australian Standards. On-site observations indicated that the existing bike parking

facilities within the Kids Research building typically has plenty of spare capacity (refer to **Figure 31**). The facility had capacity for around 40 bicycles, therefore, the proposed larger facility would be suitable to accommodate the existing and future staff bicycle parking demand.

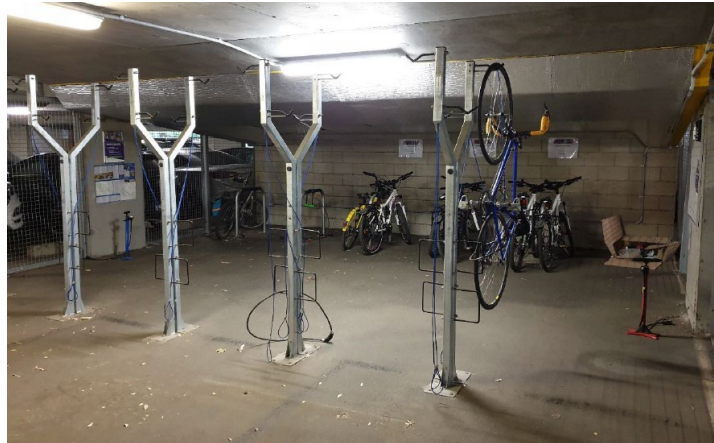


Figure 31 Existing bike parking facility utilisation
Source: PwC

Staff and visitors to the CHW could also use alternative bike parking facilities that are provided across the Precinct, including:

- Recently opened CASB: 8 showers, change rooms, and 90 bike spaces;
- Proposed PSB: 6 staff showers, and change rooms available throughout the building, co-located with clinical departments;
- The existing CHW has centralised end-of-trip facilities including 8 showers and change rooms located near the new bicycle storage. Anecdotally, these are located due to staff preference to utilise facilities adjacent to the clinical departments, of which there are facilities throughout the existing CHW.

These facilities combined provide considerable end-of-trip facilities for those arriving to the site via bicycle or by foot.

Therefore, the KR bike parking, the CASB bike parking, and the precinct's existing bike parking areas and end-of-trip facilities would be well placed to encourage sustainable transport use to/from the CHW. There is sufficient capacity to accommodate the existing and future bicycle parking demands at the CHW.

Access

Vehicular access

The main vehicular public access to CHW is via Hawkesbury Road and Hainsworth Street.

The proposed PSB car parking would be accessed via two-way boomgate from Redbank Road. This boomgate was previously used to service the recently demolished P17 car park (679 parking spaces); thus, the proposed 50 parking spaces within the PSB are considered to be safely accommodated via this access, with limited vehicle queuing and delays expected. Note the boomgate via Redbank Road would also be used to access on-grade car park spaces.

Pedestrian access

The PSB includes construction of a new pedestrian canopy link through Kid's Research Institute, connecting the main PSB with the CHW forecourt and existing CHW entrance. The canopy link is to be lifted 2 storeys above the CHW forecourt and would provide access to/from the PSB, including facilitating a strong connection between the future PLR stop and nearby bus stops on Hawkesbury Road and the site.

The PSB also includes elevated pedestrian connections into the CHW and CASB to allow visitors and staff to easily navigate their way to/from the PSB irrespective of the key Westmead Health Precinct access point that they enter or exit at.

6.8 Environmental sustainability

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

An ESD Report has been prepared by Steensen Varming detailing the ESD credentials of the proposed development. Refer to this report at **Appendix AB**.

The proposed PSB incorporates a range of ESD initiatives, including:

- The promotion of natural daylight and views.
- High levels of Indoor Air Quality (IAQ).
- Creation of healing environments.
- Excellent thermal, visual and acoustic comfort.
- Resource conservation (energy, water) and waste reduction:
 - Energy Conservation: The proposed development's approach to sustainability and energy related systems is based on applying an "energy hierarchy" methodology. This methodology has the reduction of energy use as its first priority, and then seeks to meet the remaining energy demand by the most efficient means available, before the inclusion of on-site generation and importation of green power.
 - Water Conservation: The proposed development seeks to conserve water through water efficient fixtures/fittings, passive irrigation of garden beds, selecting plant species that have low watering and maintenance requirements, recycled water/rainwater harvesting and reuse, and consideration of a separate fire services water tank.
- Selection of environmentally preferable materials is a key priority for the proposed development because building materials consume energy and natural resources during its manufacture and for their transportation to the construction site. A whole life cycle approach to materials will be taken. Preference will be given to materials that contain high-recycled content and/or are highly recyclable.
- Contractors will be requested to provide and abide by an EMP and Environmental Management System which are in accordance with NSW Environmental Management System Guidelines.
- The PSB at the CHW is targeting an equivalent/self-certified 5 Star Green Star rating utilising the Green Building Council of Australia's (GBCA) Design and As-built rating tool (DAB) version 1.3. A 5 Star Green Star rating is considered 'Australian excellence' level.

In addition, refer to a detailed assessment of the proposed development against ESD principles under the EP&A Regulations at **Section 5.4** of this EIS.

6.9 Existing trees

An Arboricultural Impact Assessment was prepared by Tree Management Strategies (**Appendix AG**) for the proposed development. A total of 156 trees were assessed as part of the PSB extent of works and all were deemed to be of low and medium retention value and none of high retention value. The trees assessed are a mixture of native and exotic species of varying ages, health, and vigour. None are considered to have heritage significance by the City of Parramatta Council.

The assessment found that of the 156 trees, 77 require removal, 9 have previously been removed, leaving a total of 70 that will be retained under the proposal. The total Canopy Cover of the PSB prior to tree removal is estimated at 5,562m², the tree removal canopy is estimated at 4,075m² with a total remaining canopy of 1,487m². Note that 2,475m² of tree canopy cover is proposed as part of landscaping works.

The reasons for tree removal include:

- Development Footprint;
- Storm water;
- Landscape (CHW Forecourt); and
- Pavement Reinstatement.

The 70 trees to be retained will have tree protection measures in place to ensure their longevity during construction and operation.

6.10 Ecology

A BDAR Waiver request for the project was prepared for the proposal by Cumberland Ecology and submitted to DPIE on 20 August 2020.

The BDAR Waiver Request (refer **Appendix AC**) found that the project was anticipated to impact approximately 0.464 ha area of planted native vegetation that shows limited, if any, structural/compositional features of a naturally occurring Plant Community Types and approximately 0.488 ha of exotic vegetation.

The affected area of vegetation may comprise potential and marginal foraging habitat within the broad habitat ranges of highly mobile native fauna including threatened species such as the Grey-headed Flying-fox, microchiropteran bats and the Powerful Owl. It is however considered unlikely that a significant impact to threatened species would occur as a result of the proposed development.

A formal BDAR waiver (refer **Appendix AD**) was issued for the project by DPIE on 25 November 2020 confirming that the development is not likely to have any significant impacts on biodiversity values.

6.11 Landscaping

Landscape Plans and a Landscaping Strategy Report have been prepared for the proposed development by McGregor Coxall. Refer to these at **Appendix H** and **Appendix I**, respectively.

CHW Forecourt landscaping works

The geometry of CHW Forecourt enables the movement from future transport nodes to the main entry points of a hospital, creating a strong and clear arrival experience.

The proposed planting features a vibrant, colourful, and textured palette of native and exotic species. The proposed native tree species reference the character of the existing site, whilst the proposed exotic deciduous species ensure these spaces remain light and warm during winter.

A Water Sensitive Urban Design rain garden is proposed on the southern end of the site, to create a sense of seclusion and buffer from the surrounding environment.

PSB indoor and outdoor landscaping works

The level 02 courtyard is a lush and vibrant landscape, providing visual amenity and views to nature for patients, visitors and staff whilst remaining in the hospital building. The inclusion of Aboriginal sculptures sparks interest and attention as people move along the walkway.

The terrace on level 03 acts as the main outdoor terrace for the PSB building, connecting the Megazone outdoor area. Through a range of both secluded and open gathering areas with views to Toongabbie Creek, the community is provided with an accessible and inclusive space to gather, relax, and heal.

Level 6 consists of an extensive rooftop garden with a meandering path, seating, and shade on the northern terrace with sweeping views across the site and to the southern inaccessible terrace.

The terraces on levels 10-13 create intimate spaces for hospital users to connect and interact within a natural setting whilst remaining in close proximity to their rooms. These semi-outdoor areas allow for year-round use.

Landscaping materials

The preliminary materials selection for the materials palette is aimed at creating a warm look and feel, avoiding typical grey hues to establish welcoming and inviting journey through to the hospital and landscaping.

Additional tree planting

A total of forty-three (43) trees are proposed to be planted, comprising twenty (20) exotic and twenty-three (23) native trees.

Tree canopy coverage

McGregor Coxall landscape architects have calculated the proposed tree canopy cover for the site accounting for trees removed and proposed. Refer to this at **Table 14** below. In summary proposed tree canopy cover is 26% or 28% if also accounting for shade structures.

The Draft Greener Places Design Guide sets an overall target for the Greater Sydney Region to achieve 40% tree canopy cover. However, the extent of works are located within a high density precinct. The achievement of 26% tree canopy cover for the extent of works area is consistent with achievable canopy cover in high density precincts.

Table 14 Tree Canopy Cover
Source: McGregor Coxall Landscape Architects

	PSB
<i>Site Area (SQM) (excl building footprint)</i>	15,340
<i>Tree Canopy Cover existing sqm</i>	5,562
<i>Tree Canopy Cover removal sqm</i>	4,075
<i>Tree Canopy Cover remain sqm</i>	1,487
<i>Proposed Tree canopy cover</i>	2,475
<i>Total Tree canopy cover (sqm)</i>	3,962
<i>Tree canopy coverage</i>	26%
<i>Shade structure cover (sqm)</i>	290
<i>Structure canopy coverage</i>	2%
<i>Total canopy coverage</i>	28%

6.12 Non-Aboriginal Heritage

A SoHI has been prepared for the proposed development by Jacobs to assess any non-Aboriginal heritage impact to any built heritage items or potential archaeological deposits.

Visual impact to Glengariff House/Wisteria House/Wisteria Gardens

The study area is in close proximity to the Glengariff/Wisteria Gardens precinct of the Cumberland District Hospital Group. There is no anticipated adverse physical impact identified for the Glengariff/Wisteria Gardens precinct, as the proposed development is of sufficient distance to negate any adverse impacts through vibration. However, it is concluded that there is to be **low-moderate visual impact** to Glengariff/Wisteria Gardens because the proposed development is positioned on a higher ridge near to the lower-lying Glengariff/Wisteria Gardens, and also due to the bulk, scale and materials of the proposed PSB and adjacent CASB. Refer to **Figure 32** for the visual intrusion of the proposed PSB from Glengariff/Wisteria Gardens.



Figure 32 View impact analysis looking towards the existing CASB and proposed PSB from Glengariff/Wisteria Gardens.

Source: Billard Leece Partnership Architects

To mitigate impact of the proposed development to Glengariff/Wisteria Gardens, appropriate planting along the western boundary of the heritage significant precinct is recommended to be planted. These trees are to obscure visual impact of the PSB once they have matured.

Impact on Potential Archaeological Deposits

The study area is within the Parramatta Archaeological Management Unit (AMU) 3070. The statement of significance for this AMU on the State Heritage Inventory recognises that this AMU has moderate archaeological research potential and evidence relating to convict huts, maize farming, and the former Government Domain. However, the study area has been highly developed with little natural ground surface remaining. Given the site of the proposed development is the decommissioned P17 car park, the potential for significant archaeological deposits to be impacted by the proposed development is considered **low**. Regardless, an “Unexpected Finds Protocol” is recommended in the SoHI prepared by Jacobs (**Appendix J**), in the instance that any archaeological remains are found, as any remains would be considered to be of high archaeological significance.

Refer to recommendations and mitigation measures to minimise any non-Aboriginal heritage impact resulting from the proposed development in **Section 8** below.

6.13 Aboriginal Cultural Heritage

An ACHAR has been prepared in response to the SEARs. Refer to this at **Appendix K**. It is noted that Stages 1 to 3 of the Aboriginal Cultural Heritage Assessment have been completed, with Stage 4 ‘Review of draft cultural heritage assessment report’ by the registered Aboriginal parties (RAPs) is predicted to be completed on 3 May 2021. The ACHAR will be reissued following EIS submission to incorporate RAP consultation results. The closest recorded Aboriginal item, namely an axe grinding groove site, was not able to be relocated within the bed of Toongabbie Creek; however, a previously carried out site inspection in 2016 described the Aboriginal item as “four weathered axe grinding grooves on flat sandstone platforms in the centre of Toongabbie Creek” (RPS, 2016:21). It should be noted that an inspection of the site in 2003 by Dallas and Irish identified the grooves as ‘non-cultural’ and that they had perhaps been misidentified.

For the purposes of the due diligence assessment, a site survey was undertaken with the RAPs on 28 January 2021 for the proposed PSB and CHW Forecourt. No Aboriginal objects were able to be identified during the site visit.

A search of the AHIMS site register, and review of the environmental, cultural, and archaeological context, along with a site inspection has demonstrated that the study area has low-nil potential for Aboriginal objects and places, and that the area does not have a likelihood of containing Aboriginal objects that would be sufficient to trigger any further archaeological assessments. The study area is heavily disturbed from historical land use of the region for farming and agricultural purposes, and from recent and historical development associated with the hospital.

6.14 Drainage and flooding

Drainage

The proposed stormwater system has been designed to capture and manage the 1% AEP for the proposed development, and where possible, maintain the existing natural catchment areas for discharges.

The stormwater strategy is a direct connection from the development site into the local existing stormwater network (i.e. no inclusion of on-site detention). The proposed strategy:

- Does not have significant impacts to the existing stormwater network or flooding conditions; and
- Intends to discharge site flows into Toongabbie Creek prior to the creek peak flow event (6 to 7 hours).

The proposed building design, stormwater scheme and grading strategy for the development do not significantly impact the existing conditions and surrounding areas.

A Civil Report has been prepared for the proposed development by Arup. Refer to this at **Appendix Z**. This includes stormwater and water sensitive urban design (WSUD) matters.

Flooding

A Flood Impact Assessment has been prepared for the proposed development by Arup (**Appendix L**).

A review of all the flood event scenarios, as required under the SEARs, have been undertaken as part of the Flood Impact Assessment.

Analysis of the post-development conditions reveals site flooding conditions are generally similar to the existing conditions with minor localised affluxes for the overland flow flood events up to the 1% AEP in areas downstream of the site, but not impacting on any properties. For the PMF extreme flood event with an estimated probability of 1 in 10 million, affluxes were also found downstream of the site but largely limited to within the extents of the Westmead Health Precinct which are already subject to extensive flooding for this event. There is minimal change to the flood hazard ratings as a result of the proposed development.

Other observations included:

- The proposed lowest finished habitable floor level of 20.6 m AHD for the proposed PSB building provides flood immunity for the 1% AEP plus 0.5 m freeboard and PMF events, with the exception of the main entryway which is to be further developed and assessed.
- The proposed building design, stormwater scheme and grading strategy for the development do not significantly impact the existing conditions, flood behaviour and surrounding areas.
- Flood hazard for the 1% AEP event is low.
- However, the PMF event hazard is high for Redbank Road, car park access, pedestrian accessway around the CHW building and KR lane and it is recommended to have a shelter-in-place approach as part of the flood emergency management strategy.
- There are no significant impacts from the climate change sensitivity analysis.

Further design development, additional flood modelling and flood emergency management strategy are recommended to be developed.

6.15 Erosion and sediment control

A Soil Erosion and Sediment Control Plan has been prepared for the proposed development as part of the Civil report prepared by Arup. Refer to this at **Appendix Z**.

Further to this, appropriate sediment, erosion, and dust control measures have been prepared and are included in the Preliminary Construction Management Plan prepared by PWC attached at **Appendix AH**.

6.16 Geotechnical

A Geotechnical Investigation Report (**Appendix P**) has been prepared by JK Geotechnics to provide information on the subsurface stratification, and comment on excavation, foundations, and groundwater levels.

The Geotechnical Investigation Report finds that the subsurface conditions and characteristics of the geotechnical conditions of the site are suitable for the proposed development, subject to detailed design consideration, excavation and construction mitigation measures and further consultation with authorities.

6.17 Contamination

A range of previous investigations for the Westmead Health Precinct have been undertaken that have identified asbestos impacted fill across the Precinct.

Two Detailed Site Investigations (**DSIs**) have been prepared by JBS&G to cover the proposed development, one for the PSB and the other for CHW Forecourt works.

A DSI (JBS&G, 03 October 2019) was subsequently completed within accessible areas of the north-western portion of the site (for the PSB) which identified bonded and friable asbestos impacts in fill materials at multiple locations. Bonded Asbestos Containing Materials (ACM) and Fibrous Asbestos (FA)/Asbestos Fibres (AF) exceeded the site assessment criteria at a number of sample locations across the lateral and vertical extent of the gravelly clay fill material at the site. All fill materials in these areas considered to be impacted by asbestos that will require remediation in order to make the site suitable for the proposed hospital use. JBS&G has concluded that the site could be made suitable for the proposed hospital land use subject to development and implementation of a site-specific Remediation Action Plan (**RAP**) and asbestos management plan (**AMP**) in accordance with the relevant regulatory requirements made or approved by the NSW Environment Protection Authority (**EPA**) and relevant Australian Standards.

The DSI prepared for the CHW Forecourt works (JBS&G, 18 March 2020) detected Bonded ACM below the site assessment criterion. Friable asbestos was reported below the site assessment criterion. To this extent, asbestos in soil is not considered to pose a potentially unacceptable risk to future site receptors and is not considered to require remediation or management from a contaminated land perspective. The bonded ACM will require management from a Workplace health and Safety (**WHS**) perspective during future activities that may result in ground disturbance in this area of the development site. The DSI therefore recommends the Construction Environmental Management Plan document environmental monitoring and management measures for construction; the existing CHW Asbestos Register and AMP should be updated; and a specific AMP and Asbestos Register is to be prepared and implemented during construction.

The RAP at **Appendix S** has been prepared by JBS&G for the full extent of works, in order to address the identified asbestos impacted soils in such a manner as to make the site suitable for the proposed future uses in accordance with Managing Land Contamination, Planning Guidelines, SEPP 55 – Remediation of Land.

In accordance with best practice, a Site Auditor has been appointed to prepare a Site Audit for the site, as was done for the Westmead Stage 1 Redevelopment.

Overall, it is considered that the risks posed by contamination can be managed in such a way as to be adequately protective of human health and the environment. The contamination investigations conducted for this site and the RAP meet the requirements

of State Environmental Planning Policy No 55 - Remediation of Land (SEPP 55). The RAP documents the procedures and standards to be followed in order to address the identified asbestos impacted soils in such a manner as to make the site suitable for the proposed future uses.

6.18 Acid sulfate soils

Although the Parramatta LEP 2011 shows the development site as being on Class 5 land for Acid Sulfate Soils (**ASS**), the geotechnical investigations undertaken on the site by JK Geotechnics (refer **Appendix P**) confirm that there is no known occurrence of ASS being present at the site, nor were they observed during site investigation works.

6.19 Hazardous chemicals

The proposed development was assessed against *State Environmental Planning Policy No. 33 Hazardous and Offensive Development* (SEPP 33) in a SEPP33 Requirements Report prepared by Arup (**Appendix V**). SEPP33 is used in NSW to regulate the planning approval process for developments in hazardous and offensive industries, and potentially hazardous and potentially offensive industries.

This assessment concluded that dangerous goods of Class 2.2 subsidiary risk (i.e. refrigerated liquid oxygen vessels, medical oxygen cylinders and medical nitrous oxide) exceed the screening threshold of SEPP 33. As such, a Preliminary Hazard Analysis report was prepared by Arup in accordance with Hazardous Industry Planning Advisory Paper No. 6 'Hazard Analysis' (Department of Planning (DoP), 2011) and Multi-Level Risk Assessment (DoP, 2011). Refer to report at **Appendix U**.

The proposed development will exceed the threshold quantities for Class 5.1 (including subsidiary risk) dangerous goods. It is noted that the proposed development is not anticipated to pose potential hazards for the transportation of dangerous goods to CHW.

Consequence of tank failure on off-site populations

The cryogenic oxygen stores, medical oxygen and medical nitrous oxide gas cylinders exceed the screening threshold of SEPP33. The consequence of tank failure will not pose a risk to any off-site populations, due to the significant distance of the dangerous goods storages from the nearby residential and industrial areas.

Off-site risk of fatality

Oxygen and nitrous oxide are non-toxic and non-combustible. However, they are a strong oxidiser, which will increase the ability for other materials (e.g. diesel) to burn. Additionally, cryogenic oxygen in contact with exposed skin can cause frostbite and damage to the eye.

The Preliminary Hazard Assessment concludes the individual risk of fatality for offsite populations is zero (0) and there is no societal risk associated with dangerous goods that exceed the threshold quantities. This is due to significant distance and physical barriers between the dangerous goods and off-site population.

Overall, the cryogenic oxygen tanks, compressed oxygen and nitrous oxide cylinders, while exceeding the Applying SEPP 33 threshold quantities, do not pose a significant off-site risk to the surrounding residential areas.

6.20 Construction

A preliminary Construction Environmental Management Plan has been prepared by PwC (**Appendix AH**). The preliminary Construction Management Plan will be replaced by the Contractor's Construction Environmental Management Plan once appointed to the project.

Construction timeframe

It is anticipated the PSB will be constructed over a three (3) year period, with the main construction works anticipated to occur between Q1 2022 to Q4 2024. The operation of the PSB is anticipated to commence in late Q4 2024.

Construction hours

The following hours of operation are proposed for the construction phase:

Standard hours	Day	– Monday to Friday: 7:00am to 6:00pm – Saturdays: 8:00am to 5:00pm – Sundays and Public Holidays: No work
	Day	– Sundays and Public Holidays: 8:00am to 6:00pm – Saturday: 7:00am to 8:00am
	Evening	– Monday to Friday: 7:00pm to 10:00pm – Saturday: 6:00pm to 10:00pm
OOHW Period 1	Evening	– Sunday and Public Holidays: 6:00pm to 10:00pm
	Night	– Monday to Saturday: 10:00pm to 7:00am – Saturday to Sunday: 10:00pm to 8:00am
OOHW Period 2	Evening	– Sunday and Public Holidays: 6:00pm to 10:00pm
	Night	– Monday to Saturday: 10:00pm to 7:00am – Saturday to Sunday: 10:00pm to 8:00am

Under the NSW DEC Interim Construction Noise Guideline, out of hours work (**OOHW**) may be undertaken outside of the recommended standard hours for 'public infrastructure works that shorten the length of a project and are supported by the affected community'. The proposed PSB is identified as public infrastructure works, so construction works are to be undertaken out of the recommended standard hours i.e. Saturday 8:00am to 5:00pm. A noise and vibration assessment has been undertaken (**Appendix AH**) to assess potential impacts of the proposed OOHW. The findings are summarised below:

- The ICNG recommends a more stringent criteria for construction works conducted outside standard working hours for residential receivers. The nearest external resident receiver (R1) has been assessed against both the standard hours and the OOHW and no exceedances are predicted.
- The surrounding residential receivers respectively R1 and R2 are located approximately 140m and 500m from the construction site. These distances eliminate the risk for any vibration impact. In terms of noise the closest receiver R1 is also shielded by Kids Research for all the early works period which will be typically the noisiest construction activities including the piling of the foundations and all inground services set out.
- The newly completed CASB located adjacent to the proposed PSB was constructed with allowances for work to be conducted outside of Standard hours (similar to the requested hours for the PSB) which was successfully delivered and completed.

Construction traffic

The potential construction vehicles routes include:

- To/from north and east via Redbank Road and Briens Road
- To/from south and west via Institute Road, Darcy Road and Cumberland Highway.

Redbank Road would be the preferred route, given that it provides a more direct access to/from the site from the north-east. Refer to **Figure 33**.

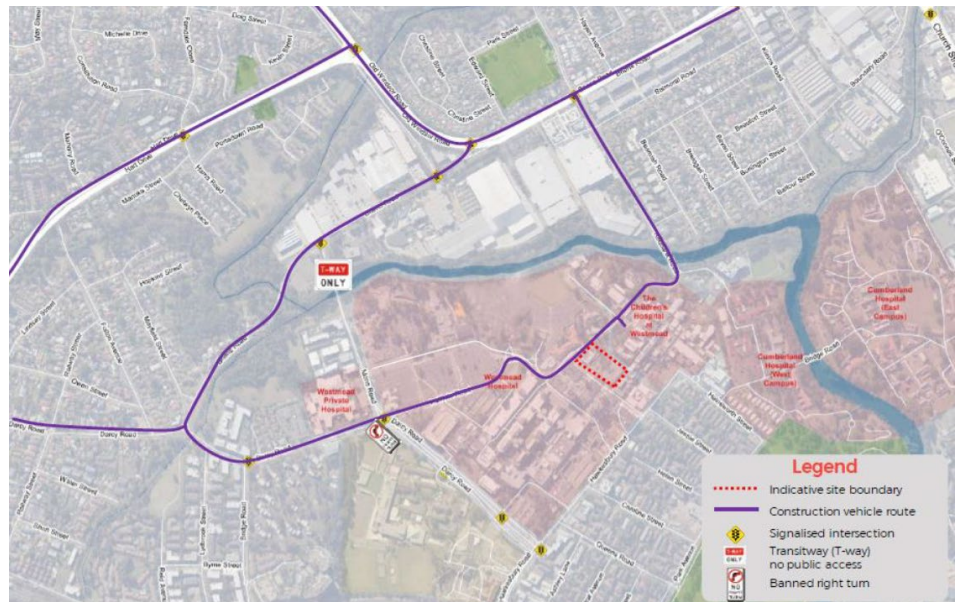


Figure 33 Construction vehicle access routes
Source: WSP Traffic Impact Assessment

The entry gates to the site will be manned by traffic control staff during site operation hours and will be locked shut when the site is closed. Traffic controllers will be used where required to manage the interface of construction vehicles with pedestrians and/or public vehicles.

Construction parking

All contractor vehicles will be located within the confines of the work area.

Construction noise

For an assessment of construction related acoustic impacts, refer to **Section 6.6** of this EIS.

Construction waste

For an assessment of construction related waste impacts, refer to **Section 6.21** of this EIS.

6.21 Waste

A Construction Waste Management Plan for the construction stage has been prepared for the proposed development by JBS&G. Refer to this report at **Appendix Y**.

Construction waste

The final amount of waste will be determined following engagement of the construction contractor. A detailed schedule and planned work staging will also provide opportunities for waste reuse across the site and determine the requirements for temporary waste storage.

Signage will be provided on site to ensure waste management measures are communicated across the site, particularly for contractors and visitors who are not regularly on site. Signage will highlight correct procedures for separating wastes where required, locations of bins and waste storage areas, labelling of designated bins, potential hazards associated with the waste streams and handling, and contact details should any issues be encountered.

Operational waste

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

A Visual Waste Assessment has been carried out by MRA Consulting Group for the CHW. It concluded that the CHW have an existing highly effective waste management system, prioritising staff education and implementing best practice waste management principles to effectively separate, collect and manage twelve (12) waste streams. The abundance of available bin infrastructure allows staff, visitors, and patients to effectively participate in source separation behaviours and demonstrates a high level of resource recovery and low leakage/contamination rates.

SCHN will further quantify and classify the likely waste streams of the proposed development into an appropriate schedule prior to hospital operations commencing.

Compliance with the following Policies will be achieved to ensure that the approach to waste management of employees, volunteers, tenants, patients/clients, and visitors of the PSB aligns with legislation, waste minimisation, licensing and achieves improvements:

- *Sydney Children's Hospital Network Waste Management Policy (2015)* – The Waste Management Policy has been designed to familiarise SCHN employees with their responsibilities in waste management in order to comply with legislative requirements. The policy is primarily focused on waste management associated with health care facilities, and hospital waste streams including waste related to general hospital activities as well as general waste.
- *NSW Health - Waste Management Guidelines for Health Care Facilities – August 1998* - The Guideline is supplemented by a General Waste Management Plan that acts as a practical tool to implement the policy directive. Compliance with the guidelines is mandatory and provides a framework to segregate waste into various waste stream, labelling and containment, handling, storage and transport, treatment / disposal, auditing, occupation Health and Safety, training, and legal requirements.
- *NSW Government Resource Efficiency Policy (GREP)*. The purpose of the policy is to assist the NSW Health System reach targets for reducing greenhouse gas emissions by reducing waste and ensuring environmentally sustainable purchasing practices. The GREP requires all Government agencies to increase the sustainability of their waste generation, management, and procurement.

6.22 Safety and security

The proposed development has been designed having regard to the principles of Crime Prevention through Environmental Design (**CPTED**). Specifically, the new PSB has been designed to reduce crime prevention through a combination of passive surveillance and lighting. Refer to the Architectural Design Statement at **Appendix G**.

A high level of passive surveillance is achieved through the public, 24/7 nature of hospitals.

Key CPTED and security features include:

- Implementation of appropriate levels of security lighting to support natural surveillance of the external environment including entrances, exits, loading docks;
- The ground plane is designed to be highly public, with clear lines of sight provided where possible;
- Use of physical attributes that express ownership, such as pavement treatment, art, signage, and landscaping;
- Wayfinding signage will be implemented to assist in legibility and campus navigation;
- Separation of vehicles and pedestrians; and
- Implementation of electronic security systems and electronic measures such as CCTV.

Lighting

An External Lighting Strategy has been prepared by Stantec (**Appendix AI**) to ensure appropriate lighting is provided to new pedestrian pathways, roads, and external building surrounds for the creation of a safe, well-lit environment that reduces the opportunity for crime. Lighting design has also been developed in consideration of minimising external lighting spillage to adjacent receivers, maintenance, energy efficiency and integration into the architectural design.

6.23 Light spill minimisation

Further to the discussion on CPTED aspects of lighting above, the External Lighting Strategy prepared by Stantec at **Appendix AI** provides measures to minimise light spill.

External lighting has also been designed with consideration of lighting spillage to adjacent properties and sensitive receivers, such as:

- CASB;
- Existing CHW building including, but not limited to:
 - Staff Areas,
 - Division of Surgery (Level 3); and
- Kids Research.

All new external lighting will comply with AS 4282 – Control of the obtrusive effects of outdoor lighting. In addition, the following approaches will be incorporated into the external lighting design to mitigate light spill impacts:

- Luminaire mounting heights selected to minimise spillage and cater for better lighting control.
- Where possible, light fittings adequately setback from the property boundary to reduce light spill.
- Light fittings with narrow beam or sharp cut of angles.
- Light fittings with low vertical aiming angles.

It is noted that final lighting design is subject to detailed design processes.

6.24 Utilities and services

An Infrastructure Management Plan has been prepared by Arup in regard to Hydraulic and Gas Infrastructure and is attached at **Appendix W**. The plan provides findings related to Hydraulic and Gas Infrastructure only.

Hydraulic Infrastructure

To facilitate the proposed development, the following augmentation is proposed, subject to detailed design investigation undertaken as part of the construction process:

- A new dual connection from the Sydney Water assets in Hawkesbury Road to facilitate Cold Water.
- New sewer drainage and sanitary plumbing for the new PSB will connect to the private infrastructure.
- Relocation of fire water supply as required.

Gas Infrastructure

The Infrastructure Management Plan confirms that the site has access to a single 150mm high pressure 1,050kPa Jemena gas main, and that augmentation to the system beyond a new connection point is not required to support the proposed development.

Electrical infrastructure and services

An Infrastructure Management Plan has been prepared by Stantec in regard to Electrical and Telecommunication Services and is attached at **Appendix X**.

The Plan confirms that the CHW relevant supply authority is Endeavour Energy. To service the PSB two (2) new HV feeders will be supplied from HV-MSB 2 to form a new HV ring on the Westmead Private HV network that will service the new PSB. There are sufficient spares on the HV- MSB 2 to accommodate the two new HV feeders required for the new PSB.

Communication Services

The Plan confirms that augmentation to the existing telecommunication infrastructure is not required to facilitate the proposed works.

6.25 Social impacts

A Social Impact Assessment for the proposed development has been prepared by Ethos Urban and is at **Appendix D**.

The proposed development is anticipated to have positive social impacts for Western Sydney, NSW and Australia given the hospital's significant contribution to health care locally and nationally.

The positive social impacts of the proposed development include:

- Transforming health service delivery for a significant Local Health District population in NSW;
- This investment will greatly increase capacity at CHW, delivering new and expanded health services for children in need, including intensive care, cancer services and mental health care services;
- Significant expansion to paediatric health services in Western Sydney will ensure The Children's Hospital at Westmead continues to be a world leader in providing care for sick children right across the state;
- Enhancing local access to services for the CHW local catchment (facilitating easier maintenance of social support for patients);
- Expanded employment opportunities relating directly to the CHW redevelopment project and potential additional services/facilities leveraged through the redevelopment;
- Less waiting times through emergency department streaming models of care; and
- Positive health and wellbeing benefits associated for staff, patients and visitors associated with the delivery of a well-designed Paediatric Services Building that prioritises worker wellbeing and user experience. The design of the future building is aligned with the outcomes of community engagement, and incorporates green space, flexible patient rooms, indoor and outdoor spaces, private spaces and culturally appropriate spaces.

6.26 Economic impacts

The economic impacts of the proposed development are positive as significant job creation will result from the proposal, with an estimated 1,872 construction jobs created and approximately 600 operational jobs.

6.27 Cumulative impacts

Traffic impacts

In relation to the potential for cumulative traffic impacts, traffic modelling has taken into account surrounding development forms and the cumulative impact on the road network. A Car Parking Demand Study was undertaken as part of the Transport Assessment report (Appendix N), which factored in future developments that have the potential to impact the demand for parking at the CHW, such as the future Parramatta Light Rail, and Sydney Metro Project.

While the PSB and MSCP SSDAs will be lodged and under assessment concurrently, and there may be some overlap of construction, it's anticipated MSCP will commence

construction sooner and be completed in advance of the PSB. A Detailed Construction Environmental Plan and Detailed Construction and Pedestrian Management Plan will be prepared for each SSDA, that accounts for and manages cumulative construction impacts. The appointed contractors for each project will be required to coordinate the construction, to minimise the likelihood of peak construction activity stages occurring simultaneously across both sites.

Surrounding planned developments

The Transport Assessment (**Appendix N**) has considered surrounding planned developments in the area in relation to the proposed PSB, and assessed cumulative traffic impacts.

The Westmead Catholic Education has submitted a State Significant Development application (SSD-10383) requesting the redevelopment and extension of the education campus located on 2 Darcy Road. This is currently at assessment stage. If approved, the intersection along Darcy Road and Hawkesbury Road is expected to perform similarly to current operation, thus it is not anticipated that this will significantly affect the road network.

Stormwater and flooding

As detailed within this EIS, the proposed stormwater resulting from the development works can be appropriately managed and will not result in a cumulative impact on water quality and downstream properties.

Visual impact

Due to existing hospital buildings, vegetation, and the topography of the site, the proposed development will generally have a low impact from all vantage points in the view analysis (refer to **Section 6.2**). The siting and design of the proposed building has sought to reduce the visual impact of the development when viewed from nearby heritage sites, residential developments, and the public domain. Overall, it is considered that the cumulative visual impacts of the proposal (in context with the Westmead Health Precinct) are low, and therefore not constitute a reason to hinder planning approval on visual impact grounds.

6.28 Suitability of the site

There are no known site conditions which would prevent the development including geotechnical conditions, contamination, flooding, biodiversity, Aboriginal cultural heritage historical archaeology, or other.

While existing trees will be impacted, and this is a consequence of being a constrained site, their removal will be compensated by proposed tree planting to suitably augment the tree canopy of the site.

The impacts on surroundings during construction and operation are not significant and can be adequately ameliorated.

The Westmead Health Precinct is established for health services purposes, the proposed development seeks to build on this established character through the provisions of additional services within the precinct. The proposed built form provides a scale of services that responds to the requirements and needs of greater Sydney whilst not precluding future development within the Westmead Health Precinct

The site is therefore considered suitable for the proposed development.

6.29 Public interest

The significance of the growth and expansion of the Westmead Health Precinct for delivery of health care services is specifically referenced in the NSW State Priorities and the Greater Sydney Region Plan: A Metropolis of Three Cities. The proposed development is a critical part of the long-term plans for the Precinct.

The environmental, social, and economic impacts of the proposed development have been evaluated above. This assessment finds that the impacts of the proposed

development will provide significant benefits to the public. Any adverse impacts have been mitigated with measures already incorporated into the design of the development or can be incorporated into the construction and operation of the development through the implementation of the proposed mitigation measures detailed in **Section 7** of this EIS.

The benefits of the proposed development include:

- Improve delivery of paediatric health services to the community;
- Meet the increasing health demands of a growing population in a facility with services that will provide for greater capacity;
- Allow for synergies between health care services and health care research because of the improved connections to the CASB and adjoining research facilities;
- Improve pedestrian amenity and movement across CHW through the construction of a new pedestrian canopy; and
- Provide employment opportunities during construction and operation.

It can be concluded that on balance, the benefits of the development outweigh any adverse impacts and as such, the development is in the public interest.

7. Environmental Risk Assessment

In accordance with the SEARs, this section addresses the following significant environmental risk issues:

- Adequate baseline data
- Consideration of potential cumulative impacts due to other development in the vicinity
- Measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment and triggers for each action.

The following table sets out the anticipated impacts, the level of respective impact in terms of severity (low, medium, high), identifies mitigation measures, and once these measures are applied, identifies residual risks (low, medium, high).

Table 15 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Traffic				
Construction	<p>The site is in close proximity to well established and high frequency public transport services, therefore construction workers should also be encouraged to use public transport instead of driving.</p> <p>The campus roads have been designed to accommodate vehicles up to a 19m semi-trailer. Therefore, the envisaged construction vehicle types can be accommodated on the internal road network and along the proposed construction vehicle access routes.</p> <p>The preliminary construction vehicle estimates are up to 20 vehicles per hour and up to 100 vehicles per day. The anticipated peak construction vehicle volumes are unlikely to impact the surrounding and/or campus transport network, or its operations including the key campus access intersections of Darcy Road/Mons Road/ Institute Road, Briens Road/Redbank Road and Darcy Road/Hawkesbury Road, particularly given the construction activities would replace the current construction activities that have been occurring across the Precinct over the last few years.</p>	Medium	<p><u>Construction traffic and pedestrian management</u> – refer to the Preliminary Construction Traffic and Pedestrian Management Plan contained in the Transport Assessment by WSP. A Detailed Construction Traffic and Pedestrian Management Plan and associated Traffic Controls Plans (TCP's) will be developed and required to be prepared as a condition of consent and incorporated into the Construction Environmental Management Plan (CEMP).</p> <p><u>Contractor parking</u> – workers would not be permitted to park outside the construction site. This presents an opportunity for the contractor to encourage carpooling and implement measures that minimise the number of workers who would arrive during the AM and PM peak periods for the campus and also the broader road network.</p> <p><u>Construction hours</u> - to be in accordance with conditions of approval.</p> <p><u>Construction vehicle access route</u> - arterial roads to be used where possible, and Redbank Road would be the preferred route for accessing the site.</p> <p><u>Pedestrians and cyclists</u> - where possible and safe to do so, pedestrian and cyclist access would be maintained in the vicinity of the construction site, for the duration of the works.</p> <p><u>Emergency vehicles access</u> - the existing and future emergency access routes to/from CHW, Westmead Hospital and CASB would be maintained via Hawkesbury Road, Institute Road,</p>	Low

Operation	<p>CHW private mode share reduction target of 5-10% by 2031-32. Based on the forecast increased staff numbers, by 2031/32 CHW could generate an additional 1,040 daily public transport trips. Given the unprecedented amount of increased public transport infrastructure planned in Westmead, the increased public transport demand could be accommodated.</p> <p>50 car spaces would be located within the PSB itself.</p> <p>Traffic modelling indicates that the anticipated traffic volumes associated with the development's traffic generation would have limited impact on the surrounding road network.</p>	Low	<p><u>Travel demand management measures</u> - refer to the Preliminary Green Travel Plan. A Detailed Green Travel Plan will be required as a condition of consent.</p> <p><u>Proposed local improvements</u> - improve cycling network; create free travel for staff on future light rail; ensure walking and cycling routes are secure; install E-bikes or E-scooters for staff to traverse the precinct.</p> <p><u>Operation</u> - refer to Operational Traffic and Access Management Plan. A precinct-wide operational traffic and access management plan would be developed to encompass the post redevelopment operations across the precinct, adopting precinct-wide transport management measures to ensure safe operation of the precinct.</p>	Low
Noise & Vibration				
Construction	It is not expected there will be significant construction noise impacts on the surrounding noise-sensitive receivers.	Low	A Detailed Construction Noise and Vibration Management Plan (CNVMP) will be required to be prepared as a condition of consent, and included in the CEMP.	Low
Operation	<p>The following activities have been identified as being likely to generate noise with the potential to impact the surrounding environment. These noise sources include:</p> <ul style="list-style-type: none"> Continuous noise from mechanical plant such as cooling towers, air handler units (AHU), chillers, condenser units and fans. Noise associated with back-up electrical system such as emergency diesel generators. Intermittent traffic noise from light weight trucks entering the loading dock delivering various type of goods. Intermittent traffic noise from car movement entering and exiting the carparks located on site. Intermittent noise from ambulances accessing the emergency department unit. Intermittent noise from operational filling of the bulk oxygen tank and associated enclosure 	Low	More detailed acoustic and vibration assessment will be undertaken during detailed design development, once more certainty on glazing, equipment selection, and the like. This will be undertaken in accordance with the recommendations of the Acoustic Report prepared by Stantec.	Low
Built Heritage				
Construction	The PSB works are of sufficient distance to negate any adverse impacts through vibration in respect of to the Old Government House and Government Domain, or the Cumberland East precinct of the Cumberland District Hospital Group.	Low	None required	Low
Operation	There is also no adverse physical impact identified for the Glengariff/Wisteria Gardens precinct. However, owing to the location of the PSB on a high ridge near the lower-lying Glengariff/Wisteria Gardens, and the bulk, scale and materials of the PSB and its combined impact with the adjacent CASB, it is concluded that there is a low-moderate visual impact. However,	Low	The SoHI recommends planting of appropriate trees along the western boundary of the Glengariff/Wisteria Gardens precinct to obscure any visual impact once trees are mature.	Low/Negligible

given the distance between the PSB and Glengariff/Wisteria Gardens.

Historical Archaeology				
Construction	The PSB is within the Parramatta Archaeological Management Unit 3070 (AMU 3070). It is considered unlikely that the proposal will cause any adverse impact to AMU 3070.	Low/Moderate	The SoHI recommends although considered unlikely, should archaeological material be identified during construction/excavation for the PSB, all works in the area should stop, the area cordoned off and a qualified archaeologist be contacted to assess the significance of the archaeological material. Works should not recommence in that area until a management plan for the deposits is completed.	Low/Moderate
Operation	Nil	Nil	Nil	Nil
Aboriginal Heritage				
Construction	<p>Previous archaeological assessments within the Westmead Health Precinct have indicated that though the surrounding landscape contains significance for Aboriginal archaeology, the extensive disturbance which has occurred in the Precinct indicates low to nil potential for archaeological deposits to be present.</p> <p>Furthermore, the site of the proposed PSB is in a highly urbanised context that has been disturbed by the construction of multiple hospital buildings and associated infrastructure.</p>	Medium	<p>An "Unexpected Finds Protocol" will be put in place prior to the commencement of work for the instance that any archaeological remains are found.</p> <p>If human remains, or suspected human remains, are found during excavation, all work in the vicinity should cease immediately. The site should be secured and the NSW Police and the DPIE notified.</p>	Low/Moderate
Operation	Nil	Nil	Nil	Nil
Contamination				
Construction	Bonded and friable asbestos was detected in fill materials at multiple locations on PSB site that exceeded the site assessment criteria.	Moderate/High	Implementation of a site-specific RAP and asbestos management plan (AMP). These will be verified by Site Auditor as Site Audit will be carried out.	Low/Moderate
Operation	Any contamination unearthed during construction will be treated/removed from site.	Low	Clean fill only will be brought to site.	Low
Light Spill				
Operation	The Central Acute Services Building, existing CHW building, and the Kids Research have been identified as sensitive to light spill during operation of the PSB.	Low	<p>The following approaches will be incorporated into the external lighting design to mitigate light spill impacts:</p> <ul style="list-style-type: none"> – Luminaire mounting heights selected to minimise spillage and cater for better lighting control. – Where possible, light fittings adequately setback from the property boundary to reduce light spill. – Light fittings with narrow beam or sharp cut of angles. – Light fittings with low vertical aiming angles. 	Low

8. Recommendations and Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed development are detailed in **Table 16** below.

These measures have been derived from the previous assessment in **Section 6** and those detailed in appended consultant's reports.

Table 16 Mitigation Measures

Item	Mitigation Measures
Heritage	It is recommended that, as soon as practicable, suitable trees be planted along the western boundary of Wisteria Gardens in order to mitigate the visual impact of the PSB. The type of trees planted should be in keeping with the existing significant plantings of the Wisteria Gardens and in keeping with the latest version of the CMP for the Cumberland District Hospital Group.
Aboriginal Heritage	An "Unexpected Finds Protocol" will be put in place prior to the commencement of work for the instance that any archaeological remains are found. If human remains, or suspected human remains, are found during excavation, all work in the vicinity should cease immediately. The site should be secured and the NSW Police and the DPIE notified.
Historical Archaeology	Although considered unlikely, should archaeological material be identified during construction/excavation for the PSB, all works in the area should stop, the area cordoned off and a qualified archaeologist be contacted to assess the significance of the archaeological material. Works should not recommence in that area until a management plan for the deposits is completed.
Operational traffic	Operational traffic impacts and requirements have been assessed and documented in the Traffic Assessment and Preliminary Green Travel Plan prepared by WSP. A precinct-wide operational traffic and access management plan would be developed to encompass the post redevelopment operations across the precinct, adopting precinct-wide transport management measures to ensure safe operation of the precinct. A Detailed Travel demand measures will be implemented in a Detailed Green Travel Plan required to be prepared and implemented as a condition of consent.
Construction Traffic	Construction traffic measures traffic impacts and requirements have been assessed and documented in the Traffic Assessment prepared by WSP. A Detailed Construction Traffic and Pedestrian Management Plan will be required to be prepared as a condition of consent.
Geotechnical	The proposed development is in accordance with the recommendations outlined in the Geotechnical Investigation Report prepared by JK Geotechnics at Appendix P .
Contamination	The proposed development will be delivered in accordance with the Detailed Site Investigations at Appendix Q and R , and the Remedial Action Plan at Appendix S . <ul style="list-style-type: none"> A Construction Environmental Management Plan (CEMP) should be prepared prior to redevelopment works, which documents the environmental monitoring and management measures required to be implemented during construction related activities associated with the construction of the site. The existing CHW Asbestos Register and AMP should be updated to reflect the results of this assessment. The WSLHD AMP should be updated to reflect the results of this assessment. WSLHD should continue to implement the WSLHD AMP until such a time that the redevelopment commences, and the management of the site is passed to the Principal Contractor as engaged by Health Infrastructure NSW. Further, a redevelopment specific AMP and Asbestos Register will be required to be prepared and implemented during future redevelopment works.

	<ul style="list-style-type: none"> – A Work Health and Safety Management Plan (WHSP) to document the procedures to be followed to manage the risks posed to the health of the remediation workforce.
Arboricultural	The proposed upgrade works will be delivered in accordance with the recommendations described in Section 6.2 of the Arboricultural Impact Assessment Report attached at Appendix AG , prior to the commencement of any works.
Ecologically Sustainable Development	<p>The proposed upgrade works will be delivered in accordance with the Ecologically Sustainable Development Report prepared by Steensen Varming at Appendix AB.</p> <p>A climate adaptation study will be undertaken to identify the climate risks in response to CSIRO projected impacts.</p>
Waste	Waste generated during construction and operation of the PSB is to be managed in accordance with the industry standards and guidelines identified in the Waste Management Plan prepared by JBS&G at Appendix Y .
Noise and Vibration	<ul style="list-style-type: none"> – A Construction Noise and Vibration Management Plan (CNVMP) will be acquired when construction management is finalized to mitigate noise emissions to the surrounding context and included in the CEMP. – The Proposal will align with noise and vibration mitigation measures outlined in the Noise and Vibration Assessment report, prepared by Stantec. – Short-term and long-term monitoring are to be undertaken by an experienced noise and vibration monitoring professional or an acoustic consultant. The results of any noise or vibration monitoring are to be provided to the relevant party or person in a timely manner allowing the builder to address the issue and respond to the complaints. – The noise and vibration monitoring program for the project, outlined in the Acoustic Report, is implemented.
Construction management	<ul style="list-style-type: none"> – Construction will be managed in accordance with the measures identified in the Preliminary Construction Management Plan prepared by PwC. – A Detailed Construction Environmental Management Plan (CEMP) is to be prepared prior to construction commencing on site.
Flood	<ul style="list-style-type: none"> – Consultation with SCHN on developing a flood emergency management plan and coordination with the wider Westmead Health Precinct management plan. – Since the lowest habitable floor level is above the riverine flood levels and overland flooding is expected to be short duration/high hazard events, a shelter-in-place approach in the event of a flood would be feasible for users in the building and around the site. – Further design development of the PSB in consultation with the Architect as the design progresses. This includes assessment of the CHW forecourt area and PSB entryway to mitigate flood risk into the building. – Updated flood modelling to demonstrate flood risk and impact of PSB and CHW forecourt as the development design progresses.
External lighting	<p>The following approaches will be incorporated into the external lighting design to minimise obtrusive lighting:</p> <ul style="list-style-type: none"> – Luminaire mounting heights selected to minimise spillage and cater for better lighting control. – Where possible, light fittings adequately setback from the property boundary to reduce light spill. – Light fittings with narrow beam or sharp cut of angles. – Light fittings with low vertical aiming angles.

9. Conclusion

This Environmental Impact Statement (EIS) has been prepared for the proposed The Children's Hospital Westmead - Paediatric Services Building in accordance with the SEARs issued by DPIE on 20 November 2020 (**Appendix A**), Schedule 2 of the EP&A Regulation, and Section 4.15(1) of the EP&A Act. It includes assessment of the proposed development against the relevant strategic and statutory planning framework, undertakes a merit assessment of the environmental impacts including assessment of site suitability, a risk assessment, and an evaluation of the public interest.

Having regard to the above, the carrying out of the project is justified for the following reasons:

- The assessment of this proposed development has demonstrated that the proposed development will not generate environmental impacts that cannot be appropriately managed and is consistent with the relevant planning controls for the site;
- The proposed development will provide a significant new and required piece of health infrastructure reinforcing the overall health orientated focus of the Westmead Health Precinct, enhance the amenity available to the community and in keeping with the future vision for the area;
- The proposed development is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the EP&A Regulation 2000.
- The proposed development is anticipated to create 1,233 jobs during the construction phase and approximately 600 full time employment staff during the operational phase;
- The proposed development will not have a significant impact on any threatened flora or fauna species;
- The proposed development will not result in any adverse traffic impacts on the surrounding road network, and parking demand associated with the proposed development can be accommodated;
- Having considered the holistic considerations for site suitability, environmental impacts, risk assessment and key benefits, the proposed development is in the public interest.

Given the above it is considered that the SSD Application has merit and can be supported by the Department of Planning, Industry and Environment and the Minister for Planning and Public Spaces.