Prepared for
Health Infrastru

13 April 2021

Environmental Impact Statement (SSD-10434896)

Multi-Storey Carpark
The Children's Hospital at Westmead

architectus™

Architectus Australia Pty Ltd
ABN 90 131 245 684

Adelaide
Lower Ground Floor
57 Wyatt Street
Adelaide SA 5000
T +61 8 8427 7300
adelaide@architectus.com.au

Brisbane
Level 2, 79 Adelaide Street
Brisbane QLD 4000
T +61 7 3221 6077
brisbane@architectus.com.au

Melbourne
Level 25, 385 Bourke Street
Melbourne VIC 3000
T +61 3 9429 5733
F + 61 3 9429 8480
melbourne@architectus.com.au

Perth
QV1 Upper Plaza West
250 St Georges Terrace
Perth WA 6000
T +61 8 9412 8355
perth@architectus.com.au

Sydney
Level 18, MLC Centre
19 Martin Place
Sydney NSW 2000
T +61 2 8252 8400
F +61 2 8252 8600
sydney@architectus.com.au

architectus.com.au

Report Contact

Jane Fielding
Senior Associate, Planning
Architectus Australia Pty Ltd
Email: jane.fielding@architectus.com.au

Revision history

Issue Reference	Issue Date	Issue Status
A	29 January 2021	Draft
B	26 February 2021	Test of Adequacy
C	3 March 2021	Updates
D	9 April 2021	Final
E	13 April 2021	Updates

File Ref: 210412_Multi-Storey Car Park_The Childrens Hospital at Westmead_EIS

Contents

Figures & tables

List of figures

List of tables

Appendices

List of appendices

A	**Secretary's Environmental Assessment Requirements** *Issued by the Department of Planning, Industry and Environment, 20 November 2020 (SSD-10434896)*
B	**Detailed Site Survey** *Prepared by LTS*
C	**Section 10.7 Planning Certificates** *Issued by Parramatta City 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 Plan** *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	**Geotechnical Investigation Report** *Prepared by JKGeotechnics*
P	**Detailed Site Investigation – The Lodge** *Prepared by JBS&G*
Q	**Remediation Action Plan** *Prepared by JBS&G*
R	**Civil Report** *Prepared by Arup*

S	**Hazardous Building Materials Survey** *Prepared by JBS&G*
T	**Infrastructure Management Plan Hydraulic and Fire Services** *Prepared by Arup*
U	**Infrastructure Management Plan Electrical Services** *Prepared by Stantec*
V	**Structural Report** *Prepared by Arup*
W	**Building Code of Australia Schematic Design Report** *Prepared by Blackett Maguire + Goldsmith*
X	**Ecological Sustainable Development Report** *Prepared by Steensen Varming*
Y	**BDAR Waiver Request** *Prepared by Cumberland Ecology*
Z	**BDAR Waiver Approval** *Prepared by DPIE and EESG*
AA	**Noise and Vibration Report** *Prepared by Stantec*
AB	**Arboricultural Impact Assessment** *Prepared by Birds Tree Consultancy*
AC	**Preliminary Construction Management Plan** *Prepared by PwC*
AD	**Lighting Strategy** *Prepared by Stantec*
AE	**Construction Waste Management Plan** *Prepared by JBS&G*

Statement of veracity

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

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

Jasmine Bautista
Student Planner

Address:

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

In respect of:

State Significant Development Application (SSD-10434896) for the proposed construction of a new Multi-Storey Car Park (**MSCP**) accommodating both staff and visitor car parking, tree removal, and associated road and landscaping works (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 Labyrinth Way, Westmead 2145 NSW. The site is described as Lot 101 DP 1119583 and Lot 1 DP 1194390.

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 Jasmine Bautista

Executive summary

Preliminary

This Environmental Impact Assessment (**EIS**) has been prepared by Architectus Australia Pty Ltd (**Architectus**) on behalf of Health Infrastructure NSW (the Applicant) in support of a State Significant Development (**SSD**) Application (SSD-10434896) for the construction of a new Multi-Storey Car Park (**MSCP**) accommodating both staff and visitor car parking, tree removal, and associated road and landscaping works at Redbank Road and Labyrinth Way, Westmead 2145 NSW (as described in **Section 3** of this EIS).

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 attached at **Appendix A**, and the supporting technical documents provided at **Appendix D – Appendix AE.**

Site

The site forms part of the Westmead Health Precinct and is located at Redbank Road and Labyrinth Way, Westmead 2145 NSW. The site falls within the Parramatta Local Government Area (**LGA**).

The site is currently occupied by The Lodge (former Ronald McDonald House).

The site falls across two lots legally described as Lot 101 in Deposited Plan 1119583 and Lot 1 in Deposited Plan 1194390.

Proposed development

The proposed development includes the construction of a new MSCP accommodating both staff and visitor car parking.

Approval is sought for up to 1,003 car parking spaces through the new MSCP, noting this is complemented by existing Precinct car parking, and additional interim parking (133 spaces) generated through the Paediatric Services Building (**PSB**) (subject of a separate planning approval). The purpose of the MSCP is to replace parking lost due to the demolition of the P17 MSCP, service the growth in clinical services associated with the PSB, and future proof for the expected loss of interim car parking spaces associated with master planned developments in and around the PSB.

Whilst approval is sought to construct the 8-level MSCP to accommodate up to 1,003 car parking spaces, subject to funding contributions from other projects and procurement outcomes, this capacity may need to be staged (e.g. initially constructing 7 levels with 860 spaces). In any case, the net operational car parking growth will remain at 280 spaces, which meets the 2031/32 projection for car parking requirements as per the Car Parking Demand Study (**Appendix N**). The existing and new car parking spaces available to Sydney Children's Hospital Network (**SCHN**) staff and CHW patients and visitors on the Westmead Precinct will be operationally managed by SCHN and opened progressively as clinical activity grows due to the development and commissioning of the PSB.

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

- Demolition of The Lodge
- Construction of a new MSCP, comprising 8 car parking storeys, which is equivalent to the height of 5 storeys of the hospital;
    - Facilitating 1,003 car parking spaces for staff and visitors:
        - 280 new spaces (110 staff spaces and 170 visitor spaces) to address the car parking requirements generated by the PSB;

        - Up to 11 additional spaces of additional capacity available to service future car parking demands at CHW as a result of optimising the car parking design;
        - 679 replaced staff spaces from the recently demolished P17 staff carpark:
        - 33 replaced spaces from the removal of parking accessed via Redbank Road, for the MSCP entry ramp;
        - Of the 1,003 parking spaces, 14 are to be disabled parking spaces; and
        - Minimum 21 motorcycle parking spaces.
    - Vehicular access from Labyrinth Way and / or Redbank Road; and
    - A split-level approach to the MSCP to respond to the natural ground level.
- Opportunity for an ancillary retail kiosk and associated public amenities (subject to commercial viability assessment)
- Realignment of Redbank Road with vehicular access connection to MSCP
- Tree removal
- Associated landscape works.

Consultation

The Applicant's team has undertaken consultation with Departments, agencies 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 proposal. 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 MSCP has been assessed against the SEARs issued for the project and the planning framework - in summary:

Statutory and strategic planning context

The proposal 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 proposal satisfies the SEARs as demonstrated in this EIS.

Local impacts

The proposed MSCP will not cause unacceptable impacts on neighbouring residential properties or the public domain. Subject to the various mitigation measures recommended at **Section 8**, the proposal will not have unreasonable traffic, heritage, economic, social and environmental impacts on adjoining or surrounding properties or the public domain. Overall, the proposal is considered to ensure the ongoing day to day management of the Westmead Health Precinct by providing an essential service in the form of a car park.

Suitability of the site

The Westmead Health Precinct is one of the largest health, education, research and training precincts in Australia and a key provider of jobs for the greater Parramatta and western Sydney region. The proposed development will ensure the longevity as a health, education, research and training Precinct is maintained.

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

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 MSCP as part of The Children's Hospital Westmead (**CHW**) Stage 2 Redevelopment provides significant public benefits, including:

- Allow for sufficient parking for the Westmead Health Precinct particularly due to the growth in healthcare services provided at the existing CHW and new PSB (subject of separate planning approval);
- Ensure an appropriate architectural and energy efficient proposal;
- Allow for the ongoing and efficient use of the Westmead Health Precinct and the safety of car park users, particularly through the replacement of temporary at-grade car parking in P23 that is a significant distance from CHW; and
- Provide employment opportunities during construction and ensure the Westmead Health Precinct will remain an employment hub.

On balance, accounting 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.

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 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	
Clause 6 of Schedule 2 of EP&A Regulation An EIS must contain the following:	
6(a) EIS author	*Statement of veracity*
6(b) contact details of the responsible person	*Statement of veracity*
6(c) the address of the land	*Statement of veracity*
6(d) development description	*Section 3: Proposed development*
6(e) assessment of impact	*Section 6: Environmental Assessment*
6(f) author's declaration	*Statement of veracity*
Clause 7 of Schedule 2 of EP&A Regulation An EIS must also include:	
(1)(a) summary of EIS	*Executive Summary*
(1)(b) EIS objectives	*Section 1: Introduction*
(1)(c) analysis of feasible alternatives	*Section 3: Proposed development*
(1)(d) analysis of development	*Section 3: Proposed development*
(d)(i) full description	*Section 3: Project description*
(d)(ii) general description of the environment likely to be affected	*Sections 1.2: Project overview* *Section 2: Site analysis* *Section 3: Proposed development* *Section 6: Environmental Assessment*
(d)(iii) likely impact on the environment	*Section 6: Environmental Assessment*
(d)(iv) mitigation measures	*Section 8: Recommendations*

Item/ Description	Document Reference
	and Mitigation measures
(d)(v) approvals required	*Section 5: Statutory and Strategic Planning context*
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	*Section 6: Environmental Assessment* *Section 7: Environmental Risk Assessment* *Appendix D – Appendix AE*
In addition, the EIS must include: – An executive summary – A complete description of the development, including; o the need for the development. o justification for the development. o suitability of the site. o alternatives considered. o likely interactions between the development and existing, approved and proposed operations in the vicinity of the site. o a description of any proposed building works. o a description of existing and proposed operations. o site survey plan, showing existing levels, location and height of existing and adjacent structures / buildings and site boundaries. o a detailed constraints map identifying the key environmental and other land use constraints that have informed the final design of the development. o plans, elevations and sections of the proposed development. o cladding, window and floor details, including materials. o 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). o plans and details of any advertising/business identification signs to be installed, including size, location and finishes. o any staging of the development. o details of construction and decommissioning including timing. o 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.	*Executive Summary* *Section 1: Introduction* *Section 3: Proposed development* *Section 6: Environmental Assessment* *Appendix B* *Appendix F* *Appendix G* *Appendix AC*
– a detailed assessment of the key issues identified below, and any other significant issues identified in the risk assessment, including: o a description of the existing environment, using sufficient baseline data and methodology to establish baseline conditions. o 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. o consideration of the cumulative impacts due to all other developments in the vicinity (completed, underway or proposed). o identification of all proposed monitoring or required changes to existing monitoring programs. o measures to avoid, minimise and if necessary, offset predicted impacts, including detailed contingency plans for	*Section 2: Site Analysis* *Section 6: Environmental assessment* *Section 8: Recommendations and Mitigation Measures*

Item/ Description	Document Reference
managing any significant risks to the environment and triggers for each action. o details of alternative measures considered.	
– a consolidated summary of all the proposed environmental management and monitoring measures, identifying all commitments included in the EIS. – the reasons why the development should be approved and a detailed evaluation of the merits of the development, including consequences of not carrying out the development.	*Section 8: Recommendations and Mitigation Measures* *Section 6: Environmental Assessment*
– 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.	*Provided under separate cover*
Key Issues *The EIS must address the following specific matters:*	
1. Statutory and Strategic Context	
Address the statutory provisions contained in all relevant environmental planning instruments, including but not limited to: – *State Environmental Planning Policy (State and Regional Development) 2011* – *State Environmental Planning Policy (Infrastructure) 2007* – *State Environmental Planning Policy No 64 – Advertising and Signage* – *State Environmental Planning Policy No 55 – Remediation of Land* – *Draft State Environmental Planning Policy (Remediation of Land)* – *Draft State Environmental Planning Policy (Environment)* – *Parramatta Local Environmental Plan 2011.*	*Section 5: Statutory and Strategic Planning context*
<u>Having regard to the relevant environmental planning instruments:</u> – address the permissibility of the development, including the nature and extent of any prohibitions. – identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards. – adequately demonstrate and document how each of the provisions in the listed instruments are addressed, including reference to necessary technical documents.	*Section 5: Statutory and Strategic Context*
2. Policies	
Address the relevant planning provisions, goals and strategic planning objectives in the following: – *NSW State Priorities* – *State Infrastructure Strategy 2018 – 2038 Building the Momentum* – *Future Transport Strategy 2056* – *Crime Prevention through Environmental Design (CPTED) Principles* – *Better Placed: An integrated design policy for the built environment of New South Wales (Government Architect NSW (GANSW), 2017)* – *Healthy Urban Development Checklist (NSW Health, 2009)* – *Draft Greener Places Design Guide (GANSW)* – *The Greater Sydney Region Plan - A Metropolis of Three Cities* – *Sydney's Cycling Future 2013* – *Sydney's Walking Future 2013* – *Sydney's Bus Future 2013* – *Central City District Plan* – *Westmead Health Core Master Plan* – *Draft Westmead Place Strategy* – *Local Strategic Planning Statement City Plan 2036.*	*Section 5: Statutory and Strategic Planning context* *Appendix G* *Appendix I* *Appendix N*
3. Built Form and Urban Design	

Item/ Description	Document Reference
– Address: o 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. o design quality and built form, with specific consideration of the overall site layout, streetscape, façade, rooftop, massing, setbacks, building articulation, materials and colours. o how Crime Prevention through Environmental Design (CPTED) principles are to be integrated into development. o how good environmental amenity would be provided, including access to natural daylight and ventilation o how services are integrated into the design of the development	*Section 3: Proposed Development* *Section 6: Environmental Assessment* *Appendix G*
– Provide: o a detailed site and context analysis to justify the proposed site planning and design approach o 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.	*Section 2: Site Analysis* *Section 6: Environmental Assessment* *Appendix F*
4. Tree Removal and Landscaping	
– Provide: o 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.	*Section 3: Proposed development* *Appendix AB*
– a detailed site-wide landscape strategy, that: o details the proposed site planting, including location, number and species of plantings, heights of trees at maturity and proposed canopy coverage. o demonstrates how the proposed development would: – contribute to long term landscape setting in respect of the site and the streetscape. – mitigate the urban heat island effect and ensure appropriate comfort levels on-site. – contribute to objectives to increase urban tree canopy cover. o a detailed landscape plan prepared by a suitably qualified person.	*Section 3: Proposed development* *Appendix H* *Appendix I*
Relevant Policies and Guidelines: – 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).	*Section 5: Statutory and Strategic Planning Context* *Appendix I*
5. Environmental Amenity	
– Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing, wind impacts and acoustic impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated.	*Section 6: Environmental Assessment* *Appendix G* *Appendix AA*
– Provide: o shadow diagrams. o 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.	*Section 6: Environmental Assessment* *Appendix G* *Appendix AD*

Item/ Description	Document Reference
○ an analysis of proposed lighting that identifies measures to reduce spill into the surrounding sensitive receivers.	
6. Transport and Accessibility	
Include a transport and accessibility impact assessment, which details, but not limited to the following:	*Appendix N*
– analysis of the existing transport network, including: ○ road hierarchy. ○ pedestrian, cycle and public transport infrastructure. ○ details of current daily and peak hour vehicle movements based on traffic surveys and / or existing traffic studies relevant to the locality. ○ existing performance levels of nearby intersections utilising appropriate traffic modelling methods (such as SIDRA network modelling).	*Appendix N*
– details of the proposed development, including: ○ a map of the proposed access which identifies public roads, bus routes, footpaths and cycleways. ○ vehicular access arrangements, including for service and emergency vehicles, 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. ○ Number of car parking spaces and any bicycle parking ○ pedestrian or road infrastructure improvements or safety measures.	*Appendix N*
– analysis of the impacts due to the operation of the proposed development, including: ○ estimated total daily and peak hour vehicular trip generation. ○ a clear explanation and justification of the: – 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 car parking including assumptions made to determine/justify the amount of car spaces sought to service the associated hospital. ○ adequacy of the existing / proposed pedestrian infrastructure to enable convenient and safe access to and from the site for all users.	*Section 6: Environmental Assessment* *Appendix N*
– measures to ameliorate any adverse traffic and transport impacts due to the development based on the above analysis, including infrastructure improvements and details of timing and method of delivery	*Section 8: Recommendations and Mitigation Measures*
– analysis of the impacts of the traffic generated during construction of the proposed development, including: ○ 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.	*Appendix N* *Appendix AC*
– a preliminary Construction Traffic and Pedestrian Management Plan.	*Appendix N*

Item/ Description	Document Reference
	Appendix AC
Relevant Policies and Guidelines: – *Guide to Traffic Generating Developments (Roads and Maritime Services, 2002)* – *EIS Guidelines - Road and Related Facilities (Department of Urban Affairs and Planning (DUAP), 1996)* – *Cycling Aspects of Austroads Guides* – *NSW Planning Guidelines for Walking and Cycling (Department of Infrastructure, Planning and Natural Resources (DIPNR), 2004)* – *Guide to Traffic Management Part 12: Integrated Transport Assessments for Developments (Austroads, 2020)* – *Australian Standard 2890.3 Parking facilities, Part 3: Bicycle parking (AS 2890.3).*	*Appendix N*
7. Ecologically Sustainable Development	
– Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Regulation) will be incorporated in the design and ongoing operation phases of the development.	*Section 5: Statutory and Strategic Planning context* *Appendix X*
– proposed measures to minimise consumption of resources, water (including water sensitive urban design) and energy.	*Appendix X*
– 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.	*Appendix X*
– Include: o an assessment against an accredited ESD rating system or an equivalent program of ESD performance. This should include a minimum rating scheme target level. o a statement regarding how the design of the future development is responsive to the CSIRO projected impacts of climate change. o an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.	*Section 5: Statutory and Strategic Planning context* *Appendix X*
Relevant Policies and Guidelines: – *NSW and ACT Government Regional Climate Modelling (NARCliM) climate change projections.*	*Appendix X*
8. Heritage	
– 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: 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	*Appendix J*

Item/ Description	Document Reference
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.	
– 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	
– Provide an Aboriginal Cultural Heritage Assessment Report (ACHAR) that: 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 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*
– 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	
– Provide a Social Impact Assessment prepared in accordance with the draft Social Impact Assessment Guideline 2020.	*Appendix D*
Relevant Policies and Guidelines: – draft Social Impact Assessment Guideline 2020 (Department of Planning, Industry and Environment)	*Appendix D*
11. Noise and Vibration	
– Provide a noise and vibration impact assessment that: o includes a quantitative assessment of the main noise and vibration generating sources during demolition, site preparation, bulk excavation and construction. o 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. o includes a quantitative assessment of the main sources of operational noise, including vehicles using carpark after hours o outlines measures to minimise and mitigate the potential noise impacts on nearby sensitive receivers. o 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. o demonstrates that the assessment has been prepared in accordance with polices and guidelines relevant to the context of the site and the nature of the proposed development.	*Appendix AA*
Relevant Policies and Guidelines: – *NSW Noise Policy for Industry 2017 (NSW Environment Protection Authority (EPA)* – *Interim Construction Noise Guideline (Department of Environment and Climate Change, 2009)* – *Assessing Vibration: A Technical Guideline 2006 (Department of Environment and Conservation, 2006)*	*Appendix AA*
12. Biodiversity	
– Provide a Biodiversity Development Assessment Report (BDAR), prepared by a person accredited in accordance with section 6.10 of the *Biodiversity Conservation Act 2016* that assesses the biodiversity impacts of the proposed development in accordance with the requirements of the *Biodiversity Conservation Act 2016, Biodiversity Conservation Regulation 2017* and Biodiversity Assessment Method, except where a BDAR waiver has been issued in relation to the development or the development is located on biodiversity certified land.	*Appendix Y* *Appendix Z*
– Where a BDAR is not required because a BDAR waiver has been issued in relation to the development, provide: o a copy of the BDAR waiver and demonstrate that the proposed development is consistent with that covered in BDAR waiver. o an assessment of flora and fauna impacts where significant vegetation or flora and fauna values would be affected by the proposed development.	*Appendix Y* *Appendix Z*
13. Contributions	
– Identify: o 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. o 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. o any actions required by a Voluntary Planning Agreement or draft Voluntary Planning Agreement affecting the site or	*Section 5: Statutory and Strategic Planning context*

Item/ Description	Document Reference
amendments required to a Voluntary Planning Agreement affected by the proposed development.	
14. Staging	
– Assess impacts of staging where it is proposed and detail how construction works and operations would be managed to ensure public safety and amenity on and surrounding the site.	*Section 6: Environmental Assessment* *Section 8: Recommendations and Mitigation Measures* *Appendix AC*
15. Utilities	
In consultation with relevant service providers: – assess of the impacts of the development on existing utility infrastructure and service provider assets surrounding the site. – identify any infrastructure upgrades required 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.	*Section 6: Environmental Assessment* *Appendix G* *Appendix T* *Appendix U*
16. Stormwater drainage	
Provide: – a preliminary stormwater management plan for the development that: o is prepared by a suitably qualified person in consultation with Council and any other relevant drainage authority. o details the proposed drainage design for the site including on-site detention facilities, water quality measures and the nominated discharge point. o demonstrates compliance with Council or other drainage authority requirements. – stormwater plans detailing the proposed methods of drainage without impacting on the downstream properties.	*Section 6: Environmental assessment* *Appendix T*
– Where drainage infrastructure works are required that would be handed over to Council, provide full hydraulic details and detailed plans and specifications of proposed works that have been prepared in consultation with Council and comply with Council's relevant standards.	*Appendix T*
Relevant Policies and Guidelines: – Guidelines for developments adjoining land managed by the Office of Environment and Heritage (OEH, 2013)	*Appendix T*
17. Flooding	
– Identify any flood risk on-site in consultation with Council and having regard to the most recent flood studies for the project area and the potential effects of climate change, sea level rise and an increase in rainfall intensity. – Assess the impacts of the development, including any changes to flood risk on-site or off-site, and detail design solutions to mitigate flood risk where required.	*Section 6: Environmental Assessment* *Appendix L*
Relevant Policies and Guidelines: – NSW Floodplain Development Manual (NSW Government, 2005).	*Appendix L*
18. Soil and Water	
Provide: – an assessment of potential impacts on surface and groundwater (quality and quantity), soil, related infrastructure and watercourse(s) where relevant. – details of measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles.	*Section 6: Environmental assessment* *Appendix T*

Item/ Description	Document Reference
– an assessment of salinity and acid sulphate soil impacts, including a Salinity Management Plan and/or Acid Sulphate Soils Management Plan, where relevant.	
Relevant Policies and Guidelines: – Managing Urban Stormwater - Soils and Construction Volume 1 (Landcom, 2004) – Guidelines for development adjoining land managed by the Office of Environment and Heritage (OEH, 2013).	*Appendix T*
19. Waste	
– Identify, quantify and classify the likely waste streams to be generated during construction and operation. – Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. – Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site. – Provide a hazardous materials survey of existing aboveground buildings that are proposed to be demolished or altered.	*Appendix AE*
Relevant Policies and Guidelines: – *Waste Classification Guidelines (EPA, 2014)*	*Appendix AE*
20. Contamination	
– Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. This must include the following prepared by certified consultants recognised by the NSW Environment Protection Authority: o Preliminary Site Investigation (PSI). o Detailed Site Investigation (DSI) where recommended in the PSI. o Remediation Action Plan (RAP) where remediation is required. This must specify the proposed remediation strategy. o Preliminary Long-term Environmental Management Plan (LEMP) where containment is proposed on-site.	*Appendix P* *Appendix Q* *Appendix S*
Relevant Policies and Guidelines: – Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP, 1998) – Sampling Design Guidelines (EPA, 1995) – Guidelines for Consultants Reporting on Contaminated Sites (OEH, 2011) – National Environment Protection (Assessment of Site Contamination) Measure (National Environment Protection Council, as amended 2013).	*Appendix P* *Appendix Q* *Appendix S*
Plans and Documents	
The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Regulation. Provide these as part of the EIS rather than as separate documents.	
In addition to the plans and documents required in the General Requirements and Key Issues sections above, the EIS must include the following:	
– A section 10.7(2) and (5) Planning Certificates (previously Section 149(2) and (5) Planning Certificate)	*Appendix C*
– Design report to demonstrate how design quality would be achieved in accordance with the above Key Issues including: 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	*Appendix G* *Appendix O* *Appendix V* *Appendix W*

Item/ Description	Document Reference
○ summary report of consultation with the community and response to any feedback provided. – Geotechnical and Structural Report – Accessibility Report.	
Consultation	
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, relevant special interest groups, including local Aboriginal land councils and registered Aboriginal stakeholders and affected landowners. In particular, you must consult with: – the relevant Council – Government Architect NSW (through the NSW SDRP process) – Transport for NSW. Consultation should commence as soon as practicable to inform the scope of investigation and progression of the proposed development. The EIS must describe and evidence the consultation process and the issues raised and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided. 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.	*Section 4: Consultation*
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 a SSDA for the proposed new Multi-Storey Car Park (**MSCP**) within the Children's Hospital at Westmead (**CHW**) Campus.

1.2 The Site

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

The land subject to the proposed works is legally referred to as Lot 101 in Deposited Plan 1119583 and Lot 1 in Deposited Plan 1194390. The two (2) lots are owned by NSW Health Administration Corporation (**HAC**).

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

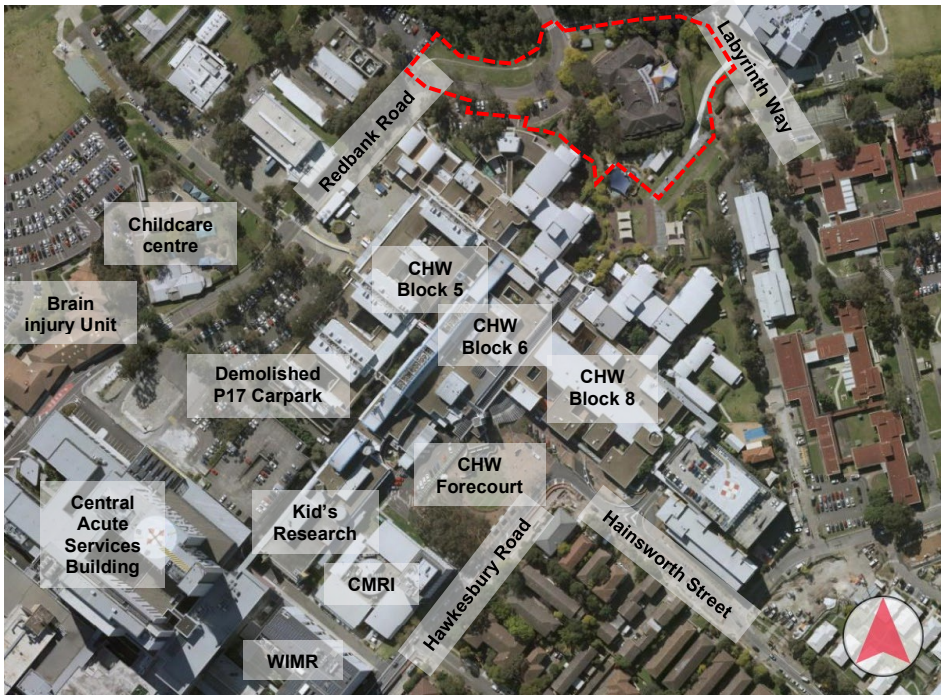

Figure 1 Site Context
The site is outlined in red dashed line
Source: Metro Map with Architectus overlay (2020)

Health Infrastructure NSW propose to undertake the CHW Stage 2 Redevelopment works. The proposed MSCP will help effectively service the CHW Stage 2 Redevelopment and its vision of 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 to 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:

- Demolition of The Lodge
- Construction of a new MSCP, comprising 8 car parking storeys, which is equivalent to the height of 5 storeys of the hospital:
    - Facilitating 1,003 car parking spaces for staff and visitors:
        - 280 new spaces (110 staff spaces and 170 visitor spaces) to address the car parking requirements generated by the PSB;
        - Up to 11 additional spaces of additional capacity available to service future car parking demands at CHW as a result of optimising the car parking design;
        - 679 replaced staff spaces from the recently demolished P17 staff carpark:
        - 33 replaced spaces from the removal of parking accessed via Redbank Road, for the MSCP entry ramp;
        - Of the 1,003 parking spaces, 14 are to be disabled parking spaces; and
        - Minimum 21 motorcycle parking spaces.
    - Vehicular access from Labyrinth Way and / or Redbank Road; and
    - A split-level approach to the MSCP to respond to the natural ground level.
- Opportunity for an ancillary retail kiosk and associated public amenities (subject to commercial viability assessment)
- Realignment of Redbank Road with vehicular access connection to MSCP
- Tree removal
- Associated landscape works.

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 plan 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 MSCP is part of the traditional lands of the Burramutta people, a clan of the Darug nation. Toongabbie Creek is located approximately 40 metres to the north of the MSCP, and Parramatta River is 400 metres to the east of the site.
- 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 event.
- 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 proposed development will be an important addition to the Westmead Health Precinct and CHW which is required to facilitate the future growth of the Precinct by providing appropriate level of urban services within the locality in turn allowing CHW to continue to serve the needs of the Western Sydney population and beyond.

The proposed development forms part of the CHW Stage 2 Redevelopment. The CHW Stage 2 Redevelopment is informed by a significant body of master planning work which sets the framework for future development of CHW and the 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; and
- 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 AE.**

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
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 context

The site forms part of the CHW Campus within the broader Westmead Health Precinct. The proposed development is located at Redbank Road and Labyrinth Way, Westmead 2145 NSW.

The site is currently occupied by The Lodge (former Ronald McDonald House), which houses administrative functions for the CHW.

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 (2021)

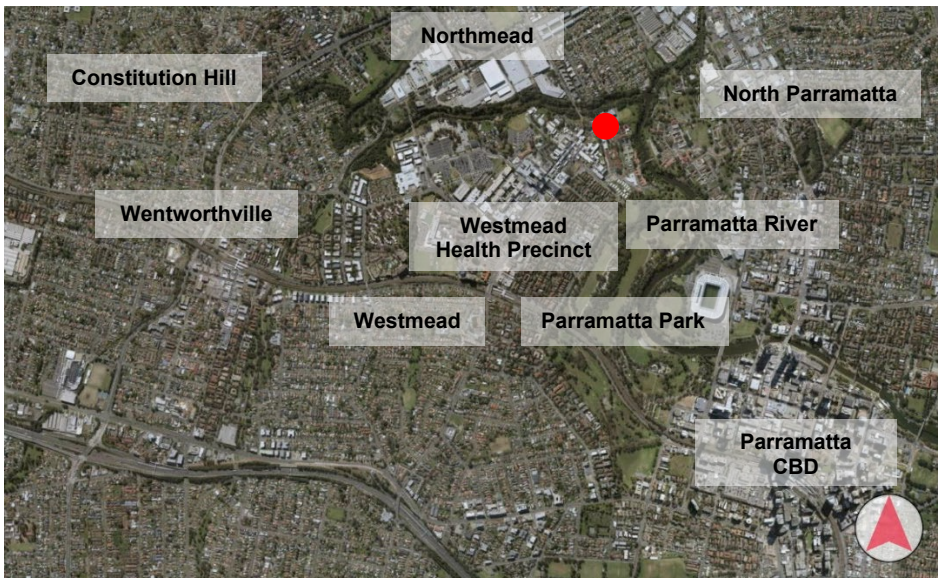

Figure 3 Regional context of the site
The indicative location of the site is shown with a red dot.
Source: Metro Map with Architectus edits (2021)

Legal Description and Ownership

The site falls within Lot 101 in Deposited Plan 1119583 and Lot 1 in Deposited Plan 1194390 as illustrated in **Figure 4** below. The lot is under the ownership of the NSW Health Administration Corporation. It is noted that the proposed development does not encroach onto the Cumberland campus.

Figure 4 Aerial photo of Lot Plan of Westmead Health Precinct
Lot 101 in Deposited Plan 1119583 and Lot 1 in Deposited Plan 1194390 are shaded in blue and the indicative area of proposed works is outlined in a red dashed line.
Source: Metro Map with Architectus edits (2021)

2.1 Existing development

The footprint of the proposed MSCP will cover the existing footprint of The Lodge and some of the landscaped area, including the Children's Playground at the south of the Lodge.

Refer to **Figure 5** for an Existing Site Plan prepared by Billard Leece Partnership Architects and **Figures 6** to **8** for site photos.

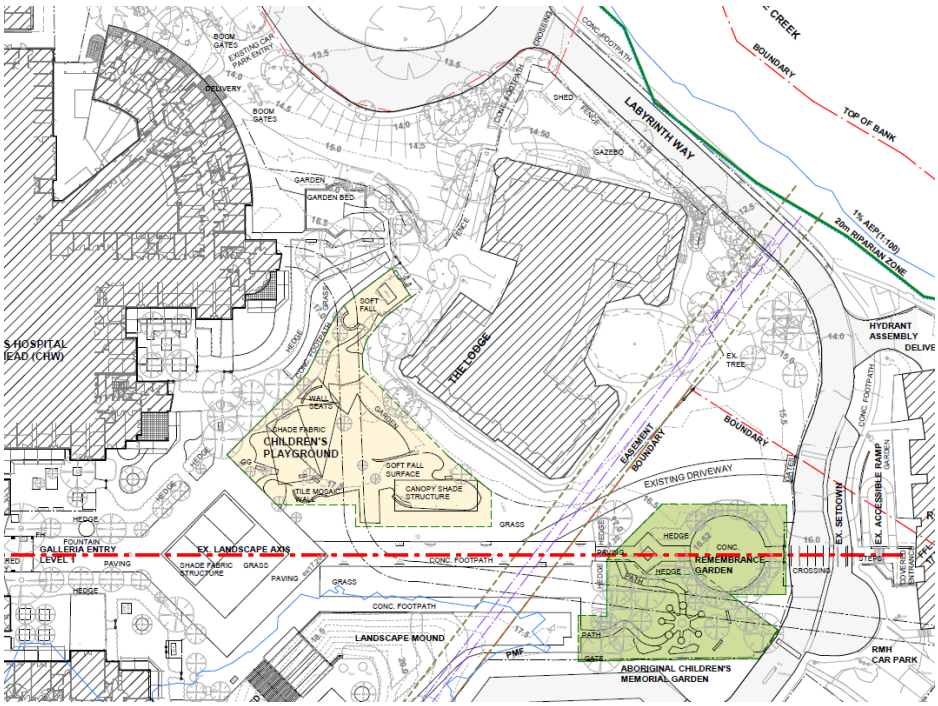

Figure 5 Site Plan – Existing
Source: Billard Leece Partnership Architects


Figure 6 The former Ronald McDonald House (right of image) and new Ronald McDonald House (at rear)
Source: Jacobs 2020


Figure 7 Landscaping in grounds of the former Ronald McDonald House and the Children's Playground (right of image).
Source: Jacobs 2020


Figure 8 Access point to footpath from the northern side of Labyrinth Way, with Redbank Road bridge (left of image).
Source: Jacobs 2020

2.2 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

Central Acute Services Building (**CASB**) has brought the Precinct to its tallest height, at 14 storeys / RL 89.1. The built form in the immediate vicinity of the proposed MSCP is outlined in **Table 3**.

Table 3 Surrounding built form

Building name	No. of storeys	Year of completion
CASB	14	2020
Children's Medical Research Institute (**CMRI**)	7	2014
Kids Research Building	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

2.3 Site considerations

Section 10.7 (2) & (5) Planning Certificates were issued for Lot 101 in DP 1119583 (no. 2019/1523 dated 12 March 2020) and Lot 1 in DP 1194390 (no. 2021/822 dated 9 February 2020). Refer to **Appendix C**. The respective lots are:

- Zoned SP2 - Infrastructure under the Parramatta Local Environmental Plan (**PLEP**) 2011.
- Identified as "Riparian Land and Waterways" on the Natural Resources – Riparian Land and Waterways map and is subject to Clause 6.5 of PLEP 2011.
- Not in a heritage conservation area.
- Not affected by a road widening or road realignment.
- Not affected by any acquisition of land provision.
- Not significantly contaminated.
- Not affected by section 38 or 39 of the Coastal Protection Act 1979.
- Not proclaimed to be in a mine subsidence district.
- Not bushfire prone.
- Not affected by a policy that restricts development of land due to the likelihood of projected sea level rise (coastal protection), tidal inundation, subsidence of any other risk.
- Identified as Class 5 on the Acid Sulphate Soils map.
- Not subject to any bio-banking agreement.
- Not affected by any property vegetation plan.
- Is affected by the 100-year Average Recurrence Interval flood. Refer to **Section 6.12**.

Lot 101 in DP 1119583 is identified as:

- Not containing an item of environmental heritage.
- Not comprising an area of outstanding biodiversity value.

Lot 1 in DP 1194390 is identified as:

- Containing a Heritage Item under PLEP2011. Note the proposed building footprint of the MSCP is not situated on a heritage item. Refer to **Section 6.10**.

- Containing ‘native vegetation’. Note the proposed development is not anticipated to have any significant impact on biodiversity values. Refer to **Section 6.7.**
- Affected by a Draft PLEP 2020 (Harmonisation LEP) which has been placed on Public Exhibition and has not yet been published.

2.4 Zoning

The subject site is zoned SP2 – Infrastructure pursuant to PLEP 2011 for the purpose of Health Services Facility. Please refer to an extract of the PLEP 2011 provided at **Figure 9**.

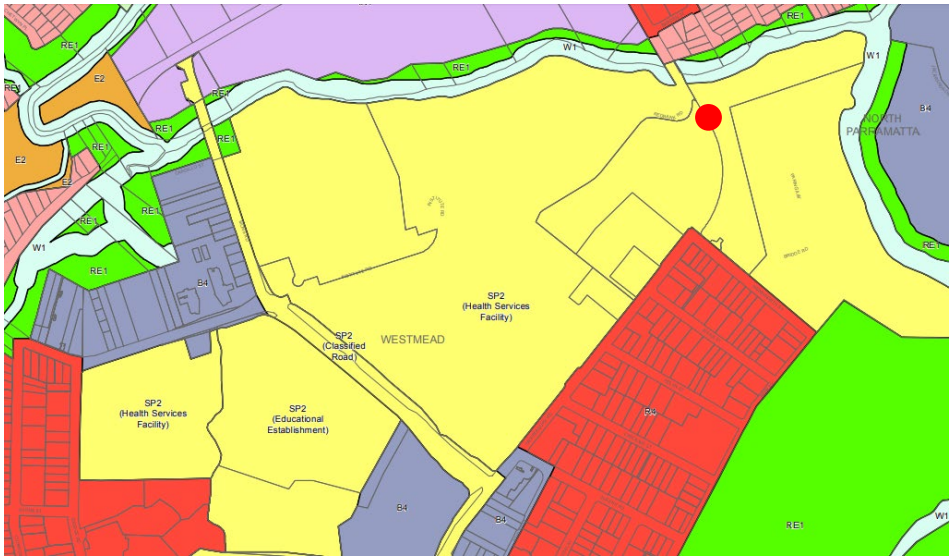

Figure 9 Extract of zoning map of Parramatta Local Environmental Plan 2011
The indicative location of the site is shown with a red dot.
Source: PLEP 2011, 6250_COM_LZN_002_010_20150122, with Architectus edits (2020)

2.5 Heritage

Aboriginal Heritage

A search of the Aboriginal Heritage Information Management System (**AHIMS**) was undertaken for the site on 4 February 2020 and 31 August 2020 (refer to Aboriginal Cultural Heritage Assessment Report prepared by Jacobs at **Appendix K**).

No Aboriginal heritage sites were identified on site. 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 50m to the north west 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.

Further discussion of Aboriginal heritage is provided in **Section 6.11** of this EIS.

European Heritage

Searches of National, State, and local heritage databases were undertaken. No built 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. Lot 1 in DP 1194390 is identified as a heritage item but not within a heritage conservation area. The site is part of a State Heritage Item, namely ‘Cumberland District Hospital (including Wisteria Gardens)’ (Item no. I00820).

The proposed development 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 site included on the National Heritage List or Commonwealth Heritage List. However, there are two listed heritage items of National heritage significance in close proximity to the study area:

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

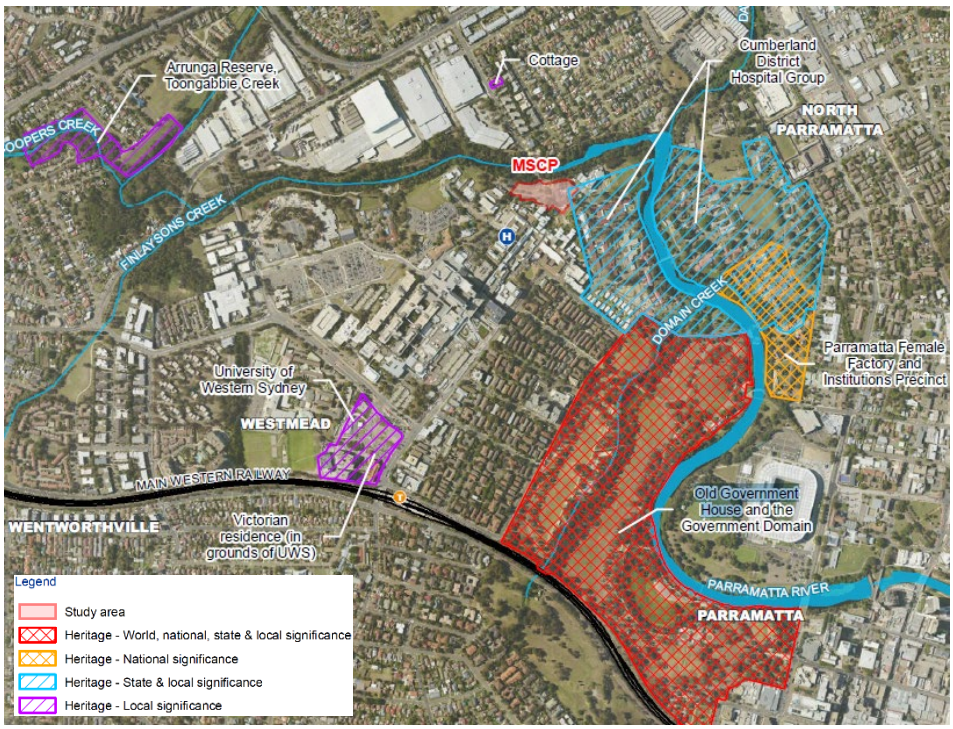

Figure 10 Built heritage items in the vicinity of the study area
Source: Multi-Storey Car Park - Heritage Impact Assessment by Jacobs (2021)

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 the Heritage Act 1977.

There are no World Heritage Sites located within the study area. Old Government House, located within Parramatta Park, is listed as a UNESCO World Heritage Item. However, this is located some distance away, with the heritage item located approximately 1.1km south east of the site.

The heritage impact of the proposed works is discussed further in **Section 6.10** of this EIS.

2.6 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 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; and
- a T-way only section of road exists at the northern end of Mons Road, connecting with Briens Road.

Figure 11 Existing transport context
Source: The Children's Hospital at Westmead Stage 2 Redevelopment, Multi-Storey Car Park Transport Assessment, WSP (2021)

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 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

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 been demolished prior to the opening of the CASB for safety reasons and replaced by a temporary car park located north of Dragonfly Drive.

It is noted that the former P17 car park has been recently demolished (subject of a Part 5 Review of Environmental Factors that was approved in May 2020). The former P17 car park accommodated up to 124 vehicles via stacked arrangements, increasing the CHW's parking capacity to 1,671 vehicles. These spaces are temporarily provided in an interim car park (Temporary P17 replacement), accessible from Mons Road, which accommodates 479 parking spaces.

As outlined in **Section 3.10**, the new MSCP will replace the 679 spaces lost from P17 as well as a further 33 spaces lost in and around the MSCP development site. The new MSCP will provide 280 new spaces to address the car parking requirements generated by the PSB, with a further 11 spaces of additional capacity available to service future car parking demands at CHW as a result of optimising the car parking design.

The MSCP is designed to be constructed in a single stage; however, car parking will be staged operationally in conjunction with the other Westmead Health Precinct car parks to come on-line with parking demand as outlined in **Section 3.14**.

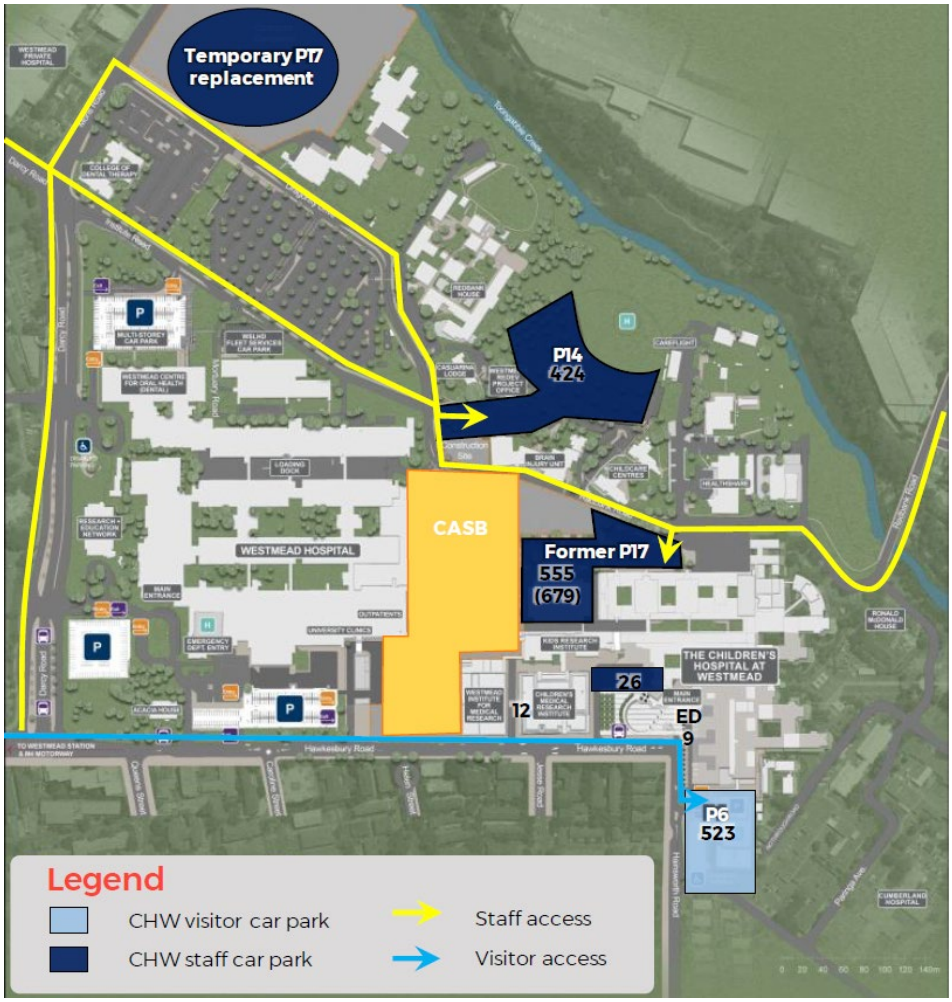

Figure 12 Existing traffic access plan
Source: The Children's Hospital at Westmead Stage 2 Redevelopment, Multi-Storey Car Park Transport Assessment, WSP (2021)

2.7 Topography

The site is generally flat across the southern portion and across The Lodge building footprint, and slopes to the northeast and northwest across the remainder of the site in line with the general topography of the area.

Westmead Hospital and CHW are situated on land sloping gently downwards to the north and north west from Hawkesbury Road towards Toongabbie Creek.

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

2.8 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 subject land 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 area of 0.463 ha.

The BDAR Waiver Request (**Appendix Y**) for the proposed development concludes 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. The BDAR Waiver request was approved by DPIE on 25 November 2020 and EES on 11 November 2020 (refer to **Appendix Z**).

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 not likely 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 Y** and is discussed further in **Section 6.7** of this EIS.

2.9 Acid sulfate soils

The land is identified as Class 5 on the Acid Sulfate Soils map under PLEP 2011.

2.10 Groundwater and Contamination

JBS&G were commissioned to prepare a Detailed Site Investigation (**DSI**) for The Lodge (refer to **Appendix P**). 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 were encountered across the site, however the dominant fill consisted of brown to dark brown heterogenous silty / gravelly clay to depths ranging from 0.4 to 4.0 m bgs. Inclusions of bonded ACM, road base gravels and slag were observed. No odours or staining were observed within fill across the site.

Bonded 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 at the site are considered to be impacted by asbestos in soils.

Elevated heavy metal concentrations were reported within groundwater across all wells. Based on the geology underlying the site, it is considered that the heavy metal concentrations are representative of a combination of regional background geochemistry and minor influences of the surrounding environment rather than specific point sources of contamination.

A Remediation Action Plan (**RAP**) was prepared for the works (refer to **Appendix Q**). An accredited Site Auditor has been appointed 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 and **Section 6.15** for impact assessment.

2.11 Flooding

As indicated by the Section 10.7 (2) & (5) Planning Certificates for the site (**Appendix C**), Lot 101 DP 1119583 and Lot 1 DP 1194390 are affected by a 100-year Average Recurrence Interval flood event.

The City of Parramatta Council has identified the northern edge of the site subject to proposed works as having medium risk flood impacts through their FloodSmart interactive map. Council defines 'Medium Risk' land as:

- Frequent flooding will be rare;
- Where the flood water goes once the creek/river areas overflow; and
- In rare floods these areas have the potential for deep and fast flowing water.

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.

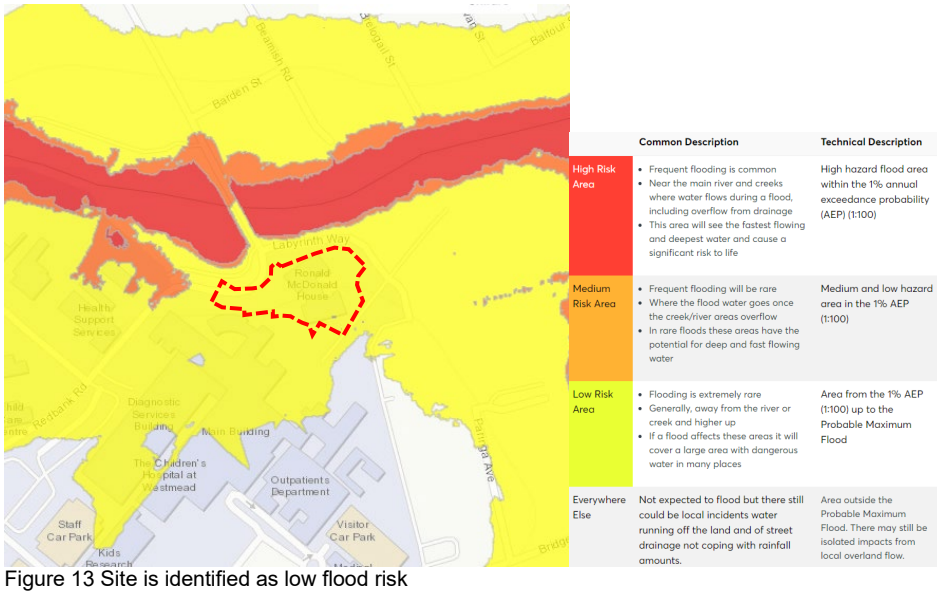

Figure 13 Site is identified as low flood risk
The indicative location of the site is identified in a dot.
Source: City of Parramatta's FloodSmart interactive map with Architectus edits (2020)

3. The proposed development

3.1 Project description

The proposed development includes the construction of a new MSCP accommodating both staff and visitor car parking, located on Redbank Road and Labyrinth Way, Westmead 2145 NSW, on site of The Lodge. The proposed works are part of the CHW Stage 2 Redevelopment.

Approval is sought for up to 1,003 car parking spaces through the new MSCP, noting this is complemented by existing Precinct car parking, and additional interim parking (133 spaces) generated through the PSB (subject of a separate planning approval). The purpose of the MSCP is to replace parking lost due to the demolition of the P17 car park, service the growth in clinical services associated with the PSB, and future proof for the expected loss of interim car parking spaces associated with master planned developments in and around the PSB.

Whilst approval is sought to construct the 8-level MSCP to accommodate up to 1,003 car parking spaces, subject to funding contributions from other projects and procurement outcomes, this capacity may need to be staged (e.g. initially constructing 7 levels with 860 spaces). In any case, the net operational car parking growth will remain at 280 spaces, which meets the 2031/32 projection for car parking requirements as per the Car Parking Demand Study (**Appendix N**). The existing and new car parking spaces available to SCHN Westmead Precinct will be operationally managed by SCHN and opened progressively as clinical activity grows due to the development and commissioning of the PSB.

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

- Demolition of The Lodge
- Construction of a new MSCP, comprising 8 car parking storeys, which is equivalent to the height of 5 storeys of the hospital;
    - Facilitating 1,003 car parking spaces for staff and visitors:
        - 280 new spaces (110 staff spaces and 170 visitor spaces) to address the car parking requirements generated by the PSB;
        - Up to 11 additional spaces of additional capacity available to service future car parking demands at CHW as a result of optimising the car parking design;
        - 679 replaced staff spaces from the recently demolished P17 staff carpark:
        - 33 replaced spaces from the removal of parking accessed via Redbank Road, for the MSCP entry ramp;
        - Of the 1,003 parking spaces, 14 are to be disabled parking spaces; and
        - Minimum 21 motorcycle parking spaces.
    - Vehicular access from Labyrinth Way and / or Redbank Road; and
    - A split-level approach to the MSCP to respond to the natural ground level.
- Opportunity for an ancillary retail kiosk and associated public amenities (subject to commercial viability assessment)
- Realignment of Redbank Road with vehicular access connection to MSCP

- Tree removal
- Associated landscape works.

Refer to proposed site plan in **Figure 14**.

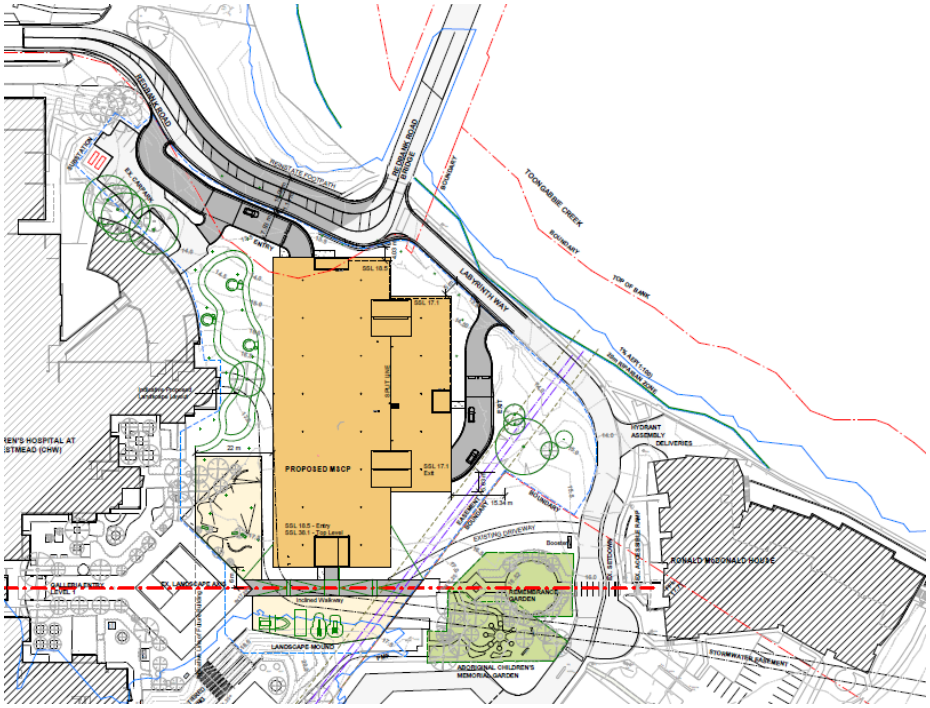

Figure 14 Proposed Site Plan
Source: Billard Leece Partnership Architect (2020)

3.2 Masterplanning principles

The Architectural Design Report prepared by Billard Leece Partnership Architects at **Appendix G** 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.

3.3 Site demolition and preparation

The proposed development includes the demolition of existing structures, including:

- The Lodge;
- The existing at-grade car parking to the north-west of the site along the edge of Redbank Road and around The Lodge (33 spaces);
- Part of the existing road along Redbank Road; and
- Part of the existing footpath and adjacent landscape north of Redbank Road.

Existing playground equipment and a shade structure located south of the site are to be removed and relocated as exempt development (i.e. not subject to SSD approval).

Vegetation and trees are proposed to be removed as part of this application. Refer **Section 3.8** for details.

A demolition plan is provided at **Appendix F** and at **Figure 15** below.

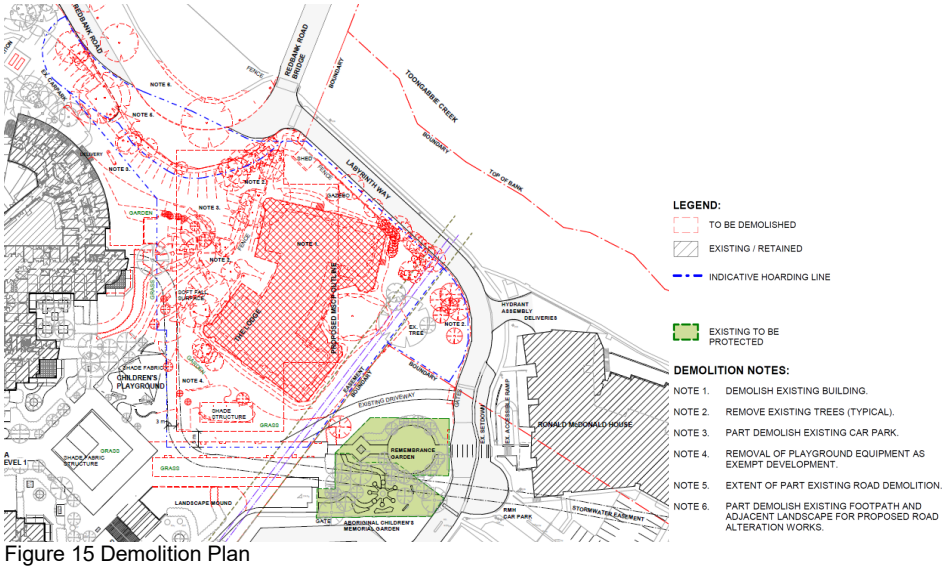

Figure 15 Demolition Plan
Source: Billard Leece Partnership Architects (2020)

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
Building height	
Storeys	8 car parking storeys, which is equivalent to the height of 5 storeys of the hospital
Highest RL	42.1 to Upper Parapet 43.1 to Lift Overrun
Parking spaces (total)	1,003
Staff	789
Visitors	203
Disabled	14
Motorcycle Parking	21
Jobs	
Construction (estimate)	233

3.5 Construction Staging

The indicative time frame for this stage will be from Q4 2021 to Q2 2023.

The MSCP will be constructed in one stage with the potential of combining the MSCP and PSB (subject of a separate planning approval) 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
    - Demolition; and
    - Earthworks, remediation and inground structure and infrastructure.

- Stage 2
    - Construction of the MSCP.

3.6 Built form and scale

The proposed MSCP is to be 8 storeys, equivalent to 5 hospital storeys. The MSCP will have a maximum RL of 43.1 AHD (inclusive of lift overrun).

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 siting of the proposed MSCP was guided by the Westmead Health Core Master Plan prepared by Billard Leece Partnership Architects. This Master Plan includes a Structure Plan for the Precinct, and identifies the existing CHW site to be a "Health Core" whereas the periphery of the Westmead Health Precinct is to locate "Mixed Use" land uses. As such, the proposed MSCP is situated to the periphery of the Westmead Health Precinct in accordance with the Westmead Health Core Master Plan.

The bulk and scale of the proposed MSCP are considered acceptable given the Westmead Health Precinct is characterised by an array of significant health and research buildings, and parking structures ranging from 3 to 8 storeys. The tallest building within the Westmead Health Precinct is the recently constructed 14 storey CASB, which has a maximum building height of RL 89.1m. It is noted that the future PSB is planned to be 14 storeys in height (subject of a separate planning approval).

The massing of the proposed MSCP is consistent with the long-term masterplanned CHW Redevelopment. The CHW Master Planning Design report (2019) prepared by Billard Leece Partnership Architects highlights that Redbank Road is to become a secondary precinct wide road, with an established appropriate urban character. The massing of the MSCP has been influenced by this Master Planning Design report, as it seeks to consolidate the built form of the CHW in a more compact and dense arrangement.

The proposed MSCP will have a clear setback and detached interface in relation to the existing surrounding development.

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.

Refer to Site Sections and Elevation Plans at **Figure 16** and **Appendix F**, and in the Architectural Design Report prepared by Billard Leece Partnership Architects at **Appendix G**.

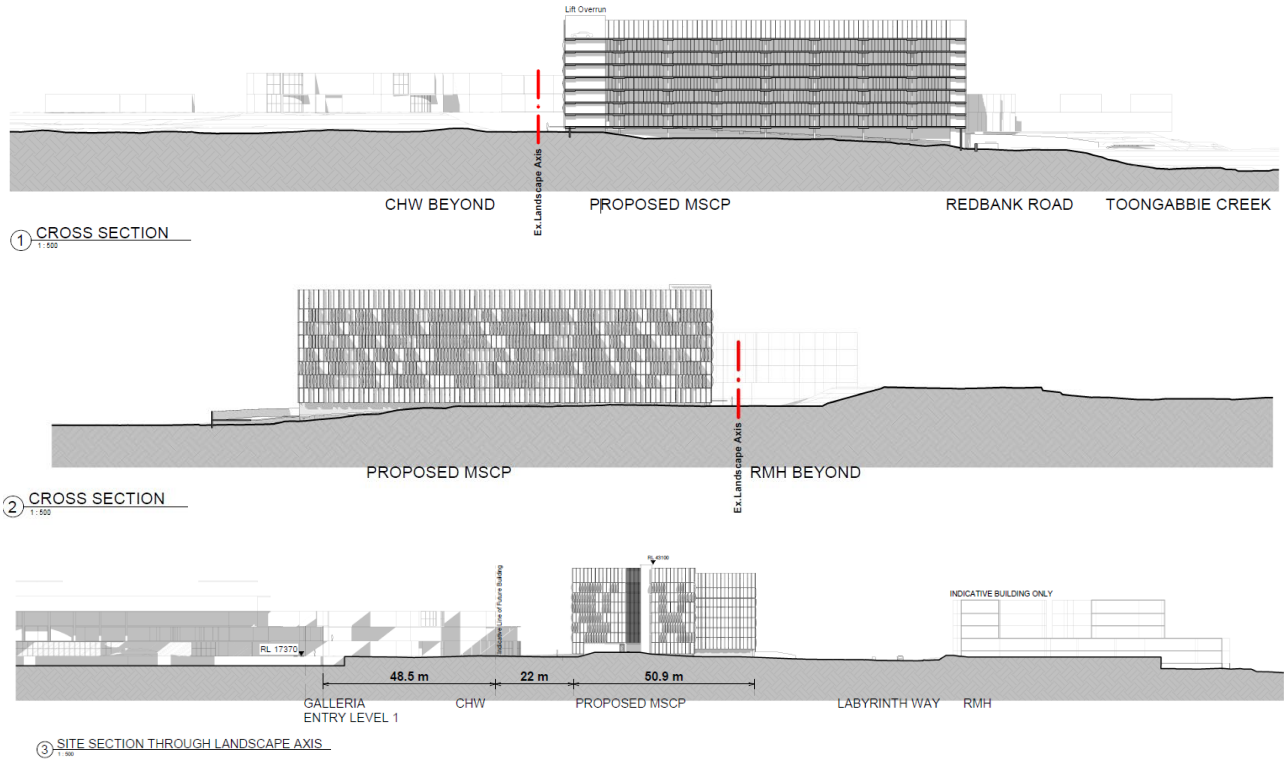

Figure 16 Site Sections and Elevations for the proposed development
Source: Billard Leece Partnership Architects (2020)

3.7 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.

A summary of proposed materials and finishes is provided below.

Location	Proposed material and finish
Wall	– Class 2 Concrete wall – Blockward wall, 190mm thick
Roof	– Lysaght bondek profiled steel formed concrete roof laid to falls
Façade	– Interpon White 1 Sable D2525 – Finish: FMTO – Adapta - Heads & Tails DX-7192-XW – 2D Pattern Standard

- 3D Pattern Metrix 3D Disks 
- Prefinished metal vertical battens 100 x 50, 110 gaps nom. open facade in front of the slab / beam face

The treatment of the proposed MSCP façade (south and west elevations) has been influenced by the site's proximity to local river networks, and the sustaining properties that this offered the local indigenous communities. Burramatta, meaning "place where eels lay down", has influenced the elliptical projecting panels to the façade, as it mimics the movement of eels through water and generally, Parramatta River aquatic wildlife (refer to **Figure 17**). Their shape references fish scales. The more articulated façade patterning is applied to the western and eastern facades, as these will have the most visual impact on the surrounding occupants.

Figure 17 Parramatta River Aquatic Wildlife
Source: Billard Leece Partnership Architects

The north and east elevations of the proposed MSCP feature building-integrated photovoltaic cells (**BIPV**) that are oriented to generate energy and follow the sustainability objectives of the project. The intent is for the solar façade to be louvred, to allow for energy absorption and to maintain the natural ventilation requirements of the car park.

For further detail 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 **Appendix F** respectively**.**

3.8 Tree removal

As identified in the Arboricultural Impact Assessment Report prepared by Tree Management Strategies at **Appendix AB**, of a total of 84 trees assessed, a total of 58 trees (Tree 159-163, 172-189, 190-211, 224-234 and 237-240) will be removed as part of the proposed development and 26 will be retained. Refer to **Figure 18** for the location of the proposed tree removal.

The total canopy cover of the proposed development prior to tree removal is estimated at 2,837m^2, the tree removal canopy is estimated at 1,943m^2 with a total remaining canopy of 894m^2. The proposed tree canopy cover as part of landscaping works is 1,180m^2. 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. It is also noted that the key sustainability initiative of including BIPV cells precludes extensive re-planting of trees around the north and east facades of the proposed MSCP; hence, landscaping is kept low in scale.

Figure 18 Proposed tree removal – Proposed MSCP impacts plan
Source: Tree Management Strategies (2020)

Further discussion of tree removal and ecological impacts is provided at **Section 6.7** and **6.8**.

3.9 Landscaping

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

The areas of landscaping works for the proposed MSCP include:

- External extension of the Galleria (walkway from the CHW Forecourt to Labyrinth Way) to the Ronald McDonald House – this will strengthen the connection between the MSCP and the main CHW building, and facilitate access to the Toongabbie Creek riverbank walk;
- Existing Remembrance Garden (note no works are proposed in this area);
- Existing Aboriginal Children's Memorial (note no works are proposed in this area);
- Healing Garden;
- Lawn;
- Existing playground area to be relocated or replicated into new playground area – note not part of this SSD Application but Exempt Development;
- New playground – note not part of this SSD Application but Exempt Development; and
- Native bushland.

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 landscape design of the proposed MSCP public domain.

It is noted that the proposed development features BIPV cells that preclude extensive re-planting of trees around the north and east facades of the MSCP; thus, the proposed landscaping has been kept low in scale to ensure landscaping is sustainable, in accordance with solar studies undertaken at **Appendix G**.

Refer to the Landscape Plan at **Figure 19** and at **Appendix H**.

Figure 19 Landscape Plan for the proposed development
Source: McGregor Coxall

3.10 Traffic, parking, and access

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

Parking

The proposed MSCP would include a total of 1,003 parking spaces in accordance with the following:

- 110 new staff spaces to address the car parking requirements generated by the PSB;
- 170 new visitor spaces to address the car parking requirements generated by the PSB;
- 679 replaced staff spaces from the recently demolished P17 staff carpark:
    - The previous P17 car park had a total capacity of 679 spaces (555 formal parking spaces and an additional 124 vehicles via stacked parking arrangements). All 679 spaces are to be replaced within the proposed MSCP.
- 33 replaced spaces from the removal of parking accessed via Redbank Road:
    - The car park entry ramp for the proposed MSCP will require the removal of 33 parking spaces accessed via Redbank Road. These spaces will be relocated within the proposed MSCP.
- 11 additional spaces of additional capacity available to service future car parking demands at CHW as a result of optimising the car parking design;
- Of the 1,003 parking spaces, 14 are to be disabled parking spaces; and
- Minimum 21 motorcycle parking spaces will be provided in the proposed MSCP.

Access

The vehicle access to the proposed MSCP is via a one-way ramp from Redbank Road, and vehicle exit via a one-way ramp to Labyrinth Way.

The proposed entry ramp for the MSCP also provides access to an existing storage area and small substation. Access to/from the substation is expected to be infrequently needed by a small truck (assumed to be 6.4m SRV).

The primary pedestrian access to/from the MSCP would be via lifts and a ramp at the southern end of the car park. Secondary pedestrian access and fire stairs are located along the eastern and northern site frontages.

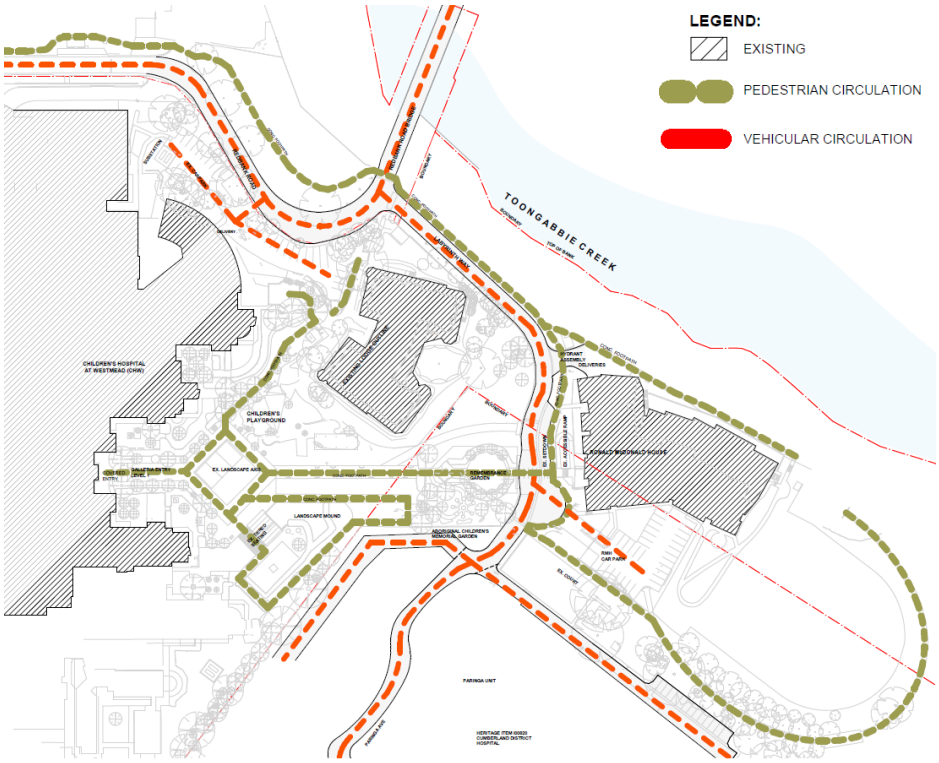

Figure 20 Site analysis – Circulation Plan for the proposed development
Source: Billard Leece Partnership Architects (2020)

Redbank Road realignment

The proposed MSCP requires realignment of Redbank Road to enable the MSCP to be located south of Redbank Road and north of a key east-west pedestrian spine.

Refer to **Section 6** for traffic, parking and access related issues. Refer **Section 3.14** below for operational staging of parking.

3.11 Utilities and Services Infrastructure

Electrical Services

An Infrastructure Management Plan for Electrical Services has been prepared by Stantec for the proposed development (**Appendix U**).

The new MSCP building will be connected to an existing Communications Room on the existing Children's Hospital at Westmead ICT network.

The proposed method of supply to the new MSCP is to re-utilise the existing supply to The Lodge. The existing supply to The Lodge is provided from the CHW existing kiosk Substation No. A1.

Upgrades to existing Substation No. A1 are not required to facilitate the development. The consumer mains from the existing Kiosk Substation No. A1 will be reticulated via underground conduits to the MSCP main switchboard.

Easements and rights of way will not need to be created for the property.

External Lighting

All external lighting will be designed and documented in accordance with:

- AS/NZS 3000 – Electrical installations “Wiring Rules”
- AS/NZS 4282 – Control of the obtrusive effects of outdoor lighting
- AS/NZS 1158.3.1 – Pedestrian area (Category P) lighting – Performance and design requirements

Refer to External Lighting Strategy prepared by Stantec at **Appendix AD**.

Hydraulic and Fire Services

An Infrastructure Management Plan for Hydraulic and Fire Services has been prepared by ARUP for the proposed development. This is attached at **Appendix T**. A description of key services is summarised below.

Domestic Cold Water

The cold water supply to the proposed development will be provided from a new connection to the 100mm authority water main, adjacent to the Redbank Road bridge. Similarly, a new connection will be provided for the fire protection water supply.

Sanitary Drainage

An existing private sewer line and an authority sewer service will be impacted by the realignment of Redbank Road. All existing services will require protection during excavation and construction works.

No new connection into the authority or private sewer main is anticipated to be required for the proposed development.

Natural Gas

Due to the proposed realignment of Redbank Road, an existing high-pressure Jemena Gas Main will need to be relocated to follow the new road alignment.

Discussions with Jemena are currently underway to determine the location of the realigned gas main. The authority gas main re-alignment will be designed, installed, managed, and owned by Jemena.

No new connection for natural gas supply is anticipated to be required for the proposed development.

3.12 Civil works

The key civil engineering works relating to the proposed development are listed below:

- Bulk earthworks;
- Erosion and sediment control;
- Freestanding retaining walls;
- Pavement;
- Stormwater; and
- Road and surface grading.

Refer to the Civil Report and Civil Plans prepared by ARUP at **Appendix R**.

3.13 Building Code of Australia

A Building Code of Australia Schematic Design Report is appended at **Appendix W**.

3.14 Staging, Construction Hours and Duration

Staging

The MSCP will be constructed in one stage with the potential of combining the MSCP and PSB (subject of a separate planning approval) 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
    - Demolition; and
    - Earthworks, remediation and inground structure and infrastructure.
- Stage 2
    - Construction of the MSCP.

Operational staging

The MSCP will be staged operationally to come on-line with parking demand across the Precinct.

1. The first stage of car parking operation would provide replacement car parking for the demolished P17 car park. There would be no net increase of parking on site during this stage of development.

2. The second stage of car parking operation to serve the growth in hospital activity associated with the future PSB (subject of a separate planning approval) would only come on-line operationally with the PSB SSD Consent becoming operational, specifically at occupation. This would provide growth of 280 additional spaces in line with hospital activity projections until 2031, plus a further 11 spaces that can be used as required, as a result of optimising the proposed MSCP design. It is noted that the operational management of the proposed MSCP will be managed by CHW.

Construction Hours

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

- Monday to Friday: 7:00am to 6:00pm;
- Saturdays: 8:00am to 5:00pm; and
- Sundays and Public Holidays: No work.

Details of proposed construction hours are provided in **Section 6.17**.

Construction Duration

The CMP prepared by PwC provides that the total construction of the SSD scope of work will be across two (2) years

Construction is expected to commence in Q4 2021 and complete in Q2 2023.

3.15 Feasible Alternatives

Following CHW Stage 2 Redevelopment and Health Core master planning, the MSCP site was selected considering the future for the CHW, enhancing strong pedestrian amenity and good connection to the road network.

Central to this master plan, Billard Leece Partnership Architects developed a Westmead Health Core Structure Plan to set the framework for future development of the campus, enabling the selection of the most suitable location of the MSCP to suit future needs. The framework utilises a realigned street network and consolidated green spaces, to ensure adequate access to future developments while maintaining open space and protecting and enhancing the natural amenity of the site. This provides for the existing and proposed CHW site and the vicinity as “Health Core” land use, while “Mixed Use” land use is allocated to the periphery of the Precinct. This allows for expansion opportunities of Health Core facilities centrally within the Precinct, while supporting uses are located to the periphery, not hindering future health core demand.

The Health Core master plan identified a few car parking locations for to service Westmead Health Precinct. The objective is to keep the parking on the periphery of the site, in order minimise vehicular traffic within the site, utilise areas that were not identified for priority Health Core expansion and promote internal pedestrianisation.

These options were further evaluated with the following parameters:

1. Appropriate separation from Landscape Axis (CHW to the current Ronald McDonald House);
2. Appropriate separation to existing Aboriginal Garden (within CHW);
3. Optimised relocation of Play Areas and Equipment (within CHW);
4. Appropriate separation to CHW and future potential stages as per the master plan;
5. Clearance to existing services infrastructure easement; and
6. Appropriate scale for the setting, whilst allowing for required number of car spaces (replacement and growth).

This identified “The Lodge” site as the optimum location for the proposed MSCP as it most comprehensively met these parameters. It also provides the following additional benefits:

- Good connection and intuitive wayfinding into the existing CHW galleria (main public thoroughfare) which links directly into the PSB.
- Creates zones co-located to the MSCP for potential Child Care facilities and Retail (subject to further commercial feasibility assessment), providing a welcoming amenity for staff and visitors.

This forms the proposed development under this SSD application.

The consequences of not carrying out the development would be a lack of car parking in the Westmead Health Precinct, which provides replacement car parking to those lost from the demolition of the P17 car park and to support the new PSB (subject of a separate planning approval) and other health facilities, in terms of availability to staff, visitors and patients who provide or use those health services.

4. Consultation

This section provides a summary of the consultation activities carried out to inform the design and assessment of at 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 EIS.

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), 27 November 2020 (video conference) and 1 February 2021 (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**
Council noted the following should be considered as part of the CHW Stage 2 project: – Hawkesbury Road activation; – Provision of improved connection(s) to green space; and – Opportunities for collaboration with the Powerhouse museum.	The CHW Stage 2 Masterplan was developed based on the following design principles: – 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. Opportunities for collaboration will be explored as part of the retail strategy.
City of Parramatta Council Comment - 24 July 2020	**Response**
Consideration of renewable energies and recycle water	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.

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 at **Appendix L**. 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. – 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: *"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 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."
Preliminary Traffic Assessment issued to TfNSW.	TfNSW advised that there were no particular issues or concerns.
TfNSW Comments - 22 July 2020	**Response**
Draft Transport Impact Assessment issued to TfNSW on 14 December 2020 and 21 December 2020 with the following comment received on 21 January 2021: "Generally, the methodology appears satisfactory and the following additional comments are provided for your consideration: 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.	The Westmead Sustainable Travel Plan prepared for Westmead Hospital CASB (SSD-7642) will be updated and developed to include the Children's Hospital Stage 2 Redevelopment.
Draft Transport Impact Assessment issued to TfNSW on 14 December 2020 and 21 December 2020 with the following comment received on 21 January 2021: "Generally, the methodology appears satisfactory and the following additional comments are provided for your consideration: 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.	The recommendation of a Parking Management Strategy may be prepared by SCHN prior to operationalising the MSCP.
Draft Transport Impact Assessment issued to TfNSW on 14 December	End of Trip (EoT) facilities have been provided across the Westmead Health

2020 and 21 December 2020 with the following comment received on 21 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.	Precinct and are available to SCHN staff. The EoT part of CASB (SSD-7642) will be operational in the near future. Furthermore, a bicycle cage will be constructed within the existing CHW (subject of a REF) providing secure bicycle parking and storage facilities.

4.2 Local Aboriginal Land Council

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

The assessment process has been 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 was completed on 1 April 2021.

4.3 Government Architect NSW / State Design Review Panel

A meeting regarding the CHW Stage 2 redevelopment works was held with the Government Architect NSW Office (**GAO**) 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**).

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	
Integration of the proposal with the Structure Plan currently under 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.	The proposed development has been informed by the CHW 2 Zonal Master Plan, Westmead Health Core Structure Plan, and Westmead Place Strategy. The built form of the proposed development was also developed in alignment with the parameters confirmed in the CHW 2 Zonal Master Plan. A Consumer and Community Engagement process was undertaken to ensure the project meets the needs of patients, families, staff, and the community. Refer to the Architectural Design Report at **Appendix G.**

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.	The proposed development will feature an upgraded external extension of the Galleria, providing continuous pedestrian connection from the future PSB (subject of a separate planning approval) to The Lodge. The proposed development enhances the network of indoor and outdoor open spaces that better connects the Westmead Health Precinct, supporting social and environmental resilience and sustainability within the site. Refer to Landscape Strategy at **Appendix 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.	The IFEB is no longer part of the proposed development.
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.	The IFEB is no longer part of the proposed development.
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.	The proposed development does not have a street frontage to Hawkesbury Road.
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 Rd, noting hard paved surfaces and vehicular areas should be minimised.	The IFEB is no longer part of the proposed development.
Explain how activation and enlivening of Kids Park is envisioned within its built context.	The KIDSPARK has been designed to be open and engaging to the broader local community, with 24/7 access. 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. It also has been designed to be flexible – with the ability to be programmed for a variety of events to occur. The design team is currently exploring potential retail opportunities which could be

	included within KIDSPARK to service the hospital and wider community.
Illustrate potential future development to the south of Hawkesbury Rd and how this is envisioned to integrate/interface with the entry zone.	This is subject to further collaborative design with DPIE and the Cumberland campus Stakeholders.
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.	The proposed development extends the Galleria to Ronald McDonald House, facilitating access to the Toongabbie Creek riverbank walk. The Toongabbie Creek riparian corridor is enhanced and expanded through the use of native bushland species along the eastern side of the proposed development, retaining existing trees where possible. The use of predominantly native tree species references the existing character of the site, whilst the introduction of exotic deciduous trees ensures the space is light and warm throughout winter. Refer to the Landscape Strategy at **Appendix I** for further detail regarding landscaped areas.
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.	The proposed development seeks to provide landscaped external spaces around the proposed development, providing much needed green space for visitors and staff.
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 naming, landscape, materials, plant selection, art installations/murals, wayfinding devices, paving, colour, texture and so on.	The key design principles for the architectural and landscape design are derived from the site's unique qualities – the convergence of three rivers. This also acknowledges the river setting's importance as a 'meeting place' for the traditional owners. To date extensive and ongoing consultation has taken place with various local Aboriginal representatives to inform the design – focused on creating spaces that are welcoming for both the local community and regional kids and families. 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, that can be appreciated by a broader indigenous community- ''see the sky, touch the earth'. 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. A significant point to note is the considered protection of the existing Aboriginal children's garden on the site. The proposed MSCP is designed with an appropriate building setback from the space and identified on all site plans.
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.	The project team is the process of engaging an indigenous spatial designer.
Clarify how site topography will be incorporated into the east/west connections and spatial opportunities optimised.	The east west connection occurs primarily on L01 – RL 17.4 through the proposed MSCP lift lobby entrance and the existing CHW Galleria. The existing galleria transition ramp connects the public and staff to Level 02 – RL 21.6. The L01 galleria entrance has the connection to the eastern green space, the proposed MSCP and Ronald McDonald House.
Clarify how the proposed link to Toongabbie Creek will be incorporated into the massing of existing buildings.	The landscape design for the proposed MSCP extends the Galleria to the Ronald McDonald House, strengthening the connection between the MSCP and the main hospital buildings at the CHW, and facilitating access to the Toongabbie Creek riverbank walk. The Toongabbie Creek riparian corridor is enhanced and expanded through the use of native bushland species along the eastern side of the proposed MSCP, retaining existing trees where possible.
Illustrate key vantage points both within and outside of proposed buildings where a view of the sky can be captured.	The proposed MSCP will improve connections to the KIDSPARK which is designed to be open to the sky.
Illustrate how the project has considered and capitalised on opportunities specific to the site: for example district views from rooftops, activation of the carpark at ground and roof levels, etc.	The proposed MSCP and vehicle movement through the existing roads was considered extensively through consultation with our traffic engineer. Countless traffic sketches and workshop time was dedicated to designing a well-considered vehicle flow path of separate entry and exit journeys. The proposed MSCP site has an existing public playground that is to be given a refresh as part of an exempt development (i.e. not requiring approval). The playground space is an important function of the site addressed to enhance the current facility for the community.

Illustrate the sequence of movement from future public transport nodes to entry points and across and through the site along the proposed axial connections.	Refer to the Architectural Design Report at **Appendix G.**
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.	Large scale site sections were presented as part of SDRP Session 2. Refer to Landscape Strategy at **Appendix I**.
Session 2 Second Review – SDRP #6 on 2 November 2020	
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.	SDRP comments were noted. The proposed pedestrian canopy is not part of the scope of works under this SSD application.
Covered walkways appear overscaled, requiring further revision and articulation. Illustrate their impact on useable open spaces.	The proposed pedestrian canopy is not part of the scope of works under this SSD application.
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.	This will be provided at the next SDRP session. Shadow studies from part of this application. Refer to the Solar Study at **Appendix F** and the Architectural Design Report at **Appendix G.**
Further link the green spaces between the Kids Way and the Kids Park.	The proposed MSCP will include an upgrade external extension of the Galleria, providing continuous pedestrian connection from the future PSB (subject of a separate planning approval) to Ronald McDonald House via KIDS Way and KIDSPARK.
Upper levels and the façade design should enhance and exhibit green 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.	No hospital patients are to use the proposed MSCP as a place for human habitation for healing.
The extent of 'soft fall' surfaces to be kept to a minimum. Provide porous landscaping elements to help the land retain rainfall.	Soft fall surfaces are to be provided to the playground area, south east of the proposed MSCP. Porous landscaping such as lawn and native grass mix are to surround the proposed PSB, to help the land retain rainfall.
The expanded carpark is closer to the river's edge than previously illustrated– examine possible reconfigurations to allow larger green spaces at ground level.	The site for the MSCP has multiple inherent man-made constraints including the roads, easements, the playground, monuments and required vehicle accessways to respect. The natural site feature of Toongabbie creek and the topographical fall of the land have also

	been key considerations for the design of the MSCP. During concept and schematic design, the team rigorously tested configurations with the above constraints considered for the car park site design. It is significant to note, the existing Lodge building to be demolished for the MSCP has a relatively large building footprint that is within a similar proximity to the creek. The proposed MSCP building will in effect replace the footprint of the existing Lodge. Labyrinth Way is serving as the separation of the site from the natural riparian zone and creek waterway system and will be retained as existing. The existing site has large landscaped spaces of hard and soft surface. The proposed MSCP is designed closer to the existing roads at the north and respects the landscaped space to the south of the building. The landscaped axis from the galleria entrance to RMH will have a refreshed finish with the current activity of children and people movement maintained with the proposed design.
Entrance 6 should be expanded to feel generous and not secondary to other entrances on the site.	The main pedestrian movement through KIDSPARK will be diagonal, from the future light rail stop, drop off and main carpark. The Entrance 6 (north-south path) is generous in width.
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.	The proposed development will improve pedestrian connectivity on site, linking the proposed MSCP to the KIDSPARK.
Where possible, provide natural ventilation / operable windows to common areas, wards and patient rooms.	The proposed development does not feature any habitable rooms for hospital patients and staff.
In the next SDRP, present the proposed sustainability initiatives and how these have been incorporated into the building and will enhance user experience.	As part of the Design Development phase of the project, ESD initiatives will be further refined and developed. This will be presented at the next SDRP Session.
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.	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. 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.
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.	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. Refer to the Landscape Strategy at **Appendix I.**
Incorporate design guidelines into the masterplan to protect open spaces over time and mitigate potential negative effects such as wind and overshadowing.	The SDRP and SSDA application is limited to the MSCP and associated public domain. Overshadowing and wind studies will be presented at the next SDRP. Refer to the Architectural Design Report at **Appendix G,** for analysis of the impacts for this application.
Session 3 Third Review – SDRP #1 on 10 February 2021	
The location of the carpark, however, is still problematic and its resolution requires further careful consideration. The carpark occupies a prominent location on the campus with favourable aspect and views to the creek and the treatment of its façade, its scale, the building volume and its relationship to other buildings on the site require thoughtful design development.	The location of the Multi-Storey Carpark has been located to align with the Westmead 2036 Place Strategy, specifically to keep parking outside of the "Health Core". In consultation with Westmead Precinct Partners, the Health Core Master Plan determined that parking should be accessible from arterial roads into the Precinct and be at the periphery of the site. The final location of the CHW MSCP achieves these principles, and allows staff and visitors to conveniently arrive to and depart from the periphery of the Precinct, reducing the volume of vehicles circulating across the hospital. The carpark location and design avoid the existing easements and the journey to and from Ronald McDonald House whilst activating the periphery of the precinct, which is bounded by Toongabbie Creek. The natural environment, open green space and landscaped areas of the MSCP provide a welcoming entry/exit point for visitors. In combination with the playground and retail (subject to further commercial feasibility), seek to enhance the staff and patient experience. The facade design of the MSCP draws inspiration from its proximity to the local river networks and sustaining properties that it offered the local Indigenous communities. In support of the concept, the south and west elevations are composed of a rhythm of feature aluminium panel modules. The panels are arranged across the facade to create a pattern that mimics the movement of eels through water.

	A comprehensive response on the MSCP location and associated design was provided to GANSW in the briefing package dated 30 March 2021.
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.	Refer to the response above. The landscaped spaces adjacent the proposed carpark include the public playground and periodical special events for the children. The proposed site design supports the continued occupation for events and a renewed public playground as part of an exempt development.

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 pf 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	NSW State Priorities are fourteen priorities unveiled by the NSW Premier, in a commitment to making a significant difference to enhance quality of life. Relevant State priorities are: – Improving service levels in hospitals; – Improving outpatient and community care; – Greener public spaces; – Greening our city; – Government made easy; and – World class public service. The proposed development is in-keeping with the NSW State Priorities as it will facilitate the expansion of the Westmead Health Precinct as a regionally significant health precinct. It supports the provision of improved health services by ensuring adequate parking facilities and efficient access to the Hospital is provided to visitors, patients, and staff.
NSW State Infrastructure Strategy 2018-2038: Building Momentum	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. 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'. Additionally, another strategic direction in the Strategy is to integrate land use and infrastructure planning. The proposed development aligns with the Strategy as the proposed scope of works will contribute to the redevelopment and expansion of the Westmead Health Precinct. As CHW

	increases its health services as part of the CHW Stage 2 Redevelopment, this in turn heightens the demand for better traffic management and parking facilities on site to support development growth. As such, the proposed development supports CHW's land use as a health services facility by providing supporting parking infrastructure.
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 creating vibrant connected centres to allow for successful places. The proposed development supports this by providing high-quality transport facilities (parking) that seeks to improve access to medical services at the CHW and broader Westmead Health Precinct. As part of the Vision for Transport, the Strategy highlights an aim towards encouraging safe and secure travel. The proposed development has considered the Crime Prevention Through Environmental Design (CPTED) principles during the design development stages of the proposed MSCP, to minimise and, where possible, eliminate foreseeable risks associated with the facility design to staff and others. Refer to **Section 6.19** for how safety and security has been integrated into the proposed development.
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. <u>Physical activity – response:</u> – Improved movement through the Westmead Health Precinct as the proposed MSCP is to be positioned at the periphery of the Campus, with good pedestrian connections into the Precinct. This allows synergistic core health facilities centrally within the Precinct. This removes the need to park central to the Precinct, essentially reducing impediments. <u>Transport and physical connectivity – response:</u> – The proposed development improves connectivity to the existing circulation patterns through the hospital. Staff and visitors will be able to conveniently arrive to and depart from the periphery of the Westmead Health Precinct. <u>Quality employment – response:</u> – The proposed development will provide construction jobs in an area close to housing and transport options. <u>Community safety and security – response:</u> – The design satisfies an enhanced sense of community safety and security. – External lighting will be provided to the landscaped areas and pedestrian pathways serving the MSCP, to meet the Australian Standard for lighting for crime prevention.

	– The 24/7 and public nature of hospitals allows for natural passive surveillance. Public open space – response: – The site area includes passive and active landscape areas accommodating a diversity of users. Social infrastructure – response: – The proposed development will directly improve the accessibility of public health services. – The proposed development improves access to a range of facilities to attract and support a diverse population, as the development will improve connectivity to public health care services. – The development responds to current and project community needs in terms of health care provision, and provides for supporting parking facilities to visitors, patients, and staff. Environment and health – response: – 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 Guide seeks to promote a networked urban ecosystem with strong connectivity to help create a healthier, more liveable, and resilient place to live. The proposed development supports the outcomes established in the Draft Greener Places Design Guide as it aims to contribute towards continuous pedestrian connections between the existing CHW and the new Ronald McDonald House east of the site. The proposed development also includes landscaping works that will improve amenity close to the existing network of waterway paths, south of Toongabbie Creek and west of the Parramatta River. Overall, the proposed development does improve connectivity to the Westmead Health Precinct, and also seeks to provide landscaping. Therefore, the proposed development is considered consistent with the Draft Greener Places Design Guide. Refer to **Section 6.8** and **6.9** on tree removal and landscaping including discussion of tree canopy cover.
The Greater Sydney Region Plan – A Metropolis of Three Cities (2018)	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. The proposed development is consistent with the vision of the Greater Sydney Region Plan as the proposed scope of works will facilitate CHW Stage 2 Redevelopment and reinforce the Westmead Health Precinct as a significant employment, education and health services hub.

	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. 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 CHW Stage 2 Redevelopment, 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. The SEARs require consideration of Objective 30 of the Greater Sydney Region Plan. Objective 30 is that 'urban tree canopy cover is increased'. The proposed development expands the urban tree canopy in the public realm by redefining the green character of the surrounding gardens and pedestrian connections, 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. 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. The tree canopy to remain in the development site is 894m^2 and the tree canopy cover proposed as part of landscaping works is 1,180m^2. Refer to **Section 6.8** and **Section 6.9** on tree removal and landscaping, including discussion of tree canopy cover.
Central City District Plan	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 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 access to CHW to provide health services to children who are sick and require medical help. Ultimately, this will ensure that the District's children 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 support the expansion of health services to meet the growing health demands that accompany an increasing population. – *Planning Priority C4 – Fostering healthy, creative, culturally rich and socially connected communities* The proposed development aligns with Planning Priority C4 as it creates an improved transport network with better connectivity across the Hospital precinct. – *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 supports 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 (LSPS) 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 Precinct, as the proposed development will foster improved access to world-class health care. 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 supports productivity and increased employment density within the Parramatta LGA. The proposed development will offer employment opportunities.
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 SCHN. The positioning of the proposed MSCP was established within the Westmead Health Core Master Plan, as it met the principles of keeping car parking to the periphery of the Health Precinct, with easy access from arterial roads.
Westmead 2036 – Draft Westmead Place Strategy	Westmead 2036 is a key document that outlines the vision and future planning needs of the Westmead 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 connections to surrounding green places and spaces within the wider Westmead Precinct, including Toongabbie Creek. It also has the opportunity to mitigate the Urban Heat Island effect by creating greener places, throughout the site, thereby creating a comfortable and liveable environment for hospital and patients alike. Sustainability is reflected through the proposed development, as discussed with the consideration of ESD principles in the ESD report prepared by Steensen Varming (**Appendix X**) and at **Section 5.4**.
NSW and ACT Government Regional Climate Modelling (NARCliM) climate change projections	At the current stage, the MSCP proposes the following strategies in response to the CSIRO projected impacts of climate change. <u>Hotter days and more frequent heatwave events:</u> – Passive building design features to reduce/dampen the effects of increasing temperature, such as façade and roof top solar shading. – The MSCP is naturally ventilated. No air conditioning is proposed which will assist with reducing peak electricity demand across the hospital campus, as cooling demand increases due to temperature rise. – Landscaping has also been proposed to reduce urban heat island effect. – Possibility of roof top solar shading will shade the top-level carpark deck, assisting with reducing urban heat island effect whilst also generating onsite renewable energy. – Consideration of solar panels with greater operating temperature range. <u>Extended drought periods:</u> – Consideration of native low water landscaping to reduce potable water consumption. – Consideration of rainwater reuse and low flow fixtures and fittings. <u>More extreme rainfall events:</u> – Consideration of increased drainage capacities to reduce flooding of roofs and hard surfaces. – Assessment of design of the building to address post development probable maximum flood (PMF) level. <u>Gustier wind conditions:</u> – Façade shading to assist with reducing the impact of gustier wind conditions. – Façade shading will also consider gustier wind conditions in the fixing details. – Solar panels fixing details will be considered against gustier winds. – Landscaping to buffer strong winds to outdoor areas.

	Material selection: – Use of and façade materials to reduce damage caused by hail. – Consideration for solar panels with impact resistance (against hail damage).
Sydney's Cycling Future 2013	Sydney's Cycling Future is a long-term plan for cycling in Sydney that proposes to create safe, connected cycling networks by: – Creating new or improve existing infrastructure and facilities, particularly within 5 km of major centres or near key destinations; – Fixing missing links; – Creating hierarchy of safe cycling routes; and – Delivering improvements with major infrastructure projects. The Westmead Health Precinct will benefit from identified cycle network improvements including the Parramatta Valley Cycleway, cycleway improvements in Parramatta Park and the M4 Cycleway. Although no end-of-trip facilities or bike parking are proposed within the MSCP, the Transport Assessment (**Appendix N**) notes that there are sufficient bike facilities offered across the Westmead Health Precinct that encourage active transport patronage, including: – End of trip facilities will be provided 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 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, generally set out with the Australian Standards. – Recently opened CASB – 8 showers, change rooms, and 90 bike spaces. – The existing CHW has centralised end-of-trip facilities including 8 showers and change rooms located near the new bicycle storage. – PSB – 6 staff showers, and change rooms available throughout the building, co-located with clinical departments (subject of a separate planning approval). These facilities combined provide considerable end-of-trip facilities for those arriving to the site via bicycle or by foot.
Sydney's Walking Future 2013	Sydney's Walking Future is an action plan to promote more walking in Sydney. The proposed development provides the opportunity to improve pedestrian connectivity across the Westmead Health Precinct, particularly to the Toongabbie Creek riverbank walk. The landscape design for the MSCP extends the existing CHW Galleria (walkway from the CHW Forecourt to Labyrinth Way) to the Ronald McDonald House, contributing towards continuous pedestrian connections between the existing CHW to Ronald McDonald House.

Sydney's Bus Future 2013	Sydney's Bus Future is the NSW Government's long-term plan to redesign Sydney city's bus network. The plan has now been superseded by the Future Transport 2056 *Strategy* and planning has been revised for most of the "rapid bus routes" identified for Greater Parramatta, however it is still a useful guide for bus network and infrastructure planning. The site is serviced by several routes, with a range of frequencies, using the T-way along Mons Road and Darcy Road, connecting to north west Sydney. This includes route 665 which operates between Rouse Hill and Parramatta on a 15 minute frequency. In addition, the following routes service the site: 705, 708, 711, 712 and 818.

5.3 Legislation

Environmental Planning and Assessment Act 1979 (EP&A 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) to promote the social and economic welfare of the community and a better environment by the proper management, development, and conservation of the State's natural and other resources,	The proposed development seeks to promote the social welfare of the community by facilitating the growth of the Westmead Health Precinct as a world-class innovation district. The proposed environmental impacts have been appropriately mitigated as detailed in **Section 8** of this report.
b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment,	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. Building Integrated Photovoltaic solar panels are considered on two louvered facades of the MSCP, with energy being distributed to serve the MSCP and the broader Westmead Health Precinct. The proposed MSCP incorporates a range of ESD initiatives as outlined in the ESD Report prepared by Steensen Varming at **Appendix X**.
c) to promote the orderly and economic use and development of land,	The proposed development seeks to deliver necessary parking facilities to support the expansion of health care facilities within the Sydney Children's Hospital Network.
d) to promote the delivery and maintenance of affordable housing,	The provision of affordable housing is not relevant to the proposed development.
e) to protect the environment, including the conservation of threatened and other species of native animals and plants,	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.

	ecological communities and their habitats,	The BDAR Waiver Request prepared for the proposed development (**Appendix Y**) 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. The BDAR Waiver was approved by DPIE on 25 November 2020 and EES on 11 November 2020. Refer to **Appendix Z**.
f)	*to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage),*	The proposed development has been designed in consideration of the sustainable management of buildings and cultural heritage of the site and context. A Heritage Impact Assessment has been carried out by Jacobs (**Appendix J**) and has concluded that it is unlikely that the proposed development will cause any adverse impact to the Old Government House and Government Domain, the Cumberland East Precinct of the Cumberland District Hospital Group. There is also no adverse physical impact identified for the Glengariff/Wisteria Gardens Precinct. 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.
g)	*to promote good design and amenity of the built environment,*	The proposed development, including the siting, built form and materiality of the proposed MSCP is guided by the site's existing surroundings and built form, topography, surrounding landscape, views, and solar access. Maintaining and improving amenity at CHW has been a key driver of the design. Refer to the Architectural Design Report at **Appendix G**.
h)	*to promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants,*	The plans and reports prepared by the consultant team have been prepared in line with relevant provisions and standards to ensure proper construction and maintenance of buildings is achievable, and to protect the health and safety of occupants, during the construction and operation phase of the hospital. The proposed development will be maintained in accordance with standards and guidelines of Health Infrastructure NSW and SCHN.
i)	*to promote the sharing of the responsibility for environmental planning and*	Being SSD, the Minister for Planning and Public Spaces is the relevant consent authority for the proposed development. Parramatta City

	assessment between the different levels of government in the State,	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.
j)	*to provide increased opportunity for community participation in environmental planning and assessment.*	Consultation has been undertaken by Health Infrastructure NSW on the proposed development and the wider CHW Stage 2 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 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 *Fisheries Management Act 1994*,	Not required
(b) an approval under section 15 of the *Mine Subsidence Compensation Act 1961*,	Not required
(c) a mining lease under the *Mining Act 1992*, Note. Under section 380A of the *Mining Act 1992*, a mining lease can be refused on the ground that the applicant is not a fit and proper person, despite this section.	Not required
(d) a production lease under the *Petroleum (Onshore) Act 1991*, Note. Under section 24A of the *Petroleum (Onshore) Act 1991*, a production lease can be refused on the ground that the applicant is not a fit and proper person, despite this section.	Not required
(e) an environment protection licence under Chapter 3 of the *Protection of the Environment Operations Act 1997* (for any of the purposes referred to in section 43 of that Act),	Not required
(f) a consent under section of the *Roads Act 1993*,	Not required
(g) a licence under the *Pipelines Act 1967*.	Not required

Section 4.42 of the EP&A Act	Response
(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 *Protection of the Environment Operations Act 1997*—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
(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 Y**. 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 Director of Social and Infrastructure Assessments 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 11 November 2020. Refer to **Appendix Z.**

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 it is located a considerable distance away (approximately 1.3 kilometres). Additionally, the Heritage Impact Statement prepared by Jacobs (**Appendix J**) concludes it is unlikely that the proposed development will cause any adverse impacts to this item of heritage significance. Refer to **Section 6.10** 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 Certificates at **Appendix C** do not regard the site to be significantly contaminated land in accordance with the CLM Act.

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 was undertaken confirming that the future proposed works in this area will avoid areas of high Aboriginal archaeological potential, essentially having nil impact on Aboriginal Cultural Heritage. An ACHAR is provided at **Appendix K**.

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 6.11** 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 Heritage Impact Statement was prepared by Jacobs to accompany this SSD Application (**Appendix J**). This concludes that there are no built heritage items in the footprint of the proposed MSCP. The site is within the Parramatta Archaeological Management Uni (**AMU**) 3070, and has been assessed as having “moderate” archaeological research potential and being of local heritage significance. However, given the proposed MSCP footprint is within the previously disturbed area, it is considered unlikely that any archaeological deposits remain.

The study area is also in the Precinct of the Cumberland District Hospital Group, and within prose proximity to the Glengariff/Wisteria Gardens. The World, National, State, and local heritage-listed Old Government House and Government Domain shares a boundary with Glengariff/Wisteria Gardens Precinct. It is noted in the Heritage Impact Statement that it is unlikely that the proposal will cause any adverse impact to the Old Government House and Government Domain, the Cumberland East Precinct of the Cumberland District Hospital Group. There is also no adverse physical impact identified for the Glengariff/Wisteria Gardens Precinct.

Refer to **Section 6.10** below for details.

Water Management Act 2000

The area of proposed works is within close proximity to Toongabbie Creek on waterfront land. Waterfront land is the bed of any river, lake or estuary, and the land within 40 metres of the highest bank of the river, the shore of the lake or the mean high-water mark of the estuary. Works to waterfront land as defined under the Water Management Act 2000 ordinarily require controlled activity approval. However, Section 4.41 of the EP&A Act provides that controlled activity approval under the Water Management Act is not required where consent is sought under an SSD application.

The proposed Redbank Road realignment, northern extents of the MSCP building, the entryway, and exit way ramps are within 40 metres of Toongabbie Creek. However, the proposed works do not modify the creek-side alignment of Labyrinth Way which currently forms a physical boundary to the creek and existing riparian vegetation. Refer to the Integrated Water Management Plan within the Civil Report that has been prepared for the proposed development at **Appendix R**.

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; and
- 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 Y**) found no significant or threatened flora or fauna species, communities or habitat to be present on the subject site and no remnant vegetation. It is concluded highly unlikely that a significant impact to threatened species would occur as a result of the proposed development. BDAR Waiver approval was granted on 25 November 2020. Refer to the waiver approval at **Appendix Z**.
- The land is impacted by asbestos contamination and this will be remediated in accordance with the RAP.
- There will be suitable stormwater quality and erosion and sediment control measures in place.

Inter-generational equity

The proposed development will enable the health, diversity and productivity of the environment, facilitating it to be enhanced for future generations as the proposed development will support the CHW Stage 2 Redevelopment.

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 Y**. 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 paediatric healthcare 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	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' is defined under Parramatta LEP 2011 as a building or a place and includes ancillary facilities such as car parking. 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.
State Environmental Planning Policy (Infrastructure) 2007 (ISEPP)	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. 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. 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. As above, 'hospital' is defined under Parramatta LEP 2011 as a building or a place and includes ancillary facilities such as car parking. 'Hospital' is identified as a land use under the 'health services facility' group land use term. Note that subject to Clause 58B (b) and (c) of the ISEPP, all wayfinding signage will be undertaken as exempt development, as it is: *(b) development for the purposes of information boards and other information facilities (except for visitors' centres),* *(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.*
State Environmental Planning Policy No. 55 – Remediation of Land (SEPP 55)	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. 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. Refer to **Section 6.15** below on contamination and remediation.
Sydney Regional Environmental Plan (Sydney Harbour Catchment) 2005 (Sydney Harbour SREP)	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. The site is not situated in a Foreshore and Waterways area and does not contain heritage items under the SREP. 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.

SEPP No. 64 – Advertising and Signage	<u>Way finding signage</u> 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 MSCP. The proposed wayfinding signage will be designed in response to the architectural and visual character of the MSCP and surrounding Precinct. The proposed signage will enhance legibility across the CHW and will ensure the proposed MSCP can be identified from the street. <u>Building identification signage</u> Two (2) building identification "zones" are nominated on the following building elevations with dimensions: – North elevation: proposed building identification signage 7.5m diameter. – South elevation: proposed building identification signage 1.2m x 7.5m. 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.
Objectives	The signage is compatible with the desired amenity and visual character of an area. It is in keeping with the signage of the PSB (subject of a separate planning approval) and CHW, providing effective communication all directions to provide way finding and identification to the MSCP. It will have high quality design and finish that integrates with the building façade.
Character of the Area	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.
Special Areas	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 sign at the north elevation will be visible.
Views and Vistas	Refer above response.
Streetscape, Setting or Landscape	The signage does not extend beyond the building facades and is in keeping with the form and scale of the building. Signage is limited to two elevations. Overall, the signage is in keeping with the hospital Precinct and in particular, the placement and style of the CASB building identification signage.
Site & Building	Refer above response.
Associated devices and logos with advertisements and	Details of any safety devices and logos will be developed at a later stage.

advertising structures	
Illumination	Illumination details will be developed at a later stage. Any illumination will be designed to avoid unacceptable glare or light spill.
Safety	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 Investigation at **Appendix P**.
Draft State Environmental Planning Policy (Environmental)	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. The Draft Environment SEPP contains provisions that are not dissimilar to the gazetted Sydney Harbour SREP.

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 by providing an ancillary service required for the day to day operation of health services.
2.2 – Zoning of land to which Plan applies – SP2 Infrastructure	Yes	The proposed works are for the purposes of a car park associated with a health services facility and are consistent with the objectives of the SP2 Infrastructure. 'Hospital' is defined under Parramatta LEP 2011 as a building or a place and includes ancillary facilities such as car parking. 'Hospital' is identified as a land use under the 'health services facility' group land use term. The proposed works are consistent with the objectives of SP2 Infrastructure as it will provide parking facilities that support the expansion of CHW, and operation of the broader Westmead Health Precinct.
5.10 – Heritage Conservation	Yes	The Heritage Impact Assessment at **Appendix J** finds that there is little to no impact on the heritage significance of the area. Refer to **Section 6.10** below.
6.1 – Acid Sulfate Soils	Yes	The site is identified as containing Class 5 Acid Sulfate Soils (ASS) pursuant to Clause 6.1 of PLEP 2011. Substantial in-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. Refer to Geotechnical Investigation Report at **Appendix O**.
6.2 - Earthworks	Yes	A RAP was prepared for the proposed development by JBS&G at **Appendix Q**. 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. Refer to the Civil Report and at Appe**ndix R**.
6.3 Flood Planning	Yes	As indicated by the Section 10.7 (2) & (5) Planning Certificates for the site (**Appendix C**), Lot 101 DP 1119583 and Lot 1 DP 1194390 is affected by a 100-year Average Recurrence Interval flood event. Refer to an assessment of flood impacts at **Section 6.12**.

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 7.12 Contributions Plan 2011

Local infrastructure contributions are legislated under the provisions of Section 7.12 of the EP&A Act and authorise Parramatta City 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. Planning Circular D6 whilst no longer current continues to provide historical information and advice on planning system matters. Planning Circular D6 confirms the consistently held view that Health Infrastructure NSW, as a Crown authority, provides critical community infrastructure and that to levy any developer contribution on provision of public health facilities increases the cost of such infrastructure for all taxpayers in the State.

On the basis that the proposed development will be supporting 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 development was designed in response to the envisaged future density of the Precinct under the Westmead Health Core Masterplan and CHW 2 Zonal Master Plan. The location of the proposed MSCP was influenced by the Structure Plan for the Precinct, which seeks to position core health facilities central to the existing and proposed CHW site, while “Mixed Use” supporting land uses are allocated to the periphery of the Precinct. The proposed development is not positioned centrally, as this would hinder synergies across existing and future health core facilities.

The maximum height of the proposed MSCP, being RL 43.1m, is derived from the following considerations:

- To establish a contextual relationship with the scale and height of the nearby CHW buildings, particularly the recently built CASB with its height at RL 89.1m and the proposed PSB (subject of a separate planning approval) that is of a similar scale;
- To establish a framework for future scale; and
- To deliver sufficient parking capacity to support the growth of the CHW.

To mitigate privacy impacts, the proposed MSCP will have a clear setback and detached interface in relation to the existing surrounding development at the CHW. Moreover, the proposed building façade of the MSCP is arranged to mitigate headlight impacts from vehicles and overlooking impacts.

For further discussion on built form, refer to the Architectural Design Report at **Appendix G.**

6.2 Visual

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

- Ronald McDonald House; and
- CHW.

The MSCP is located to the north of the CHW Campus and is approximately 90m from residential properties on Hawkesbury Road. The proposed MSCP will be strictly used for parking with no operational staff, so there will be minimal people viewing into residential properties.

The proposed development incorporates greenery and landscaping into the design of the MSCP to enhance visual amenity on site.

Existing visual environment

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

Public viewpoints

- Viewpoint 1: From the Bridge on Redbank Road, facing south east towards the proposed MSCP;

- Viewpoint 2: Cumberland East, facing north west towards the proposed MSCP;
- Viewpoint 3: Glengariff House, facing north west towards the proposed MSCP;
- Viewpoint 4: Hawkesbury Road, facing north towards the proposed MSCP; and
- Viewpoint 5: Bridge Road, facing north west towards the proposed MSCP.

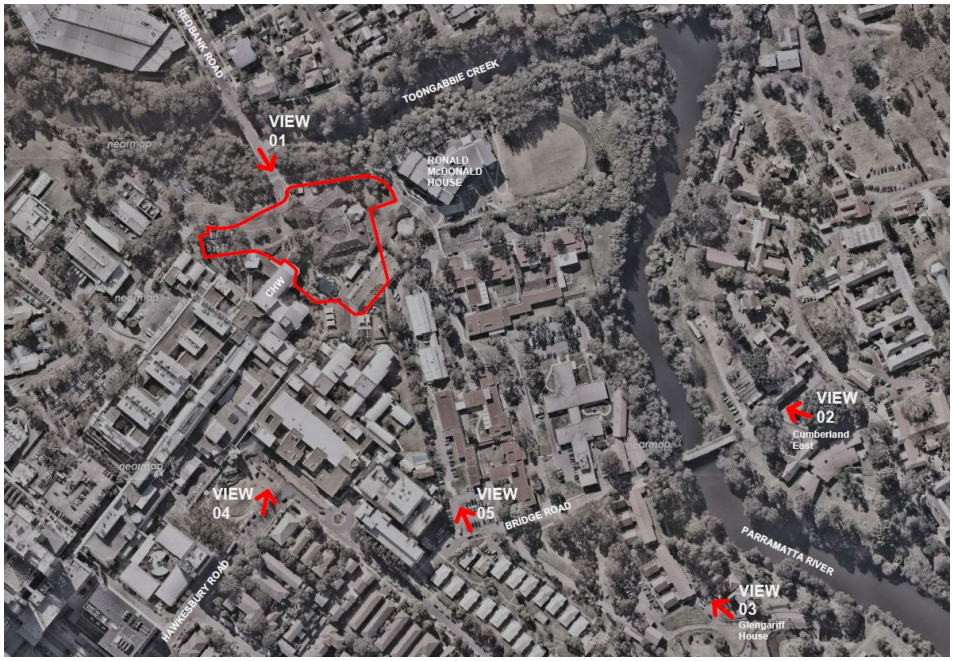

Figure 21 Public viewpoints location plan
Source: Billard Leece Partnership Architects (2020)

View Analysis

The following section assesses the visual impact of the MSCP from each of the selected viewpoints (shown in **Figure 21**). The analysis includes a description of the view from each viewpoint and a discussion of the potential visual impacts of the MSCP on that view.

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

Viewpoint 1: Redbank Road, facing south east towards the proposed PSB (subject of a separate planning approval)

Figure 22 Redbank Road viewpoint, facing south east towards the proposed MSCP
Source: Billard Leece Partnership Architects (2020)

As shown in **Figure 22**, the proposed development is completely visible from the viewpoint along Redbank Road looking south east to the proposed MSCP. While the proposal will result in visual impact from this viewpoint, it is largely in keeping with the prevailing built form context from other vantage points, and is therefore acceptable. Additionally, the proposed MSCP fulfils a key objective to improve way finding in the Precinct.

Overall, there is a moderate-high level of impact from this location; however, it is deemed acceptable because the proposed development will assist with way finding in the Westmead Health Precinct, and will establish a contextual relationship with the future character of the area. It is noted that the façade of the MSCP will be appropriately treated architecturally to add visual interest.

Viewpoint 2: Cumberland East, facing north west towards the proposed MSCP

Figure 23 Cumberland East, facing north west towards the proposed MSCP
Source: Billard Leece Partnership Architects (2020)

As shown in **Figure 23**, the viewpoint looks north west towards the project site from Cumberland East. 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 MSCP

Figure 24 Glengariff House viewpoint, facing north west towards the proposed MSCP
Source: Billard Leece Partnership Architects (2020)

As shown in **Figure 24**, this viewpoint looks from Glengariff House, facing north west towards the proposed MSCP. The proposed development will be entirely obscured by Glengariff House.

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

Viewpoint 4: Hawkesbury Road, facing north towards the proposed MSCP

Figure 25 Hawkesbury Road, facing north towards the proposed MSCP
Source: Billard Leece Partnership Architects (2020)

As shown in **Figure 25**, this viewpoint looks north towards the project site from Hawkesbury Road.

The proposed MSCP is entirely obscured by the existing CHW buildings.

Overall, **zero** visual impact is expected in this location.

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

Figure 26 Bridge Road, facing north west towards the proposed MSCP
Source: Billard Leece Partnership Architects (2020)

As shown in **Figure 26**, the proposed development will be partly blocked by the signage and flag poles at Bridge Road. The proposed MSCP will be slightly shielded by vegetation in the background.

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

In summary the visual impacts of the proposed development on its surrounds is considered low overall and acceptable. However, for discussion of the view impacts on surrounding heritage items refer to the Heritage Impact Statement at **Appendix J**.

6.3 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 proposed MSCP is designed with an element of vertical height to ensure sufficient parking numbers are provided across the Westmead Health Precinct. As a result of vertical growth, there are anticipated solar impacts to surrounding areas to the south and southwest of the site.

The shadow diagrams highlight that at 9am to 3pm of the winter solstice (21st of June), the proposed MSCP will have overshadowing impacts, casting a shadow over the existing CHW buildings south and southwest of the site, no outdoor amenity is impacted. It is noted that shadows remain wholly within the Westmead Health Precinct, with no solar impact to any residential properties.

6.4 Acoustic and vibration

Certain uses, such as:

- hospital receivers;
- short term accommodation receivers;
- residential receivers; and
- commercial receivers,

may be sensitive to noise generated from the proposed development during construction and operational phases. Stantec Australia Pty Ltd has undertaken an Acoustic and Vibration Impact Assessment to discuss the likely noise and vibration impacts on the potentially nearest most-affected receivers from the proposed development. Refer to this report at **Appendix AA**.

Operational Noise

The following activities have been identified as being likely to generate noise with the potential to impact the surrounding sensitive noise receivers. These noise sources from operational stages include:

- Loading cars
- Slamming doors
- Patrons talking whilst walking to and from vehicles
- Traffic noise from car movements entering and exiting the carpark.

The acoustic assessment concludes that the proposed development is capable of complying with the relevant noise criteria outlined in the *Environment Protection Authority Noise Policy for Industry* (NPI) if the recommended mitigation measures are applied during operation. Refer to **Section 8** Recommendations and Mitigation Measures.

As the proposed development is a non-habitable space, it is considered that there are no adverse acoustic amenity impacts to the occupants within the proposed development. No additional treatment to the proposed MSCP façade is required to achieve internal acoustic amenity for occupants.

Construction Noise

To assess the noise impact from the site during various construction stages, noise modelling was carried out for the proposed development. A 3D model of the site and its surroundings was constructed including the nearby buildings between the source and receivers, and the construction plant and equipment were positioned as noise sources.

The construction noise assessment concluded that the proposed development will not exceed the highly noise affected level outlined in the NPI. Given 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** of this EIS), it is not expected there will be significant construction noise impacts on the surrounding noise-sensitive receivers.

Construction Vibration

The vibration associated with construction is dependent on a number of variables including the types of machinery, the proximity to the nearby receivers as well as the ground type.

The proposed development is expected to make use of concrete vibrators, Continuous Flight Auger Piling Rig, and Excavator with hydraulic hammer. Concrete vibrators & excavators are anticipated to be used in safe working distances from nearby receivers, therefore no further mitigation measures are required.

6.5 Traffic, parking, and access

A Transport Assessment has been prepared by WSP. Refer to this report at **Appendix N**.

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 limited impact on the surrounding road network.

The existing traffic patterns and traffic demands associated with the existing P17 carpark and the adjacent Lodge parking spaces would be maintained despite being relocated to the MSCP. Therefore, the proposed MSCP would have negligible 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) from the PSB (subject of a separate planning approval), 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.

A detailed construction transport management plan and associated Traffic Control Plans would be developed and incorporated into the construction environmental management plan.

Parking

The purpose of the proposed MSCP is to ensure that the CHW is supported with adequate parking facilities in the future, as the demand for health care expansion increases and planned public transport infrastructure becomes operational.

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.

Of the in demand additional 280 spaces, approximately 110 of these would be staff parking while 170 would be for visitors.

Additionally, the P17 staff carpark was located within the Westmead Health Precinct, however this was recently demolished and temporarily replaced by a temporary car park located north of Dragonfly Drive. The Car Parking Demand Study identified that the P17 car parking spaces will need to be replaced as part of the proposed MSCP; hence, the previous 679 spaces (555 formal parking spaces and 124 parking spaces via stacked parking arrangements) in the P17 car park are expected to be accommodated in the proposed MSCP.

Moreover, 33 car parking spaces are also required to be provided in the proposed MSCP, as the proposed car park entry ramp requires the removal of about 33 spaces accessed via Redbank Road.

In response to the Car Parking Demand Study, the proposed MSCP is to provide 1,003 spaces that could accommodate at least the following:

- 110 new staff spaces to address the car parking requirements generated by the PSB (subject of a separate planning approval);
- 170 new visitor spaces to address the car parking requirements generated by the PSB (subject of a separate planning approval);
- 679 replaced staff spaces from the recently demolished P17 staff carpark:
    - The previous P17 car park had a total capacity of 679 spaces (555 formal parking spaces and an additional 124 vehicles via stacked parking arrangements). All 679 spaces are to be replaced within the proposed MSCP.
- 33 replaced spaces from the removal of parking accessed via Redbank Road:
    - The car park entry ramp for the proposed MSCP will require the removal of 33 parking spaces accessed via Redbank Road. These spaces will be relocated within the proposed MSCP.
- 11 additional spaces of additional capacity available to service future car parking demands at CHW as a result of optimising the car parking design;
- Of the 1,003 parking spaces, 14 are to be disabled parking spaces, satisfying the BCA disabled parking requirements of a Class 9A building;
- Minimum 21 motorcycle parking spaces will be provided in the proposed MSCP.
- No bicycle parking is proposed as part of the MSCP. The bicycle parking facility which was provided in the recently demolished P17 car park will relocate to an unused undercroft area located in the Kids Research Institute building, adjacent to the proposed PSB (subject of a Review of Environmental Factors that was approved in May 2020). This 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, generally set out with the Australian Standards.

  The facility would also be a short walk to/from the CASB's end-of-trip facilities and the showers and change rooms planned to be provided in the PSB (subject of a separate planning approval). Therefore, the Kids Research Institute bike parking facilities, as well as the CASB bike parking and the Westmead Hospital Precinct's existing bike parking areas would be well placed to encourage sustainable transport modes, more so than providing bike parking facilities within the MSCP, which is to be strategically located on the periphery of the Precinct.
- Overall, it is considered that the proposal makes adequate provision for parking to service the immediate needs and future needs of the Westmead Health Precinct, identified in the 2019 Car Parking Demand Study prepared by GTA Consultants.

Access

Vehicular access

- Vehicle entry is proposed to the MSCP is via a one-way ramp from Redbank Road.
- Vehicle exit from the MSCP is via a one-way ramp to Labyrinth Way.
- The entry and exit ramp grades are complaint with AS2890.1:2004.
- Swept path diagrams have been prepared for the site access and exit. The diagrams confirm that a B99 vehicle can enter and exit the site in an appropriate manner.
- Preliminary queuing analysis has been completed for the proposed boom gates at the MSCP entry and exit. The analysis conservatively identifies a need for two entry

lanes of 48m each and two exit lanes of 30m each to accommodate the 99th percentile vehicle queue during the AM and PM peak hours. The MSCP design accommodates this requirement. Therefore, it is anticipated that vehicles would not queue on Redbank Road, Labyrinth Way or impact circulation within the MSCP.

Pedestrian access

- The primary pedestrian access to/from the MSCP would be via lifts and a ramp at southern end of the car park.
- This provides good access between the MSCP and Ronald McDonald House to the east and CHW to the west via the east-west landscaped pedestrian spine.
- Secondary pedestrian access and fire stairs are located along the eastern and northern site frontages.

6.6 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.

The proposed MSCP facilitates environmental sustainability by reducing private vehicle usage for staff. It is noted that a Green Travel Plan has already been implemented as part of the recently constructed CASB.

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

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

- Building Integrated Photovoltaic solar panels on two louvered facades of the MSCP, with energy being distributed to serve the MSCP and the main campus.
- The car park has no mechanical cooling/ventilation, other than a small air conditioning unit to condition the COMMS rooms and switch room. The car park is naturally ventilated via the façade.
- Daylight penetration in carpark spaces is primarily used for highlighting to aid in circulation and orientation of users. Daylight will also be used to assist with energy associated with artificial lighting through means of maximised natural daylight.
- Promotion of stair use through design (reduce lift usage). Include bright colours and natural daylight to stairs to encourage the use of stairs as opposed to lifts.
- Select materials and products such as paints, adhesives, waterproofing material, antis-lip with high durability and low toxic properties i.e. Low VOC properties.

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.

6.7 Ecology

A BDAR Waiver request for the project was prepared for the proposed development by Cumberland Ecology and submitted to DPIE on 16 October 2020.

The BDAR Waiver Request (refer **Appendix Y**) notes that the proposed development is anticipated to impact approximately 0.464 ha area of planted native vegetation that shows limited, if any, structural/compositional features of a naturally occurring PCT, 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.

Formal BDAR waiver approval (**Appendix Z**) 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.

6.8 Existing trees

An Arboricultural Impact Assessment was prepared by Tree Management Strategies (**Appendix AB**) for the proposed development. A total of 84 trees were assessed as part of the MSCP 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 Parramatta Council.

The assessment found that of the 84 trees, 58 require removal, leaving a total of 26 trees that will be retained under the proposal. The total Canopy Cover of the MSCP prior to tree removal is estimated at 2,837m^2, the tree removal canopy is estimated at 1,943 m^2 with a total remaining canopy of 894m^2. Note that 1,180m^2 of tree canopy cover is proposed as part of landscaping works, resulting in 2,074m^2 tree canopy cover for the site.

The reasons for tree removal include:

- Development footprint;
- Storm water; and
- Landscaping.

The remaining 26 trees to be retained will have tree protection measures in place to ensure their longevity during construction and operation. 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.

6.9 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.

The landscape design for the MSCP extends the existing CHW Galleria (walkway from the CHW Forecourt to Labyrinth Way) to Ronald McDonald House, strengthening the connection between the MSCP and the main hospital building, and facilitating access to the Toongabbie Creek riverbank walk.

The playground is ideally positioned between the main building and the Ronald McDonald House to accommodate a broad range of users. The proposed playground will match the size of the existing playground set for demolition, with some existing equipment to be retained and relocated. It is noted that the proposed playground is to be undertaken as exempt development i.e. not subject to approval under this SSD.

The healing garden, located between the MSCP and the main hospital building, will provide indoor hospital patients and staff with visual access and views to landscape, whilst remaining in the hospital building. A variety of open and intimate outdoor areas provide patients and carers with passive recreation opportunities and space to gather and relax.

<u>Landscaping materials</u>

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.

<u>Tree canopy coverage</u>

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 13**. In summary proposed tree canopy cover is 21% or 23% 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 is located within a high density Precinct. The achievement of 21% tree canopy cover for the extent of works area is consistent with achievable canopy cover in high density Precincts.

Table 13 Tree Canopy Cover
Source: McGregor Coxall Landscape Architects

	MSCP
Site Area (SQM) (excl building footprint)	10,080
Tree Canopy Cover existing sqm	2,837
Tree Canopy Cover removal sqm	1,943
Tree Canopy Cover remain sqm	894
Proposed Tree canopy cover	1,180
Total Tree canopy cover (sqm)	2,074
Tree canopy coverage	21%
Shade structure cover (sqm)	168 (existing shade structure)
Structure canopy coverage	2%
Total canopy coverage	23%

6.10 Non-Aboriginal Heritage

A Heritage Impact Statement 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 and findings.

6.11 Aboriginal Cultural Heritage

An ACHAR has been prepared in response to the SEARs. Refer to this at **Appendix K**.

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 MSCP, to assess the degree of previous disturbance in the study area and whether there are any remaining landscape features that would be likely to contain Aboriginal objects. 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 development associated with the hospital.

The proposed demolition of The Lodge, and the subsequent construction of the MSCP will result in ground disturbance including use of fill on raised surfaces, and piling works. As the depths of fill vary significantly throughout the development site, it is proposed to undertake monitoring of the piling works according to a methodology that includes recovery of Aboriginal objects if they are identified. If objects are present, the location

would be recorded on AHIMS, in accordance with s89a of the National Parks and Wildlife Act 1974.

For the proposed realignment of Redbank Road, the current schematic design of the road realignment involves a cut and re-fill with road base. As these proposed works will not exceed a depth of 0.65 metres, the ACHAR considers that this will not impact on any potential natural fills, undisturbed landforms or Aboriginal object.

6.12 Drainage and flooding

Drainage

Within the proposed development site, there is existing stormwater infrastructure in the form of an extensive pit and pipe network which serves the CHW, The Lodge, and the public domain areas in between the two buildings. Construction of the proposed MSCP will necessitate the removal of a number of pits and pipes which discharge to the two stormwater trunk lines which in turn discharge to Parramatta River and Toongabbie Creek.

The stormwater strategy is a direct connection from the development site into the local existing (HI owned) stormwater network (i.e. no inclusion of on-site detention). This system has been designed to maintain the existing natural catchment areas for discharges. The stormwater strategy has been discussed with CoPC and there were no objections to this approach. Refer to the stormwater strategy presentation and meeting minutes with CoPC, within the Civil Report at **Appendix R**.

The proposed stormwater system has been designed to capture and manage the 1% AEP flood event plus 500mm freeboard and grade away from building entryways to prevent overland flow entering into the MSCP.

Based on hydraulic and flooding analysis, the proposed stormwater strategy is assessed to be suitable for the site because it:

- 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).

A Civil Report has been prepared for the proposed development by Arup. Refer to this at **Appendix R**. 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 will experience afflux for both the overland and river events around the development site, including the northern areas of the CHW building. The afflux for the flood events (with the exception of the Probable Maximum Flood (**PMF**) river event are generally localised impacts limited to within the extents of the Westmead Health Precinct. For the PMF extreme river event with an estimated probability of 1 in 10 million, afflux extends outside of the site extents. However, these impacts are generally in areas where significant flood depths already occur under existing conditions, and they constitute a 2% (or less) increase in flood depth.

As sensitivity analysis, the 0.5% AEP and 0.2% AEP events have been modelled as proxy for the climate change scenarios compared to the 1% AEP event. It was found that the rainfall increase did not significantly increase overland flows, however the riverine

events experience increased flooding particularly for Redbank Road and Labyrinth Way. A full pipe blockage scenario has also been modelled which saw significant increase in peak flood levels for trapped low points such as the northern area of the CHW and existing CHW loading dock. Nevertheless, the post-development afflux for this scenario generally remains similar for most areas driven by surface runoff. The MSCP entryways are still above the 1% AEP level plus 0.5 m freeboard under the full pipe blockage scenario.

Other observations included:

- The proposed lowest finished floor levels of the MSCP building provides flood immunity for the 1% AEP plus 0.5 m freeboard;
- The proposed building design, stormwater scheme and grading strategy for the development do not significantly impact the existing conditions flood behaviour beyond the project boundary for events up to and including the 0.2% AEP;
- Flood hazard for the 1% AEP event is low. However, the PMF event hazard is high for the MSCP site and its surround. It is recommended that either a shelter-in-place (evacuation to higher levels of the MSCP) or an off-site evacuation approach be explored as part of the flood emergency management strategy;
- The climate change sensitivity analysis found that afflux behaviour observed for the site under post-development conditions is similar to the 1% AEP. The rise in riverine flood as a result of climate change would impact primarily the low lying areas like Redbank Road and Labyrinth Way; and
- There are impacts from the pipe blockage sensitivity analysis, especially for trapped low points which primarily drain to stormwater trunk main. Therefore, it is recommended to maintain and clean stormwater assets to ensure adequate performance of the stormwater network.

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

6.13 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 R**.

Further to this, appropriate sediment, erosion and dust control measures have been prepared and are included in the Preliminary CMP prepared by PwC attached at **Appendix AC**.

6.14 Geotechnical

A Geotechnical Investigation Report (**Appendix O**) 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.

6.15 Contamination

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

A Detailed Site Investigation (DSI) has been prepared by JBS&G (**Appendix P**) to cover The Lodge and surrounds, which forms the site of the proposed MSCP. Several types of fill materials were encountered across the site, however the dominant fill consisted of brown to dark brown heterogenous silty / gravelly clay to depths ranging from 0.4 to 4.0

m bgs. Inclusions of bonded Asbestos Containing Materials (**ACM**), road base gravels and slag were observed. No odours or staining were observed within fill across the site. Bonded 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 at the site are considered to be impacted by asbestos in soils.

The contamination investigations conducted for the site and the DSI meets the requirements of State Environmental Planning Policy No 55 - Remediation of Land (SEPP 55). This report documents the procedures and standards to be followed to address the identified asbestos impacted soils in such a manner as to make the site suitable for the proposed future uses. JBS&G have concluded that the site could be made suitable for the proposed hospital land use subject to development and implementation of a site-specific 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.

A RAP has been prepared by JBS&G for the full extent of works and is at **Appendix Q,** 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 will be 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.

6.16 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 O**) confirm that there is no known occurrence of ASS being present at the site, nor were they observed during site investigation works.

6.17 Construction

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

Construction timeframe

It is anticipated the MSCP will be constructed over approximately 18-20 months, with the main construction works anticipated to occur between Q4 2021 to Q2 2023. The operation of the MSCP is anticipated to commence in late Q2 2023.

Construction hours

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

- Monday to Friday: 7:00am to 6:00pm;
- Saturdays: 8:00am to 5:00pm; and
- Sundays and Public Holidays: No work.

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 MSCP 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 AA**) 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 are located approximately 80m from the construction site. These distances eliminate the risk for any vibration impact. Hoarding will be provided to mitigate noise disturbance to nearby receivers.

All these factors considered, clearly indicate that the risks for noise and vibration impact associated with conducting construction works outside of standard hours (nominally on Saturdays between 8am and 5pm) on the surrounding community and adjacent occupant of surrounding buildings are minimal.

Construction traffic

The potential construction vehicles routes include:

- to/from north and east via Redbank Road and Briens Road; and
- to/from south and west via Dragonfly Drive, 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.

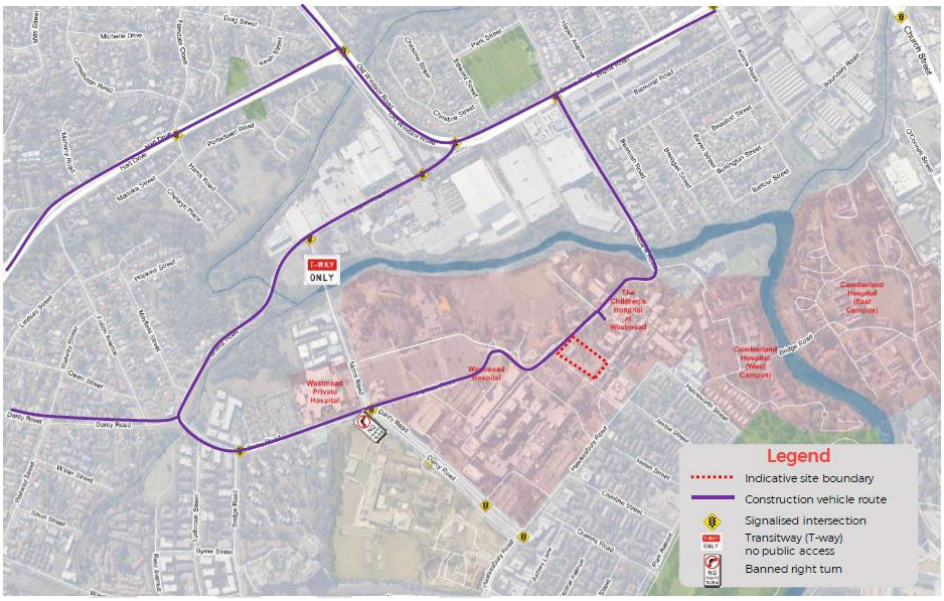

Figure 27 Construction vehicle access routes
Source: WSP Traffic Impact Assessment

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 6.4** of this EIS.

6.18 Waste

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

Construction waste

The potential construction waste types and volumes are outlined within Chapter 5 of the Construction Waste Management Plan. The final amount of waste will be determined following engagement of a 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 associated with the MSCP is expected to be minimal with waste generated by private vehicle owners only. Bins will be provided on the main pedestrian routes of the car park, to cater for these minor amounts.

6.19 Safety and security

The proposed development has been designed having regard to the principles of Crime Prevention through Environmental Design (CPTED). Specifically, the MSCP 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 and exits and the pedestrian routes servicing the MSCP;
- The ground floor plane is designed to be highly public, with 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 AD**) 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.

6.20 Obtrusive effects of lighting

Refer above section for CPTED related aspects of proposed lighting.

Locations sensitive to light spill have been identified as follows:

- Ronald McDonald House Westmead, 1 Labyrinth Way, Westmead NSW 2145
- Existing Children's Hospital at Westmead building
- Paringa Unit, Cumberland Hospital, 1-7 Hainsworth St, Westmead NSW 2145

Lighting design has been developed in consideration of minimising external lighting spillage to adjacent receivers, maintenance, energy efficiency and integration into the architectural design.

All new external lighting will comply with AS 4282 – Control of the obtrusive effects of outdoor lighting.

6.21 Infrastructure Management

An Infrastructure Management Plan has been prepared by ARUP regarding Hydraulic and Gas Infrastructure and is attached at **Appendix T**. 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:

- The cold water supply to the MSCP development will be provided from a new connection to the 100mm authority water main adjacent to the Redbank Road bridge.
- An existing private sewer line and an authority sewer service will be impacted by the realignment of Redbank Road. All existing services will require protection during excavation and construction works.
- No new connection into the authority or private sewer main is anticipated to be required for the MSCP.

Gas Infrastructure

The Infrastructure Management Plan confirms that due to the realignment of Redbank Road, an existing high-pressure Jemena Gas Main will need to be relocated to follow the new road alignment. The authority gas main re-alignment will be designed, installed, managed and owned by Jemena.

Electrical infrastructure and services

An Infrastructure Management Plan has been prepared by Stantec regarding Electrical and Telecommunication Services and is attached at **Appendix S**.

The plan confirms that the CHW supply authority is Endeavour Energy. The proposed method of supply to the new MSCP is to re-utilise the existing supply to The Lodge (old Ronald McDonald House). The existing supply to The Lodge is provided from the CHW existing kiosk Substation No. A1. Upgrades to existing Substation No. A1 are not required to facilitate the development. As Substation No. A1 is privately owned, approvals from Endeavour Energy are not required.

Communication Services

The MSCP building will be connected to an existing Communications Room on the existing CHW ICT network.

6.22 Social impacts

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

The holistic redevelopment proposed under the CHW Stage 2 Redevelopment is anticipated to have positive social impacts for Western Sydney, NSW and Australia given the hospital's significant contribution to healthcare locally and nationally.

The positive social impacts of the proposed MSCP include:

- Accessibility benefits associated with the new MSCP, which would provide additional parking capacity to cater for the needs of growing number of patients and workers at the site.
- Improvements to the way of life and daily routines for staff and visitors of the Westmead Health Precinct associated with delivery of a high quality, contemporary

health and innovation facilities that enable flexible, clinician-led innovative health care.

6.23 Economic impacts

The economic impacts of the proposed development are positive as significant job creation will result from the proposal, with an estimated 233 direct construction jobs created.

6.24 Cumulative impacts

Traffic impacts and surrounding planned developments

In relation to the potential for cumulative traffic impacts, traffic modelling has taken into account surrounding proposed development 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, it's anticipated MSCP will commence construction prior to and be completed in advance of the PSB. The immediate benefit of this arrangement is the MSCP will be operational prior to the PSB, minimising the impact of construction disruption on vehicular access to the Precinct. A Detailed Construction Environmental Plan (**CEMP**) and Detailed Construction and Pedestrian Management Plan will be prepared for each SSDA, that accounts for and manages cumulative construction impacts. The appointed contractors would coordinate the construction, to minimise the likelihood of peak construction activity stages occurring simultaneously across both sites.

Surrounding planned developments

Moreover, the Transport Assessment (**Appendix N**) has considered surrounding planned developments in the area in relation to the proposed MSCP, 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. 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, if approved.

While the appointed contractors would coordinate the construction works to minimise the likelihood of peak construction activity occurring simultaneously across the Precinct, the MSCP construction works would likely coincide with construction of the PSB for brief periods (subject of a separate planning approval). However, the cumulative CHW Stage 2 Redevelopment works replace the larger Stage 1 Redevelopment works which had been active from 2016-2020. It is understood that the Stage 1 Redevelopment works were managed effectively to minimise disruption to the internal precinct traffic operations, and also minimise impacts to the operation of surrounding intersections. Management measures that were implemented during the Stage 1 works include staggered construction activities and restricted construction activities during the road network and precinct peak periods. The cumulative traffic impacts of the Stage 2 works would be managed using the same measures.

During peak cumulative construction periods, construction vehicle activity would be limited (as much as practical) to the period between 9:00am and 4:00pm when the surrounding road network traffic volumes are significantly lower than the morning and evening peak periods of (7:00am-9:00am and 4:00pm-6:00pm). In addition, during peak cumulative construction periods, construction vehicle access routes could be restricted for each project to distribute the construction vehicle volumes across the Precinct access intersections. The managed construction vehicle access routes would likely be as shown in **Figure 28** and include:

- PSB routes: inbound only via Dragonfly Drive and outbound only (up to 20 construction vehicle movements per hour) via Redbank Road (up to 20 construction vehicle movements per hour)
- MSCP routes: inbound only via Redbank Road and outbound only (up to 10 construction vehicle movements per hour) via Dragonfly Drive (up to 10 construction vehicle movements per hour).

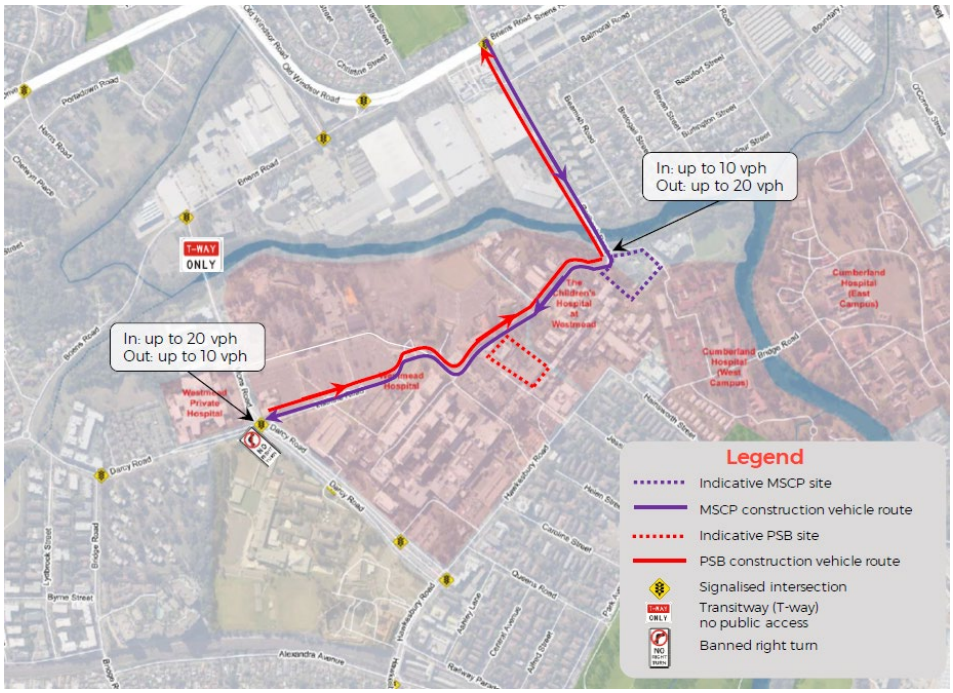

Figure 28 Managed construction vehicle access routes
Source: NSW Department of Lands Spatial Information Exchange with WSP edits (2021)

The managed construction vehicle routes would minimise the cumulative impacts to the surrounding intersections, with up to 30 vehicle movements expected at each intersection, during the peak cumulative construction periods.

It is noted that the traffic assessment (**Appendix N**) has considered the impacts of the CHW Stage 1 redevelopment construction activities. Given that the CHW Stage 2 Redevelopment construction activities are smaller and therefore expected to generate less traffic volumes than the Stage 1 construction activities, the cumulative traffic volumes generated by the Stage 2 works would have negligible impact on the level of service of the surrounding intersections.

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 Hospital Campus) are low, and therefore not constitute a reason to hinder planning approval on visual impact grounds.

6.25 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 environmental constraints.

While existing trees will be impacted, and this is a consequence of being a constrained site, 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. It is also noted that the key sustainability initiative of including Building-integrated Photovoltaics (**BIPV**) cells precludes extensive re-planting of trees around the north and east facades of the proposed MSCP; hence, the provision of low landscape planting with 1,180m^2 of tree canopy cover proposed as part of landscaping works.

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 ancillary 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.

6.26 Public interest

The significance of the growth and expansion of the 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 Westmead Health 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 are not significantly adverse. 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 8** of this EIS.

The proposed development will:

- Allow for sufficient parking for the Westmead Health Precinct particularly due to the growth in healthcare services provided at the existing CHW and new PSB (subject of separate planning approval).
- Provide high level of architectural design and detailing for a transport facility, and incorporate ESD measures to ensure energy efficiency.
- Allow for the ongoing and efficient use of the Westmead Health Precinct.
- Provide employment opportunities during construction and ensure the Westmead Health Precinct will remain an employment hub.

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; and
- 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 14 Environmental Risk Assessment

Impact Theme	Impact Detail	Level of Impact	Mitigation Measures	Residual Risk
Traffic				
Construction	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. The campus roads have been designed to accommodate for 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. The preliminary construction vehicle estimates are up to 10 vehicles per hour and up to 80 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 Campus over the last few years.	Medium	Construction Traffic and Pedestrian Management – 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 (TCPs) will be developed and required to be prepared as a condition of consent and incorporated into the Construction Environmental Management Plan (CEMP). Contractor Parking – 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. Construction hours - to be in accordance with conditions of approval. Construction Vehicle Access Route - arterial roads to be used where possible, and Redbank Road would be the preferred route. Pedestrians and cyclists - Where possible and safe to do so, pedestrian and cyclist access should be maintained in the vicinity of the construction site, for the duration of the works. Emergency vehicles access - The existing and future emergency access routes to/from CHW and Westmead Hospital would be maintained via Hawkesbury Road, Institute Road, Redbank Road and Kids Research Lane as required.	Low

Operation	High level of vehicle movement may result in vehicle queuing during peak times and staff movement.	Low	Adequate queuing space has been provided within the proposal to allow for vehicle queuing to be undertaken within the site and not spill onto the local road network. 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. <u>Cumulative construction traffic impacts -</u> The appointed contractors will coordinate the construction works to minimise the likelihood of peak construction activity occurring simultaneously at the PSB (subject of a separate planning approval) and MSCP sites. During peak cumulative construction periods, construction vehicle activity would be limited (as much as practical) to the period between 9:00am and 4:00pm when the surrounding road network traffic volumes are significantly lower than the morning and evening peak periods. During peak cumulative construction periods, construction vehicle access routes will be restricted for each project (MSCP and PSB) to distribute the construction vehicle volumes across the Precinct access intersections.	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	The following activities have been identified as being likely to generate noise with the potential to impact the surrounding environment. These noise sources include: – Intermittent traffic noise from car movement entering and exiting the carparks located on site.	Low	More detailed acoustic and vibration assessment will be undertaken during detailed design development. This will be undertaken in accordance with the recommendations of the Noise and Vibration Assessment prepared by Stantec.	Low
Built Heritage				
Construction	The MSCP works are of sufficient distance to negate any adverse impacts through vibration in respect of to the nearby heritage items.	Low	None required	Low
Operation	There are nil impacts on the heritage of the area as a result of the proposed MSCP.	Low	None required however the heritage impact statement will be updated should the proposed scheme be substantially altered.	Low/negligible
Historical Archaeology				
Construction	The MSCP 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	An “Unexpected Finds Protocol” will be put in place prior to the commencement of work for the instance that any archaeological remains are found.	Low/Moderate
Operation	Nil	Nil	Nil	Nil
Aboriginal Heritage				
Construction	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.	Moderate/High	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.	Low/Moderate

	Furthermore, the site of the proposed MSCP is in a highly urbanised context that has been disturbed by the construction of multiple hospital buildings and associated infrastructure.			
Operation	Nil	Nil	Nil	Nil
Contamination				
Construction	Bonded and friable asbestos was detected in fill materials at multiple locations on MSCP 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 Ronald McDonald House, existing CHW building, and Paringa Unit at Cumberland Hospital have been identified as sensitive to light spill during the operation of the MSCP.	Low	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. – Where necessary, light fittings will be provided with shields to prevent light spill	Low

8. Recommendations and Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed development are detailed in **Table 15** below.

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

Table 15 Mitigation Measures

Item	Mitigation Measures
Heritage	Owing to the proximity of the MSCP to the National and State heritage listed Cumberland East Precinct, should any substantial change to the design of the MSCP (such as height) be contemplated, the Statement of Heritage Impact should be revised to incorporate those changes in design.
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	An "Unexpected Finds Protocol" will be put in place prior to the commencement of work for the instance that any archaeological remains are found.
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 prior to the operation of the PSB (subject of a separate planning approval), 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 O**.
Contamination	The proposed development will be delivered in accordance with the Detailed Site Investigation at **Appendix P** and the Remediation Action Plan at **Appendix Q**. – 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. – 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 Sections 6.2 of the Arboricultural

	Impact Assessment Report attached at **Appendix AB**, prior to the commencement of any works.
Ecologically Sustainable Development	The proposed upgrade works will be delivered in accordance with the Ecologically Sustainable Development Report prepared by Steensen Varming at **Appendix X.**
Waste	Waste generated during construction and operation of the MSCP is to be managed in accordance with the industry standards and guidelines identified in the Waste Management Plan prepared by JBS&G at **Appendix AE**.
Noise and Vibration	– A Construction Noise and Vibration Management Plan (CNVMP) will be acquired when construction management is finalised to mitigate noise emissions to the surrounding context and included in the CMP. – The Proposal will align with noise and vibration mitigation measures outlined in the Noise and Vibration Assessment report, prepared by Stantec. – Standard 2.4m tall A-class hoarding will be erected around the construction site to mitigate potential noise impacts: o The A-class hoarding should be impervious of gaps and cracks which would compromise its performance o It should be comprised of acoustically suitable materials such as 17 mm plywood
Construction management	– Construction will be managed in accordance with the measures identified in the Preliminary CMP prepared by PwC. – A Detailed Construction Environmental Management Plan (CEMP) is to be prepared prior to construction commencing on site.
Flood	– Consultation with SCHN on developing a flood emergency management plan and coordination with the wider Westmead Health Precinct management plan. – Establish with SCHN whether a shelter-in-place (evacuation to higher levels of the building) or an off-site evacuation approach would be most suitable considering the current management plans. – Updated flood modelling to demonstrate impact of MSCP and existing CHW building as the development design progresses.
External lighting	The following approaches will be incorporated into the external lighting design to minimise obtrusive lighting: – 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 Children's Hospital at Westmead – Multi-Storey Car Park 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 infrastructure that is ancillary to the overall operation of the Westmead Health Precinct. The proposal will assist in reinforcing the overall health orientated focus of the Westmead Precinct 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 233 jobs during the construction 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.