Environmental Impact Statement

Nepean Hospital and Integrated Services (Stage 1) – SSD 8766
DOCUMENT MANAGEMENT

REVISION HISTORY

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<thead>
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<th>Version</th>
<th>Date</th>
<th>Author</th>
<th>Description</th>
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</table>

ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation/Acronym</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
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<td>Information and communications technology</td>
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</tr>
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<td>Preliminary Hazard Analysis</td>
</tr>
<tr>
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<td>Penrith Health and Education Precinct</td>
</tr>
<tr>
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<td>Remediation Action Plan</td>
</tr>
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<td>REF</td>
<td>Review of Environmental Factors</td>
</tr>
<tr>
<td>RMS</td>
<td>Roads and Maritime Services</td>
</tr>
<tr>
<td>RWP</td>
<td>Remediation Works Plan</td>
</tr>
<tr>
<td>SEARS</td>
<td>Secretary's Environmental Assessment Requirements</td>
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<td>State Environmental Planning Policy State and Regional Development 2011</td>
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<td>State Significant Development Development Application</td>
</tr>
<tr>
<td>TFNSW</td>
<td>Transport for New South Wales</td>
</tr>
</tbody>
</table>
## CONTENTS

1. **Executive Summary** 11

2. **Introduction** 12
   2.1 Purpose of this EIS 12
   2.2 Structure of this EIS 12
   2.3 The Site 13
   2.4 Project Objectives 13
   2.5 Development for Which Approval is Sought 13
   2.6 The Applicant and Project Team 15

3. **Site Analysis** 16
   3.1 The Regional Context 16
   3.2 Local Context 18
      3.2.1 Nepean Hospital 18
      3.2.2 Site Description 19
      3.2.3 Legal Description 20
      3.2.4 Ownership 21
      3.2.5 Existing Improvements 21
      3.2.6 Existing Access Arrangements 22
      3.2.7 Public Transport 24
      3.2.8 Active Transport 25
      3.2.9 Car Parking 25
      3.2.10 Heritage Items 26
      3.2.11 Summary of Planning/Development History 27
   3.3 Surrounding Context 27
   3.4 Site Photos 29
      3.4.1 The Site 29
      3.4.2 Surrounding Area 31

4. **Description of the Proposed Development** 32
   4.1 Overview 32
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.2</td>
<td>Proposed Site Plan</td>
<td>32</td>
</tr>
<tr>
<td>4.3</td>
<td>Demolition</td>
<td>32</td>
</tr>
<tr>
<td>4.4</td>
<td>Tree Removal</td>
<td>34</td>
</tr>
<tr>
<td>4.5</td>
<td>Excavation and Filling</td>
<td>36</td>
</tr>
<tr>
<td>4.6</td>
<td>Construction</td>
<td>37</td>
</tr>
<tr>
<td>4.7</td>
<td>Architectural Intent</td>
<td>38</td>
</tr>
<tr>
<td>4.8</td>
<td>Building Height and Scale</td>
<td>39</td>
</tr>
<tr>
<td>4.9</td>
<td>Materiality and Façade Treatment</td>
<td>39</td>
</tr>
<tr>
<td>4.10</td>
<td>Landscaping</td>
<td>40</td>
</tr>
<tr>
<td>4.11</td>
<td>Access and Parking</td>
<td>41</td>
</tr>
<tr>
<td>4.12</td>
<td>Infrastructure and Utility Works</td>
<td>42</td>
</tr>
<tr>
<td>4.13</td>
<td>Hours of Operation</td>
<td>44</td>
</tr>
<tr>
<td>4.14</td>
<td>Jobs Creation</td>
<td>44</td>
</tr>
<tr>
<td>4.15</td>
<td>Analysis of Alternative Options</td>
<td>45</td>
</tr>
<tr>
<td>4.16</td>
<td>Impact of not proceeding with the proposal</td>
<td>45</td>
</tr>
<tr>
<td>5.</td>
<td>Secretary’s Environmental Assessment Requirements</td>
<td>47</td>
</tr>
<tr>
<td>6.</td>
<td>Consultation</td>
<td>60</td>
</tr>
<tr>
<td>7.</td>
<td>Statutory Context</td>
<td>67</td>
</tr>
<tr>
<td>7.1</td>
<td>Overview</td>
<td>67</td>
</tr>
<tr>
<td>7.2</td>
<td>Environment Protection and Biodiversity Conservation Act 1999</td>
<td>67</td>
</tr>
<tr>
<td>7.3</td>
<td>Biodiversity Conservation Act 2016</td>
<td>68</td>
</tr>
<tr>
<td>7.4</td>
<td>Environmental Planning &amp; Assessment Act 1979</td>
<td>70</td>
</tr>
<tr>
<td>7.4.1</td>
<td>Division 4.7 State Significant Development</td>
<td>70</td>
</tr>
<tr>
<td>7.4.2</td>
<td>Section 4.15 - Evaluation</td>
<td>70</td>
</tr>
<tr>
<td>7.4.3</td>
<td>Section 4.46 - Integrated Development</td>
<td>71</td>
</tr>
<tr>
<td>7.5</td>
<td>Environmental Planning &amp; Assessment Regulation 2000</td>
<td>72</td>
</tr>
<tr>
<td>7.5.1</td>
<td>Requirements for Preparing an EIS - Cl. 6 &amp; 7</td>
<td>72</td>
</tr>
<tr>
<td>7.5.2</td>
<td>Approvals Required - Cl. 7(1)(d)(v)</td>
<td>75</td>
</tr>
<tr>
<td>7.6</td>
<td>SEPP (State and Regional Development) 2011</td>
<td>76</td>
</tr>
<tr>
<td>7.7</td>
<td>SEPP (Infrastructure) 2007</td>
<td>76</td>
</tr>
</tbody>
</table>
7.7.1 Health Services Facilities
7.7.2 Traffic Generating Development
7.7.3 Other Divisions of ISEPP
7.8 SEPP (Vegetation in Non-Rural Areas) 2017
7.9 SEPP No. 33 – Hazardous and Offensive Development
7.10 SEPP No. 55 - Remediation of Land
7.11 SEPP No. 64 – Advertising and Signage
7.12 SREP No 20 – Hawkesbury Nepean River
7.13 Penrith Local Environmental Plan 2010
7.13.1 Zoning
7.13.2 Permissibility
7.13.3 Zone Objectives
7.13.4 Height
7.13.5 Floor Space Ratio
7.13.6 Heritage
7.13.7 Flood Planning
7.13.8 Protection of scenic character and landscape values
7.13.9 Penrith Health and Education Precinct
7.14 Penrith Development Control Plan 2014

8. **Strategic Context**

8.1 Overview
8.2 NSW State Priorities
8.3 Greater Sydney Region Plan: A Metropolis of Three Cities
8.4 Western City District Plan
8.5 Better Placed – An integrated design policy for NSW
8.6 Future Transport Strategy 2056
8.7 Sydney's Bus Future 2013
8.8 Sydney’s Cycling Future 2013
8.9 Sydney’s Walking Future 2013
8.10 NSW Planning Guidelines for Walking and Cycling
8.11 Healthy Urban Development Checklist

9. **Environmental Impact Assessment**

9.1 Overview

9.2 Built Form and Urban Design (SEAR 3)

9.2.1 Site Analysis

9.2.2 Height, Bulk and Scale

9.2.3 Site Layout

9.2.4 Connectivity

9.2.5 Crime Prevention Through Environmental Design

9.2.6 Open spaces and edges

9.2.7 Services Integration

9.2.8 Better Placed: an integrated design policy for NSW

9.2.9 Recommended Mitigation Measures

9.3 Environmental Amenity (SEAR 4)

9.3.1 Solar Access

9.3.2 Acoustic Impacts

9.3.3 Visual Privacy

9.3.4 Visual Impact

9.3.5 View Loss

9.3.6 Lighting Impacts

9.3.7 Wind Impacts

9.3.8 Recommended Mitigation Measures

9.4 Transport and Accessibility (SEAR 5)

9.4.1 Assessment

9.4.2 Vehicle movements and the road network

9.4.3 Car parking

9.4.4 Walking and cycling

9.4.5 Public transport

9.4.6 Travel demand management

9.4.7 Access for staff, patients and visitors
<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.4.8</td>
<td>End of Trip Facilities</td>
</tr>
<tr>
<td>9.4.9</td>
<td>Access for emergency vehicles</td>
</tr>
<tr>
<td>9.4.10</td>
<td>Service Vehicles</td>
</tr>
<tr>
<td>9.4.11</td>
<td>Traffic and transport impacts during construction</td>
</tr>
<tr>
<td>9.4.12</td>
<td>Recommended Mitigation Measures</td>
</tr>
<tr>
<td>9.5</td>
<td>Ecologically Sustainable Development (SEAR 6)</td>
</tr>
<tr>
<td>9.5.1</td>
<td>Assessment</td>
</tr>
<tr>
<td>9.5.2</td>
<td>Relationship to principles of ESD</td>
</tr>
<tr>
<td>9.5.3</td>
<td>Assessment against suitably accredited rating scheme.</td>
</tr>
<tr>
<td>9.5.4</td>
<td>Measures proposed to minimise consumption of resources.</td>
</tr>
<tr>
<td>9.5.5</td>
<td>Recommended Mitigation Measures</td>
</tr>
<tr>
<td>9.6</td>
<td>Noise and Vibration (SEAR 7)</td>
</tr>
<tr>
<td>9.6.1</td>
<td>Construction Noise &amp; Vibration</td>
</tr>
<tr>
<td>9.6.2</td>
<td>Operational Noise</td>
</tr>
<tr>
<td>9.6.3</td>
<td>Recommended Mitigation Measures</td>
</tr>
<tr>
<td>9.7</td>
<td>Contamination (SEAR 8)</td>
</tr>
<tr>
<td>9.7.1</td>
<td>Environmental Site Assessment</td>
</tr>
<tr>
<td>9.7.2</td>
<td>Acid Sulfate Soils</td>
</tr>
<tr>
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<td>Recommended Mitigation Measures</td>
</tr>
<tr>
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<td>Utilities (SEAR 9)</td>
</tr>
<tr>
<td>9.8.1</td>
<td>Approach to Infrastructure</td>
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<tr>
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<td>Section 94 Contributions</td>
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<td>Voluntary Planning Agreement</td>
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<td>Recommendation</td>
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<td>Drainage (SEAR 11)</td>
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<tr>
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<td>Recommended Mitigation Measures</td>
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<td>Flooding (SEAR 12)</td>
</tr>
<tr>
<td>9.11.1</td>
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</tr>
</tbody>
</table>
9.11 Climate change, sea level rise and increased rainfall intensity

9.11.2 Recommended Mitigation Measures

9.12 Waste (SEAR 13)

9.12.1 Construction Waste

9.12.2 Operational Waste

9.12.3 Recommended Mitigation Measures

9.13 Biodiversity (SEAR 14)

9.13.1 Biodiversity impacts

9.13.2 Recommended Mitigation Measures

9.14 Plans and Documents

9.15 Social and Economic Benefits

10. Environmental Risk Assessment

11. Mitigation Measures

12. Conclusion
## LIST OF APPENDICES

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Document</th>
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<tr>
<td>1</td>
<td>Secretary’s Environmental Assessment Requirements</td>
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<td>BVN Architects</td>
<td>20 July 2018</td>
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<td>19 March 2018</td>
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<td>8</td>
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<td>Pinnacle Risk Management</td>
<td>2 December 2017</td>
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<td>Utility SSD Report</td>
<td>WSP</td>
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<td>Integrated Water Management Plan</td>
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<td>24 July 2018</td>
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<td>Arboricultural Impact Assessment</td>
<td>Moore Trees</td>
<td>July 2018</td>
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<td>Transport Report</td>
<td>Cattel Cooper</td>
<td>20 July 2018</td>
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<td>Acoustic Assessment</td>
<td>Acoustic Logic</td>
<td>23 July 2018</td>
</tr>
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<td>Statement of Heritage Impact</td>
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<td>29 March 2018</td>
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<td>Pedestrian Wind Assessment</td>
<td>Windtech</td>
<td>6 April 2018</td>
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<td>18</td>
<td>Waste Management Policy</td>
<td>NBMLHD</td>
<td>March 2015</td>
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<td>19</td>
<td>Preliminary Construction Management Plan, including Construction Traffic Management Plan and Construction Waste Management Plan</td>
<td>CPB and ptc</td>
<td>21 July 2018</td>
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<tr>
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<td>Preliminary Aboriginal Heritage Assessment</td>
<td>Extent</td>
<td>29 March 2018</td>
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<td>21</td>
<td>Environmentally Sustainable Design Report</td>
<td>Steensen Varming</td>
<td>18 July 2018</td>
</tr>
<tr>
<td>22</td>
<td>Aviation Report</td>
<td>Avipro</td>
<td>25 March 2018</td>
</tr>
<tr>
<td>23</td>
<td>CIV Statement</td>
<td>MBMpl</td>
<td>17 July 2018</td>
</tr>
<tr>
<td>24a</td>
<td>BCA Report</td>
<td>BM+G</td>
<td>26 March 2018</td>
</tr>
<tr>
<td>24b</td>
<td>Access Report</td>
<td>BM+G</td>
<td>27 July 2018</td>
</tr>
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<td>25</td>
<td>Biodiversity Development Assessment Report</td>
<td>Abel Ecology</td>
<td>30 August 2018</td>
</tr>
<tr>
<td>26</td>
<td>CPTED Report</td>
<td>Southern Cross Protection</td>
<td>3 April 2018</td>
</tr>
<tr>
<td>27</td>
<td>Traffic Impact Assessment</td>
<td>ptc</td>
<td>24 July 2018</td>
</tr>
<tr>
<td>28</td>
<td>Wayfinding Strategy</td>
<td>Urbanite</td>
<td>12 April 2018</td>
</tr>
<tr>
<td>29</td>
<td>Structural Design Report</td>
<td>Bonacci</td>
<td>25 July 2018</td>
</tr>
<tr>
<td>30</td>
<td>Green Travel Plan</td>
<td>ptc</td>
<td>August 2018</td>
</tr>
</tbody>
</table>
ENVIRONMENTAL IMPACT STATEMENT DECLARATION & CERTIFICATION

This Environmental Impact Statement (EIS) has been prepared for HI and assesses the potential environmental impacts which could arise from the development of the Nepean Hospital and Integrated Services (Stage 1) SSD DA.

This EIS has been prepared in accordance with clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000. It contains all available information that is relevant to the environmental assessment of the development to which the statement relates. The information contained in the statement is neither false nor misleading and provides a true and fair review of the activity in relation to its likely impact on the environment.

Oliver Klein
BA MURP MPIA Registered Planner
On behalf of Health Infrastructure
Level 14, 77 Pacific Highway
North Sydney NSW 2060

Reviewed by:

Rachel Mitchell
BTP (Hons) MPIA
Planning Advisor
Health Infrastructure
Level 14, 77 Pacific Highway
North Sydney NSW 2060
1. EXECUTIVE SUMMARY

This Environmental Impact Statement (EIS) has been prepared by NSW Health Infrastructure (HI). This EIS is submitted to the Minister for Planning and Environment for a State Significant Development DA (SSD DA) pursuant to Part 4 of the Environmental Planning & Assessment Act 1979 and State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD). The DA is also a Crown DA under the Environmental Planning & Assessment Act 1979.

This EIS relates to the Nepean Hospital Campus (NHC) Redevelopment Project, including demolition of existing structures and construction of a 14 storey Stage 1 Building. A detailed description of the proposed works is provided in Section 4 of this EIS.

The proposal has a capital investment value of $232,192,899 and is therefore classified as State Significant Development (SSD) by virtue of the $30 million threshold in Schedule 1 of SEPP SRD.

This EIS addresses the amended Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning and Environment (DPE) on 22 November 2017. In accordance with those SEARs, this EIS provides an assessment of the environmental impacts of the proposed development and sets out the undertakings made by HI to mitigate and manage any potential impacts arising from the development. Implementation of these mitigation measures will ensure any potential environmental risk is ameliorated.

This EIS also considers the economic and social benefits that will result from the delivery of this project. Notably the capacity of the proposal to enhance the key role of the Nepean Blue Mountains Local Health District (NBMLHD) in providing health services for the local population of around 350,000 living in four Western Sydney Local Government Areas (Blue Mountains, Hawkesbury, Lithgow and Penrith). The proposal is critical in that it will greatly assist in providing contemporary healthcare services to satisfy the most pressing requirements identified within the 'NBMLHD Healthcare Services Plan 2012-2022'.

The EIS fulfils the requirements of the EP&A Act and Regulation and addresses all relevant matters for consideration prescribed by the SEARs, demonstrating that the potential impacts of the proposal can be satisfactorily managed or mitigated. In light of the above, and the evident benefits of the proposal, we recommend that consent be granted to this application.
2. INTRODUCTION

2.1. PURPOSE OF THIS EIS
The proposed development at Nepean Hospital is declared as State Significant Development (SSD) under State Environmental Planning Policy (State and Regional Development) 2011 (SEPP SRD) by virtue of its CIV of in excess of $232 million satisfying Schedule 1 clause 14 of SEPP SRD for a hospital development:

14 Hospitals, medical centres and health research facilities

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

(a) hospitals, ...

Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) applies to SSD and requires that an Environmental Impact Statement (EIS) be prepared to accompany development applications in respect of SSD. As noted, the DA is also a Crown DA under the EP&A Act.

This EIS has been prepared to address a range of relevant matters for consideration as required under the EP&A Act 1979 and EP&A Regulation 2000, including the following:

• Details of the proposed development, including analysis of feasible alternatives;
• Assessment of potential environmental impacts of the proposed development in accordance with the Secretary's Environmental Assessment Requirements (SEARs) issued on 22 November 2017;
• Measures proposed to mitigate any adverse impacts on the environment; and
• Justification for the development and recommendation for planning approval.

This EIS has been prepared in accordance with Clauses 6 and 7 of Schedule 2 of the EP&A Regulation 2000.

2.2. STRUCTURE OF THIS EIS
This EIS is structured as follows:

Table 1: Structure of EIS

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Summary</td>
<td>Summary of the EIS</td>
</tr>
<tr>
<td>Introduction</td>
<td>Overview of the EIS and background to the proposal.</td>
</tr>
<tr>
<td>Site Analysis</td>
<td>Analysis of the development site.</td>
</tr>
<tr>
<td>Description of the Development</td>
<td>Description of the key components of the proposal.</td>
</tr>
</tbody>
</table>
2.3. THE SITE
The Nepean Hospital (NHC) is located approximately 30 kilometres west of the Parramatta Central Business District and 60 kilometres west of the Sydney Central Business District. The site is located at 35-65 Derby Street, Kingswood, in the Penrith Local Government Area and approximately 2 kilometres from the Penrith Town Centre. The NHC occupies a block bounded by Parker Street, Derby Street, Somerset Street and Great Western Highway. The site has an area of approximately 13.92ha and is legally described as Lot 1 DP1114090. A detailed description of the site analysis is provided in Section 3 of this EIS.

2.4. PROJECT OBJECTIVES
The proposed development forms part of a wider program for the delivery of improved healthcare and associated services in the Nepean Blue Mountains Local Health District (NBMLHD).

The overall aims of this project are to:

- Cater for future service demand created by the region's ageing population and increased incidence of chronic disease;
- Improve the efficiency and effectiveness of service delivery through better patient flows, integrated care and model of care and elimination of service duplication;
- Provide asset replacement capable of enhancing functionality and capacity;
- Remedy the sub-standard facility environments;
- Develop and strengthen research capacities;
- Develop a facility to enable staff/clinicians to implement contemporary models of care to better meet the needs of the community; and
- Attract and retain a skilled and sustainable workforce at Nepean Hospital.
Planning for the redevelopment of Nepean Hospital has been informed by the NBMLHD and consultation with the community, Nepean Hospital stakeholders, Transport for NSW, Roads and Maritime Services and Penrith City Council (PCC). The proposed development will seek to provide the physical capacity to support the increasing health service demands and new models of care being driven by a growing and ageing population and also those requirements of the Building Code of Australia (BCA).

2.5. DEVELOPMENT FOR WHICH APPROVAL IS SOUGHT

A detailed description of the proposed development is provided in Section 4, however, in summary, development consent is sought for the following:

2.5.1. DEMOLITION

Demolition of the existing child care centre, Hope Cottage, Medical Accommodation, Population Health buildings and pedestrian overpass, noting that the existing public and staff at grade car park and parts of the driveway may be removed as Exempt Development under State Environmental Planning Policy (Infrastructure) 2007 – Infrastructure SEPP.

2.5.2. NEW CONSTRUCTION

Construction of a 14-storey hospital building generally in the location of the existing at grade car park with access from Somerset Street and Barber Ave.

2.5.3. ENGINEERING AND LANDSCAPING WORKS

Patient and emergency drop off driveways and landscaping surrounding the building and within the building’s atrium garden at Level 00, raised planting bed and outlook / respite areas at Level 6 and green (sedum) roof at Level 9.

All of the above will be staged to allow the hospital to remain in operation during the redevelopment.

Note, all infrastructure-related works for the NHC will be separately carried out as campus-wide upgrades to ensure seamless operation of the hospital prior to, and following, these multi-stage works. The objective of the works is far-reaching, extending beyond only the Stage 1 Building scope. These future-proofing works are accordingly outside of a sole direct relationship to this SSD DA, meaning the REF pathway for assessment under Part 5 of the EP&A Act is available.
2.6. THE APPLICANT AND PROJECT TEAM

This SSD DA and EIS has been prepared by HI with a principal consultant team for the project as set out in the table below.

Table 2: Applicant and Project Team

<table>
<thead>
<tr>
<th>Role</th>
<th>Consultant</th>
<th>Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applicant</td>
<td>Health Infrastructure NSW</td>
<td>HI</td>
</tr>
<tr>
<td>Project Manager &amp; Construction Management Planning</td>
<td>CBRE</td>
<td>CBRE</td>
</tr>
<tr>
<td>Town Planner (initial preparation of draft EIS)</td>
<td>City Plan Strategy and Development</td>
<td>CPSD</td>
</tr>
<tr>
<td>Surveyor</td>
<td>Cardno</td>
<td>Cardno</td>
</tr>
<tr>
<td>Architect</td>
<td>BVN Architects</td>
<td>BVN</td>
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<tr>
<td>ESD</td>
<td>Steensen Varming</td>
<td>SVA</td>
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<td>Environmental Investigation Services</td>
<td>Environmental Investigation Services</td>
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<tr>
<td>Hazardous Materials/SEPP 33 Consultant</td>
<td>Pinnacle Risk Management</td>
<td>Pinnacle</td>
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<tr>
<td>Utilities/Services Consultants</td>
<td>Warren Smith &amp; Partners</td>
<td>WSP</td>
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<tr>
<td>Civil &amp; Structural Engineer and Flooding</td>
<td>Bonacci</td>
<td>Bonacci</td>
</tr>
<tr>
<td>Arborist</td>
<td>Moore Trees</td>
<td>Moore Trees</td>
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<td>Ecologist</td>
<td>Abel Ecology</td>
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<td>Arcadia</td>
<td>Arcadia</td>
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<td>Cattell Cooper</td>
<td>Cattell Cooper</td>
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<td>Parking &amp; Traffic Consultants</td>
<td>ptc</td>
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<td>JK Geotechnics</td>
<td>JK</td>
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<td>Acoustic Consultant</td>
<td>Acoustic Logic</td>
<td>Acoustic Logic</td>
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<tr>
<td>Aboriginal Heritage Consultant</td>
<td>Extent</td>
<td>Extent</td>
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<tr>
<td>Quantity Surveyor</td>
<td>MBMpl</td>
<td>MBM</td>
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<tr>
<td>Wind Engineer</td>
<td>Windtech</td>
<td>Windtech</td>
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<td>Aviation Engineer</td>
<td>Avipro</td>
<td>Avipro</td>
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<tr>
<td>CPTED Report</td>
<td>Southern Cross Protection</td>
<td>SX Protection</td>
</tr>
<tr>
<td>BCA</td>
<td>Blackett Maguire &amp; Goldsmith</td>
<td>BM+G</td>
</tr>
<tr>
<td>Construction Management</td>
<td>CPB Contractors</td>
<td>CPB</td>
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<td>Waste</td>
<td>Nepean Blue Mountains Local Health District</td>
<td>NBMLHD</td>
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<tr>
<td>Wayfinding</td>
<td>Urbanite</td>
<td>Urbanite</td>
</tr>
</tbody>
</table>
3. SITE ANALYSIS

3.1. THE REGIONAL CONTEXT

The site is located in the suburb of Kingswood which is within the local government area (LGA) of Penrith. It is located approximately 30 kilometres west of the Parramatta Central Business District, 60 kilometres west of the Sydney Central Business District, 20km north of the proposed Western Sydney Airport and 2 kilometres from the Penrith Town Centre. Figure 1 provides a regional context map of the NHC showing its location relative to the Sydney CBD and nearby centres.

![Figure 1: Location of the site relative to the Greater Sydney Region (source: Greater Sydney Commission).](image)

The site forms part of the NBMLHD which is one of nineteen Local Health Districts and Specialty Health Networks in NSW. The NBMLHD provides health care services and support to improve the health of approximately 350,000 people living in four LGAs of Western Sydney (Blue Mountains, Hawkesbury, Lithgow and Penrith). Healthcare is currently provided within the District through six public hospitals, ten community health centres, a range of smaller community facilities and partnerships with five Affiliated Health Organisations and twenty-five non-government organisations. Figure 2 illustrates the locations of these facilities throughout the district.

Nepean Hospital is located within the Penrith Local Government Area (LGA) and acts as a healthcare hub for the south-east sector of the NBMLHD, illustrated at Figure 2 below.
The Nepean Hospital is identified as the principal Hospital within the NBMLHD as it is the major referral hospital and specialist hospital within the district. The other main hospitals within the district include Blue Mountains District ANZAC Memorial Hospital, Springwood Hospital, Lithgow Hospital and Portland Tabulam Health Centre.

Figure 2: Locations of health care facilities within the NBMLHD (source: NBMLHD Strategic Plan 2012-2017).
3.2.  LOCAL CONTEXT

The NHC is located to the south-east of the Penrith Central Business District and is surrounded by medical related land uses and residential land uses of varying densities to the south-east of the site. The surrounding built form is undergoing significant change towards higher density medical mixed-use development, with existing examples of medical related land uses such as general and specialist practitioners, physiotherapists, and the like.

The Nepean Private Hospital is adjacent to the NHC to the north-west, currently both hospitals are linked by a bridge from the rear of the existing North Block.

The site is located approximately 600m from Kingswood Station (at its nearest point) and approximately 2.2km north west of a group of educational campuses, including the University of Western Sydney, TAFE NSW Nepean College and University of Sydney Nepean Clinical School.

The site’s local context is illustrated at Figure 3.

Figure 3: Extract from the Landscape Design Report (source: Arcadia).

3.2.1.  NEPEAN HOSPITAL

Nepean Hospital is the principal referral hospital for the NBMLHD and is a teaching hospital of the University of Sydney and the Western Sydney University. Nepean Hospital provides high-level inpatient and outpatient care. Inpatient services generally have the capacity to manage high complexity patients who require specialist care. Services provided include Emergency, Critical Care, Acute Medicine, Comprehensive Cancer Centre, Cardiology, Respiratory Medicine, Renal Medicine, Neurosciences,
Oncology, Gastroenterology, other Medical Subspecialties, Planned and Emergency Surgery, Ambulatory Procedures Centre, Endoscopy, Obstetrics and Gynaecology, Perinatal, Neonatal, Paediatric Medicine and minor surgery, Mental Health (gazetted), Aged Care, Rehabilitation services, Palliative Care, Drug and Alcohol and a broad range of specialist outpatient clinics and services including Pain Management. Nepean Hospital also has a role in the provision of Trauma services.

Nepean Hospital is a major referral centre for a range of sub-specialty medical, surgical, women’s, neonatal, drug and alcohol and mental health services. Research is also significant across medical and surgical specialties and subspecialties at Nepean Hospital. The Hospital also provides telehealth services, with a focus on specialist Medical and Surgical care, to hospitals within the NBMLHD and beyond, particularly to western NSW.

The Hospital has undergone significant upgrading in recent years to enable the provision of services appropriate for a major tertiary referral hospital, including the establishment of an Ambulatory Procedures Centre and enhancement of Operating Theatres, Intensive Care Unit and Centralised Sterilising Services Department. Other enhancements include the expansion of the Medical Assessment Unit, In-centre Haemodialysis and acute Mental Health care.

As a whole, however, the campus is in need of comprehensive redevelopment due to the combined impacts of asset condition and functionality of infrastructure deterioration, impacting on service delivery, and the lack of capacity to meet the projected needs of the growing and ageing population, to deliver contemporary models of care.

Given the scale of the campus and need to maintain services, a multi stage redevelopment process, aligning with the adopted Clinical Services Plan for the facility, has been identified as the most appropriate method for delivering the upgrades.

Nepean Hospital has approximately 500 beds and offers adult, paediatric and neo-natal inpatient and outpatient services. The hospital employs approximately 3,300 staff, of whom 2,400 work weekday shifts and 900 work weekend shifts.

3.2.2. SITE DESCRIPTION

The site is located in a block bounded by the Great Western Highway to the north, Somerset Street to the east, Derby Street to the south and Parker Street to the west. The site is irregular in shape with a western boundary of over 280 metres, southern boundary of over 380 metres, eastern boundary of over 400 metres and combined northern boundary of over 500 metres.

The site includes a series of buildings ranging from one to five storeys in height, while many of the buildings on the eastern edge of the campus are one storey. An approved six (6) split level car park and helipad is currently being constructed in the north-western corner of the campus (DA reference: DA17/0665). An aerial photograph of the site is provided at Figure 4.
Figure 4: Aerial photograph of the site outlined in red and development site outlined in yellow. The proposed Nepean Hospital Tower is to be located primarily where the existing at-grade car park is situated. (Source: Sixmaps).

The existing Nepean Hospital campus slopes from a high point of approximately RL 57.00 at the top of the existing helipad to an approximate level of RL 48.50 in the north-east (corner of Somerset Street and the Great Western Highway). The level of the site at the south-east corner of Somerset and Derby street is approximately RL 49.00.

3.2.3. LEGAL DESCRIPTION

The street address of the NHC is 35-65 Derby Street, Kingswood while the site is legally described as Lot 1 DP1114090. The allotment is illustrated in Figure 5.
3.2.4. OWNERSHIP

The Nepean Hospital site is under the ownership of Nepean Blue Mountains Local Health District.

3.2.5. EXISTING IMPROVEMENTS

Existing site features include several hospital buildings (West Block, North Block, South Block, East Block, Mental Health Care, Oral Health, Somerset Cottage Childcare, Drug & Alcohol Services, Gateway Clinic, Hope Cottage, Nepean cancer Care Centre & Tresillian), car parking and internal roads.

An existing site plan of the NHC is provided in Figure 6 (for further detail refer to the Architectural Plans that accompany this application).
3.2.6. EXISTING ACCESS ARRANGEMENTS

The Transport Report prepared by Cattell Cooper (Appendix 14) provides a detailed description of private vehicle access and bicycle access to the site. As identified in Figure 7, motor vehicle (and bicycle) access is provided to and from the NHC via six separate entrances, comprising two each on the eastern, southern
and western boundaries of the campus. There is no direct vehicular access to the Nepean Hospital Campus from the Great Western Highway, located north of the Site.

![Figure 7: Vehicular/Bicycle Access Points to Nepean Hospital (Source: Cattell Cooper).](image)

Formal footpath access to Nepean Hospital is via entrances shared with motor vehicles and bicycles that are on all sides of the campus except for the Great Western Highway. Some vehicle entrances that directly access car parking do not have adjacent footpaths. Derby Street and Somerset Street provide additional informal pedestrian entry points.
3.2.7. PUBLIC TRANSPORT

Public transport access to the Nepean Hospital Campus is available via bus and train. There are six bus services which stop adjacent to the campus. Four of these routes provide weekday services with a minimum 30-minute frequency during the day and hourly frequency during the weekend. An on-demand shuttle bus is also provided to assist people with mobility difficulties in moving around the campus.

Kingswood Train Station is located approximately 600m from the north-eastern corner of the NHC. From the east, Kingswood station is serviced by over half of the T1 Western Line trains that terminate in Penrith / Emu Plains. These services link Kingswood directly to major eastern Sydney centres (and connecting bus services) that include, in addition to the Sydney CBD, Chatswood, North Sydney, Burwood and Parramatta.

Figure 8 shows the location of bus stops adjoining the NHC and Kingswood Train Station.

A more detailed description of public transport availability is provided in the Transport Report at Appendix 14.

![Figure 8: Location of nearby public transport (Source: Google Maps)](image-url)
3.2.8. **ACTIVE TRANSPORT**

Cycling infrastructure in the Penrith LGA is underdeveloped compared to longer established and more densely settled areas of Greater Sydney. The only designated bicycle route known of within the immediate vicinity of the hospital is the recently upgraded shared pedestrian and bicycle path along (for the section opposite the NHC) the northern side of the Great Western Highway.

3.2.9. **CAR PARKING**

The existing the NHC provides 1,509 parking spaces available for public use. The location of the NHC parking facilities is shown in Figure 9.

![Figure 9: Location of existing NHC parking facilities (Source: Cattell Cooper).](image)

As outlined in the Transport Report (Appendix 14) on-street parking surrounding the site includes the following:
• Various time-restricted and uncontrolled kerbside spaces on streets outside but within walking distance of the NHC;
• Time-restricted spaces on Barber Avenue, within the NHC (controlled by PCC);
• Competitively priced commercial facilities operated on vacant land adjacent to the NHC.

The proposed Stage 1 Building is to be located on the existing at-grade car park indicated as number 10 in Figure 9. However, these car parking spaces will be replaced and supplemented in the recently approved multi-deck car park (DA17/0665). This is discussed further in Section 4.11.

3.2.10. HERITAGE ITEMS

The NHC does not contain any heritage items nor is the site located within a heritage conservation area. The site is located in proximity to the following local heritage items (as shown in Figure 10):

• Penrith General Cemetery (item no. 97) – bounded by Copeland and Phillips Streets, Richmond Road and Cox Avenue to the north east of the site;
• Weatherboard Cottage (item no. 175) – located at 71 Parker Street; and
• “Kevin Brae”, Federation house (item no. 854) – located at 142 High Street.

Figure 10: Extract from the Penrith Heritage Map, NHC outlined in red (Source: NSW Legislation).
The proposed works will not adversely impact on the heritage significance of any nearby heritage items. The potential impact of the proposal on the site’s Aboriginal Archaeological Heritage significance is discussed in detail in the Preliminary Aboriginal Heritage Assessment by Extent that accompanies this application (Appendix 20).

3.2.11. SUMMARY OF PLANNING/DEVELOPMENT HISTORY

The following development applications relating to the site have been approved or lodged at the site since 2010:

- DA10/1004: Approved on 01/11/2010 for "alterations and additions to existing overnight accommodation facility, Hope Cottage";
- MP10_0067: Approved on 23 January 2011 for “Nepean Hospital – Integrated Mental Health Unit”;
- DA10/1146: Approved on 01/03/2011 for the "expansion of the Oral Health Facility and Refurbishment of the existing building";
- DA12/0175: Approved on 10/05/2012 for the construction of a multi-deck hospital car park"; and
- DA17/0665: Approved on 28/11/2017 for a "six storey split level hospital car park and helipad".

3.3. SURROUNDING CONTEXT

The area immediately surrounding the Nepean Hospital Campus is characterised by older single storey detached cottages although there is recent activity and evidence of urban renewal that is consistent with the objectives of the Penrith Health and Education Precinct Strategic Vision (Penrith Business Alliance & Taskforce, 2011) and the Penrith Local Environmental Plan 2010 (LEP) (Figures 21 to 26).

The LEP zones the western side of Parker Street for high density residential development and the southern side of Derby Street and eastern side of Somerset Street for mixed use purposes up to 18m in height. The mixed-use zones are identified in the Strategic Vision as ‘future medical mixed use’ and the Penrith Development Control Plan requires the lower two floors of these buildings to be designed to accommodate uses that support the operation of the hospital such as “medical offices, pharmacies, short-term accommodation, convenience stores and other forms of retail that will meet the needs of visitors and people using the medical services offered within the precinct.” The higher density housing component of future mixed-use development surrounding the hospital is intended to “service the needs of medical patients, staff and students.” The distribution of these future character areas is illustrated below in Figure 11. Until such time as redevelopment comprehensively occurs some residential development is also accommodating a range of health services associated with, and in support of the hospital. Other residential development also remains for residential uses.

It is a 600m walk (approximately) from the nearest point of the NHC to Kingswood Train Station with Kingswood Town Centre located in between. The Kingswood Town Centre is also experiencing renewal in the form of multi-storey shop-top housing development (Figure 25). Redevelopment in the Kingswood
Town Centre will facilitate the implementation of public domain improvements in accordance with the Kingswood Public Domain Manual (Penrith City Council, 2014) including improved hard and soft landscaping and sidewalks.

Figure 11: Character areas identified in the Penrith DCP 2014 (Source: Penrith DCP 2014).
3.4. SITE PHOTOS
Photos of the site and surrounds are provided over.

3.4.1. THE SITE

Figure 12: View south, towards Somerset Street vehicular access and egress points, north of Hargrave Street.

Figure 13. View south east, towards the Cancer Care and Nepean Cancer Care Centre.

Figure 14. View south east, towards the existing car park within the western part of the Nepean Hospital Campus.

Figure 15. Existing internal landscape treatment.
Figure 16. View towards East Block.

Figure 17. Location of proposed Nepean Hospital Tower

Figure 18. View towards location of proposed Stage 1 Tower.

Figure 19. View north east, from Nepean Hospital Campus access to Somerset Street.

Figure 20. View south on Somerset St, towards the existing multi-deck car park.
3.4.2. SURROUNDING AREA

Figure 21. View north east, from the Wainwright Lane and Somerset Street intersection and rear of Kingswood shops.

Figure 22. View west towards the village centre and Nepean Hospital Campus from Kingswood Train Station.

Figure 23. View west, from Great Western Highway towards the intersection with Parker Street.

Figure 24. Parker Street. The new apartment building on the right, opposite the Nepean Hospital Campus, is typical of the likely future character of Parker Street.

Figure 25. New development in Kingswood Town Centre.

Figure 26. New development on Derby Street.
4. DESCRIPTION OF THE PROPOSED DEVELOPMENT

4.1. OVERVIEW
The proposal generally involves demolition, bulk excavation, land remediation and the construction of a 14 storey Stage 1 Building.

The Stage 1 Building will be 67.8m in height with a gross floor area of 57,000sqm. It will accommodate a variety of clinical functions (described below) and over 200 additional overnight hospital beds.

The proposed development is the first stage of the redevelopment programme (but is not a 'staged development' for the purpose of this SSD DA). Additional stages will be undertaken via separate statutory planning approval submissions.

Refer to the architectural plans prepared by BVN at Appendix 3 for further detail.

Note, all infrastructure-related works for the NHC will be separately carried out as campus-wide upgrades to ensure seamless operation of the hospital prior to, and following, these multi-stage works. The objective of the works is far-reaching, extending beyond only the Stage 1 Building scope. These future-proofing works are accordingly outside of a sole direct relationship to this SSD DA, meaning the REF pathway for assessment under Part 5 of the EP&A Act is available. Similarly, as the likely volume of contaminated material will be less than 30,000m3, the required remediation works will be Category 2 Remediation Works and will not require DA consent.

4.2. PROPOSED SITE PLAN
A site plan of the proposed development has been prepared by BVN and an extract is at Figure 27.

4.3. DEMOLITION
Proposed demolition works include the removal of five existing buildings, the existing public and staff car park and associated driveways and a section of covered walkway as indicated in the demolition plan shown in Figure 28 below. As noted, the existing public and staff at grade car park and parts of the driveway may also be removed as Exempt Development under State Environmental Planning Policy (Infrastructure) 2007 – Infrastructure SEPP.
Figure 27: Proposed Site Plan as produced from Appendix 3 (Source: BVN).
4.4. TREE REMOVAL

Removal of vegetation within the Penrith Local Government Area is subject to the State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017. Clause 7(2) of the SEPP states that a person must not clear native vegetation that exceeds the biodiversity offsets scheme threshold without the authority conferred by an approval of the Native Vegetation Panel. The proposed clearing of native vegetation does not exceed the biodiversity offsets scheme threshold as discussed in Section 7.3.

The Arboricultural Impact Assessment at Appendix 13 details an assessment of the health and condition of two hundred and ninety-eight (298) individual and groups of trees located within the site. Tree species within the site consist of both native and exotic species.

The trees have been grouped as below:
• High Value Trees: These could be young newly planted trees that are growing very well or mature trees that form good specimen trees or provide excellent visual amenity to the site. Screening a building with space to grow.

• Medium Value Trees: These could be trees growing as a group that are not great individual specimens. Trees in poorer health or have a limited life expectancy.

• Low Value Trees: Smaller underperforming trees. Trees with structural faults. Trees planted too close to buildings for future growth or trees that could be readily replaced.

Trees 150-152, 160, 164-195, 213-215, part of Tree group 279 and Trees 319-342 (about 64 trees in total) are proposed to be removed to enable construction of the Stage 1 Building. All other trees are to be retained. Trees to be retained will require tree protection fencing as specified in Section 5.2 of the Aboricultural Development Assessment Report. This fencing is shown as indicative locations in the Tree Protection Plan (Figure 29). Compensatory planting is proposed in the soft landscaping zones shown in the architectural plans (Appendix 3) and detailed in the Landscape Plan (Appendix 5).
4.5. **EXCAVATION AND FILLING**

Bulk excavation is addressed in the Geotechnical Investigation and the Civil Design Report that accompany this EIS. Specifically, proposed earthworks are addressed at Section 3.3 of the Civil Design Report (Appendix 12). The proposal requires approximate volumes of cut and fill of 32,315m³ and 1,550m³ respectively, resulting in an excess cut volume of 30,765m³. As detailed in the Preliminary Construction Management Plan (Appendix 19), excess excavated material will be classified and Excavated Natural Material (ENM) will be transported to appropriately approved sites requiring ENM while mixed spoil will be transported to approved waste facilities. For detail, reference should be made to the Civil Design Report and Drawings as well as the Geotechnical Investigation that accompany this EIS.

As noted in Section 4.1, the likely volume of contaminated material will be less than 30,000m³, and therefore the required remediation works will be Category 2 Remediation Works and will not require DA consent. Accordingly, consent for remediation is not required or sought through this SSD DA.
4.6. CONSTRUCTION

The proposal involves the construction of a 14-storey hospital tower. Architectural plans detailing the internal layout of the tower are provided at Appendix 3. The following table provides a level by level summary of the intended uses of the proposed tower.

Table 3 – Proposed uses by tower level

<table>
<thead>
<tr>
<th>Location/Level</th>
<th>Works/Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>LV0</td>
<td>Emergency Department (ED), plant, Psychiatric Emergency Care Centre (PECC), central landscape courtyard, external car parking and travel space.</td>
</tr>
<tr>
<td>LV1</td>
<td>Administration unit, Cardiac Diagnostics Interventional Unit (CDIU) shell space, Front of House (FOH) areas, pedestrian link to existing hospital building and travel space.</td>
</tr>
<tr>
<td>LV2</td>
<td>Administration unit, Endoscopy space, Day of Surgery Admissions (DOSA) space, two pedestrian links to existing hospital building and travel space.</td>
</tr>
<tr>
<td>LV3</td>
<td>Operating theatre suites, Stage 1 recovery, two pedestrian links to existing hospital building and travel space.</td>
</tr>
<tr>
<td>LV4</td>
<td>Plant space, sterilising services, and travel space.</td>
</tr>
<tr>
<td>LV5</td>
<td>Intensive care unit (ICU) shell space, administration unit and travel space.</td>
</tr>
<tr>
<td>LV6</td>
<td>Neonatal Intensive Care Unit / Special Care Nursery services, Administration unit and travel space.</td>
</tr>
<tr>
<td>LV7</td>
<td>Birthing Suites and travel space.</td>
</tr>
<tr>
<td>LV8</td>
<td>Maternity Inpatient Units - 24 Bed wards x 2 and travel space.</td>
</tr>
<tr>
<td>LV9</td>
<td>Generic Inpatient Unit - 28 Bed wards x 2 and travel space.</td>
</tr>
<tr>
<td>LV10</td>
<td>Generic Inpatient Unit - 28 Bed wards x 2 and travel space.</td>
</tr>
<tr>
<td>LV11</td>
<td>Generic Inpatient Unit - 28 Bed wards x 2 and travel space.</td>
</tr>
<tr>
<td>LV12</td>
<td>Generic Inpatient Unit - 28 Bed wards x 2 and travel space.</td>
</tr>
<tr>
<td>LV13</td>
<td>Plant and travel space.</td>
</tr>
<tr>
<td>LV14</td>
<td>Helipad and travel space.</td>
</tr>
</tbody>
</table>

The proposed development will result in more than 200 additional overnight hospital beds at the NHC and approximately 57,000m² of additional gross floor area (GFA).
This EIS is accompanied by a Preliminary Construction Management Plan (CMP) – see Appendix 19. The objectives of the CMP are to:

- Minimise inconvenience to the public and adjoining properties during the construction stages;
- Maintain effective communication between the builder/contractor and the community;
- Maintain a safe working environment;
- Ensure the requirements of relevant approvals, licenses codes or standards are met;
- Ensure that the Project is constructed in accordance with the Contract requirements and the objectives of the Principal; and
- Provide appropriate resources, management systems and support to ensure that construction of the Project is delivered within program and budget objectives.

Construction traffic management is addressed in detail at Section 9.4.11

4.7. ARCHITECTURAL INTENT

The project’s Design Principles and Aspirations reflect the importance of the Stage 1 Building both within the Nepean Blue Mountains Health District and the Penrith Education and Health Precinct. The Design Principles are derived from the aspirations set out in the Masterplan Report and developed in response to the detailed site analysis contained within those reports and developed as part of the Concept and Scheme Design. An extract of the zonal masterplan is provided at Appendix 4a and is shown in Figure 30 below. It indicates the long term strategic and overall intent of the proposed development to expand the existing hospital. Further detail is provided in the Architectural Design Statement provided by BVN at Appendix 4. An assessment of the proposed Built Form and Urban Design is provided in Section 9.2 of this EIS.

Figure 30. Zonal masterplan (Source: BVN).
4.8. **BUILDING HEIGHT AND SCALE**

The maximum height of the building is 67.8m (RL116.820m) measured from existing ground level. The building comprises a six-storey podium above which sits an eight storey U-shaped tower as illustrated in the massing diagram reproduced at Figure 31 below.

![Massing diagram illustrating the proposed hospital tower. (Source: BVN Architects)](image)

4.9. **MATERIALITY AND FAÇADE TREATMENT**

The elevations at Appendix 3 include a schedule of materials proposed on the building facades. Section 7 of the Architectural Design Statement provides a breakdown of materials used to treat each facade.

The Stage 1 Building façade is made up of windows and metal panels and seeks to provide textural variance using a mixture profiled/ribbed metal cladding such as Longline with a smooth flat panel. To provide depth and visual relief, the façade system is further articulated with the use of vertical sun shading and recessed “urban markers” which respond to the internal planning.

Large format terracotta tile system as the cladding material is proposed to the podium façade of the Stage 1 Building. Vision glazing percentage varies around each façade depending on the internal planning. Glazing areas have been minimised and matched to the internal clinical requirements. Windows and cladding panels are based on 1,200mm wide elements that can be accommodated within the building’s 8.4m grid.

A combination of masonry cladding with high level horizontal strip windows is proposed for Level 00. Large full height glazed areas signify the ED and FoH entry points which are highly visible providing easy navigation to the building from the respective drop-off zones.
4.10. LANDSCAPING

Landscaping is proposed in the areas shown as 'soft landscape zone' in the architectural plans and in accordance with the Landscape Plan prepared by Arcadia (Appendix 5). An extract of the overall landscape master plan is reproduced in Figure 32 below.

The landscaping reflects a theme derived from the bushland character of the locality and the nearby Blue Mountains and includes:

- A generous landscaped entry plaza providing social gathering and seating zones;
- Atrium planting and rooftop planting on the Level 6 podium;
- Raingardens and planted swales to filter overland flow; and
- Peripheral landscaping in accordance with the Masterplan comprising mostly native bushland planting.

Figure 32. Extract of Overall Landscape Master Plan (Source: Arcadia)

The design of the landscape proposes a reintroduction and reinstatement of the endemic ecology of the Cumberland Plain – consisting of the following sub-groups Alluvial Woodland, Shale Plains Woodland and the Shale Hills Woodland. Part of the landscape proposal also looks at the provision of natural shelters
and enclosures from tree canopies through a variety of *Corymbia* and *Eucalyptus* species specific to the endemic ecological grouping – this ranging from *E.moluccana* to *C.maculata*. Spatial definition is also enhanced through the consideration of many mid to lower level plantings – ranging from *Acacia* species to *Indigoferas* and *Dichondras*. In addition, the landscape addresses the concern of water management through use of native WSUD species to slow down and clean water as it moves through the site – from *Lomandra* species to *Baumeas* and *Gahnias*.

4.11. ACCESS AND PARKING

A new vehicular driveway is proposed off Somerset Street to the north of the proposed Stage 1 Building, between Orth Street and Rodgers Street as well as an extension of Barber Street for vehicles approaching from Parker Street. This is shown in the Civil Plans at Appendix 12, the Architectural Plan set at Appendix 3 and below in Figure 33.

![Figure 33. Locations of the proposed new driveways (source: BVN).](image)

As indicated in Section 3.2.9, development consent was recently granted for a six-storey split level hospital car park and helipad within the north-western part of the site (DA17/0665 dated 28/11/2017 as determined by the Sydney West Planning Panel). This new car park will supplement the existing parking
spaces lost as part of the Stage 1 Works included in this SSD DA, providing a net increase of approximately 500 parking spaces.

The Traffic Impact Assessment concludes that once the Nepean Hospital Redevelopment project is complete, and the helipad is relocated (to the proposed Stage 1 building), Nepean Hospital will accommodate 2,009 spaces comprising the additional spaces on the multi-deck car park roof level and some at-grade areas around the Stage 1 Building. Further discussion is provided in Section 9.4.3.

The location of the approved multi-storey car park relative to proposed works is illustrated at Figure 34 below.

In summary, the proposal includes a number of modifications to existing site access and parking arrangements as outlined below:

- Provide a new driveway off Somerset Street;
- Install pedestrian wayfinding signage within the NHC;
- Install bicycle wayfinding signage and racks within the NHC;
- Provide additional drop-off / pick-up locations;
- Upgrade wayfinding signage at vehicle entrances;
- New ambulance access;
- New ED drop off.

4.12. INFRASTRUCTURE AND UTILITY WORKS

Civil Engineering

Civil engineering works will consist of site works and stormwater improvements to serve the proposed development, specifically:

- Bulk excavation;
- Stormwater management systems;
- Water Sensitive Urban Design Measures (WSUD);
- Base structural works; and,
- Road pavement design.

For detail reference should be made to the Integrated Water Management Plan – see Appendix 11 and the Civil Design Report and Drawings – see Appendix 12.
Figure 34: Extract from Car Park Concept Plan indicating the location of the multi storey car park as per the recent development approval DA17/0665 (Source: BVN).
Hydraulic Services

The Utility Report prepared by WSP (Appendix 9) that accompanies this application detail the proposed design with respect to:

- Domestic water supply;
- Gas supply;
- Hot water;
- Warm water;
- Sewer systems;
- Fire hydrant and fire hose reel service;
- Fire sprinklers; and
- Allowances for potential future expansion.

Infrastructure / Utilities

An Integrated Infrastructure Management Plan has been prepared for the proposed development – see Appendix 10. The Nepean Hospital Campus is currently structured as a ‘private’ network in regards to utility services. The campus utility networks then connect to public utility infrastructure assets at or adjacent campus boundaries.

The campus presently has multiple electricity, gas and water feeds from external utility infrastructure sources. Design work is underway to implement a rationalisation of the number of feeds into the campus as part of a campus-wide network realignment program. This will amongst other things mitigate supply risk, enable the hospital operations to be maintained, and allow facilitation of the proposed new staged redevelopment. These infrastructure and utilities works are likely to be undertaken via development without consent provisions under the Infrastructure SEPP. These campus-wide works, whilst servicing the future Stage 1 Building, are not co-dependent upon this development.

4.13. HOURS OF OPERATION

The site will operate 24hrs a day and 7 days a week in accordance with the existing arrangements.

4.14. JOBS CREATION

The proposed development will result in the following estimated employment generation:

- Operational: The proposal is expected to result in an additional 600 FTE jobs.
- Construction: The proposal will create 690 jobs during the construction phase.
4.15. ANALYSIS OF ALTERNATIVE OPTIONS

A number of alternative options were considered during concept design with the preferred solution being selected as that which best met both the immediate needs of the campus and provided future opportunities for additional expansion beyond that.

The analysis of feasible development alternatives was undertaken during the Zonal Masterplan development. During this analysis it was determined that there were limited opportunities to investigate a viable alternative. A number of constraints and opportunities have determined the siting of the Stage 1 Building including:

- Availability of an appropriately sized site/area on the existing campus free of core clinical and clinical support spaces and functions;
- Incorporated around existing acute functions and buildings to allow continued operation and staging;
- Location does not pose any impact or compromise existing clinical or clinical support functions and services - existing hospital services to the community are maintained during the delivery of the Stage 1 Building;
- Proximity and relationship to existing acute clinical services and clinical support;
- Alignment to HI’s briefed requirements and the Projects cost parameters.

Refer to the Site Plan drawing included in the Architectural drawings at Appendix 3 which describes location and set out of the Stage 1 Building in relation to existing buildings and the Somerset Street frontage to the east.

4.16. IMPACT OF NOT PROCEEDING WITH THE PROPOSAL

Generally, the key impacts of not proceeding with the proposal would include:

- Limiting the ability of the NHC to meet the healthcare demands of the catchment population;
- Limiting the attraction and retention of health services staff;
- Preventing the full implementation of contemporary models of care with much of the existing NHC infrastructure not consistent with contemporary standards of health and safety and patient care;
- Increasing the likelihood of recurrent operating costs incurred by the State resulting from a growth in demand of health services;
- Limiting the potential for health services to be delivered to the quality required by the Health Infrastructure and the NBMLHD; and
- Facilitating a substantial long-term undersupply of key clinical services including, emergency, maternity, paediatric, perioperative, ICU and palliative care facilities.
In addition to the impacts identified above, failure to deliver this proposal would undermine the broader service capacity of the NHC. This would have a significant and detrimental impact on services provision for patients within the NHC and the NBMLHD.

To this end, the impact of not proceeding with the proposal would be unacceptable due to the inability of infrastructure to meet the current and future health care demands of the local and regional community.
5. SECRETARY’S ENVIRONMENTAL ASSESSMENT REQUIREMENTS

This section assists DPE and other reviewers identify the location of responses and documentation in relation to the individual requirements of the SEARs. Table 4 indicates the location in the EIS and the relevant Appendix or Appendices. The introduction of the individual Appendix will also generally set out the response to the SEARs relevant to that document / discipline.

Table 4: Location of response to SEARs in the EIS and Appendices

<table>
<thead>
<tr>
<th>SEARs Requirement</th>
<th>Location EIS / EIS Package</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General Requirements</strong></td>
<td>See Section 7.5.1 of this EIS and below.</td>
</tr>
<tr>
<td>The minimum requirements for the EIS in relation to the form and content of an EIS are:</td>
<td></td>
</tr>
<tr>
<td><strong>Clause 6</strong></td>
<td></td>
</tr>
<tr>
<td>An environmental impact statement must contain the following information:</td>
<td></td>
</tr>
<tr>
<td>a. the name, address and professional qualifications of the person by whom the statement is prepared,</td>
<td>a. and b. Environmental Impact Statement Declaration of Certification page of EIS</td>
</tr>
<tr>
<td>b. the name and address of the responsible person,</td>
<td>c. Section 2 generally and Sections 3.2.1 – 3.2.4 of EIS</td>
</tr>
<tr>
<td>c. the address of the land:</td>
<td>d. Section 2.5 and Section 4 of EIS</td>
</tr>
<tr>
<td>i. in respect of which the development application is to be made, or</td>
<td></td>
</tr>
<tr>
<td>ii. on which the activity or infrastructure to which the statement relates is to be carried out,</td>
<td></td>
</tr>
<tr>
<td>d. a description of the development, activity or infrastructure to which the statement relates,</td>
<td>e. Environmental Impact Statement Declaration of Certification page of EIS</td>
</tr>
<tr>
<td></td>
<td>f. Environmental Impact Statement Declaration of Certification page and this section, Section 5, of EIS</td>
</tr>
<tr>
<td>e. an assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule,</td>
<td></td>
</tr>
<tr>
<td>f. a declaration by the person by whom the statement is prepared to the effect that:</td>
<td></td>
</tr>
<tr>
<td>i. the statement has been prepared in accordance with this Schedule, and</td>
<td></td>
</tr>
<tr>
<td>ii. the statement contains all available information that is relevant to the environmental assessment of the development, activity or infrastructure to which the statement relates, and</td>
<td></td>
</tr>
</tbody>
</table>
iii. that the information contained in the statement is neither false nor misleading.

Clause 7
An environmental impact statement must also include each of the following:

| a) | a summary of the environmental impact statement, |
| b) | a statement of the objectives of the development, activity or infrastructure, |
| c) | an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure, |
| d) | an analysis of the development, activity or infrastructure, including: |
|   i. | a full description of the development, activity or infrastructure, and |
|   ii. | a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and |
|   iii. | the likely impact on the environment of the development, activity or infrastructure, and |
|   iv. | a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and |
| v. | a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out, |
| e) | a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d) (iv), |
| f) | the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4). |

Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.

| a) | Section 2 - Introduction of EIS |
| b) | Section 2 – Introduction of EIS |
| c) | Sections 4.15 and 4.16 of EIS |
| d) | Sections 3, 4, and 7.5, and each subsection of Section 9 of EIS |
| e) | Section 11 of EIS |
| f) | Sections 9.5 and 9.15 of EIS |

Section 10 of the EIS sets out an Environmental Risk Assessment adopted from the Australian Standards.
Where relevant, the assessment of the key issues below, and any other significant issues identified in the risk assessment, must include:

- adequate baseline data;
- consideration of potential cumulative impacts due to other development in the vicinity (completed, underway or proposed); and
- measures to avoid, minimise and if necessary, offset the predicted impacts, including detailed contingency plans for managing any significant risks to the environment.

Mitigation measures and strategies are generally addressed in the subsections of each matter addressed in **Section 9** and **Section 11** of the EIS, as derived from the assessment and sub-consultant reports and recommendations.

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 Environmental Planning and Assessment Regulation 2000) of the proposal, including details of all assumptions and components from which the CIV calculation is derived;
- an estimate of the jobs that will be created by the future development during the construction and operational phases of the development; and
- certification that the information provided is accurate at the date of preparation.

Appendix 23 provides a CIV Summary / Report as per the SEARs.

The estimate of construction and operational jobs is included in the EIS at **Section 4.14**.

### Key Issues

### Statutory and Strategic Context

Address the statutory provisions contained in all relevant environmental planning instruments, including:

- State Environmental Planning Policy (State & Regional Development) 2011;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No.55 – Remediation of Land;
- State Environmental Planning Policy No 33 – Hazardous and Offensive Development;
- Sydney Regional Environmental Plan No 20 – Hawkesbury Nepean River; and

Section 7 of the EIS addresses the Statutory Context.

This addresses the Commonwealth EPBC Act; EP&A Act; Regulation, the Biodiversity Act 2016 and all the listed planning instruments from the SEARs.
- Penrith Local Environmental Plan 2010.

**Permissibility**
Detail the nature and extent of any prohibitions that apply to the development.

**Development Standards**
Identify compliance with the development standards applying to the site and provide justification for any contravention of the development standards.

<table>
<thead>
<tr>
<th>Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address the relevant planning provisions, goals and strategic planning objectives in the following:</td>
</tr>
<tr>
<td>• NSW State Priorities;</td>
</tr>
<tr>
<td>• A Plan for Growing Sydney and Towards our Greater Sydney 2056;</td>
</tr>
<tr>
<td>• Greater Sydney Commission’s Draft West District Plan;</td>
</tr>
<tr>
<td>• Better Placed – An integrated design policy for the built environment of New South Wales;</td>
</tr>
<tr>
<td>• NSW Long Term Transport Master Plan 2012;</td>
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<tr>
<td>• Sydney’s Bus Future 2013;</td>
</tr>
<tr>
<td>• Sydney’s Cycling Future 2013;</td>
</tr>
<tr>
<td>• Sydney’s Walking Future 2013;</td>
</tr>
<tr>
<td>• NSW Planning Guidelines for Walking and Cycling; and</td>
</tr>
<tr>
<td>• Healthy Urban Development Checklist, NSW Health.</td>
</tr>
</tbody>
</table>

Permissibility is addressed by **Section 7.13** of the EIS as are all relevant development standards under the Penrith LEP.

<table>
<thead>
<tr>
<th>Built Form and Urban Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address the height, density, bulk and scale, setbacks of the proposal in relation to the surrounding locality, topography and streetscape.</td>
</tr>
<tr>
<td>Address design quality, with specific consideration of the overall site layout, connectivity, interface with the public domain, streetscape, open spaces, landscaping, internal streets, pathways, façade, rooftop, massing, setbacks, building articulation, materials, colours and Crime Prevention Through Environmental Design (CPTED) Principles.</td>
</tr>
</tbody>
</table>

**Section 8** of the EIS addresses the Strategic Context.

All listed policies are addressed by the EIS, including where these policies may have since been updated or finalised after the SEARs were issued.

*Better Placed* is further addressed by the Architectural Design Statement (**Appendix 4**) and in **Section 9.2.8** of the EIS.
- Demonstrate how high quality design would be achieved with reference to Better Placed – An integrated design policy for the built environment of New South Wales and in accordance with a strategy developed in consultation with, and to the satisfaction of the Government Architect NSW.

| Materiality and Façade Treatment; Section 4.10 - Landscaping; and other matters occurring throughout the EIS. |
| An Architectural Design Statement (Appendix 4), Hospital Zone Master Plan (Appendix 4a) and Landscape Design Statement (Appendix 5) also accompany the EIS. CPTED is addressed in Section 9.2.5 and via CPTED Report (Appendix 26). |
| Better Placed is addressed in detail in Section 9.2.8 of the EIS and in the Architectural Design Statement at Appendix 4. |

### Environmental Amenity

Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. A high level of environmental amenity must be demonstrated.

| Environmental Amenity impacts as listed are all addressed in Section 9.3 of the EIS as well as relevant supporting documents including a pedestrian wind assessment (Appendix 17). |

### Transport and Accessibility

Include a transport and accessibility assessment which details, but is not limited to, the following:

- the current daily and peak hour vehicle, public transport, pedestrian and bicycle movements and existing traffic and transport facilities provided on the road network located adjacent to the proposed development;
- the existing and proposed pedestrian and bicycle routes and facilities within the vicinity of and surrounding the
site and to public transport facilities as well as measures to maintain road and personal safety in line with CPTED principles;

- an estimate of the total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips;
- the adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development;
- the impact of the proposed development on existing and future public transport and walking and cycling infrastructure within and surrounding the site and identify measures to integrate the development with the transport network;
- details of travel demand management measures to minimise the impact on general traffic and bus operations and encourage sustainable travel choices and details of programs for implementation, such as a location-specific sustainable travel plan, provision of end-of-trip facilities, green travel plans and wayfinding strategies;
- the daily and peak (AM, PM) vehicle movements impact on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for upgrading or road improvement works (if required), including traffic modelling and analysis;
- the proposed walking and cycling access arrangements and connections to public transport services;
- the proposed access arrangements, including car pick-up/drop-off facilities, pedestrian facilities, traffic control devices and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and cycle networks;
- proposed car and bicycle parking provision for staff and visitors, including consideration of the availability of public transport and the requirements of the relevant parking codes and Australian Standards;
- provision of end of trip facilities (i.e. showers, lockers, change rooms etc.) for the use of employees who choose to walk or cycle to/from work as well as undertake activities during work hours;

Each of these assessments set out the SEARS in their introductions, further articulating how the Transport and Accessibility SEAR has been addressed within the report.

A Construction Traffic Management Plan is appended to the projects preliminary Construction Management Plan (Appendix 19). This also sets out how the Transport and Accessibility and Waste SEARs are addressed in that report.

A Wayfinding Strategy is provided at Appendix 28.

A Green Travel Plan is provided at Appendix 30.

The EIS has addressed:

- Vehicle Movements and the road network
- Car Parking
- Walking and Cycling
- Public Transport
- Travel Demand Management
- Access for staff, patients, and visitors
- End of Trip Facilities
- Access for Emergency Vehicles
- Service Vehicles
- details of ambulance and emergency vehicle access arrangements;
- service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times); and
- an assessment of road and pedestrian safety adjacent to the proposed development and details of any required road safety measures; and
- traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport and the cumulative impact of nearby construction projects, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact.

**Relevant Policies and Guidelines:**

- Guide to Traffic Generating Developments (Roads and Maritime Services)
- EIS Guidelines – Road and Related Facilities (DoPI)
- Cycling Aspects of Austroads Guides
- NSW Planning Guidelines for Walking and Cycling

**ESD**

- Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design and ongoing operation phases of the development.
- Demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice.
- Include a description of the measures that would be implemented to minimise consumption of resources,

**Section 9.5** of the EIS addresses ESD including the requirements of clause 7(4) of the Regulation.

A rating scheme has been applied to the development – See Section 9.5 and the ESD report at Appendix 21.
<table>
<thead>
<tr>
<th>Water (including water sensitive urban design) and energy.</th>
<th>Measures to minimise resource consumption are also addressed in <strong>Section 9.5</strong>. An ESD report is provided at <strong>Appendix 21</strong>.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Noise and Vibration</strong></td>
<td><strong>Section 9.6</strong> and <strong>Appendix 15</strong> of the EIS addresses noise and vibration arising from the construction and operation of the development, including plant, ambulances, general traffic, and helicopter movements. The following have been applied by the Acoustic Assessment at <strong>Appendix 15</strong>:</td>
</tr>
<tr>
<td>Identify and provide a quantitative assessment of the main noise and vibration generating sources during construction and operation. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land, including surrounding residences, Tresillian Nepean and Nepean Private Hospital. Relevant Policies and Guidelines:</td>
<td></td>
</tr>
<tr>
<td>- NSW Industrial Noise Policy (EPA)</td>
<td></td>
</tr>
<tr>
<td>- Interim Construction Noise Guideline (DECC)</td>
<td></td>
</tr>
<tr>
<td><strong>Contamination</strong></td>
<td><strong>Section 9.7</strong> of the EIS addresses contamination and remediation in addressing SEPP 55 (as set out in <strong>Section 7.10</strong>) of the EIS. A Preliminary Stage 2 Site Environmental Assessment</td>
</tr>
<tr>
<td>Demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. Relevant Policies and Guidelines:</td>
<td></td>
</tr>
<tr>
<td>- Managing Land Contamination: Planning Guidelines - SEPP 55 Remediation of Land (DUAP)</td>
<td></td>
</tr>
</tbody>
</table>
Utilities

- Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure.
- Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.

Utilities and RAP have each been prepared – see Appendices 6a and 6b, respectively.

An Infrastructure Management Plan has been prepared – see Appendix 10.

An Integrated Water Management Plan has been prepared – see Appendix 11.

The EIS addresses utilities at Section 9.8.

Contributions

Address Council’s Section 94 Contribution Plans and/or details of any Voluntary Planning Agreement.

Section 9.9 addresses contributions and VPAs.

Drainage

Detail drainage associated with the proposal, including stormwater and drainage infrastructure.

Section 9.10 addresses drainage and is supported by a civil design report and plans at Appendix 12.

Flooding

Assess any flood risk on site and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity.

Section 9.11 addresses flooding and is supported again by the civil design report and plans – Appendix 12. The Bonacci Civil Design Report has addressed the NSW Floodplain Development Manual (2005).

Waste
Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

Section 9.12 addresses waste generated by the construction and operation of the development and is supported by a Construction Waste Management Plan (at Appendix 19) and an Operational Waste Policy (at Appendix 18).

Biodiversity

Biodiversity impacts related to the proposal and the preparation of a Biodiversity Assessment are to be addressed in accordance with the requirements of the Biodiversity Conservation Act 2016.

Section 9.13 addresses biodiversity impacts and is supported by a BDAR at Appendix 25.

Plans and Documents

The EIS must include all relevant plans, architectural drawings, diagrams and relevant documentation required under Schedule 1 of the Environmental Planning and Assessment Regulation 2000. Provide these as part of the EIS rather than as separate documents.

The overall EIS package satisfies this requirement in its entirety.

In addition, the EIS must include the following:

- Architectural drawings (dimensioned and including RLs and identifying MGA94 coordinates);
- Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings and boundaries;
- Site Analysis Plan;
- Stormwater Concept Plan;
- Sediment and Erosion Control Plan;
- Shadow Diagrams;
- View Analysis / Photomontages;
- Landscape Plan (identifying any trees to be removed and trees to be retained or transplanted);
- Integrated urban design and landscape plan, including active transport facilities (existing, proposed and potential footpaths and bicycle paths) and links to surrounding public transport

- See Architectural drawings and the Architectural Design Statement at Appendices 3 and 4. Note the plans adopt 8.4 m standard structural grid.
- Site Survey Plans are included at Appendix 2.
- Site Analysis Plan forms part of the Architectural Plan set and Landscape Plan set at...
• Preliminary Construction Management Plan, inclusive of a Preliminary Construction Traffic Management Plan
detailing vehicle routes, number of trucks, hours of operation, construction program, access arrangements and traffic control measures;
• Geotechnical and Structural Report;
• Accessibility Report;
• Arborist Report;
• Aviation Impact Assessment;
• Acid Sulphate Soils Management Plan (if required); and
• Physical materials sample board (no larger than A3) with correct proportional representation of materials.

Appendices 3 and 5, respectively;
• Stormwater Concept Plan forms part of Appendix 12;
• Sediment and Erosion Control Plans form part of Appendix 12;
• Shadow Diagrams are found in Appendix 3;
• View Analysis / Photomontages are set out in Appendix 3;
• Landscape Plan (identifying any trees to be removed and trees to be retained or transplanted) are set out in Appendices 5, 13, and 25;
• Integrated urban design and landscape plan, including active transport facilities (existing, proposed and potential footpaths and bicycle paths) and links to surrounding public transport is found in Appendix 5;
• Preliminary Construction Management Plan, inclusive of a Preliminary
Construction Traffic Management Plan detailing vehicle routes, number of trucks, hours of operation, construction program, access arrangements and traffic control measures is found at Appendix 19;

- Geotechnical and Structural Report are each found at Appendices 7 and 29, respectively;
- Accessibility Report is found at Appendix 24b;
- Arborist Report is at Appendix 13;
- Aviation Impact Assessment is at Appendix 22;
- Acid Sulphate Soils Management Plan (if required) is not required – see Appendix 6a – Section 11 (p39); and
- Physical materials sample board (no larger than A3) with correct proportional representation of materials – this is included as part of the Architectural drawing set at Appendix 3.
**Consultation**

| During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. | Section 6 of the EIS addresses this SEAR as well as other consultation undertaken in addition to that required. |

| In particular you must consult with: |  |
| • Penrith Council. |  |

| The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided. | As above – Section 6. |
6. CONSULTATION

The SEARs require that:

*During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups and affected landowners. In particular you must consult with:*

- Penrith Council.

*The EIS must describe the consultation process and the issues raised, and identify where the design of the development has been amended in response to these issues. Where amendments have not been made to address an issue, a short explanation should be provided.*

In the following table we outline the consultation that has been undertaken in accordance with these requirements, the issues raised and, where appropriate, the response to these issues in the design of the proposal.

**Table 5: Summary of consultation with relevant authorities, community groups, service providers and affected land owners.**

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Process Used</th>
<th>Issues raised</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport for NSW (Land Use Planning &amp; Development)</td>
<td>Face to face meetings</td>
<td>Application of Austroads ‘Movement and Place Framework’ for road categorisation and management</td>
<td>Section 4.2.8 of the Transport Report details 5 different road categories being Motorway, Movement Corridor, Vibrant Street, Place for People and Local Street.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learnings from approach taken by other health campuses (e.g., Westmead) to management of public car parking</td>
<td>Car parking will be managed in line with NSW Health policy and consistently with management at other hospitals.</td>
</tr>
<tr>
<td>Transport for NSW (Service Design &amp; Development)</td>
<td>Face to face meetings</td>
<td>Scope for improvements to bus customer experience at southern entry to NHC</td>
<td>The Transport Report recommends actions for inclusion in Green Travel Plan which seek to improve bus customer experience. See the Green Travel Plan at Appendix 30.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Opportunities for public transport patronage growth</td>
<td>Noted</td>
</tr>
</tbody>
</table>
already offered by high standard of bus service between NHC and Penrith interchange (especially when latter is upgraded)

Need to consider future direct bus connections to suburbs north and south of NHC, as well as east and west

Actions recommended for inclusion in Green Travel Plan. Note that requires collaboration of other stakeholders.

<p>| Transport for NSW (Interchange &amp; Precinct Planning) | Face to face meetings | Connections to local walking and bike-riding routes. | The site and its surrounding local street network are on generally level terrain. The campus’ structure could facilitate pedestrians’ ability to orient themselves within the site – subject to ongoing adjustments to the internal layout of the campus, the provision and orientation of pathways through it, and improvements to wayfinding (see Wayfinding Strategy). |
| Roads &amp; Maritime Services (Network Sydney) | Face to face meetings | Long-term consideration of potential upgrade of Great Western Highway / Parker Street intersection | Noted. No changes to the intersection of Great Western Highway / Parker Street are proposed. The Great Western Highway / Parker Street intersection is to be upgraded under the Western Sydney Infrastructure Package (see Transport Report) |
| | | Not support of signalisation of Great Western Highway / Somerset Street intersection | Noted |
| | | Need for design of new multi-storey car park to minimise impacts on network operation (e.g., from queuing to Parker Street) | The new multi-storey car park is the subject of a separate approved DA and as such is not assessed as part of the Transport Report. |
| Penrith City Council (Economic Initiatives) | Face to face meetings | Interrelatedness of transport initiatives for NHC and for rest of the Penrith Health and Education Precinct (‘The Quarter’) | Noted. These are long term proposals. The Transport Report makes recommendations for future transport initiatives that seek to increase the take up of alternatives to the car consistent with Council’s approach to ‘The Quarter’. |
| | | | Council advocating for Australian Government Western Sydney Infrastructure Program | Noted. |</p>
<table>
<thead>
<tr>
<th>Penrith Council (Environment &amp; City Development)</th>
<th>Face to face meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funding for upgrade of The Northern Road to extend beyond Jamison Road to Penrith city centre</td>
<td>Need for improved local area wayfinding, to minimise local network impacts from drivers looking for car parking spaces</td>
</tr>
<tr>
<td>The Transport Report recommends actions for inclusion in a Green Travel Plan including using wireless and solar powered technology connected to directional systems to improve wayfinding and parking demand management.</td>
<td></td>
</tr>
<tr>
<td>Potential medium-term rezoning of local area around NHC (including increased focus on employment generation) and expected changes to currently free and/or untimed car parking</td>
<td></td>
</tr>
<tr>
<td>Noted. Introduction of paid parking on the streets will assist with current underutilisation of parking facilities on the hospital campus.</td>
<td></td>
</tr>
<tr>
<td>Scope for long-term urban domain improvements to northern frontage of NHC, as this orients more towards its Great Western Highway ‘address’</td>
<td></td>
</tr>
<tr>
<td>Noted. The hospital zonal masterplan provides for long term public domain improvements and the creation of a north south pedestrian spine providing the campus with a distinct address on the Great Western Highway.</td>
<td></td>
</tr>
</tbody>
</table>

Noted that redevelopment in the precinct generally is well underway. |

Key issues in precinct are at the interface of the new higher density areas and the existing low-density suburbs. |

Noted that Nepean Hospital sits within the centre of the precinct and does not interface with low density residential suburbs. |

Improved legibility and wayfinding. |

Noted that the proposal includes a Wayfinding Strategy and progresses the implementation of the Hospital's Zonal Masterplan. |

Observed that the flight path of the proposed helipad is well located to avoid conflict with surrounding development. |

Noted. |

Availability of car parking during any overlap between the completion of the new multi- | Discussed the preparation of an interim car parking strategy and likely sites in the vicinity of the hospital |
<table>
<thead>
<tr>
<th><strong>Government Architect NSW</strong></th>
<th>Briefing by HI on this project and other forthcoming SSD DAs</th>
<th><strong>Nepean Redevelopment Consumer Committee</strong></th>
<th>Face to face meetings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deck car park and closure of the affected at grade car park is key concern.</td>
<td>Council is supportive of the Nepean Hospital redevelopment project.</td>
<td>The Committee was supportive of the approach and colour/facade concepts. There were some questions about the greenspace and landscaping around the building.</td>
<td>Noted.</td>
</tr>
<tr>
<td>being investigated for use as temporary car parks (see Section 9.4).</td>
<td></td>
<td>Landscaping is proposed as indicated on the architectural site plan and detailed in the Landscape Plan at Appendix 5. The project team advised the group that further consultation opportunities will occur following the completion of schematic design to inform the detailed design process which includes landscaping opportunities.</td>
<td></td>
</tr>
</tbody>
</table>

The overall response to these matters is embodied in the Architectural Plans and Architectural Design Statement since updated and refined, as well as the Landscape Plan. See Appendices 3, 4 and 5 of this EIS.

As Stage 1 of an ongoing and multi-stage redevelopment of the hospital, final public realm, open space / green space access and the like is to be determined as the campus evolves consistent with the broader zonal master plan (see Appendix 4a). Much of the area around the building is likely to be temporary / short-term access, open space and trafficable arising from the proposed adjacent Stage 2 development.

BVN has identified the project’s key Design Principles as being:

- Human Centred
- Sustainable
- Connected
- Integrated
<p>| | | | |</p>
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- Create Identity

BVN states as follows with respect to the building’s massing:
The Stage 1 Building has great potential to become a landmark structure, with a clear identity and strong visual presence on the existing campus.

A massing strategy for the building has been developed that divides the overall mass into a finer grain of interconnected vertical solids of an appropriate scale within the urban context. Changes in façade type correspond to the massing strategy as each solid is developed with a consistent façade system and materiality.

There is a general strategy to divide and breakdown long elevations and large masses with the use of deep recesses.

These not only respond to opportunities for natural light for internal planning purposes but provide a reduction in scale. The tower component is identified with recesses are aligned in plan to accentuate the vertical language. At the podium level the breakup is more fractured and striated.

Being a building form of significant height, its locality within the context of adjacent hospital buildings and surrounding neighbouring buildings is responsive to minimise adverse amenity and contrasting scales and appropriate to the current and future density of the urban context.
In terms of green spaces on and around the building, BVN has indicated:

The design adheres to the Masterplan framework and provides multiple landscaped areas which are generally aligned to the locations proposed in the Zonal Masterplan. These include a public plaza integrated with the FoH and courtyards for staff and patient use. A large north-facing public plaza establishes a new focal point for the Hospitals Campus. This space provides the main public vehicular drop-off and pedestrian entrance to the Stage 1 Building and creates a key east-west link from Parker and Somerset Streets into the existing campus. The completion of future stages and development surrounding this plaza will bring further activation to the space.

A large central courtyard extends to the lowest occupied floor (Level 00) providing natural light and a green outlook to the higher podium levels.

An additional courtyard is created on Level 1 as a result of the new building interfacing with the existing South and East Block structures maintaining access to natural light to existing function spaces located on Levels 1 and 2 of South and East Block.

*The Nepean Redevelopment Consumer Committee meets every month and comprises consumer representatives from the local Penrith, Blue Mountains and Hawkesbury regions. This committee allows consumers to be informed about all aspects of the projects planning, design and delivery phases.

With respect to transport-related consultation, see also commentary in Section 2.3 and Table 2.1 of the Cattell Copper transport report at Appendix 14 of this EIS.
WSP has also included the results of its consultation with Sydney Water at Schedule 2 of its report – see Appendix 9 of this EIS.

Extent has also consulted informally with the Deerubbin Local Aboriginal Land Council, the results of which are set out in Section 2 and Appendix 3 of Extent’s report – see Appendix 20 of this EIS.

A community consultation workshop was held on 6 June 2018. Two sessions were held to enable the community to review and comment on the key principles of the redevelopment project. Consultation included letter box drops and flyers for nearby residents and patients as well as advertisements in the local newspaper (Nepean News) and social media in relation to the redevelopment.

It should also be noted, that extensive consultation is ongoing with hospital staff, clinicians, health representatives and consumers.

The project team has established several different communication and consultation channels to engage various stakeholders. These include:

- Letter box drops of brochures to surrounding residents;
- Distribution of brochures to all patients and visitors;
- Notice in the Nepean News;
- Project User Groups sessions with staff and consumers to inform the planning and design of the new facilities;
- Monthly and bi-monthly governance meetings with representatives from the Local Health District, Ministry of Health, hospital and community health staff;
- Regular newsletters and fact sheets for staff, consumers, community groups, government organisations and other health and educations services in the area;
- Hospital signage around the campus;
- Staff forum presentations (every second month) to keep all staff on campus updated with project progress;
- Pop-up information stands at the hospital for patients, visitors and staff to learn about the project and ask questions. These will be expanded to external community locations following the completion of schematic design;
- Website and social media channels;
- Media events and announcements at key project milestones;
- Regular meetings with Penrith City Council (the project team is also an active participant in the Council’s health and education initiative – “The Quarter”); and,
- Regular project briefings with Local Member for Penrith, Stuart Ayres.
7. STATUTORY CONTEXT

7.1. OVERVIEW
The Secretary requires the following statutory instruments to be considered and assessed as part of this EIS:

- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth);
- Biodiversity Conservation Act 2016;
- Environmental Planning and Assessment Act 1979;
- Environmental Planning and Assessment Regulation 2000;
- State Environmental Planning Policy (State & Regional Development) 2011;
- State Environmental Planning Policy (Infrastructure) 2007;
- State Environmental Planning Policy No. 33 Hazardous and Offensive Development;
- State Environmental Planning Policy No. 55 – Remediation of Land;
- Sydney Regional Environmental Plan No 20 - Hawksbury Nepean River; and
- Penrith Local Environmental Plan 2010.

Where relevant, the provisions of these are addressed below.

7.2. ENVIRONMENT PROTECTION AND BIODIVERSITY CONSERVATION ACT 1999

- actions that have a significant impact on matters of national environmental significance;
- actions that have a significant impact on the environment of Commonwealth land; and
- actions carried out by the Commonwealth Government

Under the assessment and approval provisions of the EPBC Act, actions that are likely to have a significant impact on a matter of national environmental significance are subject to a rigorous assessment and approval process. An action includes a project, development, undertaking, activity, or series of activities.

The EPBC Act identifies seven matters of national environmental significance, which are set out below:

(a) World Heritage properties;

(b) National Heritage places;
(c) Ramsar wetlands of international significance;

(d) nationally listed threatened species and ecological communities;

(e) listed migratory species;

(f) Commonwealth marine areas; and

(g) nuclear actions (including uranium mining).

There are no relevant World Heritage properties, National Heritage places, Ramsar wetlands, Commonwealth marine areas, listed migratory species, nationally listed threatened species and ecological communities or Commonwealth lands on the site.

The provisions of the EPBC Act 1999, therefore, do not apply to this proposal and it does not require referral to the Commonwealth. It is concluded that there will not be a significant impact on any matters of national environmental significance arising from the proposal, and consequently the proposed activity is not considered to be a “controlled action” pursuant to the EPBC Act. As noted in the Biodiversity Development Assessment Report addressing the NSW Biodiversity Conservation Act 2016, Cumberland Plain Woodland is listed by the Commonwealth as Critically Endangered. However, the Commonwealth specifically requires that the patch of Cumberland Plain Woodland must be equal or greater than 0.5 ha. The individual and clumps of vegetation forming part of the Cumberland Plain Woodland on the site do not form a continuous patch either within the proposal area or within Nepean Hospital.

### 7.3. BIODIVERSITY CONSERVATION ACT 2016

The Biodiversity Conservation Act 2016 (BC Act) commenced on 25 August 2017 and sets out, among other things, to establish a scientific method for assessing the likely impacts on biodiversity values of proposed development and land use change.

Under Section 7.9 of the BC Act, a development application for State Significant Development is required to be accompanied by a Biodiversity Development Assessment Report (BDAR) unless “the Planning Agency Head and the Environment Agency Head determine that the proposed development is not likely to have any significant impact on biodiversity values.”

A BDAR is a report prepared by an accredited person which:

- assesses the biodiversity values of the land subject to the proposed development in accordance with the biodiversity assessment method established under Part 6 of the BD Act, and
- assesses, in accordance with that method, the impact of proposed development, activity or clearing on the biodiversity values of that land, and
- sets out the measures that the applicant of the proposed development, activity or clearing proposes to take to avoid or minimise the impact of the proposed development, activity or clearing, and
specifies the number and class of biodiversity credits that are required to be retired to offset the residual impacts on biodiversity values of the actions to which the biodiversity offsets scheme applies.

A BDAR has been prepared by Abel Ecology and is attached at Appendix 25.

The BDAR observes that the Nepean Hospital Campus contains approximately 0.13 ha of canopy of scattered trees which are a remnant of Grassy Woodland (Formation) in the Class Coastal Valley Grassy Woodlands. The relevant Plant Community Type (PCT) is: 849 – Grey Box – Forest Red Gum grassy woodland on flats of the Cumberland Plain, Sydney Basin Bioregion. PCT 849 is associated with Cumberland Plain Woodland which is listed as a Critically Endangered Ecological Community. Although the remnant trees are not ‘intact’, that is, they are scattered individual trees in a highly urbanised environment, they do provide connectivity for various flying species and have some biodiversity value. The BDAR further notes, however, that the quality of the Cumberland Plain Woodland on the Nepean Hospital site does not meet the condition threshold of the Commonwealth Government for Critically Endangered Communities, being that the ecological community must be a discrete and continuous area that exceeds 0.5ha in size.

The BDAR finds that the proposal will require the removal of approximately 0.074 ha of PCT849 comprising primarily Grey Box Eucalyptus moluccana and Forest Red Gum Eucalyptus tereticornis trees, as part of Cumberland Plain Woodland. The BDAR notes that this area is less than half of the lowest clearing threshold for entry into the biodiversity assessment method offset scheme. The BDAR concludes that it is unlikely that the clearing of 0.074 ha of PCT 849 will be considered a Serious and Irreversible Impact (SAII) notwithstanding that the threshold for potential SAII for Cumberland Plain Woodland is not yet available.

Other existing landscaped areas with a mixed of planted exotic and native species are also identified on the campus, but do not represent any natural indigenous vegetation communities within the western suburbs of Sydney. No suitable match to any PCT is available. The appropriateness of identifying a PCT for planted landscaping is still to be further resolved under this DA’s assessment.

The Landscape Plan prepared for the proposal includes locally indigenous Cumberland Plain Woodland species in the Planting Palette for the site which will have a positive impact. The BDAR also observes that locating the proposal over the existing on-grade car park has helped minimise the impact on biodiversity values. The primary method for minimising impacts on the retained Cumberland Plain Woodland is to provide tree protection fencing to exclude any personnel, vehicles or building supplies from within the Tree Protection Zones. This will help to minimise the likelihood of damage to the retained Cumberland Plain Woodland.

Finally, the BDAR calculates that two (2) ecosystem credits will be required to be offset because of the proposal. No threatened species credits will be required.
7.4. ENVIRONMENTAL PLANNING & ASSESSMENT ACT, 1979

7.4.1. DIVISION 4.7 STATE SIGNIFICANT DEVELOPMENT

In accordance with Section 4.36 of the EP&A Act, the proposal is declared State Significant Development by virtue of State Environmental Planning Policy (State & Regional Development) 2011. This is discussed further at Section 7.5 of this statement.

7.4.2. SECTION 4.15 - EVALUATION

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

Table 6: Matters for consideration under Section 4.15(1)(a).

<table>
<thead>
<tr>
<th>Schedule 2 Subclause</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a)(i) any environmental planning instrument</td>
<td>Consideration of relevant environmental planning instruments is undertaken throughout this section of the EIS. The proposal is consistent with all relevant provisions.</td>
</tr>
<tr>
<td>(a)(ii) any proposed instrument</td>
<td>The EIS has also considered draft provisions of the update of SEPP 55, the draft Remediation of Land SEPP.</td>
</tr>
<tr>
<td>(a)(iii) any development control plan</td>
<td>Pursuant to Clause 11 of SEPP SRD, DCPs do not apply to SSD.</td>
</tr>
<tr>
<td>(a)(iiiia) any planning agreement</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>(a)(iv) the regulations</td>
<td>This SSD DA is considered to satisfactorily meet the relevant requirements of the EP&amp;A Regulations relating to applications and the requirements for EIS’s in Schedule 2. Refer to Section 7.5 of this EIS.</td>
</tr>
<tr>
<td>(a)(v) any coastal zone management plan</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>(b) the likely impacts of that development</td>
<td>The likely impacts of the development have been considered in Section 9 of this EIS. Mitigation measures to manage the impacts identified are set out in the &quot;recommended mitigations&quot; sections of Section 9 and the mitigation measures summarised in Section 11 of this EIS.</td>
</tr>
</tbody>
</table>
[c] the suitability of the site for the development

The site is located in an established urban area and with infrastructure services available to meet the needs of the development. Investigations into contamination, geology, flora and fauna, access and services show that the site is suitable for the proposed development and capable of accommodating development of the intensity proposed. Mitigations measures will be put in place to manage impacts during construction and operation to protect the amenity of adjoining residents as well as patients, staff and visitors to the NHC.

d) any submissions

This matter is for the DPE assessment.

e) the public interest

Having regard to the provisions of the EP&A Act and this EIS, it is concluded that the development is significantly in the public interest because of the important improvements in health and hospital services resulting from the new hospital facilities to be provided.

Furthermore, this EIS demonstrates that the development does not result in any adverse environmental impacts subject to adopting the recommendations and mitigation measures contained herein. On balance, the proposal is very much in the public interest.

Biodiversity values exempt if:
(a) On biodiversity certified land
(b) Biobanking Statement exists

Not applicable.

7.4.3. SECTION 4.46 - INTEGRATED DEVELOPMENT

With reference to Section 4.44 of the EP&A Act, the application is not "integrated development" pursuant to subclause 2, as it is a SSD DA and is made "by or on behalf of the Crown".
7.5. ENVIRONMENTAL PLANNING & ASSESSMENT REGULATION 2000

7.5.1. REQUIREMENTS FOR PREPARING AN EIS - CL. 6 & 7

Clause 6 and 7 of Schedule 2 of the Environmental Planning & Assessment Regulation 2000 (EP&A Regs) prescribe the requirements for preparing an EIS. This EIS has been prepared in accordance with the EP&A Regs as described in Table 7 below.

Table 7: EP&A Regulation - Schedule 2 Requirements

<table>
<thead>
<tr>
<th>Schedule 2 Subclause</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 Integrated development—requirements of approval bodies (1) An application for environmental assessment requirements must, in the case of a development application for integrated development, also include particulars of the approvals that are required.</td>
<td>N/A. Section 4.44(2) of the EP&amp;A Act states that Division 5 Special Procedures for Integrated Development, does not apply to &quot;development the subject of a development application made by or on behalf of the Crown (within the meaning of Division 4.6), other than development that requires a heritage approval&quot;.</td>
</tr>
<tr>
<td>6 Form of environmental impact statement An environmental impact statement must contain the following information: (a) the name, address and professional qualifications of the person by whom the statement is prepared, (b) the name and address of the responsible person, (c) the address of the land: (i) in respect of which the development application is to be made, or (ii) on which the activity or infrastructure to which the statement relates is to be carried out, (d) a description of the development, activity or infrastructure to which the statement relates, (e) an assessment by the person by whom the statement is prepared of the environmental impact of the development, activity or infrastructure to which the statement relates, dealing with the matters referred to in this Schedule, (f) a declaration by the person by whom the statement is prepared to the effect that: (i) the statement has been prepared in accordance with this Schedule, and</td>
<td>All of these matters have been addressed in the body of this EIS.</td>
</tr>
</tbody>
</table>
## 7 Content of environmental impact statement

(1) An environmental impact statement must also include each of the following:

<p>| | |</p>
<table>
<thead>
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<tbody>
<tr>
<td>(a)</td>
<td>a summary of the environmental impact statement,</td>
</tr>
<tr>
<td>(b)</td>
<td>a statement of the objectives of the development, activity or infrastructure,</td>
</tr>
<tr>
<td>(c)</td>
<td>an analysis of any feasible alternatives to the carrying out of the development, activity or infrastructure, having regard to its objectives, including the consequences of not carrying out the development, activity or infrastructure,</td>
</tr>
<tr>
<td>(d)</td>
<td>an analysis of the development, activity or infrastructure, including:</td>
</tr>
<tr>
<td>(i)</td>
<td>a full description of the development, activity or infrastructure, and</td>
</tr>
<tr>
<td>(ii)</td>
<td>a general description of the environment likely to be affected by the development, activity or infrastructure, together with a detailed description of those aspects of the environment that are likely to be significantly affected, and</td>
</tr>
<tr>
<td>(iii)</td>
<td>the likely impact on the environment of the development, activity or infrastructure, and</td>
</tr>
<tr>
<td>(iv)</td>
<td>a full description of the measures proposed to mitigate any adverse effects of the development, activity or infrastructure on the environment, and</td>
</tr>
<tr>
<td>(v)</td>
<td>a list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out,</td>
</tr>
<tr>
<td>(e)</td>
<td>a compilation (in a single section of the environmental impact statement) of the measures referred to in item (d)(iv),</td>
</tr>
<tr>
<td>(f)</td>
<td>the reasons justifying the carrying out of the development, activity or infrastructure in the manner proposed, having regard to biophysical, economic and social considerations, including the principles of ecologically sustainable development set out in subclause (4).</td>
</tr>
</tbody>
</table>

(2) Subclause (1) is subject to the environmental assessment requirements that relate to the environmental impact statement.

In response to this clause, we comment as follows:

A summary of the EIS is undertaken in the Executive Summary at the commencement of this EIS;
A statement of the objectives of the development is also undertaken in the Executive Summary of this EIS;
An analysis of feasible alternatives and the consequences of not carrying out the development is undertaken in Section 4.15 and 4.16 of this EIS.
An analysis of the development is undertaken in Section 4 of this EIS;
An analysis of the likely impact on the environment is undertaken in Sections 7, 8 and 9 of this EIS;
A full description of the measures proposed to mitigate any adverse effects of the development is undertaken in the "mitigation measures" in Section 11 of this EIS;
A list of any approvals that must be obtained under any other Act or law before the development, activity or infrastructure may lawfully be carried out is undertaken following this table;
A list of all of the measures referred to in (d)(iv) is in Section 11 of this EIS;
The proposed development is consistent with principles of ESD, as set out in Section 9.5 of this EIS.
(4) The principles of ecologically sustainable development are as follows:
(a) the precautionary principle, namely, that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. In the application of the precautionary principle, public and private decisions should be guided by:
(i) careful evaluation to avoid, wherever practicable, serious or irreversible damage to the environment, and
(ii) an assessment of the risk-weighted consequences of various options,
(b) inter-generational equity, namely, that the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations,
(c) conservation of biological diversity and ecological integrity, namely, that conservation of biological diversity and ecological integrity should be a fundamental consideration,
(d) improved valuation, pricing and incentive mechanisms, namely, that environmental factors should be included in the valuation of assets and services, such as:
(i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement,
(ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste,
(iii) environmental goals, having been established, should be pursued in the most cost-effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems.
7.5.2. APPROVALS REQUIRED - CL. 7(1)(D)(V)

In relation to Clause 7(1)(d)(v), the following sets out the approvals required before this development may lawfully be carried out:

Table 8: Approvals Not Required or Required.

<table>
<thead>
<tr>
<th>Act</th>
<th>Approval Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Legislation that does not apply to SSD (Section 4.41 of EP&amp;A Act)</td>
<td></td>
</tr>
<tr>
<td>the concurrence under Part 3 of the Coastal Protection Act 1979 of the Minister administering that Part of that Act,</td>
<td>N/A</td>
</tr>
<tr>
<td>a permit under section 201, 205 or 219 of the Fisheries Management Act 1994,</td>
<td>N/A</td>
</tr>
<tr>
<td>an approval under Part 4, or an excavation permit under section 139, of the Heritage Act 1977,</td>
<td>N/A</td>
</tr>
<tr>
<td>an Aboriginal heritage impact permit under section 90 of the National Parks and Wildlife Act 1974,</td>
<td>N/A</td>
</tr>
<tr>
<td>an authorisation referred to in section 12 of the Native Vegetation Act 2003 (or under any Act repealed by that Act) to clear native vegetation or State protected land,</td>
<td>N/A</td>
</tr>
<tr>
<td>a bush fire safety authority under section 100B of the Rural Fires Act 1997,</td>
<td>N/A</td>
</tr>
<tr>
<td>a water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the Water Management Act 2000,</td>
<td>N/A</td>
</tr>
<tr>
<td>Legislation that must be considered (Section 4.42 of EP&amp;A Act)</td>
<td></td>
</tr>
<tr>
<td>an aquaculture permit under section 144 of the Fisheries Management Act 1994,</td>
<td>N/A</td>
</tr>
<tr>
<td>an approval under section 15 of the Mine Subsidence Compensation Act 1961,</td>
<td>N/A</td>
</tr>
<tr>
<td>a mining lease under the Mining Act 1992,</td>
<td>N/A</td>
</tr>
<tr>
<td>a production lease under the Petroleum (Onshore) Act 1991,</td>
<td>N/A</td>
</tr>
<tr>
<td>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),</td>
<td>N/A</td>
</tr>
<tr>
<td>a consent under section 138 of the Roads Act 1993,</td>
<td>Yes. A s138 consent will be required.</td>
</tr>
<tr>
<td>a licence under the Pipelines Act 1967.</td>
<td>N/A</td>
</tr>
</tbody>
</table>
7.6. **SEPP (STATE AND REGIONAL DEVELOPMENT) 2011**

The aim of *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP SRD) is to identify development that is SSD. Pursuant to the SEPP SRD a project will be SSD if it falls into one of the classes of development listed in Schedule 1 of the SEPP. "Hospitals, medical centres and health research facilities" with a CIV of $30 million or more are identified as SSD and are considered to be development of State significance.

With a CIV of $232,192,899 and being for a new hospital building and its associated works, the development qualifies as SSD.

7.7. **SEPP (INFRASTRUCTURE) 2007**

*State Environmental Planning Policy (Infrastructure) 2007* (ISEPP) aims to facilitate the effective delivery of infrastructure across NSW and identifies matters to be considered in the assessment of development adjacent to particular types of infrastructure development.

7.7.1. **HEALTH SERVICES FACILITIES**

The proposal does not alter the use of the site. The site is categorised under the ISEPP as a hospital, within the meaning of "health services facilities". The site is zoned SP2 Infrastructure under the PLEP. The SP2 zone is defined as a "prescribed zone" pursuant to clause 56 of the ISEPP. The use of the proposed Stage 1 Building as a "health services facilities" is permissible with consent under the ISEPP.

7.7.2. **TRAFFIC GENERATING DEVELOPMENT**

The ISEPP aims to ensure that the RMS is made aware of and is given an opportunity to make representations in respect of traffic generating development. The ISEPP sets out the types of development which must be referred to the RMS. This affects the current proposal insofar as the SEPP (Schedule 3) requires referral of any proposal regarding a hospital with "over 200 beds" and any car parking for "200 or more motor vehicles".

As the development will result in more than 200 motor vehicles with access to "any road", this DA will be referred to the RMS under clause 104 of the ISEPP as it will be "traffic generating development". To assist the RMS in its consideration of the proposal, a Transport Report (Appendix 14) has been prepared by Cattell Cooper and a Traffic Impact Assessment (Appendix 27) has been prepared by ptc. Consultation was also carried out with the RMS prior to the lodgement of this SSD DA and details of this consultation are provided at Section 6 of this EIS.
7.7.3. OTHER DIVISIONS OF ISEPP

The ISEPP also enables a range of infrastructure and related works without consent via an assessment under Part 5 of the EP&A Act. Campus-wide services and utilities works are able to be carried out by HI as a public authority separately to the need for a DA. A range of works are proposed as set out in the Integrated Infrastructure Management Plan – see Appendix 10. These works are not co-dependent upon the Stage 1 Building and are required to enable continued and seamless delivery of health services for the wider campus.

7.8. SEPP (VEGETATION IN NON-RURAL AREAS) 2017

This Policy aims to protect the biodiversity values of trees and other vegetation in non-rural areas of the site and the preserve the amenity of non-rural areas of the State through the preservation of trees and other vegetation.

The SEPP applies to land within the Penrith Local Government Area. Clause 7(2) of the SEPP states that a person must not clear native vegetation that exceeds the biodiversity offsets scheme threshold without the authority conferred by an approval of the Native Vegetation Panel. The proposed clearing of native vegetation does not exceed the biodiversity offsets scheme threshold as discussed in Section 7.3.

7.9. SEPP NO. 33 – HAZARDOUS AND OFFENSIVE DEVELOPMENT

SEPP 33 provides clear definitions of hazardous and offensive industries and aims to facilitate development defined as such and to ensure that in determining developments of this nature, appropriate measures are employed to reduce the impact of the development and require advertisement of applications proposed to carry out such development.

SEPP 33 requires an assessment of hazardous materials, involving a screening method based on the quantities of dangerous goods on a site, to assist in determining if a development is likely to be a potentially hazardous industry.

Whilst the development primarily consists of consolidation of existing services and/or no new hazardous activities on the site, an assessment of the nature and quantity of dangerous goods that will potentially be stored/used at the NHC in accordance with the requirements of SEPP 33, should be undertaken, with a view to determining if the development is considered to be potentially hazardous or offensive using the performance-based criteria specified in SEPP 33.

The letter provided by Pinnacle Risk Management (Appendix 8) details that a Preliminary Hazard Analysis (PHA) is not required for the Nepean Hospital redevelopment project because:
The only Dangerous Good transported to and stored on site which exceeds the quantities listed in SEPP 33 is liquid oxygen. However, as noted by Pinnacle Risk Management this storage tank has an existing approval and will not be changing as part of the redevelopment project. Therefore, this Dangerous Good does not need to be reassessed via a PHA; and,

There are no other Dangerous Goods used at the hospital that exceed the quantities listed in SEPP 33.

7.10. SEPP NO. 55 - REMEDIATION OF LAND

State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55) establishes State-wide provisions to promote the remediation of contaminated land.

The policy states that land must not be developed if it is unsuitable for a proposed use because it is contaminated. If the land is unsuitable, remediation must take place before the land is developed. The policy makes remediation permissible across the State, defines when consent is required, requires all remediation to comply with standards, ensures land is investigated if contamination is suspected, and requires Councils to be notified of all remediation proposals. The Managing Land Contamination: Planning Guidelines were prepared to assist councils and developers to determine when land has been at risk.

Clause 7 of the SEPP 55 requires that a consent authority must not grant consent to a development unless it has considered whether a site is contaminated, and if it is, that it is satisfied that the land is suitable for the proposed use.

Environmental Investigation Services prepared a Preliminary Environmental Site Assessment (PESA), dated February 2017. Based on the findings of the PESA, the potential for significant, widespread soil contamination associated with each source/Area of Environmental Concern is considered to be low (fill) or low to moderate (remaining AEC). Environmental Investigation Services were of the opinion that the site could be made suitable for the proposed developments via the completion of additional investigation, and if required, remediation undertaken. The PESA also details that a Stage 2 investigation should be undertaken to characterise the soil and groundwater conditions, with particular focus on the development areas and identifying the source and extent of the groundwater impacts identified by Golder Associates. It also recommends that an unexpected finds protocol and asbestos management plan should be prepared for the proposed development. A waste classification assessment should be undertaken prior to disposing of any surplus excavated materials off-site.

The Preliminary Stage 2 Environmental Site Assessment (April 2018) at Appendix 6a details that the site can be made suitable for the proposed development provided that the following recommendations are implemented to address the data gaps and to minimise risks:

- Prepare a Remediation Action Plan (RAP) to outline remedial measures for the site. The RAP should address the data gaps identified in Section 9.4 of the Preliminary Stage 2 Environmental Site Assessment (Stage 2 ESA); and,
- Prepare a Validation Assessment (VA) report on completion of remediation.
Environmental Investigation Services prepared a Remediation Action Plan (RAP) (April 2018) which provides a methodology to address the identified contamination and validate that the site is suitable for the proposed development (from a contamination viewpoint). Environmental Investigation Services note that the proposed development area has increased since the preparation of the Preliminary Stage 2 ESA. Additional Pre-remediation Assessments are required for the additional site area and to quantify the Asbestos Containing Material (ACM) impacted fill material at the site. The results of the Pre-remediation Assessment may require an amendment to this RAP.

The pre-remediation Assessment should be undertaken once the existing site buildings have been demolished and prior to excavation works. Following completion of the pre-remediation Assessments, a specific Remediation Works Plan (RWP) report should be prepared for each remediation area.

The RAP concludes that the site can be made suitable for the proposed development provided the RAP and any RWP prepared for the proposed development are implemented accordingly. A site validation report should be prepared on completion of remediation activities and should be submitted to the consent authority.

A complete copy of the investigation reports prepared by Environmental Investigation Services including the Preliminary Stage 2 Environmental Site Assessment and Remediation Action Plan (RAP) accompany this EIS at Appendices 6a and 6b, respectively.

It is therefore considered that the site is suitable (or will be after undergoing remediation) for the proposed use under currently in force legislation.

The recently exhibited draft Remediation of Land SEPP (an update to SEPP 55) will not substantially alter the fundamental requirements of the legislation. At present a DA is required for any Category 1 remediation works, that is works which amongst other things are Designated Development (with a volumetric threshold of 30,000m³ of contaminated earth). Based on current information and the likely excavation and cut and fill scenario for the development, remediation is not likely to require DA consent via this SSD DA process. Noting the categorisation of the remediation works as Category 1 or Category 2 is to be determined based on the ultimate volume of contaminated earth.

Under the new exhibited, but yet to commence, draft Remediation of Land SEPP, Category 1 remediation works are at this stage proposed to be reduced to a volumetric threshold of 3,000m³, amongst a range of other criteria. Based on this current draft position, the works would however in that scenario likely require DA consent.

### 7.11. SEPP NO.64 — ADVERTISING AND SIGNAGE

The development involves only internal wayfinding around the perimeter of the building including the relevant identification signage at the building’s openings. The wayfinding signage will generally only be of a scale, dimension, and type to visible from within the campus, or from the perimeter of the site. Some signage may consequently be visible from the adjacent street frontages, such as Barber Street. The wayfinding signage will not be visible from a RMS road, such as the Great Western Highway.
To that end, in terms of assessment against SEPP 64, the nature, content and scale of the signage is consistent with the aims and objectives of the SEPP. The exact nature of the signage proposed is still to be determined, and some of the signage will most likely be Exempt Development, and therefore not subject of SEPP 64, nor signage for which development consent will be sought under this DA.

Part 2 (clause 8) of SEPP 64 applies generally to the development. As noted, the objectives of the SEPP are readily satisfied by the wayfinding signage of the development, whilst Schedule 1 of the SEPP sets out the relevant assessment criteria. Broadly, the wayfinding signage is consistent and compatible with the:

- Character of the area given the hospital use and the emerging health and education precinct evolution of the locality;
- The streetscape, setting and landscape, again given the hospital context;
- Site and building scale; and
- The nature of required illumination and glare, amenity, and safety of road users, cyclists, and pedestrians around the hospital campus and public areas and public roads around the hospital’s edge.

There are no important views and vistas or special areas that would be affected by the wayfinding signage.

7.12. SREP NO 20 – HAWKESBURY NEPEAN RIVER

This deemed State Environmental Planning Policy applies to certain land in the Greater Metropolitan Region which includes the Penrith LGA. The aim of the State and Regional Plan No 20 is "to protect the environment of the Hawkesbury-Nepean River system by ensuring that the impacts of future land uses are considered in a regional context."

As the proposed development involves the remediation of land under the development controls of Clause 11, consent is required under Clause 8(2).

Clause 4 requires the consent authority to consider the general planning considerations set out in Clause 5, and the specific planning policies and related recommended strategies set out in Clause 6 (where applicable to the proposed development).

The general planning considerations under Clause 5 are:

(a) the aim of this plan, and

(b) the strategies listed in the Action Plan of the Hawkesbury-Nepean Environmental Planning Strategy, and

(c) whether there are any feasible alternatives to the development or other proposal concerned, and
(d) the relationship between the different impacts of the development or other proposal and the environment, and how those impacts will be addressed and monitored.

The applicable specific planning policies and recommended strategies under Clause 6 have been considered. The site is approximately 3km from the Nepean River. The proposal will not impact on any environmentally and culturally sensitive areas, water quality and quantity, scenic quality, agriculture/aquaculture, recreation and tourism. The provision of these items has been included as a mitigation measure in Section 11 of this EIS to manage any potential downstream impacts.

7.13. PENRITH LOCAL ENVIRONMENTAL PLAN 2010

7.13.1. ZONING

The site is zoned SP2 Infrastructure: Health Service Facilities under the PLEP. Refer to Figure 35 below.

Figure 35: PLEP Zoning Map extract, site outlined in red (Source: NSW Legislation).
7.13.2. PERMISSIBILITY

The proposed development is defined as a health services facility and specifically a hospital. A hospital is defined under the PLEP as:

A building or place used for the purpose of providing professional health care services (such as preventative or convalescent care, diagnosis, medical or surgical treatment, psychiatric care or care for people with disabilities, or counselling services provided by health care professionals) to people admitted as in-patients (whether or not out-patients are also cared for or treated there), and includes ancillary facilities for (or that consist of) any of the following:

(a)  day surgery, day procedures or health consulting rooms,
(b)  accommodation for nurses or other health care workers,
(c)  accommodation for persons receiving health care or for their visitors,
(d)  shops, kiosks, restaurants or cafes or take away food and drink premises,
(e)  patient transport facilities, including helipads, ambulance facilities and car parking,
(f)  educational purposes or any other health-related use,
(g)  research purposes (whether or not carried out by hospital staff or health care workers or for commercial purposes),
(h)  chapels,
(i)  hospices,
(j)  mortuaries.

Development for "the purpose shown on the Land Zoning Map, including any development that is ordinarily incidental or ancillary to development for that purpose" is permissible with consent in the SP2 zone. The purpose shown on the Land Zoning Map extracted at Figure 35 above is that of 'health services facilities'. Accordingly, the proposal is permissible with consent.

7.13.3. ZONE OBJECTIVES

The objectives of the SP2 zone are:

- To provide for infrastructure and related uses.
- To prevent development that is not compatible with or that may detract from the provision of infrastructure.
By enhancing the services offered at the NHC the proposal is consistent with these objectives.

7.13.4. **HEIGHT**

There is no maximum building height for the site under the PLEP, as shown in Figure 36 below.

Figure 36. Height of Building Extract from the PLEP, site outlined and shaded in red.
7.13.5. FLOOR SPACE RATIO

There is no maximum floor space ratio (FSR) for the site under the PLEP, as shown at Figure 37 below.

![Figure 37. Maximum FSR Map extracted from the PLEP, site outlined in red. (Source: NSW Legislation).](image)

7.13.6. HERITAGE

The site does not contain a heritage item nor is the site located within a heritage conservation area. The site is located in proximity to the following local heritage items, as shown in Figure 38 below:

- Penrith General Cemetery (item no. 97) – bounded by Copeland and Phillips Streets, Richmond Road and Cox Avenue to the north east of the site;
- Weatherboard Cottage (item no. 175) – located at 71 Parker Street; and
- “Kevin Brae”, Federation house (item no. 854) – located at 142 High Street.
The proposal will not have an adverse effect on the heritage significance of these items. Refer to the Statement of Heritage Impact at Appendix 16.

A preliminary Aboriginal Archaeological Heritage Assessment (Appendix 20) also accompanies this application and it is noted from this Assessment that there are no Aboriginal archaeological sites recorded within 1.5km of the NHC and that no Aboriginal objects, scarred or carved trees or potential for these to occur were observed during site inspection. The Assessment concludes that the NHC is considered to have very low potential for Aboriginal archaeological sites to be present.

7.13.7. FLOOD PLANNING

The PLEP does not identify the subject site within a flood planning area. However, as stated in the Civil Design Report at Appendix 12, a flood study “College, Orth and Werrington Creeks Catchment Overland Flow Flood Study, Revision 3, dated 9 November 2016” has been produced by Catchment Simulation Solutions on behalf of Penrith City Council. This study identifies that the north-western portion of the Nepean Hospital Campus is flood affected. Stormwater from a major culvert under the rail corridor
passes across the north-eastern corner of the site via a combination of pipes and overland flow to the site discharge point on the eastern boundary and ponds at the low point in Summerset Street.

While the north-western portion of the site is inundated, the proposed location of the Stage 1 Building is not within the affected area. The level of the lowest floor of the building achieves 1.52m free board to the 1%AEP flood event of 47.5m AHD (finished floor level of RL49.020) and is above the level of the probable maximum flood (49.0 AHD) complying with the requirements of Penrith City Council and common engineering principles for the design of hospitals.

### 7.13.8. PROTECTION OF SCENIC CHARACTER AND LANDSCAPE VALUES

The PLEP does not identify the subject site as land with scenic and landscape values or a site with vistas of heritage items.

![Figure 39: Extract from the PLEP Scenic and Landscape Values Map (Source: NSW Legislation).](image)
7.13.9. PENRITH HEALTH AND EDUCATION PRECINCT

The site is located within the Penrith Health and Education Precinct as per the PLEP Clause Application Map shown in Figure 40 below.

Figure 40: Extract from the PLEP Clause Application Map, site outlined in red (Source: NSW Legislation).

Under the PLEP the objectives of the Penrith Health and Education Precinct are as follows:

- to encourage a built form that is suitable for both residential and health services facilities,
- to encourage adaptive reuse of residential buildings for health services facilities in the Penrith Health and Education Precinct where the residential use within the building ceases in the future.

The proposal is consistent with the objectives of this clause as the development will maintain and enhance the existing health services facility on the site in an appropriate built form as discussed further in Section 9.2 of this EIS and the Architectural Design Statement at Appendix 4.
7.14. PENRITH DEVELOPMENT CONTROL PLAN 2014

The Penrith Development Control Plan 2014 (PDCP) provides more detailed provisions, supplementing the provisions of the PLEP.

Under the provisions of Clause 11 of SEPP SRD, Development Control Plans do not apply to State Significant Development. Therefore, the PDCP does not apply to this SSD DA. The PDCP, however, provides useful insights into the desired future character of the surrounding medical precinct which has helped inform the design of this proposal.
8. STRATEGIC CONTEXT

8.1. OVERVIEW
The SEARs require the following non-statutory policies be addressed in the subject EIS:

- NSW State Priorities;
- Greater Sydney Region Plan: A Metropolis of Three Cities;
- Western City District Plan;
- Better Placed – An integrated design policy for the built environment of New South Wales;
- Future Transport 2056;
- Sydney’s Bus Future 2013;
- Sydney’s Cycling Future 2013;
- Sydney’s Walking Future 2013;
- NSW Planning Guidelines for Walking and Cycling; and
- Healthy Urban Development Checklist, NSW Health.

These policies are addressed below as follows.

8.2. NSW STATE PRIORITIES
The NSW government has identified a series of state priorities, targeting particular problems and objectives for the growth and development of the state. The NSW Government is currently actioning 18 priorities. These priorities are divided into the following five headings:

- Strong budget and economy;
- Building infrastructure;
- Protecting the vulnerable;
- Better services; and
- Safer communities.

The NSW State priorities that are applicable to this proposal are considered at Table 9 below in reference to the five headings listed above.
Table 9: NSW State Priorities and their applicability to the proposal.

<table>
<thead>
<tr>
<th>Headings</th>
<th>Priorities</th>
<th>Comment</th>
</tr>
</thead>
</table>
| Strong budget and economy | • Making it easier to start a business  
• Encouraging business investment  
• Boosting apprenticeships  
• Accelerating major project assessment  
• Protecting our credit rating  
• Delivering strong budgets | The proposal will assist in strengthening the local economy by providing improved support services for the Penrith LGA and NBMLHD. Additionally, the proposal will provide valuable employment opportunities throughout both construction and operational phases. |
| Building infrastructure | • Improving road travel reliability  
• Increasing housing supply | This application will provide essential health infrastructure by augmenting and enhancing existing services at the NHC. |
| Protecting the vulnerable | • Transitioning to the National Disability Insurance Scheme  
• Creating sustainable social housing | The proposal will enhance the level of care offered to sick and vulnerable individuals throughout the region. |
| Better services         | • Improving Aboriginal education outcomes  
• Better government digital services  
• Cutting wait times for planned surgeries  
• Increasing cultural participation  
• Ensure on-time running for public transport | The proposal provides a substantial and well-equipped expansion to the NHC. In doing this the proposal will relieve stress from surrounding medical uses and improve public medical services. |
| Safer communities       | • Reducing violent crime  
• Reducing adult re-offending  
• Reducing road fatalities | The proposed design takes into account the established Crime Prevention through Environmental Design (CPTED) principles. These are addressed at Section 9.2.5 below. |

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

The Greater Sydney Region Plan: A Metropolis of Three Cities, was released by the Greater Sydney Commission (GSC) in March 2018 and is the first Region Plan by the Greater Sydney Commission.

The Plan encompasses a global metropolis of three cities – the Western Parkland City, the Central River City and the Eastern Harbour City. It is envisioned that people of Greater Sydney will live within 30
minutes of their jobs, education and health facilities, services and great places. The NHC is located within the Western Parkland City, the approximate location of the site is shown in Figure 41 below.

The site and nearby Western Sydney University and TAFE facilities are located within the Greater Penrith Health and Education Precinct. The Nepean Hospital Redevelopment is identified in the draft Plan as a major hospital expenditure within the Western Parkland City.

The proposed NHC redevelopment will provide essential health infrastructure services within the Penrith Education and Health Precinct and relieve stress on other medical services within the Precinct and LHD. The redevelopment will also improve connectivity into the site and provide additional jobs during both construction and operation.

8.4. WESTERN CITY DISTRICT PLAN

The proposal is consistent with the following Planning Priorities in the Western City District Plan:

- Planning for a city supported by infrastructure;
- Providing services and social infrastructure to meet people's changing needs; and
- Fostering healthy, creative, culturally rich and socially connected communities.

The NHC is located within the Greater Penrith Collaboration Area, which is identified "as a Collaboration Area, Greater Penrith's growth will be supported by a whole-of-government approach to align the activities and investments of government and key stakeholders in the area."

The Collaboration Area aims to:

- develop an integrated land use and transport vision
- revitalise and grow the Penrith CBD
- develop a major tourist, cultural, recreational and entertainment hub
- protect and expand the health and education precinct
- address flooding issues
- implement Greater Sydney Green Grid projects and promote ecologically sustainable development
- improve housing diversity and provide affordable housing
- diversify the night-time economy
- implement healthy city initiatives and improve social infrastructure.
The Plan identifies that collaboration for health and education precincts “will lead to the development of plans that increase the attractiveness and productivity of each centre, coordinate and leverage urban renewal opportunities to deliver greater liveability outcomes, promote advanced technology and knowledge sectors on industrial and urban services land and align infrastructure delivery with urban renewal.” The proposal will result in an expansion of the existing NHC and improve the health services facilities within the Health and Education Precinct. This will contribute to the productivity of the Precinct and deliver greater liveability outcomes through the increased provision of health services.
8.5. BETTER PLACED – AN INTEGRATED DESIGN POLICY FOR NSW

Better Placed - an integrated design policy for the built environment of NSW (Better Placed) was published by Government Architect NSW in August 2017 and is described as follows:

Better Placed is a policy for our collective aspirations, needs and expectations in designing NSW. It is about enhancing all aspects of our urban environments, to create better places, spaces and buildings, and thereby better cities, towns and suburbs. To achieve this, good design needs to be at the centre of all development processes from the project definition to concept design and through to construction and maintenance.

Better Placed identifies seven Design Objectives for NSW including, better fit, better performance, better for community, better for people, better working, better value & better look and feel.

The design process for the proposal has been extensive and through the involvement of an extensive range of stakeholders the Design Objectives identified in Better Placed are achieved in the proposal. The proposal makes a wider contribution to the Hospital Campus and will contribute the to the creation of a more welcoming and equitable environment where the design focuses on the safety, comfort and requirements of people, as encouraged by the Better Placed Design Objectives.

A more detailed description of how the proposal satisfies the objectives of Better Placed is provided in Section 9.2.8 and the Architectural Design Statement by BVN at Appendix 4.

8.6. FUTURE TRANSPORT STRATEGY 2056

The Future Transport Strategy 2056 is an update of the 2012 Long Term Transport Master Plan for NSW. It is a 40-year strategy, supported by plans for regional NSW and for Greater Sydney.

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. It includes issue-specific and place-based supporting plans that shift the focus away from individual modes of transport, toward integrated solutions. The Future Transport Strategy 2056 is the first plan to unpack how we can harness rapid advancements in technology and innovation to transform the customer experience and boost economic performance across NSW.

The Strategy provides a range of six State-wide outcomes to guide investment, policy and reform and service provision. The "six State-wide transport outcomes" identified by the Future Transport Strategy 2056 are extracted below:

- Customer focused;
- Successful places;
- A strong economy;
- *Safety and performance*;
- *Accessible services*; and
- *Sustainable*.

The NHC is a hub for the NBMLHD and as such provides services to a broad catchment area. As per the Transport Report (Appendix 14), the predominant mode of travel for staff, visitors and outpatients is via private vehicles. Notwithstanding this the site is accessible by both bus services and the nearby Kingswood Train Station. The Transport Report suggests bus access improvements along Derby Street and the delivery of bus network redesigns as well as promoting travel via Kingswood Station to improve and encourage public transport access to the site.

In relation to promoting sustainability, the Transport Report recommends the implementation of a Green Travel Plan, which includes the following steps:

- **Step one:** Promote better use of available travel options;
- **Step two:** Improve the customer experience, capacity and impacts of existing transport operations;
- **Step three:** Introduce new public and active transport products and start to shift demand away from driving.

These actions have been included as proposed mitigation measures at Section 11 of this EIS.

A Green Travel Plan (see Appendix 30) has also been prepared by ptc. It addresses, amongst other things:

- The aim of the Green Travel Plan;
- The NHC’s and Stage 1 Building’s context;
- Existing transport (including public and active transport) infrastructure;
- Opportunities and targets, including modal splits and initiatives;
- Workplace transport strategies; and
- Monitoring and evaluation.

Based on the above the proposal is considered to be consistent with the Future Transport Strategy 2056.

**8.7. SYDNEY'S BUS FUTURE 2013**

Sydney’s Bus Future was released by Transport for NSW in 2013 and aims to deliver a “simpler, faster and better bus service for customers” through an integrated bus network approach.

As outlined in the Transport Report, Sydney’s Bus Future identifies the following new bus routes within the Nepean Hospital catchment to meet growing demand and provide direct access between centres:

- Penrith – Rouse Hill via Schofields and Marsden Park
- Penrith – Mount Druitt via Werrington and Great Western Highway.
These routes will provide increased and reliable services for staff, visitors and patients using the expanded Nepean Hospital Services. The Transport Report includes bus access improvements to integrate the adjoining bus stops with the Nepean Hospital Campus to encourage increased bus use to and from the site.

8.8. **SYDNEY’S CYCLING FUTURE 2013**

Sydney’s Cycling Future was released by Transport for NSW in 2013 and provides steps for a connected bicycle network within Sydney, encouraging customers to travel via bike through the following initiatives:

- *investing in separated cycleways and providing connected bicycle networks to major centres and transport interchanges;*
- *promoting better use of our existing network; and*
- *engaging with our partners across government, councils, developers and bicycle users.*

Sydney’s Cycling Future identifies increased local connectivity of bicycle infrastructure in Penrith, extending to the NHC. As outlined in the Transport Report (Appendix 14), the NSW Government plans to work with Penrith City Council on a bicycle network that includes an on-road path along the Great Western Highway between Penrith City Centre, Nepean Hospital and Western Sydney University. The Transport Report recommends the preparation and implementation of a Green Travel Plan for the Nepean Hospital Campus and acknowledges that implementation will require the collaboration of a number of stakeholders in addition to NSW Health Infrastructure including Penrith Council, Transport for NSW and the RMS. Recommended actions for inclusion in the Green Travel Plan seek to promote the use of existing bicycle connections, upgrade the existing bike riding experience and deliver new bike riding connections and opportunities. Accordingly, a Green Travel Plan is provided at Appendix 30.

8.9. **SYDNEY’S WALKING FUTURE 2013**

Sydney’s Walking Future was released by Transport for NSW in 2013 and identifies the following steps to encourage walking:

- *Promoting walking for transport*
- *Connecting people to places through safe walking networks around centres and public transport interchanges*
- *Engaging with partners across government, with councils, non-government organisations and the private sector to maximise our effectiveness.*

As discussed, the Transport Report (Appendix 14) proposes the future preparation of a Green Travel Plan for the NHC. This plan will promote and upgrade existing walking connections as well delivering new walking connection within and around the NHC, including improved wayfinding for customers. The Plan will include improvements to the walking connections to the adjoining bus stops as well as the nearby Kingswood Train Station. Accordingly, a Green Travel Plan is provided at Appendix 30.
8.10. NSW PLANNING GUIDELINES FOR WALKING AND CYCLING

The NSW Planning Guidelines for Walking and Cycling was released by the (former) NSW Department of Planning and Environment in December 2004. These guidelines aim to assist land-use planners and related professionals to improve consideration of walking and cycling in their work.

The guidelines include a checklist which can be used to develop locally-relevant checklists for a variety of planning purposes. The following items form part of the checklist and are relevant to the Nepean Hospital redevelopment:

- Undertaking community engagement;
- Locate off-road paths within reasonable proximity to streets where possible to take advantage of lighting and passive surveillance benefits of the street;
- Ensure all streets provide safe access to regional walking and cycling networks;
- Align local walking and cycling networks between neighbourhood and LGAs;
- Minimise the number of driveways crossing footpaths to improve pedestrian safety;
- Provide sealed footpaths on at least one side of streets in all other locations; and
- Ensure all footpaths have a visually continuous, level and unobstructed path of travel.

Walking and cycling within and surrounding the NHC are considered in the Transport Report at Appendix 14.

8.11. 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.

The HUD is structured into ten chapters, each one focused on a characteristic that is important for healthy urban development. Each characteristic has up to five key considerations, formulated as questions. The checklist is principally about helping to answer the questions:

- What are the health effects of the urban development policy, plan or proposal?; and
- How can it be improved to provide better health outcomes?

The types of plans and proposals that this checklist is intended for include:

- Master Plans (may also be called concept plans);
- Town Centre Plans; and
- Development applications for projects like large housing developments, shopping centres, and community and health care facilities.
Key themes under the checklist are:

- Healthy Food
- Physical Activity
- Housing
- Transport and Physical Connectivity
- Quality Employment
- Community Safety and Security
- Public Open Space
- Social Infrastructure
- Social Cohesion and Social Connectivity
- Environment and Health

In relation to this DA, the following are relevant considerations and comments:

- Existing levels of active transport will be maintained and further encouraged as a result of the growth of the hospital’s population within its catchment. This will be reinforced through a Green Travel Plan (see Appendix 30);
- The proposal aims to increase the legibility of the hospital campus by implementing a wayfinding strategy which will promote walking. The Transport Report (Appendix 14) recommends a variety of actions designed to increase the use of public and active transport which will promote incidental physical activity;
- Existing high levels of public transport use and connectivity will be maintained and enhanced (again, see the proposed Green Travel Plan at Appendix 30);
- The development reinforces the concept of in-fill development and responds to ongoing in-fill development within its catchment, including that of the Penrith Health and Education Precinct;
- The proposal enables an increase in jobs in the area close to housing and transport options;
- The design satisfies an enhances sense of community safety and security;
- The proposal will directly improve the accessibility and quality of public health services;
- The location of the hospital and the Stage 1 Building does not diminish the availability of open space to the wider community;
- The Stage 1 Building’s design and location reinforces a strong sense of local identity and a sense of place, but also creates a new visual identity built upon the principles of design excellence;
- The hospital maintains existing high levels of social interaction and connection among people of all ages, and reinforces this through the increased capacity of the hospital arising from population growth; and
- Provides for an environmentally responsible response to water, energy, and non-renewable resources use.

With regard to the above, the proposal is consistent with the relevant provision of the HUD checklist.
9. ENVIRONMENTAL IMPACT ASSESSMENT

9.1. OVERVIEW
In addition to the statutory and strategic context addressed in Sections 7 and 8 of this EIS, the SEARs require specific issues to be addressed in the EIS. This section contains the assessment of environmental impacts of the specific issues identified in the SEARs and identifies recommended mitigation measures where considered appropriate. Each key issue identified within the SEARs is addressed separately as follows.

9.2. BUILT FORM AND URBAN DESIGN (SEAR 3)
SEAR 3 requires that the application:

- Address the height, density, bulk and scale, setbacks of the proposal in relation to the surrounding locality, topography and streetscape.

- Address design quality, with specific consideration of the overall site layout, connectivity, interface with the public domain, streetscape, open spaces, landscaping, internal streets, pathways, façade, rooftop, massing, setbacks, building articulation, materials, colours and Crime Prevention Through Environmental Design (CPTED) Principles.

- Demonstrate how high quality design would be achieved with reference to Better Placed – An integrated design policy for the built environment of New South Wales and in accordance with a strategy developed in consultation with, and to the satisfaction of the Government Architect NSW.

9.2.1. SITE ANALYSIS
A site analysis has been prepared by BVN and is provided in Appendix 3. It addresses the site’s internal and external context from a natural and built environment perspective, as well as access and the existing operational aspects of the NHC. The site analysis supports discussion in sub-sections that follow and the integration and impacts of the new Stage 1 Building.

9.2.2. HEIGHT, BULK AND SCALE
The NHC is located in an area identified by the Penrith Development Control Plan 2014 as the 'Hospital Precinct' within the wider 'Penrith Health and Education Precinct'. Although the NHC is not subject to a maximum building height or FSR control under the PLEP, the NHC sits within a wider context of an area which is envisaged to grow and develop as a specialised medical precinct delivering a balance of social, economic and environmental outcomes. Ongoing development of the NHC is the driver of the specialised medical precinct and revitalisation of Kingswood generally.
The most dominant feature of the proposal is the hospital tower, which reaches a height of 67.8m. The building height has primarily been determined by clinical requirements and the limited availability of land, however, it also facilitates operational efficiencies by "vertical stacking" (reducing travel distances, vertically integrating functionality, and thereby creating and maintaining good clinical adjacencies). The tower form of the Stage 1 Building enables the creation of enhanced public open spaces at ground level in the longer term, consistent with the Zonal Masterplan for the NHC. The tower form also preserves opportunities for future expansion of medical services on the campus.

The height, bulk and scale of the proposed new hospital development is considered appropriate and desirable for the following reasons:

- The desired future character of the 'Medical Precinct' envisages the redevelopment of land surrounding the southern and eastern boundaries of the NHC (Derby Street and Somerse Street) for 'mixed medical use' comprising residential accommodation above a minimum of two floors containing medical related commercial uses within a maximum building height of 18m.
- The proposed tower is well setback from the street frontages (Somerset Street in particular, as well as, Parker Street, Derby Street and Barber Avenue). The Great Western Highway setback is 129m, Somerset Street setback is 30.49m and the Barber Avenue setback is 96m.
- The tower form is contextually appropriate having regard to the likely future character of the precinct discussed above and in Section 3.3 and evident in the new residential and mixed-use development on Parker and Derby Streets. The tower provides an appropriate marker, or focal point, for the 'Hospital Precinct'.

Whilst the PLEP height and FSR controls do not strictly apply to the proposed development, the following demonstrates that the proposal is consistent with the objectives of the height and FSR development standards in the PLEP, further demonstrating the appropriateness of the height, bulk and scale of the development:

- The proposed building is appropriately scaled with respect to existing buildings at Nepean Hospital and the substantial site area of the NHC;
- The proposed building will not adversely overshadow public areas or surrounding residential development. This is discussed further in Section 9.3.1 of this EIS;
- Adequate articulation and modulation of the proposed development is achieved to alleviate the visual massing and scale of the development.

The land is relatively flat which ensures the building mass is not exaggerated from any surrounding vantage points.

Having regard to the above, the height, bulk and scale of the proposed development is considered appropriate, with the new building designed to reduce both perceived and actual bulk while still meeting its required clinical functions.

The photomontage are below illustrates the proposal within the surrounding development context.
9.2.3. **SITE LAYOUT**

The Nepean Hospital Campus comprises a landholding of over 13.92 hectares. However, most of the land is built upon, except for some scattered open space areas and internal roads and pedestrian links in between existing buildings. With a requirement for approximately 57,000m² of new GFA required to accommodate the new hospital services requirements, determining the location of the new building footprint posed a significant challenge and from the outset. It was clear that demolition of existing buildings would be required.

The location of the proposed building was chosen due to several factors, the main one being it allows for appropriate internal connections to be made with existing health services facilities on the site and will minimise the disruption of services during construction. The vertical stacking of the services, as opposed to maximising the building footprint, maximises residual "space" at the ground level of the campus for future expansion. Also, the proposal optimises the footprint of the redevelopment to allow for future redevelopment at Nepean Hospital. Section 2.02 of the Architectural Design Statement at Appendix 4 discusses these issues in greater detail.

9.2.4. **CONNECTIVITY**

All paths of travel from the proposed Stage 1 Building to the public domain and other areas and buildings within the existing Nepean Hospital Campus are clearly shown on the architectural plans prepared by BVN. Activation areas are provided to the new internal landscaped courtyard, which shares an interface with the new public entrance to the hospital off Somerset Street and Barker Avenue, as well as the new ED drop off. New building entrances are clearly defined.
The existing Hospital Campus is presently characterised by internalised and not necessarily intuitive pedestrian connections. The Stage 1 Building provides an opportunity to create a public entry/forecourt for the hospital. The integration of public space will establish a sense of entry and facilitate the development and appropriate identity for the hospital within the local community as it becomes a fundamental connector for pedestrians.

The location of the public space has been strategically positioned to respond to the aspirational strategies of the campus masterplan. The Stage 1 Building responds to this aspiration by recognising pedestrian desire lines (existing and future) and ensuring the environment around the building provides a safe, sheltered and enjoyable experience for pedestrians. The location of the entry forecourt reinforces the north-south pedestrian spine envisaged in the Zonal Masterplan for the Nepean Hospital Campus.

Internal circulation is to be direct with legible pathways for visitors and clear way finding. The Stage 1 Building provides the opportunity to address the hospitals compromised patient, staff and public circulation flows by establishing a framework which de-conflicts patient, staff and public cross overs through the development of the following:

- Creating clear paths of travel both vertically and horizontally; and
- Separate and streamlined flows for patients, staff and public.

### 9.2.5. CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Crime Prevention through Environmental Design (CPTED) is a crime prevention strategy that focuses on the planning, design and structure of cities and neighbourhoods. It reduces opportunities for crime by using design and place management principles to reduce the likelihood of criminal activity.

CPTED employs four key strategies. These are territorial re-enforcement; surveillance; access control; and space/activity management. All CPTED strategies aim to create the perception or reality of capable guardianship.

A CPTED Strategy has been prepared for the proposal by Southern Cross Protection and is attached at Appendix 26. The CPTED Strategy considers the unique characteristics of the hospital the locality and has informed the architectural and landscape design. The Strategy also includes management strategies that will be implemented with the ongoing operation of the hospital.

The four CPTED principles identified in *Crime prevention and the assessment of development applications* (Department of Urban Affairs and Planning, 2001) which have been addressed by the design of the proposal and the CPTED Strategy as follows:
Principle 1 - Surveillance

Good surveillance means that people can see what others are doing. People feel safe in public areas when they can easily see and interact with others. The CPTED report at Appendix 26 includes recommendations for the proposal to incorporate casual surveillance through the integration of:

- Clear lines of sight through key areas;
- Adequate lighting to prevent any opportunities for concealment;
- Warm lighting to achieve a more calming effect;
- CCTV at all entries/exits, duress alarm locations, waiting rooms, and other key areas;
- Video analytics, video alarm monitoring, and facial recognition as a force multiplier to enhance Security Staff.

There is existing security and CCTV on the Hospital site which will be retained. It is also noted that lighting, way finding (signage) and CCTV will be addressed in detail through the design development phase to provide the level of security required by the Hospital and to ensure the safety of all concerned. The provision of these items has been included as a mitigation measure in Section 11 of this EIS.

Principle 2 - Access Control

Effective access control makes it clear where people are permitted to go, or not to go, and makes it difficult for potential offenders to reach and victimise people and their property. The CPTED report at Appendix 26 details that the goal of access control is to allow access to users who are authorized, and deny access to users who are not, and how to achieve that can vary considerably between one site and another.

The primary recommendation in this respect is to simplify the problem and focus on fundamental concepts of security. A clear and absolute delineation between a secure and non-secure area should be achieved, providing staff and visitors some reasonable assurance of security within the waiting room and other secure areas. The report provides recommendations as follows:

- Design a single, main, separated hospital entry for patients and visitors; separate, secure entries for staff only; and multiple emergency exits in accordance with industry best practices for fire safety;
- Design an independent paediatric waiting room within the ED;
- Design the passage ways to avoid accidental access by public in the main ED waiting room;
- Secure any supplies and medical equipment small enough to be used as weapons within the ED and other areas sensitive to violence.

This application does not propose to modify the existing barriers and fences at the site's boundary. The absence of any such barriers and fences has not resulted in adverse impacts with respect to safety and security in the past and is consistent with the existing and future character of the surrounding locality and desire for increased permeability of the hospital campus.
The wayfinding signage strategy submitted at Appendix 28 incorporates the abovementioned recommendations, thereby supporting the access control principle. The FOH area of Level 1 provides for a secure single main and separated hospital entry for patients and visitors. Separate and secure entries are also provided for the administration space for staff.

**Principle 3 - Territorial Reinforcement**

Well used places reduce opportunities for crime and increase risk to criminals. The hospital campus includes a mixture of public and private (or restricted) spaces. The goal is to maximise the use of the public spaces and increase the sense of community ownership of these spaces so that people who witness crime will respond by quickly reporting it or by attempting to prevent it.

The CPTED report at Appendix 26 observes that the property is generally well cared for and makes the following recommendations:

- Design strict access control into secure and staff only areas, with clear boundaries and signage to delineate the two;
- Design clear transitions and boundaries between public, semi-private, and private spaces. As much as possible, aiming to achieve this via creative use of soft, friendly, welcoming methods;
- Design with a view towards sustainable upkeep and maintenance that clearly indicates the presence of proud, capable guardianship.

The architectural plans at Appendix 3 detail areas for administration areas (staff only areas) and FOH activities which are separated by clear boundaries and will be clearly signed in accordance with the wayfinding signage strategy submitted at Appendix 28. There is a clear delineation between the public streets and footpath verges and the extent of Nepean Hospital. Access routes to and from the hospital will be clearly signposted, delineated and will be in frequent use.

**Principle 4 - Space Management**

The way that public spaces are managed contributes to the principle of territorial reinforcement by ensuring that public spaces are appropriately used and cared for. Activity and space management should be geared at providing outstanding quality of clinical care while taking active measures to minimize stress and anxiety.

The CPTED report at Appendix 26 includes the following recommendations that have been considered throughout the design phase:

- Include an independent paediatric ED Waiting Room, not directly accessible from the General Public’s Waiting Room, and with an enclosed, directly accessible playground; and
- Provide clear signage discouraging violence and aggression.

Strategies to implement this principle include, site cleanliness, rapid repair of vandalism and graffiti, the quick replacement of broken light fixtures/globes and the removal or refurbishment of decayed physical
elements. Nepean Hospital has procedures and practices in place with respect to space management. The operation of such procedures and practices on the site will not be altered by this proposal and space management will remain a priority in the operation of Nepean Hospital.

In summary, the recommendations of the CPTED Strategy by Southern Cross Protection should be implemented in the detailed design and ongoing operation of the hospital, as detailed as a mitigation measure in Section 11.

9.2.6. OPEN SPACES AND EDGES

The design adheres to the Masterplan framework and provides multiple landscaped areas which are generally aligned to the locations proposed in the Zonal Masterplan. These include a public plaza integrated with the front of house and courtyards for staff and patient use. A large north-facing public plaza establishes a new focal point for the Hospital Campus. This space provides the main public vehicular drop-off and pedestrian entrance to the Stage 1 Building and creates a key east-west link from Parker and Somerset Streets into the existing campus. The completion of future stages and development surrounding this plaza will bring further activation to the space and enhanced connection to the Kingswood Rail Station.

9.2.7. SERVICES INTEGRATION

New centralised plant is proposed at Level 04 and Level 13. The approach to the plant spaces has also been to enclose these areas with the same quality of cladding as the rest of the tower. In this regard, plant is well integrated into the built form and will not be visible from the public domain.

9.2.8. BETTER PLACED: AN INTEGRATED DESIGN POLICY FOR NSW

_Better Placed: an integrated design policy for NSW_ was released by Government Architect NSW in August 2017 and is concerned with good design, the design process that underpins the Nepean Hospital and Integrated Ambulatory Services (Stage 1) is not inconsistent with _Better Placed_.

_Better Placed_ outlines processes for achieving a well-designed built environment – which is defined as a built environment that is:

- Healthy for all members of our communities, promoting physical activity, social cohesion, and community safety and security to support people’s wellbeing;
- Responsive to the needs and aspirations of local people, now and into the future, inviting use and habitation, interaction, productivity and enjoyment;
- Integrated by drawing together the relationships between parts and elements, considering interfaces at multiple scales, and working to common goals and aspirations;
• Equitable by presenting opportunities for all segments of our community so residents and visitors have access to and can move about freely between public domain, infrastructure, open space and buildings;
• Resilient to the dynamic, challenging conditions of our time, able to adapt and evolve while retaining essential qualities and values.

To achieve a well-designed built environment, Better Placed identifies seven distinct objectives which define the key considerations.

The seven design objectives and the ways that they are reflected in the design of the Nepean Hospital and Integrated Ambulatory Services (Stage 1) are discussed below and in the Architectural Design Statement provided by BVN at Appendix 4.

Table 10: Better Places Checklist.

<table>
<thead>
<tr>
<th>Objective</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Better fit - contextual, local and of its place. Good design in the built environment is informed by and derived from its location, context and social setting. It is place-based and relevant to and resonant with local character, and communal aspirations. It also contributes to evolving character and setting.</td>
<td>The Nepean Hospital Campus fulfils a central role within its immediate and wider context. The Penrith Health and Education Precinct also known as The Quarter, encompasses the NHC and the Universities of Western Sydney and Sydney and TAFE and aspires to be a leading centre for health and education that “will drive major jobs growth, economic prosperity, educational opportunities and improved health outcomes for a rapidly growing community”. Investment in the NHC is the catalyst for further public and private investment in health, education and research and realisation of the vision for The Quarter. The proposed Stage 1 Building is appropriately scaled to visually act as an entry signifier or gateway to The Quarter and to Penrith. The staged implementation of the Landscape Plan (Appendix 5) and The Wayfinding Strategy (Appendix 28) and CPTED Strategy (Appendix 26) allied with the building design and site planning will improve the connections between the NHC and its surroundings while improving the permeability of the NHC and creating new public spaces for social gathering and interaction in a safe environment enabling greater community engagement with the campus.</td>
</tr>
<tr>
<td>Better performance - sustainable, adaptable and durable. Environmental sustainability and responsiveness is essential to meet the highest performance standards for living and working. Sustainability is no longer an</td>
<td>As detailed in the ESD Report at Appendix 21, the proposal targets an aspirational 4 Star Green Star Rating as required under Health Infrastructure’s Engineering Services Guidelines. ESD initiatives are proposed with respect to energy conservation, water conservation and water sensitive urban design to achieve a minimum 10% energy reduction against the benchmark standard, a reduction in water use</td>
</tr>
</tbody>
</table>
optional extra, but a fundamental aspect of functional, whole of life design.

(to the extent possible given the infection control requirements of the clinical environments) and water quality targets.

Facade elements such as shading, insulation, and material selection will be considered in the context of the overall energy performance of the building. The design of the building has been carefully designed with selected façade materials/systems and interior finishes that are resilient and low maintenance.

<table>
<thead>
<tr>
<th>Better for community - inclusive, connected and diverse.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The design of the built environment must seek to address growing economic and social disparity and inequity, by creating inclusive, welcoming and equitable environments. Incorporating diverse uses, housing types and economic frameworks will support engaging places and resilient communities.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Better for people - safe, comfortable and liveable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>The built environment must be designed for people with a focus on safety, comfort and the basic requirement of using public space. The many aspects of human comfort which affect the usability of a place must be addressed to support good places for people.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Better working - functional, efficient and fit for purpose.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having a considered, tailored response to the program or requirements of a building or place, allows for efficiency and usability with the potential to adapt to changes over time. Buildings and spaces which work well for their proposed use will remain valuable and well-utilised.</td>
</tr>
</tbody>
</table>

| The proposal has been designed to achieve the requirements of an exacting clinical services plan. As would be expected of the Stage 1 Building, it has very specific functional design requirements which required an extended design process and the involvement of numerous service providers and other stakeholders. The design supports the relocation of key functional areas that have critical relationships to existing departments which are remaining in their existing locations. The Stage 1 Building provides a framework for the Stage 1 Building outlined within the Transport Report (Appendix 14) and provided at Appendix 30 seeks to promote and reinforce active transport connections and access to Kingswood Station and enhanced public transport. |

The new Stage 1 Building aims to become the first point of arrival for many visitors to the campus. It will become a fundamental connector for pedestrians. |

| The Green Travel Plan to support the Stage 1 Building outlined within the Transport Report (Appendix 14) and provided at Appendix 30 seeks to promote and reinforce active transport connections and access to Kingswood Station and enhanced public transport. |

Views from all levels to the shared central courtyard ensure people retain a sense of being part of the whole even as they move through the building. Safety is maximised by the application of the principles of CPTED (Appendix 26).
that address’s the Hospitals compromised patient, staff and public circulation flows by establishing a framework which de-conflicts cross overs and provides separate horizontal circulation.

**Better value - creating and adding value.**

Good design generates ongoing value for people and communities and minimises costs over time. Creating shared value of place in the built environment raises standards and quality of life for users, as well as adding return on investment for industry.

Being a public hospital, the proposal has been conceived and designed with a primary emphasis on whole of life costs. As demonstrated in the Landscape Plan (Appendix 5) and the Wayfinding Strategy (Appendix 28) the proposal also seeks to enhance the coherence and legibility of the wider hospital campus consistent with the Zonal Masterplan (Appendix 4a).

**Better look and feel - engaging, inviting and attractive.**

The built environment should be welcoming and aesthetically pleasing, encouraging communities to use and enjoy local places. The feel of a place, and how we use and relate to our environments is dependent upon the aesthetic quality of our places, spaces and buildings. The visual environment should contribute to its surroundings and promote positive engagement.

The proposal represents a significant investment in the 'place' which will be a provide a major catalyst for further investment in the surrounding private and public domains. The Stage 1 Tower will be prominent in the landscape and appropriately so. The quality of the architecture and the proposed materials and finishes will create a visually attractive building that will be uplifting and reflective of the aspirations for 'The Quarter' shared by its broad range of stakeholders including Penrith Council, the Universities, Nepean Private Hospital, NSW TAFE, Wentworth Healthcare and others.

To promote the achievement of high quality design, there has been a pre-lodgement briefing with Government Architect NSW including a preliminary review of the proposal – see Section 6 of this EIS. To demonstrate how high-quality design is being achieved, a strategy has been agreed with the Government Architect NSW which will involve a full design review of the proposal following lodgement of the development application. Focus areas identified in the preliminary review include the creation of a welcoming address for patients and visitors, façade material strategies in response to the 'Blue Mountains' colour reference, the amenity of drop off and parking areas in relation to levels and site topography and the landscape intent to the roof gardens and public realm.

9.2.9. **RECOMMENDED MITIGATION MEASURES**

Implementation of the CPTED Strategy by Southern Cross Protection (Appendix 26) in the detailed design and ongoing operation of the hospital.

9.3. **ENVIRONMENTAL AMENITY (SEAR 4)**

SEAR 4 requires that the application:

*Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. A high level of environmental amenity must be demonstrated.*
9.3.1. SOLAR ACCESS

The site analysis provided by BVN illustrates the sun movements during the winter and summer solstice. The main orientation of the proposed Stage 1 Building is to the north-east. At noon in mid-winter the main shadows will be cast back over East Block, within the boundaries of the NHC.

In terms of surrounding land uses, as can be seen from the shadow diagrams reproduced in Figures 43 and 44, there will be some overshadowing to the south-east and outside of Nepean Hospital after 2pm. The low-level afternoon (3pm) sun at mid-winter will cast shadows across Somerset Street and the existing residential dwellings between Orth Street and Hargrave Street.

![Winter Solstice 2019](image1)

**Figure 43. Mid-winter shadow diagrams (Source: BVN).**

The properties on the eastern side of Somerset Street are currently occupied by older single storey dwelling houses used for a variety of residential and non-residential purposes; however, these some of these properties are expected to be redeveloped in the short-term. The existing planning controls envisage multi-storey commercial and mixed-use buildings comprising ground floor commercial premises with residential apartments above.

Three dimensional and elevation shadow diagrams are provided within the architectural plans to illustrate the shadows that would be cast over Somerset Street at 2pm and 3pm in mid-winter under the current developed scenario as well as their impact on future mixed-use buildings. These are reproduced at Figure 44 and show that overshadowing to properties to the south-east of the proposed Stage 1 Building will not prevent any future west facing apartments from achieving satisfactory access to sunlight.

Under current development scenarios to the east of Somerset Street, shadowing will progressively occur over 10 single storey residential properties fronting Orth, Somerset, and Hargrave Streets between 2pm to 3pm and onwards. In mid-winter, in the hours leading to 2pm, all of these adjacent properties (and their neighbours) will continue to be able to secure more than 3 continuous hours of solar access to principal living and private open space.
Figure 44. Three dimensional and elevation shadow studies. The elevational drawing shows the 2pm shadows in mid-winter falling on the lower non-residential floors. (Source: BVN).
9.3.2. ACOUSTIC IMPACTS

The acoustic impacts of the proposal are assessed in Section 9.6 of this EIS.

9.3.3. VISUAL PRIVACY

The proposed Stage 1 Building is well setback from adjacent streets and there is adequate separation between the Stage 1 Building and the closest residential uses on the eastern side of Somerset Street. These setbacks reduce the potential for overlooking. Furthermore, the height of the tower will mean that views from the upper floor will be long distance views over the surrounding suburb, rather than directly into nearby dwellings and their areas of principal private open space.

It is not anticipated that there will be any adverse visual privacy impacts arising from the proposed works due to the following considerations:

- The topography of the site (and surrounding locality) is generally flat;
- The proposed works are setback substantially from the site’s boundary and separated from surrounding residential properties by a large road reserve at Somerset Street;
- Louvres are proposed on all elevations which reduce the potential for overlooking from the building; and
- A review of the locality (refer to Section 3 of this EIS) demonstrates that there are no existing views surrounding the site that would be adversely impacted by the proposed building.

For the reasons identified above, the proposed acute services building is not considered to adversely affect the environmental amenity of surrounding residential land uses and public open space with respect to visual privacy.

9.3.4. VISUAL IMPACT

The Stage 1 Building will be prominent feature in the landscape and in this regard the site planning and design has sought to mitigate the perceived bulk and scale, particularly when viewed from the public domain, by the methods set out in Section 9.2.2 earlier and summarised below:

- Substantial street setbacks ranging from approximately 30m to Somerset Street/eastern boundary and between 45-96 metres to the Barber Avenue site boundary.
- Landscaping, including existing mature tree planting and new landscaping along the frontages "soften" the visual massing of the development.
- The façade design and materials reduce the apparent bulk of the building and will help to soften the visual impact of the proposal.
While the building will be a prominent feature in the locality, it is considered contextually appropriate given the desired (and emerging) future character of the precinct as a medium to high density medical mixed-use precinct.

9.3.5. VIEW LOSS

Available views in the locality comprise district views of the Western Sydney Parklands to the south/east and the Nepean River and the Blue Mountains National Park towards the north, west and the south.

The proposal will have negligible impact on views from surrounding properties because of its location centrally on the site, and the generally flat topography and predominantly low rise (single storey) existing development, meaning views (when they are available) will be limited.

The proposal will partly obstruct internal views within NHC, particularly the existing outlook from East Block. The degree of impact varies within the building, however, because East Block is oriented at almost 45 degrees to the proposed building, an outlook towards the Nepean River and Blue Mountains will be retained and the impact of the proposal is, therefore, not considered unreasonable in its context.

9.3.6. LIGHTING IMPACTS

Lighting will be installed to meet the minimum Australian and New Zealand Lighting Standards that will not only provide wide and even spread of illumination but will also be adequate to meet operational and CPTED requirements. A mitigation measure is included in this EIS to ensure that there will be no light spill or other lighting-related impacts resulting from the development.

9.3.7. WIND IMPACTS

A Pedestrian Wind Assessment report has been prepared by Windtech for the proposed development (Appendix 17). The purpose of the report is to assess the potential impacts of the proposed design on the local wind environment to the critical outdoor areas within and around the subject development.

The trafficable areas are located within and around the site boundary, with pedestrian footpaths between the various hospital buildings and a central courtyard area within the tower development. With the additional massing of the development, wind conditions are expected to be stronger than existing site conditions, as the current location for the Stage 1 Building is mainly comprised of a carpark. The northerly to north-easterly prevailing winds are expected to impact the site directly due to its exposure from this wind direction. The slightly stepped back northern façade is expected to help mitigate the adverse downwash winds along the inner northern façade.

The wind assessment prepared by Windtech recommends inclusion of densely foliated planting to the north and west of the development. As indicated in the Landscape Plan, these areas, particularly those
which are not protected by existing buildings, are to be planted with endemic tree species according to the capacity of the garden beds to accommodate them, consistent with the recommendations of the wind assessment. Additional planting is recommended to the south-east of the site, especially around corners of the development. It is noted that the corners of the development are also proposed to be planted with endemic tree species according to the capacity of the garden beds to accommodate them, however, it is recommended that additional tree planting be included in the south-eastern corner to provide further protection to the ambulance bay area.

9.3.8. RECOMMENDED MITIGATION MEASURES

Lighting will be installed to meet the minimum Australian and New Zealand Lighting Standards to avoid adverse light spill impacts which meeting the hospital’s operational and CPTED requirements.

The provision of additional tree planting in the south-eastern corner of the development site will be provided to mitigate the effect of wind as recommended in the Pedestrian Wind Assessment Report.

9.4. TRANSPORT AND ACCESSIBILITY (SEAR 5)

SEAR 5 requires that the application:

*Include a transport and accessibility assessment which details, but is not limited to, the following:*

- the current daily and peak hour vehicle, public transport, pedestrian and bicycle movements and existing traffic and transport facilities provided on the road network located adjacent to the proposed development;

- the existing and proposed pedestrian and bicycle routes and facilities within the vicinity of and surrounding the site and to public transport facilities as well as measures to maintain road and personal safety in line with CPTED principles;

- an estimate of the total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips;

- the adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development;

- the impact of the proposed development on existing and future public transport and walking and cycling infrastructure within and surrounding the site and identify measures to integrate the development with the transport network;

- details of travel demand management measures to minimise the impact on general traffic and bus operations and encourage sustainable travel choices and details of programs for
implementation, such as a location-specific sustainable travel plan, provision of end-of-trip facilities, green travel plans and wayfinding strategies;

- the daily and peak (AM, PM) vehicle movements impact on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for upgrading or road improvement works (if required), including traffic modelling and analysis;

- the proposed walking and cycling access arrangements and connections to public transport services;

- the proposed access arrangements, including car pick-up/drop-off facilities, pedestrian facilities, traffic control devices and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and cycle networks;

- proposed car and bicycle parking provision for staff and visitors, including consideration of the availability of public transport and the requirements of the relevant parking codes and Australian Standards;

- provision of end of trip facilities (i.e. showers, lockers, change rooms etc.) for the use of employees who choose to walk or cycle to/from work as well as undertake activities during work hours;

- details of ambulance and emergency vehicle access arrangements;

- service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times); and

- an assessment of road and pedestrian safety adjacent to the proposed development and details of any required road safety measures; and

- traffic and transport impacts during construction and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport and the cumulative impact of nearby construction projects, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact.

Additionally, it is noted that separate correspondence was received from the RMS dated 4 December 2017 detailing matters to be included in the traffic impact assessment of the proposal. This correspondence has been addressed below and in the supporting reports.
9.4.1. ASSESSMENT

The application is supported by a comprehensive Transport Report (Appendix 14) prepared by Cattell Cooper as well as a Traffic Impact Assessment by ptc (see Appendix 27). The application is also supported by a Construction Traffic Management Plan (as part of Appendix 19) prepared by ptc. A Green Travel Plan is also included at Appendix 30.

An assessment of the issues identified by the SEARs is provided as follows.

9.4.2. VEHICLE MOVEMENTS AND THE ROAD NETWORK

The surrounding road network is comprised of regional and local roads. The regional roads include the Great Western Highway and Parker Street which adjoin the northern and western boundaries of the Nepean Hospital Campus respectively.

There are nine key intersections in the surrounding road network which have been modelled by ptc (see Transport Report, Appendix 14 and Traffic Impact Assessment, Appendix 27) for the purpose of determining their current and likely future performance both with, and without, the proposed hospital expansion.

The modelling demonstrates that the key intersections are all currently performing at a satisfactory level of service, however, because of forecast growth in background traffic, two intersections which are already near to their limit of satisfactory performance (Somerset Ave/Great Western Highway and Parker Street/Derby Street) will begin to experience unsatisfactory levels of service in 2021, irrespective of the hospital expansion.

In the case of the Parker Street/Derby Street intersection, ptc suggests that a modified intersection layout will restore satisfactory levels of service while the Great Western Highway/Somerset Street intersection will require signalisation by 2021. Notably, based on SIDRA modelling, ptc concludes that the Stage 1 Building is unlikely to trigger the need for these works as the forecast additional traffic activity will have relatively limited impact.

9.4.3. CAR PARKING

Nepean Hospital is characterised by a high reliance (95 per cent) on the use of private motor vehicles to travel to work while 85 per cent of out-patients and visitors also rely on private motor vehicles to access the hospital.

Car parking demand has been forecast using a first principles approach which is described in the Traffic Impact Assessment (Appendix 27). The estimated additional car parking demand is 337 spaces. By way of comparison, the additional car parking requirement based on the rates provided for hospitals in the
Penrith Development Control Plan 2014 is 385 spaces. This figure is based on the number of extra hospital beds (256) and the number of additional staff (600).

The package of works for the Nepean Hospital Redevelopment includes the construction of a multi-level car park at the intersection of Parker Street and Barber Ave. To facilitate programming, approval for this car park was obtained separately from the Sydney West Planning Panel on 28 November 2017 and construction of the car park is underway.

The new car park includes a helipad which will be relocated to the Stage 1 Building upon completion. In its final configuration the new car park will provide 735 car parking spaces. The net car parking gain is 500 spaces because of the loss of 235 existing car spaces by the proposed hospital tower. The net gain in car parking, nonetheless, exceeds the estimated car parking demand of the proposal by 163 car parking spaces and will help reduce the existing reliance on on-street car parking.

There are also significant opportunities for the hospital to reduce the reliance on the use of private motor vehicles for transport and to improve car parking efficiency by implementing a range of strategies that are identified in the Transport Report (Appendix 14). Because of the expected growth in regional traffic, and the increased demand for on-street car parking that will occur as urban renewal continues in the hospital precinct, it is in the long-term interests of the hospital to develop and begin implementing these strategies where it is within their power to do so.

9.4.4. WALKING AND CYCLING

As noted, Nepean Hospital is characterised by high proportions of staff and outpatients who rely on private motor vehicles for access. The Transport Report (Appendix 14) observes that the proportion of staff who walk to work (2%) is substantially lower than the average for greater Sydney 4.1%. Conversely, the proportion of staff who ride bicycles to work (1.5%) is greater than the Sydney average (0.9%).

The hospital is located within a relatively flat area which is currently surrounded by mostly single storey housing. It is evident, however, that the character of the surrounding area, particularly to the west of Parker Street, is changing rapidly as the single storey homes are replaced by medium rise residential apartments. As a result, the opportunities for hospital staff to live within walking distance of the hospital are increasing.

Even though a higher than average proportion of staff cycle to work, the Transport Report observes that the cycling infrastructure in the Penrith LGA is underdeveloped compared to longer established and more densely settled areas of Greater Sydney. According to the report, the only dedicated bicycle route within the immediate vicinity of the hospital is the shared pedestrian and bicycle path along the northern side of the Great Western Highway. This path was recently upgraded and connects the hospital with the education precinct to the east, and Penrith Town Centre to the west.

Because the hospital campus has evolved over many decades, the diverse array of buildings, car parking areas and landscaping elements makes the campus difficult for pedestrians to navigate. Over the past 10
years there have been improvements to way finding within the campus, however, they have not been applied uniformly. A Wayfinding and Signage Strategy has been prepared for the campus and is provided at Appendix 28. The Transport Report makes numerous recommendations for implementation in the short, medium and long term to improve walking and cycling access which the Transport Report recommends are addressed in a 'Green Travel Plan' given the timeframes and the multiplicity of stakeholders. Accordingly, a Green Travel Plan is provided at Appendix 30.

9.4.5. PUBLIC TRANSPORT

The existing public transport services comprising bus and train services are described in Section 3.2.7 of this report and in greater detail in the Transport Report (Appendix 14).

Increasing the utilisation of public transport services and reducing the reliance on private motor vehicles for travel will be increasingly important to the future operation of the Nepean Health Campus, as noted.

The Transport Report (Appendix 14) identifies a range of initiatives which are designed to promote the use of existing public services, upgrade or improve existing services and potentially deliver new services. These recommended timeframes for these initiatives span the short, medium and longer term. In the shorter term they are focussed on the provision of improved travel information and wayfinding and initiatives such as the relocation of bus stops so they are better aligned with the north-south pedestrian spine through the hospital campus.

The Transport Report recommends these are addressed in a 'Green Travel Plan' given the timeframes and the multiplicity of stakeholders. Accordingly, a Green Travel Plan is provided at Appendix 30.

9.4.6. TRAVEL DEMAND MANAGEMENT

The Transport Report (Appendix 14) details a suite of actions for inclusion in the 'Green Travel Plan' which are aimed at promoting available travel choices to staff as well as visitors and outpatients and delivery and service providers. Accordingly, a Green Travel Plan is provided at Appendix 30.

9.4.7. ACCESS FOR STAFF, PATIENTS AND VISITORS

The main entrance and FOH for the proposed Stage 1 Building is located on the ground floor of the western building elevation. A new vehicle access providing a limited number of at-grade car parking spaces and a 'drop-off' area is to be constructed as an extension of Barber Avenue. The vehicle access from Barber Street terminates at a round-about.

Pedestrian access is available from Somerset Street along a path adjacent to the northern building elevation and Barber Street from a path on the southern side of the street and extending the proposed arrival forecourt. As noted in the Transport Report, there are opportunities to strengthen the pedestrian
connections with existing public transport services which are proposed to be addressed via the proposed ‘Green Travel Plan’ (see Appendix 30).

### 9.4.8. END OF TRIP FACILITIES

End of trip and shower and change facilities are currently available to clinical and some administrative staff, however, it is proposed that dedicated end of trip facilities will be provided in a refurbished area that is being vacated within the hospital.

### 9.4.9. ACCESS FOR EMERGENCY VEHICLES

The emergency department and ambulance bays are located on the eastern building elevation and emergency vehicles will access the Stage 1 Building from the existing driveway entrance on Somerset Street. This access is separated from general parking access to minimise potential conflict.

### 9.4.10. SERVICE VEHICLES

The Traffic Impact Assessment (Appendix 27) observes that the net increase in service vehicle activity resulting from the proposal will be minor and is unlikely to have any noticeable impact on the surrounding road network.

### 9.4.11. TRAFFIC AND TRANSPORT IMPACTS DURING CONSTRUCTION

A Construction Traffic Management Plan (CTMP) prepared by ptc is included as part of the preliminary Construction Management Plan at Appendix 19.

The proposed working hours associated with construction activity are Monday to Friday from 7am to 6pm and Saturdays from 7am to 5pm. No work is to be undertaken on Sundays or public holidays.

According to the CMTP, the construction will involve the use of commercial trucks up to 19m 'truck and dogs' and 19m articulated vehicles.

Construction activity will occur in two distinct phases. Phase 1 involves demolition and excavation, piling and in-ground works and is expected to take six months. Within this phase it is noted that the bulk excavation is scheduled to occur for 18 days and will involve up to 75 truck movements per day, from which it is estimated eight heavy vehicle movements will occur during the peak hour.

Phase 2 involves the building construction and is expected to take 26 months.

It is key to note that the CTMP anticipates minimal impact on the larger surrounding traffic network. This is facilitated by the proximity of State roads in the case of Parker Street and the Great Western Highway.
The CTMP proposes that all construction vehicles will be constrained to these roads to the greatest extent possible. Additionally, it is noted that all construction vehicles can enter and exit the hospital campus in a forward direction, and manoeuvre within the site.

The CTMP anticipates that public transport (bus and train) will be the preferred mode of travel for construction workers owing to the lack of parking for construction staff and the proximity of Kingswood Station. As such, the CTMP anticipates that the traffic impact of light vehicles associated with construction activity will be within tolerance of the road network.

In terms of existing on-site parking, it is likely that there will be an overlap between the closure of the existing at-grade carpark where the Stage 1 building is proposed, and the availability of the new multi-deck car park currently being constructed. The applicant is currently arranging temporary at-grade car parking near the hospital campus to ensure the needs of staff, patients and visitors are accommodated during the construction period. It is noted that at-grade car parking is provided for as exempt development in *State Environmental Planning Policy (Infrastructure) 2007*.

### 9.4.12. RECOMMENDED MITIGATION MEASURES

The following mitigation measures are recommended:

- Preparation of a final ‘Green Travel Plan’ in accordance with the recommendations of the Transport Report prepared by Cattell Cooper (Appendix 14) and as presently presented in the Green Travel Plan at Appendix 30;
- Implementation of the Construction Traffic Management Plan (as part of Appendix 19) including regular review to accommodate changes in design, or additional requirements of authorities including RMS and Penrith City Council; and
- Finalisation and implementation of a temporary car parking strategy to ensure the availability of adequate car parking to meet the needs of staff, patients and visitors to Nepean Hospital during the period of construction activity.

### 9.5. ECOLOGICALLY SUSTAINABLE DEVELOPMENT (SEAR 6)

SEAR 6 requires that the application:

*Detail how ESD principles (as defined in clause 7(4) of Schedule 2 of the Environmental Planning and Assessment Regulation 2000) will be incorporated in the design and ongoing operation phases of the development.*

*Demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice.*

*Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy*
9.5.1. ASSESSMENT

This application is supported by an Environmentally Sustainable Design (ESD) Report prepared by Steensen Varming which is included at Appendix 21. An assessment of the issues identified in this SEAR is provided as follows.

9.5.2. RELATIONSHIP TO PRINCIPLES OF ESD

The principles of ESD are defined by Clause 7(4) of Schedule 2 of the EP&A Regulation. Each principle is set out in the following table with a description of how they have been incorporated in the proposal.

<table>
<thead>
<tr>
<th>ESD Principle</th>
<th>Means of incorporation</th>
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<tbody>
<tr>
<td>(a) the precautionary principle, namely, that if there are threats of serious</td>
<td>The construction of a new Stage 1 Building presents no threats of serious or irreversible environmental damage. Indeed, the proposal will provide the catalyst to remediate already (in part) contaminated land. The proposal serves an important public purpose and is not inconsistent with this principle.</td>
</tr>
<tr>
<td>or irreversible environmental damage, lack of full scientific certainty should</td>
<td></td>
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<tr>
<td>not be used as a reason for postponing measures to prevent environmental</td>
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<tr>
<td>degradation. In the application of the precautionary principle, public and</td>
<td></td>
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<tr>
<td>private decisions should be guided by:</td>
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<tr>
<td>(i) careful evaluation to avoid, wherever practicable, serious or irreversible</td>
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<tr>
<td>damage to the environment, and</td>
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<tr>
<td>(ii) an assessment of the risk-weighted consequences of various options,</td>
<td></td>
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<tr>
<td>(b) inter-generational equity, namely, that the present generation should</td>
<td>The proposal will not have an adverse effect on the health, diversity or productivity of the natural environment. It will provide valued community services for current and future generations.</td>
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<tr>
<td>ensure that the health, diversity and productivity of the environment are</td>
<td></td>
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<tr>
<td>maintained or enhanced for the benefit of future generations,</td>
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<tr>
<td>(c) conservation of biological diversity and ecological integrity, namely,</td>
<td>As demonstrated in the Biodiversity Development Assessment Report at Appendix 25, the proposal will have a broadly neutral effect on biological diversity, subject to the retirement of two (2) biodiversity credits.</td>
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<tr>
<td>that conservation of biological diversity and ecological integrity should</td>
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<td>be a fundamental consideration,</td>
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<tr>
<td>(d) improved valuation, pricing and incentive mechanisms, namely, that</td>
<td>The proposal relies on utility services that are already priced in accordance with these principles. Accordingly, the proposal has been designed to conserve energy and water at levels that are greater than the minimum benchmarks in order to reduce the</td>
</tr>
<tr>
<td>environmental factors should be included in the valuation of assets and</td>
<td></td>
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<td>services, such as:</td>
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</table>
(i) polluter pays, that is, those who generate pollution and waste should bear the cost of containment, avoidance or abatement, (ii) the users of goods and services should pay prices based on the full life cycle of costs of providing goods and services, including the use of natural resources and assets and the ultimate disposal of any waste, (iii) environmental goals, having been established, should be pursued in the most cost-effective way, by establishing incentive structures, including market mechanisms, that enable those best placed to maximise benefits or minimise costs to develop their own solutions and responses to environmental problems."

| ongoing operating costs of the hospital and improve environmental performance. |

9.5.3. ASSESSMENT AGAINST SUITABLY ACCREDITED RATING SCHEME

As required by Health Infrastructure's Engineering Services Guidelines (August 2016), the Stage 1 Building will target an aspirational 4 Star Green Star rating.

9.5.4. MEASURES PROPOSED TO MINIMISE CONSUMPTION OF RESOURCES.

The Steensen Varming Report details the passive, mechanical and lighting design measures being considered for the Stage 1 building to reduce energy consumption and achieve the aspirational green star rating. These include passive design principles, the specification of mechanical services, lighting design and the specification of water efficient fixtures and fittings.

As detailed in the Civil Design Report (Appendix 12), water sensitive urban design (WSUD) is being used to treat stormwater runoff from the new roads and enviropods and stormfilters are incorporated elsewhere in the civil design to achieve Penrith Council's water quality targets. Treated rainwater is to be collected and used for irrigation.

The Preliminary Construction and Construction Waste Management Plan (Appendix 19) details the separation of construction and demolition waste into appropriate streams to maximise the recycling and reuse of resources.
9.5.5. **RECOMMENDED MITIGATION MEASURES**


9.6. **NOISE AND VIBRATION (SEAR 7)**

SEAR 7 requires that the application:

> Identify and provide a quantitative assessment of the main noise and vibration generating sources during construction and operation. Outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land, including surrounding residences, Tresillian Nepean and Nepean Private Hospital.

**Relevant Policies and Guidelines:**

- *NSW Industrial Noise Policy (EPA)*
- *Interim Construction Noise Guideline (DECC)*
- *Assessing Vibration: A Technical Guideline 2006*

Noise emissions associated with the construction and operation of the proposed Stage 1 Building have been assessed with reference to relevant EPA and Council acoustic guidelines in the Acoustic Assessment prepared by Acoustic Logic at Appendix 15. The assessment report:

- Addresses relevant SEARs, Council and Environmental Protection Authority (EPA) noise emission criteria applicable to the development.
- Identifies nearby noise sensitive receivers and anticipated operational noise sources with the potential to adversely impact surrounding sensitive receivers.
- Predicts operational noise emissions and assess them against acoustic criteria.
- Determines building and/or management controls necessary to ensure ongoing compliance with noise emission goals.
- Provides a preliminary review of potential noise and vibration impacts resulting from the proposed demolition, excavation and constructions works associated with the redevelopment.
- Provides a review of noise impacts associated with the relocation of the helipad.

To determine the existing noise conditions, long term unattended noise logging and attended noise measurements were conducted on Somerset Street, between the proposed entrances to the ambulance bays and the emergency department drop off, and on Somerset Street near the existing hospital entrance and entrance to the new multi-deck car park.

A summary of the key findings and recommendations of the Acoustic Assessment Report is undertaken below.
9.6.1. CONSTRUCTION NOISE & VIBRATION

Likely construction noise impacts and appropriate noise management recommendations have been assessed by Acoustic Logic against the EPA Interim Construction Noise Guidelines and the EPA document Assessing Vibration: A technical guideline.

According to Acoustic Logic the EPA Interim Construction Noise Guidelines recommend different noise management strategies depending on the predicted noise level at the nearest residences. The strategies differ according to whether the predicted noise levels fall within the "noise affected/noise management" category, or the "highly noise affected category".

Based on an analysis of the anticipated construction activities, Acoustic Logic concludes that:

- During the demolition/excavation/soil retention phase, noise levels exceeding EPA "noise management" levels are likely to occur if excavation in rock is required, however, noise levels exceeding the "highly noise affected level" are unlikely to occur;
- During the erection of the building, noise levels exceeding the EPA "noise management levels are unlikely to occur; and
- Once construction of the building shell is complete, EPA "noise management" levels are also unlikely to be exceeded.

The assessment concludes that noise impacts on nearby development can be suitably managed to prevent unreasonable impact by implementing the following mitigation measures:

- Locating static plant (concrete pumps, cranes) as far as practicable away from eastern boundary is recommended;
- Using augured rather than driven or vibratory piling should be considered if feasible; and
- Arranging letter box drops or similar to advise residents on Somerset Street in the event that significant excavation in rock is required.

Regarding potential construction vibration impacts, Acoustic Logic concludes that they are unlikely to exceed EPA guidelines because of the distance between the site and the nearest residential buildings on Somerset Street. Nevertheless, it is recommended that if bulk excavation in rock or driven/vibrated piles is proposed:

- Excavation in rock should be done using rock saws as opposed to hydraulic hammers, where practicable;
- For at least the initial stages of excavation in rock, vibration monitoring should be conducted to ensure excessive levels of vibration are not achieved. Monitoring at residential properties on Somerset Street and Nepean Private Hospital should be considered.
- Any vibration monitoring system should allow for rapid feedback to the contractor (for example, SMS notification) if excessive levels are reached.
It is noted from the Geotechnical Report (Appendix 7) that weathered bedrock was first encountered at depths of 4.0m. In this regard it is unlikely that there will be substantial excavation of rock, however, it is considered appropriate that the recommendations contained in the Acoustic Assessment are implemented as mitigation measures.

9.6.2. OPERATIONAL NOISE

Operational noise impacts of the proposed Stage 1 Building have been assessed with specific consideration of:

- Ambulance bays;
- General vehicle traffic;
- Mechanical plant; and
- Helicopter operations.

Ambulance bays

Acoustic Logic has assessed the noise associated with ambulances entering and leaving the ambulance bays (without sirens) and the operation of the ambulance bays (people speaking, car doors slamming) against the criteria provided in the EPA Industrial Noise Policy.

It is noted that sirens are generally not required within the site except for short bursts to alert motorists, however, because the ambulance bays are accessed from a dedicated driveway there is a low propensity for this to occur.

The Acoustic Assessment concludes that the probability of sleep disturbance to adjacent residential uses being caused by ambulances entering and leaving the site, or ambulance bay, is 0%.

General vehicle traffic

The Acoustic Assessment notes that the proposal is unlikely to generate significant additional traffic on public roads.

Mechanical plant

Acoustic Logic has undertaken a preliminary assessment of the primary plant items including the roof top cooling towers, major fans, the Level 4 plant room (air handling plant, pumps, chillers, etc) and emergency diesel generators pending final plant selections.

The Acoustic Assessment notes that a cumulative assessment of plant noise is required when conducting the detailed acoustic design of plant items, with particular consideration of plant noise near the eastern property boundary.
The Acoustic Assessment concludes that compliance with the EPA Noise Policy for Industry, and in particular the 'Intrusiveness Criteria' and 'Project Amenity Criteria' will be achievable provided that a detailed acoustic review of plant items is undertaken once plant is selected, and acoustic treatments are incorporated in the detailed design of plant rooms as required.

Helicopter operations

The Acoustic Assessment notes that there are no mandatory acoustic criteria applying to emergency vehicles and that because emergency helicopter operations are less frequent than commercial aircraft, it is inappropriate to apply acoustic guidelines such as the EPA Industrial Noise Policy and Australian Standard 2021. Instead, an assessment has been conducted against the non-mandatory guideline from Air Services Australia Environmental Principles and Procedures for Minimising the Impact of Aircraft Noise.

The assessment is based on 120 flight movements per year (2-3 per week) and based on the typical helicopter used and, the take off and approach gradient as advised by the Aviation Consultant and the flight paths it is predicted that the Air Services Australia noise goal of 95dB(A) will be achieved at all times.

The Acoustic Assessment concludes that noise impacts from the helicopter operations are reasonable bearing in mind the expected infrequency of use.

9.6.3. RECOMMENDED MITIGATION MEASURES

Implementation of the recommendations of the Acoustic Assessment by Acoustic Logic (Appendix 15), including:

- Excavation in rock should be done using rock saws as opposed to hydraulic hammers, where practicable;
- For at least the initial stages of excavation in rock, vibration monitoring should be conducted to ensure excessive levels of vibration are not achieved. Monitoring at residential properties on Somerset Street and Nepean Private Hospital should be considered.
- Any vibration monitoring system should allow for rapid feedback to the contractor (for example, SMS notification) if excessive levels are reached.
- Compliance with the EPA Noise Policy for Industry, and in particular the 'Intrusiveness Criteria' and 'Project Amenity Criteria' will be achievable provided that a detailed acoustic review of plant items is undertaken once plant is selected, and acoustic treatments are incorporated in the detailed design of plant rooms as required.

9.7. CONTAMINATION (SEAR 8)

SEAR 8 requires that the application:

*Demonstrate that the site is suitable for the proposed use in accordance with SEPP 55 relevant Policies and Guidelines:*
9.7.1. ENVIRONMENTAL SITE ASSESSMENT

A Preliminary Stage 2 Environmental Site Assessment (ESA) has been prepared by Environmental Investigation Services and is attached at Appendix 6a. It is supported by a Remediation Action Plan (RAP) which is attached at Appendix 6b.

The Preliminary Stage 2 ESA is informed by soil and groundwater sampling from 24 boreholes and a groundwater monitoring well. The Preliminary Stage 2 ESA notes that the sampling density is approximately 80% of the recommended minimum sampling density. Further sampling was constrained by the location of existing buildings (proposed to be demolished).

The Preliminary Stage 2 ESA identifies asbestos containing material (ACM) associated with existing landfill as the primary contaminant of concern and concludes that the site can be made suitable for the proposed development provided that:

- A Remediation Action Plan (RAP) is prepared to outline remedial measures for the site. The RAP should address the data gaps identified in the Stage 2 EAS; and
- A Validation Assessment (VA) report is prepared on completion of remediation.

The data gaps were identified as:

- The area beneath the existing building in the central and north-west sections of the site were not accessible at the time of the investigation;
- The vertical and horizontal extent of fill material at the site has not been fully assessed;
- The status of a nearby diesel underground storage tank (UST) should be further assessed;
- The proposed development area has been increased and requires further assessment.

As discussed in Section 7.10, a Remediation Action Plan (RAP) has been prepared to demonstrate how the data gaps will be addressed and the process for determining the most effective remediation actions based on the additional data. As such, the objectives of the RAP are:

- To detail the further investigations required prior to proceeding with remediation works;
- Provide a methodology to remediate and validate the site;
- Provide a contingency plan for the remediation works;
- Outline site management procedures to be implemented during remediation work; and
- Provide an unexpected finds protocol to be implemented during the development works.

The RAP details the additional pre-remediation assessments required for each identified remediation area to quantify the (ACM) impacted fill material. The pre-remediation assessment should be undertaken once the existing site buildings have been demolished and prior to excavation works. Following completion of
the pre-remediation assessments, a specific Remediation Works Plan (RWP) report is required for each remediation area.

Depending on the outcomes of the additional investigations, remediation may take place by either removal of contaminated material to an appropriate facility and reinstatement with clean material, or consolidation and isolation of impacted soil by cap and containment.

The RAP also confirms that the site can be made suitable for the proposed development provided the RAP and any RWP prepared for the proposed development are implemented accordingly. The RAP requires a site validation report on completion of remediation activities which is to be submitted to the consent authority.

A complete copy of the investigation reports prepared by Environmental Investigation Services including the Preliminary Stage 2 Environmental Site Assessment and Remediation Action Plan (RAP) accompany this EIS at Appendices 6a and 6b. As noted in earlier sections of this EIS, the likely volume of contaminated material will be less than 30,000m3, and the required remediation works will therefore be Category 2 Remediation Works and will not require DA consent under this SSD DA.

9.7.2. ACID SULFATE SOILS

In conclusions drawn from the Environmental Investigation Services Preliminary Stage 2 Environmental Site Assessment (Appendix 6a), the site is not located in an acid sulfate soil risk area according to the risk maps prepared by the Department of Land and Water Conservation. Based on the scope of review of available information, the risk posed by acid sulfate soils is considered to be negligible due, amongst other things, to the site not being mapped as affected; the site being located at approximately RL 50.0m AHD with acid sulfate soils not usually associated with soil horizons above 5m AHD; and the proposed development not expected to be lower the water table below 1m AHD on adjacent land. Based on this information, EIS advises that preparation of an Acid Sulfate Soil Management Plan is not considered necessary for the proposed development.

9.7.3. RECOMMENDED MITIGATION MEASURES

The recommendations of the Remediation Action Plan prepared by Environmental Investigation Services should be adopted. Notably, if any unexpected conditions or unexpected finds are encountered during development work or between sampling locations that may pose a contamination risk, all works should stop, and an environmental consultant should be engaged to inspect the site and address the issue.

9.8. UTILITIES (SEAR 9)

SEAR 9 requires that the application:
Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure.

Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and non-potable water, and water sensitive urban design.

9.8.1. APPROACH TO INFRASTRUCTURE

The application is supported by an Infrastructure Management Plan by CPB and an Integrated Water Management Plan by Bonacci (Appendices 10 and 11, respectively). A Utility Report by Warren Smith & Partners addressing water, sewer and gas utilities is also provided (see Appendix 9).

All infrastructure-related works for the NHC will be separately carried out as campus-wide upgrades to ensure seamless operation of the hospital prior to, and following, these multi-stage works. The objective of the works is far-reaching, extending beyond only the Stage 1 Building scope. These future-proofing works are accordingly outside of a sole direct relationship to this SSD DA, meaning the REF pathway for assessment under Part 5 of the EP&A Act is available.

Information provided in the respective reports is therefore provided for context and information only. The Stage 1 Building will connect directly to the proposed works. Figure 45 articulates the integrated management of electricity; telecommunications; sewer; stormwater; water (including fire services); and gas to and around the campus. A new extension of the utilities ring will be provided to ensure suitable augmentation, capacity and supply. Figure 45 below sets out these works.

Based on the Bonacci report, the Integrated Water Management Plan addresses two discrete aspects:

- The site stormwater management strategy has been designed using Water Sensitive Urban Design principles. Where possible, stormwater runoff will be allowed the opportunity to infiltrate. This will be achieved by directing runoff to pervious areas, which are to be maximised.
- Water quality treatment measures are proposed to ensure that site runoff complies with Penrith City Council’s water quality requirements. These treatment measures include proprietary systems such as Enviropods and Stormfilter cartridges. Vegetated swales and bio-retention may also be used to ensure that the stormwater discharge from the proposed site meets the water quality targets. MUSIC modelling has been undertaken to confirm that the water quality targets are met.

The strategy underpinning this water management regime is as shown in Figure 46 below.
Figure 45. Proposed internal utilities works via separate approval process (Source: CPB)

Figure 46. Integrated Water Management Strategy (Source: Bonacci)
9.9. CONTRIBUTIONS (SEAR 10)
SEAR 10 requires that the application:

Address Council’s Section 94 Contribution Plans and/or details of any Voluntary Planning Agreement.

9.9.1. SECTION 94 CONTRIBUTIONS

There are 10 Development Contributions Plans currently in force in the Penrith City Council area. None of these Contributions Plans apply to the proposal and consequently there are no contributions to be levied.

It should also be noted, and recalled, that no development contributions would be expected to apply to the development given it is a Crown DA and for the purposes of a health services facility / hospital. Accordingly, the Department of Planning & Environment’s Circular D6 applies. This long-standing and consistently applied Circular ensures no contributions are applicable to essential social infrastructure of various types.

9.9.2. VOLUNTARY PLANNING AGREEMENT

There are no voluntary planning agreements (VPAs) in place. Furthermore, a VPA is not considered to be necessary or appropriate in this instance given the proposal is for a public benefit in the form of enhanced public health services.

9.9.3. RECOMMENDATION

As is common practice, and despite any contributions plan applying or otherwise, no development contributions shall be imposed on the development as the development is for essential social infrastructure. As noted, the development will contribute to providing a significant social and health benefit to the Penrith LGA and the NBMLHD.

9.10. DRAINAGE (SEAR 11)
SEAR 11 requires that the application:

Detail drainage associated with the proposal, including stormwater and drainage infrastructure.
9.10.1. STORMWATER DRAINAGE DESIGN

A Civil Design Report (Appendix 12) has been prepared by Bonacci which includes details of stormwater retention and detention for the proposed development. In summary, two trunk drainage systems are proposed for the site to provide drainage for the affected sub-catchments during construction and to service the proposed Stage 1 Building and associated infrastructure. These are the north-western, and southern and eastern drainage systems that connect to corresponding existing NHC stormwater infrastructure.

Bonacci also notes that the impervious area of proposed site has decreased from 73.4% to 50.4% and there is currently no on-site stormwater detention system on the site. Therefore, according to Penrith City Council requirements, the current permissible site discharge (PSD) is preserved and thus negating the need for an on-site detention system.

The stormwater drainage systems have been designed to cater for storms up to and including 100-year ARI (1% AEP) storm events. Bonacci confirms that DRAINs modelling was adapted to obtain PSD for existing scenarios as well as to design the on-site detention tank (if required to maintain existing PSD).

During the construction stage, the southern diversion line and the western diversion line will be constructed and connected to the corresponding existing downstream stormwater lines to enable commencement of demolition of existing structures and the commencement of the tower construction. This will allow a diversion of the upstream catchments without any interruption to the construction site and adjacent hospital operations. The stormwater lines will remain and will be integrated within the permanent stormwater drainage network.

Bonacci confirms that the stormwater concept plans shown at Appendix 12 include pits and pipes which are design for 5% ARI for minor storms storm events. Overland flow paths were designed for major storm events.

The stormwater strategy for the proposed development demonstrates compliance with Penrith City Council water quantity requirements by limiting stormwater discharge to PSD up to and including 100-year ARI storm events. It improves the existing stormwater drainage system by significantly reducing stormwater pollution and improving the overall water quality for the site.

9.10.2. RECOMMENDED MITIGATION MEASURES

Implementation of the measures set out in the Civil Design Report and Drawings by Bonacci at Appendix 12 ensure the proposed water quality improvement measures (demonstrated in Section 3.3 of the Bonacci report) improve the existing stormwater quality conditions and fulfil all requirements of Penrith City Council “Water Sensitive Urban Design (WSUD) Policy, December 2013”. The proposed stormwater management strategy also improves the existing stormwater drainage system by reducing stormwater pollution and improving the overall water quality for the site.
9.11. FLOODING (SEAR 12)

SEAR 12 requires that the application:

Assess any flood risk on site and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in rainfall intensity.

9.11.1. FLOODING

Section 3.1 of the Civil Design Report (Appendix 12) prepared by Bonacci includes a Flood Impact Assessment. A summary of the key findings/conclusions are:

- The north-western portion of the Nepean Hospital Campus is flood affected;
- Stormwater from a major culvert under the rail corridor passes across the north-eastern corner of the site via a combination of pipes and overland flow to the site discharge point on the eastern boundary and ponds at the low point in Somerset Street; and
- The proposed location of the Stage 1 Building is not within the affected area.

The level of the lowest floor of the building achieves 1.52m free board in the 1% AEP flood event and is above the level of the probable maximum flood, complying with the requirements of Penrith City Council and common engineering principles for the design of hospitals.

In summary, the footprint of the proposed development is not located on flood affected land and therefore will not have an effect on the flood levels on adjacent properties.

9.11.2. CLIMATE CHANGE, SEA LEVEL RISE AND INCREASED RAINFALL INTENSITY

The stormwater drainage design accommodates the predicted impacts of climate change, sea level rise and increased rainfall intensity as detailed in the Civil Design Report prepared by Bonacci at Appendix 12. The report details that the effect of climate change was considered in hydraulic modelling, with effects of an increase in rainfall intensity checked. The increase will result in additional overland flows (with potentially the capacity of the pipe system reducing from the 5% event to the 10% or 20% event), however they would be maintained within overland flow paths with appropriate freeboard to building floor levels provided. An increase in sea level is not likely to have significant impacts on the site, as the hospital is located approximately 55km from the ocean.

9.11.3. RECOMMENDED MITIGATION MEASURES

No mitigation measures required.
9.12. WASTE (SEAR 13)

SEAR 13 requires that the application:

Identify, quantify and classify the likely waste streams to be generated during construction and operation and describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste. Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

9.12.1. CONSTRUCTION WASTE

A Preliminary Construction Management Plan, including a Construction Waste Management Plan has been prepared by CPB for the Stage 1 Building (see Appendix 19). It includes details regarding likely waste streams likely to be generated during demolition and construction, waste control measures and includes measures for the disposal of asbestos containing material, mixed soil, excavated natural material and demolition concrete.

Implementation of the Waste Management Plan will:

- Identify the waste management obligations attached to the tender / project and the hazards and risks associated with the works
- Assist in the prevention of unauthorised environmental harm
- Fulfil the Client’s waste management requirements as defined in the Contract, including complying with relevant permits and approvals
- Comply with all relevant waste management and environmental legislation
- Minimise negative impacts on the community that relate to the Project’s waste management and associated environmental impacts
- Identify and implement feasible opportunities to reduce and recycle waste to minimize the impact of the Project to the environment to meet compliance requirements
- Fulfil CPB Contractors’ waste management and environmental requirements enabling continued certification to ISO14001 and contribution to CPB Contractors’ overall Business Plans.

Waste will be managed in accordance with the requirements of Protection of the Environment Operations Act 1997 and Waste Avoidance and Resource Recovery Act 2001 and any associated Regulations, Guidelines and the like, and other relevant NSW legislation. Waste minimisation and reuse of materials is a fundamental objective of the management regime for the construction phase of the development.

9.12.2. OPERATIONAL WASTE

A Waste Management Policy for the NBMLHD accompanying this EIS at Appendix 18 details the continued waste management operations to be implemented for the proposed development. The purpose of this
policy is to ensure that waste management is undertaken in a manner that promotes waste minimisation and the appropriate management of waste resources to mitigate adverse environmental impact.

Operational waste for the proposed development will be managed in accordance with this existing policy at Nepean Hospital. There will be no significant increase in operational waste that would cause an adverse impact on the existing Nepean Hospital management procedures.

9.12.3. RECOMMENDED MITIGATION MEASURES

Preparation of a final Construction Management Plan for the development incorporating demolition and construction waste management measures by the appointed principal contractor(s) to ensure that demolition and construction waste can be appropriately managed with minimal impacts to the environment.

Continued implementation of existing operational waste management policies at Nepean Hospital for the proposed development.

9.13. BIODIVERSITY (SEAR 14)

SEAR 14 requires that the application:

Detail biodiversity impacts related to the proposal and the preparation of a Biodiversity Assessment are to be addressed in accordance with the requirements of the Biodiversity Conservation Act 2016.

9.13.1. BIODIVERSITY IMPACTS

As discussed in Section 7.3, a BDAR has been prepared by Abel Ecology and is attached at Appendix 25. The BDAR finds that the proposal will require the removal of approximately 0.074 ha of PCT849 comprising primarily Grey Box Eucalyptus moluccana and Forest Red Gum Eucalyptus tereticornis trees, as part of Cumberland Plain Woodland (CPW). This area is less than half of the lowest clearing threshold for entry into the BAM offset scheme, and the BDAR details that it is unlikely that the clearing of 0.074 ha will be considered a Serious and Irreversible Impact. The area of PCT849 that is proposed for removal is indicated in Figure 8 of the BDAR. Figure 8 also displays both:

- The impacts requiring offset (0.074 ha of CPW – all CPW within the proposal area except the area marked by the green circles); and
- the impacts not requiring offset, displayed as remaining site vegetation.

As such, the impacts that will require offset are the impacts on the Cumberland Plain Woodland (PCT849). The BDAR calculates a requirement for two (2) biodiversity credits to offset the impact of the proposal.
The site also contains mixed plantings that provide habitat for both common and threatened species, some of these mixed plantings will be removed for the proposal and will not require offset. The BDAR Report also states that no offsets for Species Credit Species are required as part of the proposal.

Other existing landscaped areas with a mixed of planted exotic and native species are also identified on the campus, but do not represent any natural indigenous vegetation communities within the western suburbs of Sydney. No suitable match to any PCT is available. The appropriateness of identifying a PCT for planted landscaping is still to be further resolved under this DA’s assessment.

As noted earlier in this EIS, the design of the landscape proposes a reintroduction and reinstatement of the endemic ecology of the Cumberland Plain – consisting of the following sub-groups Alluvial Woodland, Shale Plains Woodland and the Shale Hills Woodland. Part of the landscape proposal also looks at the provision of natural shelters and enclosures from tree canopies through a variety of Corymbia and Eucalyptus species specific to the endemic ecological grouping – this ranging from E.moluccana to C.maculata. Spatial definition is also enhanced through the consideration of many mid to lower level plantings – ranging from Acacia species to Indigoferas and Dichondras. In addition, the landscape addresses the concern of water management through use of native WSUD species to slow down and clean water as it moves through the site – from Lomandra species to Baumeas and Gahnias.

Further to the above, the Arboricultural Impact Assessment prepared by Moore Trees (Appendix 13) for the subject SSD DA recommends protection measures to ensure that the trees identified to be retained as a part of the development are not impacted. This mainly relates to trees where the works encroach into an area greater than 10% of the tree protection zone (TPZ). Additional assessment of the potential impacts of the development on these trees will be required following the preparation of detailed construction plans. These mitigation measures are included in Section 11 of this EIS.

9.13.2. RECOMMENDED MITIGATION MEASURES

Implementation of the mitigation measures as outlined in the Biodiversity Development Assessment Report (BDAR) prepared by Abel Ecology and the Arboricultural Impact Assessment prepared by Moore Trees to ensure that the proposal will not result in any adverse impact on biodiversity.

9.14. PLANS AND DOCUMENTS

The "Plans and Documents" section of the SEARs provides a list of "Plans and Documents" to be submitted as part of the SSD DA. All of the plans and documents identified in this section of the SEARs have been provided where necessary. Refer to Table 12 over.
### Table 12: Plans and Documents

<table>
<thead>
<tr>
<th>Appendix</th>
<th>Document</th>
<th>Prepared/Issued by</th>
<th>Date of Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secretary’s Environmental Assessment Requirements</td>
<td>DPE</td>
<td>22 November 2017</td>
</tr>
<tr>
<td>2</td>
<td>Site Surveys</td>
<td>Cardno</td>
<td>7 June 2017</td>
</tr>
<tr>
<td>3</td>
<td>Architectural Plans</td>
<td>BVN Architects</td>
<td>20 July 2018</td>
</tr>
<tr>
<td>4</td>
<td>Architectural Design Statement</td>
<td>BVN Architects</td>
<td>15 August 2018</td>
</tr>
<tr>
<td>4a</td>
<td>Nepean Hospital Zonal Master Plan</td>
<td>BVN Architects</td>
<td>28 March 2018</td>
</tr>
<tr>
<td>5</td>
<td>Landscape Plan</td>
<td>Arcadia</td>
<td>August 2018</td>
</tr>
<tr>
<td>6a</td>
<td>Preliminary Stage 2 Site Environmental Assessment</td>
<td>Environmental Investigation Services</td>
<td>6 April 2018</td>
</tr>
<tr>
<td>6b</td>
<td>Remediation Action Plan</td>
<td>Environmental Investigation Services</td>
<td>6 April 2018</td>
</tr>
<tr>
<td>7</td>
<td>Geotechnical Investigation Report</td>
<td>JK Geotechnics</td>
<td>19 March 2018</td>
</tr>
<tr>
<td>8</td>
<td>SEPP 33 Assessment / Hazardous Materials Building Surveys</td>
<td>Pinnacle Risk Management</td>
<td>2 December 2017</td>
</tr>
<tr>
<td>9</td>
<td>Utility SSD Report</td>
<td>WSP</td>
<td>22 March 2018</td>
</tr>
<tr>
<td>10</td>
<td>Integrated Infrastructure Management Plan</td>
<td>CPB</td>
<td>24 July 2018</td>
</tr>
<tr>
<td>11</td>
<td>Integrated Water Management Plan</td>
<td>Bonacci</td>
<td>25 July 2018</td>
</tr>
<tr>
<td>12</td>
<td>Civil Design Report</td>
<td>Bonacci</td>
<td>24 July 2018</td>
</tr>
<tr>
<td>13</td>
<td>Arboricultural Impact Assessment</td>
<td>Moore Trees</td>
<td>July 2018</td>
</tr>
<tr>
<td>14</td>
<td>Transport Report</td>
<td>Cattell Cooper</td>
<td>20 July 2018</td>
</tr>
<tr>
<td>15</td>
<td>Acoustic Assessment</td>
<td>Acoustic Logic</td>
<td>23 July 2018</td>
</tr>
<tr>
<td>16</td>
<td>Statement of Heritage Impact</td>
<td>Extent</td>
<td>29 March 2018</td>
</tr>
<tr>
<td>17</td>
<td>Pedestrian Wind Assessment</td>
<td>Windtech</td>
<td>6 April 2018</td>
</tr>
<tr>
<td>18</td>
<td>Waste Management Policy</td>
<td>NBMLHD</td>
<td>March 2015</td>
</tr>
<tr>
<td>19</td>
<td>Preliminary Construction Management Plan, including</td>
<td>CPB and ptc</td>
<td>21 July 2018</td>
</tr>
<tr>
<td></td>
<td>Construction Traffic Management Plan and Construction</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Waste Management Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Preliminary Aboriginal Heritage Assessment</td>
<td>Extent</td>
<td>29 March 2018</td>
</tr>
<tr>
<td>21</td>
<td>Environmentally Sustainable Design Report</td>
<td>Steensen Varming</td>
<td>18 July 2018</td>
</tr>
<tr>
<td>22</td>
<td>Aviation Report</td>
<td>Avipro</td>
<td>25 March 2018</td>
</tr>
<tr>
<td>23</td>
<td>CIV Statement</td>
<td>MBMpl</td>
<td>17 July 2018</td>
</tr>
<tr>
<td>24a</td>
<td>BCA Report</td>
<td>BM+G</td>
<td>26 March 2018</td>
</tr>
<tr>
<td>24b</td>
<td>Access Report</td>
<td>BM+G</td>
<td>27 July 2018</td>
</tr>
<tr>
<td>25</td>
<td>Biodiversity Development Assessment Report</td>
<td>Abel Ecology</td>
<td>30 August 2018</td>
</tr>
<tr>
<td>26</td>
<td>CPTED Report</td>
<td>Southern Cross Protection</td>
<td>3 April 2018</td>
</tr>
<tr>
<td>27</td>
<td>Traffic Impact Assessment</td>
<td>ptc</td>
<td>24 July 2018</td>
</tr>
<tr>
<td>28</td>
<td>Wayfinding Strategy</td>
<td>Urbanite</td>
<td>12 April 2018</td>
</tr>
<tr>
<td>29</td>
<td>Structural Design Report</td>
<td>Bonacci</td>
<td>25 July 2018</td>
</tr>
<tr>
<td>30</td>
<td>Green Travel Plan</td>
<td>ptc</td>
<td>August 2018</td>
</tr>
</tbody>
</table>
9.15. SOCIAL AND ECONOMIC BENEFITS

A range of social and economic benefits that will result from the proposed development are addressed generally throughout this EIS. This section of the EIS consolidates those "benefits" as follows.

The social impacts that will result from the proposal are set out below:

• Upgrade and expansion of out-date hospital infrastructure and enhanced capacity to provide a wide range of medical services;
• The project will provide contemporary healthcare facilities addressing clinical services suited to the current and future needs of the NBMLHD catchment population;
• Achieve critical mass of allied health staffing enabling more specialised allied health services to be provided to inpatient and ambulatory patients;
• More effective and efficient use of available clinical staff, improved staff satisfaction and greater capacity to attract and retain staff;
• Improved integration of hospital and community health services including greater capacity to provide more integrated models of care;
• Greater capacity to meet the health care requirements of the growing aged population now and into the future;
• Integrated care and new models of care, including clinical redesign and service innovation;
• Improved patient safety through reduced clinical errors and infection;
• Improved amenity for patients, their families and staff; and
• Identify benefits to the NBMLHD health network including support to the NHC.

The economic impacts that will result from the proposal are set out below.

Direct and indirect increase in employment opportunities during construction and operational phases of the development (refer Section 4.14 of this EIS). This will result in a positive contribution to the local economy and corresponding short and longer-term multiplier effects.

A range of economic benefits for the NHC include:

• Increased outcome efficiency;
• Increased output or cost efficiency. The development results in a value for money outcome which addresses the specific objectives for the redevelopment and incorporates efficient future flexibility and planning provision to facilitate the future objectives of the Nepean Hospital CSP;
• Maximisation of capital investment provides the opportunity to further reduce service fragmentation and continue to improve continuity of care, to ensure safe and effective service delivery;
• Better staff attraction and retention; and
• Higher workforce productivity.
The redevelopment will provide a catalyst for change in the NHC, support the development and enhancement of integrated services that maintain and improve the reliability and quality of patient care, as well as improve patient outcomes.

Further to the above, the proposed Stage 1 development will result in more than $232,192,889 expenditure in public health and related services for Nepean Hospital and the NBMLHD. This is a significant level investment in public health in the region and will directly benefit the local and regional community.
10. ENVIRONMENTAL RISK ASSESSMENT

Based on the environmental assessment in Section 9 of this EIS, the following Environmental Risk Analysis (ERA) assesses the significance of the identified impacts and the ability to manage those impacts to establish a residual risk rating. The ERA used for this purpose has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools as set out below.

![Environmental Risk Assessment Values](image-url)

Figure 47. Environmental Risk Assessment Values.
The significance of identified environmental impacts is assigned a value between 1 (Low) and 5 (Extreme) based on:

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

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

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

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

Refer to the Table 13 below for the complete environmental risk analysis.

**Table 13: Environmental Risk Analysis**

<table>
<thead>
<tr>
<th>Issue</th>
<th>Phase</th>
<th>Identified Environmental Impact</th>
<th>Risk Assessment</th>
<th>Manageability of Impact</th>
<th>Residual Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Built Form and Urban Design</strong></td>
<td>O</td>
<td>The height, bulk and scale of the new buildings will be incompatible with the future surrounding context.</td>
<td>3 Moderate</td>
<td>3 Straightforward</td>
<td>6 Medium</td>
</tr>
<tr>
<td><strong>Environmental Amenity</strong></td>
<td>O</td>
<td>Potential impacts on pedestrian wind comfort of occupants (courtyards, roof terrace etc).</td>
<td>1 Low</td>
<td>2 Standard</td>
<td>3 Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Unreasonable new shadow impacts on some neighbouring existing dwellings.</td>
<td>2 Minor</td>
<td>3 Straightforward</td>
<td>5 Low-medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Potential impact on amenity of existing hospital buildings (noise, overshadowing, privacy).</td>
<td>3 Moderate</td>
<td>2 Standard</td>
<td>5 Low-Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>For noise and vibration, refer to below relevant point in table.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Safety and Security</strong></td>
<td>O</td>
<td>Environmental design does not create safe places.</td>
<td>1 Low</td>
<td>2 Standard</td>
<td>3 Low</td>
</tr>
<tr>
<td>Category</td>
<td>Proposed ESD Measures</td>
<td>Impact of Additional Travel Demand on Traffic Generation and Operation of Road Network.</td>
<td>Noise and Vibration</td>
<td>Ecologically Sustainable Development (ESD)</td>
<td>Biodiversity</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
<td>---------------------</td>
<td>-------------------------------------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Transport and Accessibility</td>
<td>C</td>
<td>Construction traffic impacts on road network.</td>
<td>2 Minor</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>Impact of additional travel demand on traffic generation and operation of road network.</td>
<td>2 Minor</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>C + O</td>
<td>The proposed ESD measures will have a positive impact on the environment. Hence, there is no environmental risk identified.</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Noise and Vibration</td>
<td>C</td>
<td>Noise generated and potential impact on nearby sensitive residential receivers during excavation and construction</td>
<td>3 Moderate</td>
<td>3 Moderate</td>
<td>3 Moderate</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>Noise generated by mechanical plant, traffic and helicopter noise and potential impact on residential receivers.</td>
<td>3 Moderate</td>
<td>3 Moderate</td>
<td>3 Moderate</td>
</tr>
<tr>
<td>Biodiversity</td>
<td>C</td>
<td>Removal of small patch of Cumberland Plain Woodland species subject to 2 offset credits points</td>
<td>2 Minor</td>
<td>2 Minor</td>
<td>1 Simple</td>
</tr>
<tr>
<td></td>
<td>C + O</td>
<td>No impact identified</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Heritage</td>
<td>C + O</td>
<td>No impact identified</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Sediment, Erosion and Dust Controls</td>
<td>C</td>
<td>Potential sediment pollution as a consequence of excavation and construction activities.</td>
<td>2 Minor</td>
<td>2 Minor</td>
<td>1 Simple</td>
</tr>
<tr>
<td>Utilities</td>
<td>All</td>
<td>Existing utilities/services may require augmentation/upgrade.</td>
<td>2 Minor</td>
<td>2 Minor</td>
<td>1 Simple</td>
</tr>
<tr>
<td>Flooding</td>
<td>O</td>
<td>No identified impact</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Drainage</td>
<td>C + O</td>
<td>The construction of the developments will alter the imperviousness of the sites.</td>
<td>2 Minor</td>
<td>3 Straightforward</td>
<td>3 Straightforward</td>
</tr>
<tr>
<td>Servicing and Waste</td>
<td>C</td>
<td>Environmental impacts associated with the disposal</td>
<td>2 Minor</td>
<td>1 Simple</td>
<td>1 Simple</td>
</tr>
</tbody>
</table>
Overall, the impacts likely to arise from both the construction and operational phases of the development are low to medium in impact range. Impacts, where they do occur are either reasonable in their context, short-term and manageable. No high or extreme impacts are expected, nor any impacts that are substantial or complex in their individual or cumulative contexts. Mitigation measures as identified in respective supporting studies / reports accompanying this EIS and as set out in Section 11 will suitably address impacts.
11. MITIGATION MEASURES

The following measures have been compiled following review and consideration of the issues raised in consultation with government agencies and input from various sub-consultants in response to the SEARs (Section 9) and the Environmental Risk Assessment (Section 10).

Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* requires a full description of the measures proposed to mitigate any adverse effects of the development on the environment. The mitigation measures at Table 14 below provide a commitment by HI and indicate the responsibilities required to prevent potential environmental impacts arising from the proposed works. This will ensure that the project is environmentally, socially and economically sustainable.

Table 14: Mitigation Measures

<table>
<thead>
<tr>
<th>Issue</th>
<th>Mitigation Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td>The development will be undertaken in accordance with the Environmental Impact Statement prepared by HI (including relevant accompanying Appendices) and drawings. All construction documentation and building work will be certified in accordance with Section 109R of the Environmental Planning and Assessment Act 1979.</td>
</tr>
<tr>
<td><strong>Signage - Additional Details to be submitted to DPE</strong></td>
<td>Prior to the commencement of signage works, final signage details, including location, finishes, dimensions and illumination will be submitted to the DPE. The detailed design will ensure that any safety devices, platforms or lighting devices will be integral with the signage.</td>
</tr>
<tr>
<td><strong>Road Closures and maintenance of vehicular access</strong></td>
<td>Construction vehicle access to the site will be provided from Somerset Street. It is not anticipated that any road closures will be required during construction to facilitate the works, however this would be subject to the approved Contractor. At all stages of construction vehicular access to the Hospital will be available from Somerset Street (for loading and on-site parking purposes).</td>
</tr>
</tbody>
</table>
| **Hours of Work** | The proposed working hours are as follows:  
• Monday to Friday: 7am to 6pm  
• Saturday: 7am to 5pm  
• Sundays and public holidays: No work.  
No work will be carried out outside of standard construction hours, due to the nature of the Hospital services and the surrounding residential properties, unless works are required in accordance with the Interim Construction Noise Guidelines, extracted below. |
| **Building Code of Australia** | The development is to comply with the statutory energy efficiency requirements of Section J of the BCA. The development will also generally comply with the "deemed to
satisfy” (DTS) provisions of the BCA and where required, ‘alternative solutions' complying with the performance objectives and requirements of the BCA will be employed to address any deviations from DTS provisions.

### Approvals

The Applicant will obtain all necessary approvals required by State and Commonwealth legislation in undertaking the development.

The Applicant will continue to liaise with Penrith City Council during the development process, particularly with regard to any proposed road closure or impact on Council infrastructure.

### Erosion and Sediment Control

A detailed soil and sedimentation plan is to be prepared in accordance with The Blue Book prior to construction and will be included in the Construction Management Plan. The plan is to be prepared in accordance with the preliminary erosion and sediment control plan prepared by Bonacci and accompanying this EIS.

### Geotechnical

The recommendations of the Geotechnical Investigation prepared by JK Geotechnics will be satisfied.

### Structural

The detailed structural design of the development is to comply with the recommendations of the Civil and Structural Design Report and Drawings prepared by Bonacci.

### Contamination

The recommendations of the Remediation Action Plan by Environmental Investigation Services (dated 6 April 2018) will be implemented.

### Hazardous Waste

The Applicant commits to the continued implementation of the existing NHC management processes for hazardous waste.

### Services

The Applicant will comply with the requirements of the relevant public authorities in regard to the connection to, relocation and/or adjustment of services affected by the construction of the proposed development.

### Accessibility

The design of the facilities will permit effective, appropriate, safe and dignified use by all people, including those with disabilities and will be in accordance with the relevant NSW Health Facility Guidelines for access and mobility and relevant accessibility standards.

### Drainage

All of the recommendations of the Civil and Structural Design Report and Drawings prepared by Bonacci accompanying this EIS are to be satisfied and all final civil documentation will be prepared generally in accordance with the plans prepared by Bonacci.

### Tree protection

The protective measures contained in the Arboricultural Impact Assessment prepared by Moore Trees will be adopted and implemented.
### Transport Management

A Green Travel Plan should be prepared within a reasonable timeframe incorporating the actions recommended in the Transport Report. A current preliminary Green Travel Plan is included at Appendix 30.

### Construction Traffic Management Plan

Prior to the commencement of construction, a Final Construction Traffic Management Plan will be prepared.

### Noise and Vibration

The recommendations of the Acoustic Report prepared by Acoustic Logic will be implemented to ensure that any potential adverse construction and operational noise and vibration impacts are adequately managed and mitigated.

### Aboriginal Heritage

If unforeseen Aboriginal objects are uncovered during development, work should cease and a heritage consultant and OEH should be informed. If human remains are found, work should cease, the site should be secured and the NSW Police and the OEH should be notified.

### Ecologically Sustainable Development

The detailed design of the development is to incorporate all of the ESD principles and measures set out in the ESD Statement prepared by SVA. The development is to comply with the energy efficiency requirements of Section J of the National Construction Code (NCC 2012, previously known as the Building Code of Australia).

### External Lighting

External lighting is to be installed to meet the minimum Australian and New Zealand Lighting Standards that will not only provide wide and even spread of illumination but will also be adequate to meet operational requirements. In addition, appropriate signage is to be installed to reinforce the building’s main entrance and other secondary entrances. External lighting will be installed so as to not result in any light spill or other lighting-related impacts on the surrounding locality.

### Pedestrian Amenity (wind impacts)

Additional tree planting is to be provided in the south-eastern corner of the development site to mitigate the effect of wind as recommended in the Pedestrian Wind Assessment Report.

### CPTED

The recommendations of the CPTED Strategy by Southern Cross Protection are to be implemented in the detailed design and ongoing operation of the hospital.

### Construction Management

Prior to commencement of construction, a detailed Construction Management Plan (CMP) will be prepared which addresses (but is not limited to) the following:

- Construction noise and vibration
- Construction traffic management
- Dust management and air pollution monitoring
- Odour control
- Removal and management of hazardous materials
- Soil and erosion control
- Tree protection (where relevant)
- Site management in accordance with legislative requirements
- House of construction work
- Waste management
- Community safety plan
- Arrangements for temporary pedestrian and vehicular access
- Contact and complaints handling procedures
- The detailed CMP is to be generally in accordance with the preliminary CMP prepared by CPB and accompanying this EIS.
12. CONCLUSION

This Environmental Impact Statement (EIS) is submitted to the Minister for Planning to accompany a SSD DA for the major redevelopment of the Nepean Hospital Campus (NHC).

In accordance with the requirements of Schedule 2 of the EP&A Regulation, this EIS considers the relevant statutory instruments and strategic documents, built form and social and environmental impacts.

Further, this EIS provides an assessment of the environmental risks of the proposed development in accordance with the SEARs issued by the Department of Planning and Environment on 22 November 2017 and sets out the undertakings made by HI to manage and minimise potential impacts arising from the development.

Subject to the mitigation measures outlined in Section 11 of this EIS, we recommend approval of this application for the following reasons:

- The redevelopment will be critical in supporting and improving the medical services provision to the Penrith LGA and the wider Nepean Blue Mountains Health District.
- The redevelopment will act as the catalyst in providing modern healthcare facilities as part of the NHC and throughout the NBMLHD.
- The new Stage 1 Building, and other proposed refurbishments will generate additional jobs from the site and for the wider LGA and provide multiplier effects for the local and regional economies in the short and longer-terms.
- The site is capable of accommodating the proposed development by virtue of its capacity, size and location.
- The design of the proposal has emerged from a detailed analysis of the site, having regard for the streetscape, environmental effects, heritage, urban form, preservation of the amenity of the surrounding area and the desired future character of the locality.
- The potential environmental impacts of the proposal as outlined in this EIS are able to be satisfactorily mitigated subject to implementing the recommendations of the technical supporting documentation accompanying this EIS.

The proposal will result in significant social benefits for the local community as outlined in this EIS and in the absence of any unacceptable environmental (and other) impacts, the proposed development is in the public interest.

The EIS fulfils the requirements of the EP&A Act and EP&A Regulation and addresses all relevant matters for consideration prescribed by the SEARs, demonstrating that the potential impacts of the proposal can be satisfactorily managed or mitigated. In light of the above, and the significant public benefits of the proposal, we strongly recommend that the proposal be approved.