ETHOS URBAN

Environmental Impact Statement
SSD 9033

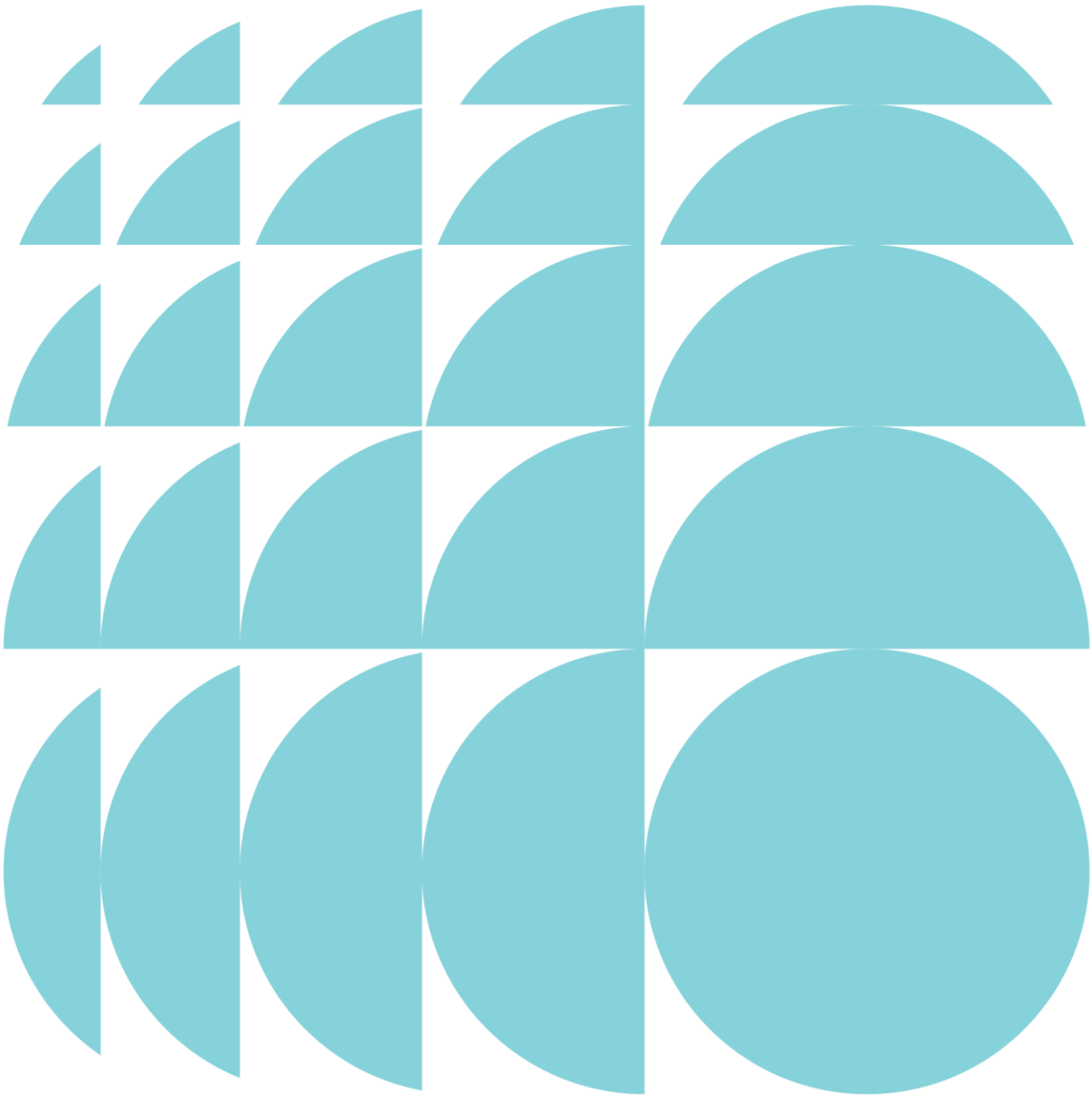
Wagga Wagga Base Hospital Redevelopment
Stage 3

Corner Edward and Docker Street, Wagga Wagga

Submitted to Department of Planning and Environment

On behalf of Health Infrastructure NSW

28 June 2018 | 17593



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Statement of Validity		6
1.0	Executive Summary	7
2.0	Introduction	9
2.1	Overview of Proposed Development	9
2.2	Background to the Development	10
2.3	Objectives of the Development	11
2.4	Analysis of Alternatives	12
2.5	Secretary's Requirements	14
3.0	Site Analysis	20
3.1	Site Location and Context	20
3.2	Land Ownership	20
3.3	WWBH Campus Description	21
3.4	Surrounding Development	24
3.5	Development Site	26
4.0	Description of the Development	27
4.1	Overview of Proposed Development	27
4.2	Development Principles	29
4.3	Numerical Overview	29
4.4	Demolition and Site Preparation	29
4.5	Removal of Demountable Buildings	29
4.6	New Ambulatory Care Building (ACB)	30
4.7	Landscaping and Public Domain	31
4.8	Car Parking and Access	32
4.9	Road Improvements	32
4.10	Services and Utilities	32
4.11	Signage	33
4.12	Construction Staging and Job Creation	33
4.13	Construction Hours	33
5.0	Consultation	34
6.0	Environmental Assessment	35
6.1	Relevant EPIs, Policies and Guidelines	35
6.2	Built Form and Urban Design	39
6.3	Environmental Amenity	40
6.4	Transport and Accessibility	43
6.5	Heritage	48
6.6	Aboriginal Heritage	48
6.7	Biodiversity	49
6.8	Noise and Vibration	49
6.9	Erosion and Sediment Control	51
6.10	Contamination	52
6.11	Acid Sulfate Soils	52
6.12	Water Cycle Management	52
6.13	Accessibility	53
6.14	Waste	53
6.15	Hazards and Risks	55
6.16	Structural Adequacy	55
6.17	Construction Management	55
6.18	Public Benefit	56
6.19	Ecologically Sustainable Development	56
6.20	Contributions	58

7.0	Environmental Risk Assessment	59
8.0	Mitigation Measures	61
9.0	Conclusion	62

Figures

Figure 1	WWBH Stage 3 Ambulatory Care Building	10
Figure 2	Location of Stage 1 and Stage 2 Works	11
Figure 3	WWBH Masterplan	13
Figure 4	Locational Context	20
Figure 5	Site Plan and location of proposed ACB development	21
Figure 6	Acute Services Building	22
Figure 7	Mental Health Unit	23
Figure 8	Harvey House	23
Figure 9	Hospital Entry from Edward Street	24
Figure 10	Residential Development typical of the surrounding area	25
Figure 11	View of the surrounding area, looking northwest, from the Stage 2 Building	25
Figure 12	Stage 3 works context plan	26
Figure 13	Photomontage viewed from intersection of Docker and Edward St	28
Figure 14	Photomontage viewed from the Hospital entry at Edward Street	28
Figure 15	Shadow Diagram, June 21, 9.00am	41
Figure 16	Shadow Diagram, June 21, 12.00pm	41
Figure 17	Shadow Diagram, June 21, 3.00pm	42
Figure 18	Risk Assessment Matrix	59

Tables

Table 1	Secretary's Requirements	14
Table 2	Key development information	29
Table 3	Floor by floor summary of ACB	30
Table 4	Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines	35
Table 5	Intersection Performance	44
Table 6	Car Park Assessment	46
Table 7	Construction Noise Emission Goals	50
Table 8	Mitigation Measures	61

Appendices

A Architectural Drawings

Martin & Ollman

B Secretary's Environmental Assessment Requirements (SEARs)

Department of Planning and Environment

C Site Survey

Rivland Surveyors

D Design Report

Martin & Ollman

E Security Risk Assessment

Jacobs

F Remedial Action Plan

JBS&G

G CIV Report, Cost Plan and Job Estimate

MBM Quantity Surveyors

H Qualitative Wind Assessment

Cermak Peterka Petersen

I Transport Impact Assessment

GTA Consultants

J Heritage Impact Statement

Weir Phillips Heritage

K Acoustic Assessment

Acoustic Logic

L Preliminary Construction Management Plan

Health Infrastructure NSW

M Infrastructure Management Plan

Jacobs and Acor Consultants

N Integrated Water Management Plan

Acor Consultants

O Civil Design Report

Bonacci Group

P Waste Management Plan

Waste Audit

Q ESD Statement and Section J Report

Jacobs

R Structural and Geotechnical Report

Bonacci Group

S Summary of Meeting Minutes

Savills

T Accessibility Assessment

Philip Chun Building Compliance

U Landscape Plans

Somewhere Landscape Architects

V Baseline Archaeological Assessment

Archaeological and Heritage Management Solutions

W Biodiversity Development Assessment Report

Eco Logical

Statement of Validity

Development Application Details	
Applicant name	Health Infrastructure NSW
Applicant address	Level 14, 77 Pacific Highway, North Sydney, NSW 2060
Land to be developed	Wagga Wagga Base Hospital, Corner Edward and Docker Street, Wagga Wagga
Proposed development	This application seeks approval for the development of a new six storey Ambulatory Care Building and associated works to the existing hospital as described in Section 3.0 of this Environmental Impact Statement
Prepared by	
Name	Chris McGillick
Qualifications	BPlan (Hons)
Address	173 Sussex Street, Sydney
In respect of	State Significant Development - Development Application
Certification	
	I certify that I have prepared the content of this EIS and to the best of my knowledge: it is in accordance with Schedule 2 of the Environmental Planning and Assessment Regulation 2000; all available information that is relevant to the environmental assessment of the development to which the statement relates; and the information contained in the statement is neither false nor misleading.
Signature	
Name	Chris McGillick
Date	19/06/2018

1.0 Executive Summary

Purpose of this Report

This submission to the Department of Planning and Environment (the Department) comprises an Environmental Impact Statement (EIS) for a Development Application under Division 4.7 of Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). It relates Wagga Wagga Base Hospital Redevelopment Stage 3.

The redevelopment of WWBH is identified as State Significant Development (SSD) in Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* (SRD SEPP). Development for hospitals with a capital investment value of more than $30 million is SSD for the purposes of the EP&A Act. As the proposed development will have a capital investment value of $111,000,000, it is SSD.

A request for the issue of Secretary's Environmental Assessment Requirements (SEARs) was sought on 11 January 2018. Accordingly, the SEARs were issued on 30 January 2018. This submission is in accordance with the Department's guidelines for SSD applications lodged under Part 4 of the EP&A Act, and addresses the issues raised in the SEARs.

Overview of the Project

This application seeks approval for the following development:

- a six (6) storey Ambulatory Care Building (ACB), including a rooftop plant room, all above an undercroft parking level. The ACB will contain:
  - Aged Care;
  - Rehabilitation;
  - Older Person's Mental Health;
  - Renal Dialysis Unit;
  - Ambulatory Clinics;
  - Rehabilitation and Allied Health;
  - Extended Hours Services;
  - Office Accommodation;
  - A new public entry atrium;
- Car parking for an additional 107 vehicles;
- Ground Level and bridge connection to the existing hospital building at Level 1 and Level 4;
- Site landscaping;
- Removal of 11 demountable buildings;
- Signage;
- Associated works to the internal car park; and
- Associated building services.

Site preparation work including remediation were approved separately.

The Site

WWBH is located on the corner of Edwards and Docker Street, Wagga Wagga. It is approximately 1km from the Wagga Wagga Central Business District in the City of Wagga Wagga LGA.

The hospital campus is legally described as Lot 334 in DP 1190643.

Planning Context

Section 6.0 of the EIS considers all applicable legislation in detail. The proposal is consistent with the requirements of all relevant SEPPs. The site is zoned SP2 Infrastructure (Hospital) under the *Wagga Wagga Local Environmental Plan 2010* (WWLEP 2010). The proposal is permissible with consent and meets the objectives of the subject zone.

Environmental Impacts and Mitigation Measures

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

Consultation

Section 5 of the EIS details the consultation that has been undertaken with various project stakeholders including Wagga Wagga Council, RMS, TfNSW, WWBH and the general public. The outcomes of the consultation process have been considered in the design of the proposal.

Conclusion and Justification

The EIS addresses the SEARs, and the proposal provides for the extension of hospital services at WWBH. The potential impacts of the development are minor and are able to be managed. Given the planning merits of the proposal, the proposed development warrants approval by the Minister for Planning and Environment.

2.0 Introduction

This Environmental Impact Statement (EIS) is submitted to the Department of Planning and Environment pursuant to Part 4 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) in support of an application for State Significant Development (SSD) for the construction and operation of a new six (6) storey ACB.

Development for the purposes of a hospital with a capital investment value (CIV) of more than $30 million is identified in Schedule 1 of *State Environmental Planning Policy (State and Regional Development) 2011* and is therefore declared to be SSD for the purposes of the EP&A Act. A CIV Statement has been prepared by MBM Quantity Surveyors (**Appendix G**). The development has a CIV of $111,000,000.

The report has been prepared by Ethos Urban on behalf of Health Infrastructure NSW, and is based on the Architectural Plans provided by Martin & Ollmann (see **Appendix A**) and other supporting technical information appended to the report (see Table of Contents).

This EIS has been prepared in accordance with the requirements of Part 4 of the EP&A Act, Schedule 2 of the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation), and the SEARs for the preparation of the EIS, which are included at **Appendix B.** This EIS should be read in conjunction with the supporting information and plans appended to and accompanying this report.

2.1 Overview of Proposed Development

This application seeks approval for the following development:

- a six (6) storey Ambulatory Care Building (ACB), including a rooftop plant room, all above an undercroft parking level. The ACB will contain:
  - Aged Care;
  - Rehabilitation;
  - Older Person's Mental Health;
  - Renal Dialysis Unit;
  - Ambulatory Clinics;
  - Rehabilitation and Allied Health;
  - Extended Hours Services;
  - Office Accommodation;
  - A new public entry atrium;
- Car parking for an additional 107 vehicles;
- Ground Level and bridge connection to the existing hospital building at Level 1 and Level 4;
- Site landscaping;
- Removal of 11 demountable buildings;
- Signage;
- Associated works to the internal car park; and
- Associated building services.

Site preparation work including remediation were approved separately.

A CGI of the proposed Stage 3 building is shown at **Figure 1** below.

Figure 1 WWBH Stage 3 Ambulatory Care Building

Source: Martin and Ollmann

2.2 Background to the Development

Stage 3 of the WWBH redevelopment builds on two previous stages of the hospital's redevelopment. The two previous stages include:

- **Stage 1**: Mental Health – Completed in 2011 (MP11_0087); and
- **Stage 2**: Acute Hospital – Completed in 2015 (SSD 5237).

MP11_0087 (Stage 1) was approved by the Department of Planning and Infrastructure on 15 May 2012 for the following development:

- A new three storey hospital building accommodating the mental health facility;
- Revised landscaped areas and soft landscaping;
- Provision of 14 additional car parking spaces (including 2 disabled);
- New pedestrian links and pedestrian entry; and
- Associated utility services.

SSD 5237 (Stage 2) was approved by the Department on 7 November 2013 for the following development:

- Construction of a new eight storey acute hospital building, including rooftop helipad;
- Demolition of the existing Ward Block hospital building;
- Construction of new car parking and entry forecourt; and
- Integrated landscaping.

2.2.1 Other Consents

Health Infrastructure has obtained approval for early works associated with the Old Hospital Building that occupies the location of the Stage 3 proposal via Part 5 of the EP&A Act. The separate approval addresses:

- demolition of existing buildings;
- removal of vegetation; and
- site remediation

For the purposes of this SSD application the site is considered cleared. The location of works for Stages 1 and 2 are shown in **Figure 2** below. The Stage 3 development site is also shown for completeness.

Figure 2 Location of Stage 1 and Stage 2 Works

2.3 Objectives of the Development

The overall objective of the WWBH Redevelopment Stage 3 is to develop a new, purpose built ACB on the existing site, with:

- significantly improved capacity;
- critical mass to support a higher scope of clinical care; and
- a broader range of sub-acute and primary and community health services to better meet the current and future needs of the Wagga Wagga community and Murrumbidgee region.

2.4 Analysis of Alternatives

Strategic Need for the Proposal

Ongoing review of facilities and service provision of the WWBH has been undertaken over the last decade. The studies undertaken identified the need for the existing hospital to maintain and expand its current service provision through the construction of new facilities.

In particular, the projected growth rate in population of those aged 75+ in Wagga Wagga is 52.5%, which is far higher than the overall rate for the Murrumbidgee Local Health District (10.7%). This will contribute to a significant growth in demand for non-acute inpatient, ambulatory and community services.

Non-acute inpatient, ambulatory and community health services are currently provided from dispersed locations across and outside the WWBH campus. These facilities are not purpose built for their current use and are at or beyond their useful life. Furthermore, the dispersed locations of these facilities create difficulties in terms of patients' ability to access them or staff being able to adequately provide integrated healthcare that would be possible within a single facility.

Alternative Options

Three options are available to Health Infrastructure NSW in responding to the identified need for the redevelopment of their facilities.

Option One - Do Nothing

Under the 'do nothing' scenario, the existing infrastructure at WWBH and elsewhere in the region would not be able to adequately provide services for the anticipated increased demand for non-acute inpatient, ambulatory and community services. Not undertaking the work would be an inappropriate outcome for a project of this nature, which will facilitate much needed health infrastructure for the region.

Option Two - Alternative Designs

Health Infrastructure NSW has explored a number of options for the location and layout of the new facility during the concept design phase. During this process a preferred masterplan was adopted that nominated masterplan principles that would inform the design alternatives. Options for the expansion of the WWBH campus included consideration of a number of different design scenarios including a number of built form arrangements with heights varying between 4 -6 storeys, small and large building footprints in various locations within the proposed Stage 3 ambulatory care zone (**Figure 3**).

Figure 3 WWBH Masterplan

Source: Martin and Ollmann

Option Three – The Proposal

Option three involves undertaking the proposed redevelopment as outlined in this SSD DA (as described in **Section 4.0**). A Services statement was issued in November 2017 to set the functional brief for the project in consultation with Murumbidgee Local Health District, WWBH Executive and Wagga Wagga Rural Referral Hospital User Groups. The service statement set functional briefs that have informed the final design including:

- Models of care delivery and management processes should enhance integration and sharing of resources across all providers of care
- The key goal of the NSW Health System Leading Better Value Care
- Telehealth and eHealth technology should be embedded into all service models and be an integrated component of service delivery
- Services should ensure equity of access
- Services should be planned on a collaboration model which supports co-location and/or physical integration where there is service or patient synergy
- Services should be planned to meet the population health needs of the area, with a view to responding to and encouraging change in service demand.

The proposal will facilitate the efficient construction of a high-quality building on the site that responds to the strategic need identified above. This proposal also aligns with a budget allocation of $170M provided by the Minister for Health and Medical Research for the Stage 3 development in February 2015.

2.5 Secretary's Requirements

In accordance with section 4.39 of the EP&A Act, the Secretary of the Department of Planning and Environment issued the requirements for the preparation of the EIS on 30 January 2018. A copy of the SEARs is included at **Appendix B**.

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

Table 1 Secretary's Requirements

Requirement	Location in Environmental Assessment	
General		
The Environmental Impact Statement (EIS) must address the *Environmental Planning and Assessment Act 1979* and meet the minimum form and content requirements in clauses 6 and 7 of Schedule 2 the Environmental Planning and Assessment Regulation 2000.	Environmental Impact Statement	
Notwithstanding the key issues specified below, the EIS must include an environmental risk assessment to identify the potential environmental impacts associated with the development.	Section 7	
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.	Section 6, Section 8	
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;	Appendix G	
• 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.	Section 4.11, 6.16	
Key Issues	**Section in EIS**	**Technical Study**
1. Statutory and Strategic Context – including: 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. 33 – Hazardous and Offensive Development;* • *State Environmental Planning Policy No. 55 – Remediation of Land;* • *State Environmental Planning Policy No. 64 – Advertising and Signage; and* • *Wagga Wagga 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.	Section 6.1 Section 6.15	Appendix P Appendix F
2. Policies Address the relevant planning provisions, goals and strategic planning objectives in the following: • *NSW State Priorities;* • *Riverina Murray Regional Plan 2036;* • *Draft Future Transport Strategy 2056 and supporting plans;* • *Crime Prevention Through Environmental Design (CPTED) Principles;* • *Planning Guidelines for Walking and Cycling;*	Section 6.1	Appendix D Appendix I Appendix E

Requirement	Location in Environmental Assessment	
• *Healthy Urban Development Checklist, NSW Health; and* • *Better Placed – An integrated design policy for the built environment of NSW 2017.*		
3. Built Form and Urban Design • Address the height, density, bulk and scale, setbacks of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces.	Section 4.6.1, Section 4.6 Section 6.2	Appendix D Appendix U
• Address design quality, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, heritage significance, materials, colours and Crime Prevention Through Environmental Design Principles.	Section 3.3.5 Section 4.2 Section 4.6 Section 4.7 Section 6.1 Section 6.2	Appendix D Appendix E
• Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development.	Section 6.14	Appendix A Appendix P
4. Environmental Amenity • Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing, reflectivity from building facades and wind impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated.	Section 6.3.1 Section 6.3.2 Section 6.3.3 Section 6.8 Section 6.3.5 Section 8	Appendix A
5. Transport and Accessibility Include a transport and accessibility impact assessment, which details, but not limited to the following: • accurate details of the current daily and peak hour vehicle, public transport, pedestrian and cycle movement and existing traffic and transport facilities provided on the road network located adjacent to the proposed development;	Section 6.4	Appendix I
• an assessment of the operation of existing and future transport networks including the bus network and their ability to accommodate the forecast number of trips to and from the development;		
• details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips;		
• the adequacy of 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 infrastructure within the vicinity of the site in consultation with Roads and Maritime Services and Transport for NSW and identify measures to integrate the development with the transport network;		
• details of any upgrading or road improvement works required to accommodate the proposed development;		
• details of travel demand management measures to encourage sustainable travel choices and details of programs for implementation;		
• the impact of trips generated by the development 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 (note: traffic modelling is to be undertaken with scope to be agreed by TfNSW and RMS in advance);		
• the proposed active transport access arrangements and connections to public transport services;		
• the proposed access arrangements, including car and bus pick-up/dropoff facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones;		
• measures to maintain road and personal safety in line with CPTED principles;		

Requirement	Location in Environmental Assessment	
• the proposed car and bicycle parking provision, including end-of-trip facilities, which must be taken into consideration of the availability of public transport and the requirements of Council's relevant parking codes and Australian Standards;		
• proposed bicycle parking facilities in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance;		
• details of the proposed number of car parking spaces and compliance with appropriate parking codes and justification for the level of car parking provided on-site (including the provision of an updated parking study);		
• details of emergency vehicle access arrangements;		
• an assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures;		
• service vehicle access, delivery and loading arrangements and estimated service vehicle movements (including vehicle type and the likely arrival and departure times);		
• in relation to construction traffic: – assessment of cumulative impacts associated with other construction activities; – an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity; – details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process; – details of anticipated peak hour and daily construction vehicle movements to and from the site; – details of access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicle; – details of temporary cycling and pedestrian access during construction; – details of proposed construction vehicle access arrangements at all stages of construction; and – traffic and transport impacts during construction, including cumulative impacts associated with other construction activities, and how these impacts will be mitigated for any associated traffic, pedestrian, cyclists, parking and public transport, including the preparation of a draft Construction Traffic Management Plan to demonstrate the proposed management of the impact (which must include vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures for all demolition/construction activities).		
→ *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* • *Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development* • *Standards Australia AS2890.3 (Bicycle Parking Facilities)*		
6. Ecologically Sustainable Development (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.	Section 6.19	Appendix Q
• Demonstrate that the development has been assessed against a suitably accredited rating scheme to meet industry best practice.	Section 6.19	-
• Include a description of the measures that would be implemented to minimise consumption of resources, water (including water sensitive urban design) and energy.	Section 6.12.3 Section 6.19	Appendix Q Appendix N
7. Heritage	Section 6.5	Appendix J

Requirement	Location in Environmental Assessment	
Include a Heritage Impact Statement that addresses the significance of, and provides an assessment of the impact on the heritage significance of any heritage items on the site and in the vicinity, and/or conservation areas and/or potentially archaeologically significant areas, in accordance with the guidelines in the *NSW Heritage Manual*.	Section 6.6	Appendix V
8. Biodiversity Biodiversity impacts related to the proposal and the preparation of a Biodiversity Development Assessment Report are to be addressed in accordance with the requirements of the *Biodiversity Conservation Act 2016*.	Section 6.7	Appendix W
9. Noise and Vibration Identify and provide a quantitative assessment of the main noise and vibration generating sources during construction and operation and outline measures to minimise and mitigate the potential noise impacts on surrounding occupiers of land. → *Relevant Policies and Guidelines:* • *Noise Policy for Industry 2017 (EPA)* • *Interim Construction Noise Guideline (DECC)* • *Assessing Vibration: A Technical Guideline 2006* • *Development Near Rail Corridors and Busy Roads – Interim Guideline (Department of Planning 2008)*	Section 6.8	Appendix K
10. Sediment, Erosion and Dust Controls Detail measures and procedures to minimise and manage the generation and off-site transmission of sediment, dust and fine particles. → *Relevant Policies and Guidelines:* • *Managing Urban Stormwater – Soils & Construction Volume 1 2004 (Landcom)* • *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA)* • *Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)*	Section 6.9	Appendix N Appendix O
11. Contamination Assess and quantify any soil and groundwater contamination and demonstrate that the site is suitable for the proposed use in accordance with SEPP 55. → *Relevant Policies and Guidelines:* • *Managing Land Contamination: Planning Guidelines - SEPP 55Remediation of Land (DUAP)*	Section 6.1 Section 6.10	Appendix F
12. Utilities • Prepare an Infrastructure Management Plan in consultation with relevant agencies, detailing information on the existing capacity and any augmentation and easement requirements of the development for the provision of utilities including staging of infrastructure. • Prepare an Integrated Water Management Plan detailing any proposed alternative water supplies, proposed end uses of potable and nonpotable water, and water sensitive urban design.	Section 4.10	Appendix M Appendix N
13. Contributions Address Council's Section 94 Contribution Plan and/or details of any Voluntary Planning Agreement, which may be required to be amended because of the proposed development.	Section 6.20	-
14. Drainage • Detail drainage associated with the proposal, including stormwater and drainage infrastructure. • Detail measures to minimise operational water quality impacts on surface waters and groundwater. → *Relevant Policies and Guidelines:* • *Guidelines for development adjoining land and water managed by DECCW (OEH, 2013)*	Section 6.12	Appendix N
15. Flooding Assess any flood risk on site (detailing the most recent flood studies for the project area) and consideration of any relevant provisions of the NSW Floodplain Development Manual (2005), including the potential effects of climate change, sea level rise and an increase in	Section 6.13	Appendix O

Requirement	Location in Environmental Assessment	
rainfall intensity.		
16. 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 6.14	Appendix P
17. Construction Hours Identify proposed construction hours and provide details of the instances where it is expected that works will be required to be carried out outside the standard construction hours.	Section 4.13	Appendix K
Plans and Documents	Section in EIS	Technical Study
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.	All Sections	-
In addition, the EIS must include the following: • Architectural drawings including but not limited to the following requirements: – dimensioned and including RLs and MGA coordinates; – plans, sections and elevations of the proposal; and – site and context plans that demonstrate active transport linkages.		Appendix A
• with existing, proposed and potential footpaths and bicycle paths and public transport links;		Appendix A
• Site Survey Plan, showing existing levels, location and height of existing and adjacent structures / buildings and boundaries;		Appendix C
• Site Analysis Plan;		Appendix A
• Drawings identifying location of any Departure and Approach Procedures for helipads on the site;		Appendix A
• Stormwater Concept Plan;		Appendix O
• Sediment and Erosion Control Plan;		Appendix O
• Shadow Diagrams;		Appendix A
• View Analysis / Photomontages, including from public vantage points;		Appendix A Appendix D
• An integrated Landscape Plan/Strategy (including identification any trees to be removed and trees to be retained or transplanted);	Section 6.7.1	Appendix U
• Preliminary Construction Management Plan, inclusive of a Preliminary Construction Traffic Management Plan detailing vehicle routes, number of trucks, hours of operation, access arrangements and traffic control measures;	Section 6.17	Appendix L
• Geotechnical and Structural Report;		Appendix R
• Accessibility Report; and	Section 6.13	Appendix T
• Schedule of materials and finishes.	Section 4.6.1	Appendix A
Consultation		
During the preparation of the EIS, you must consult with the relevant local, State or Commonwealth Government authorities, service providers, community groups, special interest groups including local Aboriginal land councils and registered Aboriginal stakeholders, and affected landowners. In particular, you must consult with: • City of Wagga Wagga Council; • Transport for NSW; and	Section 5	Appendix I Appendix S

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

3.0 Site Analysis

3.1 Site Location and Context

The site is located at the corner of Edward and Docker Street, Wagga Wagga within the Wagga Wagga Local Government Area. The WWBH is approximately 1 km south-west of the Wagga Wagga CBD.

Wagga Wagga is a major regional city in the Riverina region of New South Wales with a population of approximately 55,000 people. Wagga Wagga is located approximately a 5 hour drive south west of Sydney and 2 hours, 45 minutes west of Canberra. The WWBH is one of three primary medical facilities of the Murrumbidgee Local Health District, serving four centres of population: Albury, Deniliquin, Griffith and Wagga Wagga. The hospital services a population of over 250,000 people.

The site's locational context is shown at **Figure 4**.

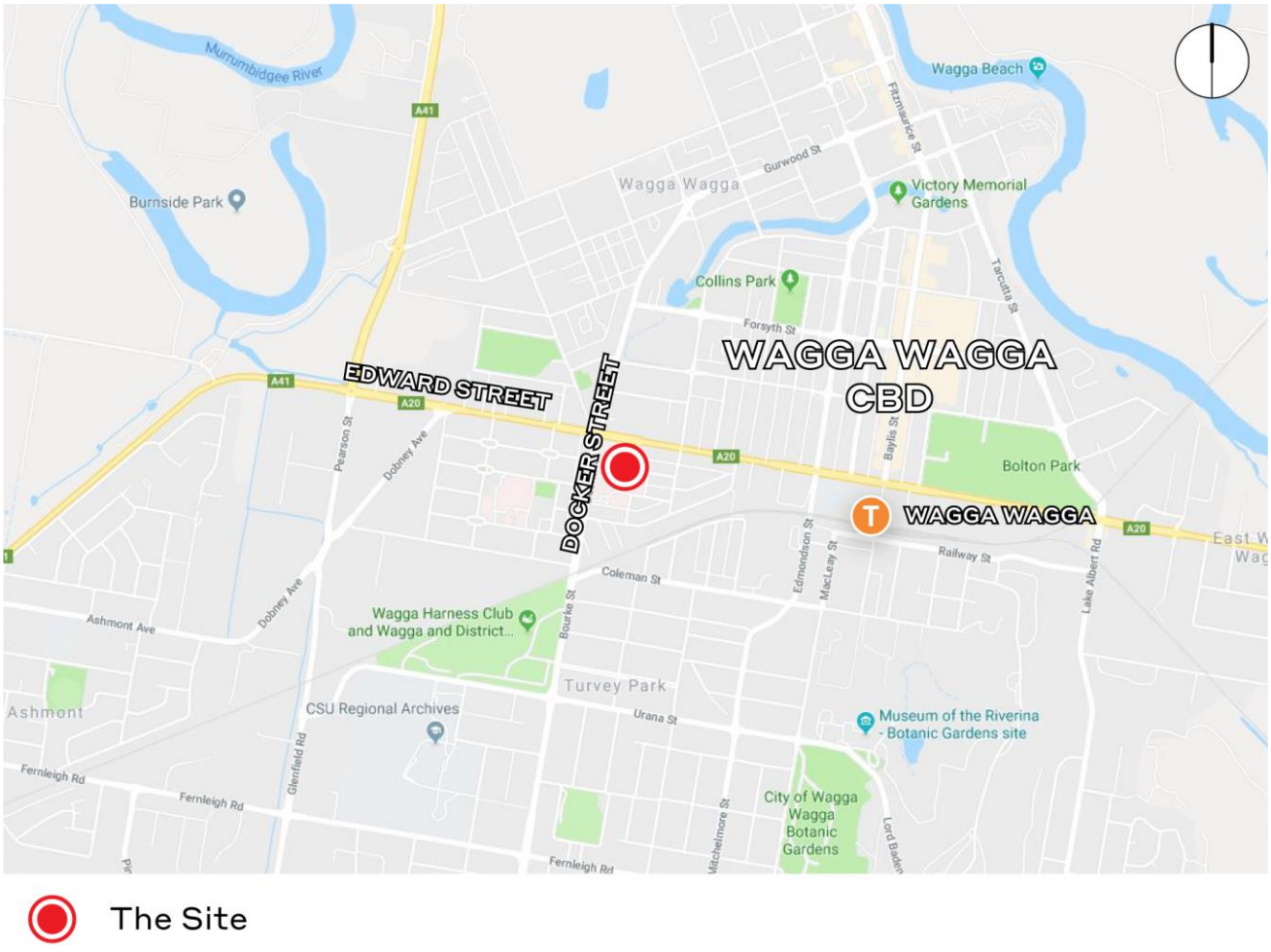

Figure 4 Locational Context

Source: Ethos Urban and Google Maps

3.2 Land Ownership

WWBH campus is located across of 4 separate land parcels that are legally described as Lot 334 in DP 1190643. The land is owned by Health Infrastructure NSW.

3.3 WWBH Campus Description

The WWBH campus has an area of approximately 4.2 hectares. The hospital campus is split across four separate development lots and is generally bound by Edward Street to the north, docker Street to the west and is otherwise surrounded by residential dwellings of the surrounding suburb.

A survey plan is located at **Appendix C**. An aerial photo of the site is shown at **Figure 5**.

Figure 5 Site Plan and location of proposed ACB development

Source: Ethos Urban

3.3.1 Existing Development

WWBH is currently a 393 bed/chair/consulting room facility and provides a wide range of services across the campus including medical, surgical, critical care, maternity, paediatrics, rehabilitation, aged care, geriatric evaluation and management, mental health, procedural centre, angiography, emergency, renal unit and transit unit services.

There are many diverse, old and ad-hoc buildings across the campus, many of which have numerous extensions. In more recent years, the hospital has been redeveloped with a new Mental Health Building (approved under Stage 1) and Acute Services Building (approved under Stage 2) recently constructed.

The Acute Services Building rises to eight storeys with a helipad above providing regional access for helicopters. At grade car parking is generally dispersed across the campus with the larger car parks located to the north and north-east of the campus. Photographs of the site are provided at **Figure 6** - **Figure 9**.

3.3.2 Topography

The topography of the campus is predominantly flat with a fall towards the Edward and Docker Streets corner of around 3.6 metres.

3.3.3 Vegetation

There are scattered trees and grassed areas on the campus.

3.3.4 Road Network, Vehicle Access and Parking

The hospital campus can be accessed from all four surrounding roads of Edward Street, Docker Street, Brookong Avenue (emergency vehicle access only) and Murray Street. The primary public entry to WWBH is from Edward Street via Lewis Drive. Emergency vehicles access the hospital is available directly from Docker Street, Rawson Lane and Lewis Drive.

There are currently 11 car parking facilities located across the campus, named CP1 – CP11. In total, 491 parking spaces are provided at WWBH across CP1 – CP11.

3.3.5 Heritage

The WWBH is listed on the NSW Department of Health's *Section 170 Register*: 'Wagga Wagga Base Hospital'.

The Old Hospital Building is listed in WLP2010 as an item of local heritage being 'Wagga Wagga Base Hospital (c. 1960 Building)'. Approval for the demolition of this building has been granted under Part 5 of the EP&A Act.

WWBH is located within the vicinity of the Wagga Wagga Heritage Conservation Area as defined by WLEP 2010.

3.3.6 Helipad

A helipad provides aerial access from the rooftop of the Acute Services Building. The flight paths for that facility are 180 degrees apart and are oriented east/west, away from the proposed Stage 3 works.

Figure 6 Acute Services Building

Source: Ethos Urban

Figure 7 Mental Health Unit

Source: Ethos Urban

Figure 8 Harvey House

Source: Ethos Urban

Figure 9 Hospital Entry from Edward Street

Source: Ethos Urban

3.4 Surrounding Development

The land surrounding the campus is predominantly residential in nature within the suburban areas of Wagga Wagga. The area is characterised by predominantly federation style although a number of properties have been converted to medical suites. Further detail regarding the development surrounding the hospital is described below:

- **To the north:** To the immediate north of the site is Edward Street, which is the primary highway running between Adelaide (approximately 800km to the west) and the Hume Highway (junction is approximately 40km to the east) which connects Sydney to Melbourne. Across the highway is a residential area comprising of predominantly single storey detached housing. Murrumbidgee Turf Club is approximately 1km to the north, and the Murrumbidgee River is approximately 1.8km to the north east.
- **To the south:** Two blocks of low density residential development separate the edge of the hospital campus from the Main South Railway Line that connects Sydney to Melbourne. Other uses further to the south include the Wagga Wagga Showground and Exhibition Complex (600m to the south west), Charles Sturt University (1.5km to the south west) and generally residential development.
- **To the east:** Outside of the hospital campus is generally low density residential development. The CBD of Wagga Wagga is approximately 1km to the east of the site. Wagga Wagga Airport is approximately 11km east of the site.
- **To the west:** Across Docker Street to the west is primarily low density residential development (**Figure 10**). Calvary Hospital, a private hospital specialising in surgery, maternity and rehabilitation is located 300m to the west of the campus. A photograph showing an elevated view of Wagga Wagga from the Acute Services Building is shown at **Figure 11**.

Figure 10 Residential Development typical of the surrounding area

Source: Ethos Urban

Figure 11 View of the surrounding area, looking northwest, from the Stage 2 Building

Source: Ethos Urban

3.5 Development Site

The development site for the Stage 3 works is located in the north west of the campus, in the location of the Old Hospital Building, Robinson House and Hydrotherapy Pool buildings. These building were approved for demolition under a separate approval (refer to Section 2.2). This development site is located between the existing at grade car park CP1, the Support Services Building and Harvey House, as shown in **Figure 12**. Additional works are proposed to demountable buildings elsewhere on the campus as described further at Section 4.5**.**

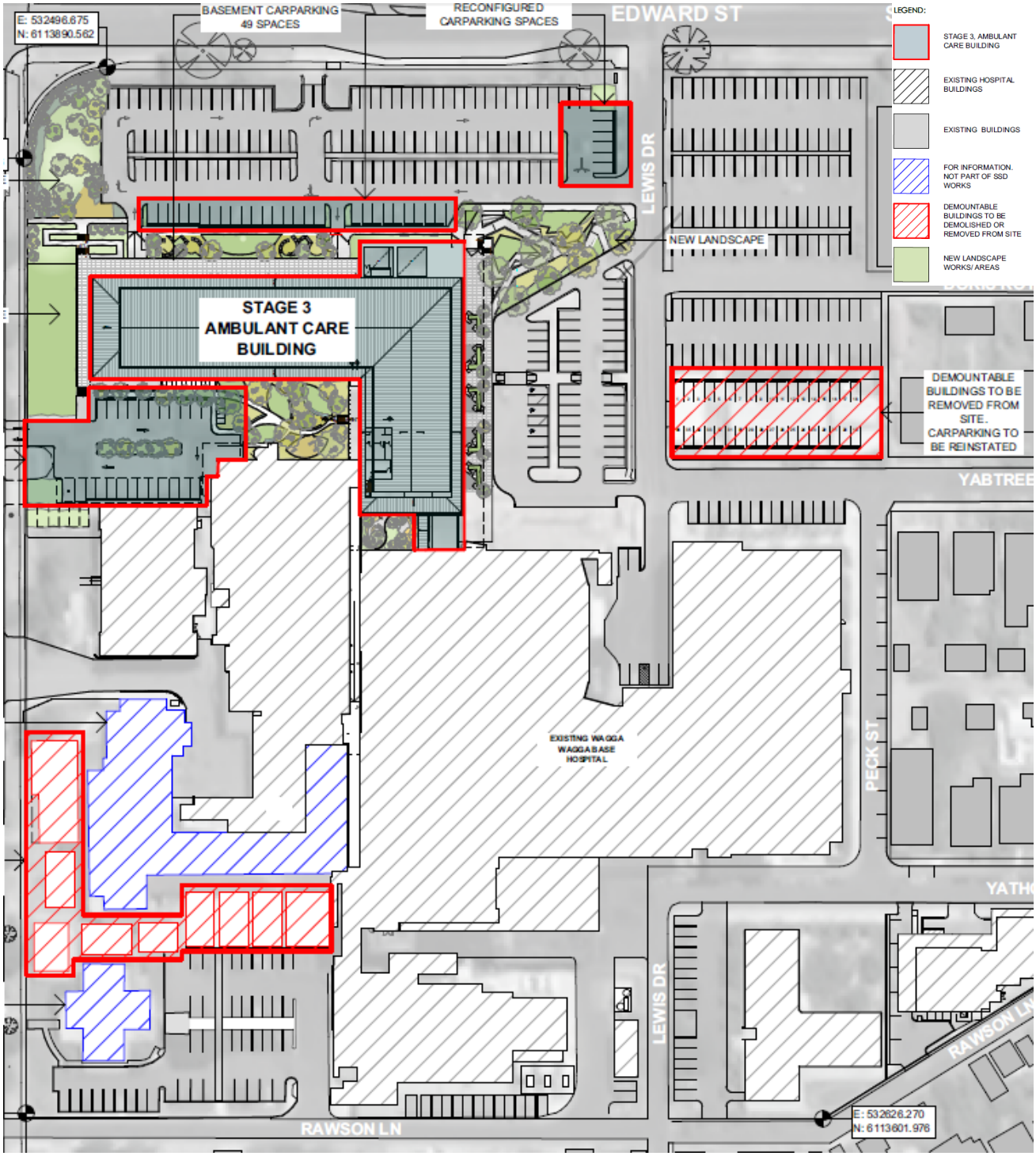

Figure 12 Stage 3 works context plan

Source: Martin and Ollmann

4.0 Description of the Development

This chapter of the report provides a detailed description of the proposed development. Architectural drawings are included at **Appendix A.**

4.1 Overview of Proposed Development

This application seeks approval for the following development:

- a six (6) storey Ambulatory Care Building (ACB), including a rooftop plant room, all above an undercroft parking level. The ACB will contain:
  - Aged Care;
  - Rehabilitation;
  - Older Person's Mental Health;
  - Renal Dialysis Unit;
  - Ambulatory Clinics;
  - Rehabilitation and Allied Health;
  - Extended Hours Services;
  - Office Accommodation;
  - A new public entry atrium;
- Car parking for an additional 107 vehicles;
- Ground Level and bridge connection to the existing hospital building at Level 1 and Level 4;
- Site landscaping;
- Removal of 11 demountable buildings;
- Signage zone;
- Associated works to the internal car park; and
- Associated building services.

Site preparation work including remediation were approved separately.

A photomontage of the proposed development is shown at **Figure 13** and **Figure 14**.

Figure 13 Photomontage viewed from intersection of Docker and Edward St

Source: Martin & Ollmann

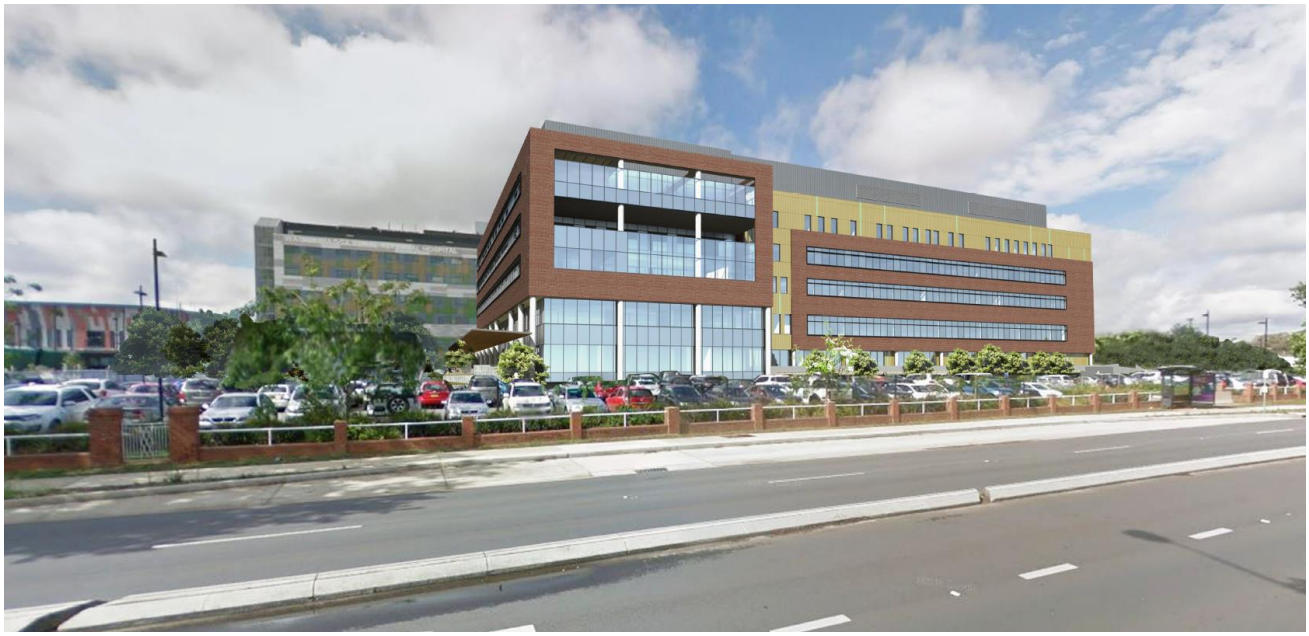

Figure 14 Photomontage viewed from the Hospital entry at Edward Street

Source: Martin & Ollmann

4.2 Development Principles

A Design Statement has been prepared by Martin & Ollmann and is available at **Appendix D**. This Statement provides further detail regarding the design intent behind the proposed development. The building will:

- provide a sympathetic solution through evidence-based design that responds to the WWBH, Stage 3 Services Statement;
- respond to the needs of the hospital occupants, both clinical and non-clinical, with a particular focus on enhancing integration, collaboration and shared services;
- create a clear and legible access for patients, visitors and staff that enables easy and equitable movement through the campus;
- provide a simple and elegant building form that addresses the public domain, creating an 'entry' to the hospital campus; and
- respond to the existing built forms that adjoin the proposed building in terms of materiality.

4.3 Numerical Overview

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

Table 2 Key development information

Component	Proposal
Campus area	4.461 ha
Hospital Beds	94 additional beds
Maximum Height	RL 211.47 (28m)
Car parking	107

4.4 Demolition and Site Preparation

Approval has been granted for demolition of the Old Hospital Building at the location of the proposed Stage 3 works (refer to Section 2.2) under Part 5 of the EP&A Act. Accordingly, the site is considered cleared of development.

4.5 Removal of Demountable Buildings

There are 11 demountable buildings and containers that are to be removed from the campus. These structures are generally located in two separate precincts within the wider campus (Refer to Architectural Plan 0401 at **Appendix A**):

- A temporary clinics building is located at the corner of Lewis Drive and Yabtree Street, adjacent to existing car park CP3; and
- Nine demountable buildings/shipping containers are located between Lewis House, Docker Street and the Dental Building. These buildings have been temporarily used for the physiotherapy department and prosthetics, among other uses.

Once removed, the clinics building will be replaced by car parking for 36 vehicles. The area occupied by the nine demountable buildings will be re-established as landscaping/grassed areas as pervious. Car parking is discussed at Section 4.8.

4.6 New Ambulatory Care Building (ACB)

4.6.1 Urban Design and Built Form

Bulk and Scale

The proposed new ACB is located over six (6) storeys above an undercroft parking level. The proposed building height of the ACB is RL 211.47, or 28m, when measured from ground. This is less than the existing Stage 2 building, which was built to a height of RL 220.745, or 9.26m taller than the proposed ACB. This includes five habitable levels with the sixth comprising roof top plant.

The building mass is similar to the Stage 2 Acute Services building which helps define the existing forecourt as the primary arrival point for access to the wider hospital campus. The ACB is has an 'L' shaped arrangement with two wings. The building is oriented with a primary north and east aspect with expansive views across the campus.

Setbacks

The ACB building is setback 20m from the Docker Street property boundary and setback 40 metres from the Edward Street property boundary to the north. A setback of 100 metres is provided to residential development to the east.

The ACB has been designed to incorporate with Stage 2 to the south with a 8 metre separation which incorporates a central void for bridge connections and solar access.

Atrium

A new double height atrium will become the main entry to the hospital. It extends along the length of the eastern façade and will connect the lobby of the Acute Services Building to the south. It adjoins the forecourt and drop off area of the adjoining car park.

Connection to the existing Hospital Buildings

An underground connection between Stage 3 and the existing hospital is proposed at the basement level of Stage 3. It will connect a bank of elevators within Stage 3 to the existing north-south corridor of the Support Services and Acute Services Building.

Additional connection between Stage 3 and Stage 2 are provided by elevated walkways that connect the two buildings at Level 1 and Level 4.

Balconies

Two large balconies are proposed at the northern elevation of the ACB at Level two and Level four. The balconies will act as 'courtyards' at these levels providing an outdoor space for patients and staff.

Retail

A retail space is proposed at the north-east corner of the ACB on Ground Level which will have an elevated outlook to the north and east.

Floor Space by Level

The proposed building is to be used as a 'health services facility' as defined in the Wagga Wagga LEP 2010. Supplementary uses include retail and education space.

The proposed uses for each level within the Ambulatory Care Building are outlined in **Table 3** below.

Table 3 Floor by floor summary of ACB

Level	Use	Floor Space
Undercroft Carpark	• 44 carparking spaces, including 2 accessible spaces (additional parking provided on campus, refer to Section 4.8). • Car park entry and exit • 2 x mechanical plant rooms	

Level	Use	Floor Space
Ground Floor	• Main entry • Oral health • Ambulatory clinics • Aboriginal health • Retail	4,001.69m^2
Level 1	• Main entry atrium • Ext clinics • Renal services • Clinics • Allied health	3,337.81m^2
Level 2	• Education and research • Older persons mental health unit	3,379.75m^2
Level 3	• Rehabilitation inpatient psychiatric unit • Aged care inpatient psychiatric unit	3,312.86m^2
Level 4	• Mental health service for older people • Plant	3,346.91m^2
Level 5	• Plant	N/A

External Materials and Finishes

The colour scheme acknowledges the traditional lands of the Wiradjuri which WWBH is located on. The design acknowledges the three rivers that cut through the red earth of the Riverina, the Murrumbidgee, the Wambool, (Macquarie) and Kalare, (Lachlan) which are considered the lifeblood of the Wiradjuri lands. These have been represented by the three strips that puncture the red clay brick facade of the two main wings to the ACB. The brick further endowing the building with both historical and local context, referencing both the old main hospital and the red brick cottages that surround the campus.

The primary facades of the building have feature horizontal brickwork to separate the glazing. Each wing is unified by a masonry 'box' hovering above a glazed podium level. External materials are proposed to include:

- Brick;
- Metal cladding;
- Off-form concrete columns and slabs;
- Aluminium curtain walls;
- Glazed balustrades; and
- Double glazed windows.

4.7 Landscaping and Public Domain

Landscape drawings have been prepared by Somewhere Landscape Architects and are included at **Appendix U**. The landscape scheme has six distinctive elements, comprising:

- North-west pocket park – an enclosed an intimate space where people can gather;
- Northern 'level change' landscape – stepped landscape zone;
- North-east pocket park – open grassed area with seating and larger trees for shading;
- Eastern covered space: rhythm of trees and timber seating;
- Western Courtyard – an internal courtyard connecting the ACB and SSB Building; and
- Spiritual Courtyard – an enclosed space to provide visual connection between Stage 3 and Stage 2 featuring sensory landscape elements

4.8 Car Parking and Access

4.8.1 Vehicle Access

The hospital campus can be accessed from all four surrounding roads of Edward Street, Docker Street, Brookong Avenue (emergency vehicle access only) and Murray Street. The primary public entry to WWBH is from Edward Street via Lewis Drive. Emergency vehicles access the hospital is available directly from Docker Street, Rawson Lane and Lewis Drive. Existing access arrangements will be maintained.

The existing hospital has a loading dock on the western side of the campus with access from Docker Street. The loading dock will continue to be the central loading point for the hospital and is not affected by the proposed Stage 3 works.

4.8.2 Pedestrian Access

The existing pedestrian infrastructure and connections on-site will generally be maintained. At the location of the proposed new buildings, existing infrastructure will be replaced with new pedestrian links, including a path from the new development to the existing buildings.

4.8.3 Car Parking

The proposal includes provision of 107 additional car parking spaces across the hospital campus. The works include introduction of a new undercroft car park and amending existing car parks to provide additional parking, including amended line marking as required. New parking provision is summaries as follows:

- Undercroft car park 44 spaces
- Northern car park 9 spaces
- Car park (north of Harvey House) 18 spaces
- Car park (corner Lewis Drive and Yabtree Street) 36 spaces

4.8.4 Bicycle Parking

The proposal includes parking for 6 bicycle lockers and 4 bike racks in the undercroft and 18 bike racks south of the Stage 3 building (28 overall).

4.9 Road Improvements

As shown on the Architectural Plans at **Appendix A** right turn restrictions are proposed out of Murray Street and Brookong Avenue onto Edward Street, with a raised median preventing right turns.

4.10 Services and Utilities

An Infrastructure Management Plan has been prepared by Acor Consultants (**Appendix N**) and Jacobs (**Appendix M**) to review services and utility supply at WWBH. The campus is currently services by electricity, water, sewer, gas and telecommunications.

Water

Water mains are available, and supply has been confirmed by Riverina Water. (Refer to **Appendix N**).

Electricity

Jacobs has confirmed the electrical infrastructure requirements for Stage 3 as part of the Services Infrastructure Management Plan (**Appendix M**). Two 1,000kVA kiosk/padmount substations will be required with an easement for Essential Energy to be created over the substations. The substations will be located adjacent to the Docker Street boundary, north of Harvey House. An application for connection was made and approved by Essential Energy.

Gas

The campus is currently supplied by a high-pressure gas main in Rawson Lane which is connected to a main meter and regulator set constructed during Stage 2. The Stage 3 works will connect to existing gas infrastructure (refer to **Appendix N**)

Telecommunications

The Stage 3 development does not require any new incoming cable connection from the existing public grids. It will connect to the existing campus distributors already installed on site. Wireless mobile phone connection via distributed antenna system will be provided. Refer to the Services Infrastructure Management Plan at **Appendix M**.

4.11 Signage

Approval for a signage zone at the eastern façade is sought. The signage zone is 10.6m x 2.8m. SEPP 64 (Advertising and Signage) is addressed at Section 6.1.

4.12 Construction Staging and Job Creation

The development will be constructed within the environment of an operating hospital. The ACB will be constructed in a single stage with construction works expected to commence in 2018 and be completed in 2020.

The Stage 3 proposal will generate approximately 320 FTE jobs during the construction process. Approximately 1,490 operational jobs will be created at the completion of the new ACB.

4.13 Construction Hours

The proposed hours of construction, including delivery of materials to and from the site shall be restricted as follows:

- Monday to Friday inclusive: 7.00am to 6.00pm;
- Saturday: 7.30am to 5.00pm; and
- No work on Sundays and Public Holidays.

It is proposed that works may be undertaken outside these hours where:

- The delivery of materials is required outside these hours by the Police or other authorities; or
- It is required in an emergency to avoid the loss of life, damage to property and/or to prevent environmental harm; or
- Variation is approved in advance in writing by the Secretary or her nominee.

Notwithstanding the proposed hours of work above, it is proposed that additional work is permitted to be carried out between 6.00pm and 10.30pm, Mondays to Fridays. To ensure that no adverse noise impacts arise works within these hours will be limited as follows:

- Restricted to the internal fit-out works within the constructed and completed façade of the building;
- No use of high noise intrusive equipment;
- No works on the façade of the building;
- Deliveries are not permitted; and
- No use of floodlighting or additional lighting beyond internal lighting and lighting required for safety and access.

An acoustic assessment is provided at Section 6.8 and **Appendix K**.

5.0 Consultation

In accordance with the SEARs issued for this project, consultation was undertaken with relevant public authorities, the community and Council. No significant issues were raised during the course of this consultation.

Agency and Council Consultation

Health Infrastructure NSW has been engaged in ongoing consultation with Council regarding the Stage 3 development, and other works currently being carried out on the hospital campus. Meetings to discuss the detailed design of Stage 3 and other matters including traffic, were held on 13 February, 5 March, 14 March and 19 March 2018.

A number of meetings were held with Council during design development of the proposal including with Council's traffic management team who raised specific requirements for the traffic assessment. The technical consultant team also consulted with TfNSW and RMS, who asked that intersection performance surrounding the site be assessed as part of the proposal. The comments raised by Council, TfNSW and RMS have been incorporated into the Transport Assessment that has been prepared by GTA Consultants at **Appendix I**. A summary of meeting minutes and meeting details prepared by Savills is provided at **Appendix S**.

Community Consultation

Health Infrastructure NSW has undertaken ongoing consultation and engagement with the local community during the Stage 3 development. The community consultation and engagement strategy has comprised:

- Consultation with the local Hospital Control Group;
- Engagement with local community and hospital user groups;
- A project website with ongoing updated information on the development's progress;
- Social media updates;
- Newspaper and media announcements; and
- Facts sheets and project information at public locations.

In addition, the proposed development will be placed on public exhibition for 30 days in accordance with clause 83 of the *Environmental Planning and Assessment Regulation 2000*. During the public exhibition period Council, State agencies and the public will have an opportunity to make submissions on the project.

6.0 Environmental Assessment

This section of the report assesses and responds to the environmental impacts of the proposed development. It addresses the matters for consideration set out in the SEARs (see Section 2.5). The Mitigation Measures at Section 8.0 complement the findings of this section.

6.1 Relevant EPIs, Policies and Guidelines

The relevant strategies, environmental planning instruments, policies and guidelines as set out in the SEARs are addressed in **Table 4**.

Table 4 Summary of consistency with relevant Strategies, EPIs, Policies and Guidelines

Instrument/ Strategy	Comments
Strategic Plans	
NSW State Priorities	NSW State Priorities are twelve high-level priorities for the State, being: • Creating jobs; • Delivering infrastructure; • Driving public sector diversity; • Improving education results; • Improving government services; • Improving service levels for hospitals; • Keeping our environment clean; • Making houses more affordable; • Protecting our kids; • Reducing domestic violence reoffending; • Reducing youth homelessness; and • Tackling childhood obesity. The proposal seeks to redevelop an existing hospital to improve service levels for health in the Murrumbidgee Local Health District. The proposal will therefore meet this key priority, whilst also creating jobs and delivering infrastructure in the Wagga Wagga region.
Riverina Murray Regional Plan 2036	The Riverina Murray Regional Plan sets 29 strategic directions in order to achieve the vision for the region, which is '*a diversified economy founded on Australia's food bowl, iconic waterways and a network of vibrant connected communities*'. The Plan directly references the NSW Government's investment in infrastructure in the Riverina Murray, including the $270 million investment in the WWBH redevelopment. One of the priorities associated with meeting the vision is to support the establishment of health precincts around WWBH, helping to support the growth of health and aged care sectors (Direction 5). Therefore, the proposed development is considered to be consistent with the Plan, directly contributing to the meeting of its vision.
Draft Future Transport Strategy 2056 and supporting plans	The Draft Future Transport Strategy 2056 sets the 40 year vision, directions and outcomes framework for customer mobility in NSW, which will guide future transport investment over the longer term. The supporting plans provide further detail on customer outcomes or place-based planning documents to guide the Strategy's implementation. A review of these documents shows that there are no place-based implications for this Strategy with relation to the WWBH campus, and further assessment as part of this application is not required.
Crime Prevention Through Environmental Design (CPTED) Principles	A Security Risk Assessment has been prepared by Jacobs and is available at **Appendix E**. It includes an assessment of CPTED guidelines, which are based on key principles for designing buildings and places that are safe and secure and which deter criminal behaviour. These principles, and how the proposed development has considered these principles, is outlined below: • **Natural Surveillance**: Glazing is provided at ground floor, with windows on the levels above to provide natural surveillance onto proposed landscape areas. Well maintained landscaping with low shrubbery, uniform lighting and wide-open spaces will increase the natural surveillance features of the site. As an additional benefit, the effectiveness of electronic CCTV systems is further increased when natural surveillance techniques are employed, by providing clear site lines. • **Access Control**: Lighting is a particularly effective technique to control the movement and concentrations of people. Individuals are attracted to brightly-lit areas at night and this can be employed to control pedestrian movements. Influencing the ways in which people gain access to a site provides greater control of the space by increasing the effort required by a potential offender to gain access to the space. Brightly lit areas can also be used to deter crime as there is a greater chance of being observed in a well-lit space. Specifically, providing additional lighting to the building perimeter would be a useful crime prevention measure which would aid staff movements at night, deter trespassers and provide added

Instrument/ Strategy	Comments	
	lighting for CCTV coverage. • **Territorial Reinforcement:** Territorial reinforcement promotes social control through increased definition of space. An environment designed to clearly delineate private space does three things. 1. It creates a sense of ownership by the legitimate user. 2. The sense of owned space creates an environment where "strangers" or "intruders" stand out and are more easily identified. 3. By using buildings, pavement, signs, lighting and landscape to express ownership, natural territorial reinforcement occurs. Territorial reinforcement measures make the authorised user feel safe, making the potential offender aware of a substantial increased risk of apprehension or scrutiny.	
Planning Guidelines for Walking and Cycling	The Planning Guidelines for Walking and Cycling provide guidance to land-use planners to ensure that walking and cycling improvements are taken into consideration in planning policy and practice. The Guidelines provide a walking and cycling focus to the NSW Government's Integrating Land Use and Transport Planning Policy Package. The Guidelines provide recommendations for improved awareness of the various public and active transport options available at a site and recommendations for cycle and cyclist facilities. For more information on how the proposed development responds to these Guidelines, refer to the Transport Impact Assessment prepared by GTA Consultants at **Appendix I**.	
Healthy Urban Development Checklist, NSW Health	The proposal will enable the construction of a new hospital building, providing improved functionality and capability whilst improving efficiency. This facility is within 1km of the Wagga Wagga CBD, or approximately a 20 minute walk or 6 minute cycle. By providing such a social infrastructure facility within close proximity to the Wagga Wagga CBD, it is considered that the proposal is consistent with the intent of the Healthy Urban Development Checklist by allowing for and encouraging active transport to the site.	
Better Placed – An integrated design policy for the built environment of NSW 2017	Better Placed has been developed by the Government Architect as an integrated design policy for the built environment of NSW. It includes seven distinct objectives that have been created to define the key considerations in the design of the built environment. The proposal has been informed by extensive consultation with Murrumbidgee Local Health District, WWBH Executive and Wagga Wagga Rural Referral Hospital User Groups, Council, relevant government agencies and local community. Design principles have informed Stage 3 as outlined by Martin and Ollmann at **Appendix D** The building is designed to meet the Better Placed design principals of being contextual and local with references in the design to the old hospital building, themes of the three rivers of the district and colours derived from the Murrumbidgee landscape. By incorporating ESD principles the building performance is to meet environmental standards that are sustainable, adaptable and durable. The building is too be fit for purpose as described in the NSW Health Infrastructure Briefing Documents, to be functional and efficient, inclusive for the community it serves and provide value that is durable over time. This is achieved through a collaborative engagement of the professional team as well as the hospital and community user groups that are consulted throughout the design process. The outcome is a building that will function in an efficient manner and provide the services to the community as required by a public building. A review of the proposals consistency with the principles of Better Placed is provided below.	
	Objective 1. Better fit *contextual, local and of its place*	The new ACB responds to the surrounding context of the WWBH and its prominent location at the primary corner of Edward and Docker Street providing an appropriate scale befitting of the Hospital and its needs while respecting the local residential character and scale through generous setbacks. The materials and colours scheme adopted adopts visual interest by featuring abstract materials and colours to acknowledge the traditional lands of the Wiradjuri.
	Objective 2. Better performance *sustainable, adaptable and durable*	NSW Health Infrastructure has taken a responsible approach to ensuring the principles of ESD are incorporated into Stage 3 ensuring effective and environmentally responsive ESD initiatives including: • NSW HI Guidelines Clause 2.3 states "Integrated built-environment sustainability must be considered, including appropriate designs for energy and water, using appropriate materials." • Green Star – All new facilities target a Green Star Health Care 4 Star equivalency rating – noting Green Star 4 Star is considered

Instrument/ Strategy	Comments	
		'Australian Best Practice' • Energy Targets – All new standalone buildings will have a mandatory required of delivering a 10% improvement on national construction code (NCC) Section J.
	Objective 3. Better for community *inclusive, connected and diverse*	The ACB incorporates accessible access to all spaces to cater to the varying needs to the public who will use the facilities. Publicly accessible open space provides opportunities for enjoyment of the outdoor space. Additional vehicle parking and bicycle parking is provided, and the site will have pedestrian paths that connect to the surrounding streetscape allowing access by public transport to ensure suitable access arrangement for all members of the community. The Hospital offers essential services that will support the health needs to Wagga.
	Objective 4. Better for people *safe, comfortable and liveable*	Stage 3 has sought to balance the operational needs of the Hospital while providing a fit for purpose building that incorporates high quality design features to make patients and staff more comfortable including, intimate landscaped parks surrounding the ACB, generous outdoor balconies on Level two and Level four and generous outdoor seating fronting the main entry. The ACB provides passive surveillance to all spaces surrounding the building consistent with CPTED principles ensuring the site will be a safe and useable public space.
	Objective 5. Better working *functional, efficient and fit for purpose*	The ACB is the next stage on the expansion of WBH. It seeks to link with Stage 2 to provide an integrated facility that will allow the Hospital to work effectively to meet the health care needs of a growing population whilst improving WWBH performance though improved and state of the art facilities.
	Objective 6. Better value *creating and adding value*	The Stage 3 expansion will cater to the increased health demands on the community, whilst meeting the NSW Government budget for the works. Robust materials and adherence tp NSW HI design requirements will ensure the new ACB will deliver better value for the NSW Government.
	Objective 7. Better look and feel *engaging, inviting and attractive*	Design principles have informed Stage 3 as outlined by Martin and Ollmann and further addressed in the Design Statement at **Appendix D.**
Wagga Wagga City Council Health Precinct	The Wagga Wagga Health Precinct is a Council document that sets the vision for the wider precinct which includes the WWBH, the private Calvary Hospital and surrounding area that is transitioning from residential to medical uses. It sees the precinct emerging as a health precinct with the conversion of dwellings into medical practices. The proposed ACB Building is an example of what this document defines as 'magnet infrastructure', whereby its teaching and learning, research and health functions act as a catalyst for new investment, driving further knowledge, information exchange and innovation in the region. Therefore, the proposed development is consistent with Council's vision for the precinct.	
State Legislation		
EP&A Act	The proposed development is consistent with the objects of the EP&A Act for the following reasons: • It promotes the social welfare of the community; • It allows for the orderly economic development of land; and • It is development for public purposes and will facilitate the delivery of community services. The proposed development is consistent with Division 4.7 of the EP&A Act, particularly for the following reasons: • the development has been declared to have state significance; • the development is not prohibited by an environmental planning instrument; and • the development has been evaluated and assessed against the relevant heads of consideration under section 4.15(1).	
EP&A Regulations	The EIS has addressed the specification criteria within clause 6 and clause 7 of Schedule 2 of the EP&A Regulation. Similarly, the EIS has addressed the principles of ecologically sustainable development through the precautionary principle (and other considerations), which assesses the threats of any serious or irreversible environmental damage (see Section 6.19). As required by clause 7(1)(d)(v) of Schedule 2, the following additional approvals will be required in order to permit the proposed development to occur.	

<table>
<tr><th>Instrument/ Strategy</th><th>Comments</th></tr>
<tr><td></td><td>
<table>
<tr><th>Act</th><th>Approval Required</th></tr>
<tr><td colspan="2">Legislation that does not apply to State Significant Development</td></tr>
<tr><td>Coastal Protection Act 1979</td><td>N/A</td></tr>
<tr><td>Fisheries Management Act 1994</td><td>N/A</td></tr>
<tr><td>Heritage Act 1977</td><td>N/A</td></tr>
<tr><td>National Parks and Wildlife Act 1974</td><td>N/A</td></tr>
<tr><td>Native Vegetation Act 2003</td><td>N/A</td></tr>
<tr><td>Rural Fires Act 1997</td><td>N/A</td></tr>
<tr><td>Water Management Act 2000</td><td>N/A</td></tr>
<tr><td colspan="2">Legislation that must be applied consistently</td></tr>
<tr><td>Fisheries Management Act 1994</td><td>No</td></tr>
<tr><td>Mine Subsidence Compensation Act 1961</td><td>No</td></tr>
<tr><td>Mining Act 1992</td><td>No</td></tr>
<tr><td>Petroleum (Onshore) Act 1991</td><td>No</td></tr>
<tr><td>Protection of the Environment Operations Act 1997</td><td>No</td></tr>
<tr><td>Roads Act 1993</td><td>No</td></tr>
<tr><td>Pipelines Act 1967</td><td>No</td></tr>
</table>
</td></tr>
<tr><td>SEPP 33</td><td>An assessment of hazardous waste has been undertaken by Waste Audit (Appendix P) to assess potential risks associated with the proposed use. The report concludes that ‘there is a low to medium risk associated with the consolidation of acute services’. Hazardous waste is further discussed at Section 6.14.3.

The quantity of dangerous goods used and stored at the ACB are within the threshold limit that would trigger SEPP 33 (Refer to Section 6.15)</td></tr>
<tr><td>SEPP 55</td><td>Whilst excavation of the site does not form part of this application, an assessment of contamination was undertaken as part of the REF for demolition of the Old Hospital Building, including approval for site remediation. In support of the REF a Remedial Action Plan (RAP) was prepared by JBS&G and is included at Appendix F. In accordance with SEPP 55, the remediation works are considered Category 2 remediation works that do not require consent. While it is noted the WWBH site is identified as a local heritage item under the Wagga Wagga LEP, the heritage building was demolished under a separate approval.

The assessment confirms the site can be remediated and made suitable for ongoing use as a Hospital.</td></tr>
<tr><td>SEPP 64</td><td>A signage zone is proposed on the eastern elevation of the ACB that has a dimension of 10.6m x 2.8m. Approval for the detailed design of the sign will need to be sought separately to this EIS. The signage zone is consistent with the objectives of SEPP 64 as:
• It is compatible with the desired amenity and visual character of the area;
• It provides effective communication in a suitable location; and
• it is capable of being delivered with high quality design and finish.</td></tr>
<tr><td>SEPP (Infrastructure)</td><td>The aim of this SEPP is to facilitate the effective delivery of infrastructure across the State, including providing for consultation with relevant public authorities about certain development during the assessment process.
Schedule 3 of the SEPP states the threshold for traffic generating development that is to be referred to RMS. This threshold is 100 or more beds for sites with access to a classified road, or 200 or more beds for sites with access to any road. Given that the proposed development will result in an additional 94 hospital beds for the WWBH, this is under the threshold whereby referral to RMS would be necessary.</td></tr>
<tr><td>SEPP (State and Regional Development)</td><td>The aim of this policy 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.

The proposed development has a CIV of $111,005,876.00 excl. GST and so qualifies as a SSD. A CIV Report prepared by MBM Quantity Surveyors confirming the total CIV of the proposal is available at Appendix G.</td></tr>
</table>

Instrument/ Strategy	Comments	
Local Planning Instruments and Controls		
Wagga Wagga Local Environmental Plan 2010	Clause 2.2 – Zone	The proposed Hospital uses are permissible with development consent in the SP2 Infrastructure 'hospital' zone.
	Clause 4.3 – Height of Buildings	There is no height of buildings control under the WWLEP 2010 relevant to the subject site.
	Clause 4.4 – Floor Space Ratio	There is no FSR control under the WWLEP 2010 relevant to the subject site.
	Clause 5.10 – Heritage Conservation	The site is identified as containing a heritage item under WWLEP 2010. Item I261 refers to 'Wagga Wagga Base Hospital' being a local heritage item. This building has been demolished under a separate approval. Refer to Section 6.5 for further detail regarding heritage considerations on the site.
Wagga Wagga Development Control Plan 2010	It is noted that despite the SEARs, development control plans are not a matter for consideration in the assessment of SSD DAs by virtue of Clause 11 of SEPP SRD, which states that *'Development Control plans… do not apply to… State significant development'*. Further, in recognition of their unique requirements and needs, there are no DCP provisions applying to hospital developments in the Wagga Wagga LGA. Notwithstanding this, the proposal has responded to general controls relative to all development, for example, through the provision of adequate parking that meets the DCP standard.	

6.2 Built Form and Urban Design

The height, density, bulk and scale of the proposal provides an appropriate built form within the context of the existing WWBH campus and responds to the existing scale of development of Stage 2 particularly, with Stage 3 to form an extension of the building and to be integrated with the existing services at WWBH.

A Design Report has been prepared by Martin and Ollmann (**Appendix D**) that outlines design quality considerations including

- Site context;
- Building form and Mass;
- Connectivity;
- Architectural Design;
- Green Spaces; and
- Façade Themes.

The design methodology with respect to the proposed building aims to:

- Provide a sympathetic solution through evidence-based design that responds to the WWBH, Stage 3 Services Statement;
- Respond to the needs of the hospital occupants, both clinical and non-clinical, with a particular focus on enhancing integration, collaboration and shared services;
- Create a clear and legible access for patients, visitors and staff that enables easy and equitable movement through the campus;
- Provide a simple and elegant building form that addresses the public domain, creating an 'entry' to the hospital campus;
- Respond to the existing built forms that adjoin the proposed building in terms of materiality;
- Respond to the site's topography to ensure that the built form is compatible with vehicular and pedestrian movement throughout the site; and
- Use materials and finishes coupled with detailed articulation to break down the perceived bulk of the proposed development.

In summary, the proposed height, density, bulk and scale is appropriate on the site for the following reasons:

- The proposed building is consistent with the varied nature of existing built form on the site and throughout the immediate locality;
- The façade of the proposed building is designed and articulated in a manner that creates visual interest and reduces perceived bulk from the public domain;
- The scale of the site can support a larger built form located away from surrounding residential development and located adjacent to the (taller) Stage 2 development;
- The new ACB provides improved landscaped curtilage, with opportunity for greater landscaped public open space surrounding the development; and
- The proposed acute services building is setback generously from surrounding residential uses;
- The proposed building is designed to respond to the topography of the site by coordinating floor levels with Stage 2 whilst utilising undercroft opportunities for car parking;
- Incorporates a recessed rooftop plant roof level to provide visual relief;
- Provides visual interest by featuring abstract materials and colours to acknowledge the traditional lands of the Wiradjuri;
- The proposed building will not adversely overshadow any public areas or surrounding residential development.

The above design considerations minimise the impact of the proposal's height, density, bulk and scale. The scale of Stage 3 is similar, (albeit lower in height) to that of the existing surrounding development. The provision of adequate setbacks from the site boundary, articulated built form, together with improved landscaped areas, will serve to reduce the bulk and scale impact of the proposed hospital building on the surrounding environment. As such, the built form of the proposal is appropriate in the context of the existing site and locality, satisfying the growing operational needs of WWBH whilst minimising adverse impacts on surrounding sites.

6.3 Environmental Amenity

6.3.1 Solar Access and Overshadowing

Shadow diagrams that illustrate the extent of overshadowing generated by the proposal have been provided by Martin & Ollman (**Appendix A**). The diagrams show the period of greatest impact of overshadowing throughout the year, being the winter solstice. The diagrams demonstrate the shadow impacts at 9am, 12pm and 3pm and are provided at **Figure 15 - Figure 17**.

The proposal has been designed having regard to protecting mid-winter solar access to adjoining residential properties on Docker Street. Front yard areas of up to four properties on Docker Street are expected to receive shadow for a small period at 9am before the shadow moves quickly across the street and onto the campus.

As there will be no impact on living spaces of these properties, and they will continue to receive a minimum of 3 hours sunlight between 9am and 3pm mid-winter, this complies with relevant provisions. The majority of shadowing falls within the hospital campus.

The Stage 3 building does not overshadow designated outdoor staff areas; however, it will shadow the courtyard between Stage 3 and the SSD building during winter months. There are a variety of landscaped areas across the Hospital that receive sunlight, ensuring access to sunlight in a landscaped setting across the day at WWBH.

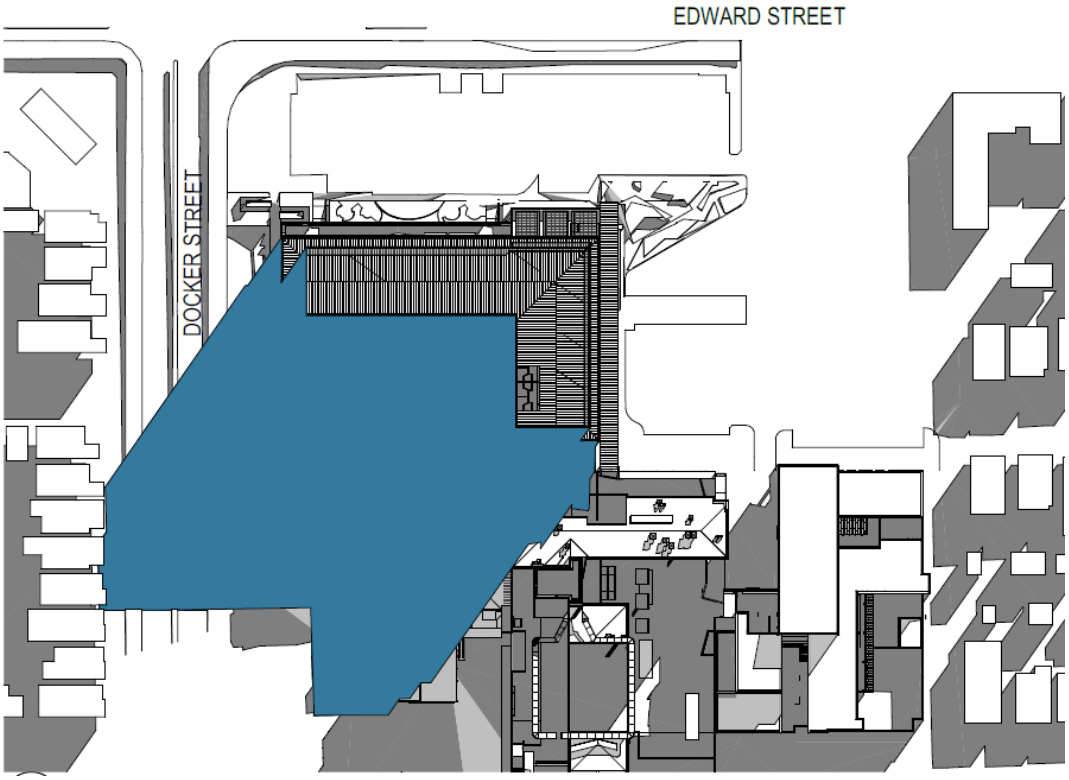

Figure 15 Shadow Diagram, June 21, 9.00am

Source: Martin & Ollmann

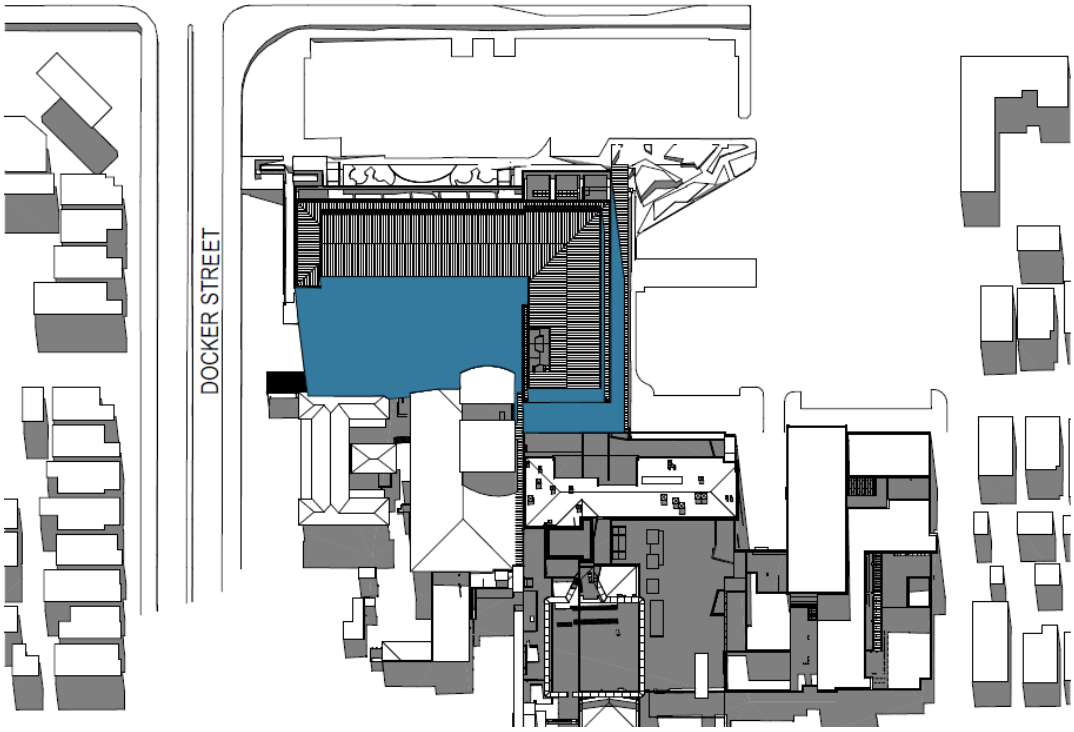

Figure 16 Shadow Diagram, June 21, 12.00pm

Source: Martin & Ollmann

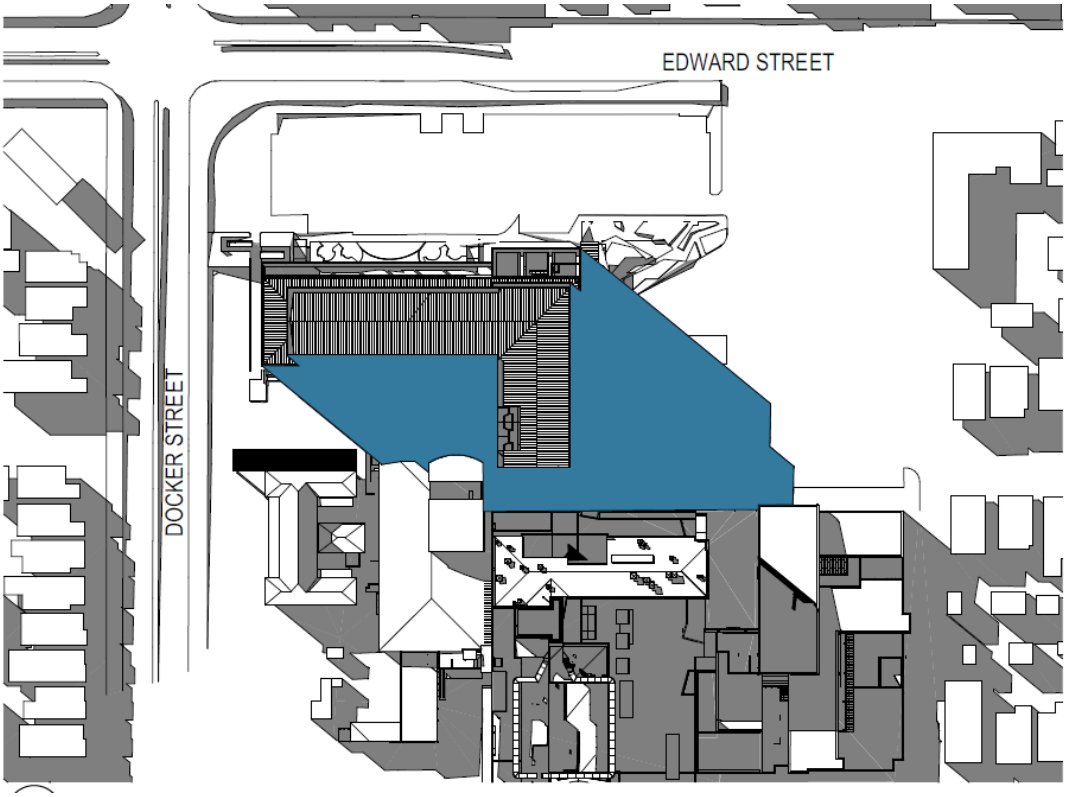

Figure 17 Shadow Diagram, June 21, 3.00pm

Source: Martin & Ollmann

6.3.2 Visual Privacy and Setbacks

The Docker Street boundary is deemed to be the most sensitive boundary in terms of visual privacy, as it is the shortest distance to residential properties (including 48-54 Docker Street) which are located approximately 55m west of the proposed ACB. The ACB building itself is setback 20m from the Docker Street property boundary with windows on the western elevation only beginning on Level 2 approximately 11 metres above ground level.

Whilst there is still potential for overlooking from the upper levels of the ACB, the building height means that occupants will generally look out over the dwellings, rather than directly at the properties. Further, the building has been orientated so that rooms face north and south, with limited opportunities to overlook dwellings to the west.

Residential properties to the north of Edward Street are more than 75m from the proposed ACB and therefore, no visual privacy impacts on these properties are anticipated.

6.3.3 View Impacts

Consideration has been given to the impact of the proposed development on existing views towards the campus from the surrounding area. A photomontage of the proposal has been prepared by Martin & Ollmann and is shown at **Figure 14** above and at **Appendix A**. This photomontage has been prepared to illustrate the view impact of the proposal from the corner of Docker and Edward Streets.

The view as seen from this intersection has recently changed due to the demolition of the existing Old Hospital Building (subject to separate approval). Therefore, the view has changed from being of the Old Hospital Building to being replaced with the proposed Stage 3 ACB Building.

The proposal will change the view of the hospital site from Docker and Edward Streets. Whilst the ACB is setback approximately 50m from the property boundary to Edward Street, from this intersection, the proposed ACB will be the primary built form at this landmark corner of the campus. Existing view corridors to buildings on campus are not of any particular significance whereby their retention should be required. This is also the case for other view lines to the site, including along Docker Street.

The new ACB incorporates articulation and façade detailing which is in keeping with the modern architectural character of the Stage 1 and 2 works, and will assist in reducing the perceived scale and visual prominence of the building. The ACB has been designed to provide a civic presence to what is a landmark corner for the hospital campus.

6.3.4 Lighting Impacts

Due to the 24-hour nature of the hospital use, lighting will be required throughout the night. The primary source of light spill from the building will come from areas of higher glazing, including the articulated component of the north façade and the entry atrium. Due to the location of the atrium (surrounded by two at-grade car parks) and the articulated component of the north façade (fronting the CP1 car park), 24 hour illumination of these areas would not have a significant impact on surrounding residential development.

6.3.5 Wind Impacts

A Pedestrian Wind Environment Statement has been prepared by Cermak Peterka Petersen (CPP) for the proposed development and is provided at **Appendix H**. This wind assessment has determined the potential impact of the proposal on various outdoor areas within and around the building and the interaction of wind conditions with the proposed built form.

Wind conditions are expected to remain similar to the existing wind conditions following completion of the ACB. No major downwash is expected due to the relatively low height of the building.

CPP confirm wind conditions surrounding the building at all locations would pass the safety/distress criterion.

The design has been amended to incorporate design recommendations, including screens to all high level balconies and terraces to a minimum 2400mm and extension of the eastern façade canopy.

6.4 Transport and Accessibility

A Transport Impact Assessment has been prepared by GTA Consultants and is included at **Appendix** I. A summary of the assessment and proposed Mitigation Measures are provided below.

6.4.1 Operational Traffic

GTA have assessed traffic generation for the hospital component using the *Roads and Maritime Services Guide to Traffic Generating Developments (2002),* which were developed using survey data collected by RMS from hospitals across the Sydney region.

The model has calculated specific trip generation rates to estimate future traffic generation from the proposed development in both the AM and PM peak periods. The proposed development is predicted to generate the following peak hour traffic movements:

- AM Peak trip generation = 76 trips; and
- PM Peak trip generation = 92 trips.

Intersection Performance

Based on these trip generation rates an assessment of the local road network has been undertaken. The assessment includes population growth assumptions and traffic modelling projections from the Integrated Movement Study for City of Wagga Wagga (2008).

GTA have found that based on general traffic growth (not related to Stage 3) Council/RMS would need to upgrade the Edward/Murray Street and Edward Street/Docker Street intersections regardless of the Stage 3 expansion. GTA identify that Council/RMS would need to undertake proposed mitigation measures including:

- Widening and signal optimisation at Edward Street/Docker Street intersection; and
- Signalise the intersection of Edward Street/Murray Street with a two-phase operation.

GTA recommend that Council/RMS need to continue to monitor the performance of these intersections noting that the performance of these intersections is as a result of traffic growth and not as a result of Stage 3. The assessment assumes these works have been implemented by Council/RMS to understand what impact Stage 3 would have on future operating conditions and if any additional mitigation measures would be required as a result of Stage 3.

The road network performance has been measured against four parameters, being:

- Level of Service (LOS)
- Degree of Saturation (DOS)
- Average Vehicle Delay (sec)
- 95th percentile queue (m)

The results of the modelling against level of service and average delay parameters are shown in **Table 5**.

Table 5 Intersection Performance

			Future Scenario without Stage 3 (2027)		Future Scenario (2027) with Council/RMS mitigation measures without Stage 3		Fully Operational (2027) with Council/RMS mitigation measures		Fully Operational (2027) with further Stage 3 mitigation measures	
Intersection	**Peak**	**Leg**	**Average Delay (sec)**	**Level of Service**	**Average Delay (sec)**	**Level of Service**	**Average Delay (sec)**	**Level of Service**	**Average Delay (sec)**	**Level of Service**
Edward Street / Docker Street	AM	South	70	E	63	E	77	F	52	E
		East	34	C	41	C	39	C	41	C
		North	59	E	47	D	47	D	47	D
		West	43	D	53	D	50	D	54	D
		Overall	**51**	**D**	**52**	**D**	**54**	**D**	**49**	**D**
	PM	South	114	F	62	E	63	E	47	D
		East	114	F	60	E	68	E	61	E
		North	102	F	63	E	64	E	62	E
		West	65	E	44	D	45	D	46	D
		Overall	**99**	**F**	**57**	**E**	**60**	**E**	**55**	**D**
Edward Street / Lewis Drive	AM	South	8	A	8	A	8	A	8	A
		East	6	A	6	A	6	A	6	A
		West	12	A	11	A	12	A	12	A
	PM	South	8	A	8	A	10	A	9	A
		East	6	A	6	A	6	A	6	A
		West	14	A	13	A	15	A	15	A
Edward Street / Murray Street	AM	South	307	F	27	B	32	C	32	C
		East	14	A	9	A	11	A	11	A
		North	160	F	27	B	27	B	27	B
		West	14	A	4	A	5	A	4	A
		Overall	**-**	**-**	**8**	**A**	**10**	**A**	**10**	**A**
	PM	South	243	F	48	D	47	D	30	C
		East	14	A	14	A	14	A	14	A
		North	180	F	49	D	49	D	22	B
		West	16	B	5	A	6	A	6	A
		Overall	**-**	**-**	**14**	**A**	**14**	**A**	**12**	**A**

As outline in the GTA assessment the Edward Street/Docker Street intersection after completion of stage 3 operates at Level F southbound. To improve this GTA proposes mitigation measures including:

- Intersection of Edward Street/Docker Street - existing southbound through lane be converted to a shared through and right-turn lane.

The assessment shows that the proposed Stage 3 development with the inclusion of recommended mitigation measures would enable the road network to continue to perform satisfactorily with Edward Street/Docker Street continuing to operate at level D while Edward Street/Lewis Drive and Edward / Murray Street operating at Level A.

Edward Street and Murray Street Intersection

As outlined previously GTA have identified the need for the intersection of Edward Street and Murray Street to be signalised into the future by Council/RMS, separately to Stage 3. As part of this DA it is proposed to introduce right turn restrictions out of Murray Street and Brookong Avenue onto Edward Street with a raised median preventing right turns.

The proposed turn restrictions will serve as an interim access management strategy to improve the safety of these intersections prior to signalising the intersection of Murray Street/ Edward Street. Restricted and prohibited turn movements at these intersections are expected to reduce the number of turning conflict points at these intersections, which are generally known to reduce crash risk.

6.4.2 Construction Traffic

The proposal will generate a maximum of 8 heavy vehicles per day during peak construction (16 movements per day). Under a worst-case scenario 25% or 2 trucks would (four vehicle movements) would occur during peak hour.

Heavy vehicles will be restricted to Sturt Highway and Olympic Highway. These are State Roads, which carry high daily traffic volumes and any additional construction vehicle traffic would have a minimal traffic impact. Construction vehicles will access the site from Docker Street via a left–in left-out arrangement with loading areas proposed on the eastern side of Docker Street.

Light vehicle traffic generation will be largely generated by construction worker traffic movements to and from the site. The number of construction workers on site is expected to be on average 140 workers, with a maximum of 320 workers during peak construction. The peak parking demand would be up to 320 vehicles. Car pooling will be encouraged. Workers will be directed to utilise the 489 on-street parking spaces in the vicinity of WWBH.

It is expected that construction workers will arrive/leave before the AM and PM peak minimising impact on the operation of the local traffic network.

A Traffic Guidance Scheme (TGS) (formerly a traffic control plan) has been prepared by Riverina Traffic Services in accordance with the principles of the Roads and Maritime Services Traffic Control at Work Sites Manual at **Appendix I**. The TGS plan presents the principles of traffic management and is subject to WorkCover requirements and includes the following considerations:

- Construction vehicle activity, including the loading/unloading of trucks and all materials handling to be provided within the construction site boundaries or within the proposed works zone at all times;
- The movement of trucks to/from the construction site would be managed and controlled by accredited site personnel with no through traffic to be affected during construction;
- Construction site accesses would provide appropriate sight distances and a safe environment for all users;
- Accredited site personnel will be required at key locations surrounding the site to maintain safety and manage construction vehicles if and as required; and
- Pedestrian safety to be maintained at all times.

6.4.3 Operational Parking

Currently there are 447 car parking spaces provided across the hospital campus with an additional 489 on-street parking in the local area. It is expected that an additional 44 parking spaces will be available at CP 1 and 3 in the near future as part of separate approvals by the hospital.

The proposal includes provision of 107 additional car parking spaces across the hospital campus. The works include introduction of a new undercroft car park and amending existing car parks to provide additional parking, including amended line marking as required. New parking provision is summaries as follows:

- Undercroft car park 44 spaces
- Northern car park 9 spaces
- Car park (north of Harvey House) 18 spaces
- Car park (corner Lewis Drive and Yabtree Street) 36 spaces

An assessment of car parking has been undertaken using Council's DCP rates for hospitals. An assessment of parking demand has also been undertaken based on existing parking spaces in relation to the number of bed/chair and consulting room numbers at the hospital. The education area has adopted a commercial parking rate as the closest equivalent standard. The findings are shown at **Table 6** below.

Table 6 Car Park Assessment

Use	Size	DCP Rate method	DCP Requirement	Demand method	Demand Requirement	Proposal
Hospital	94 beds / chair / room	1 space/4 beds/ chair/rooms	24	0.88 spaces per bed/chair/room	85	107
	115 staff	1 space/2 employees	58			
Education	379m^2	1 per 40m^2	10	1 per 40m^2	10	
Total			92		95	107

The DCP rates would require 82 parking spaces while the demand method would require 85 parking spaces. The proposal has adopted the more conservative demand method of 85 parking spaces in line with hospital demand. Inclusive of the education area, a total of 95 car parking spaces will be required. A total of 107 car parking spaces are proposed to be delivered which will meet hospital demand.

6.4.4 Accessible Parking

Based on the additional 107 spaces, the proposal will be required to provide up to a total of two accessible spaces, to be compliant with the BCA.

6.4.5 Construction Parking

No on-site parking will be provided for construction workers who will be directed to park on-street close to the hospital to minimise impact to hospital parking. 489 on-street parking spaces are available within 400 metres of the hospital which is considered sufficient to cater to the average (140) and peak construction staff numbers (320).

6.4.6 Bicycle Parking

Bicycle parking rates have been drawn from Planning Guidelines for Walking and Cycling (Department of Planning, 2004). The guidelines suggest the following bicycle parking provisions for a hospital:

- Staff (long-term use) – rate of five to 10 per cent of staff
- Visitor (short-term use) – rate of five to 10 per cent of staff.

Due to the lack of cycling infrastructure and low number of cyclists that typically access bike parking facilities at WWBH the lower parking rate of 5% has been adopted for the assessment. This would equate to a demand of 44 bicycle parking spaces for staff and visitors respectively, equating to 88 overall.

Observation of the existing bike parking facilities show that approximately 40 percent of spaces are utilised. Application of the existing demand (40%) against the 88 overall would equate to 35 spaces.

Accordingly, due to the historic low occupancy of the existing bike parking facilities the project has adopted a target of 50% of the overall bike parking requirement to be provided as part of Stage 3. This conservative approach seeks to provide a realistic provision of bicycle parking whilst providing additional capacity for future growth.

There are 16 existing bicycle parking staff bicycle spaces at WWBH. An additional 28 spaces will be provided as part of Stage 3, south of the ACB, equating to 44 spaces across the campus.

6.4.7 Emergency Services

Ambulance access within the hospital is from Docker Street, Rawson Lane and Lewis Drive. All construction works and vehicle movements will be confined to the Stage 3 development site. Accordingly, no additional provisions for emergency services are required on the surrounding road network or within the hospital campus.

6.4.8 Loading Facilities

The existing hospital has a loading dock on the western side of the campus with access from Docker Street. The loading dock will continue to be the central loading point for the hospital and is not affected by the proposed Stage 3 works.

6.4.9 Work Travel Plan

A Workplace Travel Plan (WTP) has been prepared by GTA and is available at **Appendix I**. The WTP aims to modify travel decisions and has the following key objectives:

- Reduce the need to travel
- Reduce the amount of travel
- Reduce the impact of travel.

Strategies to influence travel demand can include:

- Provide a shuttle bus service between the hospital and key public transport interchanges, such as the stops along Baylis Street and Best Street, aligned with staff shifts. A regular, flexible service is likely to increase staff perception of convenience and reliability;
- Develop shuttle bus routes targeting key residential areas near the hospital with low public transport connectivity;
- Communicate with bus operators to amend bus routes (where possible) to connect public transport nodes with the hospital using the existing on-site bus stop;
- Arrange public transport trips to be aligned with hospital shifts through consultation with Roads and Maritime Services, Transport for NSW and bus operators;
- Provide high quality and prominent bicycle parking and change/ shower facilities;
- Provide clear pedestrian and cyclist wayfinding;
- Provide shelters along walkways or near bus stops and street lighting;
- Providing information detailing opportunities and facilities available to staff. This may include providing maps of the available cycling routes to and within the Hospital site;
- Promote Car-Pooling; and
- Provide prioritised car pool parking spaces on-site, including consideration for incentives such as prices, location and proximity to services.

These recommendations are high level and will be developed in greater detail in consultation with relevant stakeholder prior to the opening of Stage 3.

6.5 Heritage

A Heritage Impact Statement (HIS) has been prepared by Weir Phillips Heritage and is included at **Appendix J**. A summary of the assessment is provided below. The WWBH (or parts of the site) is listed on the following statutory heritage registers:

- NSW Department of Health's *Section 170 Register*: 'Wagga Wagga Base Hospital'. The Register is established under the auspices of the *NSW Heritage Act 1977*.
- *Wagga Wagga LEP 2010:* 'Wagga Wagga Base Hospital (c. 1960 Building)'. This building has now been demolished.

WWBH is located within the vicinity of the Wagga Wagga Heritage Conservation Area as defined by WLEP 2010. The HIS concludes that the new building will not block view corridors towards significant buildings on the site, notably the UNSW Rural Clinical School. It will read as a larger, modern element within its immediate setting in much the same manner as existing buildings.

Weir Phillips confirm the proposed work will have no additional impact on the nearby Wagga Wagga Conservation Area. The construction of the building will not impact upon understanding the significance of this area as a place of Victorian, Federation and Interwar period housing. The new building will not block important view corridors into, within or out of the Conservation Area. It will read as a large-scale building outside the area. The HIS concludes the elevations are well detailed and articulated to help break up massing and scale. Changes to landscaping, car parking and access to Edward Street will not be apparent from the Conservation Area.

6.6 Aboriginal Heritage

Consultation has occurred with the Office of Environment and Heritage (OEH) regarding the need for a comprehensive archaeological assessment at the site. OEH has advised the project team that this is not considered necessary for such a disturbed site, however has requested justification to confirm this position. This is provided below.

In 2012, a baseline archaeological assessment was prepared to address the potential impacts of development at Wagga Wagga Base Hospital (**Appendix V**). The assessment, which applied to the whole WWBH campus, found that there is low to moderate risk of disturbance of Aboriginal Cultural Heritage (ACH) for the following reasons:

- no Aboriginal sites or places are known to be present within the area;
- the site is likely to have been used for intermittent grazing prior to its acquisition for the hospital;
- the landscape has been disturbed by previous activities associated with the hospital;
- there was no evidence of original vegetation present on site;
- there was generally a homogenised nature and general disturbance of topsoils expected to a depth of approximately 150mm across the study area; and
- successive phases of hospital modification, demolition, landscaping and building have disturbed historical archaeological resources across the study area.

Given the above, the WWBH campus, including the site of the proposed Stage 3 works, is highly disturbed, and has been subject to ongoing hospital development since the 1900s. This ongoing hospital development and highly altered site significantly reduces any risk to ACH, as no objects or relics have been identified to date despite significant disturbance. Moreover, there is no evidence to suggest that any ACH objects are present on site regardless of the significant disturbance of the site over the decades.

Notwithstanding this, the following mitigation measures (unexpected finds protocol) are proposed to ensure that no additional harm is caused if ACH is encountered during construction, and to ensure compliance with legislation that is in place to protect Aboriginal sites and objects in NSW:

If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must:

1. *Not further harm the object*
2. *Immediately cease all work at the particular location*

3. *Secure the area to avoid further harm to the Aboriginal object*
4. *Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location*
5. *Not recommence any work at the particular location unless authorised in writing by OEH.*

In the event that skeletal remains are unexpectedly encountered during the activity, work must stop immediately, the area secured to prevent unauthorised access and NSW Police and OEH contacted.

These mitigation measures have been included at **Section 8.0.**

6.7 Biodiversity

The proposed Stage 3 redevelopment at WWBH will not involve clearing any native vegetation or natural habitats, or habitat of any importance to native plants or animals.

A Biodiversity Development Application Report (BDAR) as required under the *Biodiversity Conservation Act 2016* is provided at **Appendix W**.

6.7.1 Tree Removal

As outlined in the BDAR Assessment the site is cleared of development with no trees required to be removed. The project engineers have confirmed that no works are expected to impact on existing vegetation, including works to new or amended driveways. Notwithstanding, the project has included a mitigation measure at Section 8 to require tree protection, if required, in accordance with Australian Standards (2009) AS4970: Protection of Trees on Construction Sites.

6.8 Noise and Vibration

An Acoustic Assessment has been prepared by Acoustic Logic and is included at **Appendix K**. The assessment has identified the potential acoustic and vibration impacts of the development upon the closest receivers and also noise intrusion upon the development in accordance with EPA's *Noise Policy for Industry and Australian Standard 1055.2 Acoustics – Description and measurement of environmental noise*. *Part 2 Application to specific situations*. The closest potentially affected receivers are identified in Figure 1 of the Assessment. These include receivers situated around the perimeter of the hospital campus.

The existing acoustic environment has been determined using a combination of long-term and short-term noise monitoring. Based on the background and ambient noise monitoring carried out at the nearest affected residential locations, Acoustic Logic has developed a set of project specific noise criteria (refer to Section 6 and 7 of the Acoustic Assessment) and Mitigation Measures to minimise any impacts from noise and vibration. It should be noted that the hospital does not propose a helicopter landing pad as part of the proposal.

6.8.1 Construction Impacts

The construction program has yet to be fully established as the proposal is still at the planning phase of the development. A detailed program and methodology for the works has yet to be developed, and so the indicative assessment of noise emissions is based on typical construction activities. It is noted that the site is already cleared with demolition works having taken place already.

Construction Noise

EPA guidelines adopt differing strategies for noise control depending on the predicted noise level at the nearest residences. For residential properties, the "noise effected" level occurs when construction noise exceeds ambient levels by more than:

- 10dB(A)Leq(15min) for work during NSW EPA recommended standard construction hours (7am-6pm Monday to Friday and 8am to 1pm on Saturdays); and
- 5dB(A)Leq(15min) for work outside of standard construction hours.

For residential properties, the "highly noise effected" level occurs when construction noise exceeds 75dB(A)Leq (15min) at nearby residences.

A summary of noise emission goals for both standard hours of construction and outside standard hours is provided at **Table 7** below.

Table 7 Construction Noise Emission Goals

Location	"Noise Affected" Level - dB(A)Leq(15min)	"Highly Noise Affected" Level - dB(A)Leq(15min)
Residential Receivers to the west	(NSW EPA Recommended Standard Construction Hours) – 59 (Saturdays – 7.30am to 8am) – 45 (Saturdays – 1pm to 5pm) – 50	75
Residential Receivers to the east	(Normal Construction Hours) – 55 (Saturdays – 7.30am to 8am) – 41 (Saturdays – 1pm to 5pm) – 46	75

The level of construction noise will depend on the construction activity and where the activity is taking place. Intrusive noise emissions are associated with equipment typically having sound power levels of approximately 115 – 120dB(A)Leq(15min). Some exceedance of the EPA "Noise Effected" target levels may occur at the boundary of existing residences along Docker Street and Heritage Motor Inn by these activities. Noise levels exceeding the "Highly Noise Effected" level of 75dB(A) at the residences are unlikely to occur for extended periods.

During erection of the structure, use of hand tools (jack hammers, angle grinders etc.) and concrete pumps are the loudest typical activity (sound power levels of approximately 105dB(A)Leq(15min). Intermittent exceedances of the EPA "Noise Effected" levels may occur at the boundary of existing residences along Docker Street. Little to no exceedance is predicted at the boundary of the residential receivers to the east, as the majority of works will be screened by existing buildings on site. Noise levels exceeding the "Highly Noise Effected" level of 75dB(A) are unlikely to occur.

The assessment has made a number of recommendations to mitigate acoustic impacts. If adopted, these measures can manage noise impacts to prevent adverse impacts on residential receivers, including:

- Careful planning/scheduling of noisy works, particularly when located near the property boundaries;
- Location of static plant (concrete pumps, cranes) as far as practicable away from the boundaries is recommended;
- Use of augured rather than driven or vibratory piling should be considered if feasible;
- Location of vehicular access points during construction away from local roads. Docker Street should be used as the main access point (entry and exit) for all major construction traffic as this roadway is an existing sub-arterial road with high volumes of traffic; and
- Letter box drops or similar consultation/notification methodology to all surrounding residents, informing them on activities with the potential to result in noise levels reaching the 'Highly Noise Effected' noise level. Leaflet should advice of the proposed processes/methodology and likely duration.

Construction Vibration

Structural vibration as a result of construction activities is restricted to the following standards:

- German Standard DIN 4150-3 *Structural Vibration: Effects of Vibration on Structures*; and
- the evaluation criteria presented in the British Standard BS 6472:1992 *Guide to Evaluate Human Exposure to Vibration in Buildings (1Hz to 80Hz)* for low probability of adverse comment

Excavation and earth retention works (piling) are the primary vibration generating activities.

Acoustic Logic concludes that due to the distance between the site and the nearest residential properties, no vibration impacts are envisaged.

Mitigation Measures

Acoustic Logic recommend the following construction Mitigation Measures:

- On completion of the construction program, an acoustic review of proposed construction activities and plant/methods/selections should be undertaken to identify the extent and duration of potential exceedances of EPA construction noise management levels;
- Community consultation to inform adjacent property owners of potential noise sensitive activities;
- Identify feasible acoustic controls or management techniques (for example, selection of plant, use of screens around static plant, scheduling of noisy works, notification of adjoining land users, respite periods) when exceedance of management noise levels may occur;
- For activities where acoustic controls and management techniques still cannot guarantee compliant noise levels, implement a notification process whereby nearby residences are made aware of the time and duration of noise intensive construction processes; and
- Implementation of a noise monitoring program during construction to provide feedback back to the Builder to ascertain whether construction noise goals are being exceeded and determine additional management strategies.

6.8.2 Operational Impacts

At this early stage the selection of plant for the proposal has not been finalised and accordingly detailed acoustic design assessment cannot be undertaken. However, an indicative assessment of primary plant items has been undertaken.

In general, plant will be acoustically treated to prevent noise emissions from adversely impacting the surrounding properties. This may include selecting the quietest plant practicable, or treating the plant with enclosures, barriers, duct lining and silencers as required to comply with noise criteria.

The main operational noise sources associated with the development are expected to be:

- Cooling towers;
- Air handling plant (air handling units, supply/exhaust/outside air fans); and
- Chillers.

An assessment of mechanical plant noise has been undertaken by Acoustic Logic and relevant mitigation measures have been provided for consideration in the selection of plant equipment and their location. In summary:

- In the event noise levels of cooling towers exceed 90 dB(A) SWL they can be suitably treated using acoustic silencers and the like.
- All cooling towers are to have variable speed drives, to allow for reduced fan speed during periods of low load. Typically, a fan speed of no more than 50% would be expected at night time.
- Acoustic screening around the cooling towers will likely be required to all four sides (using fc sheet or similar) or acoustic louvres. At a minimum, the screen/louvre would need to be 500mm higher than the top of the tower. Alternatively, acoustic attenuators will be required to the tower intake and discharge.
- Chillers should be located in plant rooms without any external ventilation opening/louvre.
- Light weight cladding to plant room walls and ceiling will potentially require internal plasterboard sheeting to ensure noise breakout through wall/roof are compliant with INP requirements. Final plant room building shell design to be conducted following final chiller section and plant room location.
- Air handling units do not typically require extensive acoustic treatment to ensure compliant noise emissions at nearby properties.
- Air handling unit exhaust and outside air ducting (both of which are typically ducted to outside) are to be acoustically reviewed following layout design by mechanical engineer/contractor to determine whether internal lining to this ductwork is required.
- Major fans (typically with a sound power over 90(A) – such as kitchen exhaust, major toilet exhaust and major relief air fans) will require acoustic treatment if located externally.

Acoustic Logic confirm that in all cases, mechanical plant and equipment can be sufficiently treated to ensure cumulative impacts can achieve compliance with the criteria detailed in section 6.2. of the Acoustic Report.

6.9 Erosion and Sediment Control

An Erosion and Sediment Control Plan has been prepared by Bonacci Group and is included at **Appendix O**. The Plan outlines the management processes to be put in place to maintain the quality of stormwater discharge during construction.

Surface water management measures will be in accordance with Landcom guidelines – Managing Urban Stormwater Runoff: Soils and Construction ("Blue Book") and Wagga Wagga City Council's DCP.

6.10 Contamination

Whilst excavation of the site does not form part of this application, an assessment of contamination was undertaken as part of the REF for demolition of the Old Hospital Building, including approval for site remediation. In support of the REF a Remedial Action Plan (RAP) was prepared by JBS&G and is included at **Appendix F**. In accordance with SEPP 55, the remediation works are considered Category 2 remediation works that do not require consent. While it is noted the WWBH site is identified as a local heritage item under the WLEP2010, the heritage building was demolished under a separate approval.

The assessment confirms the site can be remediated and made suitable for ongoing use as a hospital.

The RAP recommends completion of a data gap assessment to conform to the requirements of the Contaminated Sites Guidelines for the NSW Site Auditors Scheme.

Identified data gaps will be appropriately assessed by the appointed remediation consultant prior to the main commencement of the earthworks and remediation program. Following the demolition of built structures and removal of overlying concrete hardstand surfaces, the data gap assessment will be completed.

Results of the data gap assessment and any remediation requirements will be reported in accordance with NEPC 2013 and NSW EPA requirements and presented as a Data Gap Assessment Report to be included as an Addendum to the RAP. Updates to remedial methodologies may be required dependant on any additional contamination identified during the data gap assessment.

6.11 Acid Sulfate Soils

JBS&G confirm that there are no known or suspected occurrences of acid sulfate soils expected to be present at the site.

6.12 Water Cycle Management

6.12.1 Stormwater

Stormwater Management for the site is described in the Civil Report prepared by Bonacci (**Appendix O**). The report confirms that the proposed stormwater system can accommodate the proposed development. The roof drains to two separate systems. The northern portion of the roof drains to the ground floor and then discharges to the existing carpark OSD, matching the existing stormwater discharge resulting from the (demolished) Old Hospital Building. The southern portion of the roof drains to a stormfilter vault before discharging to the existing Docker Street stormwater drain. The carpark (north of Harvey House) and surrounding landscape flows to a bioretention system before discharging to the existing Docker Street stormwater drain.

The Civil Report confirms the stormwater system has been designed to meet the requirements of the following standards and guidelines:

- Wagga Wagga City Council's Engineering Guidelines for Subdivisions and Developments;
- City of Wagga Wagga Council DCP;
- Australian Rainfall and Runoff, Australian Runoff Quality – a Guide to Water Sensitive Urban Design, Australian Standard AS3500;
- all other relevant Australian Standards.

6.12.2 Flooding

Bonacci Group has investigated the potential flood impacts of the proposal (**Appendix O).** Bonacci confirm that the hospital site is not within a flood affected zone. This has been confirmed with reference to Council's flood maps, a

copy of which is included in **Appendix O.** Consequently, the site is not impacted by flooding and the development will have no impact on flooding.

6.12.3 Water Sensitive Urban Design

Water Sensitive Urban Design measures will be provided in accordance with City of Wagga Wagga Council Development Control Plan 2010 and City of Wagga Wagga Council Engineering Guidelines for Subdivisions and Development Standards 2017. Water quality controls will be achieved through a combination of storm filters, enviropods and bioretention areas.

6.13 Accessibility

An Access Report, prepared by Philip Chun is provided at **Appendix T**. The Report concludes that the proposed development can achieve compliance with the relevant statutory requirements. The development has been assessed against the following Plans, Policies and relevant Australian Standards:

- *Disability Discrimination Act 1992;*
- Disability (Access to Premises - Buildings) Standards 2010 (DDA 1992); and
- Building Code of Australia.

6.14 Waste

A Waste Management Plan (WMP) has been prepared by Waste Audit and is included at **Appendix P**. The plan provides an assessment of potential waste impacts of the construction and operation of the new ACB. The WMP identifies the potential types and volumes of waste that are expected to be generated in the construction and operational phase of the proposed development and suggests systems to be implemented to appropriately manage this waste.

6.14.1 Operational Waste Management

The following are the main waste streams that would be expected from the proposed development:

- General waste;
- Clinical waste;
- Paper and cardboard; and
- Comingled recycling.

The WMP identifies likely waste streams including potential volumes of each stream during operation of the ACB. It has been prepared with reference to the requirements of City of Wagga Wagga Development Control Plan 2010 and the NSW Office of Environment and Heritage, Model Waste Not Development Control Plan Chapter 2008.

It is noted that the ACB would not introduce any waste that is not already managed by the existing hospital operations. The WMP identifies management measures and disposal destinations for each waste stream for general, recycling and clinical waste.

It is estimated that the development will generate a total of approximately 3,305 litres ($3.3m^3$) of waste and recyclables per day – a total of 19,832 litres ($19.8m^3$) per week. All general waste will be deposited into dedicated 660 litre MGB that have been located in the various wards/departments of the redevelopment. These will be located in areas such as dirty utility rooms and other areas as required. Waste will be transported by hospital staff and emptied into a $30m^3$ general waste compactor for collection.

660 litre mobile garbage bins will be located on each level of the development for recyclables (paper and cardboard). These will be transported on a 'needs' basis by site cleaners, taken to the central storage area (in the loading dock), and replaced with an empty bin. Once a commingled recycling system is implemented, then appropriately coloured MGB will be provided and transported by hospital staff as required.

Waste from the ACB will be managed in accordance with existing waste management procedures outlined in *Wagga Wagga Rural Referral Hospital Waste Disposal Guideline*. The existing loading dock, off Docker Street, will continue to be the central point for waste collection.

6.14.2 Construction Waste Management

The WMP identifies likely waste streams including the possible volume of each stream during construction of Stage 3. Generally, waste will be segregated on site and transported to a recycling facility.

A detailed construction waste management plan will be developed by the future site contractor as part of the CEMP for the ACB (refer top **Appendix L**). The contractor will be required to achieve compliance with EPA Guidelines.

6.14.3 Hazardous Waste

An assessment of hazardous waste has been prepared by Waste Audit (**Appendix P**). The assessment evaluates the hazards associated with the handling, storage and disposal of hazardous material during operation of the ACB. Hazardous waste generated by the hospital may include clinical, cytotoxic, pharmaceutical, radioactive and chemical waste streams.

The likely waste generated by the services performed at the ACB are primarily related to clinical and pharmaceutical wastes. The Preliminary Hazard Assessment indicates there is a low to medium risk associated with the consolidation of acute services in Stage 3.

NSW Health operates under existing waste disposal guidelines for collection, control, storage and transport of clinical wastes that accord to NSW Health, NSW EPA, Safework NSW, relevant Australian Standards and industry best-practice guidelines.

6.15 Hazards and Risks

State Environmental Planning Policy Number 33 - Hazard and Offensive Development (SEPP 33) establishes a protocol for planning for development that can be categorised as Hazardous or Offensive Development. The Department of Planning's SEPP 33 Guidelines (2011) establish screening thresholds for Dangerous Goods stored on site, above which a Preliminary Hazard Analysis must be carried out to accompany a development application.

The nature and quantity of dangerous goods present on the site to determine whether the proposed development is a 'potentially hazardous industry'.

Dangerous goods identified as relevant to the ACB include:

- Cryogenic liquefied oxygen (note that this is not stored in the ACB but is reticulated) from a bulk tank in the precinct;
- Small quantities of compressed oxygen in cylinders in portable ready use units;
- Class 6.1 cytotoxic drugs (with small quantities of active ingredients) will be used in the building and are stored within the existing hospital away from the ACB (active component will be less than 1 kg, and cytotoxic contaminated waste is only 4 kg);
- Class 6.2 infectious substances – the maximum quantity of clinical waste to be kept at the Hospital at any one time is approximately 64kg;
- Class 8 corrosive substances (8 Cleaning Stores have an assumed average maximum quantity of 8 L per store – aggregating to 104 L);
- No flammable liquids will be stored in the building; and
- No radioactive wastes of Class 7 (radioactive substances) are to be generated or kept in the building.

The quantities identified are within the threshold limit that would trigger SEPP 33 and therefore the provisions of SEPP 33 relating to 'potentially hazardous industry' do not apply to the proposed development.

Further, the proposed development is not deemed to be a 'potentially offensive development' given that there is no licence required pursuant to the Chapter 3 of the Protection of the Environment Operations Act for its operations. As a consequence of being neither potentially hazardous nor potentially offensive industry, SEPP 33 does not apply to the ACB.

The design of the facilities for the receiving, storage, handling and use of hazardous materials, and the proposed operations of the WWBH acute care activity, will be in accordance with relevant standards and legislation.

6.16 Structural Adequacy

A Structural Design Statement has been prepared by Bonacci (**Appendix R**) to provide structural advice for the proposal including geotechnical considerations. Structural design associated with the proposal will be conducted in accordance with the current revision of all relevant Australian standards and Health Infrastructure Guidelines. The Design Statement provides structural advice regarding foundations, superstructure, floor systems, performance parameters and design loads relevant to the proposal.

6.17 Construction Management

An Outline Construction Management Plan (CMP) has been prepared by Health Infrastructure (**Appendix L**). The CMP outlines site management principles and measures to mitigate impacts during the construction period. These measures include:

- Appropriate hoarding/fencing (as specified in Australian Standards and WorkCover requirements);
- Vehicular access/egress gates to be erected internally. These gates will be manned by qualified traffic supervisors at the times of vehicular access and egress to the site.
- From the commencement of construction until completion, the Head Contractor will be required to maintain a community liaison officer on the project. This officer will be contactable by both a mobile phone and email and the contact details will be clearly advertised on site hoardings, community updates and the like.

- The Head Contractor undertaking the works will be required to submit for review a comprehensive Environmental Management Plan (EMP) to ensure that all elements of the EMP meet all statutory requirements, NSW Ministry of Health requirements.
- Noise from the site shall not exceed the limits set out in the Interim Construction Noise Guidelines and Environmental Protection Authority.
- Dust precautions that will be implemented during the works include water spraying, the covering of all haulage trucks with tarpaulins, monitoring of weather conditions (including wind) and helicopter down draft.
- All plant and machinery involved in the works will be regularly serviced and checked for exhaust emissions and catalytic converters.
- Vegetation protection should be in accordance with Australian Standard 4970-2009, Protection of Trees on Development Sites.
- As a minimum, the erosion and sediment controls for the works shall be designed, installed and maintained in accordance with the requirements of Managing Urban Stormwater: Soils and Construction "The Blue Book" 2004 (4th edition)

6.18 Public Benefit

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

This means that the decision on whether a project can proceed or not needs to be made in the full knowledge of its effects, both positive and negative, whether those impacts can be quantified or not. The proposed development involves the redevelopment of an existing hospital. The assessment must therefore focus on the identification and appraisal of the effects of the proposed change over the site's existing condition.

Social and Economic

The social and economic benefits associated with the proposal include:

- The proposed development will provide a significant piece of social infrastructure, increasing the number of hospital beds by 94 beds. The design and capacity increase of the redevelopment is anticipated to have positive impacts on the health outcomes of the region.
- The proposed development is anticipated to create additional employment in consultancy, construction and operation. This is anticipated to have additional social benefits for the region in terms of providing adequate employment in a rural area.
- Wagga Wagga Base Hospital is a major health facility for the Riverina. To not invest in the redevelopment of this hospital would require patients to be catered for under the existing infrastructure or travel significant distances to receive adequate health care.

Biophysical

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

- The development will not generate any environmental impacts, as it is on a completely cleared, highly modified site in an urban setting and that the site does not provide any important habitat for native plants and animals.
- The development will not have a significant impact on any threatened flora or fauna species.

6.19 Ecologically Sustainable Development

The environmental performance of the development has been assessed by using Clause 7(4) of Schedule 2 of the EP&A Regulations and the EIS is accompanied by an ESD statement prepared by Jacobs (**Appendix Q**). The initiatives and targets relate to the following aspects of the proposed development:

- NSW HI Guidelines Clause 2.3 states "Integrated built-environment sustainability must be considered, including appropriate designs for energy and water, using appropriate materials."

- The proposal will "target a Green Star Health Care 4 Star equivalency rating – noting Green Star 4 Star is considered ‘Australian Best Practice’".
- The proposed ACB will be required to deliver a 10% improvement on national construction code (NCC) Section J.

The design measures outlined above and as discussed in detail by Jacobs in the ESD Statement\ demonstrate the way in which ESD is entrenched into the design proposal. Through the incorporation of these ESD measures, the ACB will be designed in accordance with recognised best practice principles, which are capable of being applied throughout the design and ongoing operation phases of the development.

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

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

An analysis of these principles follows.

Precautionary Principle

The precautionary principle is utilised when uncertainty exists about potential environmental impacts. It provides that if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The precautionary principle requires careful evaluation of potential environmental impacts in order to avoid, wherever practicable, serious or irreversible damage to the environment.

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

Intergenerational Equity

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

- maintaining heritage listed items for future generations to appreciate and enjoy;
- implementing safeguards and management measures to protect environmental values.
- facilitating job creation and the provision of housing in close proximity to public transport; and
- Improving the public domain and amenity in the Wagga Health Precinct.

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

Conservation of biological diversity and ecological integrity

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration.

The proposal would not have any significant effect on the biological diversity and ecological integrity of the study area.

Improved valuation, pricing and incentive mechanisms

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

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

6.20 Contributions

The relevant contributions plan for the site is the *City of Wagga Wagga Section 94 Contributions Plan 2006-2019* and the *City of Wagga Wagga S94A Levy Contributions Plan 2006*. The underlying purpose of the plan is to enable Council to require a contribution towards the provision, extension or augmentation of public amenities and public services that will, or are likely to be, required as a consequence of development within the LGA.

Whilst Council's Plan does not automatically exclude NSW Government developments or hospitals from the payment of section 7.12 contributions (formerly Section 94), an exemption is considered appropriate in this instance. Health Infrastructure NSW is a government agency which relies on government grants to provide new facilities for the local community. The levying of a development contribution would divert a portion of these public funds, which have been specifically provided to fund a hospital redevelopment, to local services without any direct nexus to the impact on those services.

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

These negotiations are being undertaken separately to the *City of Wagga Wagga Section 94 Contributions Plan 2006-2019* and are deemed to be sufficient for the proposed development.

Health Infrastructure NSW's position is supported by the provisions of Circular D6, as discussed below.

Crown applications – Department of Planning Circular D6

Again, it is noted that Council does not automatically grant exemptions to NSW Government developments, however the Department of Planning's Circular D6 sets out the reasons why Crown developers (as a similar applicant) should be able to seek exemptions from Section 7.1.2 payments.

While the Department of Planning's Circular D6 *"Crown Development Applications and Conditions of Consent"* was formulated in 1995, it still remains the guiding document in relation to Crown applications and development contributions. The effect of this circular is that, where the applicant is a Crown authority and the development is for the purposes of a hospital, no contributions should be collected for open space, community facilities, parking, and general local and main road upgrades.

Taking into account the significant public benefits which the proposed development, and the presence of a redeveloped hospital generally, will provide, and the positive impact that this development will have on local and regional infrastructure, it is clear that no development contributions should be levied against this development. As stated in Circular D6:

> *Crown Activities providing a public service or facility lead to significant benefits for the public, in terms of essential community services and employment opportunities. Therefore, it is important that these essential community services are not delayed by unnecessary disputes over conditions of consent. These activities are not likely to require the provision of public services and amenities in the same way as developments undertaken with a commercial objective.*

7.0 Environmental Risk Assessment

The Environmental Risk Assessment (ERA) establishes a residual risk by reviewing the significance of environmental impacts and the ability to manage those impacts. The ERA for WWBH Stage 3 has been adapted from Australian Standard AS4369.1999 Risk Management and Environmental Risk Tools.

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

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

Figure 18 indicates the significance of environmental impacts and assigns a value between 1 and 10 based on:

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

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

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

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

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

Figure 18 Risk Assessment Matrix

				Risk Assessment		
Item	**Phase**	**Potential Environmental Impact**	**Proposed Mitigation Measures and / or Comment**	**Significance of Impact**	**Manageability of Impact**	**Residual Impact**
Key: C – Construction O – Operation						
Noise and Vibration	C + O	▪ Increase in noise and vibration levels during construction activities ▪ Increase in noise levels during the operation of the hospital	▪ Implementation of Construction Noise and Vibration Measures which considers the construction methodology and details specific mitigation measures in accordance with the DECCW Interim Construction Noise Guideline. ▪ Appropriate mitigation measures to be implemented to ensure vibration levels will not compromise human comfort or result in building damage. ▪ Appropriate sound minimisation measures to be incorporated within the plant and mechanical areas.	C = 3 O = 1	C = 2 O = 2	C = 5 (low/medium) O = 3 (low)
Traffic and Parking	C + O	▪ Increase in construction traffic on local roads ▪ Increase in traffic and parking on local roads during operation	▪ A preliminary Construction Traffic Management Plan has been prepared detailing measures to minimise any adverse impacts arising from construction traffic. ▪ Additional parking demand generated by the proposed development will be accommodated within the existing and proposed on-site parking areas. The existing road network has capacity to support any increase in traffic associated with the proposed development.	C = 3 O = 2	C = 2 O = 1	C = 5 (low/medium) O = 3 (low)
Visual and Built Form	O	▪ Visual impact of the development when viewed from the public domain.	▪ Measures have been incorporated to reduce the visual impact of the development when viewed from nearby residential development and the public domain	O = 2	O = 2	O = 4 (low/medium)
Air and Water Quality	C	▪ Potential for reduced air and water quality during construction	▪ A detailed Construction Environmental Management Plan will be developed once a contractor has been appointed to implement measures to ensure that air and water quality are maintained.	C = 2	C = 2	C = 4 (low/medium)

8.0 Mitigation Measures

The collective measures required to mitigate the impacts associated with the proposed works are detailed in **Table 8** below. These measures have been derived from the previous assessment in Section 6.0 and those detailed in appended consultants' reports.

Table 8 Mitigation Measures

Mitigation Measures
Transport and Accessibility Construction and operational traffic will be in accordance with the recommendations of the Traffic Impact Assessment Report prepared by GTA Consultants and dated 12 June 2018.
Noise and Vibration The proposal will be in accordance with the recommendations of the Acoustic Assessment Report prepared by Acoustic Logic reference 20180392.1/2103A/R2/YK.
Stormwater The proposal will be in accordance with the recommendations of the Civil Report prepared by Bonacci dated 12 June 2018.
Construction Impacts Construction Environmental Management Plan (CEMP) will be prepared by the appointed contractor prior to the commencement of works. The CEMP will establish site management principles generally in accordance with the Preliminary Construction Management Plan prepared by Health Infrastructure dated 30 April 2018.
Waste Waste will be in accordance with the recommendations of the Waste Management Plan prepared by Waste Audit dated April 2018.
Hazardous Waste Hazardous Waste will be managed in accordance with the Preliminary Hazards Assessment prepared by Waste Audit dated April 2018.
Aboriginal Heritage Aboriginal Heritage will be managed in accordance with the Baseline Archaeological Assessment dated December 2012. If any Aboriginal object is discovered and/or harmed in, or under the land, while undertaking the proposed development activities, the proponent must: 1. Not further harm the object 2. Immediately cease all work at the particular location 3. Secure the area to avoid further harm to the Aboriginal object 4. Notify OEH as soon as practical on 131555, providing any details of the Aboriginal object and its location 5. Not recommence any work at the particular location unless authorised in writing by OEH.
Reflectivity The building materials used on the facades of all buildings will be designed so as not to result in glare that causes discomfort or threatens the safety of pedestrians or drivers. A report/statement demonstrating consistency with this requirement will be submitted to the satisfaction of the Certifying Authority prior to the commencement of above ground works.
Tree Protection Tree protection will be provided in accordance with *Australian Standards (2009) AS4970: Protection of Trees on Construction Sites.*
Environmentally 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 Jacobs dated 10 May 2018.

9.0 Conclusion

The Environmental Impact Statement (EIS) has been prepared to consider the environmental, social and economic impacts of the proposed WWBH Stage 3 ACB works. The EIS has addressed the issues outlined in the SEARs (**Appendix A**) and accords with Schedule 2 of the EP&A Regulation with regards to consideration of relevant environmental planning instruments, built form, social and environmental impacts including traffic, noise, construction impacts and stormwater.

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

- The proposal will facilitate the development of a new and modern health facility which will further support and strengthen the services and facilities provided at the hospital for the benefit of the Wagga Wagga and regional community.
- The area and shape of the site allows for the provision of new health facilities that meet the special design requirements for the future proposed uses, whilst not resulting in any significant adverse impacts on surrounding uses.
- The assessment of the proposal has demonstrated that the development will not result in any environmental impacts that cannot be appropriately managed, and is consistent with the relevant planning controls for the site.
- The proposal is consistent with the principles of ecological sustainable development as defined by Schedule 2(7)(4) of the EP&A Regulation as well as Section J of the Building Code of Australia.

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