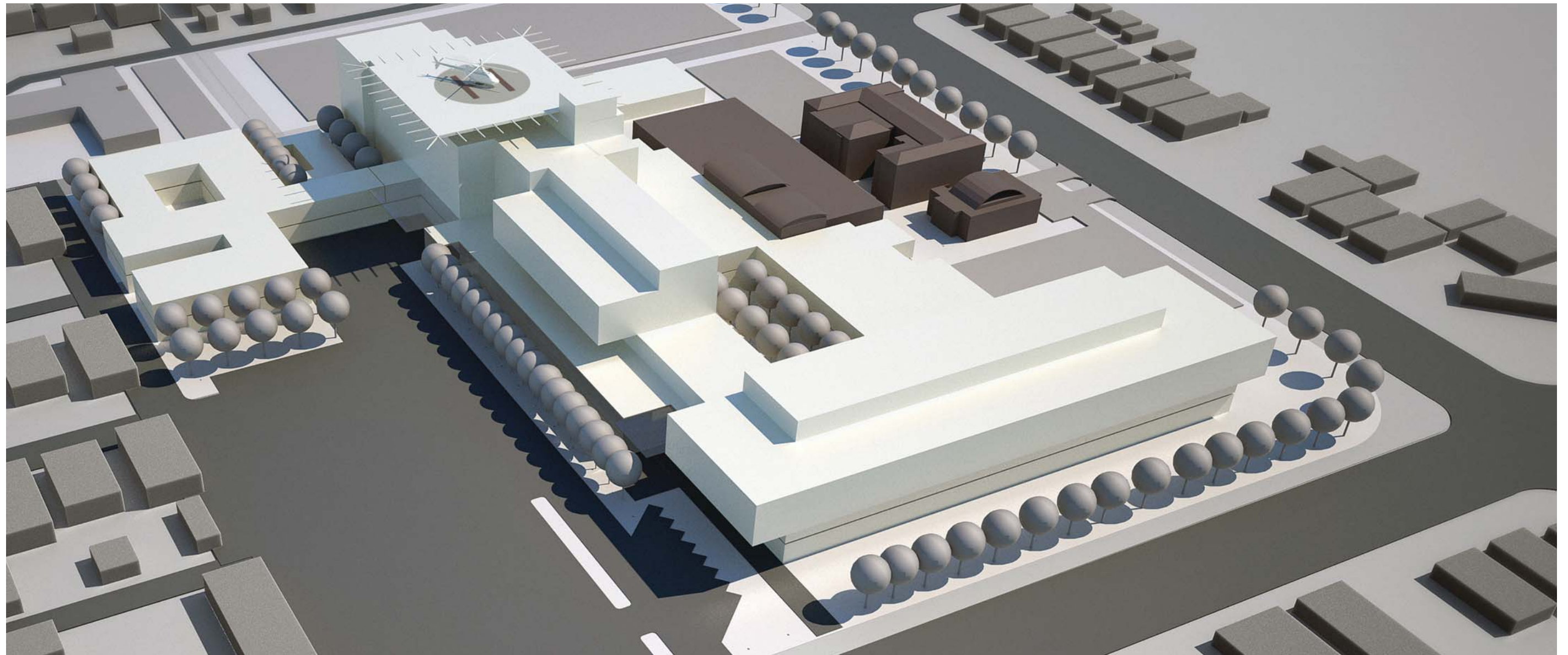





# WAGGA WAGGA BASE HOSPITAL REDEVELOPMENT (MP 10\_0226)

## CONCEPT PLAN APPLICATION AND ENVIRONMENTAL ASSESSMENT



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	<b>Project</b>	Wagga Wagga Base Hospital Redevelopment	00	First Draft	21.12.2010	<ul style="list-style-type: none"> <li>Capital Insight</li> <li>Rice Daubney</li> <li>Site Image</li> <li>Sinclair Knight Merz</li> <li>Aitken Rowe Testing Laboratories</li> <li>Webb, McKeown &amp; Associates</li> <li>Weir Phillips</li> <li>AHMS</li> <li>Somewhere Landscape Architects</li> <li>Wilkinson Murray</li> <li>Davis Langdon</li> <li>NSW GSAHS</li> <li>Douglas Partners</li> <li>Kevin Mills and Associates</li> </ul>
	<b>Project Status</b>	For Public Exhibition	01	Second Draft	16.03.2011	
	<b>EA Director</b>	Alf Lester	02	Test of Adequacy (withdrawn)	21.03.2011	
	<b>Checked by</b>	AL	03	Third Draft	19.04.2011	
	<b>Date Issued</b>	12 July 2011	04	Test of Adequacy	03.05.2011	
	<b>Issue Type</b>	For Public Exhibition	05	Public Exhibition	12.07.2011	
	<b>Proponent</b>	 				

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## STATEMENT OF VALIDITY

### Submission of Concept Plan Application and Environmental Assessment

Prepared under Part 3A of the Environmental Planning and Assessment Act 1979

#### Environmental Assessment prepared by

<b>Name</b>	Alf Lester
<b>Qualifications</b>	Bachelor of Architecture (Hons), University of NSW, 1964 Dip. Civic Design (Distinction), Edinburgh University, 1967 Fellow of the Australian Institute of Architects Member of Planning Institute of Australia
<b>Address</b>	LFA (Pacific) Pty Ltd Suite 4, 2 New McLean Street Edgecliff NSW 2027

#### In respect of

#### Applicant & Land Details

<b>Applicant Name</b>	NSW Health Infrastructure
<b>Applicant Address</b>	c/o Capital Insight 77 Berry Street NORTH SYDNEY NSW 2060
<b>Land to be developed</b>	Corner of Edward and Docker Streets, Wagga Wagga
<b>Lot &amp; DP</b>	DP 659184, Lots 1-2 DP 456751, Lot 1 DP 668972, Lots 27-31 DP 7850, Lots 1-4 DP 13345 Section A, Lots 2-3 and 12-15 DP 13345 Section B, Lots 1-6 DP 13345 Section C

#### Environmental Assessment

<b>Statement of Validity</b>	I certify that I have prepared the contents of the environmental assessment in accordance with the Director General's requirements dated 7 May, 2010 and that to the best of my knowledge, the information contained in the environmental assessment is neither false nor misleading.
------------------------------	---

**Signature**



**Date**

3 May 2011

## EXECUTIVE SUMMARY

Wagga Wagga is a major commercial centre within the greater southern region of New South Wales. Wagga Wagga Base Hospital (WWBH) is one of three primary medical facilities within this region, which serve six centres of population and 39 Local Government Areas.

The Wagga Wagga Base Hospital Redevelopment (WWBHR) project represents an important major health facility for the region.

Both Wagga Wagga City Council and the NSW State Government have identified the redevelopment of the existing hospital in their strategic plans. The Government acknowledges the need to improve access to quality health care. Council also desires improved health facilities and equates economic growth with the provision of infrastructure and employment opportunities that will result from the hospital redevelopment.

For the Murrumbidgee Local Health Network (MLHN), the redevelopment of the existing hospital will provide a modern healthcare facility suited to the current and future needs of the region and consolidate the most appropriate health services on a single site.

The Concept Plan provides for the redevelopment of the existing hospital into a new 41,500m<sup>2</sup> facility to meet the requirements up to 2021 with capacity for future development well into the future. The redevelopment is to be carried out in three key stages:

- Stage 1 – Mental Health, Emergency Department, Procedures Centre and Sterile Supply Unit
- Stage 2 – Acute Hospital and Inpatient Units
- Stage 3 – Ambulatory Care and Allied Health Facilities

The potential impacts of this redevelopment project have been assessed in accordance with the Director General's Requirements (DGRs).

The adoption of best practice health service provision on the WWBH site is fundamental to the wellbeing of the people in the greater southern region of NSW. The proposals contained in this Concept Plan Application are consistent with that objective, are in the public interest, will result in a substantial contribution to the social, economic and environmental framework of Wagga Wagga and will not result in any significant environmental impacts. Accordingly the Minister's favourable consideration of this Concept Plan Application is sought and it is recommended that the proposals set out in this document be adopted in their entirety.



FIGURE 01: Existing Wagga Wagga Base Hospital

# SCHEDULE OF DIRECTOR GENERAL'S REQUIREMENTS

Below is a schedule showing the DGRs together with the relevant sections of the report in which the requirement is addressed. The Environmental Assessment (EA) for the Concept Application must include:

GENERAL ISSUES	REFER TO
1. An executive summary.	Exec Sum
2. A thorough site analysis including site plans, areal photographs and a description of the existing and surrounding environment.	Section 2
3. A thorough description of the proposed development.	Section 3
4. An assessment of the key issues specified above and a table outlining how these key issues have been addressed.	Section 4
5. An assessment of the potential impacts of the project and a draft Statement of Commitments, outlining environmental management, mitigation and monitoring measures to be implemented to minimise any potential impacts of the project.	Section 5
6. The plans and documents outlined below.	Appendices
7. A signed statement from the author of the Environmental Assessment certifying that the information contained in the report is neither false nor misleading.	Statement of Validity
8. A Quantity Surveyor's Certificate of Cost to verify the capital investment value of the project (in accordance with the definition contained in the Major Development SEPP).	Appendix N
9. A conclusion justifying the project, taking into consideration the environmental impacts of the proposal, the suitability of the site, and whether or not the project is in the public interest.	Section 6
PLANS AND DOCUMENTS	REFER TO
1. An <b>existing site survey plan</b> drawn at an appropriate scale illustrating; <ul style="list-style-type: none"> <li>the location of the land, boundary measurements, area (sq.m) and north point;</li> <li>the existing levels of the land in relation to buildings and roads;</li> <li>location and height of existing structures on the site; and</li> <li>location and height of adjacent buildings and private open space.</li> <li>All levels to be to Australian Height Datum.</li> </ul>	Appendix C

2. A <b>Site Analysis Plan</b> must be provided which identifies existing natural elements of the site (including all hazards and constraints), existing vegetation, footpath crossing levels and alignments, existing pedestrian and vehicular access points and other facilities, slope and topography, utility services, boundaries, orientation, view corridors and all structures on neighbouring properties where relevant to the application (including windows, driveways, private open space etc).	Appendix C
3. A <b>locality/context plan</b> drawn at an appropriate scale should be submitted indicating: <ul style="list-style-type: none"> <li>significant local features such as parks, community facilities and open space and heritage items;</li> <li>the location and uses of existing buildings, shopping and employment areas;</li> <li>traffic and road patterns, pedestrian routes and public transport nodes.</li> </ul>	Section 2
4. <b>Architectural drawings</b> at an appropriate scale illustrating: <ul style="list-style-type: none"> <li>the location of any existing building envelopes or structures on the land in relation to the boundaries of the land and any development on adjoining land;</li> <li>location of the proposed building envelopes;</li> <li>indicative elevation plans;</li> <li>the height (AHD) of the proposed development in relation to the land; and</li> <li>indicative changes to the level of the land by excavation, filling or otherwise.</li> </ul>	Appendix C
5. <b>Other plans</b> (to be required where relevant): <ul style="list-style-type: none"> <li><b>Stormwater Concept Plan</b> - illustrating the concept for stormwater management;</li> <li><b>Geotechnical Report</b> – prepared by a recognised professional which assesses the risk of Geotechnical failure on the site and identifies design solutions and works to be carried out to ensure the stability of the land and structures and safety of persons;</li> <li><b>View Analysis</b> - Visual aids such as a photomontage must be used to demonstrate visual impacts of the proposed building envelopes in particular having regard to the siting, bulk and scale relationships from key areas;</li> <li><b>Landscape plan</b> - illustrating treatment of open space areas on the site, screen planting along common boundaries and tree protection measures both on and off the site;</li> <li><b>Shadow diagrams</b> showing solar access to the site and adjacent properties at summer solstice (Dec 21), winter solstice (June 21) and the equinox (March 21 and September 21) at 9.00 am, 12.00 midday and 3.00 pm.</li> </ul>	Appendix G Appendix H Section 4.2 Appendix C Appendix D Section 4.3 Appendix C

Documents to be Submitted
<ul style="list-style-type: none"> <li>1 copy of the EA, plans and documentation for the Test of Adequacy;</li> <li>5 hard copies of the EA (once the EA has been determined adequate) and sets of architectural and landscape plans to scale, including one (1) set at A3 size (to scale); and</li> <li>5 copy of the Environmental Assessment and plans on CD-ROM (PDF format), not exceeding 5Mb in size.</li> </ul>

The Environmental Assessment (EA) for the Concept Application must address the following key issues:

KEY ISSUES	REFER TO
<b>1. Relevant EPI's policies and Guidelines to be Addressed</b>	<b>Section 4.1</b>
1.1 Planning provisions applying to the site, including permissibility and the provisions of all plans and policies including: <ul style="list-style-type: none"> <li>• Objects of the EP&amp;A Act;</li> <li>• State Environmental Planning Policy (Major Development) 2005;</li> <li>• State Environmental Planning Policy No.55 – Remediation of Land;</li> <li>• State Environmental Planning Policy No.33 – Hazardous and Offensive Development;</li> <li>• State Environmental Planning Policy (Infrastructure) 2007;</li> <li>• NSW State Plan;</li> <li>• Wagga Wagga Local Environmental Plan 2010;</li> <li>• Wagga Wagga Development Control Plan 2010; and</li> <li>• Nature and extent of any non-compliance with relevant environmental planning instruments, plans and guidelines and justification for any non-compliance.</li> </ul>	
<b>2. Built Form and Urban Design</b>	<b>Section 4.2</b>
2.1 Height, bulk and scale of the proposed development within the context of the locality, adjoining hospital buildings, and surrounding residential development; and	
2.2 Details of proposed open space and landscaped areas.	
<b>3. Environmental and Residential Amenity</b>	<b>Section 4.3</b>
3.1 Impacts of the proposal on solar access, acoustic privacy, visual privacy and wind impacts (within the site and on surrounding development); and	
3.2 Details of the measures to be implemented to achieve a high level of environmental and residential amenity.	
<b>4. Staging</b>	<b>Section 4.4</b>
4.1 Details regarding the staging of the proposed development, including information regarding the future Project Applications and the extent of works proposed for each application.	

KEY ISSUES	REFER TO
<b>5. Transport and Accessibility Impacts (Construction and Operational)</b>	<b>Section 4.5</b>
5.1 Provide a Transport & Accessibility Study prepared with reference to the NSW State Plan, the NSW Planning Guidelines for Walking and Cycling, the Integrated Land Use and Transport policy package, the NSW Bike Plan, Premier's Council for Active Living (PCAL) - Development & Active Living, the RTA's Guide to Traffic Generating Development, and the Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development (where relevant), considering the following: <ul style="list-style-type: none"> <li>• Detail traffic impacts associated with the staged demolition and construction phases of development, including the impact on the surrounding road network;</li> <li>• Daily and peak operational traffic movements likely to be generated by the proposed development, including the impact on nearby intersections and the need / associated funding for upgrading or road improvement works (if required). The traffic impact assessment should consider base models with future traffic generated by the proposal; State Environmental Planning Policy No.55 – Remediation of Land;</li> <li>• Detail the existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely future demand for increased public transport and pedestrian and cycle access;</li> <li>• Describe the measures to be implemented to promote sustainable means of transport to support and achieve relevant State Plan targets including public transport usage and pedestrian and bicycle linkages in addition to addressing the potential for implementing a Workplace Travel Plan; NSW State Plan;</li> <li>• Detail the current and projected future pedestrian movements between the hospital and the surrounding medical specialists;</li> <li>• Details of the proposed access, parking provisions, loading facilities, taxi and community pickup / drop off, service vehicle movements and emergency vehicle access associated with the proposed development; and</li> <li>• Provision of appropriate levels of on site car parking for the proposed development having regard to the public transport accessibility of the site, opportunities for car sharing, local planning controls and RTA guidelines (note: The Department supports reduced parking provisions, if adequate public transport is available to access the site).</li> </ul>	



KEY ISSUES	REFER TO
<b>6. Ecologically Sustainable Development (ESD)</b>	<b>Section 4.6</b>
6.1 Detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development.	
<b>7. Contributions</b>	<b>Section 4.7</b>
7.1 Address Council's Section 94 Contribution Plan and / or details of any Voluntary Planning Agreement.	
<b>8. Contamination</b>	<b>Section 4.8</b>
8.1 Demonstrate compliance that the site is suitable for the proposed use in accordance with SEPP 55.	
<b>9. Heritage</b>	<b>Section 4.9</b>
9.1 A statement of significance and an assessment of the impact on the heritage significance of any heritage items and / or conservation areas should be undertaken in accordance with the guidelines in the NSW Heritage Manual.	
<b>10. Aboriginal Heritage</b>	<b>Section 4.10</b>
10.1 The EA shall address Aboriginal Heritage in accordance with the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005.	
<b>11. Drainage and Stormwater</b>	<b>Section 4.11</b>
11.1 Drainage issues associated with the proposal including stormwater and drainage infrastructure.	
<b>12. Flooding</b>	<b>Section 4.12</b>
12.1 An assessment of any flood risk on site in consideration of any relevant provisions of the NSW Floodplain Development Manual (2005) including the potential effects of climate change, sea level rise and an increase in rainfall intensity.	
<b>13. Utilities</b>	<b>Section 4.13</b>
13.1 In consultation with relevant agencies, the EA shall address the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure works.	

KEY ISSUES	REFER TO
<b>14. Flora and Fauna</b>	<b>Section 4.14</b>
14.1 Address impacts on flora and fauna, including threatened species, populations and endangered ecological communities and their habitats and steps taken to mitigate any identified impacts to protect the environment.	
<b>15. Noise and Vibration</b>	<b>Section 4.15</b>
15.1 Provide a quantitative assessment of the potential demolition, construction, operation and traffic noise impacts of the project.	
<b>16. Waste</b>	<b>Section 4.16</b>
16.1 Identify, quantify and classify the likely waste streams to be generated during construction and operation;	
16.2 Describe the measures to be implemented to manage, reuse, recycle and safely dispose of this waste;	
16.3 Describe the measures to be implemented to manage the disposal of nuclear waste, if required; and	
16.4 Describe the measures to be implemented to manage the disposal of contaminated and potentially contaminated biological and sewage waste, if required.	
<b>17. Hazards</b>	<b>Section 4.17</b>
17.1 An assessment against State Environmental Planning Policy No 33 – Hazardous and offensive Development; and	
17.2 A description of the proposed storage, use and management of any hazardous material and measures to be implemented to manage hazards and risks associated with the storage.	
<b>18. Consultation</b>	<b>Section 4.18</b>
18.1 Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007, in particular surrounding residences and Wagga Wagga City Council.	
<b>Deemed Refusal Period</b>	
60 days	

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## 1.0 INTRODUCTION

### 1.1 PURPOSE OF THE REPORT

On 7 December 2010, a letter was sent to the Director General of the Department of Planning (DoP) requesting his opinion that the WWBHR project is declared to be a project to which Part 3A of the Act (Section 75B of the Environmental Planning and Assessment Act) applies.

On 24 January 2011 the Director General as a delegate for the Minister for Planning formed the opinion that the WWBHR project meets the criteria in Schedule 1, Group 7, Clause 18 of the State Environmental Planning Policy (Major Projects) 2005 and is therefore a project to which Part 3A applies, as summarised below (see Section 4.1, page 32):

- Schedule 1, Group 7, Clause 18
  - *Health and public service facilities, Hospitals: Development with a capital investment value of more than \$15 million for the purpose of providing professional health care services to people admitted as in-patients.*

On 31 July 2009 the SEPP (Major Projects) 2005 was amended to become State Environmental Planning Policy (Major Development) 2005 however the above clause still applies to the WWBHR project.

On 16 February 2011 the DoP issued the DGRs relating to the preparation of a Concept Plan Application.

The document has been prepared in accordance with Part 3A of the EP&A Act and associated guidelines to provide details of the WWBHR project proposals.

The primary purpose of this application is to obtain planning consent for the Concept Plan and the development framework contained in this submission.

The WWBHR project has a Capital Investment Value (CIV) of \$317,593,700 and will involve:

- An increase in floor space area from the existing 27,000m<sup>2</sup> (approximately) to 41,500m<sup>2</sup>.
- A maximum height of 8 storeys, including a rooftop helipad.
- New development - primary/community health, mental health, acute clinical services, education, support services and rooftop helipad.
- Retained existing buildings - UNSW School of Rural Health (Harvey House), the Hydrotherapy Pool and Clinical Services Building.
- Provision of 293 beds.
- New pedestrian routes traversing the site and linking with nearby health facilities.
- New pedestrian hospital entry points including main and secondary.
- New car parking facilities.
- New internal roads.
- New access road from Docker Street.
- Integrated landscaping including softening of the street edges.

The Concept Plan Application provides for:

- The development of a modern healthcare facility suited to the current and future needs of the central sector of the MLHN.
- The retention of existing buildings currently incorporating the UNSW School of Rural Health, Hydrotherapy Pool and Clinical Services Building.

## 1.2 STRUCTURE OF THE REPORT

The Concept Plan Application and Environmental Assessment report is structured as follows:

PART	DESCRIPTION
<b>Introduction</b>	Provides an overview of the project and relevant background information including the proposed development controls.
<b>Site Analysis</b>	Provides details of the Hospital context together with a social, economic and environmental review.
<b>The Concept</b>	Provides an overview of the Concept Plan.
<b>Environmental Assessment</b>	Responds to the Director General's Requirements.
<b>Draft Statement of Commitments</b>	Provides a Draft Statement of Commitments that will apply to future Project Applications.
<b>Conclusion</b>	Summarises the key issues and provides a recommendation to approve the proposals outlined within the report.

## 1.3 BACKGROUND TO THE PROJECT

This Concept Plan Application and Environmental Assessment for the WWBHR project stems from the following sequence of studies and approvals:

<b>2006/07</b>	Project Definition Plan (PDP) prepared.
<b>November 2007</b>	The PDP approved.
<b>June 2008</b>	Formal review of the PDP undertaken.
<b>October 2008</b>	Procurement Strategy Report completed.
<b>November 2008 -</b>	Concept Design Development phase is undertaken.
<b>December 2010</b>	Preliminary Environmental Assessment is lodged.
<b>24 January 2011</b>	The Minister determines that the WWBHR project is a project to which Part 3A applies.
<b>16 February 2011</b>	The Director General's Environmental Assessment Requirements issued.

The studies undertaken identified the necessity for the existing hospital to maintain its current service provision throughout the construction of any new facilities. This resulted in the current design proposal for the WWBHR project which permits the progressive redevelopment of existing buildings and the construction of new facilities to the north and east of the site.

Construction of the proposed development will be staged to allow the existing hospital to continue to operate while the new facilities are built. As stages are completed the relevant existing services will be decanted, allowing demolition of these buildings and the provision of car parking in their place.

The Staging Program will comprise three major phases of redevelopment including:

- Stage 1 – Mental Health, Emergency Department, Procedures Centre and Sterile Supply Unit
- Stage 2 – Acute Hospital and Inpatient Units
- Stage 3 – Ambulatory Care and Allied Health Facilities

The works identified in this Concept Plan Application represent all three phases and are described in detail in Section 4.4.

### 1.3.1 Project Drivers

The key drivers of the WWBHR project are:

- To develop more integrated models of health care.
- To expand the range of specialised diagnostic and treatment services available.
- To expand provision of ambulatory care for chronic and complex conditions.
- To increase the focus on priority service areas.
- To guarantee the Wagga Wagga Base Hospital will fulfil its rural referral role.
- To improve recruitment and retention of health professionals.
- To strengthen clinical networks.
- To effectively use information management and technology.
- To optimise efficiencies through co-location.
- To improve hospital and community health facilities.

### 1.3.2 Population Characteristics

The following information provides a snapshot of the resident population in the Wagga Wagga Local Government Area (LGA). This information is drawn from the Australian Bureau of Statistics (ABS) 2006 Census and the City of Wagga Wagga 'Community Social Plan 2009-2013'.

- Wagga Wagga LGA has 59,908 residents, with an annual growth rate of 1.8%.
- Wagga Wagga has a high proportion of young people, with over 20% of the population aged under 15, almost 18% aged 15-24 and comparatively, 12% over 65.
- 93.2% of Wagga Wagga's population was born in Australia (for NSW this figure is 74.4%).
- The most common region of origin is North West Europe (2.7%).
- 3.1% of the population speak a language other than English at home.
- There has been an increase in refugee resettlement

in the LGA in the last four years, accompanied by an increasing secondary migration population.

- People from Aboriginal and Torres Strait Islander background represent 4.2% of Wagga Wagga's population (which is higher than the NSW average).
- Almost 36% of families in Wagga Wagga are couples with no children, 32.6% of families are couples with children, and a further 11.3% are single parent families.
- Half of Wagga Wagga residents aged 15 years and over have post-school qualifications.
- The unemployment rate is 6.3%.
- Almost 85% of dwellings within the LGA are detached houses.
- The average weekly income for individuals in the area is between \$700 and \$750 (ABS Census 2005).

### 1.3.3 Facility Configuration

The facility configuration of the WWBHR project provides an opportunity to enhance health services on site by:

- Providing flexible building design to allow for future modification and expansion to meet changes in clinical practice.
- Locating acute clinical services in a central cluster, with close links to rehabilitation services thus improving accessibility and enhancing continuity of care.
- Providing educational facilities on site.
- Improving links between community and health services on and off site.

### 1.3.4 New and Emerging Technologies

Contemporary service delivery modes are changing the way in which health services are delivered and arranged. Wagga Wagga's population will require a mix of services that are patient-centred and clustered in such a way as to enhance ease of use and accessibility. While in-patient beds will be an important part of the redeveloped facilities, most people will not receive treatment in a traditional in-patient unit (IPU), but will be cared for on a day-stay, ambulatory or community outreach basis.

### 1.3.5 Services Planning Principles

Wagga Wagga City Council has identified the WWBHR project as an important driver in its strategic and spatial plans: 'Community Strategic Plan, Our City...Our Tomorrow, 2008/2018' and 'Wagga Wagga Spatial Plan 2008'.

The documents represent Council's latest strategic policy for the future development of the Wagga Wagga LGA. The strategic plan acknowledges significant population growth in the region and addresses the subsequent need for infrastructure maintenance and renewal, while the spatial plan outlines the pragmatic challenges in maintaining and renewing existing infrastructure.

The WWBHR project presents an opportunity to build on existing health, education and employment assets in line with the NSW Government's State Infrastructure Strategy. The adoption of a staged delivery approach is the most appropriate, cost-effective solution to the need for maintaining existing services while new facilities are constructed.

## 1.4 PROJECT OBJECTIVES

The Concept Plan provides the overall framework for the WWBHR project to achieve the following objectives:

- Provide modern, contemporary hospital facilities with high quality care standards.
  - Facilitate the delivery of improved health, education, research and community facilities on site.
  - Provide improved access to and between different health and community services on site.
  - Provide flexible building design to allow for future modification and expansion to meet anticipated growth in demand for services and changes in clinical practice.
  - Encourage supplementary and support private hospital health facilities core to the Wagga Wagga Base Hospital service provision.
  - Ensure development provides harmony and balance with the surrounding areas.
  - Provide a high quality urban environment through careful design of buildings, enhanced landscaping and a well designed public domain.
  - Improve and enhance the public domain, including a variety of public areas and pedestrian and vehicular connections through the site.
  - Maintain and enhance, where possible, a green environment.
  - Record any significant heritage items that are required to be demolished.
  - Encourage public transport use by enhancing access to walking, cycling and bus networks.
  - Provide adequate car parking on site.
  - Provide improved access to the site and minimise or manage appropriately any adverse impacts on the surrounding main and local streets.
  - Manage traffic through the site so that pedestrians can move freely and safely within an appropriate amenity.
  - Adopt the principles of Ecologically Sustainable Design (ESD) in accordance with NSW Health and State Government policy.
- Identify opportunities for private commercial development to fund procurement and/or accommodate new health and related facilities.
  - Meet the objectives of wider strategic planning initiatives such as 'acceler8\_Wagga Wagga - a blueprint for economic growth in 2008'.



FIGURE 02: Existing Development

## 1.5 THE SITE

Wagga Wagga Base Hospital is part of a wider existing health facility precinct which includes the nearby Calvary Hospital, private health facilities, and specialist practices and clinics. Almost all of the specialist practices and clinics are housed in Docker and Edward Streets, which adjoin the existing hospital site, while Calvary Hospital is located approximately 250m south west of Docker Street.

The principal hospital site (refer to Figure 2) covers an area of approximately 4.2ha and is generally known as Wagga Wagga Base Hospital. Hospital car parking is provided on adjacent lands and covers an area of approximately 1.5ha. The site currently houses many diverse, old and ad-hoc buildings which have numerous extensions. Buildings vary from the state heritage listed Old Hospital Building to the multistorey, 1960s Main Building.

Vehicular access to car parking, the Main Building and the Emergency Department is directly off Edward Street via Lewis Drive. Vehicular access to the existing Hydrotherapy Pool is directly off Docker Street but parking is limited and shared with the UNSW School of Rural Health. Vehicular access to the Dental Unit, Community Health and the Australian Red Cross Blood Service Donor Centre is via the rear of the site, off Rawson Lane; and the Renal Unit and Yathong Lodge are accessed via Yathong Street and Lewis Drive.

Staff access is via Lewis Drive to the main car park. An additional staff car park can be accessed via Yathong Street or Rawson Lane. Service vehicles enter the site via Lewis Drive, Yathong Street and Rawson Lane. Ambulance access is via Lewis Drive.

This Concept Plan Application is focused on the existing Wagga Wagga Base Hospital site and also includes lands east of Lewis Drive.

## 1.6 DEVELOPMENT FOR WHICH APPROVAL IS SOUGHT

Aspects for which this Concept Plan Application seeks approval include:

- Land use distribution.
- Pattern of buildings.
- Building heights.
- Road hierarchy/layout.
- Open space networks.
- Access networks.
- Car parking location and numbers.
- Heritage strategy.
- Staging and associated sequenced demolition of existing buildings.
- Potential future expansion.

## 1.7 CONSULTATION

A process of consultation was begun in preparation for submission of the PEA. Following the issuing of the DGRs the process has become more extensive. A range of agencies have been consulted and both group and individual consultations have taken place with relevant agency officers. Consultations have ranged from broad strategic issues of precinct urban planning, to specific service infrastructure issues associated with the redevelopment of the hospital site.

The Agencies consulted include:

- Country Energy
- Civil Aviation and Safety Authority
- Fearnese Buses
- Greater Southern Area Health Service
- NSW Department of Health
- NSW Department of Natural Resources (now Department of Environment, Climate Change and Water)
- NSW Department of Planning
- NSW Heritage Office
- NSW Treasury
- Riverina Water
- Roads and Traffic Authority
- Telstra
- Wagga Wagga City Council

## 1.8 THE PROPONENT AND STUDY TEAM

This Concept Plan Application and Environmental Assessment has been prepared on behalf of NSW Health Infrastructure.

The principal consultant team for the project includes:

ROLE	COMPANY
Project Management	Capital Insight
Hospital Planning and Architecture	Rice Daubney
Urban Planning	LFA (Pacific) Pty Ltd
Landscape	Site Image
Services	Sinclair Knight Merz Pty Ltd
Civil Engineering	Sinclair Knight Merz Pty Ltd
Geotechnical Engineering	Aitken Rowe Testing Laboratories Pty Ltd
Flood Management	Webb, McKeown & Associates Pty Ltd.
Heritage	Weir Phillips
Archaeology	AHMS
Arborist	Somewhere
Traffic, Transport and Access	Sinclair Knight Merz Pty Ltd
Helicopter	Heli-Consultants Pty Ltd Wilkinson Murray
Quantity Surveyor	Davis Langdon
Staging	Capital Insight Pty Ltd.



## 2.0 SITE ANALYSIS

### 2.1 REGIONAL CONTEXT

Wagga Wagga is a major commercial centre with a population of nearly 60,000 located within the greater southern region of New South Wales.

Topographically Wagga Wagga is located at the eastern end of the Riverina region where the slopes of the Great Dividing Range flatten and form the Riverina plain.

Wagga Wagga Base Hospital is one of three primary medical facilities within the MLHN which serves four centres of population: Albury, Deniliquin, Griffith, and Wagga Wagga, together with 28 Local Government Areas. The MLHN area contains a population in the order of 238,000 (2006) with a projected population for 2016 of approximately 245,000 people.

Refer to Figures 3 and 4.

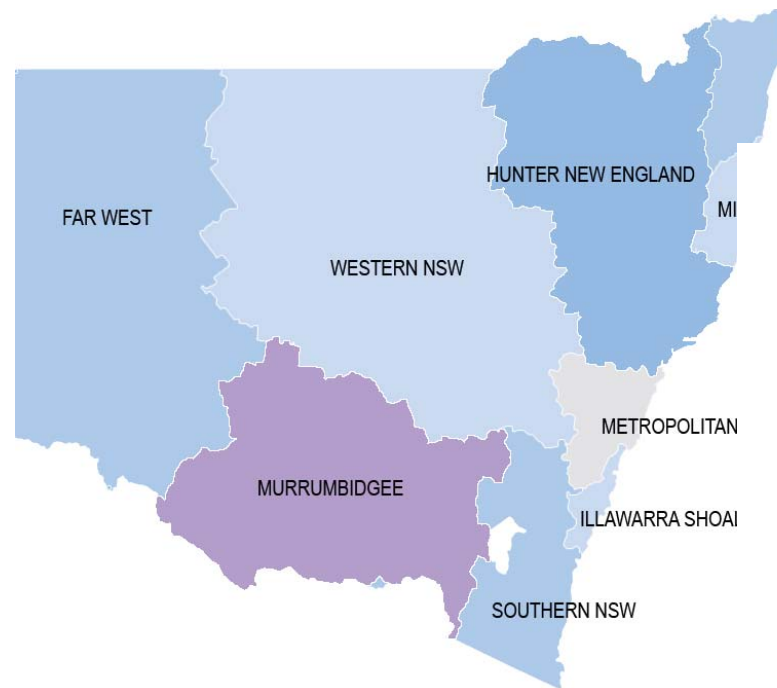


FIGURE 03: New South Wales Local Health Networks



- Health Services (Hospital, Inpatient Mental Health and Community Health)
- Health Service (Hospital and Community Health)
- Multi Purpose Service
- \* Community Health Service only

FIGURE 04: Murrumbidgee Local Health Network

## 2.2 LOCAL CONTEXT

The core elements of the local context are as below.

### Environmental

- Murrumbidgee River, Wollundry Lagoon and associated open space.

### Movement

- Good rail and road connections via the Sydney-Melbourne railway line, and Sturt, Olympic and Hume Highways.

### Land use

- Business, commercial and retail uses are concentrated in the CBD core.
- Major industrial areas exist to the north in the suburb of Bomen.
- Residential growth is primarily on higher ground to the south, however the suburb of North Wagga Wagga is located north of the Murrumbidgee River.
- Educational services including Charles Sturt University to the north in the suburb of Estella, and the Riverina Institute of TAFE.
- Defence Force services including the RAAF Base and Army Recruitment Training Facility are located to the east and south west respectively.



FIGURE 05: Local Context



Town centre



Baylis Street



Cultural precinct

### 2.3 WAGGA WAGGA CBD

The Wagga Wagga CBD is relatively flat, and is located on the southern bank of the Murrumbidgee River, protected by a levee from potential flooding. The CBD is approximately 2km from Wagga Wagga Base Hospital with good access via bus or taxi. Walking time from the CBD is approximately 20-25 minutes. The main vehicular access from the CBD is via Edward Street.

The key attributes of the Wagga Wagga CBD are as follows:

- Location within the commercial and recreational grid bounded by Best and Tarcutta Streets, the Sturt Highway and the Murrumbidgee River.
- Main shopping street, Baylis Street which becomes Fitzmaurice Street at the northern end.
- Proximity to Wollundry Lagoon which provides a water focus for the city centre.
- Proximity to the cultural precinct on the banks of Wollundry Lagoon.
- Accessibility via a dedicated local bus service.

Refer to Figure 5.

## 2.4 WAGGA WAGGA BASE HOSPITAL

Wagga Wagga Base Hospital is located within a health precinct which includes Calvary Hospital and an extensive array of private clinics and doctors' surgeries located within 'residential' properties.

The site is surrounded by a wide variety of land uses which are predominately residential but also include ovals to the north west; primary schools, high schools, and the Riverina TAFE to the east; and showgrounds to the south.

The site is within reasonable proximity to the Wagga Wagga CBD and within walking distance of the Wagga Wagga Railway Station and Bus and Coach Terminal.

The site is accessible from both the Sturt and Olympic Highways, and the Main Southern Railway. The site offers transport connections to major shopping complexes, offices, educational facilities, open space and residential areas.

Refer to Figure 5.



Main Building



Heritage Motor Inn to the east of site



Lewis House, Community Health



Sandwich Bar to the south of site



Harvey House, UNSW School of Rural Health



Residential property near to site



## 2.5 ZONING

Under the Wagga Wagga Local Environmental Plan 2010, the WWBHR site occupies an area primarily zoned SP2 Infrastructure (Hospital) and part zoned R3 Medium Density Residential. Health services facilities (including hospitals) in the R3 zone are permissible with consent.

Surrounding land uses include:

- B3 Commercial Core
- R1 General Residential
- R3 Medium Density Residential
- RE1 Public Recreation
- SP2 Infrastructure (Road)

Refer to Figure 6.

FIGURE 06: Zoning

Source: Wagga Wagga City Council

## 2.6 LAND OWNERSHIP

The lands on which the proposed WWBHR project is located (apart from the required acquisitions as detailed in Sections 2.6.1 and 2.6.2) are owned by the Wagga Wagga Base Hospital or the Health Administration Corporation of NSW Health and include:

- DP 659184
- Lots 1-2 DP 456751
- Lot 1 DP 668972
- Lots 27-31 DP 7850
- Lots 1-4 DP 13345 Section A
- Lots 2-3 and 12-15 DP 13345 Section B
- Lots 1-6 DP 13345 Section C

Refer to Figure 7.



FIGURE 07: Land Ownership



FIGURE 08: Road and Property Acquisition

### 2.6.1 Road Acquisition

The new Mental Health Building will require the acquisition of a portion of Lewis Drive and Yathong Lane, as shown in Figure 8. Acquisition negotiations have been instigated between NSW Health Infrastructure and Council.

### 2.6.2 Property Acquisition

The eastern arm of the proposed development also requires the acquisition of two residential properties between Yabtree Street and Yathong Lane, as shown in Figure 8. Two properties have been acquired and negotiations are being finalised with the remaining properties, 10 and 16 Yabtree Street. Should it ultimately be necessary, NSW Health would move to compulsorily acquire the remaining residential properties.

## 2.7 TOPOGRAPHY

The existing Wagga Wagga Base Hospital site is generally flat with a gentle fall from south to north. There is a gradual fall from Lewis Drive to Docker Street resulting in a diagonal fall across the site of approximately 3.6m.

## 2.8 CONTAMINATION

Laboratory testing of selected soil samples from the existing Wagga Wagga Base Hospital site confirmed a generally alkaline pH soil which indicates that the soil is unlikely to be aggressive to steel structures. However the soil was found to contain high levels of sulphate which indicates that the soil will be moderately to mildly aggressive towards concrete.

Groundwater contamination is unlikely as testing indicates that the soil is considered non-saline. However, Wagga Wagga City Council has introduced its *'Urban Salinity Management Plan 2008-2013'* to which the WWBHR project will adhere. Further details are provided at Appendix H.

## 2.9 FLOODING

A Flood Impact Assessment (included at Appendix E) found that flooding of the Wagga Wagga Base Hospital site is likely only in the event that the Murrumbidgee River overtops the Main City Levee. However inundation would be possible in overland flow events not associated with riverine flooding or levee overtopping.

The WWBHR project has been designed to ensure that all buildings are sited above the appropriate Flood Planning Level (FPL) and recommendations stemming from the Flood Impact Assessment have been followed, such as locating critical services at a high point of the site, to mitigate any effects that flooding may have.

Findings from the Flood Impact Assessment are described in detail in Section 4.12.

## 2.10 LANDSCAPE AND OPEN SPACE

Open space within the vicinity of the Wagga Wagga Base Hospital includes local parks, ovals, showgrounds and the cultural precinct on the banks of Wollundry Lagoon.

The landscape of the Wagga Wagga Base Hospital site has developed over time. Formal landscaping once occupied the site providing a visual buffer from adjacent major roads. This has been lost over time for safety reasons following arborist inspections and the landscaping is now characterised by grassed areas with scattered trees fronting Edward and Docker Streets. Further details are provided in the Arborist Report at Appendix L.

A Landscape Concept Plan for the project is provided in Section 3.4.3 and Appendix D.



Landscaping to the north of site prior to tree removal in accordance with the Arborist Report



Public open space to the north of site



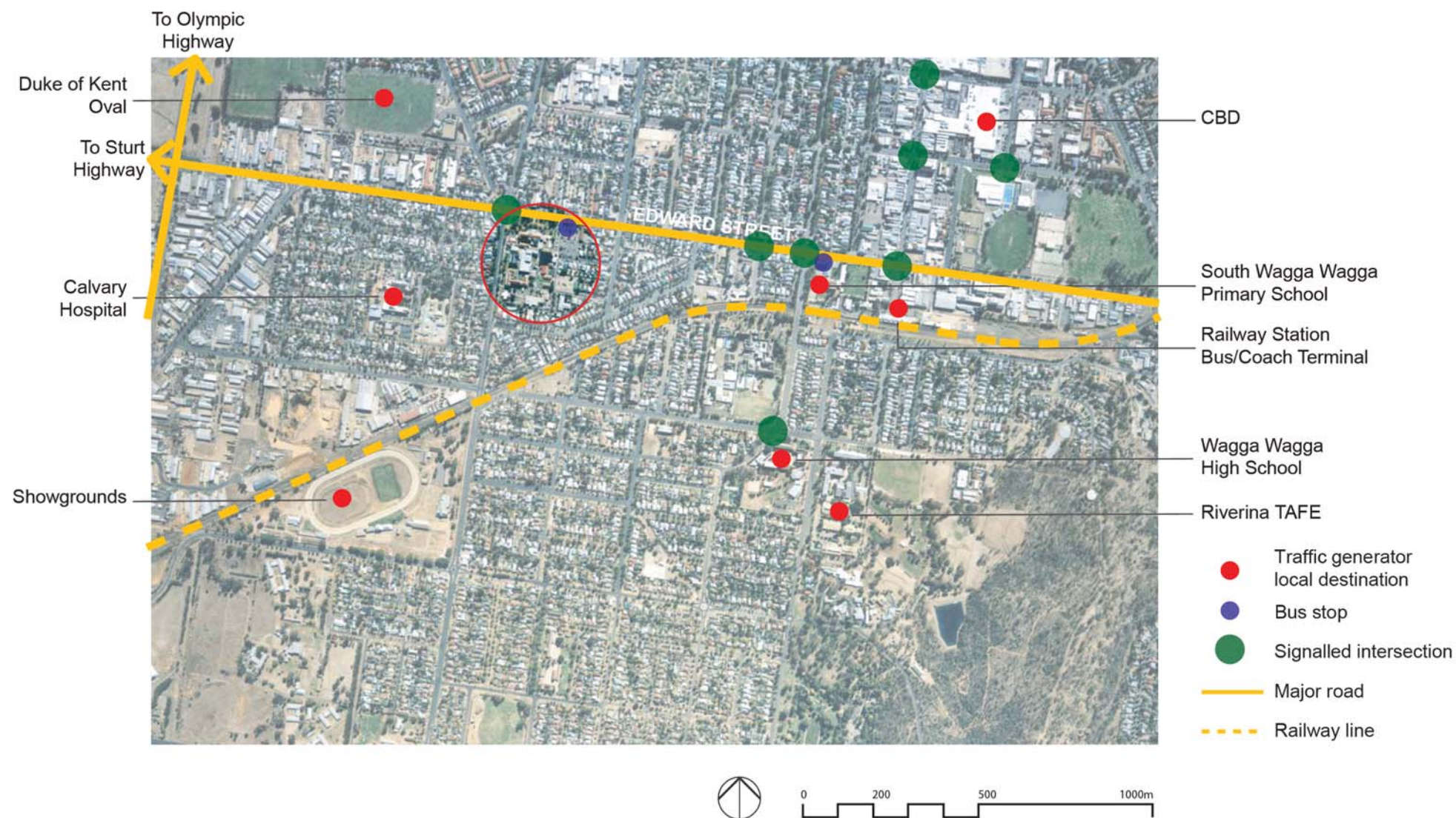


FIGURE 09: Transport and Traffic Access Conditions

## 2.11 ACCESS

The access conditions relevant to the WWBHR site are illustrated in Figure 9 and described below.

### 2.11.1 Road

The existing Wagga Wagga Base Hospital site has good access to the arterial road system including the Sturt, Olympic and Hume Highways. The main vehicular access to the CBD is via Edward Street which forms part of the Sturt Highway while Docker Street provides connections to the north and south of the hospital.

The existing hospital site is bound by Edward Street to the north, Rawson Lane to the south, Lewis Drive to the east and Docker Street to west.

### 2.11.2 Rail

The existing Wagga Wagga Base Hospital site is located approximately 1.5km east of the Railway Station and Bus and Coach Terminal which offers good rail connections via the Sydney-Melbourne railway line.

### 2.11.3 Public Transport

The existing Wagga Wagga Base Hospital site is accessed via three local bus services. These routes provide transport to the hospital, operating from the CBD and stopping near to the corner of Edward Street and Lewis Drive.

The CBD is also accessible by taxi which can be ordered via a dedicated phone line.

#### **2.11.4 Pedestrian**

The existing Wagga Wagga Base Hospital site is in reasonable proximity to the Wagga Wagga CBD, with a walking time of approximately 20-25 minutes, and within walking distance of the Wagga Wagga Railway Station and Bus and Coach Terminal. The design of the WWBHR project provides for efficient pedestrian routes within the redeveloped hospital site which are needed to access these connections as well as to access additional facilities within the health precinct.

#### **2.11.5 Cycle**

The 'Wagga Wagga Integrated Movement Plan' (Wagga Wagga City Council and URaP-TTW, 2008) identifies Docker and Murray Streets as cycle routes. To encourage cycling the WWBHR project provides bicycle storage facilities and access to cycle routes.

#### **2.11.6 Car Parking**

The existing Wagga Wagga Base Hospital site has significant on- and off-site car parking. The existing hospital site currently supports 304 car spaces with some further 200 (approximate) spaces on-street.

The WWBHR project provides for a significant expansion of on-site car parking, consistent with providing for future staff and patient on-site parking demand and reducing on-street parking needs. Refer to Section 3.4.2.

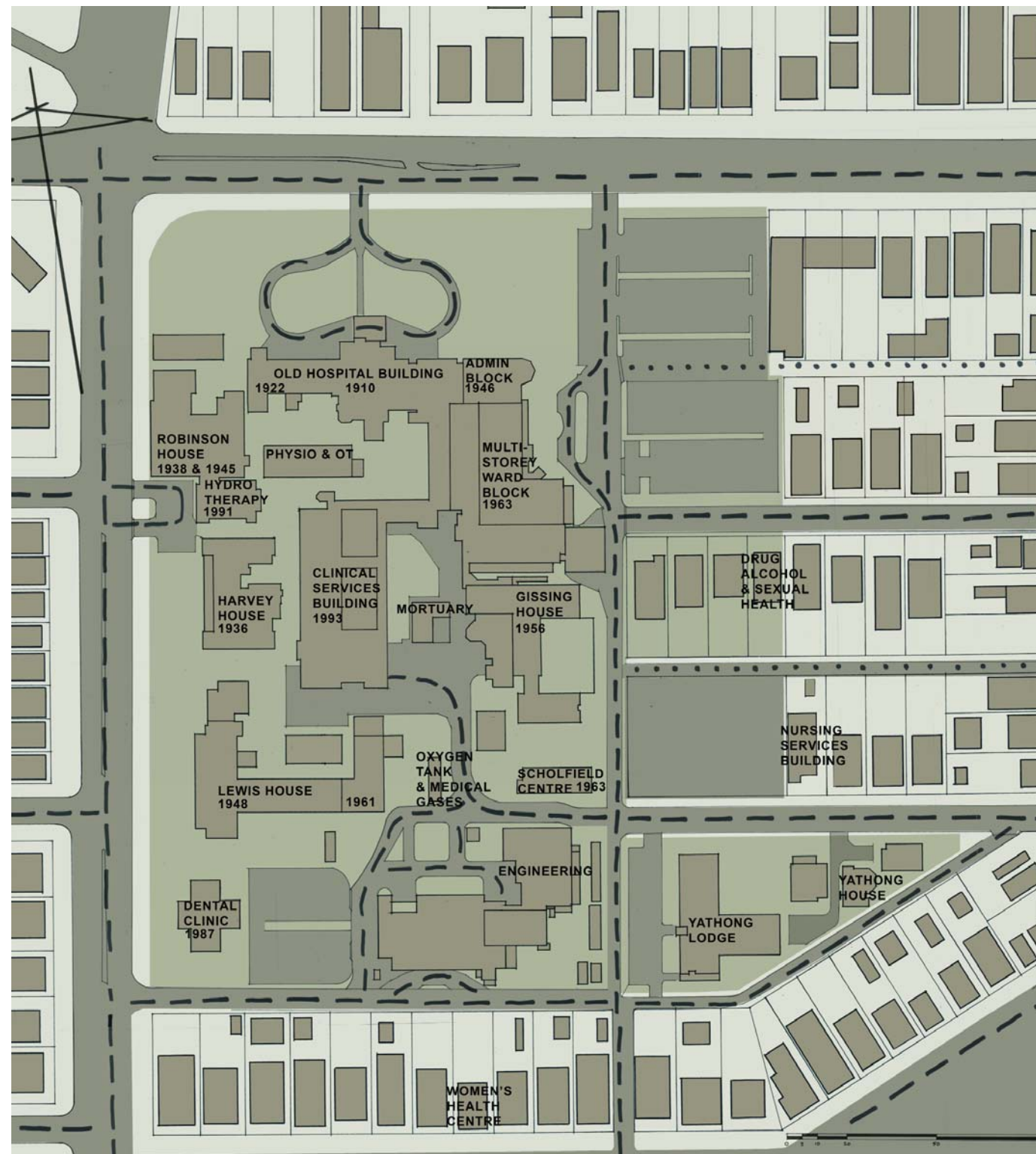


FIGURE 10: Wagga Wagga Base Hospital Existing Buildings

Source: Rice Daubney

## 2.12 EXISTING DEVELOPMENT

### 2.12.1 Wagga Wagga Base Hospital

The existing hospital currently houses a wide range of building types, styles and sizes dating from 1910 to more recent developments in the 1990s. The latest development on the hospital site is a four-chair expansion of the Renal department (Yathong House) which was completed in mid-November 2010.

Refer to Figure 10 and Table 1.

No.	Building	Condition
1	Old Hospital Building	1910 & 1922, Local Heritage, Poor
2	Admin Block	1946, Reasonable
3	Multi-Storey Ward Block	1963, Local Heritage, Reasonable
4	Gissing House	1956, Reasonable
5	Scholfield Centre	1963, Reasonable
6	Engineering/Stores	Circa 1980s, Reasonable
7	Dental Clinic	Circa 1980's, Reasonable
8	Lewis House	1948, Poor
9	Mortuary	Circa 1940s and 1980s, Reasonable
10	Clinical Services Building	1993, Good
11	Harvey House (UNSW Rural Clinical School)	1936, Good
12	Hydrotherapy	1991, Reasonable
13	Robinson House	1938 & 1945, Reasonable
14	Physio & OT	1940s, Reasonable
15	Drug, Alcohol & Sexual Health	1920s, Reasonable
16	Nursing Services Building	
17	Yathong Lodge	1990's, Good
18	Yathong House	1940's & 2010, Good

TABLE 01: Wagga Wagga Base Hospital Buildings

### 2.12.2 Surrounding Existing Development

The buildings on Edward and Docker Streets surrounding the existing hospital are low scale residential bungalows typically of red brick construction with pitched roofs of clay tile or sheet metal material. Eaves are timber construction often panelised vertically or horizontally. Porches are formed by overhanging roofs supported on columns providing weather protection often at the fronts of many houses.

Rawson Lane has a different feel with the hospital buildings on its northern face and residences to the south. The Rawson Lane residential buildings have their street frontage to Brookong Avenue consequently Rawson Lane has numerous garages and metal sheet fencing aligning its southern edge. Many of these residential properties have been converted to medical buildings and the rear of the properties have been converted to car parks accessed from Rawson Lane.

The northern edge of Rawson Lane, south of the existing hospital, is a mix of car park and single and double storey structures including the existing delivery dock with its double height canopy.

To the east of the hospital site is the Motor Inn on Edward Street, a two storey brick building with small window openings facing the current hospital car park. Residential properties bound the eastern edge of the hospital, some converted to medical uses. These properties have frontages onto the neighbouring streets of Yabtree Street, Yathong Lane and Yathong Street with minimal openings to the west toward the site.

### 2.13 BUILDING HEIGHT

The majority of existing buildings on the Wagga Wagga Base Hospital site are between 1 and 3 storeys in height. The existing Main Building is significantly higher at 8 storeys. The buildings within the surrounding health precinct are predominately single storey residences, a considerable number of which have been converted to provide consulting facilities.

The WWBHR project will adopt a range of heights which will be maximised at the centre of the site and will step down towards the surrounding residential areas to minimise adverse overshadowing impacts. Refer to Section 3.4.5.



Typical residential surrounding site



Typical Rawson Lane edge



Motor Inn east of site

## 3.0 THE CONCEPT

### 3.1 INTRODUCTION

The WWBHR project will provide modern, contemporary health facilities to meet changing clinical needs, expanded activities and the provision of educational facilities. Refer to Figure 11.

The capital investment value of the WWBHR project is \$317,593,700 (see Appendix M). The Concept Plan provides a framework for the staged delivery of the project to allow ongoing service provision from the existing hospital while new facilities are built. As stages are completed the relevant existing services will be decanted, allowing demolition of these buildings and the provision of car parking in their place. Further detail is provided in Section 4.4.

The redevelopment project will involve:

- An increase in floor space area from the existing 27,000m<sup>2</sup> (approximately) to 41,500m<sup>2</sup>.
- A maximum height of 8 storeys, including a rooftop helipad.
- Retained existing buildings - Harvey House (UNSW Rural Clinical School), the Hydrotherapy Pool and Clinical Services Building.
- An increase in the provision of beds from 220 to 293.
- New pedestrian routes traversing the site and linking with nearby health facilities.
- New pedestrian hospital entry points including main and secondary.
- New car parking facilities.
- New internal roads.
- New access road off Docker Street.
- Integrated landscaping including softening of the street edges.

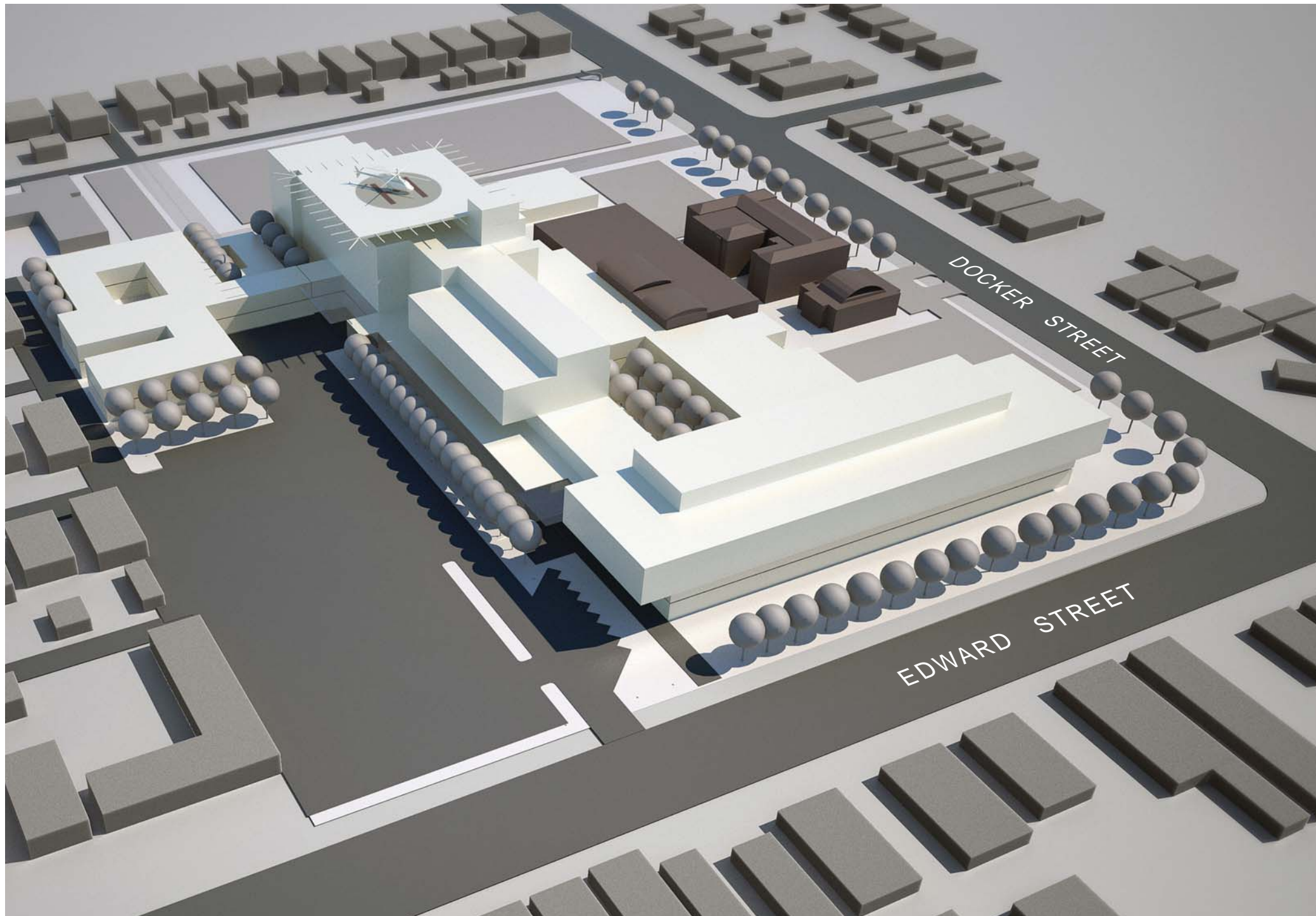


FIGURE 11: Wagga Wagga Base Hospital Concept Plan

Source: Rice Daubney

### 3.2 SITE PLANNING PRINCIPLES

The key urban design principles which guide the WWBHR project are:

- Low level development along the east and south to minimise overshadowing on surrounding residences;
- Provide vehicular permeability by:
  - Maintaining the existing entry from Edward Street;
  - Providing an east-west link by creating a new entry from Docker Street connecting to Yathong Street;
- Locate acute clinical functions centrally to the site;
- Provide clear and direct pedestrian links throughout the site with entries located off these routes;
- Provide a landscape buffer along the edges of Edward and Docker Streets for staff and patient amenity.

Refer to Figure 12.

#### Development Zones

Initial development on the site will address clinical priorities for an initial approved budget of \$90 million.

The clinical priorities involve the provision of new or refurbished facilities for the following departments:

- Procedures Centre;
- Emergency Department;
- Sterile Supply Unit; and
- Mental Health.

The current capacity of theatres will be increased by the addition of two large theatres, which will need to connect to the existing Clinical Services Building and Theatre floor in an efficient manner and meet staffing requirements.

Three development zones were identified as areas where the clinical priority needs could be met. Refer to Figure 13 and Table 3.

Zone 1 has been identified as best responding to meeting clinical priority needs with minimal impact on existing departments and services and forms the basis of the Concept Plan.



FIGURE 12: Key Urban Design Principles Source: Rice Daubney



FIGURE 13: Development Zones Source: Rice Daubney

Development Zone	Pros	Cons
<b>Zone 1 to the East</b>	<ul style="list-style-type: none"> <li>• Central Location</li> <li>• Best Clinical Linkages including good links between the Emergency Department and Mental Health</li> <li>• Best zonal linkages</li> <li>• Low level disruption to existing departments</li> <li>• Main entry off Edward Street</li> <li>• Retain 'iconic' view of ward block</li> <li>• Build new mental health (priority)</li> <li>• Single construction zone for \$90 million</li> </ul>	<ul style="list-style-type: none"> <li>• Mental Health new build takes a large portion of Stage 1A/B budget</li> <li>• Displaces Mortuary and Methadone</li> </ul>
<b>Zone 2 to the North</b>	<ul style="list-style-type: none"> <li>• Build new hospital frontage on Edward Street</li> <li>• Good links to CSB and ward block</li> <li>• Main entry off Edward Street</li> </ul>	<ul style="list-style-type: none"> <li>• Potential floodplain zone</li> <li>• Displaces non-priority departments including Paediatric Ward, Intensive Care Unit, Physio, Medical Records, and ECG.</li> <li>• Build would require a minimum of 2 stages to decant existing accommodation</li> <li>• Complex linkages and decanting strategy</li> </ul>
<b>Zone 3 to the South</b>	<ul style="list-style-type: none"> <li>• Allows for new focus of main entry</li> <li>• Works well with new access road and links to Calvary Hospital</li> </ul>	<ul style="list-style-type: none"> <li>• Impact upon existing departments within Lewis House, displacing non-priority departments including Community Health and Nurses Accommodation.</li> <li>• Complex linkages on Ground (services) and Level 1 (theatres)</li> <li>• Focuses main build on identified service zone</li> <li>• Development is constrained to the west due to the location of the existing UNSW Rural Clinical School which is to be retained.</li> </ul>

TABLE 02: Assessment of Development Zones

Source: Adapted from Rice Daubney

### 3.3 CONSIDERATIONS OF ALTERNATIVES TO THE PROPOSAL

A number of options have been explored based on the conceptual development zones identified in Section 3.2 as well as the retention and integration of existing building stock into the future hospital site.

The options are based on retaining high and medium numbers of existing buildings as follows:

Level of Retention	Buildings to Retain
High	<ul style="list-style-type: none"> <li>• Clinical Services Building</li> <li>• Harvey House (UNSW Rural Clinical School)</li> <li>• Robinson House</li> <li>• Hydrotherapy</li> <li>• Multi-Storey Ward Block</li> <li>• Yathong Lodge</li> </ul>
Medium	<ul style="list-style-type: none"> <li>• Clinical Services Building</li> <li>• Harvey House (UNSW Rural Clinical School)</li> <li>• Yathong Lodge</li> </ul>

TABLE 03: Existing Building Retention Scenarios

#### 3.3.1 Option 1

Option 1 retains a high number of existing buildings with the development zones to the north, frontage to Edward Street and a linear development zone fronting Docker Street.

The existing hospital entry off Edward Street to Lewis Drive is retained, maintaining good access to the Emergency Department. An additional vehicle entry from Docker Street at the intersection with Hardy Avenue connecting to Yathong Street is provided, creating potential future links to Calvary Hospital.

Local parking is provided opposite the entrance to the Emergency Department for emergency drop-off. The existing on grade car park is retained to the north east of the site. Additional parking is created to the south of the site as well as beneath the development zone to the north on a lower ground level.

Refer to Figure 14.

#### 3.3.2 Option 2

Option 2 retains a medium number of existing building stock, with the development zone to the west fronting onto Docker Street.

Option 2 provides a similar vehicular circulation and parking as Option 1, however this option provides a lesser area of additional parking at the southern end of the site.

Refer to Figure 15.

#### 3.3.3 Option 3

Option 3 retains a medium number of existing building stock, with the development zone to the north fronting Edward Street.

Option 3 provides similar vehicular circulation pattern as Options 1 and 2, retaining the existing hospital entry off Edward Street to Lewis Drive and providing an east-west connection by the extension of Yathong Street to a new vehicular entrance point from Docker Street.

Local parking is provided opposite the entrance to the Emergency Department for emergency drop-off. Parking is retained on the existing on grade car park to the north east of the site. Additional parking is created to the south of the site with potential for some to be created beneath the development zone to the north on a lower ground level.

Refer to Figure 16.

### 3.3.4 Assessment of Options

Option 1 involves retaining the existing Ward Block, which has limited opportunities for re-use as its lack of en suite facilities and existing floor to floor heights are not appropriate for clinical uses. The location of this non-clinical building in Zone 1, in proximity to the central acute core of the hospital, limits the opportunities to best respond to the clinical priorities of the Hospital which could otherwise be achieved if the building was to be demolished.

Option 2 does not create a strong presence on Edward Street compared to the other options. The area in the western portion of the site, south of Harvey House, has been identified as an appropriate future expansion zone for the WWBHR project. Alternatively, this portion of the side could provide for a complementary health facility separate to the Hospital.

Option 3 was selected as the preferred option, with building address to Edward Street and with the hospital footprint located centrally to the acute services. The provision of a new clinical building in the location of the existing Ward Block provides opportunities for acute hospital functions central to site with ambulatory functions located on Edward and Docker Streets.

- Development zone
- Retained building
- Parking zone
- Service area
- Road/Vehicular zone
- Vehicular access route
- Pedestrian access route
- Internal staff/patient access
- Internal public access



Build zones



Traffic arrangement



Internal circulation

FIGURE 14: Option 1

Source: Rice Daubney



Build zones



Traffic arrangement



Internal circulation

FIGURE 15: Option 2

Source: Rice Daubney



Build zones



Traffic arrangement



Internal circulation

FIGURE 16: Option 3

Source: Rice Daubney



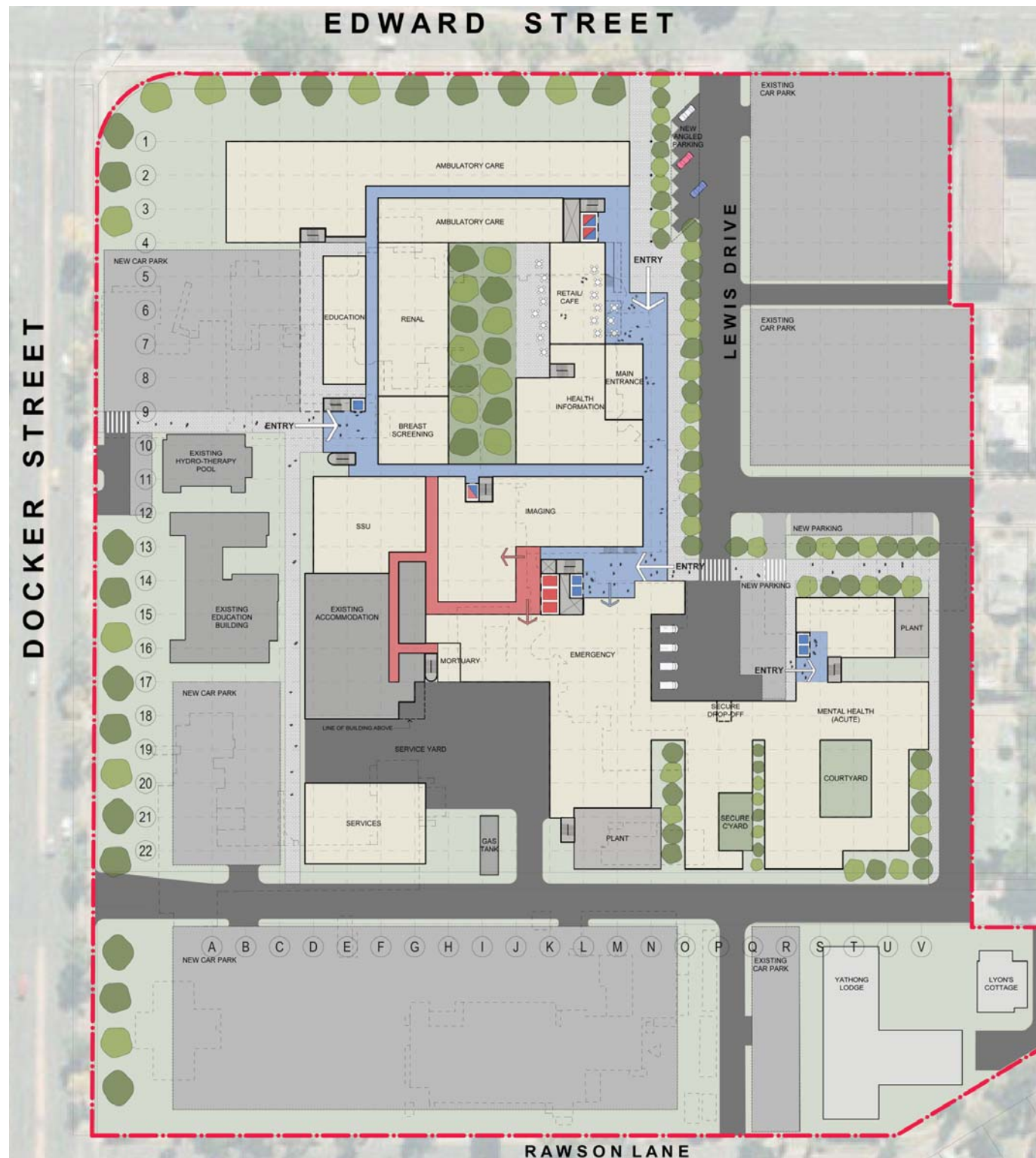


FIGURE 17: Distribution of Facilities (Ground Floor)

Source: Rice Daubney

### 3.4 THE CONCEPT PLAN

The preferred arrangement of development zones in Option 3 has been further refined and forms the basis of the WWBHR Concept Plan.

The Concept Plan sets out the following:

- Distribution and integration of new facilities with existing facilities to be retained;
- Building envelope;
- Vehicular, pedestrian and cycle access;
- Landscaping;
- Ecologically Sustainable Development (ESD) principles; and
- Potential future expansion.

#### 3.4.1 Distribution of facilities

The proposed pattern of use and areas associated with the hospital redevelopment is shown in Figure 17. The uses can be broadly classified into five categories:

- Existing facilities to be retained
- Proposed core medical zones
- Proposed core support zones
- Potential future expansion zones
- General landscape and circulation zone.

The existing facilities to be retained include:

- Clinical Services Building
- Hydrotherapy
- Harvey House (UNSW Rural Clinical School)
- Yathong Lodge

The proposed core medical zone is located centrally to the site, with elements extending north (Community Health, Ambulatory Care and Clinics) and east, over the existing Lewis Drive (Mental Health). The layout of facilities in the proposed core medical zone maximises efficiencies and synergies in the new hospital and while minimising impact on existing departments and facilities throughout the staged construction of the project.

Proposed core support zones include car parking and engineering services and are located around the periphery of the site. The service area will be located adjacent to the existing loading dock.

Potential future expansion zones are identified in the following locations:

- Above the Inpatient Units in the northern arm of the central core, for additional Inpatient Units;
- East of the central core, for additional Inpatient Units;
- South west corner of the site, for ambulatory functions given the proximity to Docker Street; and
- Existing on grade car park in the north east corner, for future car parking.

The landscape and circulation zones make up the balance of site.

### 3.4.2 Access and Car Parking

Currently, the main entrance to the hospital is provided from Lewis Drive which is accessible from Edward Street. There are few way-finding measures and the building entrance is poorly defined. Car parking is similarly accessed via Lewis Drive with additional zones located randomly throughout the site. Pedestrian pathways exist but there are no logical routes.

The proposed access and car parking arrangement for the WWBHR project is shown in Figure 18 and described below.

#### Vehicular Access

##### Lewis Drive

One-way access from Edward Street to the main entry and Emergency Department of existing hospital on Lewis Drive will be maintained.

The central portion of Lewis Drive will be removed between Yabtree Street and Yathong Street to accommodate the provision of a ground floor linkage between the new Emergency Department and Mental Health facility over this portion of the existing road. This will result in the separation of Lewis Drive into two sections:

- Lewis Drive North, which will maintain one-way access from Edward Street south bound, linking into Yabtree Street
- Lewis Drive South, which will maintain the one-way southbound connection between Yathong Street and Brookong Avenue.

A New Street will be provided between Yabtree Street and Yathong Street. It will provide two-way access along the eastern side of the new Mental Health facility.

Consequently, Yabtree Street is to be upgraded to a two-way street to permit egress from Lewis Drive North.

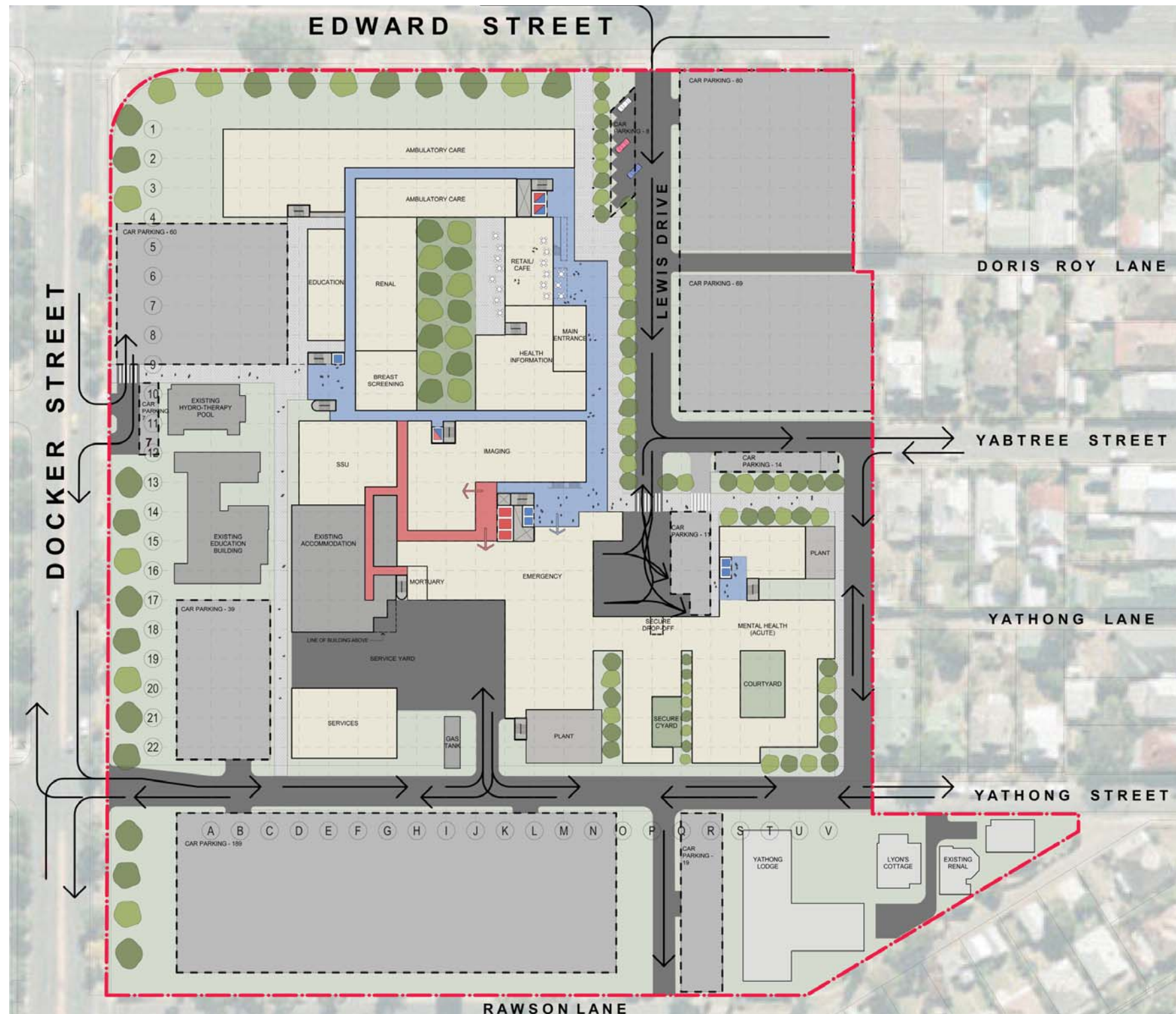


FIGURE 18: Access and Car Parking

Source: Rice Daubney

#### **Docker Street and Yathong Street**

A new east-west link will be created by the extension of Yathong Street westward through to a new vehicular entry/exit at the intersection of Docker Street and Hardy Avenue. This intersection will provide improved links to Calvary Hospital. This will provide a separate service vehicle access route along Yathong Street.

#### **Emergency and Service Vehicle Access / Egress**

Improving emergency access has been a key design objective. Emergency vehicles have been provided with one way access from Edward Street onto Lewis Drive North to the ambulance bay. Egress is available to Edward Street (via Yabtree and Murray Streets) and to Docker Street (via New and Yathong Streets).

Existing access/egress for service vehicles is provided via Lewis Drive, Yathong Street and Rawson Lane. Yabtree Street and Doris Roy Lane are also currently used by service vehicles.

Dedicated hospital vehicle access is provided on Lewis Drive North south of Yabtree Street.

A new service vehicle route is provided by the new entry/exit at the intersection of Docker Street and Hardy Avenue. This route will allow service vehicles to enter and exit the WWBHR site from both ends of Yathong Street (Docker Street or Murray Street) effectively separating site servicing from emergency and other vehicles arriving at the ambulance bay or main entrance on Lewis Drive North.

#### **Pedestrian and Cycle Access**

Primary pedestrian routes will be provided from Edward, Docker and Lewis Streets with entry to facilities located along these routes.

#### **Parking**

The WWBHR project provides for a significant expansion of on-site car parking with some 496 spaces, consistent with providing for future staff and patient on-site parking demand and reducing on-street parking needs. Parking areas are generally located around the periphery of the WWBHR site, with access from Lewis Drive, Docker Street and Yathong Street.

### 3.4.3 Landscape

A Landscape Concept Plan has been prepared for the WWBHR project as shown in Figure 19.

#### General Landscape

The landscape / external design generally aims to achieve the following outcomes:

- Provide circulation through external areas of site
- Provide necessary amenity; respite, shade, visual amelioration of built form etc
- Provide specific requirement of various users i.e secure, acute mental etc.
- Adhere to all relevant BCA and Australian Standards
- Maintain, where possible existing significant trees on the site.

Respect for safety sightlines and Crime Prevention Through Environmental Design (CPTED) will be considered in the landscape design component of these areas at the Project Application Stage. The paths and steps will also be designed to BCA requirements.

Along the boundary and setback existing trees will be complemented and enhanced with new planting to assist in providing a green outlook and screening the hospital from the busy Sturt Highway and surrounding streets. These areas shall also include paths and circulation where necessary ensuring access across the site.

Open grass areas shall be provided in various locations around the site providing passive recreational relief for relevant hospital users and staff.



FIGURE 19: Landscape Concept Plan

Source: Site Image

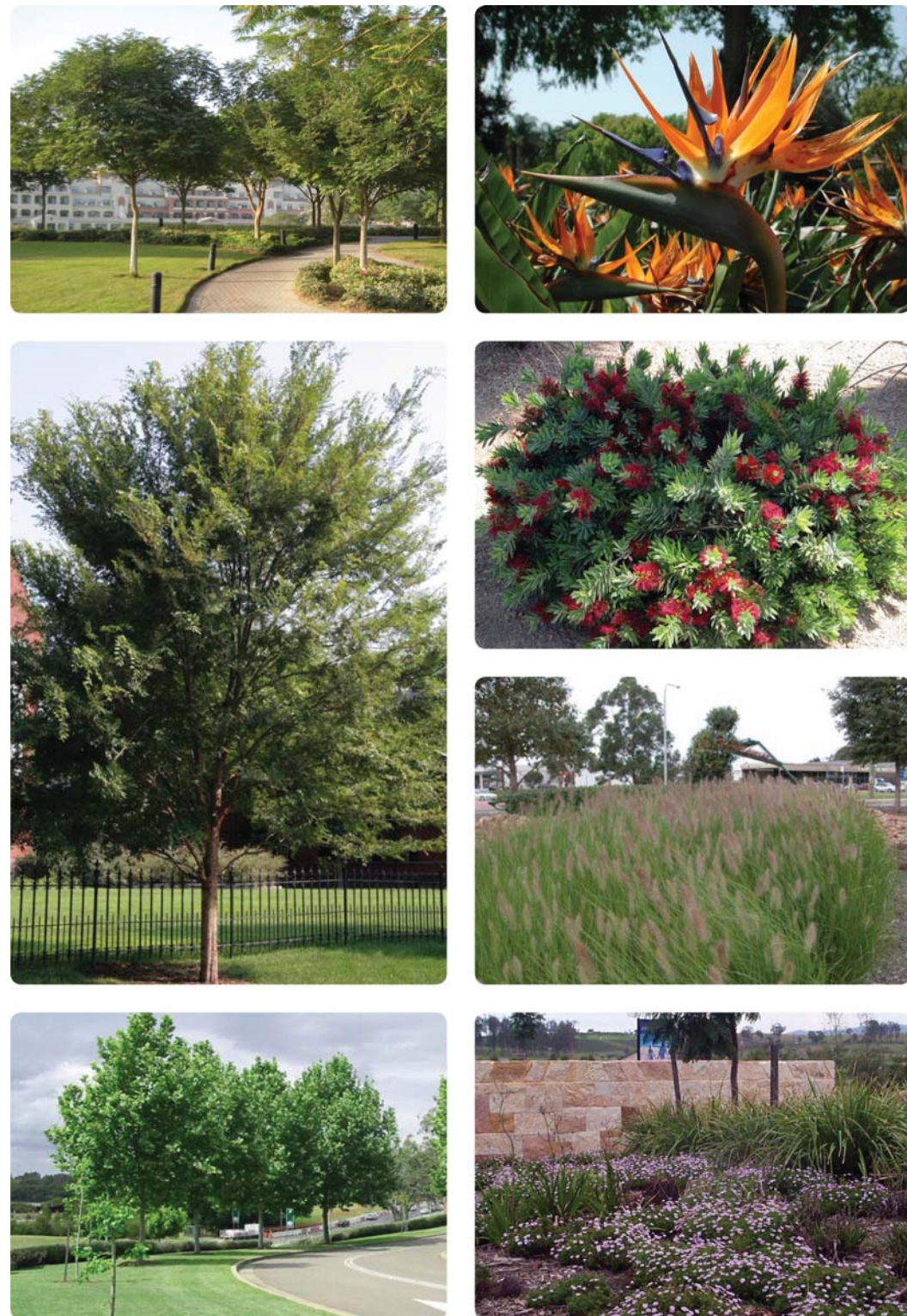


FIGURE 20: Planting Species

Source: Site Image

### Internal Courtyards

A series of internal and annexed courtyards will be accessible to patients to provide respite, relaxation and reflection, and may also be used for therapy activities. Several courtyards are proposed to provide the simple function of a pleasant outlook and also provide valuable natural contrast to the built form and a soothing natural outlook.

A variety of planting forms and textures will be utilised to provide sensory stimulation and to create a range of spaces and environments. Secure courtyards will respect their intended functions, and a careful consideration for materials, plant species and furniture will be adopted.

Viewing courtyards will provide a visual relief and respite for patients and hospital staff. They will consist of plantings which are both low maintenance and low water tolerant while providing seasonal and sensorial interest. These viewing courtyards also provide valuable natural light and a soothing natural outlook.

### Carpark Landscaping

While not nominated at this concept stage, the carparks will provide landscape zones to assist with shading and aesthetic qualities. ESD principles will be pursued e.g; inclusion of bio-swales and saw toothed curbing to harness stormwater runoff from the carpark surface to irrigate plantings as well as help with the removal of heavy metals and excess nutrients.

### General Planting Species and Materials

Landscape materials will be of a general low maintenance nature. By implementing the use of low water use plants, minimal lawn areas and large garden beds which generally demand moderate attention the landscape scheme will provide an aesthetically pleasing outlook while reducing maintenance.

The selected species will include a combination of natives and exotics with native groundcovers and shrubs selected for their hardiness and low water demand, and exotic deciduous trees used so as to allow for solar access during winter while still providing shelter and shade during summer. Deciduous species selection will also complement the existing landscape character of the hospital and surrounding city.

Where possible existing mature trees will be retained to preserve the landscape character of the area and increase the potential green outlook. All proposed trees are intended to be semi-mature to mature specimens.

The hardstand comprises of paved and concrete pathways and gravel/ballast areas.

Large areas of softscape will help soften the hardstand, discourage heat absorption, and generally create a pleasant and welcoming aesthetic environment.

Refer to Figure 20.

### 3.4.4 Ecologically Sustainable Design

Environmentally sustainable design (ESD) for the WWBHR project will be governed by the specific functional and maintenance requirements. There will be a strong focus on engineering solutions that complement passive design outcomes and reduce reliance on artificial means of heating, cooling, ventilation and lighting, while providing desirable levels of thermal, acoustic and visual comfort.

ESD principles for the WWBHR project are provided in Section 4.6.

Specific ESD measures relating to the detailed design of the WWBHR project will be provided at Project Application stage.

### 3.4.5 Proposed Building Heights

The proposed building heights will be 8 storeys maximum at the centre of the site and stepping down to 5 storeys in the north, 2 storeys in the east and 2 storeys in the west to minimise overshadowing impacts on neighbouring residences. Refer to Figure 21.

The Acute Hospital will have a maximum of 8 storeys, comprising Ground Floor Emergency Department, Level 1 Procedures Centre, four levels of Inpatient Units with a plant room above and a roof top helipad. The northern arm of Inpatient Units will be 5 storeys in height.

The Clinical Services Building will be extended two storeys to the north, incorporating the Renal department on the Ground Floor and Angiography on Level 1.

The new Mental Health facility will be 2 storeys, in keeping with the surrounding low scale buildings.

The Community Health, Ambulatory Care and Clinics building on Edward Street will be 4 storeys with a recessed plant above adequately setback from the street.

The new Engineering Services building will be 2 storeys in height adjacent to the existing loading dock.

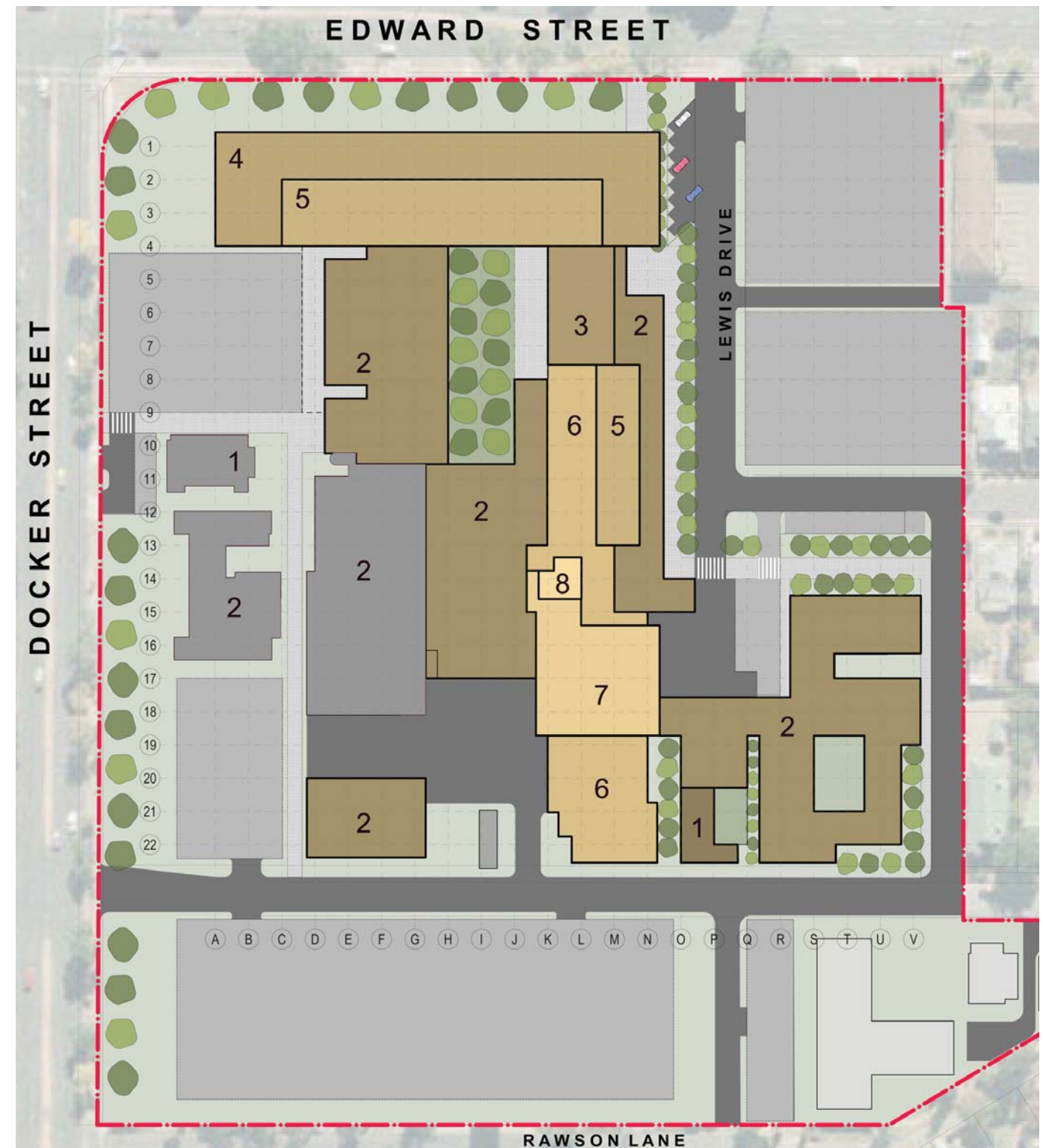


FIGURE 21: Building Heights

Source: Rice Daubney



### 3.4.6 Potential Future Expansion

As discussed in Section 3.4.1, a number of future development expansion zones have been identified, including:

- Above the IPUs in the northern arm of the central core, for additional IPUs;
- East of the central core, for additional IPUs;
- South west corner of the site, for ambulatory functions given the proximity to Docker Street; and
- Existing on grade car park in the north east corner.

The Concept Plan provides up to 41,500m<sup>2</sup> in GFA to meet the requirements up to 2021. The areas identified above have the potential to be developed in the future to meet the requirements beyond 2021. This could result in the expansion of the WWBHR to 60,000m<sup>2</sup> GFA, and would be achieved through a similar staged delivery approach to the adopted Concept Plan.

Refer to Figure 22.

FIGURE 22: Potential Future Expansion

Source: Rice Daubney

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## 4.0 ENVIRONMENTAL ASSESSMENT

The following section addresses the key assessment requirements identified by the Director General as follows:

- Relevant EPIs and Guidelines
- Key Issues:
  - Built Form and Urban Design
  - Environmental and Residential Amenity
  - Staging
  - Transport and Accessibility Impacts
  - Helipad
  - Ecologically Sustainable Development
  - Contributions
  - Contamination
  - Heritage
  - Aboriginal Heritage
  - Drainage and Stormwater
  - Flooding
  - Utilities
  - Flora and Fauna
  - Noise and Vibration
  - Waste
  - Hazards
  - Consultation

The Draft Statement of Commitments pertaining to the assessment requirements identified above is set out in Section 5 of this report.

## 4.1 RELEVANT EPIs AND GUIDELINES

### 4.1.1 Environmental Planning & Assessment Act, 1979

Part 3A of the Act came into force on 1 August 2005. It established assessment procedures for various forms of 'major development' of state or regional significance. Under Clause 6 of the State Environmental Planning Policy (Major Development) 2005, 'Identification of Part 3A projects', such significance can be established if:

- (1) *Development that, in the opinion of the Minister, is development of a kind:*
  - (a) *that is described in Schedule 1 or 2."*

Within Schedule 1 of the SEPP (Major Development) 2005, Group 7 Clause 18 'Health and public service facilities, Hospitals', the definition is as follows:

- (1) *Development that has a capital investment value of more than \$15 million for the purpose of providing professional health care services to people admitted as in-patients (whether or not out-patients are also cared for or treated there)."*

The WWBHR project conforms to the Group 7 Clause 18 class of development given capital investment value of the project is \$317,593,700 (see Appendix M).

On 7 December 2010, NSW Health Infrastructure requested that the Minister declare that the WWBHR project is a 'Major Project' pursuant to Regulation 6 of the SEPP. Concurrently a PEA was submitted to obtain the DGRs.

On 24 January 2011, the DoP confirmed that the WWBHR project was a 'Major Project' and provided the DGRs by which the project would be assessed. This Concept Plan Application has been prepared in accordance with the matters outlined in the DGRs.

The Concept Plan Application approval process provides for the Minister to undertake a coordinated, whole of government assessment of the merits of a project of significance to the state, and to recommend approval of the detailed aspects of the project.

### 4.1.2 State Environmental Planning Policy (Major Development) 2005

SEPP (Major Development) 2005 came into force on 25 May 2005 and was most recently amended on 31 July 2009. The SEPP defines development that is state significant development and is determined by the Minister for Planning.

The WWBHR project was declared a 'Major Project' on 24 January 2011 under the EP&A Act, pursuant to Regulation 6 of the SEPP because it falls within Schedule 1, Group 7 Health and public service facilities, Clause 18 Hospitals.

### 4.1.3 State Environmental Planning Policy No. 55 – Remediation of Land

SEPP No. 55 – Remediation of Land states that land must not be rezoned or developed unless contamination has been considered and, where relevant, land has been appropriately remediated.

Any contaminated land will be remediated prior to commencement of works.

#### 4.1.4 State Environmental Planning Policy No. 33 – Hazardous and Offensive Development

SEPP No. 33 – Hazardous and Offensive Development came into force on 11 March 1992 and provides clear definitions of hazardous and offensive industries where used in environmental planning instruments. It aims to facilitate development defined as hazardous and/or offensive, or potentially so, as defined in the SEPP by ensuring sufficient information is made available to the consent authority to assess whether development is hazardous or offensive, and in doing so impose conditions accordingly, taking into account measures proposed by the proponent to reduce or minimise any adverse impact to human health, life, property or to the biophysical environment.

An assessment of the WWBHR project against SEPP 33 – Hazardous and Offensive Development will be undertaken at Project Application stage (see Section 4.17).

#### 4.1.5 State Environmental Planning Policy (Infrastructure) 2007

SEPP (Infrastructure) 2007 came into force on 1 January 2008 and was most recently amended on 2 March 2011. The SEPP aims to facilitate the effective delivery of infrastructure across NSW.

The WWBHR project falls within 'Division 10 Health services facilities' of the SEPP which permits some development without consent including demolition of buildings.

#### 4.1.6 NSW State Plan

The State Plan is the NSW Government's long term plan to deliver the best possible services to the people of NSW.

The State Plan identifies the redevelopment of the WWBHR in its infrastructure projects list.

#### 4.1.7 Wagga Wagga Local Environmental Plan 2010

Wagga Wagga Local Environmental Plan 2010 (WWLEP 2010) came into force on 16 July 2010.

Under the WWLEP 2010, the WWBHR site occupies an area primarily zoned SP2 Infrastructure (Hospital) and part zoned R3 Medium Density Residential. Health services facilities (including hospitals) in the R3 zone are permissible with consent. The proposed development is permissible with consent under the current LEP.

Wagga Wagga Base Hospital is listed as a Heritage Item I261 under Part 1, Schedule 5 Environmental Heritage of WWLEP 2010. This listing relates to Lot 77, DP 757249 and Lot 13, DP 659184, and includes the Old Hospital Building and Multi-Storey Ward Block.

The Wagga Wagga Conservation Area, which is listed under Part 2, Schedule 5 Environmental Heritage abuts the southern boundary of the site.

To achieve the development of an integrated service delivery model, these LEP listed buildings cannot be retained as part of the WWBHR project. These buildings are discussed in detail in Section 4.5 and the Heritage Impact Assessment provided as part of this Concept Plan Application in Appendix I.

#### 4.1.8 Wagga Wagga Development Control Plan 2010

Wagga Wagga Development Control Plan 2010 (WWDCP 2010) was approved by Council on 27 May 2010 and came into effect on the making of WWLEP 2010. WWDCP 2010 contains detailed provisions that supplement the provisions of WWLEP 2010. As WWLEP 2010 is a comprehensive DCP, no other DCPs apply to the Concept Plan.

The following DCP provisions are relevant to the WWBHR project:

- Part 2.3 Off-Street Parking:
  - Car parking requirement of 1 space / 25m<sup>2</sup> of additional GFA for hospital redevelopments;
- Part 2.6 Safety and Security:
  - Crime Risk Assessment is required for hospital developments.

A further detailed car parking assessment is provided in Section 4.4.1.

Crime Risk Assessment will be prepared at Project Application Stage.

#### 4.1.9 Other Relevant Legislation

##### Floodplain Development Manual 2005

Wagga Wagga City Council abides by and implements the New South Wales Government's Floodplain Development Manual which was gazetted on 6 May 2005. The Manual aims to reduce the impact of and losses from flooding, but recognises the benefits of use, occupation and development of flood prone land.

## 4.2 BUILT FORM AND URBAN DESIGN

The DGRs state that the following items must be addressed:

- *Height, bulk and scale of the proposed development within the context of the locality, adjoining hospital buildings, and surrounding residential development; and*
- *Details of proposed open space and landscaped areas.*

The urban design of the WWBHR project responds to the following design parameters:

- That the site forms part of an existing health precinct which will be enhanced by the provision of a modern health care facility which acknowledges the inherent qualities of the site's heritage, topography and landscape.
- That the site is bounded by Edward Street to the north and Docker Street to the west - the 'front' of the hospital - and by Rawson Lane to the south which offers rear lane access to the residences that face Brookong Avenue.
- That the site abuts a proposed Heritage Conservation Area to the south.
- That the site is surrounded by development that is broadly single storey and low density.
- That the redevelopment will result in more efficient access routes for staff, patients and visitors, as well as emergency and services vehicles.
- That the redevelopment will result in car parking interspersed around the periphery of the site, which will incorporate new and existing landscaping as well as pedestrian paths.
- That the redevelopment will need to maintain the urban design relationships between existing and future components, including the relationship to surrounding land uses.

### 4.2.1 Height, Bulk and Scale of the Development

The existing hospital site is generally flat however there is a fall from the south east across the site, towards the corner of Edward and Docker Streets, of approximately 3.6m.

The surrounding land use is predominately residential but forms part of an existing health precinct. In broad terms the bulk and scale of the surrounding development is single storey low density.

The southern boundary zone of the site (adjacent to Rawson Lane) abuts Wagga Wagga Conservation Area. The southern side of the lane is characterised by the backs of single storey residences, car parking areas, garages and private backyards. In response, on-grade landscaped car parking will be located along this edge extending to the existing Yathong Lodge, resulting in minimal impact on the residences with a rear address to Rawson Lane. Refer to Figure 11 (p.19).

As described in Section 3.4.5, the height of the new Acute Hospital will be 8 storeys (including a rooftop helipad) at the core of the hospital stepping down to 4, 2 and 1 storey buildings to the north, east and west respectively. The location of taller elements toward the centre of the site, together with the proposed on-grade parking and landscape areas along the boundaries of the site, minimise potential bulk and scale impacts on the surrounding residences.

Formal landscaping once occupied the northern sector of the site, providing a visual buffer from adjacent major roads. This has been lost over time, for safety reasons following arborist inspections, and the landscaping is now characterised by grassed areas with scattered trees.

The overall scale of the redevelopment responds to the surrounding land uses, topography and landscape and is sensitive to the site boundary conditions.



FIGURE 23: View looking east from Docker Street



Source: Rice Daubney



FIGURE 24: View looking north east from Docker Street



Source: Rice Daubney



FIGURE 25: View looking south from Edward Street



Source: Rice Daubney

#### 4.2.2 View Analysis

Figures 23, 24 and 25 demonstrate the built form mass of the proposed development in its surrounding context. The figures also indicate that the proposed development presents minor visual impacts from various strategic view points. From Edward and Docker Streets, the height of the proposed built form, compared with the existing hospital, is reduced.

Photomontages demonstrating the proposed development in its finished form (demonstrating building articulation, openings, materials, colours and finished) will be prepared when the detailed architecture is resolved at Project Application Stage.

#### 4.2.3 Landscaping and Open Space

Section 3.4.3 describes the Landscape Concept for the WWBHR project. Refer to Figure 19 (p. 26).

Details of proposed landscaping and open space, including planting arrangements, species selection, lighting, furniture and paving materials, will be provided at Project Application Stage.

### 4.3 ENVIRONMENTAL AND RESIDENTIAL AMENITY

The DGRs state that the following items must be addressed:

- *Impacts of the proposal on solar access, acoustic privacy, visual privacy and wind impacts (within the site and on surrounding development); and*
- *Details of the measures to be implemented to achieve a high level of environmental and residential amenity.*

#### 4.3.1 Solar Access

The WWBHR project has been designed in a manner that concentrates the bulk of facilities toward the centre of the site with parking and landscaping around the periphery. As a result, there will be minor shadow impact on neighbouring properties.

Properties along Edwards Street to the north and Docker Street to the west will not be impacted by overshadowing given that these frontages feature a landscape buffer (up to approximately 20m wide) and areas of surface car parking.

The motel and properties to the north east will not be impacted by overshadowing as the surface car park provides generous setback from the shadow impacts cast by the 4 storey Ambulatory Care, Allied Health facilities and Acute Hospital IPUs.

Properties to the south east will not be impacted by overshadowing as Lewis Drive provides adequate setback from the 2 storey Mental Health facility.

Properties to the south with rear address to Rawson Lane will not experience overshadowing impacts given that there is a surface car park located on the northern side of the road.

Shadow diagrams showing solar access to the site and adjacent properties for 9.00 am, 12.00 midday and 3.00 pm on the winter solstice (21 June) are shown in Figure 26. Detailed shadow diagrams (including those for the summer solstice, winter solstice and equinox) will be provided at Project Application stage.

#### 4.3.2 Visual Privacy

The new facility is bounded by Edward Street to the north and Docker Street to the west, neither of which present any visual privacy issues.

To the east the new facility is bounded by an existing motel and a number of residences. This address will be characterised by the continuing use of surface car parking, which will not pose any visual privacy issues.

To the south the new facility is bounded by a number of residences, many of which are used for consulting purposes, with a rear address to Rawson Lane. This address will also be characterised by surface car parking. It is noted that many of the residences have taken advantage of vehicular access via Rawson Lane and converted backyards to car parks which has mitigated visual privacy issues.

The visual impact of the redevelopment has been addressed in Section 4.2.2. A series of massing models have been provided to show the limited impact of the redevelopment on the sight lines to and from surrounding buildings and in particular the residences with a rear address to Rawson Lane.

#### 4.3.3 Acoustic Privacy

Acoustic privacy is also mitigated by the design of the WWBHR project which concentrates facilities toward the centre of the site with parking and landscaping to the periphery.

#### 4.3.4 Wind Impacts

Wind impacts in relation to helicopter operations resulting from the relocation of the WWBH helipad from Duke of Kent Oval to on site will be provided at Project Application stage.

#### 4.3.5 Mitigation Measures

Specific details of the measures that will be implemented to achieve a high level of environmental and residential amenity, such as building articulation and façade treatments, will be provided at Project Application stage.

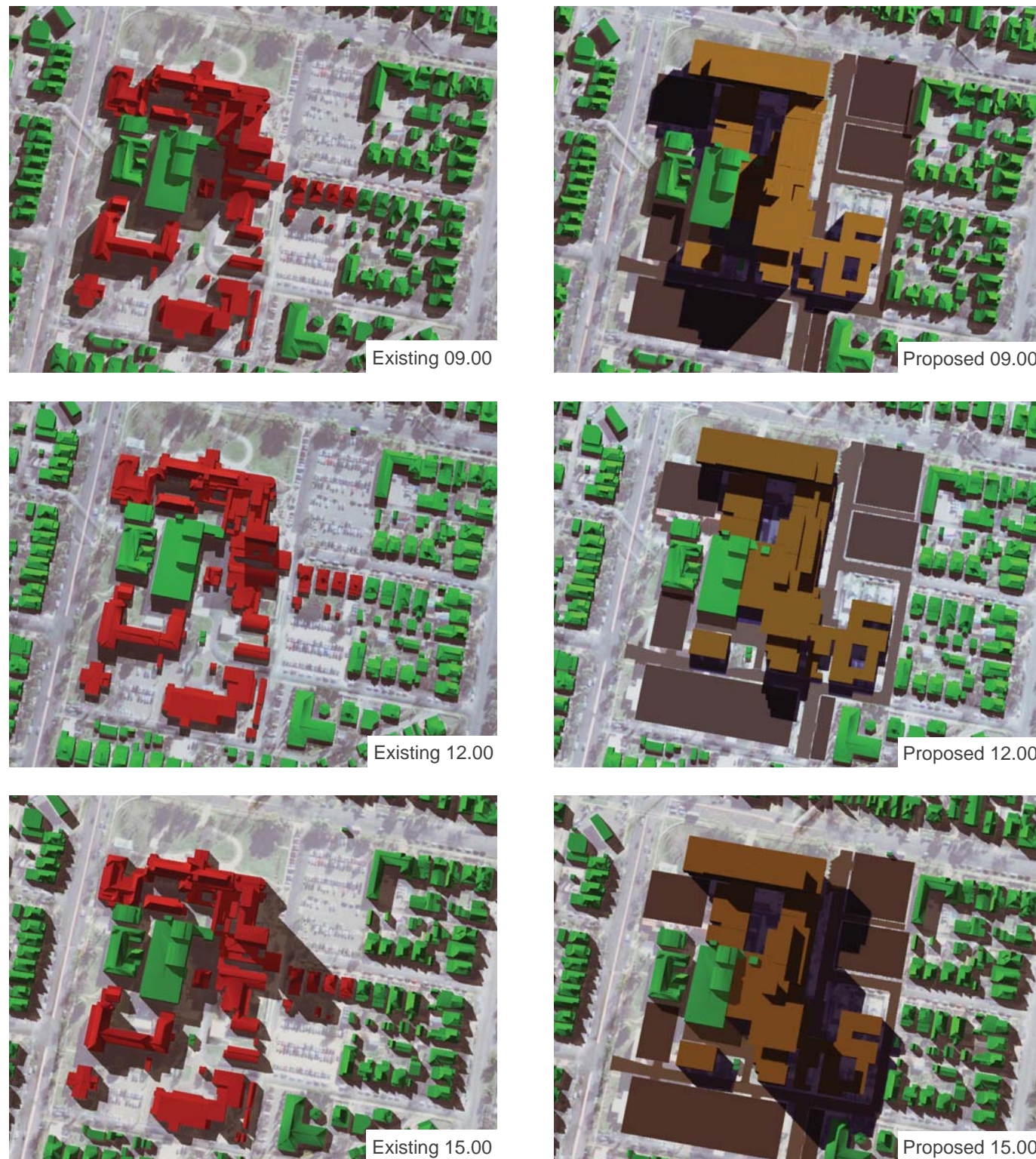


FIGURE 26: Shadow Diagrams - Winter Solstice (21 June)

Source: Rice Daubney

#### 4.4 STAGING

The DGRs state that the following items must be addressed:

- Details regarding the staging of the proposed development, including information regarding the future Project Applications and the extent of works proposed for each application.

The WWBHR project involves the delivery of a 41,500m<sup>2</sup> facility with the potential for future expansion, as identified in the masterplan, up to 60,000m<sup>2</sup> beyond the current planning horizon of 2021.

The Concept Plan provides for the redevelopment of up to 41,500m<sup>2</sup> and will comprise three major phases of development including:

- Stage 1 Mental Health, Emergency Department, Procedures Centre and Sterile Supply Unit:
  - Stage 1A, provides an Acute Mental Health Facility on the ground floor with Non-Acute on Level 1.
  - Stage 1B involves the construction of a new build Emergency Department and Procedures Centre linking into the existing Clinical Services Building and the relocation of the Sterile Supply Unit to the ground floor of the Clinical Services Building.
- Stage 2 Acute Hospital:
  - Stage 2A continues construction above the Emergency Department and Procedures Centre with four levels of Inpatient Units to the south and construction of the helipad.
  - Stage 2B involves the demolition of the existing Multi-Storey Ward Block and the construction of 2 levels to the north of the Clinical Services Building.
  - Stage 2C involves the construction of Inpatient Units to the north.
- Stage 3 Ambulatory Care and Allied Health Facilities:
  - Involves the construction of the balance of accommodation providing Ambulatory Care and Allied Health Facilities and the demolition of redundant hospital buildings to clean up the site and provide additional parking areas.

The construction staging has been influenced by the location of the existing buildings and their health service functions. The principal requirement of the construction staging is to keep existing hospital services and functions operational throughout the redevelopment process.

Separate Project Applications will be made for each of the stages represented in the Concept Plan. The extent of works for each stage is described below and shown in Figures 27 and 28.

Figures 27 and 28 demonstrate the proposed staging and decanting sequence for the WWBHR project as a series of massing studies.

**Stage 1A**

1. The existing hospital site viewed from the north west corner of the site.
2. The first build of the Stage 1 WWBHR is the two storey Mental Health building constructed on the existing gravel car park.

**Stage 1B**

3. The existing Mental Health building, Gissing House and the existing Mortuary building are demolished to make room for new development.
4. Build Emergency Department (ED) on Ground Floor (with shell space for the Imaging Department) and a new Procedures Centre linking into the existing theatres located on Level 1 of the existing Clinical Services building. Relocate Sterile Supply Unit to ground floor of Clinical Services Building.
5. The completion of these works mark the end of the Stage 1 Redevelopment.

**Stage 2A**

6. Stage 2 of the redevelopment proposes 4 levels of IPUs above ED and Procedures Centre. The entrance lobby to ED and Procedures Centre is extended a further 4 levels to serve four Inpatient floors which will accommodate ICU, Womens Health and New Born Care, and Surgical floors providing 120 beds. A helipad is proposed above these IPUs on Level 7 as part of this Stage 2 development. The shell space provided on the ground floor adjacent to ED is fitted out for the new Imaging Department and imaging is decanted from the ground floor of the existing Ward Block to its new location adjacent to ED.

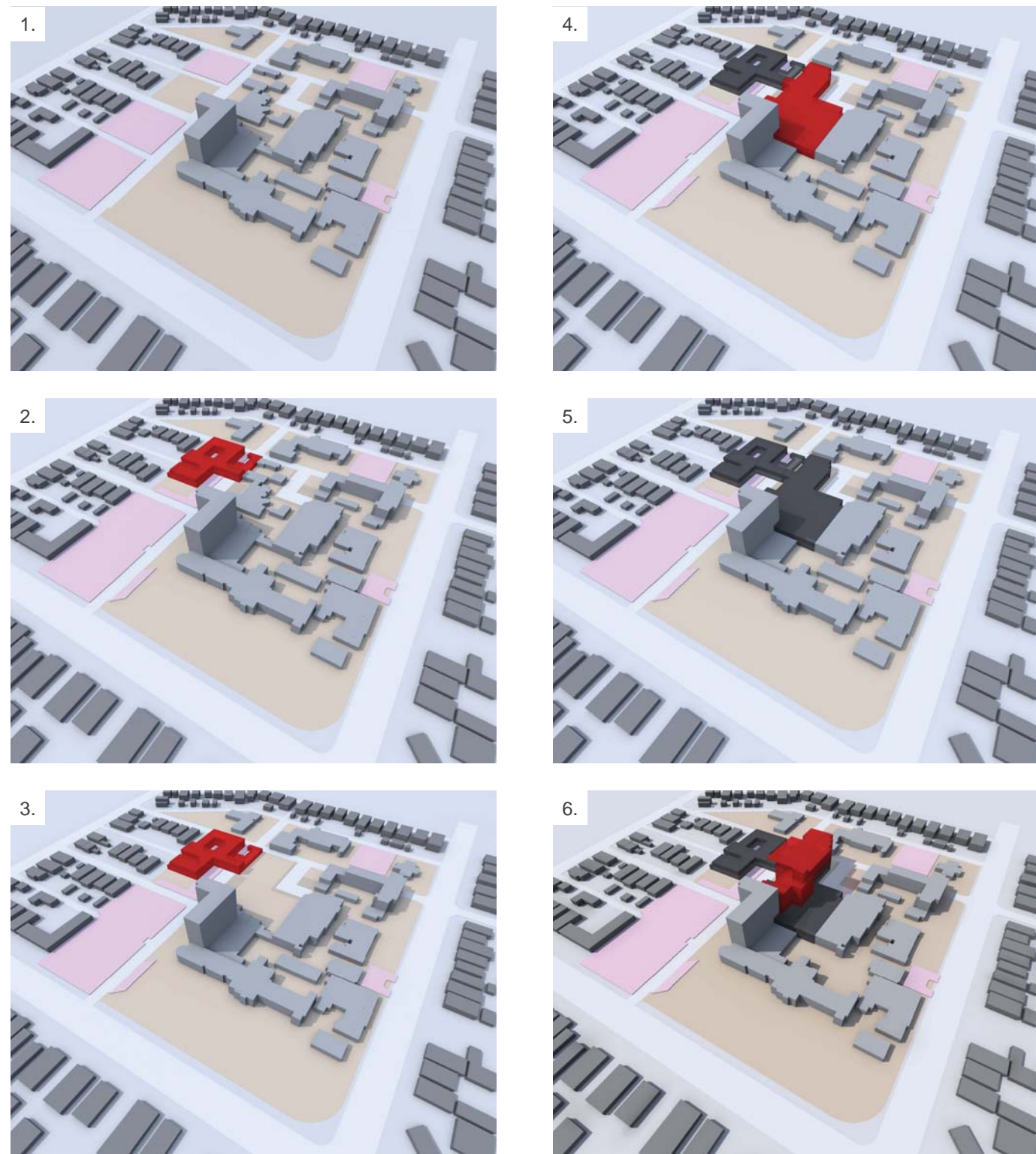


FIGURE 27: WWBHR Staging Sequence (Stage 1A - 2A)

Source: Rice Daubney



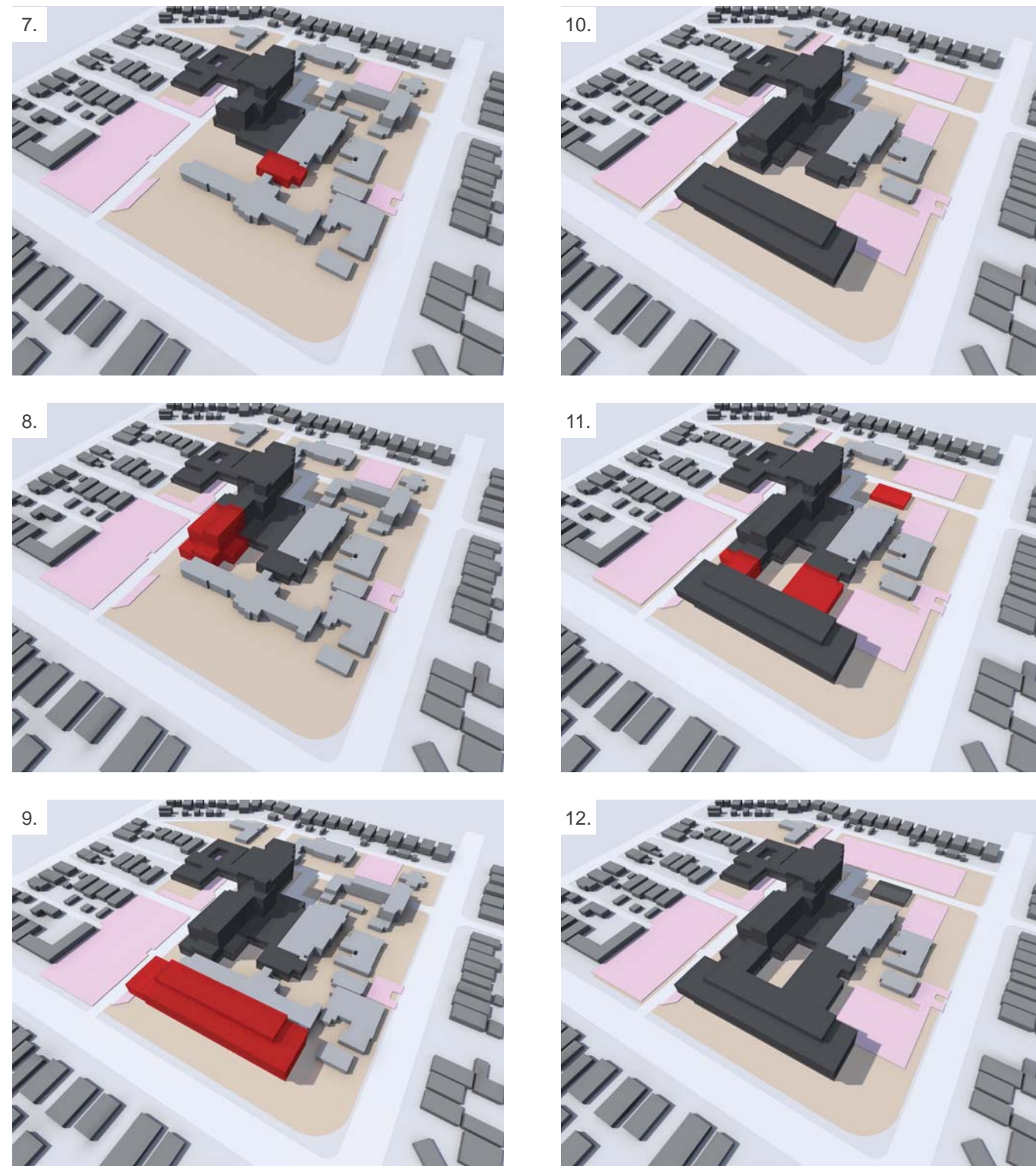


FIGURE 28: WWBHR Staging Sequence (Stage 2B - 3)

Source: Rice Daubney

**Stage 2B**

7. A two storey extension is proposed to the north of the existing CSB providing Renal on the ground floor and Angiography on Level 1.

**Stage 2C**

8. The construction of the IPUs to the north will provide the balance of the beds for the acute hospital. This represents the end of Stage 2 – the provision of the acute hospital.

**Stage 3**

9. Stage 3 of the Redevelopment sees the construction of community health, ambulatory care and clinics with frontage to Edward Street.

10. This enables the second major demolition to occur on the site with the demolition of existing Old Hospital, Robinson House, Lewis House and Dental and cleans up the site.

11. Following demolition of the Old Hospital Building the ambulatory care services building can be connected into the acute hospital. In addition replacement of engineering to the south of the CSB locating the service area adjacent to the existing loading dock.

12. The 41,500m<sup>2</sup> hospital is provided. This concept plan strategy will rationalise the existing hospital site providing set backs from the street with landscaped areas to increase patient and staff amenity. In addition the space around the new hospital will allow for future expansion.

- New build
- New facilities
- Retained facilities
- Car parking area
- Existing surrounding built form

## 4.5 TRANSPORT AND ACCESSIBILITY IMPACTS

The DGRs state that the following items must be addressed:

- *Provide a Transport & Accessibility Study prepared with reference to the NSW State Plan, the NSW Planning Guidelines for Walking and Cycling, the Integrated Land Use and Transport policy package, the NSW Bike Plan, Premier's Council for Active Living (PCAL) - Development & Active Living, the RTA's Guide to Traffic Generating Development, and the Austroads Guide to Traffic Management Part 12: Traffic Impacts of Development (where relevant), considering the following:*
  - *Detail traffic impacts associated with the staged demolition and construction phases of development, including the impact on the surrounding road network;*
  - *Daily and peak operational traffic movements likely to be generated by the proposed development, including the impact on nearby intersections and the need / associated funding for upgrading or road improvement works (if required). The traffic impact assessment should consider base models with future traffic generated by the proposal; State Environmental Planning Policy No.55 – Remediation of Land;*
  - *Detail the existing pedestrian and cycle movements within the vicinity of the site and determine the adequacy of the proposal to meet the likely future demand for increased public transport and pedestrian and cycle access;*
  - *Describe the measures to be implemented to promote sustainable means of transport to support and achieve relevant State Plan targets including public transport usage and pedestrian and bicycle linkages in addition to addressing the potential for implementing a Workplace Travel Plan; NSW State Plan;*

- *Detail the current and projected future pedestrian movements between the hospital and the surrounding medical specialists;*
- *Details of the proposed access, parking provisions, loading facilities, taxi and community pickup / drop off, service vehicle movements and emergency vehicle access associated with the proposed development; and*
- *Provision of appropriate levels of on site car parking for the proposed development having regard to the public transport accessibility of the site, opportunities for car sharing, local planning controls and RTA guidelines (note: The Department supports reduced parking provisions, if adequate public transport is available to access the site).*

A Transport and Accessibility Study has been undertaken and is included at Appendix F. The study addresses the relevant plans, guidelines and policies and the findings are summarised below.

### 4.5.1 Traffic Impacts

#### Hospital Precinct

Wagga Wagga Base Hospital forms part of a wider health precinct which is currently accessed via on-street parking. Previous traffic studies have revealed that the street system, as well as intersections around the hospital site, are operating at a very good or good level of service during the weekday morning and afternoon peak hours.

The Concept Plan provides for the following key traffic management measures to enhance transport and traffic management within the hospital precinct:

- Creating and aligning a new main access off Docker Street at its intersection with Hardy Avenue, as a four way intersection.
- Upgrading Yabtree Street to a two-way road to allow egress from one-way southbound traffic from Lewis Drive North.
- Providing a substantial increase in existing on-site parking which will reduce existing on-street parking demand.

Together with clearly defined pedestrian routes, the above measures all combine to ensure that the proposed development enhances transport and traffic management within the health precinct.

Detailed traffic modelling and intersection analysis will be carried out at Project Application stage.

### Construction

The WWBHR project comprises three major phases of development. The construction staging has been influenced by the location of the existing buildings and the principal requirement of keeping existing hospital services and functions operational throughout the redevelopment process. This includes the need to maintain access for pedestrians, cyclists and cars, and provide adequate levels of car parking.

The specific impacts of demolition and construction on traffic, pedestrians and cyclists, and the mitigation measures to be implemented will be provided at Project Application stage.

### 4.5.2 Traffic Generation

Traffic generation surveys have been undertaken and conclude that the current estimated peak traffic generation of the Wagga Wagga Base Hospital is approximately 170 vehicles in the morning peak hour (8.00am - 9.00am) and 184 in the afternoon peak hour (4.30pm - 5.30pm).

It is anticipated that by the year 2021, the hospital will experience a relatively higher level of activity as a result of the proposed development. It is projected that:

- Acute Separation will increase from around 14,000 to 23,000 per year.
- Bed facilities will increase from 220 to 293.
- An increase in annual outpatient activity from some 161,000 to 193,000.
- The number of staff will increase from 732 to 899.

Based on these figures it is estimated that the total future traffic generation of the hospital represents a 24% increase above current figures, with approximately 211 and 229 vehicles travelling to and from the hospital during the am and pm peak periods respectively.

As intersections and streets around the existing hospital site are all currently operating at a very good or good level of service during the morning and afternoon peak hours on a weekday, it is considered that some additional 40 vehicles (compared to existing) in and out of the WWBHR site during peak hour will not have an adverse impact on the surrounding road networks and intersections.

#### 4.5.3 Existing and Future Pedestrian and Cycle Movements

Currently the main pedestrian access points to the site are via Edward and Docker Streets and all surrounding streets have footpaths. Pedestrian links within the hospital grounds are poorly defined. The traffic signals at the intersection of Edward and Docker Streets provide a crossing facility for both pedestrians and cyclists.

In the Wagga Wagga Integrated Movement Plan (Wagga Wagga City Council and URaP-TTW, 2008) Docker and Murray Streets are identified as potential cycle routes.

The Concept Plan enables improved pedestrian and cycle permeability by providing for:

- A new east-west link between Docker Street and Lewis Drive (aligned with/as an extension of Yathong Street).
- Formalised north-south pedestrian routes parallel to Docker Street and along Lewis Drive.
- Clear and separate pedestrian routes adjacent to car parking zones, to minimise pedestrian/vehicular conflict.
- Locating hospital entrances along dedicated pedestrian routes.

#### 4.5.4 Sustainable Transport Measures

##### Travel Demand

A Work Place Travel Plan (WPTP) for the WWBHR project will be developed to achieve travel demand management practices relevant to the specific needs of the site and its employees. The WPTP will create specific travel behaviour programs aimed at supporting travel modes other than private cars. The WPTP should include initiatives such as:

- Providing public transport information (maps and timetables) to encourage public transport use.
- Improving pedestrian facilities which make it easier and safer to walk to and from the future hospital.
- Promoting the use and awareness of secure bicycle parking, lockers, showers and change facilities within the hospital to encourage cycling.
- Restraining on-street parking to encourage other travel options.

It is proposed that the WPTP be prepared at Project Application stage and prior to the issue of the operation/occupation certificate.

##### Public Transport

The existing hospital site is accessed via three local bus services. These routes provide transport to the hospital, operating from the CBD and stopping near to the corner of Edward Street and Lewis Drive. The CBD is also accessible via taxi which can be ordered via a dedicated phone line.

The existing bus stop and taxi rank on Edward Street near Lewis Drive will be retained as part of the proposed development. Direct telecommunication lines to transportation companies will continue to be available allowing calls to be made for taxi services.

However, it is apparent from previous studies that hospital journey-to-work trips originate from throughout Wagga Wagga which creates a challenge for the enhancement of public transport servicing the hospital. The shift patterns of hospital staff also impose constraints on commercially viable services. Development of appropriate services with local bus operators should be adopted within the WPTP at Project Application stage.

##### Infrastructure

Infrastructure measures necessary to support sustainable modes of transport include:

- Good quality bus stops in close proximity to various buildings within the WWBHR site.
- Dedicated, high quality and safe cycle routes to and from the proposed development.
- Sufficient end-of-trip bicycle facilities, such as bicycle parking, lockers, showers and change facilities, to maximise cycle usage to and from the hospital.
- Highly permeable and safe pedestrian networks to and from the WWBHR site.

Specific measures relating to the provision of infrastructure will be provided at Project Application stage.

#### 4.5.5 Access

##### Access Arrangements

The access arrangements for the proposed development are illustrated in Figure 18 (p. 24) and summarised below. Further details are provided at Appendix F.

The proposed access arrangements include:

- Maintaining the existing main access off Edward Street.
- Reconfiguring the north-south access along the existing Lewis Drive resulting in:
  - Lewis Drive North, which will provide one-way southbound access from Edward Street to Yabtree Street.

- New Street, providing two-way access between Yabtree Street and Yathong Street.
- Lewis Drive South, which will provide one-way southbound access between Yathong Street and Brookong Avenue.
- A signalised entry/exit aligned at the intersection of Docker Street and Hardy Avenue.
- A new entry/exit to off-street parking aligned at the intersection of Docker Street and Gormly Avenue.
- A new east-west link between Docker Street and Lewis Drive/New Street, aligned with Yathong Street. This link will provide a new service vehicle and funeral director access route to the loading dock, separated from emergency access.

The traffic management proposals which will enhance the proposed access arrangements include:

- Allowing only 'left in' off Edward Street for private vehicles.
- Upgrading Yabtree Street to provide access to permit egress from Lewis Drive North.
- Aligning two-way access off Docker Street at its intersection with Hardy Avenue.
- Providing disabled parking to comply with DDA requirements.
- Providing for traffic calming devices (eg. speed bumps) to delineate pedestrian crossings and reduce vehicle speed through the site.

Overall the proposed access arrangements and traffic management measures will ensure that the road systems continue to operate at a good level of service. Vehicular traffic will increase by only some 40 vehicles per hour in peak periods resulting in a minimal impact on the operation of the surrounding street network.

### Car Parking Provision

The Concept Plan provides for 496 on-site car parking spaces. This represents a 63% increase in parking provision, in comparison with a 54% increase in GFA, or a 34% increase in beds. An analysis of existing parking utilisation has indicated that, when growth in staffing numbers is related to total visitor and staff parking, a peak demand of 542 parking spaces would be required. However the proposed level of car parking reflects both the existing level of car dependency in Wagga Wagga and the need to encourage alternative modes of transport.

Car parking spaces will be complemented by proposed improvements in pedestrian and cycle access as well as public transport, all of which serve to encourage alternative modes of travel particularly for staff.

Detailed discussion is provided in Sections 4.1.8 and 4.5.6 with regards to DCP compliance and estimated parking demand respectively.

### Service Vehicles

Existing service delivery activities will be formalised with an entry provided off Yathong Street (via Docker Street in the west and Murray Street in the east) into a service yard adjacent to the proposed Services building. This entry will also provide access for funeral services vehicles.

The new east-west Yathong Street link provides for a service access route separate from emergency and other vehicles relying on Lewis Drive North.

### Emergency Vehicles

Emergency vehicles will have access off Edward Street via one way access on Lewis Drive North to the ambulance bay. Egress is available to Edward Street (via Yabtree and Murray Streets) and to Docker Street (via New and Yathong Streets).

### Emergency Evacuation and Public Access

NSW Health intends to implement an Emergency Evacuation Plan as part of its review of the existing operating policies and procedures at Wagga Wagga Base Hospital. The plan will outline the process of emergency evacuation and public access and will account for possible flood impact scenarios, including restricted or cut-off access and the transfer of equipment and patients in such situations. The plan will be ongoing during the operation of the new hospital.

#### 4.5.6 Car Parking Provision

##### Parking Demand

A parking usage survey undertaken in 2007 indicated an existing peak parking demand of 466 spaces, including 300 on-site and 166 on-street.

Based on the application of the existing parking demand profile and staff/non-staff ratio to the predicted future hospital population (as described in Section 4.5.2), the WWBHR project will generate car parking demand for 542 spaces.

It should be noted that the following assumptions were made while estimating future parking demands:

- The number of in/out cars and parking demand for the car park at 6:00am is unchanged.
- The vehicles/person ratios remain the same for in/out vehicles in the future.
- The in/out persons and cars profiles remain the same in the future.
- The ratio between in/out cars remains the same in the future.

### Car Parking Provision

The Wagga Wagga Base Hospital site currently provides 304 spaces on-site with 275 spaces on-street, which represents a total car parking availability of 579 spaces.

The Concept Plan provides for 496 on-site parking spaces. This will accommodate over 90% of the future WWBHR project parking demand and will significantly reduce overflow demand onto the adjacent street network from 166 (existing peak on-street parking demand) to 46 spaces.

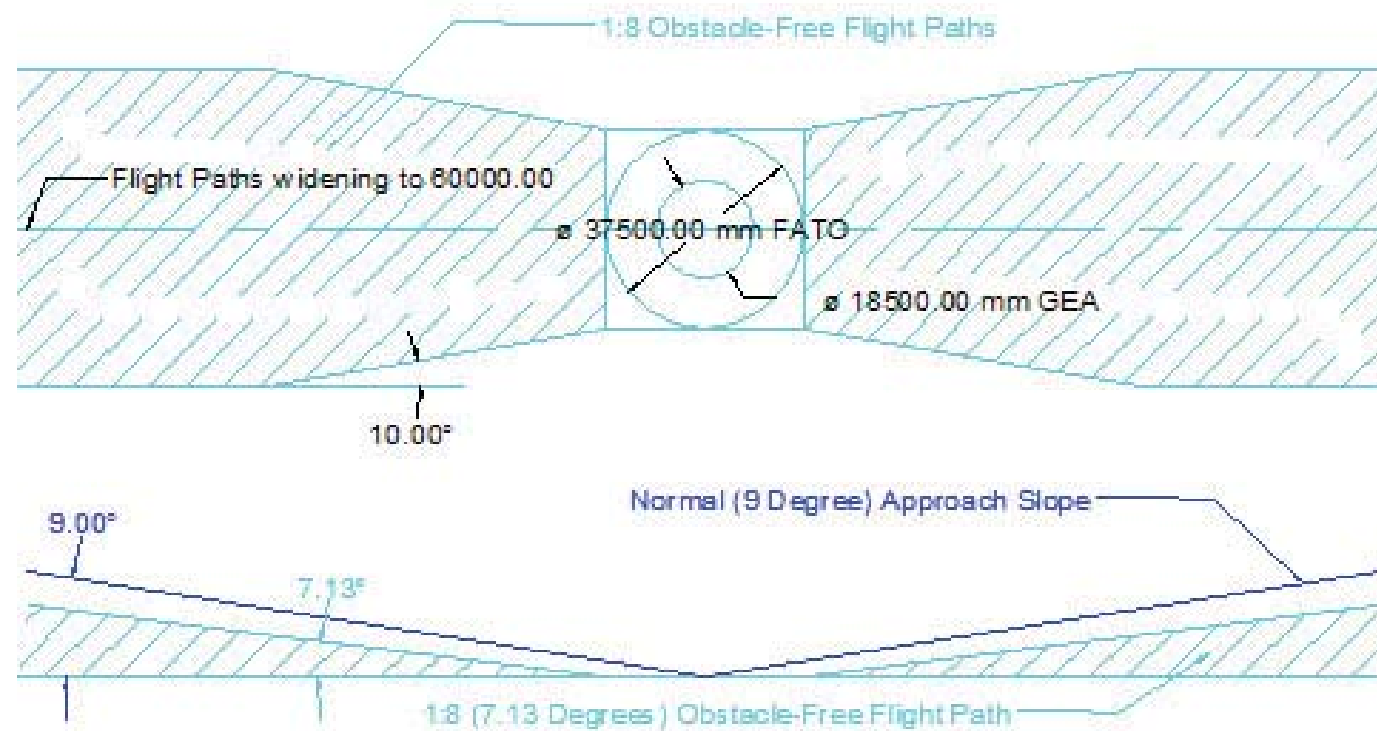


FIGURE 29: Helicopter Flight Path

Source: Heli-Consultants

#### 4.5.7 Helipad

Currently the Wagga Wagga Base Hospital uses the Duke of Kent Oval to the north west of the site for helicopter services. The existing flight path is from south east to north west and requires travel over the hospital, and landing within sight lines of residents adjacent to the oval. The oval is several hundred metres from the hospital and requires transfer of patients via ambulance.

The proposed development provides for a helipad atop the hospital, on Level 7. This reduces the length of the existing flight path and proximity to residential areas, and is expected to lessen the visual and noise impacts. Impacts are further minimised by locating the helipad towards the centre of the site. The proposed flight path is illustrated in Figure 29.

Additional advantages of an elevated landing site over ground level sites include:

- A smoother and quicker transfer of patients.
- Fewer security issues.
- Lower long-term human resource demands.
- Greater safety, particularly to non-participants.
- Lesser environmental impact, both noise and rotor wash.

Studies indicate that relocation of the helipad could lead to an increase in flights annually from 47 to around 78. This reflects advice that the current location significantly limits the use of helicopter transfers and that the on-site location will ensure increased medical assistance for remote patients.

#### 4.6 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

The DGRs state that the following items must be addressed:

- *Detail how the development will incorporate ESD principles in the design, construction and ongoing operation phases of the development.*

Environmentally sustainable design (ESD) for the WWBHR project will be governed by the specific functional and maintenance requirements. There will be a strong focus on engineering solutions that complement passive design outcomes and reduce reliance on artificial means of heating, cooling, ventilation and lighting, while providing desirable levels of thermal, acoustic and visual comfort.

The following ESD principles are adopted in this Concept Plan:

- Thermal Efficiency
  - Minimise direct solar gains through building orientation and appropriate screening.
  - Maximise thermal efficiency through the selection of appropriate materials based on their insulating and thermal mass properties to assist in keeping areas cool during the day and radiate heat during the night.
- Energy Efficiency
  - Incorporate energy efficient design and equipment such as thermal zoning, energy efficient lighting, chilled beam technology and the like.
  - Minimise non-renewable resource consumption and environmental impacts by adopting an integrated design approach and considering demand mitigation for energy, water and materials.
  - Consider alternative power options such as co-generation/tri-generation plant. Tri-generation systems are relevant for hospitals where electricity and thermal demand is high because of additional steam and hot water requirements. Those features, and the longer facility operation hours, provide a load profile that is ideal for a tri-gen system where energy saving, environmental and financial advantages of the system are maximised.

- Water Efficiency
  - Maximise water re-use through rainwater harvesting for toilet flushing and irrigation.
  - Incorporate WSUD principles in landscape, road and car park design. This should be complemented by the selection of plant species which have minimal irrigation requirements and that provide shading.
  - Use low-water use appliances and fittings with a minimum WELS rating of 3 Stars.
- Recycling and Waste
  - Embody the principles of waste avoidance, re-use, reduction and recycling as an integral part of waste management.
- Material and Product Selection
  - Select internal materials based on their low levels of Volatile Organic Compounds.
  - Minimise total facility costs by adopting 'whole of life' criteria in the selection of products, services and systems.

Specific ESD measures relating to the detailed design, construction and ongoing operation of the WWBHR project will be provided at Project Application stage.

## 4.7 CONTRIBUTIONS

The DGRs state that the following items must be addressed:

- *Address Council's Section 94 Contribution Plan and / or details of any Voluntary Planning Agreement.*

### 4.7.1 City of Wagga Wagga Contributions Plans

#### City of Wagga Wagga Section 94 Contributions Plan 2006 - 2019

The City of Wagga Wagga Section 94 Contributions Plan 2006 - 2019 came into force on April 2010. The plan aims to ensure the adequate provision of public facilities and services to meet the needs of incoming population as a result of development.

Under Section 1.1 Overview of This Plan, the plan states:

*A condition may only be imposed under section 94 towards the future provision of public facilities: if the proposed development will or is likely to require the provision of, or increase the demand for, public facilities within the local government area;"*

The WWBHR project is itself a public facility and is proposed to service the needs of the population within the MLHN up to 2021. Accordingly, Section 94 contributions do not apply.

Under Section 2.5 Development to Which This Plan Applies, the list comprises only: subdivision of land for the purposes of a dwelling house, residential flat building or dual occupancy, and self-care housing.

The WWBHR project is neither, a dwelling house, residential flat building, dual occupancy or self-care housing. Accordingly, Section 94 contributions do not apply.

The plan also allows for Section 94 Credits (Section 2.16 and 2.17) and Works in Kind (Section 2.18) where demand for public facilities is satisfied by the proposed development and/or works in kind and other material public benefits are made. As well as providing new hospital facilities, the WWBHR Concept Plan provides for improved pedestrian access; improved traffic

management; an increase in on-site parking above the increase in service levels, decreasing the demand for on-street parking; and upgrading of some adjacent roads and a new section of road to replace a portion of Lewis Drive. The new road will be built to Council's road design standards. These proposals will provide additional material public benefit.

#### City of Wagga Wagga S94A Levy Contributions Plan 2006

The City of Wagga Wagga S94A Levy Contributions Plan 2006 aims to offset the negative effects of development which increases the population which then places a strain on existing infrastructure.

The WWBHR project is itself a public facility and is proposed to service the needs of the population within the MLHN up to 2021. Thus, rather than have a negative effect, the project will improve the lives of existing residents and cater for future increases in population. Accordingly, it is argued that Section 94A contributions do not apply.

The plan also allows for Alternatives to Payment of the Levy (Section 20) where an offer to carry out works or provide material public benefit can be made. The WWBHR Concept Plan provides for new hospital facilities as well as proposals which will provide additional material public benefit as outlined above.

The provision of enhanced public hospital services for Wagga Wagga, and the additional material benefits associated with the project satisfy the intent of Wagga Wagga City Council's Section 94 and 94A Contributions Plans for public facilities. Accordingly, Council has advised that it will not be seeking any contributions for Section 94 or 94A purposes.

### 4.7.2 Road Acquisition

NSW Health has progressed negotiations with Wagga Wagga City Council regarding the acquisition of roads adjacent to the site.

A Heads of Agreement between the Health Administration Corporation (HAC) and Wagga Wagga City Council was signed on 9 April 2010. This agreement acknowledges the need for HAC to acquire portions of existing Council roads to enable the proposed development to proceed and provides a mechanism for this to occur.

The development of this Concept Plan has identified that a portion of Lewis Drive and Yathong Lane will need to be acquired to consolidate a site suitable for the development of the Acute Mental Health building (refer to Figure 8, p.13). A new road linking Yabtree and Yathong Streets is proposed and discussions have progressed with Council with respect to a 'like for like' exchange of land to enable this to occur.

### 4.7.3 Property Acquisition

NSW Health has completed the acquisition of two of the four residential properties on Yabtree Street to enable the hospital project to proceed (refer to Figure 8, p. 13). NSW Health is negotiating with the owners of the properties at 10 and 16 Yabtree Street which still need to be acquired. Should it prove necessary NSW Health may need to utilise compulsory acquisition powers to acquire the balance of the properties.

## 4.8 CONTAMINATION

The DGRs state that the following items must be addressed:

- *Demonstrate compliance that the site is suitable for the proposed use in accordance with SEPP 55.*

### 4.8.1 Contamination

Groundwater contamination may exist due to salinity in the area however Wagga Wagga City Council provides annual status reports and has introduced its 'Urban Salinity Management Plan 2008-2013' to which the WWBHR project will adhere.

In addition, prior to the commencement of any works, a Construction Environmental Management Plan (CEMP) will be prepared and will include procedures for site contamination review and remediation and hazardous materials and contamination management. The Contamination Management Procedures will be prepared by a suitably qualified person in accordance with relevant legislation and guidelines, including SEPP No. 55 – Remediation of Land, identifying any contaminants on site and the required procedure for removal of contaminants and remediation of the site.

A Preliminary Contamination Assessment was undertaken in May 2011. The report is included at Appendix O. The assessment concluded that the site is suitable for its intended use in accordance with SEPP 55.

### 4.8.2 Geotechnical

A geotechnical investigation undertaken on the existing hospital site in 2007 (included at Appendix H) revealed that the likely supporting material for new construction will be alluvium clay. The investigation found the topsoil and fill materials to be unsuitable for use as subgrade or foundation of any structure and recommended they be removed and the topsoil retained for landscaping and any suitable excavated material retained for fill.

The report also recommended that the tree root systems and old footing systems of the demolished building/s be completely removed and these areas backfilled with appropriate, approved material and compacted in layers.

The report recommends that the structural fill supporting any structural element must be prepared in such a way as to achieve a minimum of 100% of Standard Maximum Dry Density in every 150mm thick compacted layer and certified by a relevant NATA accredited testing laboratory for which a safe allowable bearing pressure of 100kPa may be adopted, provided proper drainage measures are incorporated in the design, during and after construction.

A geotechnical report relating to the detailed design of the WWBHR project will be provided at Project Application stage.





FIGURE 30: Wagga Wagga Hospital 1943

## 4.9 HERITAGE

The DGRs state that the following items must be addressed:

- *A statement of significance and an assessment of the impact on the heritage significance of any heritage items and / or conservation areas should be undertaken in accordance with the guidelines in the NSW Heritage Manual.*

### 4.9.1 Heritage Impact

A Heritage Report, including a Heritage Impact Statement, has been prepared and is included at Appendix I. This document provides an extensive history of the Wagga Wagga Base Hospital and supports the findings of the Conservation Management Report previously undertaken, in particular demolition of the Old Hospital Building and Main Building (Multi-Storey Ward Block) to ensure that a contemporary service delivery model within a modern health care facility can be provided. The conclusion from the report is provided below.

Wagga Wagga Base Hospital has operated continuously on this site since the Old Hospital Building was completed in 1910. Since this time, the hospital has been constantly altered and new buildings constructed on the site so that it now presents as a complex of buildings of different periods and architectural styles. The long period of association of the Hospital with this site and significant community involvement means that the site has a high degree of social significance, making it a landmark site in Wagga Wagga. The WWBHR project will perpetuate this significance by providing for the next phase of health services on the site.

It has been determined that the existing site is the best site for a public hospital in Wagga Wagga for logistical and other reasons. To provide for the construction of the new hospital much of the existing infrastructure will be demolished, resulting in the loss of buildings that have social, historic and/or aesthetic significance in their own right. The social significance of these buildings will be perpetuated by the ongoing use of the site and can be recorded by measures such as interpretation, the relocation of moveable heritage and archival recording where appropriate.

The impact of demolishing the Old Hospital Building is regarded as acceptable given the low integrity of the building compared to examples of other hospital buildings of the same architectural style elsewhere in NSW. The work of the architect, W.L. Vernon, is represented in Wagga Wagga by the Courthouse.

While the Main Hospital demonstrates a higher degree of integrity, this building has achieved its landmark status due to its height comparative to the surrounding area, independent of its associations with the Hospital. It is also noted that this building lacks architectural merit in comparison to other examples in NSW. The benefits to be derived from the new hospital facility, which requires that this building be demolished, must be weighed against the fact that there are other, and better, examples of hospitals in this style in New South Wales.

The proposed works will not result in the loss of any significant historic or aesthetic relationships between the site and the adjoining Wagga Wagga Conservation Area or impact upon any significant view corridors into or out of the Conservation Area. The visual impact of placing buildings of a greater massing and scale within the vicinity of the Conservation Area is to be managed through the appropriate articulation of elevations and planting. The new buildings will provide a distinct edge to the Conservation Area, as do the existing buildings on the site. The proposed carparking along the southern edge of the site, which will be appropriately screened by landscaping, will provide good physical separation.

While the proposed development will impact upon the heritage of the site, mitigation measures are proposed (refer to Figure 31) and include:

- Archival recording.
- Relocation of moveable heritage items.
- Preparation of an interpretation strategy.
- Implementation of a naming policy commemorating those associated with the hospital.
- Preservation of existing Canary Island Date Palms.



Recycled Balustrade from Old Hospital Building



Harvey House To Be Retained



Canary Island Date Palms To Be Retained

FIGURE 31: Heritage Mitigation Measures



 Remains of Rawson House  


FIGURE 32: Remains of Rawson House

#### 4.9.2 Archaeological Assessment

In addition to a Heritage Report, a specialist study addressing aboriginal and historical archaeology has also been undertaken and is included at Appendix J. The study was commissioned to inform a broader heritage impact assessment and identifies known Aboriginal and historical archaeological elements in and around the Wagga Wagga Base Hospital site.

The study found that historical archaeological resources relating to previous hospital structures and features are likely to have survived at the site. However, while the proposed development will impact upon the historical archaeological resource, investigating and recording it archaeologically, because of its limited potential to provide additional information to that already retained in historical material, would appear redundant and unwarranted on archaeological research grounds.

There is some potential for the remains associated with Rawson House to provide detailed information not currently known, which would add to the corpus of information about the hospital. It is recommended that should these remains be uncovered they be photographically recorded (refer to Figure 32).

The findings pertaining to Aboriginal archaeology are summarised below.

#### 4.10 ABORIGINAL HERITAGE

The DGRs state that the following items must be addressed:

- *The EA shall address Aboriginal Heritage in accordance with the Draft Guidelines for Aboriginal Cultural Heritage Impact Assessment and Community Consultation 2005.*

##### 4.10.1 Aboriginal Heritage Impact

The specialist study addressing aboriginal and historical archaeology, included at Appendix J, found that within a 5km radius of the Wagga Wagga Base Hospital no Aboriginal sites were identified. In addition, Wagga Wagga City Council has no Aboriginal Heritage items listed on its Local Environmental Plan or Development Control Plan, nor are any items found on the NSW State Heritage Register. A search of the Native Tribunal website establishes that there are currently no Native Title claims active on the hospital site.

The archaeological patterning in the Wagga Wagga area and across the Murrumbidgee Plains indicates that the site (prior to hospital uses) would have had low to moderate archaeological potential. The original topsoil across the site has been significantly disturbed by past land uses, compromising the integrity and archaeological research values of any stone artefact deposits present within affected soils. In-situ artefact deposits are unlikely to occur, however, there remains some likelihood of isolated artefacts surviving in disturbed contexts.

Should any isolated artefacts be exposed, disturbed, discovered or excavated during works the study recommends local Aboriginal communities be consulted to determine how they may wish the artefacts be retrieved, recorded and collected. The study further recommends consultation with local Aboriginal communities to determine whether the site has any Aboriginal cultural significance.

Overall the proposed development will have minimal impact on Aboriginal heritage and in particular no impact on items of Aboriginal significance.

## 4.11 DRAINAGE AND STORMWATER

The DGRs state that the following items must be addressed:

- *Drainage issues associated with the proposal including stormwater and drainage infrastructure.*

### 4.11.1 Stormwater Drainage

The Wagga Wagga Base Hospital site is subject to local stormwater flows from adjacent local catchments and is also subject to flooding from the Murrumbidgee River.

The existing site condition is predominantly impervious in nature. It consists of roadways, car parks, buildings and other paved areas. The 2 metre contour data obtained from Wagga Wagga City Council indicates that the south eastern catchment of the site bounded by Rawson Lane and Murray Street generally flows towards the river through the internal minor roads within the vicinity of the hospital.

It has been identified that the existing drainage networks surrounding the site, including the adjacent roads, are likely to be inadequate to cater for the proposed development.

The proposed development will require the deflection of stormwater via the New Street including Lewis Drive North and South, between the new hospital facility and existing buildings located east of the hospital site.

Options for stormwater catchment have been prepared for the entire site and are shown in Figure 33 and provided at Appendix G.

#### Stormwater Flows From the Adjacent Local Catchment

Stormwater flows from the south eastern catchment are currently conveyed overland through the existing Lewis Drive, Yathong Street, Yathong Lane, Yabtree Street and Doris Roy Lane, which fall towards the hospital site.

As a consequence of the proposed location of the new Mental Health facility over a portion of Lewis Drive, the existing flow regime will need to be redirected to keep external stormwater runoff away from the hospital site.

In order to manage stormwater runoff and maintain existing overland flow paths four main options have been proposed:

- Option 1 – providing a minor drainage pipe system within the new road proposed east of the Mental Health building and link this drainage up with Council's existing stormwater network in Edward Street.
- Option 2 – diverting of upstream catchment to Docker Street firstly via the continuation of Yathong Street and then via grassed swale north of Lewis House.
- Option 3 – diverting of Over Land Flow (OLF) from upstream catchment away from the main hospital entrance through doctor's car park requiring a section of kerb to be removed and the re-grading of the car park to convey the flow.
- Option 4 – providing an underground On-site Detention System (OSD) at the corner of the proposed New Street and Yathong Street in the landscaped open space area south east of the Mental Health building, with an associated inlet structure in Yathong Street to capture the surface flows, as well as the connection of the OSD tank to existing drainage in Edward Street some 250m away.

These options have been assessed and it is recommended that Options 2, 3 and 4 be further developed at Project Application stage. The development of these options will require a detailed survey and consultation with Wagga Wagga City Council and the hospital operators. The final solution is likely to incorporate elements of all three preferred options to achieve the best value permanent solution that will benefit hospital users as well as the community.

Refer to Figure 33.

#### 4.11.2 Hospital Site Stormwater Drainage System

The stormwater drainage of the WWBHR site will be managed through the installation of pit and pipe drainage systems in accordance with the *Wagga Wagga City Council Engineering Guidelines (Part 3 - Stormwater Drainage Design, Draft December 2008)* and will connect to Council's existing drainage infrastructure located along Edward Street and Docker Street.

The capacity of the piped drainage system is to be designed for the 20 year ARI storm event. It is envisaged that existing drainage infrastructure will be utilised where possible and that redundant stormwater infrastructure within the site will be removed.

The stormwater runoff for minor events up to the design storm will be handled by the pit and pipe drainage systems. Excess flows due to storms higher than the design ARI will be conveyed through the site as overland flows along roadways and footpaths.

#### On-Site Detention System

On-Site Detention (OSD) is to be incorporated as part of the stormwater drainage systems, to ensure that the peak discharge from the proposed hospital is less than or equal to that from the existing development. This may include underground devices and possibly some parts of the carpark areas which could also be utilised to achieve similar results to form part of the overall OSD system.

It is expected that the OSD requirements can be accommodated within the site considering that the impervious areas of the proposed development are only slightly greater than that of the existing condition. OSD is to be designed for the 20 and 100 year events.

#### Water Sensitive Urban Design

There is a requirement under *Wagga Wagga City Council Engineering Guidelines (Part 3)* to include the principles of Water Sensitive Urban Design (WSUD) as part of the development.

The guideline draws a requirement that the WSUD be in accordance with the general principles outlined in the references listed (i.e. WSUD - Melbourne Water 2005, Australian Runoff Quality - A guide to water sensitive urban design, etc). These principles will be considered in detail at the Project Application stage.

While the stormwater drainage systems for the proposed development will be connected to Council's existing underground drainage infrastructure, the Concept Plan provides scope for WSUD to be incorporated through:

- Landscape design, such as swales and raingardens, to allow possible reduction or removal of pollutants at the first instance in a storm event.
- Consideration of other water quality devices, such as Gross Pollutant Traps and the like, as alternatives or additional options.

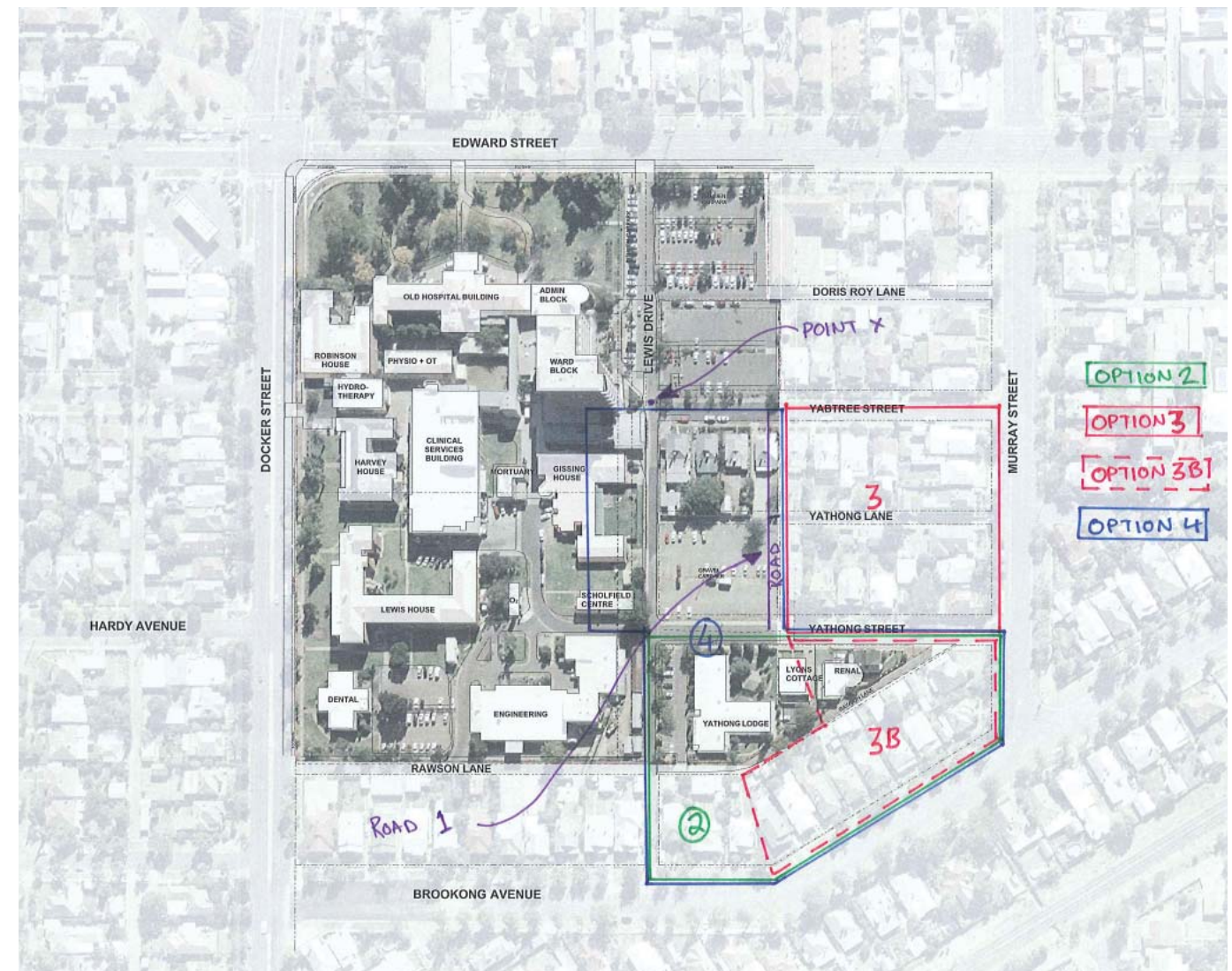


FIGURE 33: Stormwater Catchment Plan

Source: SKM

## 4.12 FLOODING

The DGRs state that the following items must be addressed:

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

### 4.12.1 Flooding

A Flood Impact Assessment has been undertaken on the Wagga Wagga Base Hospital site. The report is included at Appendix E.

The assessment concludes that flooding of the Wagga Wagga Base Hospital site is likely only in the event that the Murrumbidgee River overtops the Main City Levee. The levee is designed to prevent inundation up to approximately a 60 year ARI. Wagga Wagga City Council has a proposal to upgrade the levee but this has not commenced. Inundation would also be possible in overland flow events not associated with riverine flooding or levee overtopping. The Murrumbidgee River flood levels at the hospital site are as follows:

Flood Recurrence Interval (m AHD)	Design Flood Level
200yr ARI	180.6
500yr ARI	181.7
1000yr ARI	182.2
PMF	183.5

TABLE 04: Selected Riverine Flood Levels at WWBH (cnr Edward & Docker Streets) (Source: WMA)

The WWBHR project has been designed with a minimum floor level of RL 182.580 to tie into the existing CSB slab level. The proposed floor level provides the site with approximately 750 year ARI protection including an allowance for 0.5m freeboard.

### 4.12.2 NSW Floodplain Development Manual

The project has been designed to ensure that all buildings are sited above the appropriate FPL, in a manner consistent with the NSW Floodplain Development Manual (2005) Policy Provisions which state:

*The policy provides for: a merit based approach to selection of appropriate flood planning levels (FPLs)...noting that...it is neither feasible nor socially or economically justifiable to adopt the PMF as the basis for FPLs."*

However as the WWBHR project is an emergency response facility:

*Consideration should also be given to using the PMF (probable maximum flood) as the FPL when siting and developing emergency response facilities such as...hospitals."*

The adoption of the PMF level as the FPL is not feasible for the WWBHR project due to economic and practicality constraints. While appropriate FPLs will be adopted, an Emergency Evacuation Plan will be implemented as part of the hospital's emergency response planning which acknowledges that the site is subject to inundation in quite rare events and highlights that flood-free access is available during the PMF from the south east corner of the site. The hospital's emergency response planning will also address the need for essential services to remain operational during any flood-related emergency.

### 4.12.3 Climate Change, Sea Level Rise and Rainfall Intensity

The Wagga Wagga Base Hospital Site is prone to inundation from riverine flooding in rare events (greater than 500 year ARI).

Investigations by CSIRO and BOM into the past and likely future changes to climate in NSW estimate that extreme rainfall (defined as a 1 in 40 year 1 day total rainfall event) would be likely to increase by up to 7% for the Murrumbidgee River catchments by 2030. Based on these investigations and taking into consideration the DECCW Draft Floodplain Risk Management Guideline – Practical Consideration of Climate Change which recommends a sensitivity analysis for increases in rainfall of between 10 and 30%, an assessment was undertaken based on a 10% increase in rainfall due to climate change.

The results show flood levels as a result of climate change could potentially increase by between 0.2 and 0.3m. The most significant potential increase occurs at the corner of Lewis Drive and Yabtree Street (0.3m). A potential 10% increase in rainfall intensity also increases the extent of inundation, resulting in a small portion of the site that was previously flood free during the 1000 year ARI now being inundated.

## 4.13 UTILITIES

The DGRs state that the following items must be addressed:

- *In consultation with relevant agencies, the EA shall address the existing capacity and any augmentation requirements of the development for the provision of utilities including staging of infrastructure works.*

### 4.13.1 Water

The existing hospital is currently provided with domestic water, sewer and fire water reticulation. All services are supplied from Authority mains from the site's surrounding streets.

The existing water infrastructure will remain operational throughout the construction of the redevelopment until it is demolished to accommodate the new works.

#### Potable Cold Water

The existing potable cold water system includes five metered water supplies that connect to Council's water mains and reticulate through the facility. These include:

- 150mm connection in Docker Street – main supply
- 100mm connection in Edward Street – serving the Multi-Storey Ward Block
- 80mm connection in Docker Street – serving Lewis House/Community Health, Stores and Engineering
- 20mm connection in Docker Street - serving the Dental Clinic
- 20mm connection in Lewis Street – serving Gissing House
- 100mm connection in Edward Street - serving the Multi-Storey Ward Block

The WWBHR project will require an upsized connection to the existing Council water main in Edward Street and reticulate to all new fixture, plant and equipment requiring potable cold water.

A new non-potable water service to supply flushing sanitary fixtures and irrigation demand is proposed, sourced from harvested stormwater from selected roofs stored and treated on site.

#### Potable Hot / Warm Water

Hot and warm water systems for the proposed development will include a centralized hot water plant co-existing with the mechanical plant, reticulated as a flow and return system to all fixtures, plant and equipment requiring hot water. Warm water may be a centralized system incorporating a flow and return system to all fixtures plant and equipment requiring tempered water.

#### Fire Water

The existing fire hydrants for the site are supplied from an existing connection to the Authority's water main in Docker Street. Internal and external fire hydrants are located throughout the site. It is noted that the existing installations are non-compliant with current standards.

As part of the redevelopment, provision will be made for a new mains connection in Edward Street to supply fire water for both fire hydrants and fire sprinklers. This may also include tanks for water flows and pumps to provide the required flows and pressures to obtain BCA compliance.

Fire hose reels are to be connected to the new potable cold water service to the requirements of Australian Standard AS2441.

Generally, the Authority's mains appear to have adequate capacities to service the proposed development. Subject to the determination of new works details and further investigation of the condition of existing services at Project Application stage, the new facility may be able to connect into the existing infrastructure. However, water main diversions will be required to facilitate the new configuration of the proposed development.



#### 4.13.2 Sewer

##### Sanitary / Trade Waste Drainage

The sanitary drainage for the existing hospital has four main connections to the Council's sewer including three 150mm connections in Lewis Street and a 150mm connection in Edward Street.

The existing sanitary drainage is a gravity system which collects sanitary waste from fixtures, plant and equipment requiring sanitary drainage. The gravity drainage generally follows the natural fall of the site and traverses west to east and south west to north east. There are also a number of on-site pre-treatment pits, including cooling pits, grease arrestors, and dilution pits (used for the decontamination showers) that are located around the Clinical Services Building.

The Authority's mains appear to have adequate capacities to service the proposed development. The WWBHR project will make use of the existing sanitary drainage connections with new pipework extending to all areas requiring sanitary drainage and will include on-site treatment of grease and trade waste to local Authority requirements. However, sewer diversions will be required to facilitate the new building configuration for the WWBHR.

#### 4.13.3 Gas

The existing Natural gas system for Wagga Wagga Base Hospital extends from the main gas meter assembly located adjacent to Rawson Lane. Incoming pressure is reported to be 1050kPa with reticulation pressure at 110kPa. The system reticulates through the facility to all buildings requiring natural gas energy to supply mechanical services, hot water demands and kitchen services.

The existing 50mm mains connection and meter assembly is considered adequate to supply the demands of the proposed development. This will also take into consideration the redundant demand of demolished buildings.

The natural gas service downstream of the main meter assembly will require upsizing of pipe work to suit the new demands of the proposed development.

#### 4.13.4 Stormwater

As identified in Section 4.11.1, the existing drainage networks surrounding the site, including the adjacent roads, are likely to be inadequate to cater for the entire WWBHR project.

The proposed pit and pipe stormwater drainage system for the WWBHR project will connect to Council's existing drainage infrastructure located along Edward Street and Docker Street. The capacity of the piped drainage system is to be designed for the 20 year ARI storm event.

The stormwater runoff for minor events up to the design storm will be handled by the pit and pipe drainage systems. Excess flows due to storms higher than the design ARI will be conveyed through the site as overlandflows along roadways and footpaths.

It is envisaged that existing drainage infrastructure will be utilised where possible and that redundant stormwater infrastructures within the site will be removed.

#### 4.13.5 Power

The Wagga Wagga Base Hospital is predominantly supplied by the main Country Energy substation located within the Clinical Services Building (CSB) on the ground floor. Two HV Country Energy feeders supply the substation and originate from Docker and Edward Streets.

The CSB main switchboard supplies power to the CSB and a majority of other Hospital buildings such as the Multi-Storey Ward Block, Gissing House and Harvey House. The Gissing House main switchboard then subsequently provides power supply to the Engineering building and Schofield House.

##### Substation

A three transformer substation exists on the site equipped with 3 x 500KVA transformers.

Recent advice from Country Energy would indicate that this substation is operating at around 85% capacity and that any significant additional load would require a new substation and feeders of appropriate capacity. Therefore, additional substations and communications facilities are proposed for the redevelopment.

A new indoor Central Energy Substation and associated Main Switch Room is proposed to power the new facility. Country Energy has indicated that their recently upgraded Zone substations will have the capacity to accommodate separate HV feeders for supply to the redevelopment. Given that the area is prone to flooding, particular care will be taken in determining the appropriate location of the substation and associated switch rooms/equipment rooms to ensure protection/isolation from flood risk.

##### Backup Generator

The existing generator for the existing hospital is rated at 412kVA with a 5,000L in-ground diesel tank. The generator is located on the ground floor of the Clinical Services Building adjacent to the Main Switch Room.

Indications are that the generator is close to full capacity with little opportunity for an upgrade to the generator and associated switchgear/controls.

Any proposed new development/upgrade requiring additional load over and above the existing, would require a new generator set(s) and associated switchgear and controls. This would indicate a need for a new Generator Room.

#### 4.13.6 Telecommunications

An existing Telstra fibre optic connection originates from Docker Street to the hospital distributor in the Clinical Services Building. The existing copper connection originates via Edward Street to the Multi-Storey Ward Block and terminates. The copper connection is then extended to the hospital distributor in the Clinical Services Building.

A new hospital distributor room is proposed in the early stage of construction to contain cross-connect equipment to link with carriers' equipment and other buildings within the WWBHR site.

Other telecommunications services to be provided include a fibre optic based structured cabling system and strategically located floor distributors (each serving an area of approximately 1400m<sup>2</sup>).

VoIP telephony and Wi-Fi with integration to nurse call and security systems will be considered.

#### 4.14 FLORA AND FAUNA

The DGRs state that the following items must be addressed:

- *Address impacts on flora and fauna, including threatened species, populations and endangered ecological communities and their habitats and steps taken to mitigate any identified impacts to protect the environment.*

An arborist inspection of the WWBH site was undertaken in March 2011. The report is included at Appendix L. The inspection found that many of the younger trees on site are in good condition while the older trees are identified as being in poor condition. The report recommends that the younger trees be retained and the older trees removed and replaced as part of the redevelopment.

The landscape strategy for the WWBHR project aims to maintain, where possible, existing significant trees on site. In particular, the strategy aims to adhere to the recommendations stemming from the Heritage Impact Assessment (refer to Appendix I):

*The preservation of old plantings on the site, in particular those associated with country hospitals, such as the Canary Island Date Palms. Should new work require that these palms be removed, they should be relocated to an appropriate position on the site."*

Accordingly, where possible, Canary Island Date Palms will be preserved and/or relocated.

The continuous development and operation of hospital facilities on site since the 1900s has provided little opportunity for fauna to establish any significant habitat within this area. The site is predominantly occupied by buildings and carpark areas and any potential habitat is limited to scattered trees and grassed areas, neither of which is likely to support threatened species, populations and endangered ecological communities.

A Flora and Fauna Assessment, which included a site inspection, was undertaken in June 2011. The report is included at Appendix P. The assessment concluded that the existing hospital is located 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, including threatened species.

Accordingly, the WWBHR project will have no significant impact on flora and fauna.

#### 4.15 NOISE AND VIBRATION

The DGRs state that the following items must be addressed:

- *Provide a quantitative assessment of the potential demolition, construction, operation and traffic noise impacts of the project.*

##### 4.15.1 Demolition, Construction, Operation and Traffic Noise

Given that the purpose of the Concept Plan is to provide the development framework for future Project Applications, it is considered more appropriate to address demolition, construction and operation noise at Project Application stage when detailed investigations have been carried out and design detail resolved.

Accordingly, details of specific noise impacts and details of the mitigation measures to be implemented will be provided at Project Application stage.

However, the WWBHR project provides for helicopter landings/movements on site and this presents a traffic noise impact. An acoustic assessment has been undertaken and the findings are summarised below.

##### 4.15.2 Helipad

An acoustic assessment has been undertaken (refer to Appendix K) and the following conclusions drawn:

- The daytime maximum (60dBA) for on-ground noise (noise from the helicopter standing on the helipad) to neighbours will not be exceeded.
- The night time maximum (40dBA) for on-ground noise to neighbours will be exceeded by up to 15dBA at the closest residences. However it is expected that night time operations will be infrequent and that therefore any noise impact would be of short duration.
- The predicted levels of long term noise (noise from the helicopter in flight) are:
  - For the existing helipad the LAeq, 24hour would exceed 40dBA at approximately 7 houses.
  - For the proposed helipad the LAeq, 24hour would exceed 40dBA at approximately 65 houses.
  - The noise would not exceed the LAeq, 24hour 60dBA at any house for either the existing or proposed helipad.

Overall the exceedences are below the level of 'unacceptable' according to the operating principles of Air Service Australia.

- Flyover noise as a result of the flight path to the east will likely be the same between the existing and proposed helipad. The noise impact of the flight path to the west will be greater for the proposed helipad as the route is located further south, over residential rather than industrial and recreational land.
- Noise impact within the new hospital will be controlled by suitable building elements and architectural design including a range of glazing options which will help mitigate transfer of helicopter noise.

Overall, while there is some increase in noise impact as a result of the relocation of the helipad, the on-site location enables better health care provision for residents within the Wagga Wagga community and the wider MLHN area.

#### 4.16 WASTE

The DGRs state that the following items must be addressed:

- *Identify, quantify and classify the likely waste streams to be generated during construction and operation;*
- *Describe the measures to be implemented to manage the disposal of nuclear waste, if required; and*
- *Describe the measures to be implemented to manage the disposal of contaminated and potentially contaminated biological and sewage waste, if required.*

NSW Health promotes sustainable operations through the provision of dedicated facilities for waste management and sorting. In particular, the Wagga Wagga Health Service Cluster, of which the WWBHR project is a part, is committed to maintaining a waste management system that is safe, efficient, cost effective and considers environmental issues.

The waste streams that are likely to be generated by the WWBHR project include:

- Clinical
- Cytotoxic
- Pharmaceutical
- Chemical
- Radioactive
- Recyclable
- Organic
- Liquid
- General

Waste management for the WWBHR project will be undertaken in accordance with the Wagga Wagga Health Service Cluster Waste Management Plan 2010-2011 (WMP) which is provided at Appendix N.

The three key objectives of the WMP are:

- All waste is disposed into the correct waste streams.
- Waste volumes are reduced; waste minimisation and recycling is increased.
- Waste management practices optimise staff safety.

The WMP outlines strategies for the effective management of waste including:

- Waste management committees, plans and waste audits.
- Waste minimisation, avoidance, segregation, recycling and re-use.
- Waste labeling and containment.
- Proper waste handling, storage and transport.
- Correct waste treatment / disposal.
- Staff training and education.

Detailed identification and quantitative assessment of waste streams likely to be generated during construction and operation will be carried out at Project Application stage.

In addition, prior to the commencement of any works, a CEMP will be prepared and will include procedures for waste management relating to construction activities.

#### 4.17 HAZARDS

The DGRs state that the following items must be addressed:

- *An assessment against State Environmental Planning Policy No 33 – Hazardous and offensive Development; and*
- *A description of the proposed storage, use and management of any hazardous material and measures to be implemented to manage hazards and risks associated with the storage.*

An assessment of the WWBHR project against SEPP 33 – Hazardous and Offensive Development will be undertaken at Project Application stage.

Notwithstanding the assessment, it is recognised that operations at the new WWBH are likely to generate, and require storage of, hazardous waste. The WMP, provided at Appendix N, details the types of waste and the relevant storage requirements.

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

#### 4.18 CONSULTATION

The DGRs state that the following items must be addressed:

- *Undertake an appropriate and justified level of consultation in accordance with the Department's Major Project Community Consultation Guidelines October 2007, in particular surrounding residences and Wagga Wagga City Council.*

An integral part of the project management process is ongoing consultation with a wide range of key organisations, health professionals and community groups (i.e. stakeholders) who will use the planned facilities or interface with the project as either, an Authority, service provider and/or user. The frequency, degree and level of consultation vary according to the role and responsibility of the particular stakeholder.

NSW Health has consulted with Wagga Wagga City Council regarding the staged construction process and the need to acquire a number of roads adjacent to the site. Consultation with utility providers and transport authorities is also underway.

The Agencies consulted include:

- Civil Aviation and Safety Authority
- Country Energy
- Fearnese Buses
- Greater Southern Area Health Service
- NSW Department of Health
- NSW Department of Natural Resources
- NSW Department of Planning
- NSW Heritage Office
- NSW Treasury
- Riverina Water
- Roads and Traffic Authority
- Telstra
- Wagga Wagga City Council

In addition, NSW Health intends to implement a Stakeholder Consultation and Communications Plan in conjunction with the project developer at the Project Application stage. The plan will outline the process of stakeholder communication and consultation which will be ongoing for the duration of the project.

Refer to Table 5 for a detailed schedule of consultation.

Date	Stakeholder Group	Key Topics
3/08/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan
25/08/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan
1/09/2010	WWBHR Stage 1 Project Planning Team	Masterplan
1/09/2010	Medical Advisory Council	Masterplan
1/09/2010	Medical Advisory Council	Masterplan / Stage 1
15/09/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan
15/09/2010	Wagga Wagga City Council (Mayor Briefing)	Masterplan
16/09/2010	Emergency Department User Group	Functional Brief
16/09/2010	Acute Mental Health User Group	Functional Brief
16/09/2010	Procedure Centre User Group	Functional Brief
22/09/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan
29/09/2010	Medical Advisory Council	Masterplan
29/09/2010	Wagga Wagga City Council	Masterplan
29/09/2010	WWBHR Staff Briefing (Cafeteria)	Masterplan
30/09/2010	Media Briefing	Masterplan
30/09/2010	Emergency Department User Group	Functional Brief
30/09/2010	Acute Mental Health User Group	Functional Brief
30/09/2010	Procedure Centre User Group	Functional Brief
6/10/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan / Stage 1
11/10/2010	NSW Health Department (Health Administration Corporation)	Stage 1 / Business Case
15/10/2010	NSW Treasury Briefing	Masterplan / Stage 1
20/10/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan / Stage 1
20/10/2010	Emergency Department User Group	Functional Brief
20/10/2010	Acute Mental Health User Group	Functional Brief
20/10/2010	Procedure Centre User Group	Functional Brief
27/10/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan / Stage 1
3/11/2010	WWBHR Stage 1 Planning and Development Committee	Masterplan / Stage 1
3/11/2010	REROC Briefing	Masterplan
3/11/2010	After Hours GP Service	Masterplan
12/11/2010	Sterilising Services User Group	Functional Brief
12/11/2010	Non-Acute Mental Health User Group	Functional Brief
12/11/2010	NSW Treasury Briefing	Stage 1 / Business Case
17/11/2010	WWBHR Stage 1 Planning and Development Committee	Stage 1 / Business Case
17/11/2010	After Hours GP Service	Masterplan
24/11/2010	Wagga Wagga Mayor	Masterplan / Stage 1
26/11/2010	Sterilising Services User Group	Functional Brief

Date	Stakeholder Group	Key Topics
26/11/2010	Non-Acute Mental Health User Group	Functional Brief
30/11/2010	Executive Steering Committee	Stage 1 / Business Case
1/12/2010	WWBHR Stage 1 Planning and Development Committee	Stage 1 / Business Case
13/12/2010	Executive Steering Committee	Stage 1 / Business Case
13/12/2010	Council Endorsement of Road Transfer	Heads of Agreement
1/02/2011	Procedure Centre User Group	Early Scheme Design
1/02/2011	Mental Health User Group	Early Scheme Design
2/02/2011	Inpatient Unit User Group	Early Scheme Design
1/02/2011	Emergency Department User Group	Early Scheme Design
9/02/2011	Engineering User Group	Early Scheme Design
9/02/2011	WWBHR Stage 1 Planning and Development Committee	Updated Concept Plan
18/02/2011	Emergency Department User Group	Early Scheme Design
23/02/2011	Procedure Centre User Group	Early Scheme Design
23/02/2011	Mental Health User Group	Early Scheme Design
23/02/2011	Inpatient Unit User Group	Functional Brief
23/02/2011	Medical Advisory Council	Updated Concept Plan
23/02/2011	Medical Staff Council	Updated Concept Plan
3/03/2011	RTA	Updated Concept Plan
3/03/2011	Wagga Wagga City Council	Updated Concept Plan
9/03/2011	WWBHR Stage 1 Planning and Development Committee	Early Scheme Design / Early Works
23/02/2011	WWBHR Staff Briefing	Updated Concept Plan

TABLE 05: Schedule of Consultation

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## 5.0 DRAFT STATEMENT OF COMMITMENTS

A Draft Statement of Commitments for the Wagga Wagga Base Hospital Redevelopment project is set out below.

The Commitments respond to the Key Issues that are required to be addressed by the Environmental Assessment and are set out as such.

The range of commitments include:

- Built Form and Urban Design
- Environmental and Residential Amenity
- Staging
- Transport and Accessibility Impacts
- Helipad
- Ecologically Sustainable Development
- Contributions
- Contamination
- Heritage
- Aboriginal Heritage
- Drainage and Stormwater
- Flooding
- Utilities
- Flora and Fauna
- Noise and Vibration
- Waste
- Hazards
- Consultation

### 5.1 GENERAL COMMITMENTS

- NSW Health is committed to the principles of sustainability as defined in the Environmental Planning and Assessment Act (1979) and as outlined in this Concept Plan Application.
- The Proponent will obtain all necessary approvals required by State and Commonwealth legislation in undertaking this project.
- The Proponent will continue to liaise with the local community during the development process.

### 5.2 BUILT FORM AND URBAN DESIGN

- The Proponent undertakes to pursue the urban form and design proposals outlined in this Concept Plan Application such that they adhere to key commitments including:
  - Ensuring the compatibility of the proposals with the existing bulk and scale of the surrounding development
  - Minimising impacts on existing buildings, topography and streetscape
  - Ensuring urban form and design proposals aim to minimise the overshadowing of existing private land
  - Improving the pedestrian and vehicular connectivity of the hospital and its environs to maximise safety and security for staff, patients and visitors
  - Providing measures to improve street address
- The Proponent undertakes to provide photomontages of the proposed development in its finished form at Project Application stage.
- The Proponent undertakes to provide details of proposed landscaping and open space at Project Application stage.

### 5.3 ENVIRONMENTAL AND RESIDENTIAL AMENITY

- The Proponent undertakes to ensure the compatibility of the proposal with the existing bulk and scale of the surrounding development, within the constraints imposed by the site, development of a modern healthcare facility suited to the current and future needs of the region, and the need to maintain the ongoing functioning of the existing hospital while the redevelopment is in progress.
- The Proponent undertakes to minimise impacts on existing buildings, topography, streetscape and view corridors within the health precinct, in particular to the residential properties east of Lewis Drive, within the constraints imposed by the site.
- The Proponent undertakes to provide detailed shadow diagrams at Project Application stage.
- The Proponent undertakes to provide details of wind impacts as a result of helicopter operations at Project Application stage.
- The Proponent undertakes to provide details of the measures that will be implemented to achieve a high level of environmental and residential amenity, such as building articulation and façade treatments at Project Application stage.

### 5.4 STAGING

- The Proponent undertakes to pursue the proposed development in accordance with the staging program identified in this Concept Plan Application.

### 5.5 TRANSPORT AND ACCESSIBILITY IMPACTS

- The Proponent undertakes to ensure that roads and other traffic based elements will be designed in accordance with Australian Standards and/or the relevant standards of Wagga Wagga City Council or the RTA as applicable.
- The Proponent undertakes to ensure that car parking and loading bays will be designed in accordance with the relevant Australian Standards.
- The Proponent undertakes to ensure that the transport, traffic and access proposals will support the relevant strategic State and Local government transport policies.
- The Proponent undertakes to implement strategies to promote alternate forms of transport as outlined in this Concept Plan Application.
- The Proponent undertakes to ensure that detailed traffic modelling and intersection analysis will be carried out at Project Application stage.
- The Proponent undertakes to provide details of the impacts of demolition and construction on traffic, and the mitigation measures to be implemented, at Project Application stage.
- The Proponent undertakes to prepare a WPTP at Project Application stage.
- The Proponent undertakes to provide measures relating to the provision of infrastructure at Project Application Stage.
- The Proponent undertakes to ensure that access and safety protocols will be included in a CEMP prepared prior to the commencement of any works.
- The Proponent undertakes to ensure that future construction and traffic requirements will be included in a CEMP prepared prior to the commencement of any works.

## 5.6 ECOLOGICALLY SUSTAINABLE DEVELOPMENT

- The Proponent undertakes to implement the proposed ESD principles as outlined in this Concept Plan Application.
- The Proponent undertakes to provide details of specific ESD measures relating to design, construction and operation of the proposed development at Project Application stage.

## 5.7 CONTRIBUTIONS

- The Proponent undertakes to ensure that road acquisition be in accordance with the established Heads of Agreement with Wagga Wagga City Council.
- The Proponent undertakes to ensure that prior to the commencement of any Early and/or Enabling Works, discussions regarding the following will be finalised:
  - The extent of road acquisitions and a proposed new road linking Yabtree and Yathong Streets
  - The possibility of a 'like for like' exchange of land between NSW Health and Wagga Wagga City Council.

## 5.8 CONTAMINATION

- The Proponent undertakes to ensure that future demolition is completed in accordance with the requirements of Australian Standard AS2601- 2001.
- The Proponent undertakes to implement measures to control erosion and sedimentation during future demolition and construction in accordance with the Soil and Water Management Plan and currently accepted principles.
- The Proponent undertakes to address SEPP No. 55 in regard to any identified contaminated land.
- The Proponent undertakes to provide a geotechnical report relating to the detailed design of the proposed development at Project Application stage.

## 5.9 HERITAGE

- The Proponent undertakes to ensure that prior to demolition, full archival recording to Heritage Office standards is completed.
- The Proponent undertakes to photographically record any remains associated with Rawson House during future site works should remains indicate the internal configuration of the building.
- The Proponent undertakes to relocate moveable heritage items such as the Old Hospital balustrade and/or memorial plaques from the existing to the new hospital.
- The Proponent undertakes to preserve old plantings on the site, in particular the Canary Island Date Palms. Should new works require the removal of these palms then they should be relocated within the site.
- The Proponent undertakes to implement a naming policy for all new areas within the hospital which commemorates those who have served the community through the hospital or who have been benefactors of the hospital such as Lewis, Gissing etc.
- The Proponent undertakes to complete an interpretation strategy for the entire hospital site.

## 5.10 ABORIGINAL HERITAGE

- The Proponent undertakes to ensure that should any isolated artefacts be exposed, disturbed, discovered or excavated during works then local Aboriginal communities will be consulted.
- The Proponent undertakes to ensure that local Aboriginal communities will be consulted to determine whether the site has any Aboriginal cultural significance.

### 5.11 DRAINAGE AND STORMWATER

- The Proponent undertakes to ensure stormwater management and mitigation will be in accordance with:
  - The Stormwater Concept Plan (refer to Appendix G)
  - The Wagga Wagga City Council Engineering Guidelines.
- The Proponent undertakes to provide design details for stormwater management at Project Application stage.
- The Proponent undertakes to provide details of specific WSUD measures relating to the proposed development at Project Application stage.

### 5.12 FLOODING

- The Proponent undertakes to adopt appropriate Flood Planning Levels including an allowance of 0.5m freeboard.
- The Proponent undertakes to implement an Emergency Evacuation Plan which addresses access and operation during flood-related emergencies.

### 5.13 UTILITIES

- The Proponent undertakes to comply with the requirements of the relevant public authorities in regard to the connection to and relocation and/or adjustment of services affected by construction of the proposed development.
- The Proponent undertakes to carry out all diversions of existing services in consultation with Wagga Wagga City Council and/or the relevant agency and in accordance with the necessary requirements.

### 5.14 FLORA AND FAUNA

- The Proponent undertakes to maintain, where possible, any existing significant trees.

### 5.15 NOISE AND VIBRATION

- The Proponent undertakes to ensure that noise and vibration management will be included in a CEMP prepared prior to the commencement of any works.
- The Proponent undertakes to provide details of specific noise and vibration impacts and their mitigation measures at the Project Application stage. These measures will consider:
  - Architectural acoustics and building envelope design
  - Design of specialised acoustic spaces such as auditoria and conference rooms
  - Internal space planning
  - Sound isolation from external sources
  - Mechanical services/plant noise and vibration
  - Control of reverberant noise build-up and specification of materials
  - Speech privacy and intelligibility
  - Sound system and audio-visual design.

### 5.16 WASTE

- The Proponent undertakes to ensure that all waste management practices are in accordance with NSW Health guidelines as detailed in this Concept Plan and included at Appendix N.
- The Proponent undertakes to provide detailed identification and quantities of waste streams likely to be generated during construction at Project Application stage.

- The Proponent undertakes to ensure that procedures for waste management during construction will be included in a CEMP prepared prior to the commencement of any works.

### 5.17 HAZARDS

- The Proponent undertakes to ensure that the design of the new facilities for storage, use and management of hazardous waste will be in accordance with the relevant codes and standards.
- The Proponent undertakes to address SEPP No. 33 in regard to any identified hazardous and offensive development at Project Application stage.

### 5.18 CONSULTATION

- The Proponent undertakes to continue consultation with the relevant agencies, authorities and the public throughout each stage of construction.
- The Proponent undertakes to implement a Stakeholder Consultation and Communications Plan.

## 6.0 CONCLUSION

This Concept Plan Application and Environmental Assessment outlines the proposal for the Wagga Wagga Base Hospital Redevelopment project. The assessment, together with the appended technical reports, comprises a comprehensive study based on the provisions of Part 3A of the Environmental Planning and Assessment Act (1979) and the Director General's Requirements.

The key conclusions of the study are that overall the impacts of the proposed development are limited and will result in significant positive social, environmental and economic outcomes for Wagga Wagga and the greater southern region of New South Wales. The Concept Plan demonstrates a high level of consistency with the relevant planning instruments and fully addresses the issues identified in the Director General's Assessment Criteria.

The provision of a high quality, state of the art facility responds to the current and future needs of the region and consolidates the most appropriate health services on a single site. The functional requirements of the WWBHR project have been carefully balanced against the need to safeguard the amenity and environmental quality of the existing health precinct. The completion of the Wagga Wagga Base Hospital Redevelopment project will represent an important major health milestone for the region.

In summary this Concept Plan Application and Environmental Assessment has fully addressed the Director General's Requirements and demonstrates that there are no significant impacts associated with the Wagga Wagga Base Hospital Redevelopment project. Accordingly, the Minister's favourable consideration of this Project Application is sought.

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## SCHEDULE OF APPENDICES

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| <p><b>A.</b> Part 3A Application Letter and Application Form</p>  | <p><b>N.</b> Wagga Wagga Health Service Cluster Waste Management Plan<br/>Prepared by NSW Greater Southern Area Health Service</p> |
| <p><b>B.</b> Director General's Requirements<br/>Issued 16 February 2011</p>                              | <p><b>O.</b> Preliminary Contamination Assessment<br/>Prepared by Douglas Partners</p>   |
| <p><b>C.</b> Architectural Concept Drawings<br/>Prepared by Rice Daubney</p>                              | <p><b>P.</b> Flora and Fauna Assessment<br/>Prepared by Kevin Mills &amp; Associates</p>   |
| <p><b>D.</b> Landscape Concept Plan<br/>Prepared by Site Image</p>  |  |
| <p><b>E.</b> Flood Impact Assessment<br/>Prepared by Webb McKeown &amp; Associates</p>                    |  |
| <p><b>F.</b> Civil, Traffic and Building Services Concept Report<br/>Prepared by Sinclair Knight Merz</p> |  |
| <p><b>G.</b> Overland Flow Options Report<br/>Prepared by Sinclair Knight Merz</p>                        |  |
| <p><b>H.</b> Geotechnical Report<br/>Prepared by Aitken Rowe Testing Laboratories</p>                     |  |
| <p><b>I.</b> Heritage Report<br/>Prepared by Weir Phillips</p>  |  |
| <p><b>J.</b> Archaeological Assessment<br/>Prepared by AHMS</p>   |  |
| <p><b>K.</b> Helicopter Noise Assessment<br/>Prepared by Wilkinson Murray</p>                             |  |
| <p><b>L.</b> Arborist's Report<br/>Prepared by Somewhere Landscape Architects</p>                         |  |
| <p><b>M.</b> Quantity Surveyor's Certificate of Cost<br/>Prepared by Davis Langdon</p>                    |  |

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