HEALTH INFRASTRUCTURE

Review of Environmental Factors

Cowra Hospital Redevelopment – Main Works

Version Number 5

Declaration

This Review of Environmental Factors (REF) has been prepared for NSW Health Infrastructure (HI) and assesses the potential environmental impacts which could arise from the proposed construction of a new health services facility on behalf of the Cowra Health Service at 64 Liverpool Street, Cowra.

This REF has been prepared in accordance with the relevant provisions of *the Environmental Planning and Assessment Act 1979* (EP&A Act), *the Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) and *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TISEPP).

This REF provides a true and fair review of the activity in relation to its likely impact on the environment. It addresses to the fullest extent possible, all the factors listed in Section 171(1) of the EP&A Regulation, the Department of Planning & Environment's (DPE) *Guidelines for Division 5.1 Assessments* (the Guidelines) and the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999 (EPBC ACT).*

The proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a SIS or a BDAR is not required.

Based upon the information presented in this REF, it is concluded that, subject to adopting the recommended mitigation measures, it is unlikely there would be any significant environmental impacts associated with the activity. Consequently, an *Environmental Impact Statement* (EIS) is not required.

Declaration	
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Document Management, Tracking and Revision History

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D	Architectural Plans & Specification	Djrd architects	9 December 2022
E	Architectural Design Report	Djrd architects	15 February 2023
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EE	Social Impact Assessment	Ethos Urban	15 February 2023

Abbreviations

Abbreviation	Description
AEC	Area of Environmental Concern
AHD	Australian Height Datum
AHIP	Aboriginal Heritage Impact Permit
AHIMs	Aboriginal Heritage Information Management System BC Regulation
AMG	Australian Map Grid
BC Act 2016	Biodiversity Conservation Act 2016
BC Act 2017	Biodiversity Conservation Act 2017
BC Regulation	Biodiversity Conservation Regulation 2017
BAM	Biodiversity Assessment Method
CA	Certifying Authority
CE	Chief Executive
CM Act	Coastal Management Act 2016
CMP	Construction Management Plan
CWC	Connecting with Country
CRA	Conservation Risk Assessment
DPC	Department of Premier and Cabinet
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EES	Environment, Energy and Science
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPBC Act (Cwth)	Environment Protection and Biodiversity Conservation Act 1999
EPI	Environmental Planning Instrument
EPL	Environment Protection License
FM Act	Fisheries Management Act 1994
Ha	Hectares
HHIMS	Historic Heritage Information Management System
HI	Health Infrastructure
LEP	Local Environmental Plan
LGA	Local Government Area
MPS	Multipurpose Service
MNES	Matters of National Environmental Significance

Abbreviation	Description
NPW Act	National Parks and Wildlife Act 1974
NPW Regulation	National Parks and Wildlife Regulation 2009
NPWS	National Parks and Wildlife Service (part of EES)
NT Act (Cth)	Commonwealth Native Title Act 1993
OEH	(Former) Office of Environment and Heritage
PCMP	Preliminary Construction Management Plan
Planning Systems SEPP	State Environmental Planning Policy (Planning Systems) 2021
POEO Act	Protection of the Environment Operations Act 1997
Proponent	NSW Health Infrastructure
REF	Review of Environmental Factors
RF Act	Rural Fires Act 1997
RFS	Rural Fire Service
Resilience and Hazards SEPP	State Environmental Planning Policy (Resilience and Hazards) 2021
SEPP	State Environmental Planning Policy
SIS	Species Impact Statement
TISEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021
WM Act	Water Management Act 2000

Executive Summary

The Proposal

NSW Health Infrastructure (HI) proposes to redevelop the Cowra Health Service at 64 Liverpool Street, Cowra (the site), by constructing a new health services facility. The Proposal forms part of HI's delivery of infrastructure solutions and services to support the healthcare needs of Cowra and its surrounding districts. The Proposal involves:

- Construction of a new two-storey hospital, car park and loading area.
- Staged demolition of the existing hospital and associated structures.
- Site preparation and earthworks.
- Removal of selected trees to facilitate the proposed works.
- Construction of a new car park.
- Installation and realignment of selected services.
- Installation of ancillary development including, but not limited to, lighting, signage, stormwater management and fencing.
- Site-wide landscaping strategy.

Need for the Proposal

The Cowra Health Service is a district hospital that acts as a hub for specialist services such as maternity, surgery, renal dialysis, and chemotherapy within the Western NSW Local Health District. The hospital's facilities are approximately 60 years old and located on the same site as earlier hospital buildings. The existing buildings are aged and have functional and structural problems that need to be addressed. At the same, Cowra's population is predicted to grow over the next ten years, and like other parts of Australia, the population is ageing.

In response to the above challenges, the major redevelopment of the Cowra Health Service was identified in the 2017 Western NSW LHD Asset Strategic Plan as a priority for future capital investment. The NSW Government has since allocated funding towards the redevelopment of the hospital in line with the Cowra Hospital and Health Service Clinical Services Plan 2020-2030 (**Appendix A**). The funding seeks to deliver new facilities that provide contemporary, integrated models of health care to support and improve the health of residents in Cowra and surrounding districts, including Grenfell, Canowindra, and Woodstock.

Background

Master planning for the redevelopment project commenced in July 2021. The construction of a new hospital on the existing site was identified as the preferred option. An 'Early Works' REF was prepared and approved on 1 December 2022 for site preparation works to prepare the northern portion of the site for the new hospital, which is the subject of this 'Main Works' REF.

Proposal Objectives

The Proposal's primary objective is to deliver a new hospital that will replace an outdated facility and:

- Provide reliable contemporary health care to meet the projected increased demand from an ageing population combined with the increased prevalence of long-term diseases.
- Contribute to NSW Health and District strategic priorities to provide early prevention, early intervention and alternatives to in-hospital treatment.
- Provide safe, reliable, urgent, emergency and acute health care.
- Deliver integrated care to manage continuity of care across health disciplines and life courses.
- Improve patient experiences, including that of vulnerable communities seeking health care.
- Create opportunities for building community partnerships.

The Proposal's other objectives include:

- Minimising environmental and amenity impacts through appropriate mitigation measures, including impacts to the users of the main hospital building while the new hospital is under construction.
- Minimising disruption to surrounding uses.
- Incorporating Ecologically Sustainable Development (ESD) principles in the Proposal's design and operation.
- Provide a source of construction and operational employment at a time of economic recovery.

Options Considered

As discussed, master planning for the project commenced in July 2021, with the following three options considered.

- Option 1 - Extend and refurbish the existing hospital
- Option 2 - A new hospital on the existing site
- Option 3 - A new hospital on a greenfield site

The following project objectives were used to determine the preferred option:

1. Consistent and efficient provision of new models of care.
2. New infrastructure to replace existing outdated facility.
3. Building partnerships, better value and sustainability of health services and stabilising workforce.
4. Proximity to population and to other services; builds on existing precinct for health services.
5. Consistency for provision of safe and reliable services and maintains C2 hospital status.

The construction of a new hospital on the existing site (option 2) was identified as the preferred option for the following reasons.

- The existing hospital site is located within the Cowra town centre with good access to Cowra's bus network.
- The acquisition of a new site would not be required as the new facilities can be accommodated on the existing site.
- Option 2 is significantly less disruptive to the existing hospital's operations than Option 1.
- Option 2 allows for the creation of a purpose-built facility that would be able to achieve optimal clinical and service adjacencies and allow delivery of services through contemporary models of care. That facility would also benefit from elevated and wide-ranging district views to support healing and wellbeing.
- Option 2 provides a single point of public entry, separation of emergency, public and logistics traffic and will improve accessibility to the hospital by providing parking within proximity to the main entry.

Site Details

The Cowra Health Service is located at 64 Liverpool Street, Cowra, in the Cowra Local Government Area. It is the primary provider of hospital services to Cowra and surrounding communities. The site comprises one lot, legally described as Lot 2 DP1169527, and covers approximately 1.43ha. It is bound by Liverpool Street to the south, Brisbane Street to the west, and Ina Drive to the east. Cowra's main street, Kendal Street, is located approximately 240m to the south of the site.

Figure 1 provides a contextual map of the site and its surrounds.

Figure 1 Site Contextual Map
Source: Maphub, edits by Ethos Urban

Planning Approval Pathway

Section 4.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) states that if an Environmental Planning Instrument provides that development may be carried out without the need for development consent, a person may carry the development out, in accordance with the EPI, on land to which the provision applies. However, the environmental assessment of the development is required under Part 5 of the Act (through a REF).

State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) aims to facilitate the effective delivery of infrastructure across the State. As the proposed works are within the boundaries of the existing Cowra Health Service, which is defined as a 'health services facility', the provisions of the TISEPP apply. Specifically, the following sections of the TISEPP enable the proposed works to be undertaken by NSW Health Infrastructure (as a public authority) as 'development permitted without consent'.

- Section 2.44 (1) – 'Development for the purpose of an electricity transmission or distribution network'
- Section 2.61(1)(a) – 'The erection or alteration of, or addition to, a building that is a health services facility'
- Section 2.61(1)(c) – 'Demolition of buildings carried out for a health service facility'.
- Section 2.61(1)(d) – 'Development for the purposes of patient transport facilities, including helipads and ambulance facilities'.
- Section 2.61(1)(e) – 'development for the purposes of car parks to service patients or staff of, or visitors to, the health services facility'
- Section 2.75(2) - 'Development for the purpose of a gas pipeline'
- Sections 2.109(1) & (3)(c) – 'Alterations or additions to an existing road (such as widening, narrowing, duplication or reconstruction of lanes, changing the alignment or strengthening of the road)'
- Section 2.126(6) – 'development for the purpose of sewage reticulation systems'

- Section 2.137(1) – 'development for the purpose of stormwater management systems'
- Section 2.159(1) – 'Development for the purpose of water reticulation systems'

Under Part 5 of the EP&A Act, the proposal is defined as an 'activity' and is therefore subject to an environmental assessment (Review of Environmental Factors) as presented in this report.

Statutory Consultation

In accordance with Chapter 2, Division 1 and Division 10 of the TISEPP, the REF was notified to the following parties:

- Cowra Shire Council under Sections 2.10(1)(a), (c), (d) and (f) and Section 2.62(2)(a)(i) of the TISEPP.
- Occupiers of adjoining properties under Section 2.62(2)(a)(ii) of the TISEPP.

The REF scope of works was notified to the above stakeholders for 21 calendar days from 23 November 2022 to 15 December 2022, with an extension for time to review requested by and given to Cowra Council until 13 January 2023.

In addition to the above statutory consultation requirements, the project team has undertaken other extensive community consultation activities throughout the project to date, which has helped form the current design. This has included multiple Community Information Sessions, briefings with Cowra Council, Cowra Youth Council, Health Council and Local MP, Walk on Country, Master Plan, Concept Design and Schematic Design Stakeholder Engagement Sessions and initiation of the Cowra Hospital Redevelopment Website. A summary of non-statutory engagement carried out by Health Infrastructure is provided at **Appendix S**.

Environmental Impacts

This REF considers the requirements of Part 5 of the EP&A Act and Section 171(1) of the EP&A Regulation. **Section 6** outlines the potential impacts of the works on the environment, including traffic and parking, visual, noise, vibration, and ecological and heritage impacts.

The Proposal's environmental impacts are considered to be temporary and minimal. The environmental impacts of the Proposal are not likely to be significant, and therefore it is not necessary for an EIS to be prepared. Mitigation measures, included in **Appendix B**, outline the undertakings to manage and minimise potential impacts arising from the development.

Justification and Conclusion

This REF describes the Proposal and examines, to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the proposed activity. Potential impacts can be reasonably mitigated and where necessary managed through the adoption of suitable site practices and adherence to accepted industry standards.

The Proposal is justified as it responds to the strategic priorities of the Cowra Health Service Clinical Services Plan 2020-2030 by delivering a new hospital that will provide contemporary, integrated models of health care to support and improve the health of residents in Cowra and its surrounding districts.

1. Introduction

NSW Health Infrastructure (HI) proposes to redevelop the Cowra Health Service at 64 Liverpool Street, Cowra (the site), by constructing a new health services facility. The Proposal forms part of HI's delivery of infrastructure solutions and services to support the healthcare needs of Cowra and its surrounding districts. The Proposal involves:

- Construction of a new two-storey hospital, car park and loading area.
- Staged demolition of the existing hospital and associated structures.
- Site preparation and earthworks.
- Removal of selected trees to facilitate the proposed works.
- Construction of a new car park.
- Installation and realignment of selected services.
- Installation of ancillary development including, but not limited to, lighting, signage, stormwater management and fencing.
- Site-wide landscaping strategy.

Ethos Urban has prepared this Review of Environmental Factors (REF) on behalf of HI to determine the environmental impacts of the proposed works at the site. For the purposes of these works, HI is the proponent and the determining authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of this REF is to describe the Proposal, to document the likely impacts of the proposal on the environment and to detail protective measures to be implemented to mitigate impacts.

The description of the proposed works and associated environmental impacts have been undertaken in the context of the Department of Planning & Environment's (DPE) *Guidelines for Division 5.1 Assessments* (the Guidelines), section 171(1) of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) and the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The assessment contained within the REF has been prepared having regard to:

- whether the proposed activity is likely to have a significant impact on the environment and therefore the necessity for an EIS to be prepared and approval to be sought from the Minister for Planning and Homes under Part 5.1 of the EP&A Act;
- whether the activity is likely to significantly affect threatened species, populations, ecological communities or their habitats, in which case a SIS and/or BDAR is require; and
- the potential for the proposal to significantly impact *Matters of National Environmental Significance* (MNES) on Commonwealth land and the need to make a referral to the Australian Government Department of Environment and Energy for a decision by the Commonwealth Minister for the Environment and Water on whether assessment and approval is required under the EPBC Act.

The REF helps to fulfil the requirements of section 5.5 of the EP&A Act, which requires that HI examine, and take into account to the fullest extent possible, all matters affecting, or likely to affect, the environment by reason of the proposed activity.

1.1 Proposal need and alternatives

The Cowra Health Service is a district hospital that acts as a hub for specialist services such as maternity, surgery, renal dialysis, and chemotherapy within the Western NSW Local Health District. The hospital's facilities are approximately 60 years old and located on the same site as earlier hospital buildings. The existing buildings are aged and have functional and structural problems that need to be addressed soon. At the same, Cowra's population is predicted to grow over the next ten years, and like other parts of Australia, the population is ageing.

In response to the above challenges, the major redevelopment of the Cowra Health Service was identified in the 2017 Western NSW LHD Asset Strategic Plan as a priority for future capital investment. The NSW Government has since

allocated funding towards the redevelopment of the hospital in line with the Cowra Hospital and Health Service Clinical Services Plan 2020-2030 (**Appendix A**). The funding seeks to deliver new facilities that provide contemporary, integrated models of health care to support and improve the health of residents in Cowra and surrounding districts, including Grenfell, Canowindra, and Woodstock.

Master planning for the redevelopment project commenced in July 2021. The construction of a new hospital on the existing site was identified as the preferred option. An 'Early Works' REF was prepared and approved for site preparation works to prepare the northern portion of the site for the new hospital. This 'Main Work's REF now proposes the construction of the new hospital and decanting and demolishing the old main hospital building to construct a final carpark and landscaping.

2. Site Analysis and Description

2.1 The Site and Locality

The Cowra Health Service is located at 64 Liverpool Street, Cowra, in the Cowra Local Government Area. It is the primary provider of hospital services to Cowra and surrounding communities. The site comprises one lot, legally described as Lot 2 DP1169527, and covers approximately 1.43ha. It is bound by Liverpool Street to the south, Brisbane Street to the west, and Ina Drive to the east. Cowra's main street, Kendal Street, is located approximately 240m to the south of the site.

Figure 2 provides a contextual map of the site and its surrounds.

Figure 2 Site Contextual Map
Source: Maphub, edits by Ethos Urban

2.1.1 Existing Development

The Cowra Health Services site contains a range of healthcare facilities that provide inpatient, outpatient and community clinical services, as well as ancillary structures. The location of these facilities is shown in **Figure 3.**

Figure 3 Site Aerial
Source: Maphub, edits by Ethos Urban

As described in **Section 1.1**, an 'Early Works' REF was prepared and approved for site preparation works to prepare the northern portion of the site for the new hospital. That REF approved the demolition of the following structures and associated ground floor concrete slabs and footings.

- Staff accommodation building (item 2 in **Figure 3**).
- The vacant building previously used as a nurses' quarter (item 9 in **Figure 3**).
- Old boiler house (item 8 in **Figure 3**).
- Maintenance sheds (item 7 in **Figure 3**).
- Life skills building (item 6 in **Figure 3**).
- Stores building (item 5 in **Figure 3**).

The 'Early Works' REF also included the removal of three (3) trees whose removal was identified as a necessary outcome to facilitate the proposed demolition works.

2.1.2 Other Site Elements

The site's topography gradually increases in a northeast direction from a low point of approximately 322m AHD at the site's southwest corner to 338m AHD in the site's northeast corner. The site is highly developed and does not contain bushland. It does contain several mature trees and a number of stressed young introduced trees.

The site's nearest bus stop is located approximately 200m to the south on Brisbane Street. It is serviced by bus routes 541, 543, 544 and 545, which provide services across the Cowra township.

The site is not identified as a heritage item or located in a heritage conservation area, nor is it located near a heritage item or conservation area.

2.1.3 Site Considerations and Constraints

Section 10.7 Planning Certificate No.17997 dated 11 August 2022 identifies that the site is located within the 'R1 General Residential' zone under Cowra Local Environmental Plan 2012, and is provided at **Appendix C**.

Table 1: Section 10.7 Planning Certificate

Affectation	Yes	No
Critical habitat		✓
Conservation area		✓
Item of environmental heritage		✓
Affected by section 38 or 39 of the Coastal Management Act 2016 (CM Act)		✓
Proclaimed to be in a mine subsidence district		✓
Affected by a road widening or road realignment		✓
Affected by a planning agreement		✓
Affected by a policy that restricts development of land due to the likelihood of landslip		✓
Affected by bushfire, tidal inundation, subsidence, acid sulphate or any other risk		✓
Affected by any acquisition of land provision		✓
Biodiversity certified land or subject to any bio-banking agreement or property vegetation plan		✓
Significantly contaminated		✓
Subject to flood related development controls		✓

2.2 Surrounding Development

The site is located at the interface between Cowra's Town Centre to the south and Bellevue Hill to the north. The site's surrounding development is described below.

- **North:** An existing residential dwelling used for health service purposes (Tresillian Family Care Centre, which has an association with the hospital)and field is located immediately north of the site. Beyond that, Bellevue Hill is located further north along Scenic Drive.
- **East:** Low density detached dwellings are east of the site until Cowra's TAFE NSW campus, located approximately 500m along Liverpool Street.
- **South:** A mixture of retail and commercial uses are located south of the site along Brisbane Street, which intersects with Cowra's main street – Kendal Street. Cowra Physiotherapy and Health Supplies and the Cowra Services Club Motel are both located immediately to the south across Liverpool Street.
- **West:** Low density detached dwellings are located west of the site across Brisbane Street.

3. Proposed Activity

3.1 Proposal Overview

The Proposal involves:

- Construction of a new two-storey hospital, car park and loading area.
- Staged demolition of the existing hospital and associated structures.
- Site preparation and earthworks.
- Removal of selected trees to facilitate the proposed works.
- Construction of a new car park.
- Installation and realignment of selected services.
- Installation of ancillary development including, but not limited to, lighting, signage, stormwater management and fencing.
- Site-wide landscaping strategy.

Architectural drawings and a Design Report illustrating the proposed development are included at **Appendix D** and **E**. **Figure 4** provides a site plan, illustrating the proposed scheme following the completion of construction works.

In delivering the above-described works, the Proposal seeks to achieve the following objectives.

- Deliver a new hospital that will replace an outdated facility and:
    - Provide reliable contemporary health care to meet the projected increased demand from an ageing population combined with the increased prevalence of long-term diseases.
    - Contribute to NSW Health and District strategic priorities to provide early prevention, early intervention and alternatives to in-hospital treatment.
    - Provide safe, reliable, urgent, emergency and acute health care.
    - Deliver integrated care to manage continuity of care across health disciplines and life courses.
    - Improve patient experiences, including that of vulnerable communities seeking health care.
    - Create opportunities for building community partnerships.
- Minimise environmental and amenity impacts through appropriate mitigation measures, including impacts to the users of the main hospital building while the new hospital is under construction.
- Minimise disruption to surrounding uses.
- Incorporate Ecologically Sustainable Development (ESD) principles in the Proposal's design and operation.
- Provide a source of construction and operational employment at a time of economic recovery.

Figure 4 Proposed Site Plan
Source: drjd Architects

3.1.1 Design Approach

The REF is accompanied by an Architectural Design Report prepared by djrd architects (**Appendix E**) that outlines the Proposal's design approach. This design approach is described below.

Placemaking and Design

The Proposal has been designed per the objectives for good design in *Better Placed* prepared by the NSW Government Architect. The consistency of the Proposal with the Better Placed objectives is described as follows:

- **Better fit –** The Proposal responds surrounding residential context by locating the new hospital to the north of the existing hospital building and limiting its height to a maximum of two storeys, including a single-storey portion to the northern end of the site in line with the site's sloping terrain. This built-form design and site planning maximises solar access to Liverpool and Brisbane Streets and complements the site's surrounding low-density residential character.
- **Better performance –** The new hospital will be constructed to meet Health Infrastructure's Ecologically Sustainable Development (ESD) performance requirements, including:
  - Compliance with NCC2022 Section J Energy Efficiency Requirements.
  - 10% Improvement from the minimum NCC2022 Section J Energy Efficiency Requirement.

- 4-Star Green Star Design & As Built v1.2 equivalent design.

- The REF is accompanied by an ESD Report that outlines the ESD initiatives (**Appendix F**).
- **Better for community –** The Proposal's design has been informed by extensive community consultation, including consultation with the local Aboriginal community. The Proposal will deliver a new hospital that provides contemporary, integrated models of health care that will ultimately support the health outcomes of Cowra and its surrounding districts.
- **Better for people –** The Proposal has been designed with a focus on the safety, comfort and enjoyment of future users. The Proposal includes extensive landscaped areas, including a rehabilitation garden, a rose garden and a central 'lightwell' outdoor space around which the new hospital is organised. These green spaces will create a pleasant environment for the hospital's users. The Proposal also consolidates the site's health functions into one building, improving the wayfinding and access at the site.
- **Better working –** The Proposal provides for a streamlined hospital environment by locating clinical services and back-of-house services on the first floor and outpatient services and the main entrance on the ground floor. Separate car parking service on the two levels, reducing conflict between the public and staff, ambulances and services.
- **Better value –** The Proposal will provide ongoing value for the community by expanding and improving the range of available healthcare services available to Cowra and its surrounding districts.
- **Better look and feel –** The new hospital's massing features highly articulated elevations, with a split-level elevation along Brisbane Street and Ina Drive and a two-storey elevation along Liverpool Street. These elevations are broken up vertically and horizontally through glazing and a range of materiality. The hospital's architecture also references common elements of Cowra's built heritage, including hipped pitched roofs and masonry construction.

Connecting with Country and Aboriginal Engagement

The REF is accompanied by a Connecting with Country Report prepared by djrd architects (**Appendix G**) that outlines the collaboration and consultation that was undertaken with local Aboriginal groups and how this process has informed the Proposal's design. This process included a Walk on Country and sessions with an Aboriginal Reference Group. The following design moves were informed by the learnings of this process.

- Adopting a biophilic design approach that focuses on connections between people and the natural world. This approach materialised in the hospital's design through:
    - Maximizing views over Country from the hospital's waiting areas.
    - Providing safe areas throughout the site that allow for refuge, restoration and relaxation.
    - Maximising light and solar access into spaces.
    - Providing a Cultural Garden and Ceremony space adjacent to an indigenous community room. This courtyard will include a variety of seating areas and open spaces for gatherings and ceremonies.

Furthermore, the hospital's interior design is intended to incorporate artworks, murals and feature windows that reflect the natural characteristics, colours and patterns of Country.

Sustainability

As described above, the hospital will be constructed to meet Health Infrastructure's Ecologically Sustainable Development (ESD) performance requirements, including:

- Compliance with NCC2022 Section J Energy Efficiency Requirements.
- 10% Improvement from the minimum NCC2022 Section J Energy Efficiency Requirement.
- 4-Star Green Star Design & As Built v1.2 equivalent design. This benchmark demonstrates "Best Practice" Sustainability.

The REF is accompanied by an ESD Report that outlines the ESD initiatives that will be included within the project to achieve the above objectives (**Appendix F**).

Design Advisory Review

The design team incorporated feedback from Health Infrastructure's Internal Design Review and Executive Reference Group Reviews into the Proposal's design. The details of these reviews are presented on page 39 of the Architectural Design Report. The following points summarise the Proposal's design response to feedback from the various reviews.

- The initial Health Infrastructure Internal Design Review identified that a single-entry point would not be feasible. Instead, the hospital's design carefully considers the location of lifts and stairs to improve wayfinding between the hospital's two levels.
- The hospital's roof plant room was reduced and relocated as a north-south spine along the hospital's western side, and the design team lowered the hospital's gable roof pitches to present a more 'civic' than 'domestic' presence.

3.1.2 Proposed Activity

Staging

The Proposal will be delivered across the following stages:

- **Stage 1** – Demolition works and removal of trees in the site's northern portion to prepare it for the construction of the new hospital (under the previously approved Early Works REF).
- **Stage 2** - Construction of the new hospital and northern car park with 11 parking spaces, during which the existing main hospital building will be retained and continue to operate until such time that services can be decanted to the new hospital.
- **Stage 3** – Demolition of the existing main hospital building and other structures within the site's southern portion following the construction of the new hospital.
- **Stage 4** - Construction of the southern car park and landscaping at the front of the site.

The Architectural drawings prepared by djrd architecture include staging plans illustrating the proposed staging of works.

Demolition and Tree Removal

As described in **Section 1.1**, a separate 'Early Works' REF was prepared and approved for site preparation works to prepare the northern portion of the site for the new hospital. These site preparation works included demolishing the existing staff accommodation building, former nurses' quarters, old boiler house, life skills building, stores building and maintenance sheds and removing three (3) trees.

This Proposal seeks to remove further trees in the site's northern portion to facilitate the construction of the new hospital under Stage 1. These trees are identified in the Arborist Impact Assessment prepared by McArdle Arboricultural Consultancy (**Appendix H**) that accompanies the REF and are shown in the Stage 1 Demolition Plan below (**Figure 5**).

Following the completion of the hospital under Stage 2, the Proposal will demolish existing structures within the site's southern portion, including the main hospital building, pharmacy and linin building, as shown in Stage 3 Demolition Plan below (**Figure 6**). Existing services to these structures will be disconnected before being demolished and capped. The Proposal also seeks to remove trees within this area, whose removal is necessary to facilitate the proposed demolition works.

In total, 40 trees will be removed across both the Early Works and Main Works, three (3) under the Early Works REF and 37 under the Main Works REF. As discussed further in **Section 6.2.9**, the site's landscaping strategy compensates for removing these trees by planting 89 new trees, increasing the site's canopy coverage from 5.6% to 26.96%.

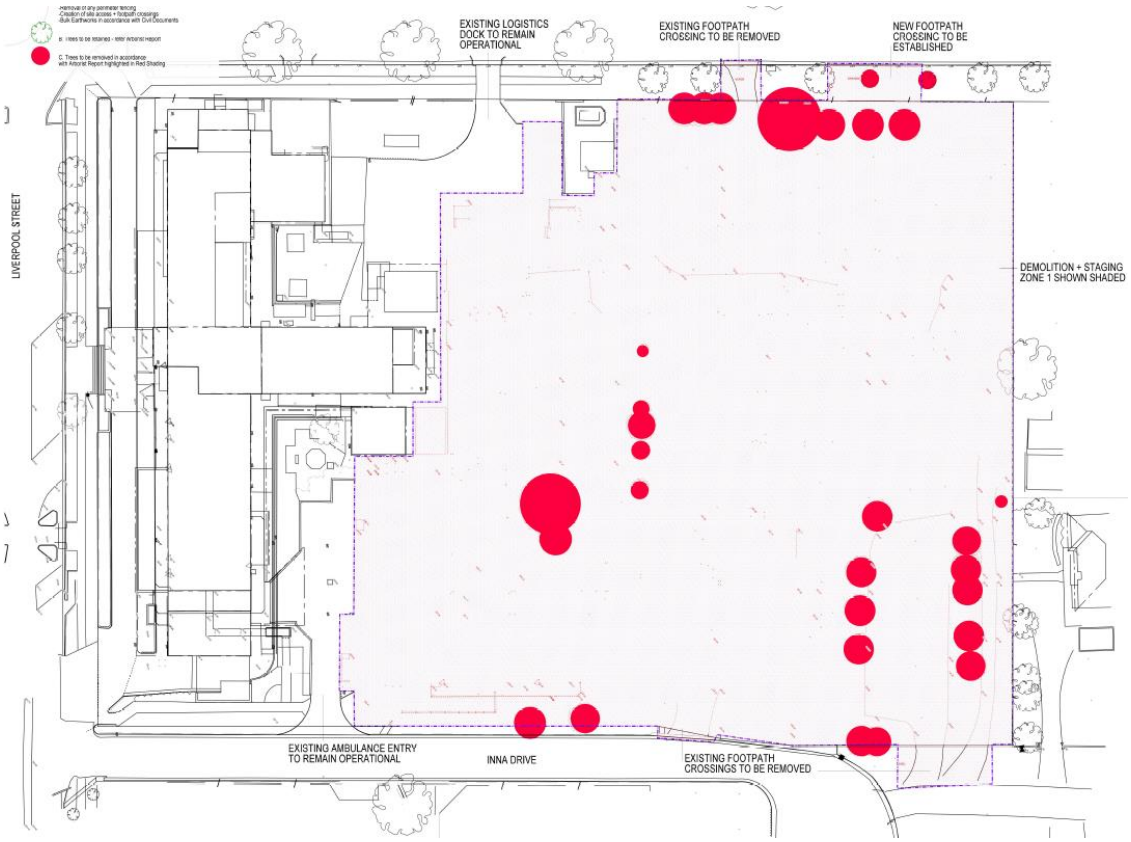

Figure 5 Proposed Demolition Plan (Stage 1)
Source: *drjd Architects*

Figure 6 Proposed Demolition Plan (Stage 3)
Source: *drjd Architects*

Built Form

The Proposal seeks to construct a two-storey hospital at the site's rear. The hospital includes a plant room above the first floor; however, the plant room is substantially set back from the first floor's roofline to provide visual screening. The hospital features a minimum setback of 5.78m to its nearest property boundary toward the southern edge of Ina Drive (the eastern property boundary), with an approximate roof overhang of 1.7m from the hospital's brick walls' external face. Its maximum building height is 14.886m, measured at the top of the proposed plant room.

As shown in **Figure 7**, the ground floor will feature the hospital's main pedestrian entrance directed toward Liverpool Street and contain the hospital's out-patient services, pathology and staff area. Most visitors to the hospital will utilise the ground floor main entrance. As shown in **Figure 8,** the first floor features a side entrance that will connect to the hospital's northern car park and the ambulance bay. This entrance will provide access to the facility's emergency department for direct and after hours entry, which will be located on the first floor. The first floor also includes the inpatient unit, Tresillian unit, operating theatres and the facility's back-of-house services with direct access to the new loading area.

Figure 7 Ground Floor Plan
Source: drjd Architects

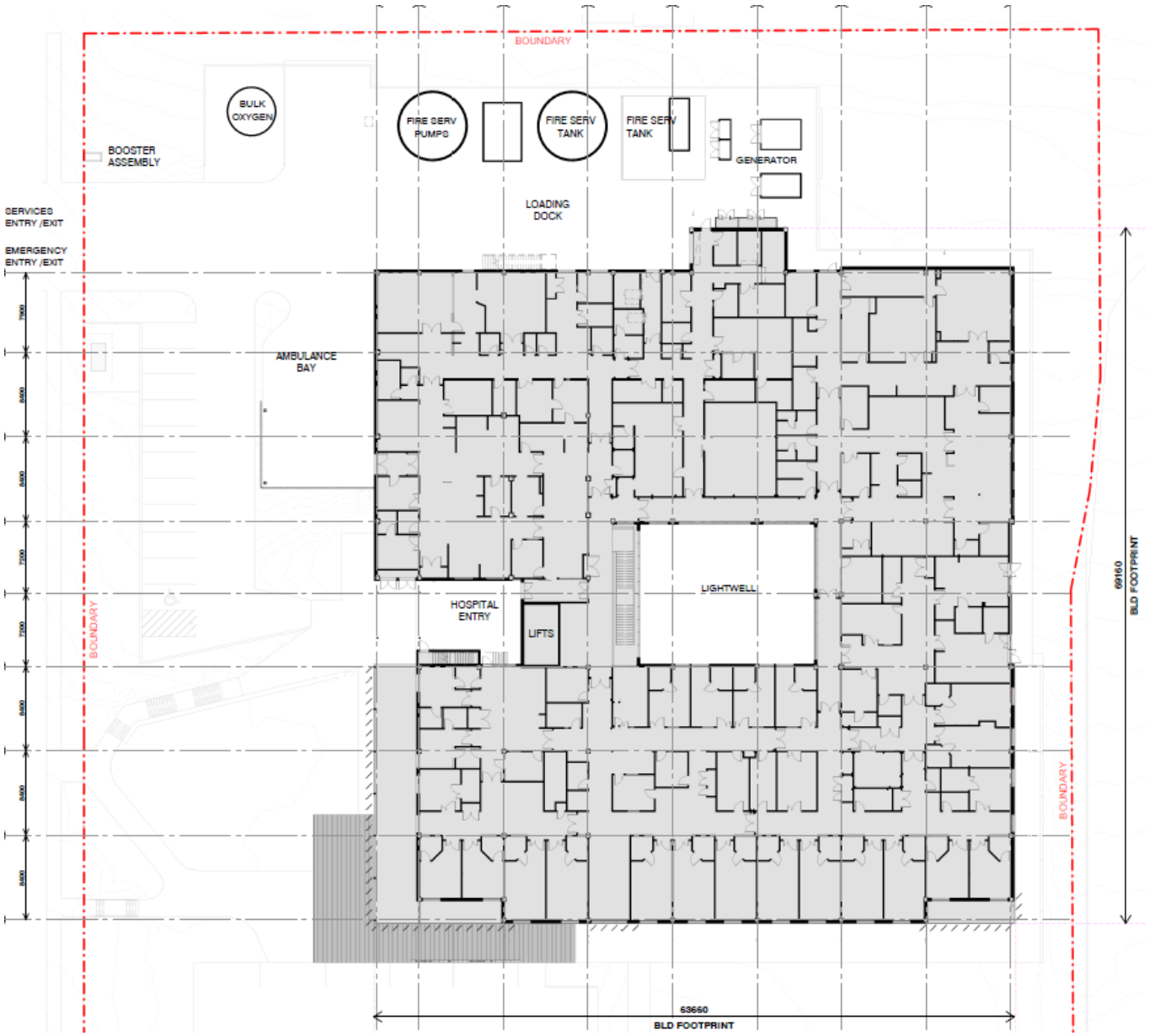

Figure 8 First Floor Plan
Source: drjd Architects

Roadworks and Parking

Under Stage 2 works, the Proposal seeks to construct a new vehicular driveway off Brisbane Street along the site's western boundary, designed to accommodate two-way traffic (see **Figure 4**). The driveway will provide access to a new northern car park containing 11 parking spaces, including one accessible space, that is intended to provide after-hours or direct, urgent access parking for the public needing to use the emergency department. A pedestrian footpath is provided between the car park and the hospital's first-floor entrance to provide safe and convenient pedestrian access. The Brisbane Street driveway will also provide access to a new loading dock adjacent to the new facility's northern elevation and an ambulance bay adjacent to the facility's western elevation. These will provide vehicular access for staff, logistics and servicing vehicles and ambulances from the commencement of the new hospital.

Under Stage 4 works, the Proposal seeks to construct a new vehicular driveway off Liverpool Street along the site's southern boundary, designed to accommodate two-way traffic. The driveway will provide access to a new visitor car park constructed to the south of the new hospital. The car park will contain 31 parking spaces, including two (2) accessible spaces and two electric vehicle spaces. In addition, there will be five pick-up/drop-off spaces. This car park will be used by all daytime visitors / users of the hospital, with the exception of urgent visitors / users of the emergency department, who will have 24 hr access via the direct Liverpool Street entry.

Therefore, following the completion of works, the new hospital will be serviced by 42 parking spaces and five (5) pick-up/drop-off spaces. This represents an increase of 15 on-site parking spaces (or a 56% increase) compared to existing conditions.

Landscaping

The REF is accompanied by a Landscape Design Report and Landscape Plans prepared by Site Image Landscape Architects (**Appendix I** & **J**). Drawing upon an analysis of the site and its surroundings, including the learnings of the Connecting with Country process, these documents present a site-wide landscaping strategy that incorporates a range of native plantings and includes:

- The delivery of a cultural garden and gathering space, a community-facing garden adjacent to Liverpool Street, a rehabilitation courtyard, a maternity courtyard and a landscaped lightwell.
- Landscaped setbacks to all property boundaries.
- Tree plantings within the southern car park and adjacent to the northern car park to provide shading for parked cars.

The landscape strategy will deliver 89 new trees, increasing the site's canopy coverage from 5.6% to 26.96%

Services & Infrastructure

The REF is accompanied by a Civil Engineering Design Report (**Appendix K**) and Civil Engineering Drawings (**Appendix L**) prepared by ACOR Consultants and a Building Services Report prepared by ARUP (**Appendix N**) that describe how the new hospital will be connected to services and utilities. This includes stormwater, electrical, mechanical services, hydraulic services, medical gas services, water, sewer, gas, and fire services. The table below summarises how key services and utilities will be provided.

Table 2: Utilities and Infrastructure

Service	Description
Stormwater	The new hospital is proposed to be drained via a conventional roof drainage system connecting to a new inground pit and pipe network. The in-ground pit and pipe systems will be designed to capture and convey all runoff for up to and including a 20-year ARI storm event to Council's stormwater infrastructure.
Electrical	New electrical systems will be installed throughout the hospital building and external site. The new hospital's electricity demand is anticipated to be above the capacity of the site's existing substation, so this electrical supply will be augmented to allow for the increased load. As part of the future design stage, an application will be made to the electrical supply authority to confirm supply availability. The new hospital will also include a photovoltaic system on its roof.
Water	A new 150mm water main will be taken from the 200mm AC main along Brisbane Street, which serves the existing hospital. The 200mm main with highest available flow and pressure along Brisbane Street is not suitable for new connections due to its location and depth; therefore, Cowra Council has expressed a preference to connect to the main that serves the existing building.
Sewer	The new hospital will be connected to the existing 150mm concrete utility sewer along Ina Drive. It is assumed that the capacity will be sufficient for the new building as the overall load of the existing site is not expected to increase significantly. A new private sewer line will be provided along the east of the site before connecting to the utility main.
Gas	A gas connection to the new hospital will be provided from the 32mm 210kPa main along Brisbane Street that serves the existing hospital.

Structural Design and BCA & Access Compliance

The REF is accompanied by Structural Plans prepared by ACOR Consultants that outline the Proposal's structural design (**Appendix M**). It is also accompanied by a BCA and Access Compliance Statement prepared by Blackett Maguire + Goldsmith that provides a preliminary assessment of the Proposal against the deemed-to-satisfy provisions of the BCA and the Disability (Access to Premises – Buildings) Standards 2010 (**Appendix O**).

The Review demonstrates that the Proposal is generally capable of achieving compliance with the relevant deemed-to-satisfy provisions, subject to further regulatory Review as a detailed design is progressed. It confirms that any

amendments required to the design documentation to comply with the BCA can be addressed when preparing the detailed documentation for a Crown Certificate without giving rise to significant changes to the Proposal as submitted for REF.

Signage

The Proposal includes the following external signs:

- A 5.6m (w) x 0.6 (h) illuminated emergency sign box fixed near the hospital's emergency entrance.
- A 10.015m (w) x 0.8m (h) illuminated sign displaying 'Cowra Hospital' fixed near the hospital's drop-off/pick-up point.
- A 0.6m (w) x 1.5m (h) freestanding directional sign near the corner of Liverpool Street and Brisbane Street that provides directions to the emergency department.
- A 1.5m (w) x 4.2m (h) freestanding sign near the proposed Brisbane Street driveway, which indicates site entry for the emergency department, ambulance, parking and loading dock.
- A 1.5m (w) x 1.5m (h) freestanding sign near the site's entry on Liverpool Street, which indicates the site's main entry and parking.

The proposed locations for the above signs are shown in

Figure 9 below. The proposed dimensions for the signs are illustrated in Wayfinding and Signage Plan in the Architectural Drawing Package. The proposed signs meet the relevant requirements of Chapter 3 of the *State Environmental Planning Policy (Industry and Employment) 2021, as demonstrated in* **Section 4.5**.

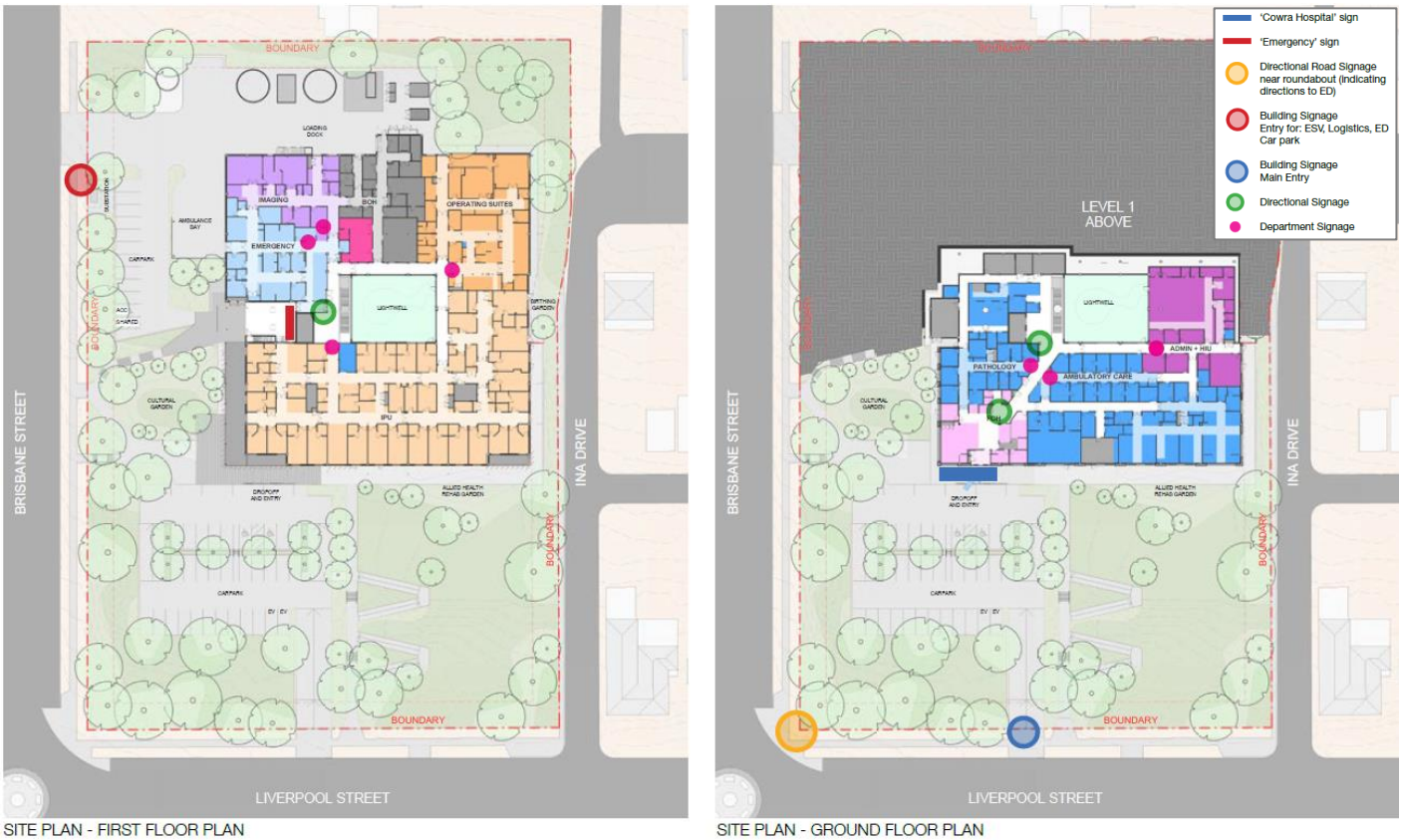

Figure 9 Signage Location Plan
Source: *drjd Architects*

3.2 Proposal Need, Options and Alternatives

3.2.1 Strategic Justification

The Cowra Health Service is a district hospital that acts as a hub for specialist services such as maternity, surgery, renal dialysis, and chemotherapy within the Western NSW Local Health District. The hospital's facilities are approximately 60 years old and located on the same site as earlier hospital buildings. The existing buildings are aged and have functional and structural problems that need to be addressed soon. At the same, Cowra's population is predicted to grow over the next ten years, and like other parts of Australia, the population is ageing.

In response to the above challenges, the major redevelopment of the Cowra Health Service was identified in the 2017 Western NSW LHD Asset Strategic Plan as a priority for future capital investment. The NSW Government has since allocated funding towards the redevelopment of the hospital in line with the Cowra Hospital and Health Service Clinical Services Plan 2020-2030 (**Appendix A**). The funding seeks to deliver new facilities that provide contemporary, integrated models of health care to support and improve the health of residents in Cowra and surrounding districts, including Grenfell, Canowindra, and Woodstock.

The Proposal also responds to the site's strategic planning context as articulated in the Cowra Local Strategic Planning Statement and Central West and Orana Regional Plan 2036 by delivering a new hospital that will:

- Improve access to health services for the Region's aging population.
- Deliver additional and complementary health services around existing health facilities.
- Meet the Cowra Local Strategic Planning Statement's objective to upgrade / replace the Cowra Hospital to meet anticipated population growth.

3.2.2 Alternatives and Options

An overview of the alternatives, and an identification of the preferred alternative, for the Proposal are provided within **Table 3**.

Table 3: Alternatives considered for the proposal

Alternative description	Advantages and disadvantages	Preferred alternative
Option 1 - Extend and refurbish the existing hospital	The advantages of this option included: • The acquisition of a new site would not be required. • The existing hospital site is well-located within Cowra the town centre and has good access to existing public transport networks. • Extending the existing hospital would provide the largest hospital floor area of the three options. The main disadvantages of this option included: • The design of the extended and refurbished hospital would be restricted by existing structure and floor heights. • The existing hospital's operations would be significantly impacted, requiring complex staging and increased time. • The high cost associated with rectifying the issues associated with the existing hospital building would limit the funds available for new or refurbished facilities.	
Option 2 - A new hospital on the existing site	The advantages of this option included: • The acquisition of a new site would not be required. • The existing hospital site is well-located within the Cowra town centre and has good access to existing public transport networks. • Fewer disruptions to the existing hospital's operations compared to option 1. • Enabling the construction of a purpose-built facility, which could provide optimal clinical and service adjacencies for delivery of services through contemporary models of care. The main disadvantages of this option included: • The need to relocate maintenance storage during construction. • The challenges associated with the construction of a new building on the site's sloped topography.	✓

Alternative description	Advantages and disadvantages	Preferred alternative
Option 3 - A new hospital on a greenfield site.	The advantages of this option included: • Minimal impact on the existing hospital's operations. • A flatter site may be acquired, which could improve logistics and accessibility. The main disadvantages of this option included: • The site would likely be located outside the Cowra town centre with less access to local amenities and public transport. • Time and financial cost associated with selecting and acquiring a new site. • Remediation of the existing hospital site and the construction of new infrastructure to support the new hospital would be included in the project's costs.	

3.3 Construction Activities

The proposed construction activities are detailed in **Table 4** below. A Preliminary Construction Management Plan is provided at **Appendix P**.

Table 4: Project Timeframes and Construction Activities

Construction activity	Description
Commencement Date	The commencement of the Early Works is scheduled for January 2023. The Main Works will follow, dependent on Main Works REF approval and engagement of the Contractor. They are likely to commence in May 2023.
Work Duration/Methodology	The duration of the overall works program is approximately 29 months, followed by a Post Completion Period of 12 months for each Milestone. • Milestone 1 - Early Works: Approximately 4 months. • Milestone 2 - Main Works: Approximately 18 months. • Milestone 3 – Demolition of Existing Hospital and Finalisation: Approximately 7 months.
Work Hours and Duration/Construction	The working hours will be in accordance with the Interim Construction Noise Guideline, as follows: • Monday to Friday: 7am to 6pm. • Saturday: 8am to 1pm. • Sunday and Public Holidays: No Work. High noise generating works are to equate to a maximum of four-hour blocks, separated by at least a one hour respite period. Some work may need to be completed outside of the above hours. If required, these will be planned in consultation with stakeholders and Council to ensure all aspects of work are clearly understood by all parties and minimise disruption to hospital operations. This may include works that are most appropriately carried out outside of main working hours for critical hospital operational reasons.
Workforce/Employment	100
Ancillary Facilities	The site amenities and compounds erected will accommodate lunch, ablution and change facilities for the duration of the project. The proposed location will be determined post-engagement of the preferred contractor. The site amenities will be modest in area and located away from any sensitive hospital or residential uses. An area will be set aside for contractors and subcontractors to park during works.
Plant Equipment	The following plant equipment is anticipated for the works: • Bulldozers, backhoes and earthmoving equipment • Articulated and fixed trucks. • Excavators. • Forklifts. • General Power Tools.

Construction activity	Description
Earthworks	A preliminary bulk earthworks model has been undertaken to estimate volumes of cut and fill. Cut and fill levels on-site range between approximately 6.5 metres of cut to 2 metres of fill, with the total balance calculated to be approximately 15,600m3 of excess cut, which will need to be appropriately disposed of off-site during construction. The existing hospital is required to remain operational during the construction of the new buildings, and as such, the staging of the works will impact how the earthworks will be completed. Temporary retaining walls and shoring will be required along some of the proposed building extents and at the interface between the proposed development and existing structures to be retained.
Source and Quantity of Materials	<u>External Materials</u> Building elements will be selected to meet NCC 2022 requirements and structural requirements appropriate to Building Importance Level 4. The building will comprise a concrete structure with concrete floor slabs. Gable and skillion roofs will be Colorbond sheet steel. Cowra is well known for granite and sandstone. The landscape architect will explore the use of these materials during the next phase of design. <u>Internal Materials</u> Internal walls will be mostly plasterboard-lined steel stud walls with appropriate fire, thermal and acoustic ratings. Detailed proposals will be developed during Detailed Design. Internal materials are to be low-maintenance and durable finishes, as well as locally appropriate. An emphasis on materials that minimise the opportunity for vandalism will also be considered. The exact quantity and source of materials will be refined prior to the commencement of any works. Notwithstanding, the following measures are adopted to encourage the management and reduction of waste to minimise the loss of natural resources and landfill space: • Implement a waste management hierarchy of waste avoidance and reduction, reuse, recycling/processing, and waste disposal. • Ensure skip bins and on-site construction/demolition waste storage areas are appropriately sized and clearly labelled to facilitate the correct separation and storage of material. • Encourage the use of recycled materials where it is reasonably practical. • Minimise the use of packaging materials and recycle packaging materials where possible. • Waste concrete to be sent to a concrete recycling plant where possible. • Separate removed native vegetation from general construction waste, mulched and stockpiled for re-use. • Non-recyclable general waste will be disposed at an approved waste disposal facility.
Traffic Management and Access	During site inductions, workers will be encouraged to use public transport, active transport, or carpooling, as they will not be permitted to park on-site or within the Hospital. This will assist with minimising the impact on residents and Hospital users. It is not anticipated that any road closures will be required to facilitate the proposed works. A Traffic Guidance Scheme will be developed detailing traffic control measures to maintain safety within the existing road network. This will include traffic marshals, signage, manoeuvring areas, and any other relevant traffic management strategies to be in place during demolition. Access to the worksite for construction and delivery vehicles is anticipated to be via Brisbane Street and Ina Drive. The recommended access route is described below and aims to avoid local access roads where possible: ▪ Approach via Kendal Street. ▪ Left/Right turn onto Brisbane Street. ▪ Enter the site via left/right turn from Brisbane Street. ▪ Exit site in a forward direction onto Brisbane Street. ▪ Left/Right turn onto Kendal Street. Emergency vehicle access is anticipated to be modified per stage of construction. It is anticipated that a temporary adjustment to the ambulance access to the site will be incorporated during the staged development. This is to be further developed with the future Contractor. Priority will be given to Hospital vehicles at all times. Further details regarding traffic management and access are provided in **Section 6.2.1**.

3.4 Operational Activities

Use

The site will continue to operate as a health services facility, meaning a building or place used to provide medical or other services relating to the maintenance or improvement of the health, or the restoration to health, of persons or the prevention of disease in or treatment of injury to persons.

Operating Hours

The new hospital will continue to operate 24 hours, 7 days a week, per the Cowra Health Service's current trading hours.

Staff/patient

The existing hospital and associated facilities contain 30 hospital beds, generate employment for approximately 126 full-time equivalent positions and are staffed by 74 workers during a typical weekday shift.

The new hospital and associated facilities will provide 34 hospital beds, generate employment for approximately 130 full-time equivalent positions and be staffed by 84 workers during a typical weekday shift.

4. Statutory Framework

4.1 Planning Approval Pathway

Section 4.1 of the EP&A Act states that if an EPI provides that development may be carried out without the need for development consent, a person may carry the development out, in accordance with the EPI, on land to which the provision applies. However, an environmental assessment of the development is required under Part 5 of the Act.

State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) aims to facilitate the effective delivery of infrastructure across the State. As the proposed construction of the new two-storey hospital, car parks and loading area and demolition of the existing hospital and associated structures are within the boundaries of the existing Cowra Health Service, which is defined as a 'health services facility', the 'development permitted without consent' provisions under Section 2.61 of the TISEPP apply. Furthermore, the site is zoned R1 General Residential under the *Cowra Local Environmental Plan 2011*, which is a prescribed zone under the TISEPP. Additional provisions relating to installing services and utilities under the TISEPP also apply.

Table 5 outlines the Sections of the TISEPP that enable the proposed works to be undertaken by NSW Health Infrastructure (as a public authority) as 'development permitted without consent'.

Table 5: Description of proposed activities

Division and Section within TISEPP	Description of Works
Division 5 – Electricity Transmission or Distribution	
Section 2.44(1) – 'Development for the purpose of an electricity transmission or distribution network'	The proposed ancillary works associated with the installation and augmentation of electrical services can be undertaken as development without consent by a public authority on any land. The proposed electrical works are being carried out by HI (a public authority). Therefore, the proposal is consistent with Sections 2.109(1) and (3) of the TISEPP.
Division 10 – Health Services Facilities	
Section 2.61(1)(a) – 'The erection or alteration of, or addition to, a building that is a health services facility'	The proposed erection of the new hospital (which is defined as a health service facility under this Division) can be carried out by or on behalf of a public authority without consent on any land within the boundaries of an existing health services facility if: • The development does not result in a building exceeding 15m, or • being located closer than 5 metres to any property boundary. As described in **Section 3.1.2**, the proposed hospital provides a minimum setback of 5.78m to its nearest property boundary, and its maximum building height is 14.886m, which is below 15m. Furthermore, the proposed works are within the boundaries of the Cowra Health Service, an existing health services facility, and HI (a public authority) will carry them out. Therefore, the Proposal is consistent with Section 2.61(1)(a) and (2) of the TISEPP.
Section 2.61(1)(c) – 'Demolition of buildings carried out for a health service facility'.	The proposed demolition works (described in **Section 3.1.2**) can be carried out by or on behalf of a public authority without consent on any land within the boundaries of an existing health services facility. The proposed demolition works are being carried out by HI (a public authority) within the boundaries of the Cowra Health Service. Therefore, the Proposal is consistent with Section 2.61(1)(c) of the TISEPP.
Section 2.61(1)(d) – 'Development for the purposes of patient transport facilities, including helipads and ambulance facilities'.	The proposed development of the ambulance bay adjacent to the new hospital's western frontage can be carried out by or on behalf of a public authority without consent on any land within the boundaries of an existing health services facility. The ambulance bay works are being carried out by HI (a public authority) within the boundaries of the Cowra Health Service. Therefore, the Proposal is consistent with Section 2.61(1)(d) of the TISEPP.
Section 2.61(1)(e) – 'development for the purposes of car parks to service patients or staff of, or visitors to, the health services facility'	The proposed construction of northern and southern car parks can be carried out by or on behalf of a public authority without consent on any land within the boundaries of an existing health services facility. The proposed car park works are being carried out by HI (a public authority) within the boundaries of the Cowra Health Service. Therefore, the Proposal is consistent with Section 2.61(1)(e) of the TISEPP.
Division 12A Pipelines and Pipeline Corridors	

Division and Section within TISEPP	Description of Works
Section 2.75(2) – 'Development for the purpose of a gas pipeline'.	The new gas connection to the new hospital can be carried out by or on behalf of a public authority without consent on any land. The proposed gas connection is being carried out by HI (a public authority) and the site and adjoining Council land is not zoned Zone C1 National Parks and Nature Reserves. Therefore, the Proposal is consistent with Sections 2.75 of the TISEPP.
Division 17 Roads and Traffic	
Sections 2.109(1) & (3)(c) – 'Alterations or additions to an existing road (such as widening, narrowing, duplication or reconstruction of lanes, changing the alignment or strengthening of the road)'	The proposed vehicular driveways to Liverpool and Brisbane Streets can be carried out by or on behalf of a public authority without consent on any land. The proposed driveway works are being carried out by HI (a public authority) and the site is not land reserved under the *National Parks and Wildlife Act 1974*. Therefore, the proposal is consistent with Sections 2.109(1) and (3) of the TISEPP.
Division 18 Sewerage Systems	
Section 2.126(6) – 'development for the purpose of sewage reticulation systems'	The proposed sewer main diversions can be carried out by or on behalf of a public authority without consent on any land. The proposed works are being carried out by HI (a public authority). Therefore, the Proposal is consistent with Section 2.126(1) and (6) of the TISEPP.
Division 20 Stormwater Management Systems	
Section 2.137(1) – 'development for the purpose of stormwater management systems'	The proposed stormwater system can be carried out by or on behalf of a public authority without consent on any land. The proposed works are being carried out by HI (a public authority). Therefore, the Proposal is consistent with Section 2.137(1) of the TISEPP.
Division 24 Water Supply System	
Section 2.159(1) – 'Development for the purpose of water reticulation systems'	The proposed water main diversions can be carried out by or on behalf of a public authority without consent on any land. The proposed works are being carried out by HI (a public authority). Therefore, the Proposal is consistent with Section 2.159(1) of the TISEPP.

Therefore, the Proposal is considered an 'activity' for the purposes of Part 5 of the EP&A Act and is subject to an environmental assessment (REF).

TISEPP consultation is discussed within **Section 6** of this REF.

4.2 Environmental Protection and Biodiversity Conservation Act 1999

The provisions of the EPBC Act do affect the Proposal as it is not development that takes place on or affects Commonwealth land or waters. Further, it is not development carried out by a Commonwealth agency, nor does the proposed development affect any matters of national significance. An assessment against the EPBC Act checklist is provided at 5.

Table 6: EPBC Checklist

Consideration	Yes/No
Will the activity have, or likely to have, a significant impact on a declared World Heritage Property?	No
Will the activity have, or likely to have, a significant impact on a National Heritage place?	No
Will the activity have, or likely to have, a significant impact on a declared Ramsar wetland?	No
Will the activity have, or likely to have, a significant impact on Commonwealth listed threatened species or endangered community?	No
Will the activity have, or likely to have, a significant impact on listed migratory species?	No
Will the activity involve any nuclear actions?	No
Will the activity have, or likely to have, a significant impact on Commonwealth marine areas?	No
Will the activity have any significant impact on Commonwealth land?	No
Would the activity affect a water resource, with respect to a coal seam gas development or large coal mining development?	No

4.3 Environmental Planning and Assessment Act 1979

Duty to Consider Environmental Impact

Part 5 of the EP&A Act applies to activities that are permissible without consent and are generally carried out by a public authority. Activities under Part 5 of the EP&A Act are assessed and determined by a public authority, referred to as the determining authority. Health Infrastructure is a public authority and is the proponent and determining authority for the proposed works.

For the purpose of satisfying the objects of the EP&A Act relating to the protection and enhancement of the environment, a determining authority, in its consideration of an activity shall, notwithstanding any other provisions of the Act or the provisions of any other Act or of any instrument made under the EP&A Act or any other Act, examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of that activity (refer to sub-section 1 of section 5.5 of the EP&A Act).

The Department of Planning & Environment's (DPE) *Guidelines for Division 5.1 Assessments* (the Guidelines) define the factors which must be considered when assessing the likely impact of an activity on the environment under Part 5 of the EP&A Act. **Section 6.1** specifically responds to the factors for consideration.

Table 7 below demonstrates the effect of the proposed development activity on the matters listed for consideration in sub-section 3 of section 5.5 of the EP&A Act.

Table 7: Matters for consideration under Sub-Section, Section 5.5 of the EP&A Act

Matter for Consideration	Impacts of Activity
Sub-section 3: Without limiting subsection 1, a determining authority shall consider the effect of any activity on any wilderness area (within the meaning of the *Wilderness Act 1987*) in the locality in which the activity is intended to be carried on.	The Proposal will not impact any wilderness area
Note: If a biobanking statement has been issued in respect of a development under Part 7A of the *Threatened Species Conservation Act 1995*, the determining authority is not required to consider the impact of the activity on biodiversity values.	

4.4 Environmental Planning and Assessment Regulation 2021

Section 171(1) of the EP&A Regulation states that when considering the likely impact of an activity on the environment, the determining authority must take into account the environmental factors specified in the environmental factors guidelines that apply to the activity. The Guidelines provide a list of factors that must be taken into account for an environmental assessment under Part 5 of the EP&A Act. These requirements are considered at **Section 6.1** of this REF.

Section 171A of the EP& Regulations also provides additional matters for consideration for activities carried out in a regulated water catchment. As the site is not located within a regulated water catchment as defined in Chapter 6 of *State Environmental Planning Policy (Biodiversity and Conservation) 2021*, the provisions of this Section do not apply.

4.5 Other NSW Legislation

The following table lists any additional legislation that is required to be considered if it is applicable to the proposed activity.

Table 8: Other Possible Legislative Requirements

Legislation	Comment	Relevant? Yes/No
State Legislation		
Rural Fires Act 1997	The site is not identified as bushfire prone land.	No

Legislation	Comment	Relevant? Yes/No
Biodiversity Conservation Act 2016	The site does not contain any critical habitat, threatened species or ecological population or community.	No
Water Management Act 2000	The site is not located within 40 metres of a watercourse.	No
Contaminated Land Management Act 1997	The site is not listed on the register of contaminated sites.	No
Heritage Act 1977	The site is not identified as a heritage item, nor is it in a heritage conservation area under Schedule 5 of the *Cowra Local Environmental Plan 2012.*	No
Roads Act 1993	The Proposal involves the construction of a new vehicular cross over to Brisbane Street and Liverpool Street, both of which are public roads. Therefore, a Section 138 approval is required.	Yes
State Legislation Planning Policies		
State Environmental Planning Policy (Resilience and Hazards) 2021	*State Environmental Planning Policy (Resilience and Hazards) 2021* aims to promote the remediation of contaminated land to reduce the risk of harm to human health or any other aspect of the environment. The SEPP specifies when consent is required for remediation of contaminated land. Section 4.6 of the SEPP states that a consent authority must consent to the carrying out of any development on land unless it: • Has considered whether the land is contaminated, and • If contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable after remediation) for the purpose for which the development is proposed to be carried out. Whilst this provision applies only to DAs, it remains a relevant consideration for the works as the object of *State Environmental Planning Policy (Resilience and Hazards) 2021* aims to provide a State-wide planning approach to the remediation of contaminated land.	Yes - discussed in **Section 6.2.12**.
	Section 3.12 outlines mandatory matters for a consent authority to consider when determining an application for potentially hazardous or offensive development. Chapter 3 applies to any Proposals which fall under the policy's definition of 'potentially hazardous industry' or 'potentially offensive industry'.	Yes - discussed in **Section 6.2.12**
State Environmental Planning Policy Industry and Employment) 2021	Section 3.6 of the *State Environmental Planning Policy (Industry and Employment) 2021* (SEPP (Industry and Employment)) stipulates that a consent authority must not grant development consent to an application to display signage unless the consent authority is satisfied that: • the signage is consistent with the objectives as set out in Section 3.1(1)(a), and • the signage satisfies the assessment criteria specified in Schedule 5 of the SEPP.	Yes – discussed in **Section 4.5.1**

Legislation	Comment	Relevant? Yes/No
Cowra Local Environmental Plan 2012		
LEP Clause	**Description** **Comment**	
2.2 Land Use Zoning	The site is zoned ''R1 General Residential'. The zone's objectives and permitted and prohibited development are presented below. **1 Objectives of the Zone** • To provide for the housing needs of the community. • To provide for a variety of housing types and densities. • To enable other land uses that provide facilities or services to meet the day to day needs of residents. • To provide attractive, affordable, well located and market-responsive residential land. • To ensure that any non-residential land uses permitted within the zone are compatible with the amenity of the area. • To ensure that housing densities are broadly concentrated in locations accessible to public transport, employment, services and facilities. • To maximise public transport patronage and encourage walking and cycling. **2 Permitted without consent** Environmental protection works; Home occupations **3 Permitted with consent** Attached dwellings; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dwelling houses; Food and drink premises; Group homes; Home industries; Hostels; Kiosks; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Tank-based aquaculture; **Any other development not specified in item 2 or 4** **4 Prohibited** Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Car parks; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Industrial retail outlets; Industrial training facilities; Industries; Jetties; Local distribution premises; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Public administration buildings; Recreation facilities (major); Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations; Warehouse or distribution centres; Waste or resource management facilities; Water treatment facilities; Wharf or boating facilities; Wholesale supplies	While the development of a ***Health Services Facility*** is permitted with consent in the zone (as it is development not specified in items 2 or 4), Section 2.61 of the TISEPP allows for the proposed activities to be carried out without consent, as discussed in **Section 4.1** above. The Proposal is also consistent with the zone's objectives as it will deliver a new hospital, which will meet day to day healthcare needs of Cowra and its surrounding districts' residents. Furthermore, the Proposal will not compromise the amenity of the surrounding residential neighbourhood.
4.3 Height of Buildings	There is no height of buildings development standard applicable to the site.	
4.4 Floor Space Ratio	There is no floor space ratio development standard applicable to the site.	
5.10 Heritage	The site is not identified as a heritage item, nor is it in a heritage conservation area under Schedule 5 of the *Cowra Local Environmental Plan 2012.*	
5.21 Flood Planning	No part of the site is located within a flood planning area subject to flood-related development controls.	

Legislation	Comment	Relevant? Yes/No
7.3 Terrestrial Biodiversity	The site is not identified as biodiversity, watercourse, wetland or groundwater vulnerable in the Terrestrial Biodiversity Map, Riparian Lands and Watercourses Map, Wetlands Map or Groundwater Vulnerability Map.	
7.4 Riparian lands and watercourses		
7.5 Waterlands		
7.6 Groundwater Vulnerability		
7.8 Essential Services	The existing main hospital building is currently serviced by water, electricity and sewerage. These existing services will be disconnected before demolition. As described in **Section 3.1.2**, the new hospital building will be connected to these essential services.	

4.5.1 Industry and Employment Signage SEPP Assessment

The proposed signs outlined in **Section 3.1.2** are consistent with the objectives of Section 3.1(1)(a) of the *State Environmental Planning Policy (Industry and Employment) 2021* as they are compatible with the proposed development will provide effective communication, are integrated into the proposed building design and will be of a high-quality design and finish. The proposed signs are also consistent with the assessment criteria specified in Schedule 5 of the SEPP, as outlined in the table below.

Table 9: Schedule 5 Assessment

Criteria	Assessment	Compliance
Character of the area		
Is the proposal compatible with the existing or desired future character of the area or locality in which it is proposed to be located?	The proposed signage is compatible with the site's desired future character as it appropriately identifies the site as a health services facility while also providing wayfinding.	✓
Is the proposal consistent with a particular theme for outdoor advertising in the area or locality?	Not applicable – there is no identified theme for outdoor advertising in the area or locality.	**N/A**
Special areas		
Does the proposal detract from the amenity or visual quality of any environmentally sensitive areas, heritage areas, natural or other conservation areas, open space areas, waterways, rural landscapes or residential areas?	The proposed signage will not detract from the amenity or visual quality of the area. Signage has been thoughtfully considered and will feature high-quality finishes.	✓
Views and vistas		
Does the proposal obscure or compromise important views?	No, the proposed signs are appropriately sized and located to not dominate the skyline. As such, the proposed signage does not obscure or compromise important views or reduce the quality of vistas.	✓
Does the proposal dominate the skyline and reduce the quality of vistas?		✓
Does the proposal respect the viewing rights of other advertisers?		✓
Streetscape, setting or landscape		
Is the scale, proportion and form of the proposal appropriate for the streetscape, setting or landscape?	Yes, the proposed signage is scaled to be visible for users to navigate the site while not appearing out of scale, setting or landscape.	✓
Does the proposal reduce clutter by rationalising and simplifying existing advertising?	Not applicable.	**N/A**
Does the proposal screen unsightliness?	The proposed signs' purpose does not involve screening unsightliness.	**N/A**

Criteria	Assessment	Compliance
Does the proposal protrude above buildings, structures or tree canopies in the area or locality?	The proposed signs do not protrude above the proposed hospital.	✓
Does the proposal require ongoing vegetation management?	No.	**N/A**
Site and building		
Is the proposal compatible with the scale, proportion and other characteristics of the site or building, or both, on which the proposed signage is to be located?	The proposed signage has been thoughtfully considered to help future patients, workers, suppliers, and visitors navigate the site. They are entirely compatible with the characteristics of the site and the proposed hospital.	✓
Does the proposal respect important features of the site or building, or both?	Yes. The proposed signage is consistent with the design and features of the hospital.	✓
Does the proposal show innovation and imagination in its relationship to the site or building, or both?	The signs have been carefully designed to integrate seamlessly with the hospital. An anti-graffiti clear coat will be applied to mitigate vandalism.	✓
Associated devices and logos with advertisements and advertising structures		
Have any safety devices, platforms, lighting devices or logos been designed as an integral part of the signage or structure on which it is to be displayed?	The proposed signs incorporate the branding and logo of the Local Health District to help users identify the site.	✓
Illumination		
Would illumination result in unacceptable glare?	The proposed illuminated fixed signs are well removed from the site's property boundaries. They will not cause unacceptable glare.	✓
Would illumination affect safety for pedestrians, vehicles or aircraft?	The illumination of the proposed fixed signs will be controlled so as to not affect pedestrian, vehicle or aircraft safety. Indeed, the illumination of the proposed emergency sign will promote safety by helping users identify and locate the emergency department.	✓
Would illumination detract from the amenity of any residence or other form of accommodation?	The proposed illuminated fixed signs are well removed from nearby residences to preserve their night-time amenity.	✓
Can the intensity of the illumination be adjusted, if necessary?	Yes	✓
Is the illumination subject to a curfew?	No.	**N/A**
Safety		
Would the proposal reduce the safety for any public road?	No, the proposed signage has been designed and positioned to assist motorists, pedestrians and cyclists in identifying the hospital without compromising the safety of surrounding roads.	✓
Would the proposal reduce the safety for pedestrians or bicyclists?		✓
Would the proposal reduce the safety for pedestrians, particularly children, by obscuring sightlines from public areas?	No, the signage is positioned to avoid obstructing sightlines from existing public roads.	✓

5. Consultation

5.1 Statutory Consultation

The REF scope of works was notified for 21 calendar days to the Cowra Shire Council and occupiers of adjoining land in accordance with the relevant consultation requirements of the TISEPP as outlined in **Table 10**.

Table 10: Stakeholders required to be notified

Stakeholder	Relevant TISEPP Section
Cowra Shire Council	• Section 2.62(2)(a)(i) – Notification of carrying out of certain development without consent • Sections 2.10(1)(a), (c), (d) and (f) – Development with impacts on Council-related infrastructure and services
Occupiers of adjoining land	• Section 2.62(2)(a)(i) – Notification of carrying out of certain development without consent

The notification period commenced on 23 November 2022 and concluded on 15 December 2022. An extension of the notification period was requested by Council and given, closing 13 January 2023. Copies of the notification letters are provided at **Appendix Q** and **Appendix R**.

An overview of the comments received are outlined and responded to in **Table 9** below.

Table 11: Issues raised and responses

Issue raised	Date received	Response	Reference
Occupiers of adjoining land			
Requested to know how parking will be provided for patients and staff.	2 December 2022	The Proposal includes two new car parks, which increase the amount of formal parking at the site to 42 parking spaces. The Proposal also includes five drop-off/pick-up spaces near the new hospital's main entrance to enable patients to access the hospital conveniently. In addition, an assessment of on-street parking identified 375 vacant spaces within 200m of the hospital site at the peak time of 1.30 pm during shift changeovers. Accordingly, the Traffic Impact Assessment accompanying this REF concludes that the new hospital will be serviced by a sufficient amount of both on-site parking and nearby off-site parking to meet demand.	**Section 6.2.1**
Requested to know how the Tresillian Family Day Service to the site's north will maintain sewerage connectivity.	29 November 2022	The project team anticipates that a new sewer main line will need to be installed to the Tresillian Family Day Service, pending the outcome of the contractor's on-site investigations during the early works phase. As described in **Section 3.1.2**, this Main Works REF includes the new sewer line to Tresillian.	-
Council			
Requested a detailed schedule of demolition works and proposed quantities of generated waste to ensure that Council's MRF can accept and deal with waste materials generated during the demolition and construction stages.	19 January 2023	Health Infrastructure provided a detailed table outlining current estimates for waste generation. Health Infrastructure can provide an updated list of waste quantities once they appoint a main works contractor.	**Section 6.2.14**
Requested a detailed sediment and erosion control plan and that these measures are	19 January 2023	Health Infrastructure provided the Soil Erosion and Sediment Control Plans in the	**Appendix L**

Issue raised	Date received	Response	Reference
maintained at all stages during the demolition and construction process.		Civil Engineer Drawings accompanying this REF. The Plans' notes state that erosion and sediment control measures are to be set up before any site works, shall be maintained throughout the construction process, and shall only be removed once construction and permanent landscaping has been completed.	
Requested detailed earthworks plans.	19 January 2023	Health Infrastructure provided Bulk Earthwork Plans, including cut and fill quantities.	**Appendix K & L**
Requested that rainwater harvesting is incorporated into the drainage design.	19 January 2023	The Proposal's stormwater design includes a 26,000L buried rainwater harvesting tank to service the mechanical cooling water.	**Appendix K & L**
Expressed preference for grates or solid checker plates above the gutter for driveway crossovers. Also stated that the width of driveways will need to be arranged to prevent wheels from going over the edge and suggested that the inclusion of a kerb be provided to afford a physical barrier along the driveway edges.	19 January 2023	The project's civil engineer reviewed Council's comments and provided the following responses. • The proposed configuration for the Brisbane Street driveway features a Class 'D' grate over the gutter, per Council's preference. • The project's traffic engineer completed swept paths and vertical clearance checks to ensure that driveway widths are suitable for vehicles accessing the site and will not cause scraping. • The Proposal seeks to extend the width of the gutter bridge an additional 500mm on either side of the driveway extent, as well as the 750mm kerb transitions (as per the detail) back down to existing kerb levels in lieu of constructing a kerb edge at either end of the grate. • Due to the large vehicles frequently using this driveway, the installation of a kerb is a potential ongoing maintenance issue if it is frequently struck and dislodged. The extension of the gutter bridge should accommodate slight deviations in vehicle turn paths, and reduce the risk of vehicles trafficking off the side of the gutter. • The Liverpool St driveway is proposed to be a standard layback, due to the flatter grades of the public domain here.	**Appendix K, L** & **T**.
Requested that the change of grade at driveway access is no more than 13%	19 January 2023	The Proposal's driveways comply with this design requirement.	-
Requested new kerb and guttering along the full extent of the development's frontage.	19 January 2023	The Proposal will demolish all existing redundant laybacks, culverts and vehicle crossings and replace them with kerb and gutter.	-
Requested that truck movements occur in a forward in and forward out direction only.	19 January 2023	The Proposal allows for all tucks to enter and exit the site in a forward direction.	**Section 6.2.1** & **Appendix T**

Issue raised	Date received	Response	Reference
Expressed concern regarding service vehicles turning into the site blocking through traffic and requested a comprehensive turn path analysis.	19 January 2023	Appendix A of the Traffic Impact Assessment accompanying this REF (**Appendix T**) provides detailed swept path analysis for all relevant vehicle and truck types. The project's traffic consultant anticipates that there will be minimal service vehicle movements along Brisbane Street, and these will often occur outside peak hours. Therefore, the Proposal is not expected to significantly impact traffic along Brisbane Street.	
Request that sufficient water supply and pressure be allocated to the site to minimise impacts upon pressure and flow on Council's existing water main.	19 January 2023	Health Infrastructure provided a response advising that the proposed hospital's fire systems are supplied by full size combined sprinkler and hydrant fire tanks (320,000L total capacity) located at the north of the site, with full size pumps. Therefore, the proposed fire system does not rely on Council's water main.	**Appendix N**

5.2 Community & Stakeholder Engagement

In addition to the above statutory consultation requirements, the project team has undertaken other extensive community consultation activities throughout the project to date, which has helped form the current design. This has included multiple Community Information Sessions, briefings with Cowra Council, Youth Council, Health Council and Local MP, Walk on Country, Master Plan, Concept Design and Schematic Design Stakeholder Engagement Sessions and initiation of the Cowra Hospital Redevelopment Website. **Appendix S** provides an overview of the project team's non-statutory consultation activities.

6. Environmental Impact Assessment

6.1 Environmental Planning and Assessment Regulation 2021 – Assessment Considerations

The relevant assessment considerations under Section 171(1) of the EP&A Regulation and the Department of Planning & Environment's (DPE) *Guidelines for Division 5.1 Assessments* (the Guidelines) are provided below.

Table 12: Summary of Environmental Factors Reviewed in Relation to the Activity

Relevant Consideration	Response/Assessment		
Factors listed in the Guidelines for Division 5.1 Assessments			

a) Any environmental impact on a community	The Proposal's likely environmental impacts on the community are limited to construction and operational-related noise, traffic and parking, visual and dust impacts. As described in **Section 6.2,** these impacts are readily managed through the Construction Management Plan (**Appendix P**) and the management measures outlined in **Appendix B**.
	Overall, the Proposal will have long term community benefits by delivering a new hospital to improve outcomes for patients and staff. The Proposal will also deliver the following positive environmental impacts:
	• The hospital's design and massing better complement the low-density residential character of the surrounding area compared to the existing 4-storey hospital. The new hospital's positioning on the site, which incorporates extensive landscaped setbacks to all property boundaries, also provides visual privacy for occupiers of adjoining land.
	• The Proposal will increase the site's canopy coverage from 5.6% to 26.96%, delivering significantly improved environmental outcomes, such as:
	  ○ Increased habitat for local fauna.
	  ○ Cooling the urban environment.
	  ○ Reduction of stormwater runoff.
	  ○ Pollution absorption.
	• The new hospital will incorporate 'best practice' ESD initiatives.
		-ve
		Nil
		+ve
			
			✓

(b) Any transformation of a locality	The Proposal will positively contribute to the transformation of its locality for the following reasons. • The scale of the new two-storey hospital better complements the site's surrounding low-density residential neighbourhood character compared to the existing 4-storey building. • By consolidating the site's activities within one health services building positioned toward the site's rear, the Proposal can deliver a substantial amount of landscaped open area alongside Liverpool Street, improving its streetscape. • The structures proposed for demolition are not culturally or socially significant. They are not heritage items, nor do they contribute to the setting for a heritage item. Therefore, the Proposal will not remove significant elements from the locality. The new hospital's design also respects the surrounding locality's architecture by incorporating common elements of Cowra's built heritage, including hipped pitched roofs and masonry construction.	-ve Nil +ve	 ✓
(c) Any environmental impact on the ecosystem of the locality	The Proposal is not likely to result in a significant impact to any threatened species, ecological communities, or their habitats listed under the *Biodiversity Act 2016* or the *Environment Protection and Biodiversity Conservation Act 1999*.	-ve Nil +ve	 ✓
		-ve Nil	

Relevant Consideration	Response/Assessment		
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality.	The Proposal provides a new hospital on an existing health services site that will deliver an improved aesthetic, recreational, scientific and environmental outcome for the locality for the following reasons: • As discussed above, the new hospital's massing and design appropriately complement the site's surrounding low-density residential neighbourhood character. • The Proposal incorporates a range of landscaped outdoor areas for the recreational enjoyment of patients and other site users. • The new hospital will transform the delivery of healthcare for the Cowra community, delivering high-quality, contemporary and accessible care close to home. • The new hospital will incorporate a range of ESD initiatives to provide a sustainable facility for the community.	+ve	✓
e) Any effect on locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations.	The structures proposed for demolition are not culturally or socially significant. They are not heritage items, nor do they contribute to the setting for a heritage item. Furthermore, it is highly unlikely that Aboriginal objects are located at the site as it has been developed since 1885 and is highly disturbed. As discussed above, the Proposal will deliver an improved aesthetic, architectural and scientific outcome for the community. The site will retain its social significance to the community as a location for health services.	-ve Nil +ve	 ✓
(f) Any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974)	The Flora and Fauna Assessment that accompanies the REF concludes that the Proposal is not likely to result in a significant impact to any threatened species, ecological communities, or their habitats listed under the *Biodiversity Act 2016* or the *Environment Protection and Biodiversity Conservation Act 1999* (see **Section 6.2.9**).	-ve Nil +ve	 ✓
(g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air		-ve Nil +ve	 ✓
(h) Any long term impacts on the environment	The Proposal will not have any long-term effects on the biophysical environment.	-ve Nil +ve	 ✓
(i) Any degradation of the quality of the environment	The Proposal will not degrade the environment as the site is highly disturbed. Also, as noted, the Proposal is not likely to result in a significant impact to any threatened species, ecological communities, or their habitats listed under the *Biodiversity Act 2016* or the *Environment Protection and Biodiversity Conservation Act 1999.* The proposed removal of trees will be compensated through the planting of new trees. Mitigation measures will also be implemented during the demolition works to prevent the derogation of the quality of the environment.	-ve Nil +ve	 ✓
j) Any risk of safety of the environment	The REF is accompanied by a Hazardous Building Materials Survey and Detailed Site Investigation (see **Section 6.2.12**) that outline measures to safely manage, treat and dispose hazardous and contaminated material at the site.	-ve Nil +ve	 ✓
(k) Any reduction in the range of beneficial uses of the environment	There will be no reduction in the range of beneficial uses of the environment. Instead, the Proposal will enhance the site's existing use as a health services facility.	-ve Nil +ve	 ✓
(l) Any pollution of the environment	Minor localised air quality impacts during demolition and construction works are suitably addressed and will be mitigated through the Construction Management Plan and its anticipated correlated management plans. No further polluting impacts are likely to result from the works.	-ve Nil +ve	 ✓

Relevant Consideration	Response/Assessment		
(m) Any environmental problems associated with the disposal of waste	The REF is accompanied by a Waste Management Plan that outlines measures to appropriately classify and either reuse, recycle, process or dispose of waste (see **Section 6.2.13**). In accordance with the *Protection of the Environment Operations Act 1997*, waste will be transported to a facility that is licensed to process or dispose of that waste classification to avoid adverse environmental impacts. Hazardous waste, including asbestos waste, will be appropriately managed through an Asbestos Removal Control and HAZMAT register (see **Section 6.2.12**).	-ve	
		Nil	✓
		+ve	
n) Any increased demanded on resources (natural or otherwise) that are, or are likely to become, in short supply	Essential services will service the new hospital, and its construction is not anticipated to impact demand for scarce resources significantly. Indeed, the Proposal will seek to maximise the reuse or processing/recycling of demolished materials.	-ve	
		Nil	✓
		+ve	
(o) Any cumulative environmental effects with other existing or likely future activities.	As described throughout, an 'Early Works' REF was prepared and approved for preparation works to the site's northern portion. Should the works proposed in this 'Main Works' REF overlap with the Early Works, their cumulative impact will be minimal and short-lived.	-ve	
		Nil	✓
		+ve	
(p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions.	Given the site's inland location, the works will have no impact on coastal processes or contribute to coastal hazards.	-ve	
		Nil	✓
		+ve	
q) Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1	As discussed in **Section 3.2.1, t**he following local strategic planning statement and regional and district plan apply to the site. • Cowra Local Strategic Planning Statement • Central West and Orana Regional Plan 2036 The Proposal is consistent with the above strategic plans as it will deliver a new hospital that will: • Improve access to health services for the Region's aging population. • Deliver additional and complementary health services around existing health facilities. • Meet the Cowra Local Strategic Planning Statement's objective to upgrade / replace the Cowra Hospital to meet anticipated population growth.	-ve	
		Nil	
		+ve	✓
(r) Any other relevant environmental factors.	As identified in the sections below, there are no other environmental factors that will result in any unacceptable impact on the environment.	-ve	
		Nil	✓
		+ve	

6.2 Identification of Issues

6.2.1 Traffic, Access and Parking

Questions to consider	Yes	No
Will the works affect traffic or access on any local or regional roads?	✓	
Will the works disrupt access to private properties?		✓
Are there likely to be any difficulties associated with site access?		✓
Are the works located in an area that may be highly sensitive to movement of vehicles or machinery to and from the work site (i.e. schools, quiet streets)?	✓	
Will full or partial road closures be required?		✓
Will the proposal result in a loss of onsite car parking?		✓
Is there onsite parking for construction workers?		✓

The REF is accompanied by a Traffic Impact Statement prepared by TTW (**Appendix T**) that assessed the Proposal's impact on parking, site access, pedestrian movements and the local street network.

Parking Impacts

Cowra Health Services currently contains 24 formal staff spaces, three emergency spaces and approximately 20 informal parking spaces (located within a grass verge) across six parking areas at the site. Visitors and patient parking is provided on the surrounding streets. The 'Early Works' REF included demolishing four parking areas, resulting in the removal of 20 formal and all informal parking spaces.

The Traffic Impact Assessment includes a parking demand assessment that evaluates the required number of visitor and staff parking spaces to service the new hospital based on hospital benchmarking data related to the number of hospital beds and staff at the site. The findings of the assessment are summarised as follows.

- The new hospital will increase the number of beds at the site from 30 to 34 beds and the number of staff per weekday shift from 74 to 84 staff. Based on the benchmarking data, this increases the demand for parking by 15 parking spaces, from 130 spaces for the existing hospital to 145 spaces for the new hospital.
- As described in **Section 3.1.2,** the Proposal will deliver a northern and southern car park, providing 42 formal on-site parking spaces (including three accessible parking spaces) and five pick-up/drop-off spaces. This represents an increase of 15 on-site parking spaces (or a 56% increase) compared to existing conditions. EMM also conducted an assessment of on-street parking, which identified 375 vacant spaces within 200m of the site at the peak time of 1.30pm during shift changeovers.
- Therefore, the Traffic Impact Assessment concludes that the new hospital will be serviced by a sufficient amount of on-site parking and nearby off-site parking to meet demand. It also confirms that the three (3) accessible parking spaces exceed the requirements of the Building Code of Australia and Cowra DCP.

Table 13: Parking Requirements

	Existing Parking	Required Parking	Proposed Parking	Additional Parking	Compliance
Staff & Visitor	• 27 formal on-site parking spaces • 375 vacant off-street spaces within 200m	• 145 parking spaces	• 42 formal parking spaces • 5 formal short-stay pick-up / drop-off spaces • 375 vacant off-street spaces within 200m	• 15 formal parking spaces • 5 formal short-stay pick-up / drop-off spaces	✓

The Proposal also includes bicycle racks suitable for storing six bicycle parking spaces, which satisfies the bicycle parking requirements of the Cowra DCP (1 bicycle space per 10 car parking spaces).

Staging

The Traffic Impact Statement notes that there will be a temporary period between the completion of Stage 2 and 4 works where the site will only be serviced by the northern car park containing 11 parking spaces. The Statement concludes that this temporary arrangement is acceptable due to the 375 available on-street parking spaces near the hospital.

Traffic Impacts

Based on the traffic generation rates for hospitals in the RMS Guide to Traffic Generating Developments, the Traffic Impact Assessment estimates that the Proposal will result in a minor increase of seven (7) vehicle trips in the AM peak and six (6) trips in the PM peak. Accordingly, minimal impacts are anticipated on the road network as these additional volumes are negligible.

Site Access and Internal Circulation

The Traffic Impact Assessment includes Swept Path Analysis of the two proposed vehicle access points from Liverpool and Brisbane Streets and the ambulance bay, loading area and internal circulation roads. That analysis confirms suitable manoeuvrability for all vehicles anticipated to use the site, including ambulances accessing the ambulance bay outside the emergency department.

Construction Impacts

Emergency vehicle access will always be maintained during construction works, which will likely require temporary adjustments to the ambulance access at the site during the different construction stages. This strategy will be developed further with the engaged building contractor.

The Proposal is not anticipated to require the full or partial closure of roads, and traffic impacts during construction are likely to be minimal. No on-site parking will be provided for construction workers. The WNSELHD is leasing a car park near the site to accommodate fleet cars until the project's completion, and a car parking strategy will be developed with the building contractor to retain nearby on-street parking for patients, staff and visitors. This approach ensures that on-street parking near the site will remain available for the existing hospital's users during construction works.

The Traffic Impact Assessment recommends preparing a detailed Construction Traffic Management Plan before the commencement of construction works. This and other traffic recommendations are included in the summary of mitigation measures at **Appendix B.**

6.2.2 Noise and Vibration

Questions to consider	Yes	No
Are there residential properties or other sensitive land uses or areas that may be affected by noise from the proposal during construction? (i.e. schools, nursing homes, residential areas or native fauna populations)?	✓	
Will any receivers be affected by noise for greater than three weeks?	✓	
Are there sensitive land uses or areas that may be affected by noise from the proposal during operation?	✓	
Will the works be undertaken outside of standard working hours? Monday – Friday: 7am to 6pm Saturday: 8am to 1pm Sunday and public holidays: no work	Some work may need to be completed outside of the standard hours.	
Will the works result in vibration being experienced by any surrounding properties or infrastructure?	To be monitored	

Noise

As outlined in **Section 3.1**, the hours of construction, including the delivery of materials to and from the site, will generally be restricted to the following:

- Monday to Friday: 7:00am to 6:00pm;
- Saturdays: 8:00am to 1:00pm; and
- Sunday and Public Holidays: No work.

Some work may need to be completed outside of the above hours. If required, these will be planned in consultation with stakeholders and Council to ensure all aspects of work are clearly understood by all parties and minimise disruption to hospital operations. This may include works most appropriately carried out outside of main working hours for critical hospital operational reasons.

The REF is accompanied by a Construction Noise and Vibration Management Plan (NVMP) and Operational Noise Management Plan (NMP) prepared by Acoustic Logic (**Appendix U** & **V**) that quantifies the Proposal's potential noise and vibration impacts associated with its construction and operations. An overview of these assessments is provided below.

Existing Environment & Relevant Noise Criteria

As shown in **Figure 10** below, the nearest identified residential receivers are located east of the site across Ina Drive (Labelled R2 and R3) and west across Brisbane Street (labelled R1). Other nearby receivers include the existing hospital building (labelled H1), the proposed hospital (also labelled H1), the Tresillian Family Care Centre (labelled C1) and commercial receivers to the south (labelled C2).

Figure 10 Nearby Sensitive Receivers
Source: Acoustic Logic

Utilising unattended background noise measurements undertaken between 13 July 2022 and 27 July 2022 and attended internal background noise measurements within the existing hospital, Acoustic Logic formulated the Proposal's construction noise criteria (Noise Management Levels) and operational noise criteria (Project Noise Trigger Levels and sleep disturbance criteria).

Table 14:Noise Management Levels

Receiver		Period	Noise Management Levels ($dB(A)_{Leq(15min)}$)	Project Noise Trigger Levels ($dB(A)_{Leq(15min)}$)	Sleep Disturbance Criteria
Residential (R1 & 2)		Day	*Noise Affected Level*[1]	44	-
		Evening	49	41	-
		Night	*Highly Affected Noise Level*[2] 75	40	40 $dB(A)_{Leq(15min)}$ 52 $dB(A)L_{Fmax}$
Residential (R3)		Day	*Noise Affected Level*	44	-
		Evening	49	40	-
		Night	*Highly Affected Noise Level* 75	38	40 $dB(A)_{Leq(15min)}$ 52 $dB(A)L_{Fmax}$
Commerical (C1 and 2)		When in use	70	63	-
Hospital (H1)	General Wards and Operating Theatres	-	45	-	-

[1] *Noise affected level - Where construction noise is predicted to exceed the "noise effected" level at a nearby residence, the proponent should take reasonable/feasible work practices to ensure compliance with the "noise effected level".*

[2] *Highly affected noise level - Where noise emissions are such that nearby properties are "highly noise effected", noise controls such as respite periods should be considered.*

Receiver		Period	Noise Management Levels ($dB(A)_{Leq(15min)}$)	Project Noise Trigger Levels ($dB(A)_{Leq(15min)}$)	Sleep Disturbance Criteria
	Dental Clinic	-	48	-	-
	X-ray Room	-	51	-	-
	Pathology Lab	-	65	-	-
	Labour Ward	-	46	-	-
	Palliative Care Ward	-	52	-	-

Day – 7am to 6pm; Evening – 6pm to 10pm; Night – 10pm to 7am (the next day)

Construction Noise Impacts

The NVMP predicts internal and external noise levels at the receivers identified in **Figure 10**, resulting from the proposed construction and demolition works during Stages 1, 2, 3 and 4 using Soundplan noise modelling. It is noted that as the location for noise-generating construction equipment will vary within the construction site, the NVMP predicts a range of noise levels. The findings of this noise modelling are summarised as follows:

- Predicted noise levels at Residential Receiver 1 have the potential to exceed the Noise Affected Level; however, they are below the Highly Affected Noise Level.
- Predicted noise levels at Residential Receivers 2 and 3 have the potential to exceed the Highly Affected Noise Level.
- Predicted noise levels at Commercial Receivers 1 and 2 have the potential to exceed the Affected Noise Level.
- Predicted noise levels at the new and existing hospital (H1) are below the Noise Affected Level except in the General Wards of the new hospital during stage 3 demolition works.

A full list of assumptions used in the noise modelling can found in the NVMP.

Given the potential to exceed the Proposal's Noise Management Levels, the NVMP outlines recommendations to minimise noise impacts, including the implementation of respite hours for high noise-generating activities. These mitigation measures are included in the summary of mitigation measures at **Appendix B**. The NVMP also contains a procedure for addressing complaints and outlines additional acoustic treatments that can be implemented to address non-compliances or noise complaints. Acoustic Logic concludes that provided the NVMP's recommendations are adopted, noise impacts are expected to be appropriately minimised.

Operational Noise Impacts

The NMP predicts noise levels at the receivers identified in **Figure 10**, resulting from the operations of the new hospital, including the use of the on-grade car parks and associated driveways, services vehicle movements, mechanical plant operation and traffic generation associated with the Proposal. The findings of this noise modelling are summarised as follows:

- The use of the on-grade car park is predicted to comply with all Project Noise Trigger Levels and Sleep Disturbance Criteria.
- The use of the loading dock is predicted to comply with all Project Noise Trigger Levels.
- The operation of proposed mechanical plant equipment is predicted to comply with the relevant noise criteria, provided a detailed acoustic review of plant items occurs once plant equipment is selected.

A full list of assumptions used in the noise modelling can found in the NMP.

Further to the above, the NMP predicts that noise level increases from the predicted traffic generation associated with the Proposal will comply with the Road Nose Level criteria outlined in the NSW EPA Road Noise Policy. Therefore, the NMP concludes that the operations of the new hospital are predicted to comply with all noise criteria.

Vibration

The NVMP notes that it is impossible to predict vibrations resulting from the proposed works at sensitive receivers, as vibration levels are principally proportional to the energy impact, which is unknown, the nature of the terrain in the area (type of soil), drop weight, height etc. Instead, the NVMP recommends that vibration monitoring be conducted within the operational hospital (existing or new, depending on the construction stage) during the proposed works to monitor vibration levels per the criteria presented in NVMP. If 75% of a vibration criterion is measured, the site manager will be notified and can implement corrective measures as needed.

6.2.4 Air Quality and Energy

Questions to consider	Yes	No
Could the works result in dust generation?	✓	
Could the works generate odours (during construction or operation)		✓
Will the works involve the use of fuel-driven heavy machinery or equipment?	✓	
Are the works located in an area or adjacent to land uses (e.g. schools, nursing homes) that may be highly sensitive to dust, odours, or emissions?	✓	

Before the commencement of works, the Principal Contractor will prepare and implement a dust prevention strategy, which may include precautions such as water spraying, covering all haulage truck loads with tarpaulins and monitoring weather conditions (including wind). Management and contingency plans will be developed to prevent any foreseeable impacts from dust. Further, odour problems will be minimal on-site. Appropriate mitigation measures are included in the summary of mitigation measures at **Appendix B.**

6.2.5 Soils and Geology

Questions to consider	Yes	No
Will the works require land disturbance?	✓	
Are the works within a landslip area?		✓
Are the works within an area of high erosion potential?		✓
Could the works disturb any natural cliff features, rock outcrops or rock shelves?		✓
Will the works result in permanent changes to surface slope or topography?	✓	
Are there acid sulphate soils within or immediately adjacent to the boundaries of the work area? And could the works result in the disturbance of acid sulphate soils?		✓
Are the works within an area affected by salinity?		✓
Is there potential for the works to encounter any contaminated material?	✓	

The site is not affected by any Acid Sulfate Soils. There is approximately a level difference of between RL338 in the site's northeast corner and RL322 in the site's southwest corner (16 metres). The new hospital's design locates the first floor toward the site's higher portion to minimise excavation (see **Figure 7** and **Figure 8)**. Nevertheless, the new hospital will require a cut into the site's northern topography, while the location of the southern car park will be filled to match the existing boundary levels along surrounding roads.

Accordingly, the REF is accompanied by Civil Engineer Drawings that include Soil Erosion and Sediment Control Plans prepared by ACOR Consultants (**Appendix L**) to manage sediment-laden stormwater-water runoff. The REF is also accompanied by Preliminary Site Investigation and Detailed Site Investigation that assess the potential for contamination at the site. The findings of these investigations are outlined in **Section 6.2.12**.

6.2.6 Hydrology, Flooding and Water Quality

Questions to consider	Yes	No
Are the works located near a natural watercourse?		✓

Questions to consider	Yes	No
Are the works located within a floodplain?		✓
Will the works intercept groundwater?		✓
Will a licence under the *Water Act 1912* or the *Water Management Act 2000* be required?		✓

Flooding

The site is not identified as a Flood Planning Area by the NSW Government Flood Planning Maps and the *Cowra Local Environmental Plan 2012*.

Groundwater

The Detailed Site Investigation involved the installation of three groundwater monitoring wells at the site. The observed groundwater water levels at these monitoring wells ranged between 3.411m (below ground level) and 5.582m (below ground level). Furthermore, the preliminary geotechnical assessment that informed the Civil Engineering Drawings involved the installation of two groundwater monitoring wells, and no groundwater was encountered in either test location. Accordingly, the Civil Engineering Report that accompanies the REF (**Appendix K**) concludes that it is not expected that groundwater will be encountered during excavations for the project.

Surface water

As noted, the REF is accompanied by Civil Engineer Drawings that include Soil Erosion and Sediment Control Plans prepared by ACOR Consultants (**Appendix L**) to manage sediment-laden stormwater-water runoff during construction works. Meanwhile, the Civil Engineer Report confirms that the new hospital's stormwater drainage system is designed to capture and convey all runoff for up to and including a 20-year ARI storm event. Moreover, the Proposal reduces the extent of impervious areas at the site by approximately 1,750m^2, thereby reducing stormwater runoff during rain events. Therefore, stormwater will be appropriately captured and directed toward Council's stormwater infrastructure to mitigate erosion and concentrated stormwater runoff entering neighbouring sites.

6.2.7 Visual Amenity

Questions to consider	Yes	No
Are the works visible from residential properties, or other land uses that may be sensitive to visual impacts?	✓	
Will the works be visible from the public domain?	✓	
Are the works located in areas of high scenic value?		✓
Will the works involve night work requiring lighting?	✓	

Prevailing receptors within the site's immediate visual catchment are relatively low in number. The site is visible from the Bellevue Hill Reserve Lookout to the north, which provides the most significant views of the site. The Architectural Design Report prepared by djrd architecture (**Appendix E**) includes photomontages illustrating the new hospital's visual impact compared to the existing hospital. These photomontages are presented in **Figure 11** to **Figure 14** below.

The new hospital incorporates the following design moves to minimise adverse visual and amenity impacts and positively contribute to the surrounding neighbourhood's character.

- The hospital's building height is limited to two storeys to complement the low-density residential character of the surrounding area. The hospital includes a plant room above the first floor; however, the plant room is substantially set back from the first floor's roofline to provide visual screening. This screening is evidenced in **Figure 13** and **Figure 14**.
- The hospital is partially cut into the site's northern topography. This minimises the building's maximum elevation, and, as shown in **Figure 12**, its massing appears minimal when viewed from the north. Therefore, the new hospital building will look appropriate within its low-density context when viewed from the Bellevue Hill Reserve Lookout.
- The hospital's massing features highly articulated elevations broken up vertically and horizontally through glazing and a range of materiality to create a visually appealing design. The hospital's architecture also references common elements of Cowra's built heritage, including hipped pitched roofs and masonry construction.

- The Proposal includes extensive landscaped setbacks to all property boundaries. This provides a visually appealing setting for the new hospital, improves the streetscape of surrounding roads and provides screening to the new car parks and loading areas.
- Proposed lighting is strategically positioned away from residents to preserve the night-time amenity of the surrounding neighbourhood.

Based on the above reasons, the new hospital represents a significantly improved visual outcome compared to the existing 4-storey hospital and collection of other health service facilities at the site.

There will be a limited period where both new and existing hospitals will be on the site following the completion of Stage 2 works; however, this arrangement and its associated visual impact will be temporary and, therefore, acceptable. It is also noted that the structures proposed for demolition do not comprise an important visual setting. They are not heritage items, nor do they contribute to the setting for a heritage item.

Figure 11 View locations
Source: *drjd Architects*

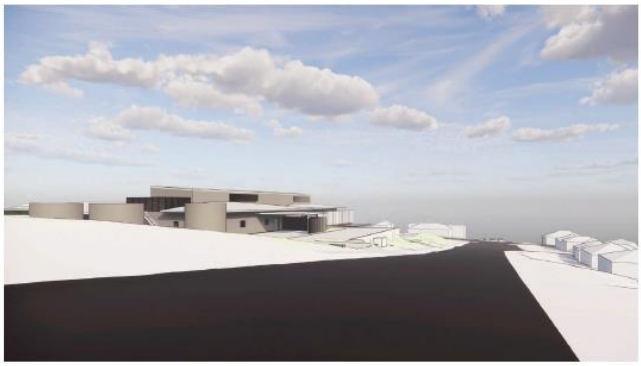

Figure 12 View A – from Brisbane Street
Source: *drjd Architects*

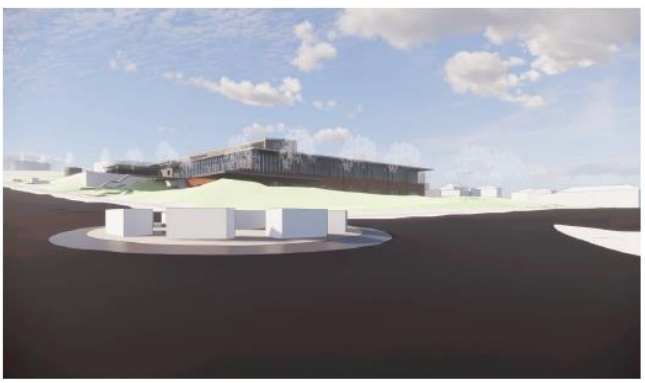

Figure 13 View B – from Liverpool Street
Source: *drjd Architects*

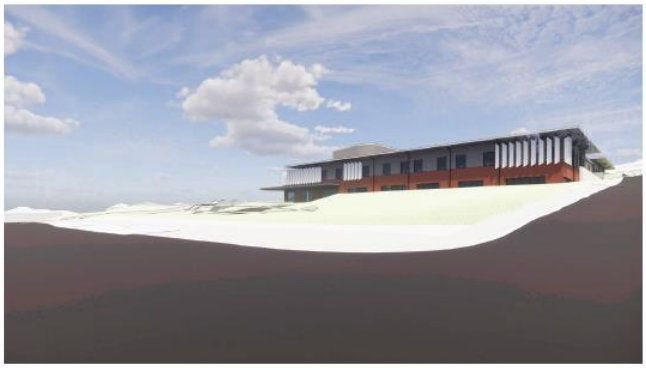

Figure 14 View C – from Liverpool Street
Source: *drjd Architects*

6.2.8 Aboriginal Heritage

Questions to consider	Yes	No
Will the activity disturb the ground surface or any culturally modified trees? I	✓	
Are there any known items of Aboriginal heritage located in the works area or in the vicinity of the works area (e.g. previous studies or reports from related projects)?		✓
Are there any other sources of information that indicate Aboriginal objects are likely to be present in the area (e.g. previous studies or reports from related projects)?		✓
Will the works occur in the location of one or more of these landscape features and is on land not previously disturbed? • Within 200m of waters. • Located within a sand dune system. • Located on a ridge top, ridge line or headland. • Located within 200m below, or above a cliff face. • Within 20m of, or in a cave, rock shelter or a cave mouth		✓
If Aboriginal objects or landscape features are present, can impacts be avoided?	N/A	
If the above steps indicate that there remains a risk of harm or disturbance, has a desktop assessment and visual inspection been undertaken?	✓	
Is the activity likely to affect wild resources or access to these resources, which are used or valued by the Aboriginal community?		✓
Is the activity likely to affect the cultural value or significance of the site?		✓

The REF is accompanied by an Aboriginal Archaeological Assessment prepared by Comber Consultants (**Appendix W**). The Assessment involved background research, a site inspection and consultation with the Cowra Local Aboriginal Land Council to determine the presence of Aboriginal objects at the site.

A search of the Aboriginal Heritage Information System identified 14 registered Aboriginal sites within 1km of the site; however, it identified no Aboriginal items at the site. During the site inspection, visibility for Aboriginal objects was nil due to existing buildings, paved areas and grass cover. The Aboriginal Archaeological Assessment concludes that as the site has been developed since 1885 and is highly disturbed, it is highly unlikely that Aboriginal objects are located at the site. However, if they are, they would most likely be open artefact scatters or isolated finds. Furthermore, as the site has been cleared of original vegetation, there were no identified scarred or carved trees. If any Aboriginal objects are unexpectedly uncovered during the proposed works, all work must cease in the vicinity of that object. Next, the archaeological consultant must be contacted for further advice per the Unexpected Finds and Human Remains Procedure outlined in the Assessment.

The unlikely presence of Aboriginal objects means an Aboriginal Heritage Impact Permit is not required. The Aboriginal Archaeological Assessment states that as AHIP is not needed, it is not necessary to prepare an Aboriginal Cultural Heritage Report; however, ongoing Aboriginal consultation should still occur.

The Aboriginal Archaeological Assessment's recommendations are included in the summary of mitigation measures at **Appendix B.**

6.2.9 Non-Aboriginal Heritage

Questions to consider	Yes	No
Are there any heritage items listed on the following registers within or in the vicinity of the work area? NSW heritage database (includes section 170 and local items) Commonwealth EPBC heritage list?		✓
Will works occur in areas that may have archaeological remains?		✓
Is the demolition of any heritage occurring?		✓

The site is not a heritage item, not is it located within a heritage conservation area or the vicinity of a heritage item. Therefore, the Proposal will not have an adverse heritage impact. Notwithstanding this, the hospital's existing buildings will be photo archived before demolition to recognise the community's connection with the site, which will be acknowledged through an Arts Strategy.

6.2.10 Ecology

Questions to consider	Yes	No
Could the works affect any *Environmental Protection and Biodiversity Conservation Act 1999 (Cth)* listed threatened species, ecological community or migratory species?		✓
Is it likely that the activity will have a significant impact in accordance with the Biodiversity *Conservation Act (2016)?* In order to determine if there is a significant impact, the REF report must address the relevant requirements of Section 7.2 of the BC Act: • Section 7.2 (a) – Test for significant impact in accordance with section 7.3 of the BC Act. • Section7.2 (c) – it is carried out in a declared area of outstanding biodiversity value.		✓
Could the works affect a National Park or reserve administered by EES?		✓
Is there any important vegetation or habitat (i.e. Biodiversity and Conservation SEPP) within or adjacent to the work area?		✓
Could the works impact on any aquatic flora or habitat (i.e. seagrasses, mangroves)?		✓
Are there any noxious or environmental weeds present within the work area?	✓	
Will clearing of native vegetation be required?	✓	

Flora and Fauna

The REF is accompanied by a Flora and Fauna Assessment (**Appendix X**) prepared by RPS that assessed the Proposal's impact on threatened biodiversity listed under the *Biodiversity Conservation Act 2016* and the *Environment Protection and Biodiversity Conservation Act 1999* and the site's general biodiversity values. The Assessment involved the application of a range of flora and fauna field survey methods undertaken during a site investigation.

The Flora and Fauna Assessment states that no Plant Community Types could be attributed to the field data obtained from the flora plots. It notes that as the site is entirely developed and modified, vegetation at the site is described as planted natives and exotics and does not comprise any listed threatened ecological community. A total of 41 flora species were recorded at the site, including 37 exotic species and four native species. Nine of the exotic species are listed as High Threat Weeds in NSW. No threatened flora species were identified. **Figure 15** shows the distribution of vegetation at the site.

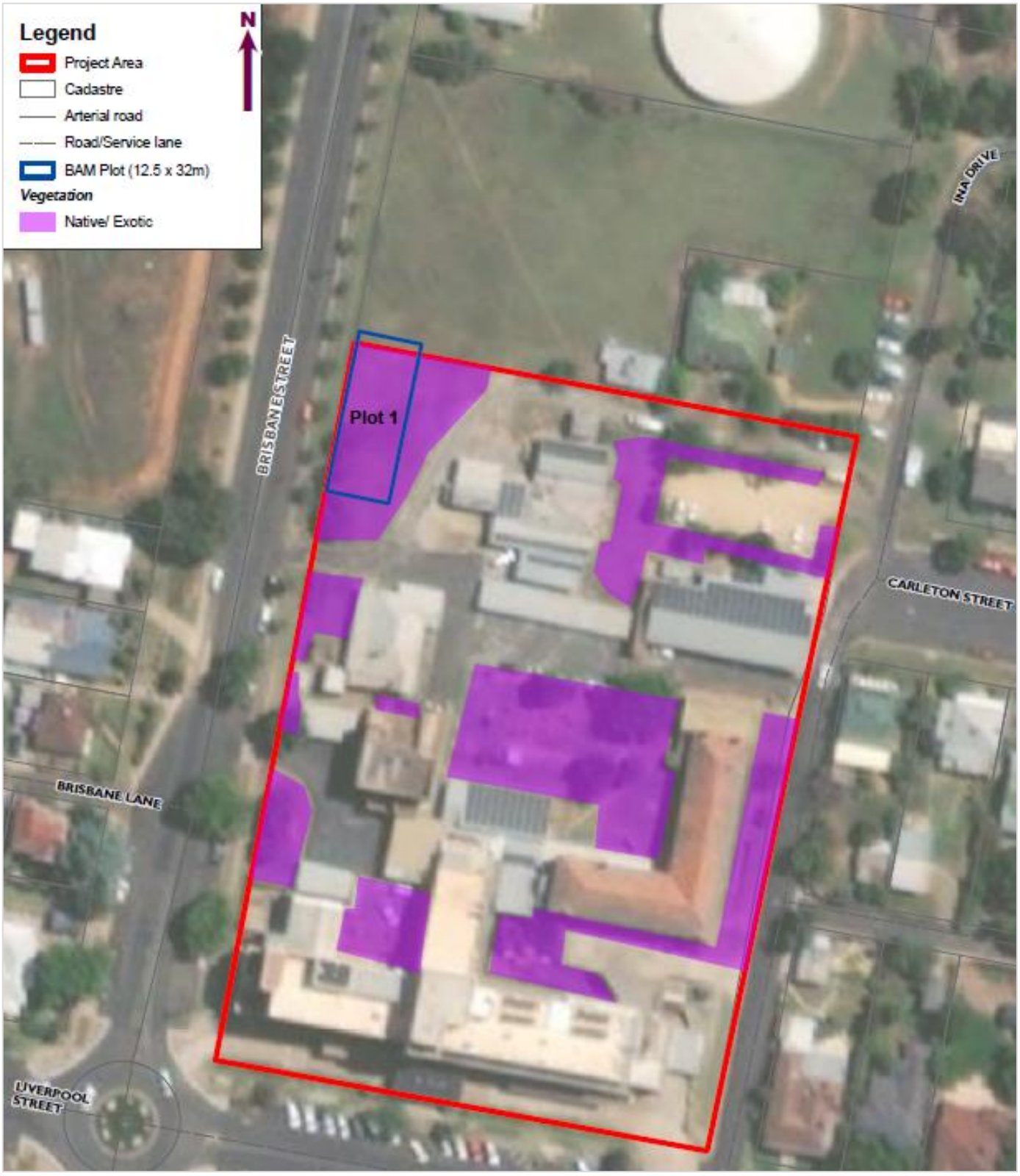

Figure 15 Vegetation Mapping
Source: RPS

No threatened fauna species were found within the site; although many structures within the site were disused and contained a suite of crevice and sheltering habitat suitable for a great range of fauna species. Based on the site's habitat conditions, the ecologist identified four species as having high potential to occur at the site two with moderate potential (see **Table 15**). **Figure 16** shows the location of surveyed habitat.

Table 15: Habitat Conditions for Threatened Fauna Species

Potential to Occur Based on Habitat Conditions	Species
High	• *Hirundapus caudacutus* (White-throated Needletail) • *Pteropus poliocephalus* (Grey-headed Flying-fox) • *Saccolaimus flaviventris* (Yellow-bellied Sheathtail-bat) • *Miniopterus orianae oceanensis* (Large Bent-winged Bat)
Medium	• Hieraaetus morphnoides (Little Eagle) • *Glossopsitta porphyrocephala* (Purple-crowned Lorikeet).

Figure 16 Habitat Mapping
Source: *RPS*

The Flora and Fauna Assessment identified the Proposal's potential direct and indirect impacts as:

- The removal of several habitat items that may provide habitat values for native fauna, including birds' nests, a salvaged hollow and various crevices and cavities of disused structures.
- The removal of trees.
- Modification of habitat attributes through increased light and noise levels and changes to vegetation structure, soil nutrient levels and plant species diversity.
- The introduction of weeds by earth-moving equipment and routine access to the facility.
- Increased risk of sediment-laden stormwater-water run-off.

The Flora and Fauna Assessment provides mitigation measures to minimise the above potential direct and indirect impacts. These include removing habitat under the supervision of an ecologist before the demolition of structures containing habitat and appropriately storing all fuels, chemicals and other hazardous materials. It is noted these mitigation measures were also adopted for the proposed 'Early Works'. The Proposal also involves the implementation of a Soil Erosion and Sediment Control Plan to mitigate sediment-laden stormwater-water run-off.

A test of significance was undertaken to determine the Proposal's level of impact on threatened species. It concludes that the Proposal is not likely to result in a significant impact to any threatened species, ecological communities, or their habitats listed under the *Biodiversity Act 2016* or the *Environment Protection and Biodiversity Conservation Act 1999*. Accordingly, the Proposal does not require a Species Impact Statement or a Biodiversity Development Assessment Report.

Tree Removal

The 'Early Works' REF proposed the removal of three (3) trees, whose removal was necessary to facilitate the demolition works under that REF. This Main Works REF is accompanied by an Arborist Report prepared by McArdle Aboricultural Consultancy (**Appendix H**) that identifies and assesses those trees whose removal is necessary to facilitate the works proposed in this REF.

The Arborist Report identified 37 trees with major Tree Protection Zone (TPZ) encroachments from the proposed works that require removal. Of these, 16 trees are identified as having a low to moderate retention value, 20 trees as having a low retention value and one (1) as having a very low retention value (see **Table 16**). The location of these trees is identified in the Arborist Report. It is noted that five (5) of these trees are exempt from replenishment due to their weed status, and (2) are exempt due to their declined condition.

The Arborist Report identified a further 33 trees on the site and adjacent surrounding area that can be retained, and the Report includes measures to ensure their protection.

Table 16: Trees Proposed for Removal

	Low to Moderate Retention Value	Low Retention Value	Very Low Retention Value	Total
Number of Trees Proposed for Removal	16	20	1	**37**

The Arborist Report recommends planting 35 new trees with a canopy size at maturity of 8 metres to compensate for the removal of trees. These 35 trees are in addition to the three (3) new trees recommended in the Arborist Report that accompanied the 'Early Works' REF (38 total). The Landscape Strategy currently proposes 89 new trees, including 20 that will have greater than an 8m canopy.

The Arborist Report notes that five (5) trees were removed before the completion of the Main Works REF due to infrastructure conflict and encouraged their replenishment. The Arborist Report's recommended 35 new trees account for replenishing these removed trees.

Before the commencement of construction, the Landscape Plan is recommended to be updated to include the planting of at least 38 new trees with a canopy greater than 8m at maturity, consistent with the Arborist Report's recommendations (see mitigation measures in **Appendix B**).

The Landscape Strategy currently increases the site's canopy coverage from 5.6% to 26.96%, delivering significantly improved environmental outcomes, such as:

- Increased habitat for local fauna.
- Cooling the urban environment.
- Reduction of stormwater runoff.
- Pollution absorption.

6.2.11 Bushfire

Questions to consider	Yes	No
Are the works located on bushfire prone land?		✓
Do the works include bushfire hazard reduction work?		✓
Is the work consistent with a bush fire risk management plan within the meaning of the *Rural Fires Act 1997* (RF Act) that applies to the area or locality in which the activity is proposed to be carried out?	N/A	

The site is not identified as bushfire prone land.

6.2.12 Land Uses and Services

Questions to consider	Yes	No
Will the works result in a loss of, or permanent disruption of an existing land use?		✓
Will the works involve the installation of structures or services that may be perceived as objectionable or nuisance?		✓
Will the works impact on, or be in the vicinity of other services?	✓	

As described in **Section 3.1.2**, the Proposal will be staged across the following stages:

- **Stage 1** – Demolition works and removal of trees in the site's northern portion to prepare it for the construction of the new hospital.
- **Stage 2** - Construction of the new hospital and northern car park with 11 parking spaces, during which the existing main hospital building will be retained and continue to operate until such time that services can be decanted to the new hospital.
- **Stage 3** – Demolition of the existing main hospital building and other structures within the site's southern portion following the construction of the new hospital.
- **Stage 4** - Construction of the southern car park and landscaping at the front of the site.

This staged approach ensures that the existing hospital can continue to operate until the new hospital can commence operations. The REF is accompanied by a Preliminary Construction Management Plan (**Appendix P**) that includes measures to protect the retained hospital's operations during construction works. Notably, emergency vehicle access will always be maintained at the site. The Traffic Impact Assessment also confirms that there is sufficient on-street parking surrounding the site for visitors and staff to the existing and new hospital until the southern car park is constructed under Stage 4.

Furthermore, the Noise and Vibration Management Plan (**Appendix U**) that accompanies the REF includes mitigation measures and a management procedure to ensure that noise and vibration impacts associated with the new hospital's construction will not disrupt the existing hospital's operations.

Ultimately, the Proposal will deliver a new hospital, enhancing and continuing the site's use as a health services facility that supports and improves the health of residents in Cowra and surrounding districts.

6.2.13 Hazardous Materials and Contamination

Questions to consider	Yes	No
Is there potential for the works to encounter any contaminated material?	✓	

Will the works involve the disturbance or removal of asbestos?	✓	
Is the work site located on land that is known to be or is potentially contaminated?	✓	
Will the works require a Hazardous Materials Assessment?	✓ - Appendix AA	
Is a Remediation Action Plan required?		✓
Is the work category 2 works under Resilience and Hazards SEPP?	✓	

Contamination

The REF is accompanied by a Preliminary Site Investigation (PSI) and Detailed Site Investigation (DSI) prepared by SMEC (**Appendix Y** & **Z**) that assessed the potential of contamination at the site and the site's suitability for the erection of a health services facility. The PSI identified 12 areas of environmental concern, which were further investigated via soil sampling across 42 sample locations. Soil contamination exceeding the DSI's adopted health criteria was recorded at three locations where bonded Asbestos Containing Material fragments were observed on the ground surface. Groundwater contamination exceedances and ecological soil contamination exceedances were also detected.

Accordingly, the DSI provides a range of management recommendations to appropriately manage contaminated materials. It also recommends preparing an interim Site Management Plan to ensure the appropriate management of hazardous building materials and subsoils during maintenance works. The DSI and accompanying supplementary response prepared by SMEC (**Appendix Z**) conclude that the site is considered suitable for the erection of a health services facility per the requirements of *State Environmental Planning Policy (Resilience and Hazards) 2021*, provided the DSI's recommendations are adopted, and a Remediation Action Plan is not required.

Hazardous Material

The REF is accompanied by a Hazardous Building Materials Survey (**Appendix AA**) prepared by JK Environments that involved a detailed inspection of existing buildings and structures at the site and material sampling for hazardous material. **Table 17** below summarises the results of the inspection for structures that are proposed to be demolished in this REF.

Table 17: Summary of Identified Hazardous Material

Building	Friable Asbestos	Bonded Asbestos	SMF Materials	Deteriorated Lead Paint	Lead in Dust	PCB Containing Electrical Equipment
Main Hospital	Yes	Yes	Yes	Yes	No	Yes
Pharmacy Department	No	Yes	Yes	Yes	No	No
Pharmacy, and Pharmacy Store, Medical Records & Hotel Services Store	Yes	Yes	Yes	Yes	No	Yes
Linen	No	Yes	Yes	No	No	Yes
Generator	No	No	Yes	Yes	No	Yes
Carports	No	Yes	No	Yes	No	No
Water Pump Shed	No	No	No	No	No	No

Appendix B of the Hazardous Building Materials Survey includes a HAZMAT register that outlines the specific location for hazardous material within each structure. The register also outlines control measures to safely treat and remove hazardous material before demolition. A Licensed Class A Asbestos Removalist will prepare an Asbestos Removal Control Plan for the site before the proposed demolition works, which along with the HAZMAT register, will be provided to the demolition/building contractor.

Resilience and Hazards Screening

The REF is accompanied by a Resilience and Hazards SEPP Screening Report prepared by ARUP (**Appendix BB**) that considers whether the Proposal is considered a 'potentially hazardous industry' under the Resilience and Hazards SEPP by virtue of the storage and use of dangerous goods on the site. The Report confirms that all dangerous goods that will be transported and stored at the site do not meet or exceed the screening threshold. Therefore, the Proposal is not considered a 'potentially hazardous industry', meaning a Preliminary Hazard Analysis is not required. Nevertheless, the Report includes recommendations for storing dangerous good classes at the site. These recommendations are included in the summary of mitigation measures at **Appendix B.**

6.2.14 Waste Generation

Questions to consider	Yes	No
Will the works result in the generation of non-hazardous waste?	✓	
Will the works result in the generation of hazardous waste?	✓	
Will the works result in the generation of wastewater requiring off-site disposal?		✓

Construction and Demolition Waste

The REF is accompanied by a Construction Waste Management Plan (**Appendix CC**) prepared by CWMP, outlining waste management measures to implement during the construction and demolition stages. These measures will be implemented per the waste management hierarchy outlined in the *Waste Avoidance and Resource Recovery Act 2001* and described below.

- **Waste Avoidance and Reduction** – Actions that reduce the amount of generated waste.
- **Waste Reuse** – Reuse of waste without further need for processing.
- **Waste Recycling, Processing or Reprocessing** – Processing waste materials to be used for a similar or different purpose
- **Energy Recovery –** Processing waste materials to recover energy.
- **Waste Disposal –** Where recovery is unachievable, waste is appropriately treated (where necessary) and disposed of in an environmentally sensitive manner.

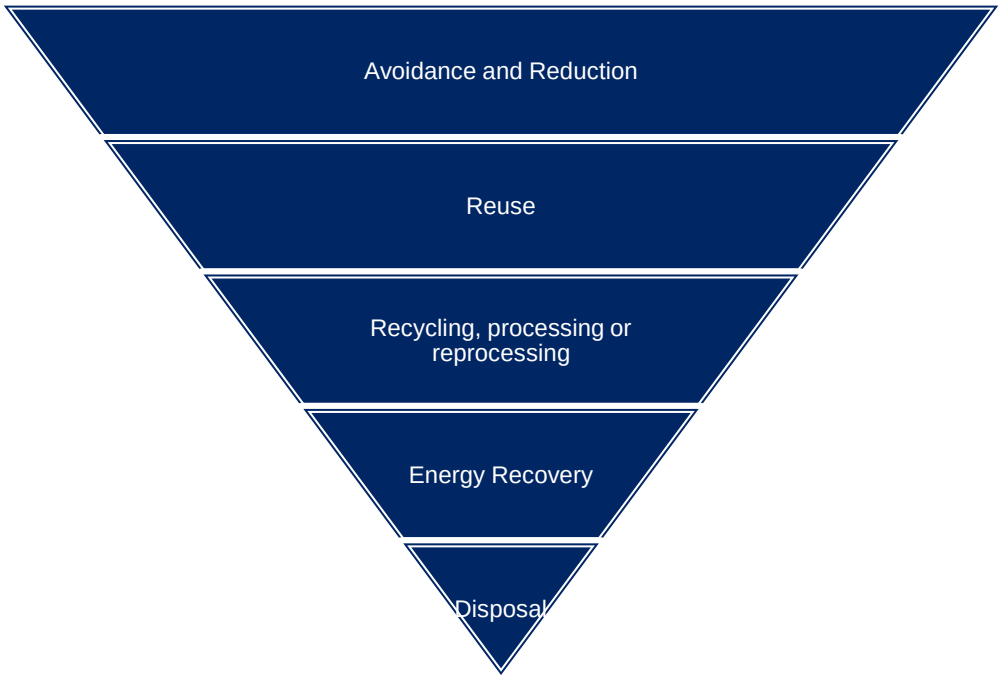

Figure 17 Waste Management Hierarchy
Source: Ethos Urban

The demolition and construction stages present significant waste reduction and recycling opportunities, particularly through on-site sorting and storage of material for reuse or recycling on or off-site. The Principal Contractor will be required to ensure that the measures outlined in the Waste Management Plan are implemented, including those that encourage the avoidance, reduction, and reuse of waste. Where waste cannot be reused, recycled, or processed, it should be classified using the NSW EPA's Waste Classification Guidelines and appropriately disposed of in accordance with the *Protection of the Environment Operations Act 1997*.

The quantity of demolition and construction waste generated during the proposed works will be determined when a detailed schedule of planned works is developed. An appropriately sized waste temporary waste storage area/s will be provided during the demolition and construction stages based on the numbers and size of waste storage bins, containers and stockpile areas needed to store the generated volume of waste. The Waste Management Plan outlines considerations for the location and design of the waste storage area/s. Waste will be periodically removed from the site to ensure sufficient waste storage capacity is available.

Operational Waste

The REF is accompanied by an Operational Waste Management Plan (**Appendix DD**) prepared by Encycle, which details the management of waste generated by the new hospital's operations.

The table below outlines the Operational Waste Management Plan's estimated waste generation for the new hospital and the required number of bins to store the volume of waste.

Table 18: Waste Generation

Waste / Recycling Stream	Annual Generation – New Hospital (L)	Required Number of Bins	Collection Frequency
General Waste	761,748	1 x 4.5m^3 bin in the loading area	Mon, Wed, Fri
		4 x 240L bins in waste storage area	Swap out bins
Commingled recycling	883,116	1 x 4.5m^3 bin in the loading area	Mon, Wed, Fri
		1 x 3m^3 bin in the loading area	Weekly
		4 x 240L bins in waste storage area	Swap out bins
Clinical and related waste (CRW)	42,664	4 x 240L bins 30 x 64L bins	Fortnightly
Sharps	6,433	16 x 32L bins	Fortnightly
Pharmaceutical waste	2,734	2 x 120L bins	Fortnightly
Cytotoxic waste	5,418	6 x 64L bins	Fortnightly
Anatomical waste	-	2 x 64L bins	Fortnightly
-	-	4 x 20L spare sanitary bins in waste storage area	As required
-	-	3m^3 bulky waste space in waste storage area	As required

The Operational Waste Management Plan confirms that there are sufficient waste storage areas across the new hospital to store the required number of bins.

6.2.15 Community Impact/ Social Impact

Questions to consider	Yes	No
Is the activity likely to affect community services or infrastructure?	✓	
Does the activity affect sites of importance to local or the broader community for their recreational or other values or access to these sites?		✓

Questions to consider	Yes	No
Is the activity likely to affect economic factors, including employment numbers or industry value?	✓ Positive Impact	
Is the activity likely to have an impact on the safety of the community?		✓
Will the activity affect the visual or scenic landscape? This should include consideration of any permanent or temporary signage.	✓ Positive impact	
Is the activity likely to cause noise, pollution, visual impact, loss of privacy, glare or overshadowing to members of the community, particularly adjoining landowners?	✓ Positive impacts	

Environmental Impacts

This REF and the accompanying technical documents confirm that the Proposal is unlikely to result in adverse noise, pollution, visual impact and loss of privacy impacts to members of the community. Increased, the Proposal will deliver the following positive impacts.

- The hospital's design and massing better complement the low-density residential character of the surrounding area compared to the existing 4-storey hospital. The new hospital's positioning on the site, which incorporates extensive landscaped setbacks to all property boundaries, also provides visual privacy for occupiers of adjoining land.
- The Proposal will increase the site's canopy coverage from 5.6% to 26.96%, delivering significantly improved environmental outcomes, such as:
  - Increased habitat for local fauna.
  - Cooling the urban environment.
  - Reduction of stormwater runoff.
  - Pollution absorption.

Furthermore, as shown in the shadow diagrams included in the Architectural Design Report and presented in **Figure 18** below, the new hospital's design will not cause adverse overshadowing impacts to neighbouring dwellings between 9am and 3pm at the Winter Solstice.

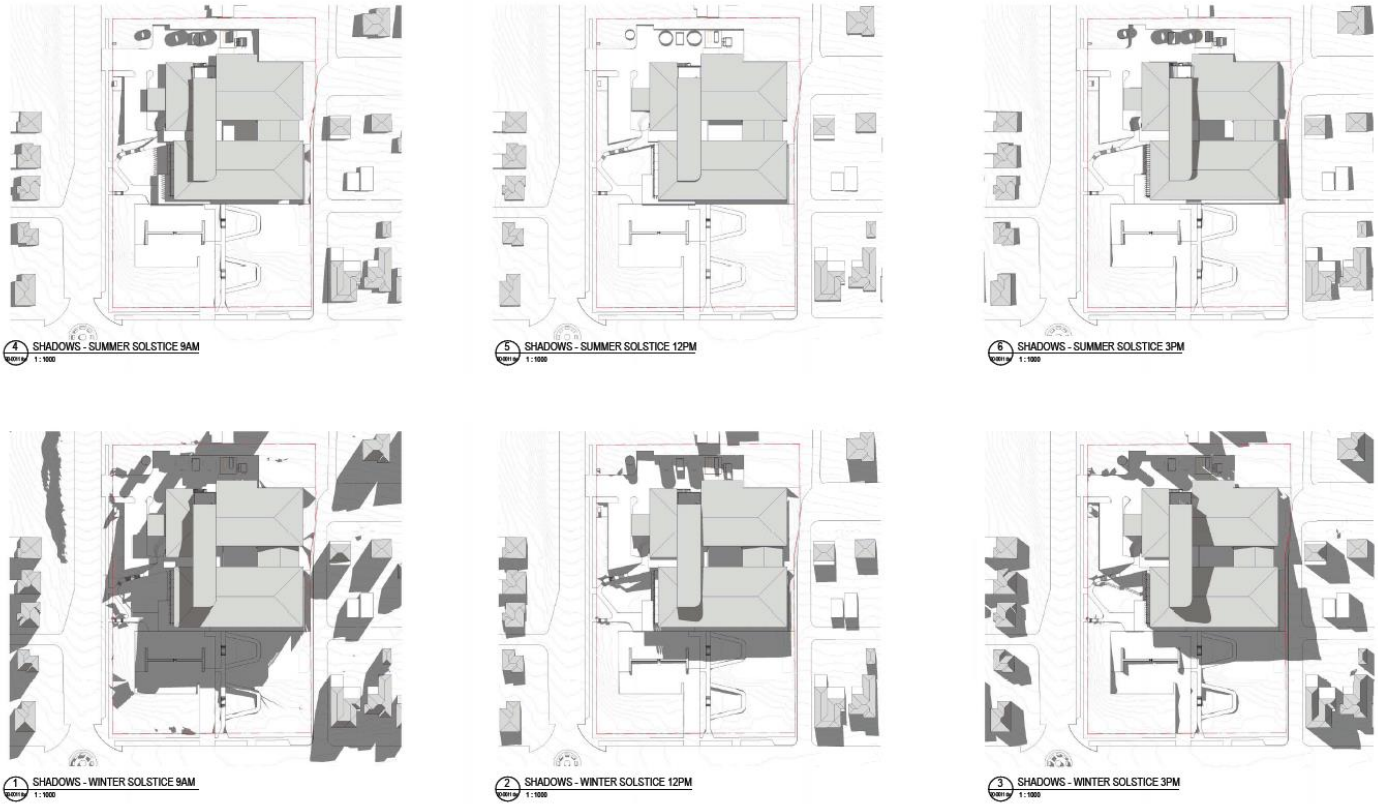

Figure 18 Shadow Diagrams
Source: djrd architecture

Social Impact

A Social Impact Assessment (SIA) has been prepared by Ethos Urban (**Appendix EE**) per the Department of Planning and Environment's *Social Impact Assessment Guidelines for State Significant Projects.*

Local Social Context

The SIA identified three areas of social influence:

- **Primary study area (PSA)** – Landowners and occupiers within approximately 500m of the site. These community members are most likely to experience impacts associated with the Proposal's construction.
- **Secondary study area (SSA)** – The Cowra locality. The locality will most likely experience impacts associated with the Proposal's operations.
- **Tertiary study area (TSA)** – A WNSWLHD catchment comprising Cowra and Weddin LGAs and the suburb of Canowindra. The Proposal will impact residents' health outcomes across the catchment.

The SIA summarises that the demographics of the three study areas are characterised by an ageing population of Australian-born background, with a higher share of vulnerable and socio-economically disadvantaged populations. Households, on average, earn less than the rest of the region, but homeownership is relatively high. Single dwellings and lone-person households are also common in the study areas.

Based on NSW Health Data, the SIA also identifies that the Western NSW LHD population has a shorter average life expectancy, higher mortality rates and poorer health outcomes than the NSW averages.

Social Impact

The SIA evaluates the Proposal's potential impact on the community and social environment compared to the baseline scenario of the site's existing use and social context.

The evaluation includes a risk assessment based on the social impact significance matrix provided within the DPE *Social Impact Assessment Guidelines (2021)* (see **Table 19**). The matrix determines a social impact's risk based on the following considerations:

- The **likelihood** of a social impact based on:
    - The findings of the various technical reports; and
    - The social baseline study.
- The **magnitude** of a social impact based on the duration, extent, severity and sensitivity of each impact.

Table 19: Social Impact Assessment Matrix

Likelihood	**Magnitude**				
	Minimal	**Minor**	**Moderate**	**Major**	**Transformational**
Very unlikely	Low	Low	Low	Medium	Medium
Unlikely	Low	Low	Medium	Medium	High
Possible	Low	Medium	Medium	High	High
Likely	Low	Medium	High	High	Very high
Almost certain	Medium	Medium	High	Very high	Very high

Table 20 summarises the social impact risk assessment's findings.

Table 20: Social Impact Assessment Summary

Matter	Overall Impact	Duration	Severity / Sensitivity	Extent
Way of life – how people live, get around, work, play and interact with one another each day	During construction: • Potential negative impacts during construction include dust, noise and vibration, traffic and disruption to the hospital's existing environment and operations. During operations: • The new hospital will provide a high-quality working and care environment with increased capacity and associated services. This will likely result in enhanced convenience, improved quality of care, and staff, patient, and visitor satisfaction. Social Impact Rating • Construction: **Medium** (Possible, Moderate) – Negative • Operation: **Medium** (Possible Minor) – Positive	Most potential negative impacts will occur during the construction phase. Most potential positive social benefits will occur during the operational phase.	**Moderate** due to the proximity of residential uses	Temporary negative impacts may affect residents, visitors and businesses in the PSA. The provision of the new hospital, once constructed, will impact the SSA and beyond.
Community - its composition, cohesion, character, how it functions, resilience, and people's sense of place	During construction: • An increased presence of construction workers may change perceptions of safety due to an increase of 'strangers'. • Construction works may disrupt regular community functioning within the hospital. • Community connection to, and sense of place is likely to be altered due to the establishment of a construction site and hoardings. During operations: • People with long-term health issues may be attracted to the area to be in close proximity to the new and improved health facilities. • The new hospital's breakout spaces for staff, and areas where patients, staff, and visitors can socialise may lead to the generation of new social connections and networks. Social Impact Rating • Construction: **High** (Likely, Moderate) – Negative • Operation: **High** (Likely, Moderate) – Positive	Changes to the local community composition would be permanent.	**Moderate** to **low**	The broader SSA may be affected.
Accessibility – how people access and use infrastructure, services and facilities (private, public or not-for-profit)	During construction: • Construction vehicles may result in adverse traffic impacts. However, it is anticipated that the construction of the site will have minimal impact on the road network and surrounding properties. • Construction activities may decrease the utilisation of surrounding active transport routes • Staff parking and site access will be impacted. During operation: • Improved accessibility to high-quality health infrastructure.	Increased traffic and the potential need for access to daily needs in the local area are long term. Construction impacts are temporary.	**Moderate** due to the proximity of residential dwellings and existing hospital access being a priority.	Visitors to the existing Cowra Hospital, the broader Cowra locality, and users of the local road network.

Matter	Overall Impact	Duration	Severity / Sensitivity	Extent
	• The Proposal increases the number of parking spaces and access points at the site in line with the new hospital's increased operations. <u>Social Impact Rating</u> • Construction: **Low** (Likely, Minor) - Negative • Operation: **Medium** (Possible, Moderate) – Positive			
Culture - culture - shared beliefs, customs, values and stories, and connections to land, places, buildings	During construction: • The Proposal may impact access to sites of Aboriginal significance, although the Aboriginal Archaeological Assessment notes that the site is highly disturbed, and it is not expected that any Aboriginal objects. During operation: • The design team has designed the hospital with culturally accessible and welcoming spaces, such as the proposed cultural and ceremony garden. <u>Social Impact Rating</u> • Construction: **Medium** (Unlikely, Moderate) - Negative • Operation: **Medium** (Possible, Minor) – Positive	Permanent	**Low** sensitivity due to the existing site comprising a hospital and the likelihood for Aboriginal heritage artefacts on site being low.	Impacts on culture may affect the broader LGA and health district.
Health and wellbeing - people's physical, mental, social and spiritual wellbeing – especially for people vulnerable to social exclusion or substantial change, psychological stress (from financial or other pressures), access to open space and effects on public health	During construction: • The NVMP estimates that the Proposal can potentially exceed noise management levels at several receivers. Accordingly, the NVMP outlines recommendations to minimise noise impacts, including the implementation of respite hours for high noise-generating activities. • Construction activities may disrupt the existing hospital's environment. During operation: • The new hospital will improve health outcomes for people living across the Cowra Health Service Catchment and improve health and wellbeing for staff and patients due to the hospital's 'biophilic' design. • The Proposal will provide additional bike parking spaces and pedestrian access points on Brisbane Street and Liverpool Street, which will encourage sustainable transport <u>Social Impact Rating</u> • Construction: **High** (Likely, Moderate) - Negative • Operation: **High** (Likely, Moderate) – Positive	Construction impacts are temporary. Ongoing positive impacts are permanent.	**High** as there are sensitive receivers near the site.	Impacts are likely to be experienced predominantly by existing residents and workers within the precinct,
Surroundings – access to and use of natural and built environment, including ecosystem services (Shade, pollution control, erosion control), public safety and	During construction: • As noted, the NVMP estimates that the Proposal can potentially to exceed noise management levels at several receivers. Accordingly, the NVMP outlines recommendations to minimise noise impacts, including the implementation of respite hours for high noise-generating activities. • Construction activities may disrupt the existing hospital's environment.	Construction impacts are temporary. Potential for ongoing impacts with the operation of the development.	**High** as there are sensitive receivers near the site.	Impacts are likely to be experienced predominantly by existing residents and workers within the precinct.

Matter	Overall Impact	Duration	Severity / Sensitivity	Extent
security, as well as aesthetic value and amenity	• The erection of site fencing and hoarding is likely to disrupt the community's enjoyment of the site during construction activities. During operation: • The new hospital's design may be perceived positively or negatively depending on the receiver's impression of the design. <u>Social Impact Rating</u> • Construction: **Medium** (Possible, Minor) - Negative • Operation: **High** (Likely, Moderate) – Negative or Positive			
Livelihoods – including people's capacity to sustain themselves through employment or business	During construction: • Increased access to construction employment. • Increased employment opportunities for Aboriginal people residing in the study areas, associated with Aboriginal participation targets set for the project. • Potential improved viability of businesses in the area associated with trade from additional construction workers. During operation: • Increased access to employment opportunities within the health and social assistance sector during operation. • Potential for increased viability of local businesses, associated with attracting new customers and clientele due to increased hospital capacity. <u>Social Impact Rating</u> • Construction: **Medium** (Likely, Moderate) - Positive • Operation: **Medium** (Likely, Minor) – Positive	Construction impacts are short term, while operational impacts are long term.	**Low**	Both construction and operational phase are likely to draw workers from the Cowra locality.

The Social Impact Assessment concludes that, on balance, there are not considered to be significant negative social impacts as a result of the proposal, subject to the implementation of the proposed mitigation methods (see **Appendix B**). The proposal will have ongoing value for the community and will improve and expand the range of available healthcare services available to Cowra and its surrounds.

6.2.15 Ecologically Sustainable Development

Questions to consider	Yes	No
Have ESD principles (as defined in clause 7(4) of Schedule 2 of the EP&A Regulation) been incorporated in the design and ongoing operation of the activity?	✓	
Does the activity minimise greenhouse gas emissions (reflecting the Government's goal of net zero emissions by 2050) and consumption of energy, water (including water sensitive urban design) and material resources?	✓	

ESD Principles

The EP&A Regulation lists four principles of ecologically sustainable development. **Table 21** below provides an assessment of the Proposal's impact against these principles. The ESD Report prepared by Stantec informs the assessment.

Table 21: Assessment against the Principles of Ecologically Sustainable Development

Principle	Assessment
Precautionary Principle If there is a threat of serious irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation.	There are no threats of serious irreversible environmental damage associated with the Proposal. The site is highly developed and as confirmed in the Flora and Fauna Assessment, no threatened species or threatened ecological communities were observed at the site. It provides mitigation measures to minimise potential direct and indirect impacts. Therefore, there are no anticipated significant impacts on threatened species or threatened ecological communities.
Intergenerational Equity The present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.	The Proposal has integrated short and long-term social, financial and environmental considerations so that any foreseeable impacts are not left to be addressed by future generations. Issues with potential long-term implications, such as waste disposal, will be avoided and/or minimised through construction planning and the application of safeguards and management measures described in this REF and the appended technical reports. Furthermore, the Proponent will incorporate a range of sustainability initiatives (as discussed in Section 3) and the ESD Report (**Appendix F**) to minimise impacts on inter-generational equity.
Conservation of biological diversity and ecological integrity Maintaining the diversity and quality of ecosystems and enhancing their capacity to adapt to change and provide for the needs of future generations.	The Proposal will not significantly impact the site's biological diversity and ecological integrity. As described, no threatened species or threatened ecological communities were observed at the site. Moreover, the Proposal will increase the site's canopy coverage from 5.6% to 26.96%, delivering significantly improved environmental outcomes, such as: • Increased habitat for local fauna. • Cooling the urban environment. • Reduction of stormwater runoff. • Pollution absorption.
Improved valuation, pricing and incentive mechanisms Environmental factors should be included in the valuation of assets and services.	The Proposal will incorporate the sustainability measures outlined in the ESD Report and mitigation and management measures presented in Annexure B to minimise environmental impacts. The cost of implementing these measures is included in the project.

Greenhouse Gas Emissions, Energy, Water and Resources Minimisation

The REF is accompanied by an ESD Report prepared by Stantec that outlines measures and initiatives to ensure energy and water efficiency and minimise greenhouse gases associated with the Proposal. These measures have been designed to enable the new hospital to achieve a 10% over-and-above improvement on the NCC 2019 energy efficiency requirements and reduce potable water consumption.

6.2.16 Cumulative Impact

Questions to consider	Yes	No
Has there been any other development approved within 500m of the site?	✓	
Will there be significant impacts (for example, including but not limited to, construction traffic impacts) from other development approved or currently under construction within 500m of the site?		✓

The DPE Guidelines *Cumulative Impact Assessment Guidelines for State Significant Projects* (October 2022) identifies the following types of development as 'relevant future project's' that should be included in the cumulative assessment of a project.

- SSD and SSI projects.
- Designated development requiring an EIS.
- Projects requiring assessment under Division 5.1 of the EP&A Act that are likely to significantly affect the environment and require an EIS.
- Projects declared to be a controlled action under the EPBC Act.
- Major greenfield or urban renewal developments.

A review of the DPE's Major Projects Register, the Sydney and Regional Planning Panels Register, and Cowra Council's Development Application Tracker did not identify any of these development types within the site's vicinity.

As described throughout, an 'Early Works' REF was prepared and approved for preparation works to the site's northern portion. Should the works proposed in this 'Main Works' REF overlap with the Early Works, their cumulative impact will be minimal, short-lived and accounted for in the mitigation measures outlined in both REFs.

7. Summary of Mitigation Measure

Mitigation measures are to be implemented for the proposal to reduce impacts on the environment. The mitigation measures are provided at **Appendix B**.

7.1 Summary of Impacts

Based on the identification of potential issues, and an assessment of the nature and extent of the impacts of the proposed development, it is determined that:

- The extent and nature of potential impacts are minimal and will not have significant adverse effects on the locality, community and the environment.
- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality, community.
- Given the above, it is determined that an EIS is not required for the proposed development activity.

8. Justification and Conclusion

The proposed redevelopment of the Cowra Health Service is subject to assessment under Part 5 of the EP&A Act. The REF has examined and taken into account to the fullest extent possible all matters affecting, or likely to affect, the environment by reason of the proposed activity.

As discussed in detail in this report, the Proposal will not result in any significant or long-term impact. The potential impacts identified can be reasonably mitigated and, where necessary, managed through the adoption of suitable site practices and adherence to accepted industry standards.

As outlined in this REF, the proposed activity can be justified on the following grounds:

- It responds to an existing need within the community.
- It generally complies with or is consistent with all relevant legislation, plans and policies.
- It has minimal environmental impacts.
- Adequate mitigation measures have been proposed to address these impacts.

The environmental impacts of the Proposal are not likely to be significant, and therefore it is not necessary for an EIS to be prepared and approval to be sought for the Proposal from the Minister for Planning and Homes under Part 5.1 of the EP&A Act. On this basis, it is recommended that HI determine the proposed activity in accordance with Part 5 of the EP&A Act and subject to the adoption and implementation of mitigation measures identified within this report.

Appendix B Summary of Mitigation Measures

Aspect	Mitigation Measure	Timing
Overall Construction Management	A final Construction Management Plan shall be prepared by the contractor and endorsed by HI addressing all the necessary requirements of construction that form part of this REF approval. This shall include the preparation of: • A Traffic Guidance Scheme which will detail traffic control measures that maintain safety at construction vehicle entries to the site and within the existing road network. • An updated Construction Waste Management Plan that estimates the quantity of demolition waste generated during the proposed works.	Pre-demolition/construction
	The works will be undertaken in accordance with the Safe Work Australia guidelines relating to *Building and construction industry: Minimising the risk of exposure to COVID-19* and any NSW Government requirements.	Demolition/construction
Design	Consultation will need to be undertaken between the appointed Principal Contractor, HI and other key stakeholders to ensure that the existing fire safety arrangements at the Cowra Health Service are not compromised as a result of the proposed development.	Pre-demolition/construction
Community Consultation	Prior to commencement of work, the Proponent must notify the Council and occupier of any land within 40 metres of the property boundaries of the project site, providing a project description and the expected dates for commencement and completion of works.	Pre-demolition/construction
	Complaints received shall be recorded and attended to promptly. On receiving a complaint, works shall be reviewed to determine whether issues relating to the complaint can be avoided or minimised. Feedback shall be provided to the complainant explaining what remedial actions were taken.	Pre-demolition/construction
	The Proponent shall develop a complaints management system and record details of all complaints received and the means of resolution of those complaints. The Complaints register shall be made available to Council on request.	Pre-demolition/construction
	A site notice board must be located at the main entrance to the site in a prominent position and must include the following: • 24-hour contact person for the site; • telephone and facsimile numbers and email address; and, • site activities and time frames.	Pre-demolition/construction
	The site notice must be erected no less than 2 days prior to the commencement of works.	Pre-demolition/construction
Work Site	All relevant legislation and associated regulations would be complied with.	Demolition/construction
	Traffic during construction would be managed in accordance with AS 1742.3 - 1996 “Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads”.	Demolition/construction
	Protective site safety fencing would be installed around the construction site. Vehicle and workforce access points to the construction compounds would be controlled.	Pre-demolition/construction & Demolition/construction
	The hours of demolition or construction, including delivery of materials to and from the site, shall be restricted as follows: • Monday to Friday: 7am to 6pm. • Saturday: 8am to 1pm. • Sunday and Public Holidays: No Work. Some work may need to be completed outside of the above hours. If required, these will be planned in consultation with stakeholders and Council to ensure all aspects of work are clearly understood by all parties and minimise disruption to hospital operations. This may include works which are most appropriately carried out outside of main working hours, for critical hospital operational reasons Measures should also be undertaken to ensure that acoustic impacts are mitigated, as outlined in the Noise and Vibration Management Plan prepared by Acoustic Logic (25 July 2022).	Demolition/construction
	The worksite would be left tidy and rubbish free each day prior to leaving site and at the completion of the works.	Demolition/construction

Aspect	Mitigation Measure	Timing
	No plant and equipment storage areas or bunded areas for storage of petroleum, distillate and other chemicals would be permitted within the site.	Demolition/construction
	The Principal Contractor would meet all workplace safety legislation.	Demolition/construction
	Undertake dilapidation reporting of Council assets and where necessary adjacent private properties (e.g. footpath) prior to commencement of works.	Pre-demolition/construction & Post-demolition/construction
	All materials on-site or being delivered to the site must be contained within the site. The requirements of the *Protection of the Environment Operations Act 1997* are to be complied with when placing/stockpiling loose material or when disposing of waste products or during any other activities likely to pollute drains or watercourses.	Demolition/construction
	The public way must not be obstructed by any materials, vehicles, refuse, skips or the like, under any circumstances.	Demolition/construction
Plant and Equipment	In accordance with WorkSafe all plant and equipment used in construction work must comply with the relevant Australian Standards and manufacturer specifications.	Demolition/construction
	No vehicle maintenance would be permitted in the demolition and construction areas except in emergencies.	Demolition/construction
	All plant/equipment would be inspected daily to avoid leakage of fuel, oil or hydraulic fluid to the work sites. Machinery found to be leaking would be repaired or replaced.	Demolition/construction
	All machinery would be secured against vandalism outside working hours.	Demolition/construction
	No batching plant would be permitted on site.	Demolition/construction
Demolition / Construction	A copy of the approved and certified plans, specifications and documentation shall be kept on site at all times and shall be available for perusal by any officer of Council.	Demolition/construction
	The use of any rock excavation machinery or any mechanical pile drivers or the like is restricted to the hours of 8:00am to 5:00pm (maximum) on Monday to Friday only, to minimise the noise levels during construction and loss of amenity to nearby residents.	Demolition/construction
	If asbestos is encountered, a standard commercially manufactured sign containing the words “DANGER ASBESTOS REMOVAL IN PROGRESS” measuring not less than 400mm x 300mm is to be erected in a prominent visible position on the site. The sign is to be erected prior to demolition work commencing and is to remain in place until such time as all asbestos containing material has been removed from the site to an approved waste facility.	Pre-demolition/construction & demolition/construction
	After demolition works, the site is to be left free of debris that may harbour vermin.	Demolition/construction
Erosion and Sediment Control	The demolition/building contractor is to confirm all soil erosion and sediment controls on site to suite the programme of works with reference to the Erosion and Sedimentation Control Plans prepared by ACOR Consultants (15 December 2022).	Pre-demolition/construction & demolition/construction
	Erosion and sedimentation control measures would not be removed until disturbed areas have stabilised.	Demolition/construction
	Any excess spoil following construction would be seeded to minimise the likelihood of it being transported offsite through wind or water action. Alternatively, it would be removed off site for disposal in accordance with DECCW, Council and legislative requirements.	Demolition/construction
	Any loose material stockpiles would be located within the temporary construction compounds and be protected from possible erosion.	Demolition/construction
	Erosion and sedimentation control works are to be undertaken in accordance with the ‘Managing Urban Stormwater Soils and Construction’ Landcom 2004.	Demolition/construction
	The demolition/building contractor shall programme works to ensure that disturbed areas are adequately drained during the period of demolition. Surfaces shall be well graded and sealed off to remove any depressions which would allow ponding water.	Pre-demolition/construction

Aspect	Mitigation Measure	Timing
	The demolition/building contractor shall ensure that all areas disturbed for demolition works are reinstated with minimum 100mm topsoil and hydroseeded.	Demolition/construction
Water Quality	All reasonable and practical measures will be implemented to prevent pollution material entering drain inlets or waterways.	Demolition/construction
Noise and Vibration	Operate in accordance with the Construction Noise and Vibration Management Plan prepared by Acoustic Logic (25 July 2022).	Demolition/construction
	Prior to commencement of works each month, neighbouring receivers should be notified of the anticipated works for that month and the potential noise and vibration generation from the anticipated activities.	Pre-demolition/construction & demolition/construction
	All reasonable and practical steps shall be undertaken to reduce noise and vibration from the site.	Demolition/construction
	The Principal Contractor would use appropriate techniques not entailing excessive cost to meet the Office of Environment and Heritage construction noise and vibration requirements as far as practicable. Reference should be made to the Office of Environment and Heritage “Interim Construction Noise Guideline (July 2009)”.	Demolition/construction
	Wherever feasible, hydraulic hammering should be minimised in favour for the use of excavators with a bucket.	Demolition/construction
	Where high noise generating works are proposed to be undertaken, respite hours should be implemented to reduce the impact on surrounding receivers. Limit the use of any required hydraulic hammers and grinding / saw cutting activities to between 8:00am – 12:00pm and 1:00pm - 5:00pm Monday to Friday and between 9:00am - 1:00pm on Saturdays. This equates to a maximum of four-hour blocks of high generating noise activity, separated by a minimum 1 hour respite period.	Demolition/construction
	Trucks to turn off their engines during idling to reduce impacts on nearby receivers (unless truck ignition needs to remain on during concrete pumping). Minimise truck reversing. Plant and equipment should be off when not in use.	Demolition/construction
	Deliveries and waste removal should use straps in place of chains for handling materials wherever possible. Deliveries should be scheduled during less sensitive time periods (After 9am) wherever practical.	Demolition/construction
	When selecting construction equipment to be used on the project, the noise levels of plant and equipment should be considered, whereby equipment selected has an equivalent or lower sound power level than the predictive sound power levels of equipment maintained within this report.	Pre-demolition/construction & demolition/construction
	A conscientious effort should be made to avoid works near the nearest sensitive receivers, particularly the existing hospital, wherever feasible. Compounding various high generating activities simultaneously near receivers should be avoided where possible.	Demolition/construction
	Unnecessary shouting should be avoided on site, and appropriate signage should be installed to remind workers of their responsibility to reduce noise impacts where feasible. Loud music from radios and stereos should not be permitted.	Demolition/construction
	Materials should be placed gently and not thrown to avoid making crashing noises.	Demolition/construction
	Non-tonal reversing beepers should be implemented on all construction equipment and mobile plant used regularly on site.	Demolition/construction
	Maximum delivery vehicle speed of 10km/h through service road.	Demolition/construction
	In the event of a complaint, the noise management procedure identified in the Construction Noise and Vibration Management Plans is to be followed.	Demolition/construction
	Noise would be attenuated with the use of screening, acoustic enclosures, engine silencing and substitution by alternative processes to reduce noise emission levels from typical construction equipment. In addition to these physical noise controls, the following general noise management measures would be followed.	Demolition/construction
	Plant and equipment would be properly maintained.	Demolition/construction

Aspect	Mitigation Measure	Timing
	Equipment would be checked and calibrated to the appropriate design requirements and to ensure that maximum sound power levels are not exceeded.	Demolition/construction
	Where possible, plant would be strategically positioned on site to reduce the emission of noise to the site, surrounding neighbourhood and to site personnel.	Demolition/construction
	Any equipment not in use for extended periods would be switched off.	Demolition/construction
	During fit-out in the construction stage and where practical and safe to do so, handheld construction equipment should be used within the building shell to minimise noise impacts on adjacent receivers.	Construction
	Safe working distances should be observed where possible. Where work is required to take place within these distances, the Principal Contractor shall consult with the affected community member to establish appropriate periods when this work will occur.	Demolition/construction
	A trial test should be conducted where vibration levels are measured near each vibration sensitive equipment when using construction and demolition equipment. These measured vibration levels should be assessed against the equipment criteria, and operational procedures should be investigated.	Pre-demolition/construction
	Vibration monitoring shall be conducted within the operational hospital during each demolition stage. The number of vibration monitors is to be confirmed following consultation with the existing hospital and the contractor.	Demolition/construction
	Any vibration monitor is to have SMS notification capability to enable contractor to be immediately informed when 75% of the vibration criteria has been measured.	Demolition/construction
	Vibration monitoring results would be assessed against the nominated vibration goals and compiled into a report to be provided by the Principal Contractor to the project manager.	Demolition/construction
	Vibration impacts would be attenuated through the implementation of clearly visible signage including contact details for the Principal Contractor, consultation with relevant occupants of nearest affected buildings and the provision of respite periods where necessary.	Demolition/construction
	A detailed acoustic review of acoustic plant items shall be undertaken once plant items are selected.	Construction
Air Quality	Spraying of paint and other materials with the potential to become air borne particulates would only be undertaken in still or light wind conditions.	Demolition/construction
	Community notification would be undertaken where appropriate.	Demolition/construction
	No burning of vegetation or other materials would be permitted on site or at the construction compound.	Demolition/construction
	Management of dust prevention strategy is to be developed by the Principal Contractor, detailed in the Construction Management Plan and agreed by the project manager.	Pre-demolition/construction
	Dust generation during demolition activities would be controlled by regular control measures such as on-site watering.	Demolition/construction
	Areas of open excavation would be kept to a minimum.	Demolition/construction
	Use of mesh and shade cloth fences would be used around open excavation areas as required to reduce wind velocity and also trap any wind born objects.	Demolition/construction
	Construction vehicles and equipment would be suitably serviced within the six-month period prior to commencement of construction activities and all necessary maintenance undertaken during construction period. In addition, where practicable, the excessive use of vehicles and powered construction equipment would be avoided.	Demolition/construction
	Exposed areas would be progressively revegetated as soon as practical.	Demolition/construction
	Vehicle wash down areas would be established to ensure all mud and soil from construction vehicles is not carried onto public roads.	Demolition/construction

Aspect	Mitigation Measure	Timing
	All vehicles involved in the excavation and/or demolition process and departing the property with demolition materials, spoil or loose matter must have their loads fully covered before entering the public roadway.	Demolition/construction
	Mud deposited on the road network due to truck movements to and from the site would be either prevented or cleaned up immediately.	Demolition/construction
Waste Management (Construction and Demolition)	The waste management measures outlined in the Construction Waste Management Plan (16 November 2022) shall be implemented.	Pre-demolition/construction & demolition/construction
	Waste generation shall be avoided through strategic selection of materials during design and purchasing.	Pre-demolition/construction
	All waste generated by the project, shall be beneficially reused, recycled or directed to a waste facility lawfully permitted to accept the materials in accordance with the NSW EPA's Waste Classification Guidelines and the *Protection of the Environment Operations Act 1997*.	Demolition/construction
	Where available, recyclable site and construction waste would be recycled in accordance with the NSW Government's "Waste Reduction and Purchasing Policy (WRAPP guidelines)". Waste oil would be sent to approved recyclers.	Demolition/construction
	The type and volume of all waste materials (e.g. excavation material, green waste, bricks, concrete, timber, plasterboard and metals) would be estimated prior to demolition and the destination specified either for on-site re-use or recycling, or off-site re-use or recycling and as a last resort disposal at a licensed waste facility.	Demolition/construction
	Where possible non-contaminated excavated material would be incorporated in the earthworks for the proposed development.	Demolition/construction
	No burning or burying of wastes would be permitted on site.	Demolition/construction
	Cleaning out of batched concrete mixing plant would not be permitted within the construction area.	Demolition/construction
	Non-recyclable waste and containers would be regularly collected and disposed of at a licensed landfill or other licensed disposal sites in the area.	Demolition/construction
	Any bulk garbage bins delivered by authorised waste contractors would be placed and kept within the property boundary.	Demolition/construction
	Waste management practices for the Proposal would follow the resource management hierarchy principles embodied in the *Waste Avoidance and Resource Recovery Act 2001*. These practices include: avoid unnecessary resource consumption; recover resources (including reuse, reprocessing, recycling and energy recovery); and dispose (as a last resort).	Demolition/construction
	The location and design of temporary waste storage areas should consider the following matters: • The waste storage area should be appropriately sized and signposted to enable the correct separation and storage of material. • Suitable vehicle and personnel access must be provided to the waste storage area. • Consideration shall be given to topography, drainage and existing vegetation before selecting a location for the waste storage area. • The waste storage area should be located to prevent adverse amenity impacts (such as odour and visual) on neighbouring properties. • The waste storage area should be wholly located within the site's property boundary unless Council has granted approval.	Pre-demolition/construction & demolition/construction
	Staff present on site during the Early Works stage of the project shall be required to undertake induction and awareness training inclusive of the Waste Management Plan and site-specific waste management.	Pre-demolition/construction & demolition/construction

Aspect	Mitigation Measure	Timing
	Signage shall be provided on site to ensure waste management measures are communicated across the site, particularly for contractors and visitors who are not regularly on site. Signage should highlight correct procedures for separating wastes where required, locations of bins and waste storage areas, labelling of designated bins, potential hazards associated with the waste streams and handling, and contact details should any issues be encountered.	Pre-demolition/construction & demolition/construction
	The following activities will be undertaken to inform the onsite waste management process and to determine the success of the Waste Management Plan: • Ensure waste quantities generated are recorded, including tracking of receipts from waste recycling or disposal via the appointed waste contractor; • Record waste classification and testing results; • Review the Waste Management Plan in light of any changes to Early Works activities or further information which may alter waste management practices; • Undertake auditing of waste management across the site as a component of broader environmental site audits; and • Undertake visual inspections daily to ensure waste management controls are implemented and maintained across the site.	Demolition/construction
	Where formal auditing, daily visual inspections or incident reporting identify incorrect storage or disposal procedures, or maintenance or waste management issues, observations shall be promptly reported to the Site Manager and recorded. The Site Manager shall determine appropriate measures to rectify the issues in a timely manner in consultation with the Environmental Management Representative and Health and Safety Manager where required. The initiation, progress and close out of corrective actions shall be reported to the Project Manager on a weekly basis.	Demolition/construction
Waste Management (Operations)	The waste management measures outlined in the Operational Waste Management Plan (OWMP) (22 December 2022) shall be implemented. The OWMP shall be reviewed and updated before the new hospital becomes operational	Pre-operations/operations
	There shall be clear delineation between the clean (empty) bins and dirty (full) bins in clinical and related waste (CRW) bin storage areas to reduce contamination and odours. Access to these storage areas will be limited to authorised persons only.	Operations
	A spill kit shall be available in the CRW bin storage area and contain items necessary to clean up skills of biohazard waste.	Operations
	Skip bins shall be covered and screened to reduce access for vermin and minimise visual impact.	Pre-operations/operations
	Bin storage areas shall be fully enclosed and only accessible by cleaners, hospital staff and the waste service providers.	Pre-operations/operations
	Routes between point of waste generation and bin storage areas shall be kept be free from hazards.	Operations
	Doors/access for bin storage areas shall be at least the size of the largest bin to enable bins to be easily wheeled into and out. Internal and external doors will be ventilated. Doors shall be self-closing to eliminate access to vermin.	Construction
	Bin store internal walls shall be cement rendered (solid and impervious) to enable easy cleaning. Ceilings shall be finished with a smooth faced, non-absorbent material capable of being easily cleaned and walls and ceilings finished/painted in a light colour.	Construction
	Floors in in the general waste/recycling bin storage area shall be constructed in concrete in accordance with AS 2870, with a slab thickness minimum of 100 mm, be impervious and have a brush finish treatment. Floors in the general waste/recycling bin storage area shall be evenly graded to an approved liquid refuse disposal system.	Construction
	The secure (CRW) bin store shall drain to a sump or sewer to collect spills and wash waters. No liquid waste, washdown waters or stormwater contaminated with biohazardous waste shall be disposed of via the stormwater drainage system.	Construction/operations
	Bin storage areas shall include an adequate separate ventilation system that complies with Australian Standard 1668 (AS1668). Ventilation outlet will not be in the vicinity of windows or intake vents associated with other ventilation systems.	Construction

Aspect	Mitigation Measure	Timing
	Bin storage areas shall have sensor or switch controlled artificial lighting both internally and externally to the room. The secure (CRW) bin store shall be signposted with the biohazard symbol and other labelling appropriate to the types of waste stored within.	Construction
	Visual aids and signage shall be provided in bin storage areas to ensure that the area works as intended.	Construction
	Grease traps shall be located within 10 m to 40 m of the tanker vehicle so that the hose can reach.	Construction
	Noise shall be minimised through the location of the bin storage area and collection point and the timing of collections to prevent disruption to hospital patients and neighbours.	Operations
	Bin wash areas shall have impermeable walls and floors grading to an industrial floor waste (including a charged 'water-trap' connected to sewer or an approved septic system), with a hose cock to enable bins and/or the enclosures to be washed out and a 100 mm floor waste gully to waste outlet. Both hot and cold water shall be available.	Construction
	Clinical and related waste: • Must be handled by staff with knowledge and access to appropriate Personal Protective Equipment • Must be packaged so that there is no risk of waste escaping • Must be transported and disposed of in accordance with NSW EPA legislation and guidelines and relevant Codes of Practice • Must be stored in uniquely identified receptacles located in separate rooms from all other wastes and recyclables, and disposed of according to designated Clinical and Hazardous Waste Procedures • Sharps containers should be placed within "arms reach" of where the sharp is generated • Hospital staff will service the sharps containers/bins from their place of use within the hospital and replace them at the same time with empty containers/bins • All containers must meet the required Australian Standard in terms of construction and colour coding etc.	Operations
	All staff shall receive information appropriate to their role regarding the waste collection systems including how to use the system, which items are appropriate for each stream and collection times. Facilities management will have the responsibility for this task.	Operations
	Cleaners and hospital staff shall be required to provide feedback to management about any non-compliance issues they observe during their cleaning activities, such as contamination, non-participation, or missing or damaged bins.	Operations
	The waste/recycling contractor shall be required to report actual quantities collected by stream so that management can monitor performance and feed this back to staff. The contractor should also be required to participate in ongoing reviews and provide updates on new opportunities that may allow the hospital to further increase their diversion from landfill.	Operations
Heritage and Archaeology	Should any heritage relics or sites be discovered during construction they shall be reported to Health Infrastructure. Any proposal to disturb any suspected relics or heritage sites may require consultation with the Office of Environment and Heritage.	Demolition/construction
	Should any evidence of Aboriginal relics be discovered during construction they shall be reported to Health Infrastructure and the Aboriginal Archaeologist. Any proposal to disturbance suspected relics or Aboriginal heritage site may require consultation with the Office of Environment and Heritage. All work is to cease on site until the relevant permit is received or advice is provided by Health Infrastructure that work can recommence.	Demolition/construction
Hazards and Contamination	An Asbestos Management Plan must be prepared for the site to meet the requirements under Clause 429 of the Work Health and Safety Regulation (2017).	Pre-demolition/construction
	The control measures outlined in the HAZMAT Register (4 May 2022) by JK Environments shall be implemented. Prior to demolition works, the HAZMAT register and the Asbestos Management Plan must be provided as a register to the demolition/building contractor.	Pre-demolition/construction

Aspect	Mitigation Measure	Timing
	All works associated with the disturbance and removal of any friable asbestos containing materials must be undertaken by a Licenced Class A Asbestos Removalist The asbestos removalist must prepare an Asbestos Removal Control Plan for the proposed works. The control plan must include an allowance for asbestos air fibre monitoring during the removal and thorough clean up works upon completion of the removal works.	Pre-demolition/construction
	A clearance inspection must be undertaken on completion of demolition works before construction activities can commence.	Post-demolition
	Contamination of the site during works would be avoided.	Demolition/construction
	If any contaminated materials or hazardous substances (for example, asbestos, polychlorinated biphenyls, synthetic mineral fibre, lead dusts, paint containing lead and ozone depleting substances) are encountered during demolition woks, works should cease and the material should be inspected and classified by an asbestos removal contractor. The area should be isolated and barricaded until the material has been classified as non-hazardous or removed and the area cleared.	Demolition/construction
	Asbestos removal and management in NSW is regulated under the Work Health and Safety Act 2011 and the Work Health and Safety Regulation 2017. The handling of asbestos and asbestos work must be carried out in accordance with the following documents published by the NOHS Commission in August 1988, as in force from time to time (Clause 259): – "Guide to the Control of Asbestos Hazards in Buildings and Structures [NOHSC: 3002 (1988)]", and, – "Code of Practice for the Safe Removal of Asbestos [NOHSC: 2002 (1988)]".	Pre-demolition/construction & demolition/construction
	The Regulation requires licensed contractors to contact SafeWork NSW of each bonded asbestos removal project of 10m2 or more.	Pre-demolition/construction & demolition/construction
	Any contaminated and hazardous material (i.e. lead paint, PCB containing electrical equipment, SMF Materials etc.) would be classified first and then stored, transported and disposed of in accordance with DECCW requirements at a DECCW licensed waste facility.	Pre-demolition/construction & demolition/construction
	An Unexpected Finds Protocol should be established as part of the detailed Construction Management Plan and include appropriate responses to report and manage the discovery of unexpected contaminated materials.	Pre-demolition/construction
Ecologically Sustainable Team	The sustainability initiatives and energy efficiency measures outlined in the ESD Report prepared by Stantec (26 October 2022) shall be considered in the detailed design of the new hospital.	Pre-construction/construction
Hazardous Material Storage	The storage of flammable gases, flammable liquids, flammable solids, toxic and infectious materials, corrosive materials and oxidising substances shall meet the requirements of the Resilience and Hazards SEPP Screening prepared by Arup (30 September 2022).	operation
Traffic	A Construction Traffic Management Plan shall be developed by the building contractor.	Pre-construction
	The Principal Contractor is to prepare a Traffic Guidance Scheme that includes traffic control measures that will be implemented to maintain safety at construction vehicle entries to the site and within the existing road network. These measures will include traffic marshals, signage, manoeuvring areas, and any other relevant traffic management strategies to be in place during construction.	Pre-demolition/construction
	The following construction vehicle access route is recommended to avoid local access roads where possible: • Approach via Kendal Street. • Left/Right turn onto Brisbane Street. • Enter the site via left/right turn from Brisbane Street. • Exit site in a forward direction onto Brisbane Street. • Left/Right turn onto Kendal Street.	Demolition/construction
	Construction vehicles are not permitted to block access to the site's emergency vehicle access driveway.	Demolition/construction
	Access by pedestrians to and from the Hospital site will be maintained during the works.	Demolition/construction

Aspect	Mitigation Measure	Timing
	Temporary hoarding appropriate to the interaction between pedestrians and construction works (as per SafeWork requirements and Australian Standards) will be constructed to prevent unauthorised access to the Site.	Demolition/construction
	Vehicles operating to, from and within the site shall do so in a manner which does not create unreasonable or unnecessary noise or vibration.	Demolition/construction
	Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.	Demolition/construction
Ecology	All habitat is to be removed prior to demolition and is to be supervised by a suitably qualified Ecologist to ensure appropriate techniques are utilised. Any fauna injured during such activities should be transported to a veterinary clinic or taken by a Wires volunteer.	Pre-demolition/construction
	Bat detection devices (Anabat) should be used in all areas of potential habitat prior to demolition activities.	Pre-demolition/construction
	Appropriate hygiene measures such as removal of contractor rubbish, vehicle and equipment cleaning protocols are to be implemented to ensure that operations within the site do not contribute to the encouragement or spread of feral pest, disease or weed species.	Demolition/construction
	All fuels, chemicals and other hazardous materials will be stored in a roofed, fire-protected and impervious bunded area at least 50 metres from waterways, drainage lines, basins, flood-affected areas or slopes above 10%. Bunding design will comply with relevant Australian Standards and should generally be in accordance with guidelines provided in the EPA Authorised Officers Manual.	Demolition/construction
	Before the commencement of construction, the Landscape Plans prepared by Site Image Landscape Architects (25 November 2022) shall be updated to reflect the requirements of the Arborist Report dated 16 February 2023, including the planting of 35 new trees with a canopy at maturity of 8 metres or greater. Trees shall be planted after the completion of construction works at the site in accordance with the updated Landscape Plans.	Pre-construction/construction
	Aged eucalyptus mulch should be maintained to all retained and replenished trees at the site in accordance with Australian Standards® AS 4454- 2003 Compost, Soil Conditioners and Mulches.	Pre-demolition/construction & demolition/construction
	A watering schedule should be maintained for new planted trees; for example, a 45L pot requires approximately 35L of daily water.	Post-demolition/construction
	Tree protection measure shall be applied to the trees identified in the Arborist Report (16 February 2023) to protect those trees during the proposed works.	Pre-demolition/construction
	All retained trees should be protected by fencing and / or ground protection before any demolition, development, or soil stripping starts.	Pre-demolition/construction
	Prior to demolition, earthworks or site clearing, a competent person should clearly mark trees for removal (spray paint on trunks).	Pre-demolition/construction
	Scheduled inspection of trees should be undertaken by a level 5 project Arborist.	Demolition/construction