

HEALTH INFRASTRUCTURE

# Review of Environmental Factors

Gunnedah Hospital Redevelopment

Version Number 2



## 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 demolition and construction works at [Gunnedah Hospital, 10 Anzac Parade, Gunnedah \(Lot 3 DP 792209\)](#).

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* (TI SEPP).

This REF provides a true and fair review of the activity in relation to its likely impact on the environment and the information it contains is neither false nor misleading. It addresses to the fullest extent possible all the factors listed in Section 3 of the *Guidelines for Division 5.1 Assessments* (DPE June 2022), the *Environmental Planning and Assessment Regulation 2021* and the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

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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<b>C</b>	Architectural Plans	dwp	14.06.2023
<b>D</b>	Landscape Plans	Stewart Surveys	30.05.2023
<b>E</b>	Signage Plans	Minale Tattersfield	10.05.2023
<b>F</b>	Built Form and Urban Design Report	dwp	18.05.2023
<b>G</b>	Ecologically Sustainable Development Report	Steensen and Varming	25.05.2023
<b>H</b>	BCA and Access Report	Blackett Maguire & Goldsmith	09.06.2023
<b>I</b>	Arboricultural Impact Assessment	Wade Ryan Contracting	15.05.2023
<b>J</b>	Tree Removal Plan	Stewart Surveys	30.05.2023
<b>K</b>	Traffic Impact Assessment	ptc	07.06.2023
<b>L</b>	Searches	Various	Various
<b>M</b>	Notification Letters and Responses	Health Infrastructure	13.07.2023
<b>N</b>	Community Engagement Report	Health Infrastructure	05.06.2023
<b>O</b>	Mitigation Measures	GeoLINK	14.06.2023
<b>P</b>	Noise and Vibration Assessment	Muller Acoustic Consulting	16.07.2022
<b>Q</b>	Construction Management Plan	Richard Crookes Constructions	21.04.2023
<b>R</b>	Hazmat Report	JK Environments	18.07.2023
<b>S</b>	Geotechnical Investigation Report	JK Environments	15.07.2023
<b>T</b>	Civil Engineering (Preliminary Erosion and Sediment Control Plan, Stormwater Management Plan)	Northrop	14.04.2023
<b>U</b>	Contamination Preliminary Site Investigation	JK Environments	01.07.2022
<b>V</b>	Contamination Detailed Site Investigation	JK Environments	28.02.2023
<b>W</b>	Flooding, Stormwater Assessment and Design	Northrop	19.06.2023
<b>X</b>	Aboriginal Heritage Due Diligence Assessment	OZark	14.06.2023
<b>Y</b>	Biodiversity Assessment Report	GeoLINK	14.06.2023
<b>Z</b>	Services Report	Northrop	12.04.2023
<b>AA</b>	Remediation Action Plan	JK Environments	19.05.2023

## Abbreviations

Abbreviation	Description
AHD	Australian Height Datum
AHIP	Aboriginal Heritage Impact Permit
AHIMS	Aboriginal Heritage Information Management System
CA	Certifying Authority
CE	Chief Executive
CMP	Construction Management Plan
CWC	Connecting with Country
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPBC Act (Cwth)	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPI	Environmental Planning Instrument
EPL	Environment Protection License
FM Act	<i>Fisheries Management Act 1994</i>
GHR	<i>Gunnedah Hospital Redevelopment</i>
HI	Health Infrastructure
LEP	Local Environmental Plan
LGA	Local Government Area
MNES	Matters of National Environmental Significance
NPW Act	<i>National Parks and Wildlife Act 1974</i>
NPW Regulation	National Parks and Wildlife Regulation 2009
NPWS	National Parks and Wildlife Service (part of EES)
NT Act (Cth)	<i>Commonwealth Native Title Act 1993</i>
OEH	(Former) Office of Environment and Heritage
Planning Systems SEPP	State Environmental Planning Policy (Planning Systems) 2021
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
Proponent	NSW Health Infrastructure
REF	Review of Environmental Factors
Resilience and Hazards SEPP	State Environmental Planning Policy (Resilience and Hazards) 2021
SEPP	State Environmental Planning Policy
TI SEPP	State Environmental Planning Policy (Transport and Infrastructure) 2021
WM Act	<i>Water Management Act 2000</i>

# Executive Summary

This Review of Environmental Factors (REF) has been prepared by GeoLINK on behalf of NSW Health Infrastructure (HI) for the determination of the proposed development activity under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

## The Proposal

NSW Health and HI proposes to undertake redevelopment works at Gunnedah District Hospital, located at 10 Anzac Parade, Gunnedah NSW. The Gunnedah Hospital Redevelopment (GHR) includes reconfiguration of assets to meet contemporary standards in models of care and facility design to improve sustainability and efficiency across the health service. The redevelopment will focus on improved patient accommodation and upgraded infrastructure. The GHR includes:

- New single storey redevelopment including inpatient, maternity, birthing and emergency department;
- Landscaped central courtyard with stair and ramp access to lower level;
- Private landscaped birthing courtyard;
- Landscaped gathering courtyard;
- New single storey plant room and enclosed rainwater harvesting plant yard;
- Refurbished and separated back of house loading zone;
- New substation, bulk oxygen tank, fire protection tanks and pumpset;
- New emergency parking, drop off zone and 24/7 entry;
- New accessible ramp to helipad; and
- Improved signage and wayfinding strategy.

## Need for the Proposal

Gunnedah Hospital is a C2 District level facility that delivers a range of clinical services including emergency medicine, acute care, surgery, maternity and outpatient services. Part of the building infrastructure is at the end of its useful life. A new health facility, located on the existing site, is required to support the delivery of contemporary models of care and quality services for the future healthcare needs of the catchment population.

## Proposal Objectives

The primary objective of the Proposal is to provide a contemporary healthcare facility that is culturally appropriate, welcoming and inclusive to service the community in Gunnedah now and into the future.

Secondary objectives for the Proposal include:

- Minimising impacts on ongoing operations of the hospital;
- Minimising visual, noise and vibration impacts on adjoining properties;
- Minimising traffic impacts; and
- Maintaining adequate services.



## Options Considered

Several options for upgrading the existing Gunnedah Hospital have been investigated by the Hunter New England Local Health District Executive, Gunnedah Hospital staff, Health Infrastructure and other project partners. Because the hospital is situated on a relatively large and unconstrained site, the construction of a new hospital on a greenfield site was not an option.

As part of the masterplanning process, four long-term site development options were investigated, each for a different zone within the existing hospital. Option 2, described as a simple and staged redevelopment in the north-west centre of the site, constructed around the clinical operation area of the hospital, with potential to redevelop around existing hospital buildings, was selected as the preferred option.

## Site Details

The Gunnedah Hospital is located at 10 Anzac Parade, Gunnedah NSW (Lot 3 DP 792209). The site is located within the Gunnedah Shire Local Government Area (LGA), within the New England North West Region of NSW.

The broader Gunnedah Hospital project site is made up of three existing lots:

- The Gunnedah Hospital and associated buildings, Rural Health Centre and Ambulance Station are contained within Lot 3 DP 792209;
- The Lions Park with park structures and landscaping are contained within Lot 2 DP 792209; and
- The Alkira Nursing Home is contained with Lot 1 DP 792209.

## Planning Approval Pathway

Section 4.1 of the EP&A Act states that if an environmental planning instrument (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, the environmental assessment of the development is required under Part 5 of the Act.

State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&ISEPP) aims to facilitate the effective delivery of infrastructure across the State. Division 10 of the T&ISEPP outlines the approval pathways for health services facilities development.

Section 2.61(1) of T&ISEPP enables the erection or alteration of, or addition to, a building that is a health services facility, and demolition of buildings carried out for the purposes of a health services facility to be carried out by or on behalf of a public authority, without consent, on any land provided the development is carried out within the boundaries of an existing health services facility.

The project, however, becomes an 'activity' for the purposes of Part 5 of EP&A Act and is subject to an environmental assessment (Review of Environmental Factors). The development is considered an 'activity' in accordance with Clause 5.1 of the EP&A Act because the development involves the demolition of a building and carrying out of work by HI (public authority).

## Consultation and Engagement

The Activity triggers statutory consultation requirements pursuant to Sections 2.10, 2.45 and 2.62 of the T&ISEPP, requiring notification to Council and adjoining occupiers of land. Written notice was provided to Council and the occupiers of adjoining land on 10 June 2023. One response was received from an adjoining property occupier and a reply was provided, closing out the matters raised. Gunnedah Shire Council acknowledged receipt of the letter but no further response has been received at this point in time.

Additionally, the project team has consulted with staff, stakeholders and the community at each design stage including master plan, concept design and schematic design. This included giving presentations to hospital staff, holding pop-up community consultation events, holding on site meetings with various stakeholder groups including representatives of the local Aboriginal community, and extensive online publications.

## Environmental Impacts

This REF provides an assessment of the Gunnedah Hospital Redevelopment (GHR). It takes into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the proposed development as required under the EP&A Act. The REF also sets out the commitments made by HI to manage and minimise potential impacts arising from the development. The REF finds an Environmental Impact Statement (EIS) is not required and this REF is an adequate level of impact assessment.

The redevelopment will generally result in environmental impacts that are either negligible or low. The most notable potential environmental impact relates to short-term noise and traffic impacts.

The redevelopment will be positively received by the local community and result in a long-term positive impact on health service delivery within the community.

## Justification and Conclusion

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

- The extent and nature of potential impacts will not have significant adverse effects on the locality, community and the environment.
- Potential impacts can be appropriately mitigated and managed to ensure that there is minimal effect on the locality and community.
- From an analysis of the environmental impacts associated with the proposed development activity, it has been determined that preparation of an EIS is not required.
- The proposed development will not have any effect on matters of national significance and approval of the activity under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* is not required.
- There are no separate approvals, authorisations or notifications required in relation to the proposed development activity prior to determination under Part 5 of the EP&A Act or under any other Acts.

Additionally, the Gunnedah Hospital Redevelopment project will ultimately benefit patients, carers, staff, other stakeholders and the wider Gunnedah community, delivering improved and higher quality health care.

It is recommended that HI approve the proposed activity in accordance with Part 5 of the EP&A Act and subject to adoption and implementation of matters outlined in Section 6.

# 1. Introduction

NSW Health Infrastructure (HI) propose to demolish some of the existing buildings and construct new health facilities (the proposal) at Gunnedah Hospital (the site) as part of their delivery of infrastructure solutions and services to support the healthcare needs of the NSW communities.

This Review of Environmental Factors (REF) has been prepared by GeoLINK on behalf of HI to determine the environmental impacts of the proposed redevelopment at Gunnedah Hospital. 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 *Guidelines for Division 5.1 Assessments* (DPE June 2022), the *Environmental Planning and Assessment Regulation 2021*, and the *Commonwealth 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 of the EP&A Act; 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 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

Gunnedah Hospital is a C2 district level facility that delivers a range of clinical services including emergency medicine, acute care, surgery, maternity, and outpatient services. Much of the building infrastructure is at the end of its useful life. A new inpatient unit, emergency department, front of house areas, plant areas, roadways, paving and landscaping at the existing site, is required to support the delivery of contemporary models of care and quality services for the future healthcare needs of the catchment population. This would support the ongoing co-location of acute services, with the federally funded Rural Health Centre (RHC). The RHC was commissioned in 2012 and currently houses Community Health, community services and General Practitioner services.

The Gunnedah Health Service Clinical Services Plan (the CSP) provides direction and priorities for Gunnedah clinical services for the next 10 years. The Plan represents the outcome of a comprehensive consultation process undertaken with internal stakeholders across Hunter New England Local Health District (HNELHD) Executive and Gunnedah Hospital, key service partners, and community representatives. The Plan was also informed by a detailed analysis of quantitative data and a scenario modelling process that quantifies the potential impact of future service changes.

Gunnedah Hospital forms part of the broader system of health care across the HNELHD and rural New South Wales (NSW). While emphasising the importance of safely providing services close to home and with strong links between all service providers (from primary care to acute), the CSP acknowledges the important interconnectedness between facilities for patients requiring higher levels of care.

Issues identified through stakeholder consultation include:

- **The need to support service sustainability** - recruiting and retaining a skilled healthcare workforce is a significant issue for the region especially in the Primary Care sector.

- **Closing the gap** - in addition to having areas of relatively high socio-economic disadvantage, the Gunnedah LGA has a higher proportion of Aboriginal people than the state average. The opportunity to provide improved access and an environment that is culturally sensitive to the Aboriginal people will allow earlier diagnosis and management of the chronic conditions experienced by this group.

While the Gunnedah population is not significantly growing (at a projected rate of 0.1% per annum), the suitability of the ageing infrastructure at Gunnedah Hospital is identified as a barrier to providing contemporary services and optimal efficiency. The replacement of the current facilities is recommended to bring them up to current standards.

### Master Planning/ Options Development

The master plan investigations began with understanding the design and planning considerations and constraints across the site and the hospital campus. These principles informed the exploration of a number of potential development zones and arrangements. From the preferred site development zone, a number of master planning options were tested to arrive at the preferred and approved master plan.

#### Potential Development Zones:

The master planning process explored a number of potential development zones across the campus:

- A:** Existing car park/ fleet parking/ entry: Consider reconfiguration of the parking and entry areas.
- B:** Underutilised areas of the existing hospital buildings: Explore possibility of some temporary relocation to enable demolition works.
- C:** Existing car park/ entry, daycare centre, staff accommodation, and community health: Staff accommodation is in use. Relocation or parking/ entry to be considered.
- D:** Open area with car parking, helipad, and education facility: Parking and servicing of Alkira Nursing Home to consider the stormwater easement area.
- E:** Lions Park and storm water easement: Park relocation, construction over easement, and infrastructure links to consider.
- F:** Existing hospital: Facilities to remain operational requiring a staged redevelopment.
- G:** Kitchen support services and infrastructure: Support services to remain operational requiring a staged development.
- H:** Ambulance station, engineering building and main switch room: Maintain operational.

Through the master plan studies and consultation processes, the preferred development zone was identified to be the centre of the site utilising a combination of development zones **B**, **C** and **F** (refer **Figure 1** below).



Figure 1 Potential Development Zones



## 2. Site Analysis and Description

### 2.1 The Site and Locality

The site is the existing Gunnedah District Hospital located at 10 Anzac Parade, Gunnedah NSW, described in real property terms as Lot 3 DP 792209. The site currently accommodates Gunnedah Hospital and associated buildings and infrastructure, the Gunnedah Rural Health Centre and Gunnedah Ambulance Station. The site is approximately 3.62 ha in area.

A Locality Plan is provided at **Illustration 2.1** and a Site Plan is provided at **Illustration 2.2**.



The site is located centrally within the town of Gunnedah, on the southern side of the Gunnedah CBD and railway line. Gunnedah is a regional town located in the New England North-West Region of NSW, located approximately 65 km west of Tamworth, 145 km south-west from Armidale and 300 km north-west of Newcastle. The site is located within the Gunnedah Shire Local Government Area (LGA). Gunnedah Hospital is located within the Hunter New England Local Health District (HNELHD).

The site is bound by Anzac Parade (to the east), Reservoir Street (to the south) and Marquis Street (to the west). Alkira Nursing Home and Lions Park are located directly north of the hospital, forming a broader hospital site, bound by the adjoining South Street/ Oxley Highway (to the north).

The site gently slopes from the south-east corner at the intersection of Reservoir Street and Anzac Parade (approximately 281.5 AHD) to the north-west corner of the site (approximately 276 AHD). The site is developed land including buildings, landscaping, trees and hardstand areas for access, parking and walkways associated with the hospital. There are multiple vehicular access points to different carpark areas on site from Marquis and Reservoir Streets and Anzac Parade.

The site survey is located at **Appendix A**.

Figure 2 The Site

### 2.2 Existing Development

The Gunnedah Hospital consists of a number of single storey, predominantly brick, hospital buildings including, but not limited to:

- Gunnedah Hospital (which contains; Administration, Community health, Family health, Function room, Physio, Dental clinic, Kitchen, Back of house, Maternity and Birthing, Chapel, Staff support, General Wards, Emergency, Day surgery, Theatre, Imaging and CSSD).
- Support buildings (including Engineering, Generator, Mortuary, Day care centre, Staff accommodation and Clinics, Kiosk and Education centre).

- Gunnedah Rural Health Centre.
- Gunnedah Ambulance Station and Helipad.

The hospital buildings are spread across the site, interspersed with open green spaces and established trees and smaller shrubs and carparking areas. There are few formal garden plantings or landscaped zones within the site.

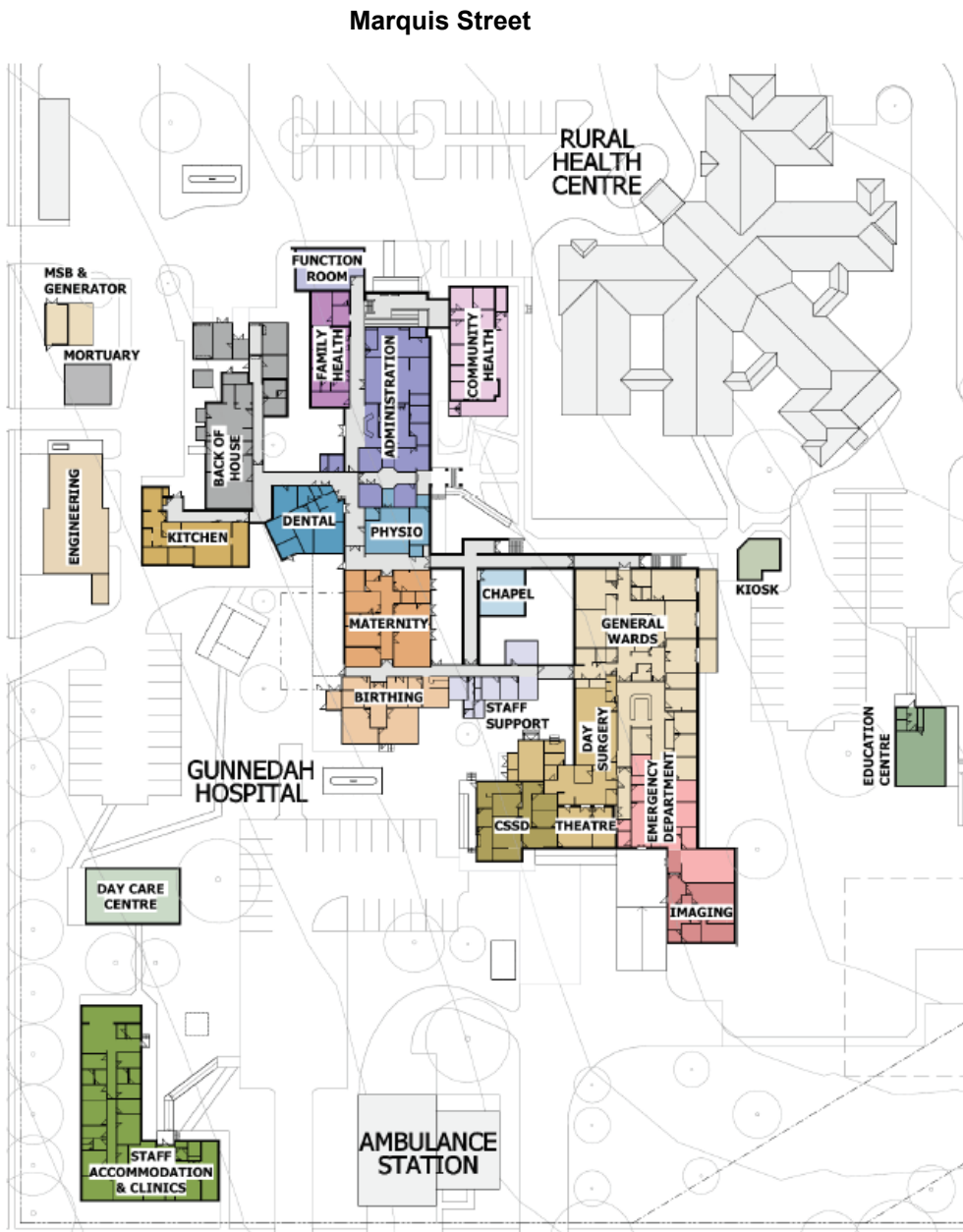


Figure 3 Existing Hospital Departments

## 2.3 Existing Ecology

Vegetation on site is highly disturbed with a number of open space areas and scattered trees of various ages and conditions. Native trees (endemic to the North Western Slopes Botanical Region of NSW) (Harden 2002) on site comprise:

- Eight River Red Gum (*Eucalyptus camaldulensis*).
- One of each Kurrajong (*Brachychiton populneus*), White Cedar (*Melia azedarach*), Carbeen (*Corymbia tessellaris*), and Bimble Box (*Eucalyptus populnea*).

Native species (non-endemic to the North Western Slopes Botanical Region) include:

- Eight Flowering Gum (hybrid form) (*Corymbia ficifolia*).
- Four Sugar Gum (dwarf) (*Eucalyptus cladocalyx*).
- Three each of Silky Oak (*Grevillea robusta*) and *Eucalyptus* sp.
- Two Crepe Myrtle (*Lagerstroemia* species).
- One of each Bottle Tree (*Brachychiton rupestris*), Lemon-scented Gum (*Corymbia citriodora*), and Yellow Gum (*Eucalyptus leucoxylon*).

Exotic/ ornamental species include:

- 17 Jacaranda (*Jacaranda mimosifolia*)
- Five Golden Elm (*Ulmus glabra* 'Lutescens')
- Three Callery Pear (*Pyrus calleryana* 'Capital')
- Two Desert Ash (*Fraxinus angustifolia* subsp. *Angustifolia*)
- One of each Escallonia species, Citrus species, Claret Ash (*Fraxinus* species), Frangipani (*Plumeria* species), and Magnolia species.

Vegetation on site is not representative of any plant community types (PCTs) outlined in the BioNet Vegetation Classification system (DPE, 2022).

## 2.4 Existing Services

The following existing services and connections are available to the site:

- **Power:** Site power supply is fed from a 315kVA pole mount transformer located in Reservoir Street.
- **Communications:** Existing Telstra optic fibre lead in cables enter the site from Marquis Street via conduit and pit networks and terminate into the main comms room located in the Administration Building.
- **Water Supply:** The site is serviced by a 300 mm Council watermain located in Marquis Street and a 100 mm watermain in Reservoir Street. The potable water supply is fed from an 80 mm water meter assembly and backflow prevention device located at the south-west corner of the site which is connected to the 300 mm watermain in Marquis Street and the 100 mm watermain in Reservoir Street for redundancy (the Rural Health Centre has its own independent water/ fire connection).
- **Sewer Connection:** Sewer from the site discharges through a sewer manhole located in front of the Rural Health Centre along Marquis Street (sewer connections are shared with the Rural Health Centre). An existing Council sewer main crosses the northeast corner of the site. However, the existing hospital drains to the sewer main located in Marquis Street.



- **Fire Hydrants:** There are two fire hydrant service connections to the site; one is connected to the 300 mm watermain in Marquis Street to the west; the other is connected to the 100 mm watermain in Reservoir Street to the south (the Rural Health Centre has its own independent water/ fire connection).

## 2.5 Access and Parking Facilities

The site has a total of eight vehicle access points including two driveways at Marquis Street, three driveways at Reservoir Street and three driveways at Anzac Parade.

Primary vehicle access for the public is provided from Marquis Street to the main car parking area for the Hospital and Rural Health Centre. A secondary access point is available on Marquis Street to a carpark servicing the nursing home. Anzac Parade provides separate entry/ exit for public parking and emergency vehicles. The Ambulance Station is located on the Anzac Parade frontage. Public and restricted vehicle access points are provided along Reservoir Street to service another public carpark and engineering services. A helipad is located in the north-east corner, with a paved path linked to the emergency entrance.

There are seven car parking areas within the hospital grounds, with a total provision of 156 car spaces. This includes five accessible spaces.

## 2.6 Site Considerations and Constraints

Section 10.7 Planning Certificate No. 7252 dated 19 July 2022 identifies that the site is located within the R2 Low Density Residential zone under the Gunnedah Local Environmental Plan 2012. The certificate is provided at **Appendix B**.

**Table 1: Section 10.7 Planning Certificate**

Affectation	Yes	No
Critical habitat		✓
Conservation area		✓
Item of environmental heritage		✓
Affected by coastal hazards		✓
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 sulfate or any other risk		✓
Affected by any acquisition of land provision		✓
Biodiversity certified land or subject to any biobanking agreement or property vegetation plan		✓
Significantly contaminated		✓
Subject to flood related development controls		✓

## 2.7 Surrounding Development

The hospital site is located south of the Gunnedah town centre and Mungindi railway line, which runs alongside the two-lane Oxley Highway, located to the north of the hospital site. The Gunnedah High School is located to the west of the site, and the Gunnedah Memorial Pool is located to the east. The hospital site is zoned R2 Low Density Residential and is generally surrounded by residential uses (R3 Medium Density Residential zoning) to the south and east.



Locality Plan - Illustration 2.1





**LEGEND**

- The site
- Cadastre
- Burrell Tree (AHIMS Site 20-4-1002)

0 40 Metres

**Site Plan - Illustration 2.2**

## 3. Proposed Activity

### 3.1 Proposal Overview

The redeveloped Gunnedah Hospital will include the following features and services:

- New single storey redevelopment including inpatient, maternity, birthing and emergency department;
- Landscaped central courtyard with stair and ramp access to lower level;
- Private landscaped birthing courtyard;
- Landscaped gathering courtyard;
- New single storey plant room and enclosed rainwater harvesting plant yard;
- Refurbished and separated back of house loading zone;
- New substation, bulk oxygen tank, fire protection tanks and pumpset;
- New emergency parking, drop off zone and 24/7 entry;
- New accessible ramp to helipad;
- Improved signage & wayfinding strategy.

To enable the redevelopment works described above, the following demolition works are proposed:

- Remove trees that are in direct conflict with the redevelopment;
- Demolish the maternity ward, birthing suite, staff support ward and the day care centre;
- Demolish a gazebo;
- Remove the two LPG tanks and the bulk oxygen tank; and
- Decant into underutilised spaces within the general ward and administration building.

Architectural drawings of the GHR are provided at **Appendix C**. Landscape Plans are provided at **Appendix D**. Signage Plans are provided at **Appendix E**.



# MARQUIS STREET

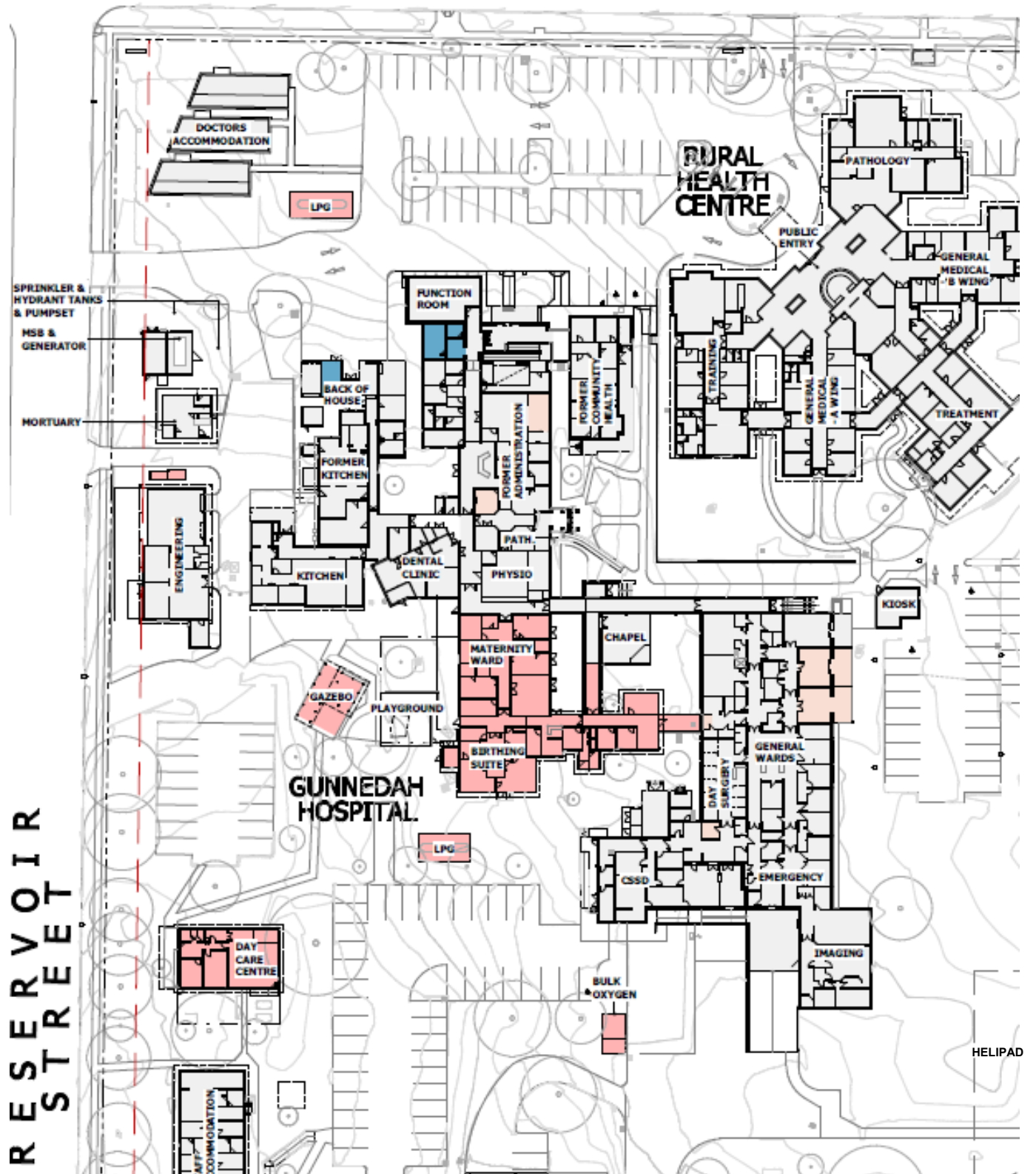


Figure 4 Demolition Works (pink), Long Term Decant (teal), Temporary Decant (peach)

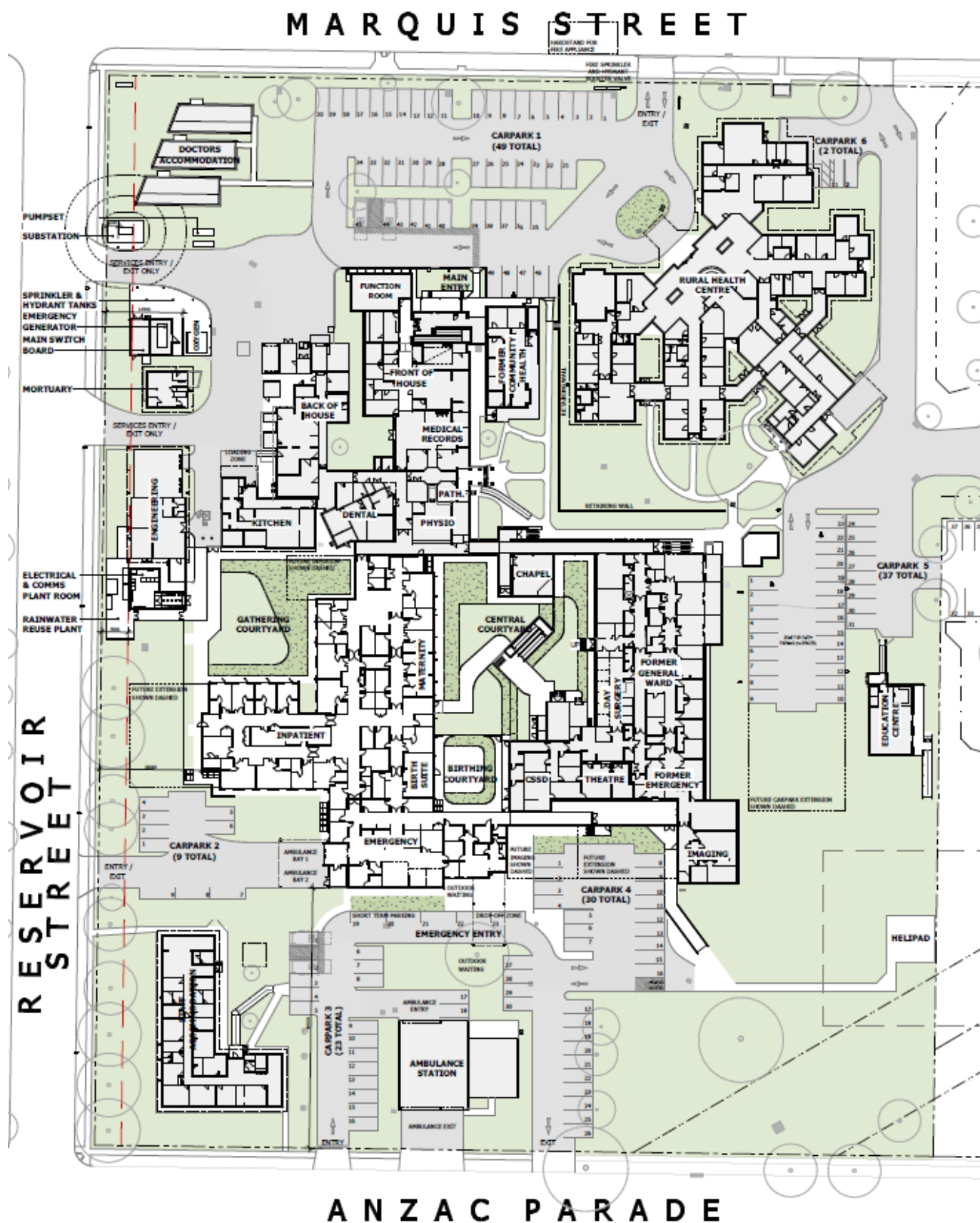


Figure 5 Proposed Site Plan

### 3.1.1 Design Approach

#### Placemaking and Design

A Built form and Urban Design Report has been prepared by the Project Architect, DWP, and is attached at **Appendix E**. This report provides a comprehensive outline of the design philosophy of the redevelopment. There are many clinical, cultural, social and community considerations that have been encompassed by the three design principles provided below. These design principles encapsulate the objectives of the Government Architect of NSW's Better Placed policy, to enhance the design quality of our built environment and create better places, spaces and buildings.

**Design for wellbeing** will create a quality new health facility for use by patients, their carers and the staff providing clinical care to support improved health, healing and wellbeing in difficult and stressful times. This particular principle is also driven by the Emotional Design Brief framework which focuses on the individuals experience of the built health-care spaces.

**Design for country** aims to establish meaningful and culturally appropriate references to Country by not only creating connections to the ground and landscape, but also facilitating family connectivity and gathering through the design. This principle is guided by the Connecting with Country framework which focuses on 'place-led' design approaches and outlines strategies for designing with Country in order to value and respect our First Nations culture.

**Design for equity** strives to create an inclusive and welcoming built hospital environment that ensures everyone accessing and working in healthcare feels safe and comfortable. This principle is linked closely to the previous principles; Design for Wellbeing in terms of designing spaces that are private and secure, and Design for Country in terms of design that is culturally appropriate, safe and provides dignity to all. Design for Equity is guided by the Design Guide for Healthcare which provides a framework for the design of quality, inclusive and sustainable health facilities.



Figure 6 Design Principles

#### Architectural Design

Conceptually, the landscape context of Gunnedah informs the approach to the hospital's architecture both internally and externally, drawing on the colours and structure of the landscape beyond the site. The local context informing the design is the first objective of the *Better Placed* in order to contribute positively and evolve the future character and context of Gunnedah. The facade approach is seen as a soft and recessive building that will act as a backdrop to the landscaped courtyards - being the key component to the design of the redevelopment. In reference to the design principles, this approach will provide natural outlooks for health and wellbeing, connection to Country through Indigenous medicine plantings and/or their representations and create safe and equitable spaces.

The preliminary materials palette includes profiled metal wall cladding used in a vertical format that references the linear crop rows of the surrounding agricultural fields. The pre-finished nature of the product makes it economical and low maintenance. The proposed Colorbond colours include Paperbark and Terrain as soft earthy references. Perforated art facade screens will be integrated into the architecture of the facade at the thresholds to create a language that references Country and culture, aiming to create an inclusive and welcoming healthcare setting. Brick has been a material widely used in the built form across the site and an opportunity exists to re-utilise these bricks as a material within the redevelopment. One of the key design principles is to break down the threshold transition into the hospital spaces. This can be achieved by blurring the lines between inside and outside by using exterior materials internally.





Figure 7 Façade Concept Typical Elevations

The two facade concept elevations above, diagram the proposed application of the material selections across the facade. The left elevation shows the single storey hospital scale, with the striking feature of a large highlight window above a staff station slicing into the sky to capture views and light. The popout is featured in Colorbond Terrain metal cladding to break down the scale and form across the facade. The main building is finished in three different metal profile cladding types in a vertical orientation to reference the linear language of the crop rows of the surrounding agricultural fields. Profiled (Longline), channelled (Dominion) and ribbed (Spandek) metal sheets will be applied across the facade in order to create a dynamic rhythm of light and shadow in one harmonious colour. The use of one colour aims to emphasise the effect of light and shade, and its changing effect throughout the day.

The large inpatient windows in the right elevations provide an expansive sense of connection with the landscaping in an aim to open up the rooms and connect with nature. The opportunity exists for these windows to include operable portions to allow access to fresh air and the activity in the courtyard. Awning screens provide solar protection and mirrored window tint will enhance visual privacy from courtyard sight lines. Sheer and blockout roller blinds recessed into a window pelmet will allow patients and visitors to control solar access and privacy.

The approach to the massing of the building form and materiality as a consistent canvas to the landscaping across the redevelopment allows the design to focus the attention and detailing on the threshold places into the building - the canopies. The mass of the building itself is seen as a soft grounded building that is the canvas to the landscape design, as a shelter and a healing place within nature.



Figure 8 Emergency Canopy (left) and Ambulance Canopy (right) Impressions

The public emergency entry to the hospital provides all hours access to the Emergency Department and after-hours access to the Birth Suite and the Inpatient Unit from Anzac Parade. This entry features a canopy, referencing the agricultural gable forms of the region. The canopy provides covered drop-off and pick-up access to the Emergency Department. The canopy utilises perforated art screens applied as the soffit lining to the pitched ceiling, creating a consistent language across the architecture. The soffit lining will be backlit, shining light through the perforated pattern, creating a beacon wayfinding element to the Emergency Department entry after hours. Outdoor waiting will also be provided at this entry, softened with mass planting that references the same landscaping species utilised in the courtyards created by the built form.



The facade section through the highlight window (shown on Figure 8 below) illustrates how natural daylight is pulled into the centre of the wide clinical footprint of the inpatient unit. A dramatic raked ceiling pitches from 2700 mm high corridor ceilings to open up spaces at the staff station. Large vertical windows will give a beautiful visual connection to the sky and weather patterns as they change across night and day enhancing the patients, staff and visitors experience of the typically internalised clinical spaces of hospital design. The highlight window will also act as a wayfinding device for patients and visitors to navigate the hospital layout. The facade section shows an elevation of the inpatient unit bedrooms beyond and shows the window connection providing visual sight lines from the patient bed out to the landscaping.



Figure 9 Façade Section Through Highlight Window

The central courtyard is created at the centre of the new inpatient unit and the existing hospital. The space features terraced paving to respond to the fall across the site. The integrated stairs and ramps can also be utilised by the gymnasium for outdoor physiotherapy and rehabilitation sessions. The existing chapel, a result of local fundraising efforts, opens directly into the courtyard providing a breakout space for gathering and access to outdoors. The plantings will incorporate an Indigenous healing garden with local medicine plants and an opportunity for a locally commissioned sculpture piece to be installed as a wayfinding feature and provide connection to culture. Playground equipment installed on rubber soft fall will provide active engagement for visiting siblings. A large array of rooftop photovoltaic solar panels form part of the environmentally sustainable design strategy.

The building design responds to the site and surrounding, natural environment, incorporating culturally sensitive elements and utilises natural light and low-profile forms to dilute the clinical character of the hospital to a more welcoming place with a functionally driven layout. This demonstrates how principles of placemaking and key objectives in the Better Placed policy have been considered to achieve the best possible design outcomes for the local community, ensuring a healthy, responsive, integrated, equitable and resilient built environment.

The Built form and Urban Design Report describes how the seven objectives of *Better Placed* have been utilised throughout the design process to ensure the redevelopment achieves good design. Furthermore, throughout the design of the redevelopment, four design meetings were held with the NSW HI Design Advisors, where recommendations for improvements were made. **Table 2** below describes the recommendations made by HI's Design Advisor and the project's response.

**Table 2: HI Design Advisor Review Process**

Date	Meeting	Recommended Changes
July 2022	Health Infrastructure Expert Reference Group	<ul style="list-style-type: none"> <li>Improved visibility of main entrances through refurbished awning, unique emergency entry canopy design and a comprehensive signage and wayfinding strategy.</li> <li>Consolidation of entrances into the hospital from seven to two: a main entry during business hours and a 24/7 emergency entry.</li> <li>Separating the general public from back of house services areas.</li> <li>Improved vistas into landscaped courtyards by maximising glazing from patient bedrooms and hospital corridor links.</li> </ul>
August 2022	Health Infrastructure Clinical Innovation Review	<ul style="list-style-type: none"> <li>Ambulance bay has direct access to central staff station and treatment bays in lieu of being further away from triage.</li> <li>Planning revised to ensure visibility from staff station to all emergency treatment bays and spaces.</li> <li>Decontamination room incorporated with direct internal access within the emergency department rather than a unenclosed bay.</li> <li>Relocation of emergency outdoor waiting area and glazing maximised to improve staff oversight for security and safety.</li> <li>Inpatient unit replanned to adopt a racetrack configuration and avoid entrapment issues for staff and isolation of patients.</li> </ul>
September 2022	Health Infrastructure Architect Design Review	<ul style="list-style-type: none"> <li>Landscape plan revised to earmark zones for future expansion.</li> <li>Strengthen connection to courtyards by providing additional access as an important connecting with Country element to access nature.</li> <li>Shade sails added to the central courtyard to provide extra shade.</li> <li>Combined Indigenous art design and screens to provide additional shade and connecting with Country elements.</li> </ul>
October 2022	Health Infrastructure Executive User Group	<ul style="list-style-type: none"> <li>Achieve a balance between Indigenous and colonial historical references through materiality, art strategy and landscape design.</li> <li>Break up the building mass by utilising various metal wall cladding profiles and colours and reduced the scale of building at entrances through entry canopy design.</li> </ul>

### Connecting with Country/Engagement

The GHR project team has consulted extensively throughout the development of the project, including consultation with the Aboriginal community. This consultation occurred in accordance with the Government Architect of New South Wales's Connecting with Country framework and NSW HI's Implementing the Connecting with Country Framework – A Guideline for Health Infrastructure Project Teams and Partners. The following engagement sessions were held:

- 23 February 2022 – Introductory workshop held with local Elders, community members and representatives from Aboriginal health organisations at the Red Chief Local Aboriginal Land Council. This workshop aimed to introduce the project and project team, learn about Country and how this could influence the design.
- 22 March 2022 – Meeting with the Gunnedah Hospital Aboriginal Staff Collaborative to introduce the project and seek their early feedback.
- 4 July 2022 – Design workshop held with staff and community at the Gunnedah Hospital following NAIDOC Week celebrations. Focus on entry and overall landscaping design elements.
- 25 July 2022 – Cultural assessment of the site completed with Aboriginal staff in attendance.
- 16 November 2022 – Design workshop held with staff at the Gunnedah Hospital focusing on maternity and birthing and connection to outdoor spaces.

**Table 3** details how the feedback received during engagement sessions has been incorporated into the final design of the GHR. How the overall design has addressed the Connecting with Country framework is outlined in the Built Form and Urban Design Report (refer to **Appendix E**).

**Table 3: Connecting with Country Design Response**

Location/ Theme	Feedback	Design Response
Entry	<ul style="list-style-type: none"> <li>A more welcoming drop off zone and entry that considers signage, language and a friendly face.</li> </ul>	<ul style="list-style-type: none"> <li>Improved access via single main entry and to the relevant Aboriginal Health Liaison services.</li> <li>Create a culturally responsive welcoming environment through colourful artwork, signage in Indigenous language, and simple wayfinding.</li> </ul>
Wayfinding	<ul style="list-style-type: none"> <li>Wayfinding needs to be simple and the layout easy to follow with Aboriginal language.</li> </ul>	<ul style="list-style-type: none"> <li>Simple wayfinding.</li> <li>Incorporate dual language on signs where possible.</li> </ul>
Waiting spaces	<ul style="list-style-type: none"> <li>Importance of family, family connections and support to the Gamilaroi people.</li> </ul>	<ul style="list-style-type: none"> <li>Facilities to accommodate large family groups and gathering spaces.</li> <li>Access to outdoor landscaped spaces.</li> </ul>
Connection to outdoors	<ul style="list-style-type: none"> <li>Access to outdoor space and landscaping – use of natives, consider plants for medicine, healing and wellness.</li> <li>Consider use of healing plants in artwork and wayfinding.</li> </ul>	<ul style="list-style-type: none"> <li>Natural light filled spaces.</li> <li>Link connections with views to courtyards.</li> <li>Access to outdoor landscaped spaces.</li> </ul>
Emergency	<ul style="list-style-type: none"> <li>Better design of ED that makes waiting more comfortable and also considers privacy and an outdoor space.</li> </ul>	<ul style="list-style-type: none"> <li>Outdoor waiting connected to the emergency entry.</li> <li>A more contemporary design of the Emergency Department including an indoor waiting space.</li> <li>Potential to include welcoming entry with perforated art screen in collaboration with local indigenous artists.</li> </ul>
End of life	<ul style="list-style-type: none"> <li>Palliative care services – facilities for sorry business, large family room to accommodate many family members, end of life spaces, cultural artwork, stories on the walls, family members can come and go freely.</li> </ul>	<ul style="list-style-type: none"> <li>Dedicated palliative care room which flows onto an outdoor courtyard.</li> <li>Facilities to accommodate large family groups and gathering spaces.</li> </ul>
Start of life	<ul style="list-style-type: none"> <li>Birthing – access to water births, artwork on the curtains or ceiling, beverage bay, outdoors access, some more private areas for different family groups, the current play area off maternity is useful, space for large family members to visit, carer spaces and midwife comforts for long labours.</li> </ul>	<ul style="list-style-type: none"> <li>Immersion bath included in birthing suite.</li> <li>Birthing courtyard to have connection to natural earth materials and a walking track.</li> <li>Play area in internal courtyard near maternity unit.</li> </ul>
Inpatient unit	<ul style="list-style-type: none"> <li>Inpatient Unit – space for children and an area for staff to meet with families, more privacy, culturally inappropriate for men and women to be combined in ward rooms.</li> </ul>	<ul style="list-style-type: none"> <li>Access to shared interview spaces for confidential and sensitive conversations.</li> <li>Carer spaces allowing overnight stay provided to some bedrooms.</li> </ul>
Other	<ul style="list-style-type: none"> <li>A Keeping Place at the hospital for displaying artefacts.</li> </ul>	<ul style="list-style-type: none"> <li>To be considered as part of the arts strategy and working group, along with other opportunities to introduce Country connections.</li> </ul>

## Sustainability and Climate Resilience

The GHR project team includes sustainable design consultants Steensen Varming, who advise on environmentally sustainable design (ESD) initiatives that can be incorporated into the development and provide an overview of how the proposed design is responding to sustainable planning. An ESD report has been prepared which outlines the ESD requirements, principles and strategies recommended for this project required to meet HI's ESD principles.

The ESD initiatives proposed for the project aim to reduce the environmental impacts typically associated with buildings during the construction and ongoing operation of the building. The project utilises a resource hierarchy approach, with emphasis on avoiding, then reduction of energy, water, waste and materials. Resource conservation is a key focus of the sustainability strategy, including strategies for energy, water, and material resources.

The project will meet HI's ESD principles by aspiring to meet the sustainability targets from HI's ESD Evaluation tool from DGN 058. The ESD report recommends that during detailed design and construction stages, a consolidated set of sustainability strategies and targets are established, and these are embedded into the project.

Sustainability and climate resilience is assessed in detail in Section 6.2.14 of this report. The ESD report can be found at **Appendix G**.

A Building Code of Australia (BCA) and *Disability Discrimination Act 1992* assessment of the proposed development has been conducted by Blackett Maguire + Goldsmith (dated 09/06/2023). The assessment determined that compliance can be readily achieved (refer to **Appendix H**).

### 3.1.2 Proposed Activity

As part of the GHR, early works are required. This includes demolishing the following:

- The eastern third of the existing main hospital ward (containing the maternity ward and birthing suite),
- The unused day care building,
- A gazebo and playground; and
- Removal of two LPG tanks and the bulk oxygen tank.

The proposed demolition work includes removing any in-ground services (if not being re-used) as well as removing existing foundations. Works are to be completed to ensure a clean site is present for the new building construction.

Areas within the former administration building and general ward will be utilised for temporary decanting, during construction works.

A temporary contractor’s compound will be established on site. On site vehicular access for construction vehicles will be maintained off Reservoir Street. The existing car parking and open space areas within the demolition line will be maintained and will continue to be available for use. However, those spaces will be shared by existing users and construction staff during the works.

#### Roadworks and Parking

There are currently six car parks at the Gunnedah Hospital. Some of these will be reconfigured or relocated as part of the GHR: The existing and proposed car parking scenarios are described in **Table 4**. Car Parks 1, 5 and 6 will remain largely unchanged. Proposed Car Park 2 is new and existing Car Parks 3 and 4 will be entirely reconfigured. The GHR will result in a loss of six spaces.

**Table 4: Carparking Comparison**

Carpark Name	Existing	Proposed
1	50 (incl. 2 accessible)	49 (including 2 accessible)
2	-	9
3	18	23 (including 2 accessible)
4	41 (incl. 1 accessible)	30
5	37 (incl. 2 accessible)	37
6	2	2
Emergency	8	-
<b>TOTAL:</b>	156	150 (including 4 accessible)

#### Tree Removal and Landscaping

A total of 68 trees and shrubs have been identified across the site. This vegetation is not representative of any plant community types (PCTs) outlined in the BioNet Vegetation Classification system. Twenty-two trees are proposed to be removed as part of the Proposal, as per **Table 5** below. The tree numbers correlate to the Arboricultural Impact Assessment at **Appendix I**, the Tree Removal Plan at **Appendix J**, and the Biodiversity Assessment Report at **Appendix Y**.

**Table 5: Tree Removal**

Number	Species	Origin	Retention Value
2	<i>Jacaranda mimosifolia</i>	Exotic	Very poor
17	<i>Escallonia species</i>	Exotic	Poor
39	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Native	Fair
40	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Native	Good
41	<i>Plumeria</i> (frangipani)	Exotic	Poor
42	<i>Lagerstroemia species</i> (Crepe myrtle)	Exotic	Poor
43	<i>Lagerstroemia species</i> (Crepe myrtle)	Exotic	Poor
44	<i>Citrus Species</i> (Orange)	Exotic	Poor
45	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	Exotic	Poor
46	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	Exotic	Poor
47	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	Exotic	Poor
48	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	Exotic	Poor
49	<i>Ulmus glabra</i> 'Lutescens' (Golden Elm)	Exotic	Fair
50	<i>Fraxinus angustifolia</i> subsp. <i>Angustifolia</i> (Desert Ash)	Exotic	Good
51	<i>Fraxinus</i> "Raywood" (Claret Ash)	Exotic	Poor
52	<i>Pyrus calleryana</i> 'Capital'.	Exotic	Fair
53	<i>Pyrus calleryana</i> 'Capital'.	Exotic	Fair
54	<i>Pyrus calleryana</i> 'Capital'.	Exotic	Poor
55	<i>Eucalyptus camaldulensis</i> (River Red Gum)	Native	Good
56	<i>Grevillea robusta</i> (Silky Oak)	Native	Fair
57	<i>Jacaranda mimosifolia</i>	Exotic	Good
64	<i>Jacaranda mimosifolia</i>	Exotic	Excellent

The Landscape Plans provided at **Appendix D** show how the site will be landscaped, including the location and types of compensatory planting. Approximately 40 large trees will be planted across the site, with mature heights ranging from 6 m to 12 m. These trees will be native species and will include Dwarf Spotted Gum, Summer Red, Lemon Scented Gum, White Box, Bangalay, Narrow Leaved Peppermint, Bimble Box and Red Flowering Ironbark. Furthermore, the mass planting of shrubs, grasses, groundcovers and climbers will occur in six main areas across the site. The proposed landscaping will increase the green canopy of the site.

## Utilities

The existing utility infrastructures (electricity and communications) will be upgraded to cater for the development. The existing electricity infrastructure is inadequate to cater for the proposed redevelopment. An upgraded power supply will be required with a new padmount substation, a new main switchboard along with new consumer mains. Furthermore, new Telstra and NBN lead-in cables will be established and terminated into a new equipment room.

The existing potable water supply will be retained. A new connection to the existing watermain in Marquis Street is required to supply new sprinkler and hydrant systems. Due to limitations of the water supply, new tanks and pumps have been provided to supplement.

There is an existing Council sewer main that crosses the southeast corner of the site (corner of Reservoir Street and Anzac Parade), however the existing hospital drains to a Council sewer main in Marquis Street. It is proposed to connect the new building to the existing on-site sewer network.



## 3.2 Proposal Need, Options and Alternatives

### 3.2.1 Strategic Justification

The Gunnedah Hospital Redevelopment is part of an ongoing program of major health capital projects by Health Infrastructure and the NSW Government to improve health care throughout New South Wales.

The Gunnedah Hospital Redevelopment (GHR) project was identified and had funding commitments confirmed in the 2020/2021 NSW government state budget. The Project includes reconfiguration of assets to meet contemporary standards in models of care and facility design to improve sustainability and efficiency across the health service. The GHR will focus on improved patient accommodation and upgraded infrastructure.

### 3.2.2 Alternatives and Options

As the Gunnedah Hospital site is well located and relatively unconstrained, relocating to a new greenfield site was not investigated. Initially, a masterplanning process for the existing site was undertaken by the project architect (dwp), the Hunter New England Local Health District, Health Infrastructure and other stakeholders. The GHR Masterplan document that was produced reported on the due diligence investigations that were carried out on the existing buildings and produced key recommendations on how the site could be developed. Eight development zones across the site were considered (Zone A – Zone H) (see Figure 10).



Figure 10 Potential Development Zones

Through the master plan studies and consultation processes, the preferred development zone was identified to be the centre of the site utilising a combination of Development Zones B, C and F. These potential development zones were further refined into four site development zone options (see Figure 11). Option 2 was described as a simpler staged redevelopment in the north-west centre of the site, constructed around the clinical operation areas of the hospital, with potential to redevelop around the existing hospital considered beneficial. Ultimately, Option 2 was identified as the best option for further development.

Within Option 2, three options were investigated, to identify the preferred development option. These investigations were based on achieving the project's vision and design principles, whilst achieving functional relationships between

wards, constructability, the ability of the hospital to remain operational and within budget. The GHR as described in this REF is a refinement of Site Development Zone Option 2.



Figure 11 Site Development Zone Options

### 3.3 Construction Activities

Construction of the GHR can be broadly divided into the following stages:

- Stage 1: Permanent, Temporary and Decanting Works

Site preparation including demolition, decanting and construction of temporary structures and plant room to enable the redevelopment to commence.

- Stage 2: Main Works Construction

Demolition of decanted buildings, including maternity and birthing buildings. Construction of the main works. includes:

- New single storey redevelopment including inpatient, maternity, birthing and emergency department;
- New single storey plant room and enclosed rainwater harvesting plant yard;
- Refurbished and separated back of house loading zone;
- New emergency parking, drop off zone and 24/7 entry; and

- New substation, bulk oxygen tank, fire protection tanks and pumpset;

Once the main work is complete, the areas temporarily decanted will move into the new spaces. The work will include the removal of temporary construction and demolition of the spaces temporarily occupied by maternity and birthing.

- Stage 3: Road Works and Landscaping
  - Private landscaped birthing courtyard;
  - Landscaped gathering courtyard;
  - New accessible ramp to helipad; and
  - Improved signage and wayfinding strategy.
  - Paving and planting.

**Table 6: Project Timeframes and Construction Activities**

Construction activity	Description
<b>Commencement Date</b>	The works are expected to commence in October 2023
<b>Work Duration/Methodology</b>	The works are expected to take 22 months
<b>Work Hours and Duration/Construction</b>	Monday to Friday 7.00 am to 6.00 pm Saturday 8.00 am to 1.00 pm Sunday and Public Holidays No Work
<b>Workforce/Employment</b>	Number of construction workers 50.
<b>Ancillary Facilities</b>	A temporary site compound and material stockpile area would be established within the activity area. The appointed contractor will be required to undertake an initial site-specific safety check prior to site establishment. Site containment fencing will be erected to restrict public access to the works zone. The temporary fencing will be secured from any unauthorised access via padlock.
<b>Plant Equipment</b>	The main plant likely to be used for the works would include, but are not limited to: <ul style="list-style-type: none"> <li>• Excavator (20t)</li> <li>• Excavator Hammer (10t)</li> <li>• Loader – Front End/ Telehandler</li> <li>• Tipper Truck</li> <li>• Genset</li> <li>• Grinder/ Impact Wrench</li> <li>• Dozer (D6)</li> <li>• Roller (Padfoot)</li> <li>• Backhoe/ Trencher</li> <li>• Concrete Truck</li> <li>• Concrete Pump</li> <li>• Truck (10t)</li> <li>• EWP</li> <li>• Franna</li> <li>• Mobile Crane</li> <li>• Hand Tools (Powered)</li> <li>• Welding Equipment</li> <li>• 12.5 m Heavy Rigid Vehicle</li> <li>• 18.1 m truck and dogs</li> <li>• Demolition pliers</li> <li>• Demolition excavator</li> <li>• Bulldozer</li> <li>• Handheld power and battery operated tools</li> </ul>



Construction activity	Description
<b>Earthworks</b>	The bulk earthworks will generally consist of cut and fill operations to establish working platform levels consistent and reflective of the design of the proposed hospital redevelopment. Minor excavation will be required to remove the footings of the existing hospital building. Any clean excess spoil (soil) will be used within landscaping treatments throughout the site or removed from the site and disposed of appropriately.
<b>Source and Quantity of Materials</b>	Demolition is estimated to generate approximately 1,200 m <sup>3</sup> of waste. Any required materials will be sourced locally from licensed quarries and operators. All materials will be certified uncontaminated and environmentally safe.
<b>Traffic Management and Access</b>	Temporary vehicular access is proposed for construction traffic off Reservoir Street. During the demolition period, some sections of existing footpath and public parking may be temporarily impacted.

### 3.4 Operational Activities

Operational changes to hospital services will be necessary throughout the redevelopment stages. The intention of the decanting stage is to prepare the hospital site to allow for the continued service of care during the main construction stage.

As part of the project management, the principal contractor will be responsible for liaison with all relevant stakeholders to ensure that any disruption to the ongoing operations of hospital services is minimised. A temporary site access will be maintained off Macquarie Street and all work sites will be kept clear to ensure that the ongoing operations of the hospital are not interrupted.

Once the works are complete, operation of the hospital will remain generally unchanged. The GHR is not creating any new services or expanding on existing operations. The development is focused on upgrading aging infrastructure.

#### Use

The redevelopment does not involve a change in use.

#### Operation Hours

There will be no change to operation hours.

#### Staff/Patients

There will be no change to the capacity of the hospital or the staffing.

#### Traffic and Parking

As described in Section 3.1.2, there are currently six car parks at the Gunnedah Hospital, containing a total of 156 spaces.

Car Park 1, accessed off Marquis Street, is the main car park utilised by the public, providing 50 spaces. This car park will be modified slightly in order to make the two accessible spaces comply with the current design standards. As a result, one space will be lost.

A new Car Park 2 is proposed. This car park will contain 9 spaces and will be accessible from Reservoir Street. The driveway entrance to Car Park 2 is also the entrance to the new emergency department.

Existing Car Park 3, accessed from Reservoir Street, will be demolished. A new Car Park 3 will be constructed providing 23 spaces, accessed from Anzac Parade.

Existing Car Park 4, accessed from Anzac Parade, will be demolished. A new Car Park 4 will be constructed, providing 30 spaces.

Existing Car Parks 5 and 6 will remain unchanged. Existing Emergency Car Park, accessed from Anzac Parade, will be demolished.

There are currently eight driveways into the hospital. This will remain unchanged.

In summary, the GHR will result in a reduction of six car parking spaces. As discussed in Section 6.2.1 of this REF and in the Traffic Impact Assessment at **Appendix K**, there is a surplus of car parking spaces on the hospital grounds and there is ample street parking available. As such, the number of spaces proposed to be provided is adequate to service the development.

## 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, the environmental assessment of the development is required under Part 5 of the Act.

State Environmental Planning Policy (Transport and Infrastructure) 2021 (T&ISEPP) aims to facilitate the effective delivery of infrastructure across the State. Division 10 of the T&ISEPP outlines the approval requirements for health service facilities. A hospital is defined as a health service facility under this division.

The site is zoned R2 Low Density Residential under the Gunnedah Local Environmental Plan 2012 (GLEP). The R2 Zone is a prescribed zone under the T&ISEPP. Section 2.61(1) of the T&ISEPP permits the following works without consent on any land, provided that it is carried out by or on behalf of a public authority and the development is carried out within the boundaries of an existing health services facility:

- (a) *the erection or alteration of, or addition to, a building that is a health services facility,*
- (b) *development for the purposes of restoring or replacing accommodation or administration facilities,*
- (c) *demolition of buildings carried out for the purposes of a health services facility,*
- (d) *development for the purposes of patient transport facilities, including helipads and ambulance facilities,*
- (e) *development for the purposes of car parks to service patients or staff of, or visitors to, the health services facility (or to service staff of, or visitors to, other premises within the boundaries of the facility)."*

The Activity involves activities identified at (a), (c) and (e) above; the erection of a building that is a health services facility, demolition of buildings carried out for the purposes of a health services facility and car parks to service patients or staff of, or visitors to, the health services facility. The works are within the grounds of the Gunnedah Hospital and are being carried out on behalf of Health Infrastructure and NSW Health. Section 2.61(2) of the T&ISEPP does not preclude the activity as it does not involve the erection of any building that exceeds 15 m in height.

Furthermore, as the GHR contains a new electricity substation, the provisions of T&ISEPP Division 5 Electricity Transmission or Distribution apply. Under Section 2.44(1) development for the purpose of an electricity transmission or distribution network may be carried out by or on behalf of an electricity supply authority or public authority without consent on any land.

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). The proposal is considered an 'activity' in accordance with section 5.1 of the EP&A Act because the development involves the carrying out of a work and demolition of a building. The development is also not any act, matter or thing for which development consent under Part 4 is required, is not prohibited under an environmental planning instrument, and is not exempt development.

T&ISEPP consultation is discussed within Section 6 of this REF.

**Table 7: Description of proposed activities**

Division and Section within T&ISEPP	Description of Works
Section 2.44(1)	Development for the purpose of an electricity transmission or distribution network
Section 2.61(1)(a)	Erection or alteration of, or addition to a building that is a health services facility
Section 2.61(1)(c)	Demolition of an existing building, which may be carried out by or on behalf of a public authority without consent on any land if the development is carried out within the boundaries of an existing health services facility.
Section 2.61(1)(e)	Car parks to service patients or staff of, or visitors to, the health services facility

## 4.2 Environmental Protection and Biodiversity Conservation Act 1999

The provisions of the EPBC Act do not 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 or development on Commonwealth land, nor does the proposed development affect any matters of national significance. An assessment against the EPBC Act checklist is provided at Table 8.

**Table 8: 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 Subsection 1 of Section 5.5 of the EP&A Act).

Section 171 of the EP&A Regulation defines 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 of this REF specifically responds to the factors for consideration for the activity.

Table 9 below demonstrates the effect of the proposed development activity on the matters listed for consideration in Subsection 3 of Section 5.5 of the EP&A Act.

**Table 9: Matters for consideration under Subsection 3, Section 5.5 of the EP&A Act**

Matter for Consideration	Impacts of Activity
<b>Subsection 3:</b> Without limiting subsection 1, a determining authority shall consider the effect of any activity on any wilderness area (within the meaning of the <i>Wilderness Act 1987</i> ) in the locality in which the activity is intended to be carried on.	The land is not a wilderness area.
Note: If a biobanking statement has been issued in respect of a development under Part 7A of the <i>Threatened Species Conservation Act 1995</i> , 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 Environmental Planning and Assessment Regulation (2021) notes 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 guidelines that apply to the activity.

The *Guidelines for Division 5.1 Assessments* (DPE June 2022) provides a list of environmental factors that must be taken into account for an environmental assessment of the activity under Part 5 of the EP&A Act. These factors are considered at Section 6 of this REF.

In addition, Section 171A of the Environmental Planning and Assessment Regulation (2021) requires the consideration of the impact an activity in a defined catchment. This is considered further below under Section 4.5 of this REF.

## 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 10: Other Possible Legislative Requirements**

Legislation	Comment	Relevant? Yes/No
<b>State Legislation</b>		
<i>Rural Fires Act 1997</i>	<i>Is the site identified on the Bushfire Prone Land Map?</i>	No
<i>Biodiversity Conservation Act 2016</i>	<p><i>Does the site contain any critical habitat, threatened species or ecological population or community?</i></p> <p>Part 7 of the <i>Biodiversity Conservation Act 2016</i> (BC Act) sets out the requirements for biodiversity assessment and approvals under the EP&amp;A Act. For the purposes of Part 5 of the EP&amp;A Act, an activity is to be regarded as likely to significantly affect the environment if it is expected to significantly affect threatened species.</p> <p>The proposed activity occurs on a developed, suburban site and will not affect important vegetation or habitat. It will not have a significant impact upon any threatened species, ecological communities or populations such that a viable local population will be placed at risk of extinction.</p> <p>An EPBC Act Protected Matters Report has been obtained and is discussed in Part 6.</p>	<p>No</p> <p>Refer Section 6.2.9</p>
<i>Water Management Act 2000</i>	<p><i>Are the works within 40 metres of a watercourse?</i></p> <p>No. The nearest watercourse is the Namoi River which is at least 1 km north of the site.</p>	No
<i>Contaminated Land Management Act 1997</i>	<p><i>Is the site listed on the register of contaminated sites?</i></p> <p>A search of the NSW Environmental Protection Authority (EPA) contaminated land data base was undertaken for the Gunnedah area. The closest site is located over 300 m from the Activity site, the Former Caltex Depot at 61 Railway Avenue, Gunnedah. The site would not have an impact on the Activity. A copy of the search is attached as <b>Appendix L</b>.</p> <p>The soil disturbance and demolition works may encounter contaminated or hazardous material. The handling of asbestos containing material will be by an accredited contractor in accordance with EPA requirements. Implementation of an unexpected finds procedure is a mitigation measure of this REF.</p>	<p>Yes</p> <p>Refer Section 6.2.4 and Section 6.2.13</p>
<i>Heritage Act 1977</i>	<p><i>Any impacts on Local or State or National heritage?</i></p> <p>A search of the State Heritage Inventory was undertaken (refer to <b>Appendix L</b>) which identified no heritage items within the subject site. The closest heritage item is located over 200 m north of the site. The proposed Activity will not affect the heritage significance of any heritage sites.</p> <p>The archaeological provisions of the NSW <i>Heritage Act 1977</i> are applicable, however, as all "relics" are protected under the NSW Heritage Act, regardless of whether or not the place is listed as a heritage item at a local, State or national level. Should any unexpected relics be disturbed during excavation of the site they must be managed under the archaeological provisions of the NSW Heritage Act.</p>	<p>Yes</p> <p>Refer Section 6.2.7 and Section 6.2.8</p>

Legislation	Comment	Relevant? Yes/No
<i>Roads Act 1993</i>	<p><i>Any works to a public road, or pumping of water onto a public road, or involve the connection of a road to a classified road?</i></p> <p>Section 138 of the NSW Roads Act requires that all activities undertaken within Council's road reserve be approved by Council prior to the activities being undertaken. Health Infrastructure will need to obtain a Section 138 Approval for works within the road reserve/ connection of any new driveways.</p>	Yes
<i>Local Government Act 1993</i>	<p><i>Any water or sewer supply head works that require contribution payment, per Section 64 of the Act?</i></p> <p>Various activities (e.g. water, sewer, stormwater connections, amongst other things) generally require the approval of Council under Section 68 of the <i>Local Government Act 1993</i>. However, pursuant to Section 69 (Crown exemption from approval to do things incidental to erection or demolition of building) of the <i>Local Government Act 1993</i>, Section 68 does not require the Crown, or a person prescribed by the regulations to obtain the approval of a council to do anything that is incidental to the erection or demolition of a building.</p>	No
Other Acts as required	<i>Any other acts as required to be addressed?</i>	No
Section 171A of the Environmental Planning and Assessment Regulation 2021	<p><i>Are there any impacts to catchments, as defined for consideration under Section 171A of the EP&amp;A Regulation?</i></p> <p>The site is not within any of the catchments described in Chapter 6 of State Environmental Planning Policy (Biodiversity and Conservation) 2021</p>	No
<b>State Legislation Planning Policies</b>		
State Environmental Planning Policy (Planning Systems) 2021	<p>The GHR is not considered State Significant Development, State Significant Infrastructure or Regionally Significant Development.</p> <p>The land is not owned by an Aboriginal Land Council.</p> <p>There are no concurrent consent authorities to this development.</p>	No
State Environmental Planning Policy (Biodiversity and Conservation) 2021	<p><b>Chapter 2 - Vegetation in non-rural areas</b></p> <p>This SEPP applies (as applicable) to clearing vegetation in non-rural areas of the State, including environmental zones, not associated with a Development Application. Section 2.7 outlines clearing that does not require authority under this Policy, including:</p> <p>(1) A permit or approval to clear vegetation is not required under this Chapter if it is clearing of a kind that is authorised under the <i>Local Land Services Act 2013</i> (Clearing authorised under other legislation) section 60O or under Part 5B (Private native forestry).</p> <p>On this basis and Clause 60O of the <i>Local Land Services Act 2013</i> (LLS Act), and given the Proposal is a Part 5 Activity, any vegetation clearing is authorised by way of compliance with that part of the EP&amp;A Act and authority under the Vegetation SEPP is not required.</p> <p><b>Chapter 4 - Koala habitat protection 2021</b></p> <p>Chapter 4 of the BCSEPP aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their present range and reverse the current trend of koala population decline. It applies when Councils assess development applications within all local government areas (LGAs) listed under Schedule 2, which includes Gunnedah Shire Council.</p> <p>Although this SEPP does not technically apply to the Part 5 Approval Pathway under the EP&amp;A Act, in order to fulfill the requirements of Part 5, Koala habitat and associated protections have been considered in the context of assessing the potential environmental impacts of the proposed Activity to the fullest extent possible.</p> <p>The proposed Activity will occur within managed land in an urban area. Three of the trees to be removed are Koala feed trees. The removal of these three trees is not sufficient to result in a significant impact to threatened species.</p>	<p>No</p> <p>Yes Refer Section 6.2.9</p>

Legislation	Comment	Relevant? Yes/No
State Environmental Planning Policy (Sustainable Buildings) 2022	<p>Chapter 3 applies to non-residential development, including the erection of a new building or alterations, enlargement or extension of an existing building, if the development has a capital investment value of \$10 million or more. As such, Chapter 3 applies to the GHR. However, there are no subsequent sections that apply to non-residential development that is permitted without consent.</p> <p>In any case, an Ecologically Sustainable Development report has been prepared for the GHR and is attached at <b>Appendix G</b>.</p>	<p>Yes</p> <p>Refer Appendix G</p>
State Environmental Planning Policy (Resilience and Hazards) 2021	<p><b>Chapter 4 Remediation of land</b></p> <p>The objective of Chapter 4 of the RHSEPP is to provide for a State-wide planning approach to the remediation of contaminated land. It aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. Chapter 4 applies to rezoning and development applications for development requiring consent.</p> <p>A number of contamination investigations have been undertaken for the site, culminating in a Remediation Action Plan (RAP) (refer to <b>Appendix AA</b>) for localised contamination found on the site. Details of the investigations and RAP are discussed further in <b>Section 6.2.13</b>. The land would be remediated (as Category 2 remediation works, not needing consent) prior to commencing earthworks to ensure it is suitable for the future hospital use.</p> <p>A Hazmat Investigation Report undertaken for the GHR identified hazardous materials in structures on the site, including Asbestos. The report provides measures to address the handling and removal of any hazardous materials. The findings of the report and potential impacts associated with hazardous materials and contamination are discussed further in Section 6.2.13.</p>	<p>Yes</p> <p>Refer Section 6.2.13</p>
State Environmental Planning Policy (Transport and Infrastructure) 2021	<p>The relevant planning approval matters pursuant to the T&amp;ISEPP have been discussed in Section 4.1. The proposed development is defined as 'development permitted without consent' under Section 2.61 of the T&amp;ISEPP and therefore requires assessment under Part 5 of the EP&amp;A Act.</p> <p>Sections 2.10-2.15 and 2.62 of TI SEPP set out requirements for consultation with councils, other public authorities and occupiers of adjoining land. These requirements are address in Section 5 of this REF.</p>	<p>Yes</p>
<b>Gunnedah Local Environmental Plan 2012</b>		
Zone	The site is zoned R2 Low Density Residential	Yes
	<p>The objectives of the zone are:</p> <ul style="list-style-type: none"> <li>To provide for the housing needs of the community within a low-density residential environment.</li> <li>To enable other land uses that provide facilities or services to meet the day to day needs of residents.</li> <li>To provide for low density housing while maintaining environmental or scenic landscape qualities of land that would not be sustainable with higher densities of development.</li> <li>To minimise the impact of non-residential uses and ensure these are in character and compatible with surrounding development.</li> </ul> <p>The GHR represents the provision of ongoing health services (health infrastructure) for the community and is therefore consistent with the R2 zone objectives presented above.</p> <p>Hospitals are permitted with consent in the R2 Low Density Residential Zone. Regardless, the proposed Activity is permitted as development without consent under the provisions of the T&amp;ISEPP.</p>	Yes
Height of Buildings	No Maximum Building Height is specified for the site under Gunnedah LEP 2012.	No
Floor Space Ratio	No Floor Space Ratio is specified for the site on the Gunnedah LEP 2012 Floor Space Ratio Map.	No
Heritage	The site is not identified as a heritage listed item under Schedule 5 of the LEP or on the Gunnedah LEP 2012 Heritage Map.	No
Infrastructure development and use of existing buildings of the Crown	The proposed Activity is permitted as development without consent under the provisions of the TI SEPP.	Yes

Legislation	Comment	Relevant? Yes/No
	The LEP does not restrict or prohibit the proposed Activity.	
Flood Planning	The hospital is outside of Flood Planning Area on the Gunnedah LEP 2012 Flood Planning Map. The site is not subject to inundation in the Probable Maximum Flood.	No
Essential Services	All services are available to the site. The need for continued access to services throughout the demolition and construction stages needs to be planned for as part of this proposal.	Yes



## 5. Consultation

### 5.1 Statutory Consultation

Consultation requirements are established through Sections 2.10-2.15, 2.45 and 2.62 of the T&ISEPP. The need for consultation for the proposed development is addressed in Table 11.

Section 2.10 *Consultation with councils – development with impacts on council-related infrastructure or services* requires written notification of intent to Council to carry out the development. Consultation under Section 2.10 is triggered as the GHR may involve the installation of a temporary structure on, or the enclosing of, a public place that is under council's management or control that is likely to cause a disruption to pedestrian or vehicular traffic that is not minor or inconsequential. And it may involve excavation that is not minor or inconsequential of the surface of, or a footpath adjacent to, a road for which a council is the roads authority under the *Roads Act 1993*.

The Activity does not trigger any further consultation requirements under Division 1 of T&ISEPP. The Activity will not impact on local heritage, or flood liable land.

Section 2.45 *Notification of certain electricity substation development that may be carried out without consent* requires written notice of the intention to carry out the development to council and the occupiers of adjoining land. This section applies to the GHR as the development includes a new electricity substation.

Section 2.62 *Notification of carrying out certain development without consent* requires written notice of the intention to carry out the development to council and the occupiers of adjoining land. This section applies to the GHR as it is development carried out by or on behalf of a public authority under Section 2.61(1) of T&ISEPP.

The REF scope of works was notified for 21 calendar days to the stakeholders outlined in Table 11.

**Table 11: Stakeholders required to be notified**

Stakeholder	Relevant Section
Gunnedah Shire Council	Section 2.130(1), Section 2.45(1) and Section 2.62(2)
Occupiers of adjoining land:	Section 2.62(2)
Occupier of 1, 3, 5, 7, 9, 11, 13 and 16 Reservoir Street Gunnedah	
Occupier of 1 Anzac Parade, Gunnedah	
Occupier of 1 Eighth Division Memorial Avenue, Gunnedah	
Alkira Nursing Home (35 – 45 Marquis Street, Gunnedah)	
Gunnedah High School (54 Hunter Street, Gunnedah)	
Gunnedah Memorial Pool (2 Acacia Street, Gunnedah)	

The notification period commenced on 13 July 2023 and concluded on 4 August 2023. Copies of the notification letters, responses received and HI's response, are provided at **Appendix M**.

One response was received via email from an occupier of adjoining land. A return email was sent, addressing the matters raised in the submission. The points raised in that submission and HI's response is provided in Table 12 below.

No response was received from Gunnedah Shire Council.

**Table 12: Issues raised and responses**

Issue raised	Date received	Response	Reference
<b>Occupiers of Adjoining Land</b>			
<b>Car park entry</b> Given the general carpark/ entry to Emergency is off Anzac Parade, we would hope this will be clearly signed to indicate this is where people enter. Otherwise, we are concerned that people will try to enter from Reservoir St and not then be able to access the Front of House for Emergency.	23 July 2023	As you have noted, the access from Reservoir Street adjacent to the new emergency department is for emergency vehicles only and there will be clear signage indicating this. Please note further along Reservoir Street towards Marquis Street there is a separate entry and exit point for hospital services vehicles. Access for the	Architectural drawings at <b>Appendix C</b> . Signage Plans at <b>Appendix E</b> .

Issue raised	Date received	Response	Reference
		general public to the main carpark is from Marquis Street, while access to the emergency department for the general public is from Anzac Parade.	
<b>Signage</b> It would be highly recommended that the signs on Reservoir St side are clearly indicating this is the entry (limited) for other parts of the hospital (eg inpatient, staff?) and NOT for access to Emergency/ Maternity/ G Ward etc or there'll be an issue with ambulances trying to access the same entryway. Currently the signage is confusing, and every weekend people ask us where they need to go for entry to emergency even now after many years. If someone is new to town or passing through, it's not very clear. So, we hope the new development will come with clearer signage.		In addition to enhanced clinical facilities, a key goal of the redevelopment is simplifying access and improving signage. There will also be comprehensive communication prior to opening of the new facility to reinforce the access points for the hospital site.	Signage Plans at <b>Appendix E</b> .
<b>Community Health</b> Currently Community Health is within the Rural Health Centre. The updated diagram doesn't indicate where Community Health is proposed to be located. If it's going to stay where it is, this should be included on the diagram. What is proposed to be where Community Health was ("Former Community Health")? Will this just be more office space? If so, this should be stated on the diagram instead of Former Community Health which tells us nothing of its new purpose.		Community Health will remain in its current location within the Rural Health Centre and patients/clients will continue to access these services from the main access/carpark off Marquis Street. The area labelled "Former Community Health" was vacated when Community Health services moved into the Rural Health Centre. It is currently vacant space and not proposed for use within this redevelopment. Hunter New England Local Health District (HNE LHD) may wish to utilise this space for operational purposes in the future.	Architectural drawings at <b>Appendix C</b> .
<b>Staff Accommodation Building</b> The building on the corner of Reservoir St and Anzac Parade (Staff Accommodation) is planned for what exactly? Given it's partly used for Coal Health Services and there's a new 3 houses Doctor's Block on the corner of Reservoir and Marquis Streets, what staff would be accommodated there? It seems like a potential waste of space for the few who would need to stay there. What other services are earmarked for its use?		The existing building on the corner of Reservoir Street and Anzac Parade is currently used for staff accommodation and services operated by Coal Health. The three units on the corner of Reservoir Street and Marquis Street are new staff accommodation facilities delivered by HNE LHD. Both accommodation facilities are highly utilised by visiting staff and clinicians and there are no plans to reduce the accommodation capacity.	<b>Section 3</b>
<b>Tree Removal</b> In order to make the safe access for emergency vehicles into Emergency (off Reservoir St), we assume at least two trees will need to be removed. We accept that this is necessary but we'd hope that the one on the left of the Emergency entrance be spared if at all possible. We accept that the gumtree behind the current Day Centre will need to go. All of these trees have had koalas here and there and they are a stunning site when all in bloom. Having said that, we respect progress. We just hope that only the essential trees are removed.		Any trees that are required to be removed from the hospital site for the construction are replaced to ensure there is no change to the tree canopy. The landscaping design will be finalised over the coming months as the overall design is completed. Your comments about trees on Reservoir Street have been noted.	Ecological impacts of the project are assessed in <b>Section 6.2.9</b> . Landscape Plans are provided at <b>Appendix D</b> .
<b>Timeframe</b> Is there any sense of the time frame for the development?		The overall design is forecast to be complete by the end of the year, and some early construction activities are scheduled to occur in late 2023. Construction is forecast to be complete in 2025.	The project timeframe is provided in <b>Section 3.3</b> .

## 5.2 Community and Stakeholder Engagement

A series of consultation activities occurred throughout 2022 regarding the proposed GHR. These consultation activities are listed in Table 13 below and outlined in the attached Community Engagement Report (refer **Appendix N**). It should be noted that the final architectural plans that form part of this REF are not the same as the plans that were exhibited at the various community and stakeholder consultation sessions, however the general outcome is the same.

An overview of the comments received are outlined and responded to in the table below.

**Table 13: Other consultation (non-statutory)**

List of community engagement activities	Date	Feedback	Project response
<b>Master Plan Consultation</b>			
	March 2022	<p>The project team consulted on the master plan with staff, stakeholders (including Council, Gunnedah Paediatric and Maternity Support (PRAMS), Auxiliary, Gunnedah Local Health Committee) and the community during March 2022 in Gunnedah and online. This involved nine engagement activities with over 900 people engaged.</p> <p>Gunnedah Hospital staff identified that there's a magnolia tree outside the old administration block that was planted in remembrance of a staff member. It was requested that this tree be relocated. This tree is not in conflict with the GHR proposed in this REF and will be retained in its current location.</p> <p>Staff raised that there is a baby remembrance garden near the existing maternity ward, near the gazebo. This area will be utilised by the new IPU. As such, the baby remembrance garden needs to be relocated.</p> <p>PRAMS raised that the playground was a family project that involved a lot of community members.</p> <p>Community request for more beds.</p> <p>Community concerns expressed about the increased traffic and use of the hospital carpark at school pick-up/drop-off times.</p> <p>Council happy to see that the GHR entails a new build.</p>	<p>The magnolia tree is being retained.</p> <p>The baby remembrance garden will be relocated within the new Gathering Courtyard.</p> <p>The playground will be relocated to within the new Central Courtyard.</p> <p>The GHR does not provide an increase in beds. However, future proofing has been a consideration in the architectural design and there are future expansion areas nominated on the drawings.</p> <p>Upon completion of construction, there will be no increase in traffic. The Transport Impact Assessment advises that there is ample car parking at the hospital.</p>
<b>Concept Design Consultation</b>			
	May – July 2022	<p>The project team consulted on the concept design with staff, key stakeholders including Gunnedah Shire Council, PRAMS, the Evans family, Aboriginal community, Ambulance, local doctors, and the community during May, June and July 2022 in Gunnedah and online.</p> <p>Hospital staff wanted to know how many beds the maternity unit will have and how many beds in total in the new build. Concern was expressed about a loss of beds.</p> <p>Hospital staff wanted to know where staff should park.</p> <p>Concern was expressed about the potential demolition of the chapel.</p> <p>During the Connecting With Country session, access to outdoor space was emphasised as important. In particular, the provision of a birthing tree.</p>	<p>There are two dedicated maternity units that can flex up to four as required.</p> <p>The new build will have 19 beds, but with the changing models of care, community-based nursing, flexibility of staffing and increased use of treatment spaces, there is no reduction of services.</p> <p>Car parks 3 and 4 are staff car parks.</p> <p>The chapel is being retained.</p> <p>The GHR does focus on its outdoor spaces and is providing three courtyards, including a maternity courtyard directly off the birth suite. Most rooms will have windows to an outdoor space, and ease of access to a courtyard has been a priority for the design team.</p>
<b>Schematic Design Consultation</b>			
	November – December 2022	<p>The project team consulted on the schematic design with staff, key stakeholders including Gunnedah Shire Council, PRAMS, the family of Catherine Turner, Aboriginal</p>	<p>The project architect dwp has prioritised access to natural light and outdoor space throughout the</p>

List of community engagement activities	Date	Feedback	Project response
		<p>community, local doctors, and the community in Gunnedah and online. The project feedback was:</p> <ul style="list-style-type: none"> <li>• Incorporate natural light where possible;</li> <li>• Support for maternity being in the general inpatient unit yet still able to be separated;</li> <li>• Kiosk will be more visible to the public now with access from the front of house;</li> <li>• Ensure the exterior colours suit Gunnedah's climate and are complimentary to the existing architecture;</li> <li>• Love all the courtyards and landscaping;</li> <li>• The idea of a birthing courtyard is wonderful;</li> <li>• Shading over courtyards while still allowing natural light in;</li> <li>• Provide appropriate seating at the main entry and outdoor waiting areas;</li> <li>• Low allergy plantings preferred; and</li> <li>• Consolidated car parking arrangements are better.</li> </ul>	<p>design. The colour palette has been selected to reflect the agricultural background of the town.</p>

## 6. Environmental Impact Assessment

### 6.1 Environmental Planning and Assessment Regulation 2021 – Assessment Considerations

Section 171(1) of the *Environmental Planning and Assessment Regulation* (2021) notes 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 for Division 5.1 Assessments* (June 2022) apply to the activity. The relevant assessment considerations under Section 3 of these Guidelines are provided below:

**Table 14: Summary of Environmental Factors Reviewed in Relation to the Activity**

Relevant Consideration	Response/Assessment		
(a) Any environmental impact on a community?	All works are within the grounds of the hospital. There is likely to be a minor increase in vehicles and noise during works, however this will be minimal and of temporary duration. Such impacts can be appropriately minimised by the imposition of mitigation measures.  Hazardous materials will be handled and removed in accordance with EPA protocols to prevent impacts on hospital staff, patients or the general public.  The Activity will enable an area of the hospital currently not utilised to be redeveloped as a functioning part of the hospital which, in the long-term will contribute in a positive fashion to the ongoing provision of health services to the community.	-ve	✓
		Nil	
		+ve	
(b) Any transformation of a locality?	The site will continue to be used and identifiable as a hospital and its visual appearance will be improved. Minor negative visual impacts during construction will be temporary and managed to minimise external impacts.	-ve	
		Nil	
		+ve	✓
(c) Any environmental impact on the ecosystems of the locality?	Environmental impacts associated with the Activity are generally minor and of temporary duration. Tree removal is necessary and the magnitude of the impact is not sufficient to result in a significant impact to threatened species. A full assessment of environmental impacts, including ecology and water quality, is contained in Section 6. Any environmental impacts will be minimal and will be subject to appropriate mitigation measures.	-ve	
		Nil	✓
		+ve	
(d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality?	No.	-ve	
		Nil	✓
		+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?	No. The Activity will not adversely impact the heritage significance of any heritage items (refer Section 6.2.7 and 6.2.8).  Based on the Due Diligence Code of Practice for the Protection of Aboriginal Objects (DECCW 2010) there is very low probability of Aboriginal objects occurring in the Activity Area (refer <b>Section 6.2.7</b> ).	-ve	
		Nil	✓
		+ve	
(f) Any impact on the habitat of protected animals, within the meaning of the <i>Biodiversity Conservation Act 2016</i> ?	The Activity site is within the maintained grounds of an existing hospital complex and is not identified as important vegetation or habitat (refer <b>Section 6.2.9</b> ).	-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?	As above. The site is unlikely to include habitat utilised by any threatened species.	-ve	
		Nil	✓
		+ve	
(h) Any long-term effects on the environment?	Impacts associated with the Activity will be temporary and managed through the imposition of mitigation measures (e.g. noise, visual, air quality).	-ve	
		Nil	✓

Relevant Consideration		Response/Assessment		
		These matters are discussed in further detail in Section 6.	+ve	
(i)	Any degradation of the quality of the environment?	No. Erosion control measures will be implemented on site to minimise soil erosion. Compensatory tree planting will occur to offset the proposed tree removal.	-ve	
			Nil	✓
			+ve	
(j)	Any risk to the safety of the environment?	No. Mitigation measures will be implemented to minimise any potential impact from contamination.	-ve	
			Nil	✓
			+ve	
(k)	Any reduction in the range of beneficial uses of the environment?	No. The Activity will enable the site to continue to be utilised as a hospital.	-ve	
			Nil	✓
			+ve	
(l)	Any pollution of the environment?	No. Appropriate mitigation measures will be incorporated to minimise any potential pollution of the environment (e.g. erosion control, contamination).	-ve	
			Nil	✓
			+ve	
(m)	Any environmental problems associated with the disposal of waste?	No. Safeguards will be implemented during construction works to minimise potential waste impacts during construction ( <b>Section 6.2.12</b> ). Any hazardous materials will be disposed of at a licenced facility and in accordance with EPA protocol.	-ve	
			Nil	✓
			+ve	
(n)	Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply?	No. Materials salvaged as part of demolition works will be sorted and identified for recycling. Some of the bricks will be re-used in the construction of the new building. Impacts associated with the consumption of natural resources through the use of machinery would be minimal.	-ve	
			Nil	✓
			+ve	
(o)	Any cumulative environmental effects with other existing or likely future activities?	No. Refer <b>Section 6.2.16</b> .	-ve	✓
			Nil	
			+ve	
(p)	Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	No. The site is not in the Coastal Zone as identified in the <i>Coastal Management Act 2016</i> .	-ve	
			Nil	✓
			+ve	
(q)	Applicable local strategic planning statement, regional strategic plan or district strategic plan made under Division 3.1 of the Act?	Gunnedah is identified as a Strategic Centre in the 'New England North West Regional Plan 2036'. The project is consistent with directions in the Plan relating to health care. The proposed Activity is consistent with the relevant Planning Priorities and Actions identified in 'Future 2040 – Local Strategic Planning Statement' (Gunnedah Shire Council 2020).	-ve	
			Nil	
			+ve	✓
(r)	Any other relevant environmental factors?	No.	-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 change to onsite car parking?		✓
Is there onsite parking for construction workers?	✓	

### Existing Environment

The site is bound by three local road roads:

- Marquis Street (to the west), with a 50 km/hr speed limit (with School Zone 40 km/hr limit 8-9.30 am and 2.30-4 pm Monday to Friday).
- Reservoir Street (to south), with a 50 km/hr speed limit (with School Zone 40 km/hr limit 8-9.30 am and 2.30-4 pm Monday to Friday) near intersection with Marquis Street.
- Anzac Parade (to the east), with a 50 km/hr speed limit.
- A state road north is located north of the south, separated from the site by the Alkira Nursing Home.
- South Street/Oxley Highway (to the north) which has a 50 km/hr speed limit between Anzac Parade and Marquis Street.

The hospital site has numerous vehicle entry points from the three local roads. The main vehicle entry is from Marquis Street, which provides access to the main carpark that services the Hospital and Rural Health Centre.

A pedestrian crossing located in Marquis Street provides linkage to footpaths adjacent the high school and hospital.

Marquis Street is generally quiet until morning and afternoon drop-off and pick-up times where pedestrian and traffic flows increase and may disrupt access to the main carpark of the hospital site.

The hospital currently has 156 car parking spaces. There are no bike parking or end of trip facilities.

### Impact Assessment

A Transport Impact Assessment (TIA) has been prepared by ptc. for the development (refer to **Appendix K**). This report incorporates a Green Travel Plan.

It is important to note that from a traffic impact perspective, the development involves minimal, if any, additional facilities. The development focusses predominantly on updating and refurbishment, and in some instances relocation, of existing site facilities to create a more functional and up to date hospital.

The site has limited access to public transport, and as a result many staff and patients use private vehicles to access the site. Surrounding pedestrian and dedicated cycling facilities are limited, however the nature of the local roads and lower traffic volumes does enable some short distance active travel.

Based on parking occupancy surveys of the existing site, as well as anticipated traffic generation of the proposed development, adequate parking space capacity exists to accommodate the future site needs. Accessible parking spaces are provided in excess of the minimum requirement and is therefore compliant. Based on the parking occupancy survey undertaken as part of the TIA, there is a surplus of 62 spaces overall. As such, the loss of 11

spaces as part of the GHR will not result in any difficulties in finding a car park and the excess spaces can be utilised by construction staff.

All of the proposed access and egress points across the site, for the various anticipated vehicle types, are suitable based on swept path assessments. All on-site parking spaces are to be compliant with Class 3 parking dimensions.

Based on the assumptions detailed above, the existing site provides adequate parking supply for the expected traffic generation. Furthermore, the surrounding road network operates with a good Level of Service, with ample spare capacity to handle any minor increases in traffic due to the proposed development and during construction.

The implementation of a Green Travel Plan is expected to promote the uptake of active cycling and pedestrian travel to the site, particularly for staff, and lessen any carparking or traffic impacts that may arise in the future. A GTP is an operation program, that actively evolves and progresses into the future of the site, through planned implementation and ongoing evaluation.

A comprehensive list of mitigation measures can be found at **Appendix O**.

## 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? That is: <ul style="list-style-type: none"> <li>Monday - Friday: 7am to 6pm;</li> <li>Saturday: 8am to 1pm;</li> <li>Sunday and public holidays: no work.</li> </ul>		✓
Will the works result in vibration being experienced by any surrounding properties or infrastructure?	✓	
Are there any impacts to the operation of helipads on the activity site?		✓

## Existing Environment

The Gunnedah Hospital campus site is zoned R2 Low Density Residential and is surrounded by wide, quiet residential streets to the south and east. West of the site, separated by Marquis Street, is Gunnedah High School. Gunnedah Baptist Church and Community Preschool are located on the south-west corner of Reservoir and Marquis Streets. The Alkira Nursing Home is directly to the north. Additional residential properties are located further north on the northern side of the Oxley Highway, however the nursing home and two-way Oxley highway provide acoustic distancing from the proposed redevelopment area. There are no listed heritage structures in the vicinity of the site (i.e. within 300 m).

The nearest residential and non-residential receivers are located approximately 50 m from the project site.

## Impact Assessment

A Construction and Operational Noise and Vibration Assessment has been prepared by MAC to quantify the potential construction and noise and vibration impacts and operational noise intrusion to residential receivers adjacent to the proposal site (refer to **Appendix P**). The primary considerations of the assessment report include:

- Provide a technical document that can support the REF for the proposal;
- Identification of sensitive receivers;
- Quantifying construction noise and vibration impacts from the proposal based on the proposal brief information;
- Quantifying potential operational noise, including consideration of public address systems, alarms, mechanical services and maintenance activities;



- Review of external transportation noise sources, including road, rail and aviation sources, and assessment of potential noise intrusion to adjacent receivers; and
- Review reasonable and feasible control measures to mitigate noise and vibration emissions with the aim of meeting noise management levels and relevant vibration criteria.

Sensitive receivers are shown on Figure 12 below.



Figure 12 Nearby Sensitive Receivers

Construction Noise Assessment

Construction noise levels have been predicted for sensitive receiver locations for each of the construction scenarios. A summary of the predicted LAeq(15min) noise emissions is presented for the most affected receiver location for each receiver type in Table 15. Predicted levels exceeding the NMLs are displayed in BOLD text.

Table 15 Summary of Noise Assessment Results – Most Affected Receivers

Receiver Type	Period	MNL (dB LAeq)	Highest Predicted dB LAeq Per Scenario			
			Demolition	Earthworks	Site Prep	Construction
Residential	Standard	51	<b>65</b>	<b>60</b>	<b>64</b>	<b>65</b>
Education Institute	When in use	65 <sup>2</sup>	63	56	56	57
Place of Worship	When in use	65 <sup>2</sup>	<b>67</b>	58	51	52
Childcare Centre	When in use	55 <sup>2</sup>	<b>65</b>	<b>57</b>	50	50
Active Recreation	When in use	65	62	54	54	55
Commercial <sup>3</sup>	When in use	70	49	42	38	39
Industrial	When in use	75	48	41	39	40

Note 1: Exceedance of relevant NMLs highlighted and shown in BOLD.

Note 2: External noise criteria derived using 20dBA façade attenuation for a closed facade as per Table 4.2 of ENMM.

Note 3: Includes accommodation services during the day period.

The results of the assessment demonstrate that LAeq(15min) noise emissions would be above the relevant NMLs for residential receivers for all construction scenarios during standard construction hours. The highest LAeq(15min) noise levels are predicted at up to 65dB at 5 Reservoir Street, Gunnedah, NSW during demolition (S1) and building construction works (S4). Additionally, construction noise levels are predicted to exceed the NML for residential receivers at the Alkira Aged Care facility during demolition works (S1). Construction noise levels are predicted to remain below the highly affected NML of 75dB LAeq(15min) at all residential receivers.

The construction noise emissions are predicted to exceed the relevant NMLs for the following non-residential receivers:

- Gunnedah Baptist Church (Place of Worship) during demolition works (S1);
- Gunnedah Baptist Community Preschool (Childcare Centre) during demolition works (S1) and earthworks (S2); and
- Sugar Gums Family and Childrens Centre (Childcare Centre) during demolition works (S1).

Further analysis was undertaken to determine the potentially affected distance from the project site, and the number of residential receivers within the affected area for each of the construction scenarios. The results of the analysis are provided in Table 16.

Table 16 Affected Distances – Construction Activities

Receiver Type	Construction Scenario	NML (dB LAeq(15min))	Affected Distance (m)	Number of Receivers Affected
Residential	S1 – Demolition	<b>51</b>	~340	~35
	S2 – Earthworks		~200	<15
	S3 – Site Preparation		~215	<20
	S4 – General Construction		~215	<20

The results of the assessment demonstrate that during demolition works, residential receivers located within approximately 340 m of the project site may experience noise levels above the relevant NML for standard construction hours, with up to 35 houses potentially affected. During earthworks, up to 15 residential receivers within approximately 200 m of the project site are predicted to experience noise levels above the standard hours NML, while up to 20 receivers within 215 m standard hours NML during site preparation works and general construction works.

### Construction Vibration Assessment

Consideration of safe working distances for vibration intensive equipment used during demolition (e.g. vibratory rollers in excess of 7 tonnes or large hydraulic hammers) indicates that construction vibration levels are likely to exceed the



criteria for human comfort for residential receivers immediately adjacent to the project site. It is not anticipated however, that vibration levels would exceed the cosmetic damage criteria for any non-project related sensitive receivers (including heritage structures).

A review of minimum offset distances will be conducted once the final vibratory plant has been selected. Where the works are to be undertaken close to sensitive processes, different construction method with lower source vibration levels should be used where feasible and reasonable.

To minimise potential noise and vibration impacts on nearby properties a detailed Construction Noise and Vibration Management Plan (CNVMP) will be prepared as part of the environmental management plan for the project to identify all feasible and reasonable management measures to minimise noise and vibration impacts on nearby sensitive receivers.

### Noise and Vibration Impacts to Existing Hospital Buildings

The noise and vibration assessment found that construction noise levels would potentially exceed the internal design sound levels for the existing Community Health building and Rural Health Centre during each of the construction activities. Where construction works may impact on sensitive spaces (including operating theatres and hospital wards), consultation will be undertaken with hospital administrators to schedule construction works around critical activities.

It was identified that construction works will occur within very close proximity (<5m) to existing hospital buildings which are to be retained. Where vibration intensive plant are to be used during demolition (e.g. vibratory rollers and hydraulic hammers), vibration levels may exceed the cosmetic damage criteria for sensitive items. As required for human comfort levels above, once the final vibratory plant has been selected a review of minimum offset distances will be conducted. Where works are close to sensitive processes, different construction methods with lower source vibration levels will be used where feasible and reasonable.

### Operational Noise Impacts

The Construction and Operational Noise and Vibration Assessment has quantified operational noise levels at the nearest sensitive receivers. Noise predictions from all sources have been quantified at sensitive receivers surrounding the project site, with the highest predicted noise levels for each receiver type presented in Table 17.

Table 17 Operational Noise Predictions – All Receivers

Receiver	Predicted Noise Level dB LAeq(15min)			Predicted Noise Trigger Level dB LAeq(15min)			Compliant
	Day	Evening	Night	Day	Evening	Night	
Residential	39	39	39	46	43	42	✓
Education Institute	39	36	N/A		58 <sup>1</sup> (when in use)		✓
Place of Worship	43	40	40		63 <sup>1</sup> (when in use)		✓
Childcare Centre	41	38	38		55 <sup>1</sup> (when in use)		✓
Active Recreation	41	40	N/A		58 (when in use)		✓
Commercial	<30	<30	N/A		68 (when in use)		✓
Industrial	<30	<30	<30		73 (when in use)		✓

Note: Day – the period from 7am to 6pm Monday to Saturday or 8am to 6pm on Sundays and public holidays. Evening – the period from 6pm to 10pm. Night – the remaining periods.

Note 1: External noise level with internal to external correction for 20dB for closed building.

### Conclusion

Prior to commencement of works, a detailed construction noise and vibration management plan will be prepared as part of the environmental management plan for the project. The plan will identify all feasible and reasonable management measures to minimise noise and vibration impacts on nearby sensitive receivers.



Operational noise levels associated with vehicle movements in the hospital car parks and mechanical plant are predicted to achieve the relevant NPI criteria. It is noted that the assessment of mechanical plant was indicative only and should be reviewed following development of a detailed mechanical services plan.

The proposed hospital redevelopment would not result in a change to the existing vehicle access or car parking areas. Hence, it is anticipated that road traffic noise levels would remain consistent with existing conditions.

A review of potential external noise intrusion, undertaken in accordance with the Department of Planning Development Near Rail Corridors and Busy Roads – Interim Guideline, identified that the offset distances between the project site and nearest railway lines and major roads is beyond the screening test distance, where acoustic impacts are possible. Hence, noise and vibration levels are expected to comply with the internal design sound levels.

A comprehensive list of mitigation measures for the development is provided at **Appendix O**.

### 6.2.3 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?	✓	

#### Existing Environment

The Activity site is the Gunnedah Hospital which is located within a residential area of Gunnedah township. The site fronts local roads and is surrounded by residential areas, a local high school and recreational areas. A railway line and main town centre is north of the site. The area has been subject to drought in the past, which causes significant amounts of dust which can impact air quality.

The local air quality is generally good. Potential airborne particles within the locality would be restricted to vehicle emissions.

The Activity involves the demolition of buildings which are past their useful life span. Hazardous building materials have been identified within some of these buildings which can pose a potential air contamination source during demolition.

#### Impact Assessment

##### • Dust and exhaust emissions

During the demolition and construction works, the Activity has potential to generate dust and may cumulatively contribute to generating exhaust emissions locally through:

- Excavation resulting in dust generation;
- Exhaust emissions from machinery and associated transportation; and
- Material blown from the site during high winds.

Dust generation during the proposed demolition and construction works is likely but would be minimal and limited to the immediate vicinity of the work area. The mobilisation of dust poses risks to worker and public safety.

Notwithstanding these risks, significant quantities of dust or exhaust fumes are unlikely, especially with effective implementation of appropriate safeguards and mitigation measures. Consideration of the use of an irrigation system to wet the area is to be considered as a potential mitigation measure.

##### • Hazardous building materials

A HAZMAT Investigation undertaken for the site identified areas of concern relating to hazardous building materials, including asbestos, lead paint, PCBs and SMFs (refer **Appendix R**) and recommended control measures to

manage the handling and removal of hazardous building materials. These control measures are included as mitigation measures in **Appendix O**.

- **Traffic**

Additional traffic generated during works is not expected to be significant, being limited to vehicles and trucks associated with the demolition, and therefore it is not anticipated to affect local air quality.

- **Greenhouse gas emissions**

The Activity would contribute to greenhouse gas emissions to a minor extent via the emissions from construction equipment and traffic, as well as the consumption of materials requiring carbon emissions. Given the scale of the works however, the influence on greenhouse gas emissions would be negligible. However, it is appropriate to implement measures that can reduce or minimise such effects.

A comprehensive list of mitigation measures for the development is provided at **Appendix O**.

## 6.2.4 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 sulfate soils within or immediately adjacent to the boundaries of the work area? And could the works result in the disturbance of acid sulfate soils?		✓
Are the works within an area affected by salinity?		✓
Is there potential for the works to encounter any contaminated material?	✓	

### Existing Environment

The activity site is generally level with a slight slope to the north. It is located within the grounds of the Gunnedah hospital and is occupied by several buildings largely constructed on-grade, paved car parks, internal driveways and open concrete or paved areas, with surrounding grassy areas and pockets of landscaping and garden beds. Parts of the site have been previously levelled to accommodate existing development.

A search of the NSW EPA Contaminated Land Register undertaken on 7 July 2022 (refer to **Appendix L**) identified a number of registered contamination items within the Gunnedah local government area. None of these sites are within close proximity to the hospital site. The closest site is the former Caltex Depot at 61 Railway Avenue, approximately 250 m north-west of the site, north of the railway line.

The work area does not traverse any mapped acid sulfate soil risk areas.

The area has been subject to drought in the past, which causes significant amounts of dust. Mitigation measures are to be considered such as an irrigation system to wet the area and sufficient dust filtering to be included in the design.

### Impact Assessment

A Geotechnical Investigation Report has been prepared by JK Geotechnics (refer to **Appendix S**). The purpose of the investigation was to obtain geotechnical information on the subsurface conditions, and to use this as a basis for providing comments and recommendations on the geotechnical aspects of the proposed development, such as demolition and excavation, measures to reduce vibrations, temporary and permanent cut and fill batter slopes, retention design and suitable retention systems (together with advice on geotechnical related construction aspects), site classification to AS2870-2011, footing design, earthquake site classification to AS1170.4 – 2007, earthworks, pavement design parameters, pavement materials, a flexible pavement thickness design, any slope stability issues and suitable methods to improve stability, if required.

### Subsurface Conditions

The boreholes and test pits have disclosed a generalised profile comprising a variable thickness of fill overlying typically alluvial clays but occasionally overlying residual clays with weathered basalt bedrock encountered at moderate depth. Groundwater was intermittently encountered at moderate depth in the alluvial soils.

### Comments and Recommendations

Site preparation will require demolition of selected existing buildings, structures and paved surfaces, stripping of topsoil and/or root affected soils and removal of the existing uncontrolled fill. Any obviously deleterious or contaminated existing fill should be removed in accordance with the advice presented in the JKE report. The stripped contaminated materials should be taken off-site as they are not suitable for re-use as engineered fill.

Demolition, localised excavations and the earthworks will need to be carefully completed in order to maintain the stability of the adjacent sections of existing hospital buildings and structures that will remain and in this regard, excavations should not extend below a line drawn downward from any footing at 1V in 2H unless temporary shoring is installed, although this is unlikely to be required. This work will need to be completed using suitably experienced (and insured) contractors.

If the existing concrete block retaining wall immediately to the north and north-west of the proposed inpatient unit building and new access road is to remain then we recommend that it is inspected by the structural engineer. Based on inspection by the structural engineer, the need and extent of any necessary wall strengthening measures can be determined and detailed. Test pits to expose the retaining wall footings and possibly further existing ward building footings (in addition to TP101 to TP103) may be required in order to confirm footing details and the foundation materials.

JK Geotechnics do not recommend that rock breakers be used for demolition close to existing buildings or structures as they could be adversely affected by ground vibrations. We recommend that the removal of concrete paved surfaces, floor slabs and footings be completed using a diamond saw followed by removal of the concrete pieces using ripping tyne and bucket attachment to the tracked excavator. Where access is restricted, handheld equipment including demolition saws, may be required. If rock breakers are proposed to be used during demolition, then further advice should be sought regarding the need for quantitative vibration monitoring.

Regarding ground water seepage, it is expected that inflows, if any, to be very small and managed by conventional sump and pump techniques or gravity drainage. Inspection and monitoring of groundwater seepage during excavation is recommended, so that any unexpected conditions, which may be revealed can be incorporated into the drainage design.

The Geotechnical Investigation Report provides further advice regarding the construction of temporary batters, earthworks, site drainage, subgrade preparation, placement of engineered fill, trench backfilling, retaining wall design, permanent batter slopes, footing design, slab design and pavement design. The following further geotechnical input will be required:

- Inspection of additional footings exposing existing footings.
- Witnessing proof rolling.
- Density testing of engineered fill and pavement materials.
- Inspection of a representative number of footings.

A preliminary sediment and soil erosion control plan has been prepared for the Activity site and is attached as part of the civil engineering package (refer **Appendix T**). Measures proposed include the creation of temporary sediment basins and site stockpiles, installation of sediment filter and fencing, drainage swales and treatment of site access.

## 6.2.4 Coastal risks

Questions to consider	Yes	No
Are the works affected by any coastal risk/hazard provisions?		✓
Is any coastal engineering advice required, proportionate to the proposed activity?		✓

## 6.2.5 Hydrology, Flooding and Water Quality

Questions to consider	Yes	No
Are the works located near a natural watercourse?		✓
Are the works within a Sydney Drinking Water Catchment?		✓
Are the works located within a floodplain?		✓
Is the development activity located above Probable Maximum Flood Levels?	Unknown	
Will the works intercept groundwater?		✓
Will a licence under the <i>Water Act 1912</i> or the <i>Water Management Act 2000</i> be required?		✓
Has stormwater management been adequately addressed?	✓	

## Existing Environment

### Flooding

The Section 10.7 Planning Certificate issued for the site states that:

- Development on the subject land or part of the subject land is not subject to flood related development controls for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (but not including development for the purposes of group homes or seniors housing); and
- The subject land or part of the subject land IS NOT subject to the flood related development controls for any other purpose.

Gunnedah's Floodplain Management Plan (refer Figure 14 below) shows that the Gunnedah Hospital site is located outside of the inundation zone in the 5%, 1% and 3X1% AEP flood event.

Discussions with Councils Planning Staff also confirm that Council is of the opinion that the site is not flood prone and there are no flood related provisions under the Gunnedah Local Environmental Plan 2012 or Gunnedah Development Control Plan 2012 that would apply to the site or the proposed development.

The Gunnedah Flood Study states that estimation of the Probable Maximum Flood (PMF) was not feasible due to the size and complexity of the upstream catchment. The flood study there therefore adopted an extreme event that was 3 times the record of floods between 1864 and 1955. This was considered the "Extreme Flood Event (3x1% AEP). Refer below extract from the "Gunnedah and Carroll Floodprone Land Development Control Plan Flood Study Prepared by SMEC (1999):

*"Extreme flood event (3x1% AEP) is the largest flood event considered feasible for use in flood management and setting planning levels for this flood plain management plan. It is possible that a larger event, the probable maximum flood (PMF) could conceivably occur. However, in this instance estimation of the PMF was not feasible due to the size and complexity of the catchment upstream."*

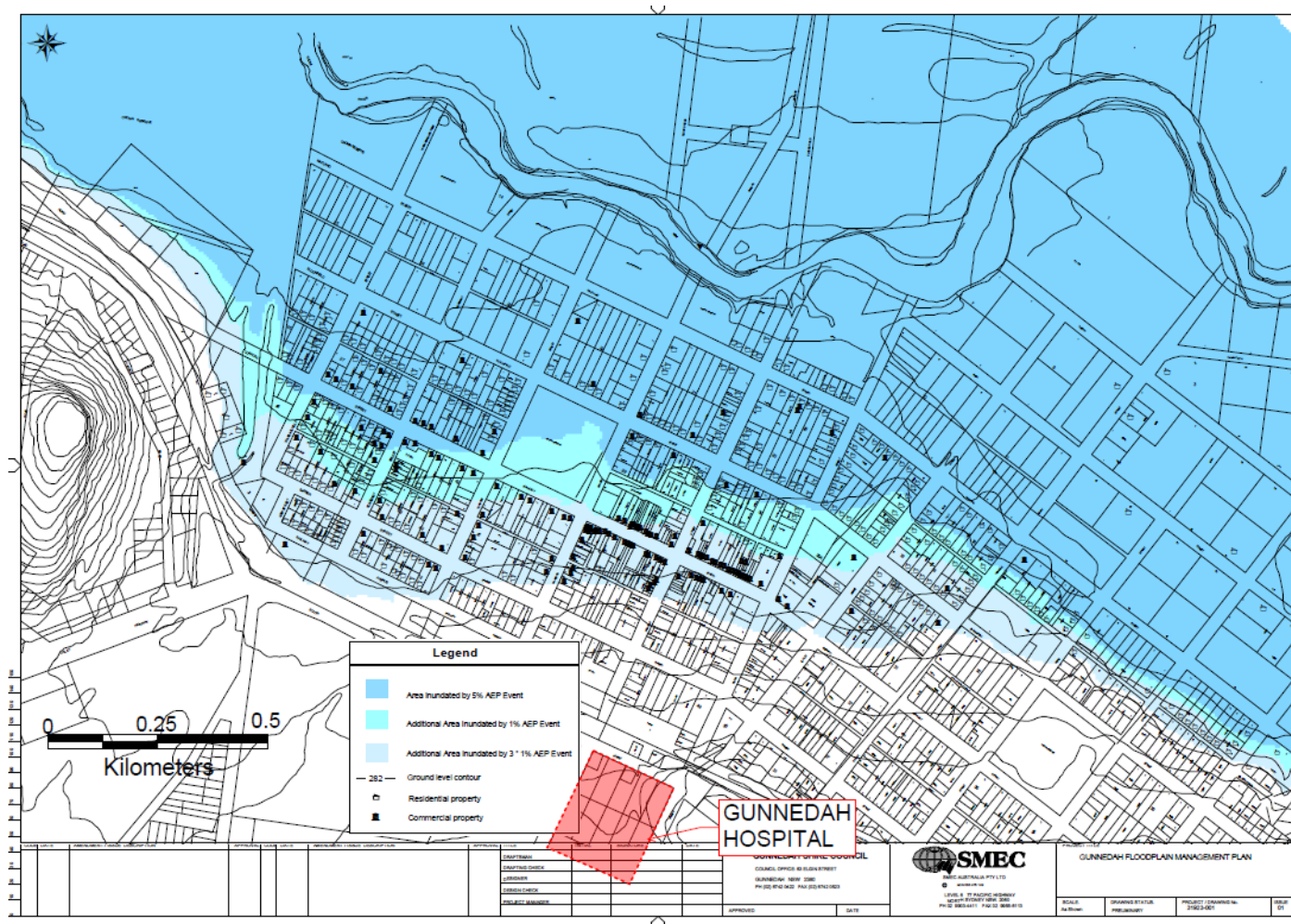


Figure 13 Inundation map - Gunnedah 5%,1% and 3\*1% AEP, Gunnedah Floodplain Management Plan.

## Stormwater

The Namoi River is located approximately 1.2 km north of the site. Based on local topography and surrounding land features, the river is the only potential receptor of any groundwater flow via the existing stormwater system. No other natural drainage lines or watercourses are located within the vicinity of the site.

A stormwater drainage easement/ overland flow path exists in the north-east portion of the hospital site, traversing through Lions Park and along the South Street/ Oxley Highway frontage of the nursing home site.

## Groundwater

A Preliminary Site Investigation (PSI) and a Detailed Site Investigation (DSI) have been undertaken for the proposed hospital redevelopment (refer to **Appendix U** and **V**). The PSI and DSI identify that the regional aquifer on-site and immediately surrounding the site includes porous, extensive aquifers of low to moderate productivity. A total of 196 bores are registered within a 2 km buffer, the majority of which are for monitoring or dewatering purposes only. None are registered for irrigation use. The closest registered bores typically identified silty clay soil to depths of approximately 13 m BGL (Below Ground Level), underlain by weathered basalt bedrock. Standing water levels (SWLs) in the bores ranged from 2.8 m BGL to 15.25 m BGL.

Subsurface conditions at the site are likely to consist of relatively low permeability (residual) soils overlying shallow bedrock. The potential for viable shallow groundwater abstraction and use of shallow groundwater under these conditions is considered to be low. Reticulated water supply is available and consumption of the shallow groundwater is not expected to occur and does not appear to be occurring based on the registered bore records. Use of groundwater is not proposed as part of the development.



Impact Assessment

Flooding

Recommendation 28 of the NSW Flood Inquiry (2022) requires hospitals to be situated above PMF level. As identified above, Council's current flood study does not identify or model the PMF due to complexity and size of the upstream catchment. The hospital site is above the extreme flood event that has been adopted by Council which is the 3x1% AEP flood event. Northrop have prepared a Technical Memorandum on Flooding (refer **Appendix W**) which assesses the risk of the development with regard to flood impacts. The Technical Memorandum has indicated that:

- The Gunnedah Hospital site is located outside of the inundation zone in the 1% AEP flood event and outside of the 3x1% AEP inundation zone;
- Gunnedah Development Control Plan 2012 indicates that the General Flood Planning Level for the site is 1:100 ARI plus 0.5 m of freeboard for sites within the flood affected zone. There are no requirements specified in Gunnedah's DCP for sites that are not within the 1:100 ARI flood zone.
- The Probable Maximum Flood (PMF) has not been modelled or mapped due to the complexity and size of the catchment.
- Council has adopted the 3x1% AEP flood event as the extreme flood event for Gunnedah. The Gunnedah Hospital site is also located outside of the inundated areas for this event.
- Flood Risk is deemed acceptable for the proposed development given the above information.

Stormwater

Works associated with the hospital redevelopment are generally of a minor scale with minimal impact. Potential impacts to hydrology, flooding and water quality that could arise from the demolition and construction works generally relate to the disturbance of soil and chemical spills during works that may enter the public stormwater system and potentially make their way into natural waterways.

In relation to potential impacts on the nearest natural waterbody, adequate erosion and sediment control measures will be put in place in accordance with the Blue Book to prevent any materials entering the public stormwater system. A spill kit will be on-site as a precaution in the event of any potential spills.

Project engineers Northrop have prepared a stormwater management plan (refer **Appendix T**) that includes a pre-development catchment plan and a post-development catchment plan to determine if the proposed works would result in an increase in impervious areas. This assessment of the proposed development area indicated that there will be an overall reduction of 1,681 m<sup>2</sup> in impervious surfaces and as such, on-site stormwater detention is not considered necessary for the development.

Regarding stormwater quality requirements for the site, Gunnedah Shire Council recommends compliance with the Integrated Water Cycle Management Strategy prepared by Woodlots and Wetlands Pty Ltd. The strategy provides the following pollution reduction targets.

Table 18: Pollution Reduction Targets

Contaminant (kg/yr)	Best Practice Stormwater Targets (% reduction compared with conventional urban development)
Total Suspended Solids (TSS)	85%
Total Phosphorus (TP)	65%
Total Nitrogen (TN)	45%
Gross Pollutants (GP)	90%

To achieve the above targets, water quality devices have been incorporated in the design and modelled in MUSIC. To achieve these targets, a rainwater tank, Stormfilter Cartridges and Ocean Guards have been specified, as shown on drawings GHR-CI-MW-0401 and GHR-CI-MW-0402 (refer **Appendix T**). The MUSIC model below shows how the

development will achieve the stormwater targets. This will be updated during the detailed design phase to ensure the best practice stormwater targets continue to be achieved in detailed design.

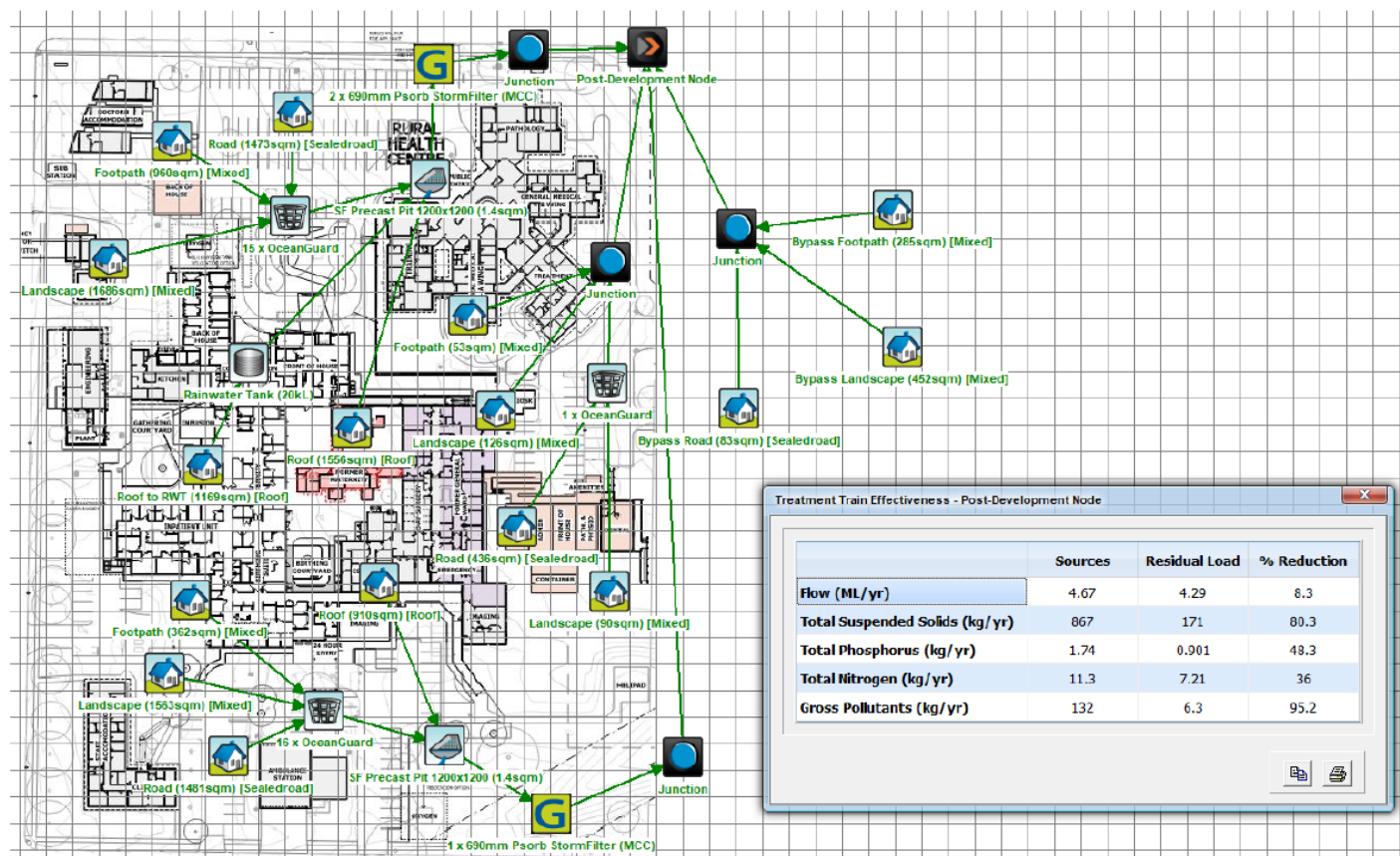


Figure 14 MUSIC Model

The Activity will not affect a wetland, groundwater aquifer or natural water drainage pattern.

A preliminary sediment and soil erosion control plan has been prepared for the Activity site and is attached as part of the Civil Engineering Package (refer **Appendix T**). A comprehensive set of Mitigation Measures is provided at **Appendix O**.

## 6.2.6 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?		✓

## Existing Environment



Figure 15 Gunnedah Hospital looking north-west towards High School (source Master Plan)

The Gunnedah Hospital setting comprises of various built forms and infrastructure which are generally consistent with a regional district hospital and include predominantly single storey brick buildings, carparking areas and open landscaped spaces. The Activity site has frontages to Marquis Street, Reservoir Street and Anzac Parade.

Residential properties along Reservoir Street and Anzac Parade have direct views to the redevelopment site. The Alkira Nursing Home located north of the hospital site will also have direct views to the activity area.

68 trees and shrubs have been identified across the site, with 20 identified for removal.

### Impact Assessment

The GHR will result in a local visual change, which will be experienced from within the hospital grounds and from the adjoining streets (Marquis Street, Reservoir Street and Anzac Parade).

Initially, works will involve the establishment of a construction site and the presence of works crew, plant and equipment. Buildings to be demolished are single-storey and the majority of the works are centrally located within the hospital site. Therefore, activities will not be dominant within the streetscape and will be a short-term localised variation to the visual environment.

There will be significant, permanent visual change as a result of the construction of a new modern building, new paving and landscaping works. The visual impact will be noticeable from the adjoining streets, particularly Reservoir Street and Anzac Parade, but as the redevelopment is only single storey, will not be visible from further afield.

Residential premises in adjoining streets will be separated from the Activity area by wide road reserve and existing hospital structures. The nursing home fronts South Street away from the site (not visible in Figure 14) and will be separated from the Activity site by landscaped areas, carparks and driveways.

Of the trees/ shrubs likely to require removal to facilitate the redevelopment only one has been categorised as significant. Most of the vegetation on site will be retained, including the significant trees with strong amenity values along the street frontage. The retention of this vegetation will lessen visual impacts by continuing to partially screen the site. In the longer term, the design of future facilities will likely consider existing design elements and surrounding views which, combined with new landscaping, will result in improved visual amenity.

The architectural design of the GHR has been informed by the landscape context of Gunnedah, drawing on the colours and structure of the landscape beyond the site. The visual change is reduced through the façade design, which has focused on creating a soft and recessive building that will act as a backdrop to the landscaped courtyards. The materials palette includes profiled metal wall cladding used in a vertical format that references the linear crop rows of the surrounding agricultural fields. The proposed Colorbond colours include Paperbark and Terrain as soft earthy references. Perforated art facade screens will be integrated into the architecture of the facade at the thresholds to



create a language that references Country and culture, aiming to create an inclusive and welcoming healthcare setting. Brick has been a material widely used in the built form across the site and an opportunity exists to re-utilise these bricks as a material within the redevelopment.

Overall, while the appearance of the Gunnedah Hospital will be changed, the existing buildings are aging and do not provide a high level of visual amenity to the community. The proposed redevelopment, including building and landscape design, will improve the appearance of the hospital and the visual impact will be positive.

### 6.2.7 Aboriginal Heritage

Questions to consider	Yes	No
Will the activity disturb the ground surface or any culturally modified trees?	✓	
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?		✓
<ul style="list-style-type: none"> <li>• Within 200 m of waters;</li> <li>• Located within a sand dune system;</li> <li>• Located on a ridge top, ridge line or headland;</li> <li>• Located within 200 m below or above a cliff face;</li> <li>• Within 20 m of, or in a cave, rock shelter or a cave mouth.</li> </ul>		
If Aboriginal objects or landscape features are present, can impacts be avoided?	✓	
If the above steps indicate that there remains a risk of harm or disturbance, has a desktop assessment and visual inspection been undertaken?		n/a
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?		✓

### Existing Environment

The Traditional landowners of Gunnedah are the Kamilaroi Aboriginal Nation. The Activity is located within the Red Chief Local Aboriginal Land Council (LALC) area.

The Activity is located in a residential area within a site that has been historically cleared and associated with the hospital use. The site contains the existing Gunnedah hospital and associated buildings, parking and hard stand areas built at different stages. The development area therefore meets the definition of disturbed land as defined under the Due Diligence Code of Practice for the Protection of Aboriginal Objects (DECCW 2010).

An Aboriginal Heritage Information Management System (AHIMS) search (refer to **Appendix L**) undertaken on 19 October 2022 identified the location of an Aboriginal site in close proximity to the site at the intersection of Anzac Parade and Reservoir Street to the south-east.

### Impact Assessment

An Aboriginal Due Diligence Assessment Report has been prepared for the GHR by OzArk Environment and Heritage (refer to **Appendix X**). The study area for the assessment was the existing Gunnedah Hospital site. The study area is situated on a gently sloping to flat landform. This landform has been substantially modified over the life of the hospital. The closest waterway is an unnamed drainage line, which is approximately 100 m south of the study area.

A visual inspection of the study area was undertaken on 25 July 2022 by OzArk Archaeologist, Harrison Rochford. No Aboriginal sites were recorded during the field inspection and all landforms were assessed as having low potential to contain Aboriginal objects in subsurface archaeological deposits.

The undertaking of the due diligence process resulted in the conclusion that the proposed works will have an impact on the ground surface, however, no Aboriginal objects or intact archaeological deposits will be harmed by the project. This moves the project to the following outcome:

*Aboriginal Heritage Impact Permit (AHIP) application not necessary. Proceed with caution. If any Aboriginal objects are found, stop work, and notify Heritage NSW (02) 9873 8500 (heritagemailbox@environment.nsw.gov.au). If human remains are found, stop work, secure the site, and notify NSW Police and Heritage NSW.*

To ensure the greatest possible protection to the area's Aboriginal cultural heritage values, the following recommendations are made:

- 1) The proposed work may proceed at the study area without further archaeological investigation under the following conditions:
  - a) All land and ground disturbance activities must be confined to within the study area. Should the parameters of the project extend beyond the assessed areas, then further archaeological assessment may be required.
- 2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however, Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the Unanticipated Finds Protocol (Appendix 2 of the Aboriginal Due Diligence Assessment Report) should be followed.
- 3) Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see Appendix 3 of the Aboriginal Due Diligence Assessment Report) and are aware of the legislative protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* and the contents of the Unanticipated Finds Protocol.
- 4) The information presented here meets the requirements of the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales*. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

## 6.2.8 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? <ul style="list-style-type: none"> <li>NSW heritage database (includes Section 170 and local items);</li> <li>Commonwealth EPBC heritage list.</li> </ul>		✓
Will works occur in areas that may have archaeological remains?		✓
Is the demolition of any heritage occurring?		✓

## Existing Environment

Reviews of the State and Local heritage lists, and Health Infrastructure's Section 170 register have been undertaken. There are no heritage listed buildings within the Gunnedah Hospital campus. Furthermore, the site is not within a heritage conservation area. The nearest heritage listed places are the Anglican Church, located on Elgin Street, and Carinya House, located on Barber Street. Both are approximately 250 m away to the north. Both of these heritage places have local heritage significance.

## Impact Assessment

The proposed redevelopment would not impact on heritage items and a Heritage Impact Assessment is not required. Standard mitigation measures relating to unexpected heritage finds are included in this REF.

## 6.2.9 Ecology

Questions to consider	Yes	No
Could the works affect any <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (Cth) listed threatened species, ecological community or migratory species?		✓



Questions to consider	Yes	No
Is it likely that the activity will have a significant impact in accordance with the <i>Biodiversity Conservation Act 2016</i> (BC Act)? 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:		✓
<ul style="list-style-type: none"> <li>Section 7.2(a) – Test for significant impact in accordance with Section 7.3 of the BC Act;</li> <li>Section 7.2(c) – It is carried out in a declared area of outstanding biodiversity value.</li> </ul>		
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?		✓

## Existing Environment

The development site is a suburban land parcel and is not identified as biodiversity certified land. As well as a variety of buildings, carparks and hard stand areas the hospital grounds have a number of open space areas and scattered trees of various ages and conditions. Site canopy coverage currently represents only 12% of the site. An EPBC Act Protected Matters Report undertaken on 27 October 2022 identified habitat for six threatened ecological communities and 29 threatened species (9 flora and 20 fauna species) within 1 km of the site (refer **Appendix L**).

An Arboricultural Impact Assessment of the site has been prepared (refer **Appendix I**). All trees and shrubs on site are considered amenity plantings and include a number of exotic, ornamental species. 68 trees were identified across the site, including three large trees fronting Anzac Parade under Council's control. While there are no remnant trees, there are a number of Australian Native species. One tree has since been removed.

The following trees have been identified as significant trees:

- Three larger trees, *Eucalyptus cladocalyx* (Sugar Gums) controlled by Gunnedah Shire Council located on the verge of Anzac Parade. The trees are in good condition with long life expectancy, positive environmental values as native trees with hollows and positive values to the local ecosystems.
- Ten trees that form a line on Reservoir Street; *Jacaranda mimosifolia* x 8 and *Eucalyptus camaldulensis* x 2 (River Red Gums)). This is a line of larger trees with amenity values and lengthy replacement time frames.
- A large eucalyptus species located to the rear of the Ambulance Station. This tree will require tree protection measures.

A small Magnolia shrub species located near the main entry has been identified as having some cultural value and its preservation has been requested. Its current location is in direct conflict with the development and it lacks adequate irrigation and has a poor soil profile with low nutrient levels. If its value is validated, it may be able to be lifted, stored and replanted elsewhere on the site.

## Impact Assessment

A Biodiversity Assessment Report (BAR) has been prepared for the proposed development (refer **Appendix Y**). The BAR identified that the Activity would incur the following main biodiversity impacts:

- Removal of 22 planted native and non-endemic/ exotic trees.
- Removal of three Koala feed trees (River Red Gum - *Eucalyptus camaldulensis*).
- Removal of two hollow-bearing trees (one jacaranda and one White Cedar).

Key results of the field assessment are as follows:

- Vegetation on site is highly disturbed with a number of open space areas and 67 scattered planted trees; comprising 12 native trees endemic to the North Western Slopes botanical region, 23 native non-endemic trees and 32 exotic species of various ages and conditions.
- Vegetation on site is not representative of any plant community types (PCTs) outlined in the BioNet Vegetation Classification system.
- Six hollow-bearing trees occur on site.
- Feeding and refuge habitat for Koala (*Phascolarctos cinereus*) occurs at the site associated with River Red Gum (*Eucalyptus camaldulensis*). River Red Gum is a regionally recognised Koala food tree species for the Western Slopes and Plains Koala Management Area (DECC, 2008).
- Koala use trees (River Red Gum and Bimble Box - *Eucalyptus populnea*) listed under the State Environmental Planning Policy (Koala Habitat Protection) 2021 are present on site.
- The development will require removal of 22 trees (comprising three native trees endemic to the North Western Slopes botanical region, three native non-endemic trees and 16 exotic species) and transplanting of one exotic species.
- No NSW *Biodiversity Conservation Act 2016* (BC Act) or *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) listed threatened flora were recorded on site.
- No BC Act or EPBC Act listed threatened ecological communities (TECs) occur on site.
- Eight threatened fauna species (Speckled Warbler - *Chthonicola sagittata*, Little Lorikeet - *Glossopsitta pusilla*, Superb Parrot - *Polytelis swainsonii*, Koala - *Phascolarctos cinereus*, Grey-headed Flying-fox - *Pteropus poliocephalus*, Corben's Long-eared Bat - *Nyctophilus corbeni* and Yellow-bellied Sheath-tail-bat - *Saccolaimus flaviventris*) are considered to potentially occur within the site and locality.

The BAR concludes that the impacts is not sufficient to result in a significant impact to threatened species.

Review of statutory instruments relevant to the Activity was completed as follows:

- *Biodiversity Conservation Act 2016*: the Activity is unlikely to significantly impact any threatened species or communities.
- EPBC Act: the Activity is unlikely to significantly affect threatened species or communities, or listed migratory species.

The BAR provides a series of mitigation measures to reduce the impact of the proposed removal of Koala feed trees and hollow-bearing trees. These mitigation measures are included in the comprehensive list of mitigation measures at **Appendix O**.

## 6.2.10 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 <i>Rural Fires Act 1997</i> (RF Act) that applies to the area or locality in which the activity is proposed to be carried out?		✓

## Existing Environment

The site is not mapped as bushfire prone land and it is not identified as bushfire prone on the Section 10.7 Planning Certificate issued by Gunnedah Shire Council. As such, there is no significant risk from bushfire at the site and no further assessment is required.

### 6.2.11 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?	✓	

#### Impact Assessment

A Services Utility Report has been prepared by Northrop for the development (refer to **Appendix Z**). The project scope is to redevelop Gunnedah Hospital in line with the current Clinical Services Plan (CSP) including the master planning and delivery of the following:

- Upgrade aging patient accommodation focused on improving the patient experience of care (including quality and satisfaction).
- Improve efficiency of service delivery
- Provide improved access and an environment that is culturally sensitive to the Aboriginal people to allow earlier diagnosis and management of the chronic conditions experienced by this group.
- Consideration of opportunities for innovative and sustainable infrastructure that delivers environmental and social outcomes (Including culture and heritage).

Existing utility infrastructures (electricity, communications) will be upgraded to cater for the development. The existing electricity infrastructure is inadequate to cater for the proposed development. An upgraded power supply will be required with a new padmount substation, a new main switchboard along with new consumer mains. As part of the early works, new Telstra and NBN lead-in cables will be established and terminated into a new equipment room.

Existing potable water supply will be retained. A new connection to the existing watermain in Marquis Street is required to supply new sprinkler and hydrant systems. Due to limitations of the water supply, tanks and pumps have been provided to supplement.

An existing Council sewer main crosses the southeast corner of the site (corner of Reservoir Street and Anzac Parade). However, the existing hospital drains to a Council sewer main in Marquis Street. It is proposed to connect the new building to the existing on-site sewer network.

The redevelopment does not include any works to the existing helipad and therefore an aviation assessment is not required.

### 6.2.12 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?		✓
Will the works require augmentation to existing operational waste management measures?		✓

#### Impact Assessment

The development includes the demolition of existing building and infrastructure and the construction of buildings, which will generate waste. Materials removed as part of the demolition will be sorted and stacked for recycling or disposal to a licenced waste facility. Works will be undertaken to ensure minimal impacts are generated from waste material produced on-site by ensuring that all waste is collected and disposed of or recycled in accordance with legislative waste disposal protocols and Environment Protection Authority guidelines. No materials will be used in a manner that poses a risk to public safety.

A Construction Waste Management Plan will be prepared by the appointed contractor and will provide a framework to reduce waste directed to landfill. Where possible, materials would be recycled. All remaining waste would be disposed of at a licenced waste facility.

As discussed in **Section 6.2.13**, a hazardous materials survey has identified that there are hazardous materials in the buildings to be demolished, including Asbestos Containing Materials. Any hazardous materials would be handled, managed, transported, and disposed of according to applicable regulations, including Work Health and Safety (WH&S) and EPA waste protocols.

As the redevelopment will not increase the capacity of the hospital, it is considered that hospital operational waste can continue to be managed as per the existing protocols and arrangements.

### 6.2.13 Hazardous Materials and Contamination

Questions to consider	Yes	No
Is there potential for the works to encounter any contaminated material?	✓	
Is there potential for the works to disturb or require 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?	✓	
Is a Remediation Action Plan (RAP) required to establish the proposed activity?	✓	
Is the remediation work category 2 works under Resilience and Hazards SEPP?	✓	

#### Existing Environment

A hazardous materials register prepared for the Gunnedah Hospital Campus in 2016 identified buildings that contained asbestos, as well as SMF containing material and lead based paint. Previous asbestos removal has been recorded in one area of the hospital. It is therefore very likely that hazardous building materials, including asbestos, will be encountered and disturbed during the proposed demolition works, posing a risk to human health if asbestos fibres are made airborne and inhaled.

#### Impact Assessment

The following reports have been prepared as part of this Review of Environmental Factors:

- Preliminary (Stage 1) Site Investigation, prepared by JK Environments (refer to **Appendix U**).
- Detailed (Stage 2) Site Investigation, prepared by JK Environments (refer to **Appendix V**).
- Remediation Action Plan, prepared by JK Environments (refer to **Appendix AA**).
- Hazardous Building Materials Survey, prepared by JK Environments (refer to **Appendix R**).

The Preliminary (Stage 1) Site Investigation (PSI) included a review of historical information and sampling from eight boreholes and six test pits. The following areas of environmental concern were identified: fill material, use of pesticides, hazardous building materials, electrical transformer, diesel generator, and an incinerator. The PSI recommended that a detailed (Stage 2) site investigation (DSI) be prepared and an Asbestos Management Plan (AMP) for asbestos in the soil.

The subsequent DSI further characterised the soil and groundwater contamination conditions in order to assess site risks in relation to contamination and to establish whether remediation is required. A secondary aim was to provide preliminary waste classification data for off-site disposal of soil waste which may be generated during the proposed development works. The DSI concluded that remediation of soil contamination will be required and that the site can be made suitable via a relatively straight forward soil remediation process such as 'excavation/ disposal' and 'cap and contain'. The DSI makes the following recommendations:

- Prepare and implement an Asbestos Management Plan (AMP) for asbestos in soil;

- Prepare and implement a Remediation Action Plan (RAP) for the site that provides a suitable framework to manage and remediate the known contamination risks and also provides a robust framework to address the data gaps identified in Section 8.4 of the DSI, prior to proceeding with remediation;
- Validation of the site in accordance with the RAP; and
- Prepare and implement a Long-Term Environmental Management Plan (LETMP), if needed.

JK Environments advise that provided the above recommendations are carried out, there is no requirement to report any site contamination to the NSW EPA.

The goal of the remediation is to render the site suitable for the proposed development from a contamination viewpoint. The primary aim of the remediation at the Gunnedah Hospital is to reduce the human health and environmental risks posed by the site contamination to an acceptable level. The objectives of the RAP are to:

- Provide a framework for further investigation of the site, to be implemented when access is available;
- Provide a methodology to remediate and validate the site based on the information available at the date of this report;
- Provide a contingency plan for the remediation works;
- Outline site management procedures to be implemented during remediation work; and
- Provide an unexpected finds protocol to be implemented during the development works.

The RAP advises that based on the available data and the Conceptual Site Model (CSM), an Interim Environmental Management Plan (IEMP)/ Asbestos Management Plan (AMP) must be prepared and implemented so that potential human-health risks from OCPs and asbestos remain low and acceptable until further investigation and remediation occurs, and a Long-Term Environmental Management Plan (LTEMP) is prepared.

Prior to the commencement of remediation, and following establishment of a contractor works area and demolition of the required buildings, an investigation is to occur to further characterise the soil and groundwater conditions and facilitate a more comprehensive and complete assessment of the risks driving the remediation. The additional pre-remediation investigation requirements are outlined in Section 5 of the RAP and an amended/ updated RAP is to be prepared where necessary following this investigation.

Based on the current data, the proposed remediation strategy outlined in the RAP includes implementation of a management strategy in relation to the occurrence of OCPs in soil beneath buildings that are not being demolished. Contingency alternate/ additional remediation options have also been provided in Section 8.1 of the RAP, including 'excavation and off-site disposal' and 'cap and contain' of contaminated fill in-situ, should additional contamination be identified during the pre-remediation investigation.

JKE is of the opinion that the site can be made suitable for the proposed development via remediation and the implementation of the RAP. Site validation reporting is to occur as specified in the RAP to document that the procedures have been followed and to demonstrate that the site is suitable on completion of the remediation, subject to implementation of an LTEMP.

JKE has assessed that the remediation falls within Category 2 however requested that this be confirmed by the town planner. GeoLINK's categorisation of the remediation works is outlined below.

Chapter 4 (Remediation of Land) of State Environmental Planning Policy (Resilience and Hazards) 2021 (Resilience and Hazards SEPP) provides a Statewide planning approach to, and the promotion of, the remediation of contaminated land.

Section 4.7 outlines the permissibility of remediation work:

- (1) *A person may carry out a remediation work in accordance with this Chapter, despite any provision to the contrary in an environmental planning instrument, except as provided by section 4.16(3).*
- (2) *A person must not carry out a category 1 remediation work except with the consent of the consent authority.*



- (3) A person may carry out a category 2 remediation work without the consent of the consent authority.
- (4) A person who carries out a remediation work must ensure that section 4.13 (if it applies) and sections 4.14 and 4.15 are complied with in relation to the work.

Section 4.8 outlines Category 1 remediation work: work needing consent (this is addressed further below).

Section 4.11 outlines Category 2 remediation work: work not needing consent. For the purposes of this Chapter, a category 2 remediation work is:

- (a) a remediation work that is not a work of a kind described in section 4.8(a)–(f), or
- (b) a remediation work (whether or not it is a work of a kind described in section 4.8(a)–(f)) that—
- (i) by the terms of a remediation order, is required to be commenced before the expiry of the usual period under the Contaminated Land Management Act 1997 for lodgement of an appeal against the order, or

*Note—*

*The usual period for lodgement of an appeal is 21 days or a period prescribed instead by regulations made under the Contaminated Land Management Act 1997.*

(ii) may be carried out without consent under another State environmental planning policy or a regional environmental plan (as referred to in section 4.16(4)), or

(iii) is carried out or to be carried out by or on behalf of the Director-General of the Department of Agriculture on land contaminated by the use of a cattle dip under a program implemented in accordance with the recommendations or advice of the Board of Tick Control under Part 2 of the Stock Diseases Act 1923, or

(iv) is carried out or to be carried out under the Public Land Remediation Program administered by the Broken Hill Environmental Lead Centre.

**Table 18** considers the requirements of Chapter 4, Section 4.8(a)–(f) as to whether the remediation work can be considered Category 2 remediation work: work not needing consent (by way of not being Category 1 work). Chapter 4, Section 4.8 states for the purposes of this Chapter, a Category 1 remediation work (work needing consent) is a remediation work (not being a work to which section 4.11(b) applies) that is as per the subsections listed in **Table 18**.

**Table 19: Resilience and Hazards SEPP – Section 4.8 Category 1 Remediation Work: Work Needing Consent**

Chapter 4 Section 4.8 Subsection	Requirement	Comment	Applies
4.8(a)	Designated development, or	The remediation work is not expected to be designated development. Subject to contaminated soil remediation works being excavation for disposal/treatment at another site/licensed facility, the works do not involve on-site treatment and would not trigger CI 20, Schedule 3 of the EP&A Regulations 2021.	No
4.8 (b)	Carried out or to be carried out on land declared to be a critical habitat, or	The remediation work is not on land declared to be a critical habitat.	No
4.8(c)	Likely to have a significant effect on a critical habitat or a threatened species, population or ecological community, or	The remediation work is not likely to have a significant effect in this regard.	No
4.8(d)	Development for which another State environmental planning policy or a regional environmental plan requires development consent, or	Not applicable	No

Chapter 4 Section 4.8 Subsection	Requirement	Comment	Applies
4.8(e)	Carried out or to be carried out in an area or zone to which any classifications to the following effect apply under an environmental planning instrument: (i) coastal protection, (ii) conservation or heritage conservation, (iii) habitat area, habitat protection area, habitat or wildlife corridor, (iv) environment protection, (v) escarpment, escarpment protection or escarpment preservation, (vi) floodway, (vii) littoral rainforest, (viii) nature reserve, (ix) scenic area or scenic protection, (x) wetland, or	None of these classifications are identified under an environmental planning instrument as being applicable to the identified remediation area.	No
4.8(f)	Carried out or to be carried out on any land in a manner that does not comply with a policy made under the contaminated land planning guidelines by the council for any local government area in which the land is situated (or if the land is within the unincorporated area, the Minister).	It is assumed/expected that the remediation work would be carried out in accordance with any applicable contaminated land planning guidelines.	No

On the basis of the above review, the remediation work would fall into Category 2 remediation work and does not need specific consent. The requirements of Chapter 4 (Remediation of Land) Resilience and Hazards SEPP 2021, including but not limited to the giving of notice to Council (30 days prior to commencing and upon completion of remediation works) and compliance with relevant guidelines, would need to be complied with, as required.

### Hazardous Development

Currently, the chemicals kept on site are typical of those required for small hospitals and are considered 'minor storage' under the current Australian Standards. The GHR proposes to remove the provision of LPG at the site entirely and use electricity for water heating instead. In early works, decanted maternity and birthing areas will be served by existing medical gases available within the existing general ward. The new clinical departments will be served with nitrous oxide, suction and medical air from a Medical Gas Storage Room accommodated within the existing and vacant former kitchen space. Oxygen will be supplied from the relocated BOC oxygen tank (with pressure-loss auto isolation valve arrangement) positioned alongside the existing Generator enclosure. The oxygen tank will be protected with a 240 min FRL fire wall. Careful consideration has been undertaken between the connection of the old to the new buildings due to the differences in importance levels of the buildings. The quantities of dangerous goods to be stored on site do not exceed State Environmental Planning Policy (Resilience and Hazards) 2021 preliminary screening thresholds, therefore a Preliminary Hazard Analysis is not required. The transport of dangerous goods for the proposed development does not trigger the SEPP. The proposed development is not considered a hazardous development and no further assessment is required.

### 6.2.14 Sustainability and Climate Resilience

Questions to consider	Yes	No
Does the activity ensure the effective and efficient use of resources (natural or other)?	✓	
Does the activity use any sustainable design measures?	✓	
Are climate resilient design measures to be incorporated in the activity?	✓	

An Ecologically Sustainable Design (ESD) Report has been prepared for the development by Steensen Varming (refer **Appendix G**). The report summarises the ESD initiatives being considered for the development and advises how the hospital design is responding to sustainable planning and design requirements.

NSW HI and the Local Health District (LHD) have defined high-level ESD targets for GHR as follows:

- As per Design Guidance Note 058 Environmentally Sustainable Development and considering the project's location, a minimum of 45 points + 5 buffer points (or 4-star equivalent) to be achieved by the design in accordance with HI's ESD Evaluating tool.
- LHI has set an aspirational target for this project to go beyond the minimum requirements and aim to meet 60 points + 5 buffer points (or 5-star equivalent) to be achieved by the design in accordance with HI's ESD Evaluating tool.
- A minimum 10% improvement in energy efficiency compared to a baseline of NCC Section J compliance applicable to the development.

The HI ESD Evaluation tool has been used during the schematic development process to assess and coordinate the targeted credits and define the overall score. The selection of the credits targeted has been based on the following:

- ESD target requirements;
- Review of site, context, and proposed design;
- Opportunities and constraints identified within the current design;
- Key ESD healthcare specific considerations (As described in Section 5 of the ESD report); and
- Project team experience in other similar health care projects.

The status of the assessment includes 41 low risk points and 25 higher risk points (totalling 66 points). There is a 6-point buffer above minimum threshold at this stage to confirm that the minimum requirement of 60 points is feasible.

The targeted credits require some further investigation to ensure they are adequately incorporated into the design and achieve the necessary performance. This work to confirm these credits will continue during the detailed design and construction stages.

The ESD recommends the following steps are undertaken during the detailed design phase of the GHR:

- Review of the targeted items to determine achievability and further coordination with design teams for strategy development as design develops at the DD stage;
- Teams to carry out or finalise calculations, modelling or analysis required to support strategies and achieve targeted points;
- Coordination with project quantity surveyor to ensure any cost impact from required strategies is included within the cost plan and within the procurement requirements; and
- Finalise a set of strategies to be agreed by the design team, stakeholders and the LHD, and to be confirmed by HI to include in the design moving forward.

## 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?		✓
Is the activity likely to affect economic factors, including employment numbers or industry value?		✓
Is the activity likely to have an impact on the safety of the community?		✓
Will the activity affect the visual or scenic landscape?	✓	
Is the activity likely to cause noise, pollution, visual impact, loss of privacy, glare or overshadowing to members of the community, particularly adjoining landowners?	✓	

Overall, the redevelopment of Gunnedah Hospital will provide improved health services to the community of Gunnedah and surrounding areas that will benefit patients, staff, hospital stakeholders and the wider community. The proposed

demolition and construction works will allow for the hospital to realise its full potential and will improve the overall function of the hospital.

Some temporary minor amenity impacts resulting from demolition and construction works associated with noise, visual change (signage and fencing) and air quality may be experienced by adjoining residents, but overall, the demolition and consequent new building represents a benefit to the community. Environmental issues associated with potential contamination, erosion control, water quality, traffic, visual amenity, noise and waste management are considered to be minor and have been addressed throughout Section 6 and found to be satisfactory. Where necessary the implementation of appropriate mitigation measures, including the requirement for a Construction Management Plan, have been proposed.

Regarding impacts on the safety of the community, an assessment of the redevelopment against Crime Prevention Through Environmental Design (CPTED) principles has been carried out. CPTED is a crime prevention strategy that focuses on the planning, design and structure of cities and neighbourhoods. It aims to create the reality (or perception) that the costs of committing crime are greater than the likely benefits. This is achieved by creating environmental and social conditions that:

- Maximise risk to offenders (increasing the likelihood of detection, challenge and apprehension).
- Maximise the effort required to commit crime (increasing the time, energy and resources required to commit crime).
- Minimise the actual and perceived benefits of crime (removing, minimising or concealing crime attractors and rewards).
- Minimise excuse making opportunities (removing conditions that encourage/ facilitate rationalisation of inappropriate behaviour).

CPTED employs four key strategies. These are territorial re-enforcement, surveillance, access control and space/ activity management. In terms of assessing the Project security and crime prevention measures, the most appropriate document is the Department of Planning's guideline titled Crime Prevention and the Assessment of Development Applications (2001). The design of the Project has taken into consideration the principles of CPTED, which are outlined in the aforementioned guideline.

Table 19 below provides an assessment against the four principles of CPTED with regard to the redevelopment.

**Table 20: CPTED Assessment**

CPTED Principles	Comment
<p><b>Surveillance</b> - The attractiveness of crime targets can be reduced by providing opportunities for effective surveillance, both natural and technical. Good surveillance means that people can see what others are doing. People feel safe in public areas when they can easily see and interact with others. Would-be offenders are often deterred from committing crime in areas with high levels of surveillance. From a design perspective, 'deterrence' can be achieved by:</p> <ul style="list-style-type: none"> <li>• Clear sightlines between public and private places</li> <li>• Effective lighting of public places</li> <li>• Landscaping that makes places attractive, but does not provide offenders with a place to hide or entrap victims.</li> </ul>	<p>The following security and surveillance measures have been adopted in the design for the project:</p> <ul style="list-style-type: none"> <li>• All access areas and pedestrian paths will be well lit and have security camera surveillance.</li> <li>• The entries on Marquis Street, Reservoir Street and Anzac Parade are clear and legible.</li> <li>• The smooth integration between public and private spaces supports clear sightlines between various uses in the building.</li> <li>• Landscaping is well considered to promote the appearance of the development and maintain passive surveillance.</li> </ul>

CPTED Principles	Comment
<p><b>Access Control</b> - Physical and symbolic barriers can be used to attract, channel or restrict the movement of people. They minimise opportunities for crime and increase the effort required to commit crime. By making it clear where people are permitted to go or not go, it becomes difficult for potential offenders to reach and victimise people and their property. Illegible boundary markers and confusing spatial definition make it easy for criminals to make excuses for being in restricted areas. However, care needs to be taken to ensure that the barriers are not tall or hostile, creating the effect of a compound.</p> <p>Effective access control can be achieved by creating:</p> <ul style="list-style-type: none"> <li>Landscapes and physical locations that channel and group pedestrians into target areas</li> <li>Public spaces which attract, rather than discourage people from gathering</li> <li>Restricted access to internal areas or high-risk areas (like carparks or other rarely visited areas). This is often achieved through the use of physical barriers.</li> </ul>	<p>There are two main public entry points to the redevelopment: the main entry during business hours and a 24-hour zone for the emergency department. Both entries are clearly visible from the street and accessed from the associated car parks providing clear entry points for the public. Ambulance, emergency vehicle and doctor access to the hospital is provided separately 24 hours from Reservoir Street. These access points are enhanced by a strategic wayfinding and signage strategy. The 24-hour zone includes the emergency department, public amenities and waiting space so that the remainder of the hospital and main entry is locked down after business hours, restricting access which is highly controlled. A drop-off zone and short-term parking makes the afterhours access more accessible for carers and patients. Within the hospital itself, internal circulation is further controlled by the use of access-controlled doors with card reader access to prevent unauthorised persons from entering restricted areas.</p>
<p><b>Territorial Enforcement</b> – Community ownership of public space sends positive signals. People often feel comfortable in, and are more likely to visit, places which feel owned and cared for. Well used places also reduce opportunities for crime and increase risk to criminals.</p> <p>If people feel that they have some ownership of public space, they are more likely to gather and to enjoy that space. Community ownership also increases the likelihood that people who witness crime will respond by quickly reporting it or by attempting to prevent it.</p> <p>Territorial reinforcement can be achieved through:</p> <ul style="list-style-type: none"> <li>Design that encourages people to gather in public space and to feel some responsibility for its use and condition</li> <li>Design with clear transitions and boundaries between public and private space</li> <li>Clear design cues on who is to use space and what it is to be used for. Care is needed to ensure that territorial reinforcement is not achieved by making public spaces private spaces, through gates and enclosures.</li> </ul>	<p>The redevelopment was designed with the needs of the Gunnedah people at its centre, aiming to provide a contemporary healthcare facility that is culturally appropriate, welcoming and inclusive for the community. The community ownership of the space is enhanced by references to the local context, art strategies by local artisans and implementation of design principles outlined in the Connecting with Country framework which aims to create a safe and respectful environment where Indigenous people can feel valued while accessing healthcare. The territorial reinforcement means the community are more likely to enjoy the space and increase the likelihood to report or prevent crime.</p>
<p><b>Space Management</b> - Popular public space is often attractive, well maintained and well used space. Linked to the principle of territorial reinforcement, space management ensures that space is appropriately utilised and well cared for.</p> <p>Space management strategies include activity coordination, site cleanliness, rapid repair of vandalism and graffiti, and the replacement of burned-out pedestrian and car park lighting and the removal or refurbishment of decayed physical elements.</p>	<p>Space management strategies are an important means of generating and maintaining activity, serviceability, and natural community control ensuring the space is appropriately utilised and cared for. This is also linked to the principle of territorial reinforcement. Strategies include activity coordination, site cleanliness, rapid repair of vandalism and graffiti, and the refurbishment of decayed physical elements. The redevelopment implements a low maintenance landscape design considering ease of management by the maintenance team and includes drought tolerant plants. Low maintenance and durable external and internal finishes are utilised to ensure the spaces longevity and cleanliness. Space management is further controlled through dual egress doors to consult and interview rooms and safe assessment rooms.</p>

It is considered that the proposed design measures will significantly reduce the risk of criminal activities. The GHR provides adequate public surveillance and does not provide opportunities for concealed criminal behaviour; therefore, suitably addressing principles of crime prevention through environmental design. The security settings will continue to be developed throughout the detailed design phase of the project.

Overall, it is considered that the social and community benefits of redeveloping the Gunnedah Hospital outweigh any potential impacts.

## 6.2.16 Cumulative Impact

Questions to consider	Yes	No
Has there been any other development approved within 500 m of the site?		✓



Questions to consider	Yes	No
Is there any transformation planned within 500 m 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 500 m of the site?		✓
Is the activity likely to result in further significant impacts together with other development planned, approved or under construction within 500 m of the site?		✓
Has a cumulative impact statement, proportionate to the activity, been included in REF documentation? If no – why not? The below impact assessment addresses the potential cumulative impacts of the Activity. Given the scale of the development, particularly that it is replacing existing infrastructure, it is considered that this impact assessment is sufficient and a stand alone cumulative impact statement is not required.		✓

## Impact Assessment

The scale of the Activity is not considered significant and presents minimal environmental impacts that can be adequately addressed via safeguards outlined within this REF.

It is likely that the Activity could add to a number of common cumulative impacts, including generation of greenhouse gas emissions (e.g. through operation of vehicles and equipment). However, given the scale and nature of the Activity, any impact would be minimal. Furthermore, the environmental management measures identified within this REF and the choice of methodology for completion of the project aim to minimise the extent to which the Activity contributes to cumulative adverse environmental impacts.

A search of the Department of Planning and Environment (DPE) major project register identified a number of State Significant Developments within the Gunnedah Shire Local Government Area. However, these projects are generally located outside the Gunnedah town area (including a waste facility and solar farm), so are well distanced from the hospital site, and are therefore unlikely to result in cumulative impacts with the Gunnedah Hospital Redevelopment.

A search of the Northern Regional Planning Panels Development and Planning register identified a determined application at 11 Anzac Parade, opposite the hospital site. DA number 2016/031 approved construction of new and alterations to the existing Swimming Pool Complex. However, it appears these works have already been completed. The other developments on the register are not in close proximity to the hospital.

A search of the Gunnedah Council Development Application (DA) register identified a number of DAs that have been submitted and approved around the Gunnedah town area. These generally consist of small-scale proposals, such as residential alterations and additions, which are unlikely to result in significant cumulative impacts with the Gunnedah Hospital Redevelopment.

The GHR will not have a significant impact on the natural environment. No threatened species or threatened ecological communities will be significantly impacted by the proposal. Furthermore, the site is not significantly constrained by any natural hazards such as flooding or bushfire. The scale of the proposed works is relatively minor in its regional context.

It is expected that the GHR may add to a number of cumulative impacts including resource consumption (e.g. construction material) and generation of greenhouse gas emissions (e.g. through operation of vehicles and equipment and use of electricity). However, the environmental management measures identified within this REF and the choice of methodology for completion of the project aim to minimise the extent to which the project contributes to cumulative adverse environmental impacts in the locality.

Where applicable, the GHR construction team would coordinate activities and undertake them in a manner to help minimise any potential cumulative impact where such risk may be present. If a major development does occur concurrently with the project, the potential for any such cumulative impacts would need to be considered and managed by the construction contractor once the timing of other developments becomes known. The CEMP would include a process to review and update mitigation measures, including those in response to new works coming online or if complaints are received.

Overall, the site is well suited to the project that would deliver socio-economic benefits for the community and can be undertaken with effective management and mitigation of environmental impacts, including any potential cumulative effects. Relevant mitigation measures are outlined throughout relevant parts of Section 6 and summarised in **Appendix O**.

## 7. Summary of Mitigation Measures

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

### 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 low, 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; and
- 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 Gunnedah Hospital at 10 Anzac Parade, Gunnedah, 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; and
- Adequate mitigation measures have been proposed to address these impacts.

The activity is not likely to significantly affect threatened species, populations, ecological communities or their habitats, and therefore it is not necessary for a Species Impact Statement and/or a BDAR to be prepared. 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 under Part 5 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.