

HEALTH INFRASTRUCTURE

# Review of Environmental Factors

Key Health Care Worker Accommodation – Broken Hill Hospital



Declaration

This Review of Environmental Factors (REF) has been prepared for NSW Health Infrastructure (HI) and assesses the potential environmental impacts which could arise from the proposed key health care worker accommodation at the Broken Hill Hospital.

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), Department of Planning & Environment’s (DPE) *Guidelines for Division 5.1 Assessments* (the Guidelines) and *State Environmental Planning Policy (Transport and Infrastructure) 2021* (TISEPP).

This REF provides a true and fair review of the activity in relation to its likely impact on the environment. It addresses to the fullest extent possible, all the factors listed in the Guidelines, consistent with section 171(2) of the EP&A Regulation and the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (EPBC ACT).

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

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

Declaration	
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Document Management, Tracking and Revision History

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<b>B</b>	Architectural Plans	Kearney Architecture	Various dates between 19/02/2024 and 06/06/2024
<b>C</b>	Architectural Design Report	Kearney Architecture	04/04/2024
<b>D</b>	Landscape Plans	agla	05/06/2024
<b>E</b>	Civil Plans	Kehoe Myers	06/06/2024
<b>F</b>	Section 10.7 certificate	Broken Hill City Council	23/05/2023
<b>G</b>	Statement of Heritage Impact	OzArk Environment and Heritage	March 2024
<b>H</b>	Aboriginal Heritage Impact Management System Search	Ethos Urban	18/08/2023
<b>I</b>	Traffic Impact Statement	SCT Consulting	21/12/2023
<b>J</b>	Arboricultural Development Impact Assessment Report	Birds Tree Consultancy	06/06/2024
<b>K</b>	Acoustic Advice Letter	Vipac Engineers & Scientists Ltd	26/02/2024
<b>L</b>	Geotechnical Report	CivilTest Pty Ltd	8/03/2023
<b>M</b>	Preliminary and Detailed Site Investigation	JBS&G	29/03/2023
<b>N</b>	Remediation Action Plan	JBS&G	5/04/2024
<b>O</b>	Asbestos Management Plan	JBS&G	5/04/2024
<b>P</b>	Preliminary Construction Management Plan	Hutchinson Builders	10/01/2024 (revision C)
<b>Q</b>	Waste Management Plan	Hutchinson Builders	21/02/2024
<b>R</b>	Notification letters	Health Infrastructure	23/02/2024

## Abbreviations

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



Abbreviation	Description
<b>NPW Act</b>	National Parks and Wildlife Act 1974
<b>NPW Regulation</b>	National Parks and Wildlife Regulation 2009
<b>NPWS</b>	National Parks and Wildlife Service (part of EES)
<b>NT Act (Cth)</b>	Commonwealth Native Title Act 1993
<b>OEH</b>	(Former) Office of Environment and Heritage
<b>PCMP</b>	Preliminary Construction Management Plan
<b>Planning Systems SEPP</b>	State Environmental Planning Policy (Planning Systems) 2021
<b>POEO Act</b>	Protection of the Environment Operations Act 1997
<b>Proponent</b>	NSW Health Infrastructure
<b>REF</b>	Review of Environmental Factors
<b>RF Act</b>	Rural Fires Act 1997
<b>RFS</b>	Rural Fire Service
<b>Resilience and Hazards SEPP</b>	State Environmental Planning Policy (Resilience and Hazards) 2021
<b>SB SEPP</b>	State Environmental Planning Policy (Sustainable Buildings) 2022
<b>SEPP</b>	State Environmental Planning Policy
<b>SIS</b>	Species Impact Statement
<b>TISEPP</b>	State Environmental Planning Policy (Transport and Infrastructure) 2021
<b>WM Act</b>	Water Management Act 2000

# Executive Summary

## The Proposal

NSW Health Infrastructure (HI) is proposing to install key health care worker accommodation at the Broken Hill Hospital at 170-320 Thomas Street, Broken Hill (the site), as part of their delivery of infrastructure solutions and services to support the healthcare needs of the NSW communities.

The proposal involves:

- Site preparation works.
- Tree removal.
- Installation of 20 modular housing units across two (2) accommodation blocks.
- Augmentation of site services.
- Site landscaping.

## Need for the Proposal

Local Health Districts (LHDs) are experiencing challenges in attracting and retaining healthcare workers and staff in regional and rural New South Wales due to an urgent need for more key health worker accommodation. In response, the NSW Government is implementing the Key Worker Accommodation Program, which will deliver modern short- and long-term housing accommodation across the three LHDs of Southern NSW, Murrumbidgee, and Far West LHD.

As a part of this program, the Broken Hill Base Hospital was identified as a location for new housing based on criteria including the scale of need, type of accommodation needs, potential beds, and existing demand and supply of accommodation.

## Proposal Objectives

The proposal's primary objective is to deliver key health care worker accommodation that will help attract and retain staff at the Broken Hill Hospital. The proposal's other objectives include:

- Provide accommodation that is functional, safe and accessible.
- Minimise disruption to the existing hospital during construction.
- Minimise environmental and amenity impacts through appropriate mitigation measures.
- Incorporate Ecologically Sustainable Development (ESD) principles in the proposal's design and operation.
- Provide a source of construction employment.

## Options Considered

The project team adopted the following criteria to determine an appropriate location for the proposed accommodation at the Broken Hill Hospital.

- Level area of 300 to 400m<sup>2</sup>.
- Adjacent drainage connections, water service and power supply.
- Existing privacy or capable of being screened from the public gaze.
- Capable of being screened from traffic noise.
- Minimal site clearing and demolition work.

- No general restrictions to the installation of solar panels.

As a result of the above criteria, the project team identified the location shown in **Figure 1**. In addition, this location benefits from good solar access and convenient access to parking in the adjacent carpark.

### Site Details

The REF relates to the Broken Hill Hospital at 170-320 Thomas Street, Broken Hill, within the Broken Hill Local Government Area. It is the primary provider of healthcare services for Broken Hill and its surrounding communities.

The hospital site comprises one lot, legally described as Lot 4376 DP757298 and covers approximately 8.38ha. The site is bound by Morgan Street to the north, Chloride Street to the east, Thomas Street to the south and Bromide Street to the west.

**Figure 1** provides a site aerial image of the Broken Hill Hospital site and shows the location of the proposed works.

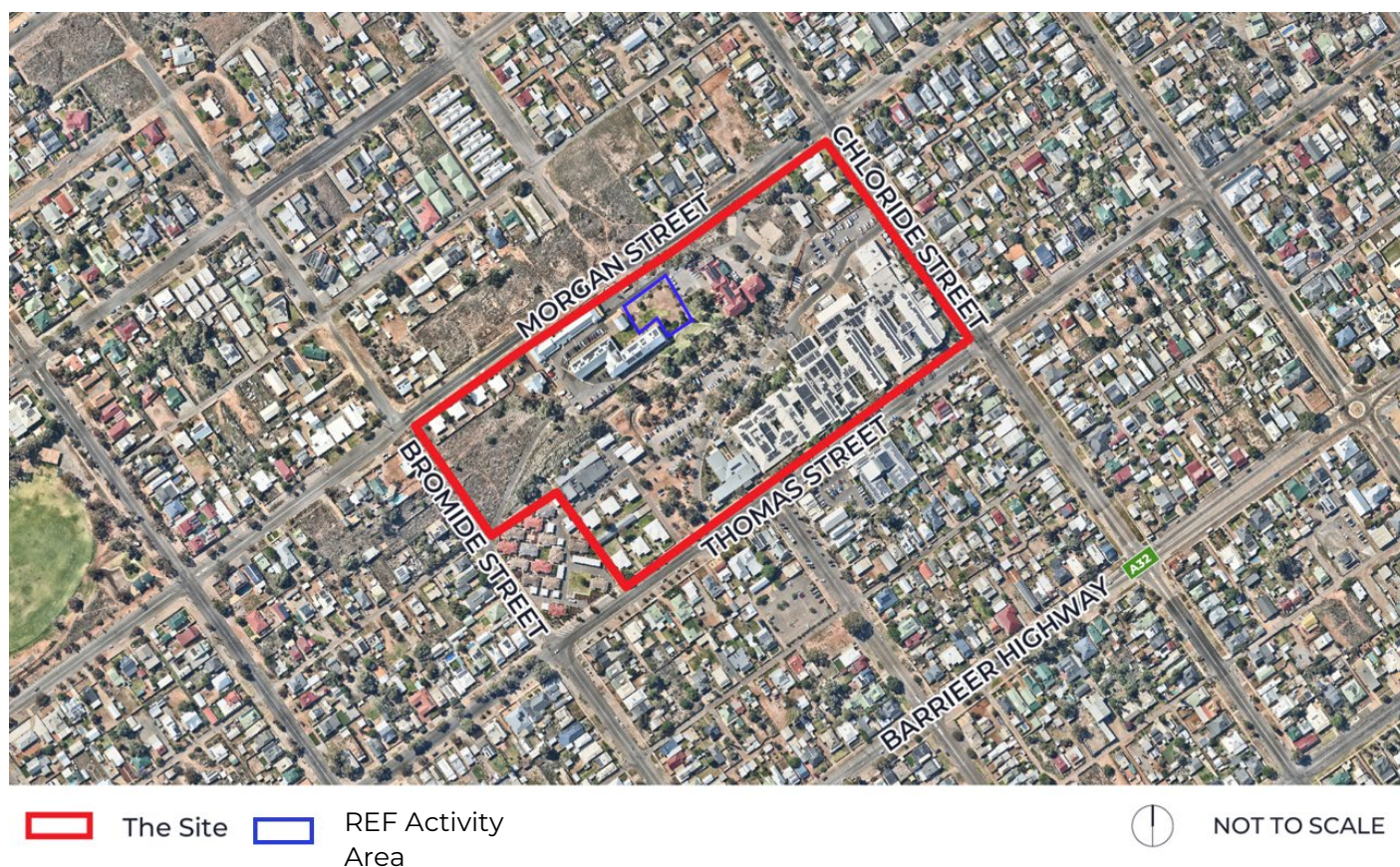


Figure 1 Site Aerial

Source: Nearmap, edits by Ethos Urban

### 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* (TISEPP) aims to facilitate the effective delivery of infrastructure across the State. As the proposed installation of the key health care worker accommodation will be within the boundaries of the existing Broken Hill Hospital site, which is defined as a 'health services facility' the 'development permitted without consent' provisions under Section 2.61 of the TISEPP apply. Furthermore, the site is zoned R1 General Residential under the Broken Hill Local Environmental Plan 2013, which is a prescribed zone under the TISEPP. Additional provisions relating to installing services and utilities under the TISEPP also apply.

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

### Statutory Consultation

In accordance with Chapter 2, Part 2.2 Division 1, and Part 2.3 Division 10 of the TISEPP, the REF was notified to the following parties:

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

The REF scope of works was notified to the above stakeholders for 21 calendar days from 23 February 2024 to 15 March 2024.

In addition, the project team met with representatives of the Broken Hill City Council on 27 February 2024 to present the proposal. During the meeting, the Council did not raise any issues with the proposal.

One (1) neighbour called the project contact during the notification period to request further details about the proposal, which were provided over the phone. The neighbour raised no issues, and they expressed their support for the proposal.

### Environmental Impacts

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

The proposal’s environmental impacts are considered to be temporary or minor. The environmental impacts of the proposal are not likely to be significant, and therefore it is not necessary for an EIS to be prepared. Mitigation measures, included at **Section 7**, outline the undertakings to manage and minimise potential impacts arising from the development.

### Justification and Conclusion

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

The proposal is justified as it:

- Provides critically needed housing to help attract and retain health workers at the Broken Hill Hospital, which supports the overall health and well-being of the local community.
- Provides a secure supply of housing for healthcare workers that is not affected by external demand pressures in the general rental housing market.
- Responds to the strategic priorities of the Broken Hill Local Strategic Planning Statement 2020 – 2040 by contributing to maintaining and upgrading Broken Hill Hospital.



# 1. Introduction

HI is proposing to construct key health care worker accommodation (the proposal) within the Broken Hill Hospital site at 170-320 Thomas Street, Broken Hill (the site), as part of their delivery of infrastructure solutions and services to support the healthcare needs of the NSW communities.

The proposal involves:

- Site preparation works.
- Tree removal.
- Installation of 20 modular housing units across two (2) accommodation blocks.
- Augmentation of site services.
- Site landscaping.

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

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

The description of the proposed works and associated environmental impacts have been undertaken in the context of the Department of Planning & Environment's (DPE) *Guidelines for Division 5.1 Assessments* (the Guidelines), section 171(2) of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation) and the Australian Government's *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

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

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

Local Health Districts (LHDs) are experiencing challenges in attracting and retaining health workers and staff in regional and rural New South Wales due to an urgent need for more key health care worker accommodation. In response, the NSW Government is implementing the Key Worker Accommodation Program, which will deliver modern short- and long-term housing accommodation across the three LHDs of Southern NSW, Murrumbidgee, and Far West LHD.

As a part of this program, the Broken Hill Hospital was identified as a location for new housing based on criteria including the scale of need, type of accommodation needs, potential beds, and existing demand and supply of accommodation.

The project team adopted the following criteria to determine an appropriate location for the proposed accommodation at the Hospital.

- Level area of 300 to 400m<sup>2</sup>.
- Adjacent drainage connections, water service and power supply.
- Existing privacy or capable of being screened from the public gaze.
- Capable of being screened from traffic noise.
- Minimal site clearing and demolition work.
- No general restrictions to the installation of solar panels.

As a result of the above criteria, the project team identified the location shown in **Figure 3**. In addition, this location benefits from good solar access and convenient access to parking in the adjacent carpark.

## 2. Site Analysis and Description

### 2.1 The Site and Locality

The REF relates to the Broken Hill Hospital at 170-320 Thomas Street, Broken Hill, within the Broken Hill Local Government Area (LGA). It is the primary provider of healthcare services to Broken Hill and the surrounding communities.

The hospital site comprises one lot, legally described as Lot 4376 DP 757298 and covers approximately 8.38ha. It is bound by Morgan Street to the north, Chloride Street to the east, Thomas Street to the south, and Bromide Street to the west. The hospital is located 1 km northwest of Broken Hill Town Centre and 1.5 km northwest of the Broken Hill Railway Station.

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

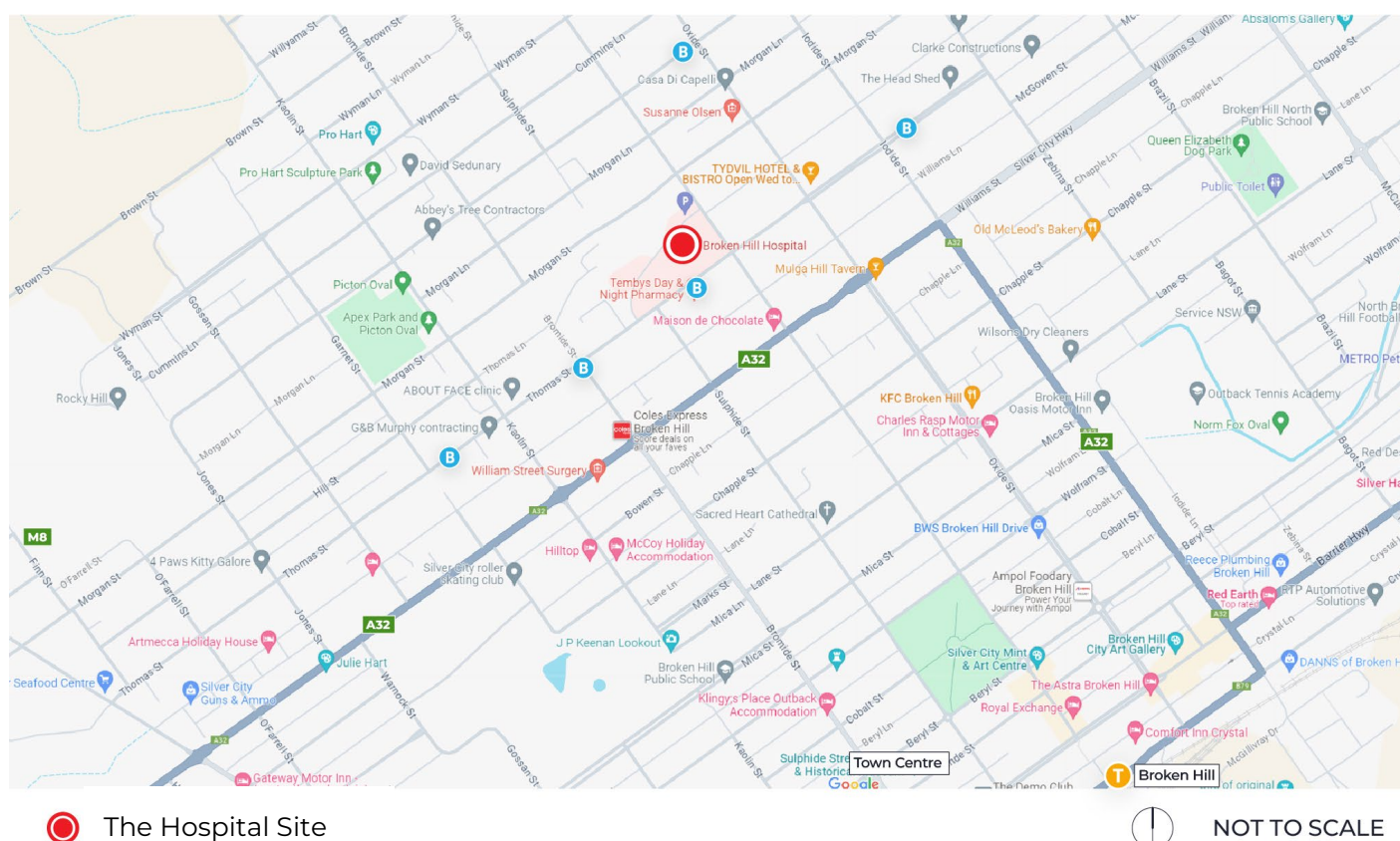


Figure 2 Site Contextual Map

Source: Nearnmap, edits by Ethos Urban

The proposed works are contained within an approximately 1,200m<sup>2</sup> area near the site's Morgan Street frontage (the REF Activity Area). **Figure 3** below provides an aerial image of the Broken Hill Hospital site and shows the location of the REF Activity Area.



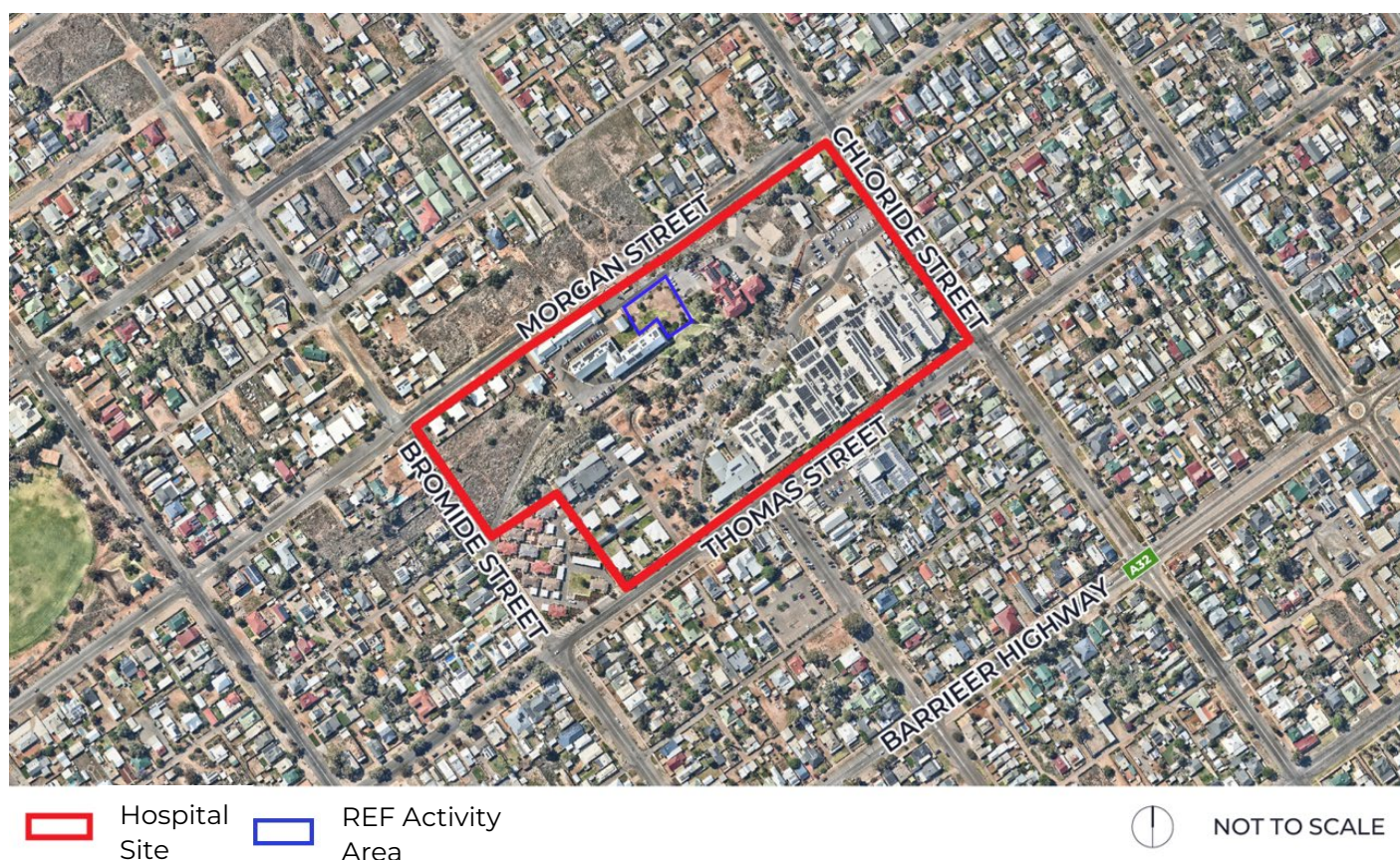


Figure 3 Site Aerial

Source: Nearmap, edits by Ethos Urban

### 2.1.1 Topography

The hospital site's topography slopes in an easterly direction from a high point of approximately 332m AHD at its western corner to a low point of approximately 308m AHD at its eastern corner. The site's topography divides it into two parts:

- a **lower campus**, which is mainly public-facing and contains all the clinical services buildings, and
- an **upper campus**, which has no public-facing functions.

The REF Activity Area is located on the upper campus and features a slope that requires some cut and fill. The Architectural Plans include a site survey (**Appendix B**).

### 2.1.2 Existing Development

Broken Hill Hospital contains a range of healthcare facilities, including a 10-bed emergency department as well as general medical, surgical obstetric, paediatric, dialysis, oncology and acute mental health beds, operating theatres, specialist palliative care, intensive and coronary care. As noted, these public-facing facilities are located on the site's lower campus.

As illustrated in **Figure 4**, the REF Activity Area is near several existing buildings on the hospital's upper campus, including the two-storey Kincumber House to the southwest, which is used for staff accommodation (refer to **Figure 5**), and a single-storey heritage building used as a workshop store (refer to **Figure 6**).

The REF Activity Area is not occupied by existing development.





Figure 4 REF Activity Area Aerial

Source: Nearmap, edits by Ethos Urban



Figure 5 Kincumber House

Source: Kearney Architecture





Figure 6 Workshop Store

Source: Kearney Architecture

### 2.1.3 Heritage

The site is identified as a heritage item of local significance under Schedule 5 of the *Broken Hill Local Environmental Plan 2013* (Broken Hill LEP). The item is described as 'Old areas of Broken Hill Hospital' (I25). The site is also adjacent to a Heritage Conservation Area known as the 'Oxide Street Heritage Conservation Area and Willyama Precinct', which is of local significance (refer to **Figure 7**).

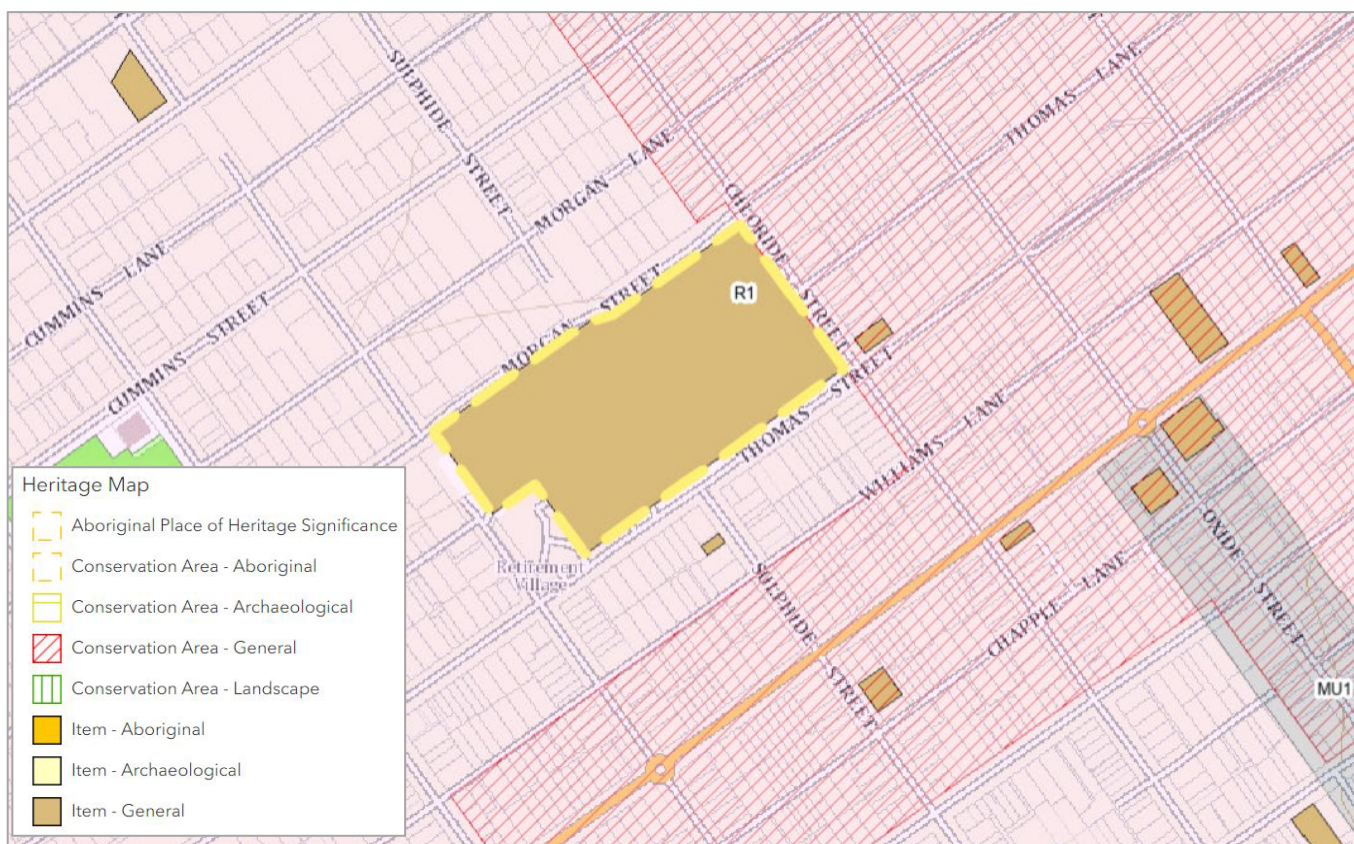


Figure 7 Heritage Significance

Source: Broken Hill Local Environmental Plan 2013, edits by Ethos Urban



The REF is accompanied by a Statement of Heritage Impact (SoHI) prepared by OzArk Environment and Heritage (**Appendix G**). The SoHI identifies that the hospital's heritage significance is derived from its contribution to the health history of the Broken Hill region and its aesthetic contribution to the heritage environment of Broken Hill. The northern areas of the hospital grounds comprise several buildings identified as featuring historic significance. These include:

- Former Refractory (built 1890).
- Former Operating Theatre repurposed as staff residence (built 1890).
- Elleoura Lodge, formerly the women's and children's Nightingale wards (built 1890).
- Workshop Store, formerly the changing and x-ray rooms (built 1890).
- Kincumber House (built 1890 with later modifications in 1907, 1941, and 1961).
- Corrindah House, formerly the nightingale wards (built 1930).

**Figure 8** shows the REF Activity Area in relation to the Old Hospital precinct and heritage items.

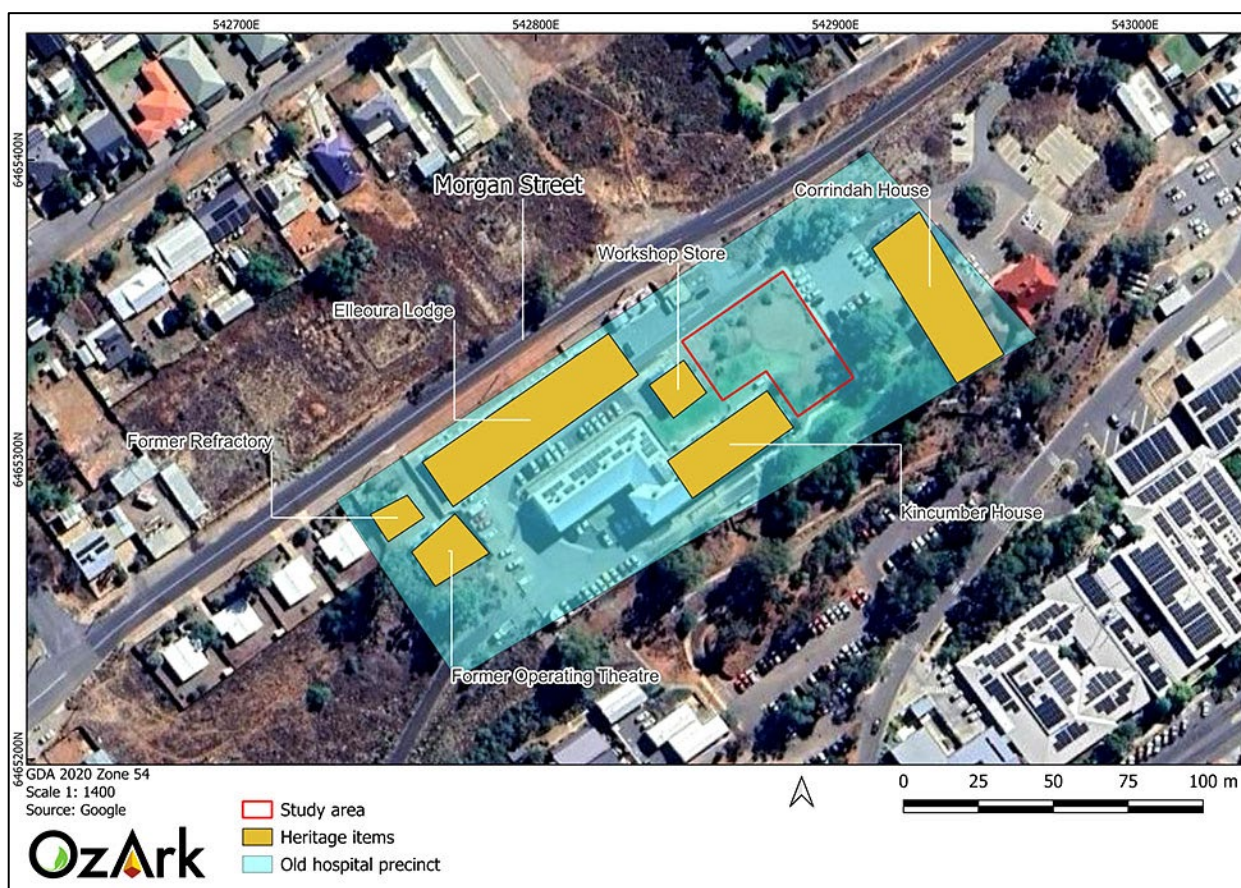


Figure 8 Old Hospital Precinct and Heritage Items in relation to the REF Activity Area

Source: OzArk Environment and Heritage

### 2.1.4 Vegetation

The hospital site is heavily developed and contains scattered trees. There are 13 trees near or within the REF Activity Area, including a *Jacaranda mimosifolia*, three (3) *Acacia melanoxylon*, a *Brachychiton populneus*, three (3) *Eucalyptus camaldulensis*, and five (5) *Callistemon viminalis*.

## 2.1.5 Transport and Accessibility

### Site Access and Parking

Vehicles can access the Hospital's upper campus using a driveway off Morgan Street or Bromide Street, while the lower campus is accessed via Thomas Street and Chloride Street.

There are 91 on-site parking spaces on the Hospital's upper campus, including parking spaces in an existing car park adjacent to the REF Activity Area. There are also 155 on-site parking spaces on the Hospital's lower campus. Upper campus spaces are generally only used by staff, while lower campus parking is shared by patients, visitors, and staff who don't stay on-site.

There are also 129 parking spaces on the streets surrounding the Hospital.

### Public transport

The nearest bus stop is located directly outside the Broken Hill Hospital on Thomas Street. Bus routes 592 and 592A frequent this stop and provide a loop service connecting the Broken Hill CBD to Thomas Street. In addition to these services, a Menindee and Willcannia Intertown service connects patients and visitors with Broken Hill Hospital.

## 2.1.6 Site Considerations and Constraints

Section 10.7 Planning Certificate No.18543 dated 23 May 2023 identifies that the site is located within the 'R1 General Residential' zone under *Broken Hill Local Environmental Plan 2012*, and is provided at **Appendix F**.

**Table 1: Section 10.7 Planning Certificate**

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

## 2.2 Surrounding Development

The hospital site's surrounding development is described below.

- **North:** Low-density residential dwellings are located to the site's north on the other side of Morgan Street.
- **East:** Low-density residential dwellings are located to the site's east. The Morgan Street Public School is also 800m northeast of the site.
- **South:** Low-density residential dwellings and a pharmacy and clinic labs are located to the site's south on the opposite side of Thomas Street

- **West:** Low-density residential dwellings are located to the site's west. Picton Oval is also 600 metres to the site's southwest.



## 3. Proposed Activity

### 3.1 Proposal Overview

The proposal involves:

- Site preparation works.
- Tree removal.
- Installation of 20 modular housing units across two (2) accommodation blocks.
- Augmentation of site services.
- Site landscaping.

Architectural drawings and an Architectural Design Report illustrating the proposal are included at **Appendix B** and **C**. **Figure 9** shows the location of the proposed accommodation blocks, while **Figure 10** provides a render illustrating the accommodation's appearance.

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

- Deliver key health care worker accommodation that will help attract and retain staff at the Broken Hill Hospital.
- Provide accommodation that is functional, safe and accessible.
- Minimise disruption to the existing hospital during construction.
- Minimise environmental and amenity impacts through appropriate mitigation measures.
- Incorporate Ecologically Sustainable Development (ESD) principles in the proposal's design and operation.
- Provide a source of construction employment.

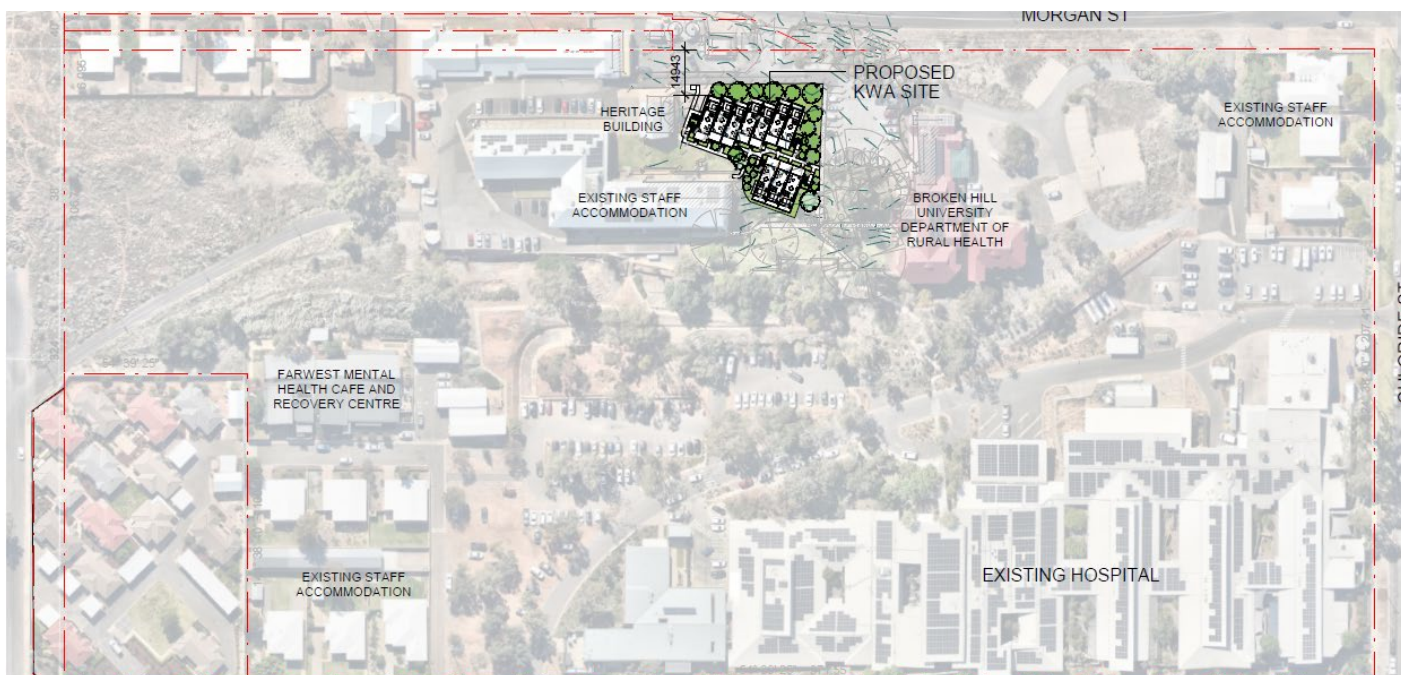


Figure 9 Proposed Site Plan

Source: Kearney Architecture



Figure 10 Architectural Render

Source: Kearney Architecture

### 3.1.1 Design Approach

The project team adopted the following criteria to determine an appropriate location for the proposed accommodation.

- Level area of 300 to 400m<sup>2</sup>.
- Adjacent drainage connections, water service and power supply.
- Existing privacy or capable of being screened from the public gaze.
- Capable of being screened from traffic noise.
- Minimal site clearing and demolition work.
- No general restrictions to the installation of solar panels.

As a result of the above criteria, the project team identified the location shown in **Figure 9** In addition, this location benefits from good solar access and convenient access to parking in the adjacent carpark.

### 3.1.2 Proposed Activity

#### Tree Removal

The proposal seeks to remove seven (7) trees whose removal is necessary to facilitate the installation of the new key health care worker accommodation. These trees are identified in the Aboricultural Development Impact Assessment Report prepared by Birds Tree Consultancy (**Appendix J**).

#### Earthworks

Some cut and fill will be required to prepare the laydown area for the accommodation blocks. The accommodation blocks require some 600mm clearance above ground level and will be fixed to piers. This construction technique minimises the need for cut and fill.



## Accommodation Blocks

As illustrated in **Figure 11** and **Figure 12**, the proposal seeks to install two (2), two-storey modular accommodation blocks that contain 20 key health worker housing units. The larger block, nearest to Morgan Street, will accommodate 14 units, while the second building, situated further southeast, will house six (6) units. Both accommodation blocks are staggered to maximum solar access.

The accommodation blocks are a maximum of 9.5m in height (above ground level (existing)) and setback at least 3.5m from the nearest existing building and approximately 15m from the nearest property boundary (to Morgan Street).

Each unit is self-contained and features one (1) bedroom, a bathroom, a kitchen and a living area.



Figure 11 Proposed Ground Floor Plans

Source: Kearney Architecture



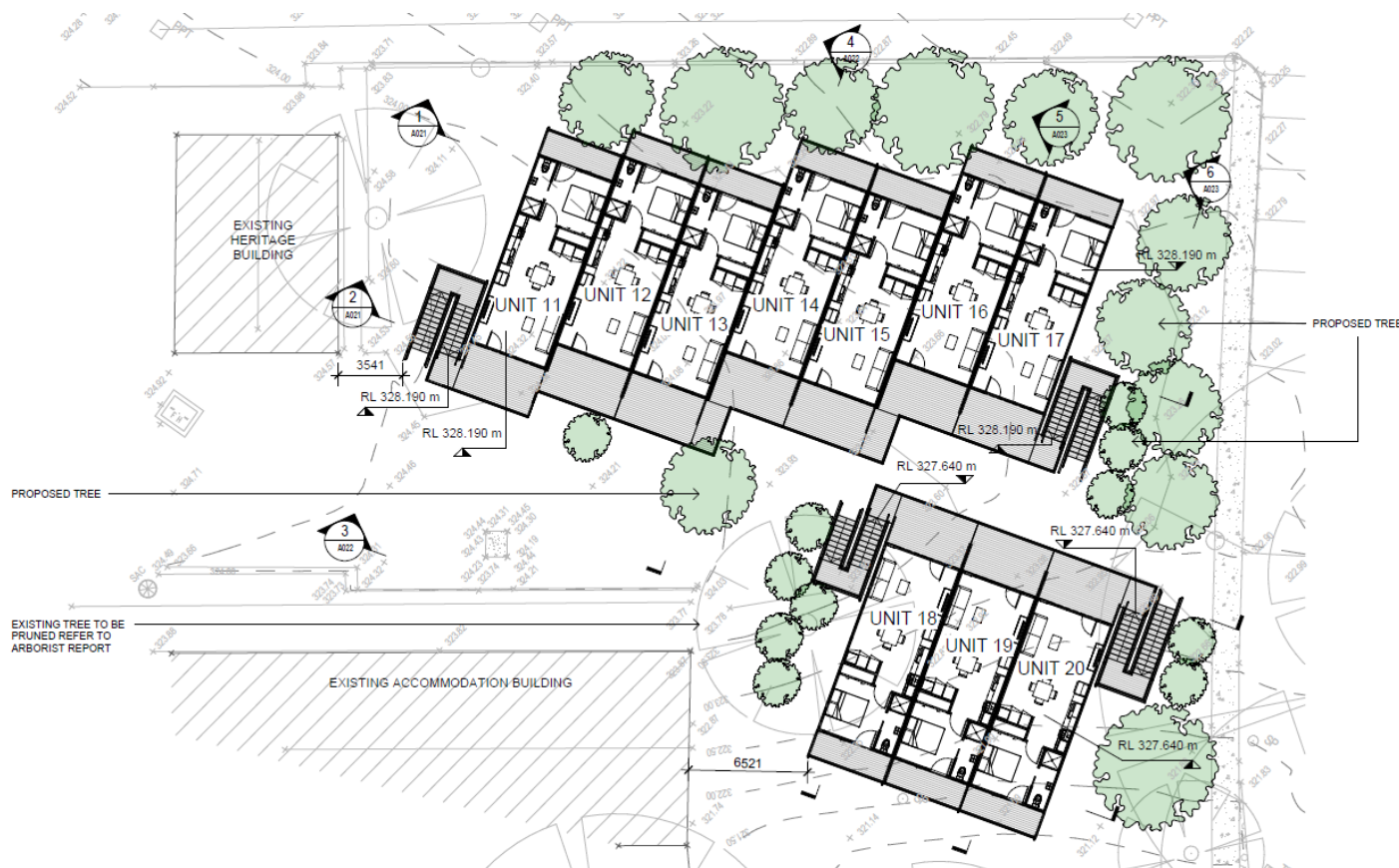


Figure 12 Proposed Level 1 Floor Plans

Source: Kearney Architecture

### Services and Infrastructure

Once the modular units are placed, they will be connected to essential services, including electricity, water, and stormwater. The REF is accompanied by Civil Plans prepared by Kehoe Myers that show the location of existing services and illustrate the accommodation's proposed stormwater system.

### Site Access and Parking

The proposed accommodation will be connected to the hospital campus via existing and new footpaths.

Staff living in the accommodation will utilise existing parking spaces in the car park adjacent to the development.

### Landscaping

This REF is accompanied by a Landscape Concept Plan prepared by Agla (**Appendix D**). As illustrated in **Figure 13**, the Landscape Plan involves:

- Feature gardens adjacent to pedestrian footpaths.
- New trees surrounding the accommodation blocks to provide shade and visual screening.
- Shrubs and groundcovers to improve building presentation.

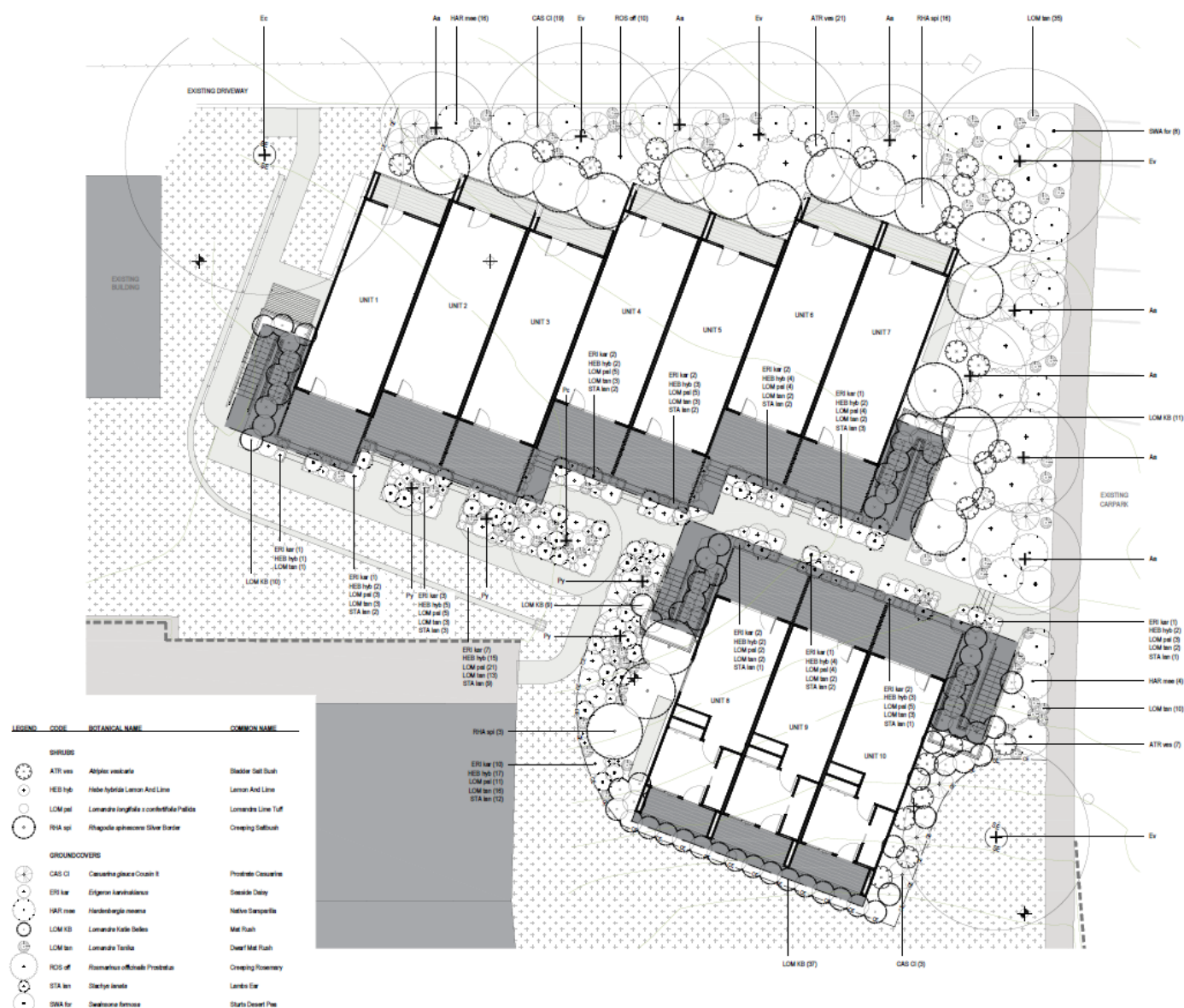


Figure 13 Proposed Landscape Concept Plan

Source: alga

## 3.2 Proposal Need, Options and Alternatives

### 3.2.1 Strategic Justification

Broken Hill Hospital is the primary health care facility in Broken Hill. It provides a plethora of health care services, including:

- Aboriginal health services.
- Cancer care services.
- Emergency services.
- Mental health services.
- Women health services.

Local Health Districts (LHDs) are experiencing challenges in attracting and retaining health workers and staff in regional and rural New South Wales due to an urgent need for more key health care worker accommodation. In response, the NSW Government is implementing the Key Worker Accommodation Program, which will deliver modern short- and long-term housing accommodation across the three LHDs of Southern NSW, Murrumbidgee, and Far West LHD.

As a part of this program, the Broken Hill Hospital was identified as a location for new housing based on criteria including the scale of need, type of accommodation needs, potential beds, and existing demand and supply of accommodation.

3.2.2 Alternatives and Options

As presented in **Section 3.1.1**, the location for the proposed accommodation was selected based on the following criteria:

- Level area of 300 to 400m<sup>2</sup>.
- Adjacent drainage connections, water service and power supply.
- Existing privacy or capable of being screened from the public gaze.
- Capable of being screened from traffic noise.
- Minimal site clearing and demolition work.

3.3 Construction Activities

**Table 2** outlines the Proposal’s construction activities. The REF is also accompanied by a Preliminary Construction Management Plan that provides further information regarding these construction activities (**Appendix P**).

Table 2: Project Timeframes and Construction Activities

Construction activity	Description
Commencement Date	On-site construction activities are anticipated to commence in August 2024 and be completed by early 2025.
Work Duration/Methodology	<p>The proposal’s construction period will occur over the following phases.</p> <ul style="list-style-type: none"><li>• <b>Offsite Manufacture</b> - The two-storey accommodation modules will be constructed in the Hutchinson Builders Toowoomba yard. This includes the completion of the internal fit-out where possible before being wrapped and ready for transportation.</li><li>• <b>Site Establishment</b> - The builder will prepare a dilapidation report and install temporary fencing, sediment control, and building/construction signage in accordance with legislation requirements. Following this, the builder will prepare a laydown area and remove any vegetation requirements in preparation for commencing the civil / foundation works.</li><li>• <b>Modular Installation</b> - The installation works will commence prior to the modules being delivered to the site, with the coordination of the services and installation of foundation piers/fire separation requirements. Once the pre-delivery works have been completed, the modules will be landed and connected to the substructure.</li><li>• <b>Certification and Handover</b> - After the fit-off / connection works, the modules will be commissioned, cleaned, and prepped for handover, including the coordination of all required regulatory certifications and testing certificates.</li></ul>
Work Hours and Duration/Construction	<p>Generally, the proposed works will occur during the following construction hours in accordance with the Broken Hill City Council requirements.</p> <ul style="list-style-type: none"><li>• <b>Monday-Friday:</b> 7.00am to 6.00pm</li><li>• <b>Saturday:</b> 8.00am to 1.00pm</li><li>• <b>Sunday and Public Holidays</b> – no work</li></ul> <p>Some work may need to be completed outside of the above hours. If required, these will be planned in consultation with stakeholders and Council to ensure all aspects of work are clearly understood by all parties and minimise disruption to hospital operations. This may include works that are most appropriately carried out outside of main working hours for critical hospital operational reasons.</p>

Construction activity	Description
<b>Workforce/Employment</b>	60 construction workers
<b>Ancillary Facilities</b>	The builder will establish a site office, amenities and storage areas. The Preliminary Construction Management Plan includes a layout plan showing the proposed temporary location of these facilities.
<b>Plant Equipment</b>	<p>The following equipment is anticipated for the works:</p> <ul style="list-style-type: none"> <li>• A crane</li> <li>• Earthmoving equipment</li> <li>• Articulated and fixed trucks.</li> <li>• Excavators.</li> <li>• General Power Tools.</li> </ul>
<b>Earthworks</b>	The builder will undertake minor earthworks when preparing the laydown area for the accommodation blocks.
<b>Source and Quantity of Materials</b>	<p>As noted, the two-storey accommodation modules will be constructed off-site in the Hutchinson Builders Toowoomba yard. Therefore, there will be minimal material sourced as part of the construction.</p> <p>Notwithstanding, the following measures are adopted to encourage the management and reduction of waste to minimise the loss of natural resources and landfill space:</p> <ul style="list-style-type: none"> <li>• Implement a waste management hierarchy of waste avoidance and reduction, reuse, recycling/processing, and waste disposal.</li> <li>• Ensure skip bins and on-site construction/demolition waste storage areas are appropriately sized and clearly labelled to facilitate the correct separation and storage of material.</li> <li>• Encourage the use of recycled materials where it is reasonably practical.</li> <li>• Minimise the use of packaging materials and recycle packaging materials where possible.</li> <li>• Non-recyclable general waste will be disposed at an approved waste disposal facility.</li> </ul>
<b>Traffic Management and Access</b>	<p>Section 4 of the Preliminary Construction Management Plan outlines traffic management measures during construction. Key measures include:</p> <ul style="list-style-type: none"> <li>• The main construction site access entrance and exit points will be clearly signed for all subcontractors and suppliers.</li> <li>• Deliveries will be scheduled in advance and coordinated daily with the Site Manager.</li> <li>• Deliveries will be limited to body trucks only and will be reversing in from Morgan Street.</li> <li>• Traffic control will only be present on an as need basis.</li> <li>• Construction workers will park off-site on Morgan Street.</li> </ul>

### 3.4 Operational Activities

#### Use

The proposed key health care worker accommodation will provide short and long-term housing for the Broken Hill Hospital's health care staff.

#### Traffic and Parking

The proposed activity will not result in any changes to the parking supply or access. Staff living in the accommodation will utilise existing car parking spaces available in the car park adjacent to the development.

#### Waste Management

The LHD will manage operational waste using the same waste management system for the nearby accommodation at the Hospital Site. As illustrated in **Figure 14**, the proposed plans include a hardstand area adjacent to an existing internal road, which will be used to store a 330L waste bin. Waste will be collected from this location via a waste collection vehicle, which currently accesses this part of the Hospital to collect waste from the adjacent accommodation.





Figure 14 Bin Hard Stand Area

Source: Kearney Architecture

## Laundry

Each unit will have its own self-contained laundry with a sink, washing machine and dryer. Each unit will also have its own portable clothesline provided, as well as a larger communal line. These laundry services will be allocated for dedicated use for this development. The existing hills hoist on the site will be relocated on the site for existing residences use.

## 4. Statutory Framework

### 4.1 Land Use

The proposed key health care worker accommodation is defined as a '**hospital**' under the Standard Instrument, as it is accommodation for nurses or other health care workers that is ancillary to a building or place used to provide professional health care services (the Broken Hill Hospital). A '**hospital**' is listed as a land use sub-category of '**health services facility**' under the Standard Instrument.

### 4.2 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* (TISEPP) aims to facilitate the effective delivery of infrastructure across the State. As the proposed installation of the key health care worker accommodation is within the boundaries of the existing Broken Hill Hospital site, which is defined as a 'health services facility' the 'development permitted without consent' provisions under Section 2.61 of the TISEPP apply. Furthermore, the site is zoned R1 General Residential under the Broken Hill Local Environmental Plan 2013, which is a prescribed zone under the TISEPP. Additional provisions relating to installing services and utilities under the TISEPP also apply.

**Table 3** outlines the Sections of the TISEPP that enable the proposed works to be undertaken by NSW Health Infrastructure (as a public authority) as 'development permitted without consent'.

**Table 3: Description of proposed activities**

Division and Section within TISEPP	Description of Works
<b>Division 5 – Electricity Transmission or Distribution</b>	
Section 2.44(1) – 'Development for the purpose of an electricity transmission or distribution network'	The proposed ancillary works associated with the installation and augmentation of electrical services can be undertaken as development without consent by a public authority on any land. The proposed electrical works are being carried out by HI (a public authority). Therefore, the proposal is consistent with Sections 2.44(1) of the TISEPP.
<b>Division 10 - Health Services Facilities</b>	
Section 2.61(1)(a) – 'The erection or alteration of, or addition to, a building that is a health services facility'	<p>The proposed activity involves the installation of key health care worker accommodation (which is defined as a <b>health service facility</b> as discussed in <b>Section 4.1</b>). Such development can be carried out by or on behalf of a public authority without consent on any land within the boundaries of an existing health services facility if the development does not result in a building:</p> <ul style="list-style-type: none"> <li>• exceeding 15m, or</li> <li>• being located closer than 5 metres to any property boundary.</li> </ul> <p>As outlined in <b>Section 3.1.2</b>, the proposed accommodation is setback approximately 15m from its nearest property boundary and has a maximum building height of 9.5m above ground level (existing).</p> <p>Furthermore, the proposed works are within the boundaries of Broken Hill Hospital, an existing health services facility. Health Infrastructure is a public authority and will carry out the proposed activity.</p> <p>Therefore, the proposed activity is consistent with Section 2.61(1) and (2) of the TISEPP.</p>
<b>Division 18 Sewerage Systems</b>	
Section 2.126 (6) – 'development for the purposes of sewage reticulation systems'	The proposed sewer main diversions can be carried out by or on behalf of a public authority without consent on any land. The proposed works are being carried out by HI (a public authority). Therefore, the Proposal is consistent with Section 2.126(1) and (6) of the TISEPP.

Division and Section within TISEPP	Description of Works
<b>Division 20 - Stormwater Management Systems</b>	
Section 2.137(1) – ‘development for the purpose of stormwater management systems’	The proposed stormwater system can be carried out by or on behalf of a public authority without consent on any land. The proposed works are being carried out by HI (a public authority). Therefore, the proposal is consistent with Section 2.137(1) of the TISEPP.
<b>Division 24 - Water Supply System</b>	
Section 2.159(1) – ‘Development for the purpose of water reticulation systems’	The proposed water main diversions can be carried out by or on behalf of a public authority without consent on any land. The proposed works are being carried out by HI (a public authority). Therefore, the Proposal is consistent with Section 2.159(1) of the TISEPP.

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

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

### 4.3 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, nor does the proposed development affect any matters of national significance. An assessment against the EPBC Act checklist is provided at **Table 4** below.

**Table 4: EPBC Checklist**

Consideration	Yes/No
The activity will not have any significant impact on a declared World Heritage Property?	No
The activity will not have any significant impact on a National Heritage place?	No
The activity will not have any significant impact on a declared Ramsar wetland?	No
The activity will not have any significant impact on Commonwealth listed threatened species or endangered community?	No
The activity will not have any significant impact on listed migratory species?	No
The activity does not involve nuclear actions?	No
The activity will not have any significant impact on Commonwealth marine areas?	No
The activity will not have any significant impact on Commonwealth land?	No
The activity does not relate to a water resource, a coal seam gas development or large coal mining development?	No

### 4.4 Environmental Planning and Assessment Act 1979

#### Duty to Consider Environmental Impact

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

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

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 6.1** specifically responds to the factors for consideration under section 171.

**Table 6** below demonstrates the effect of the proposed development activity on the matters listed for consideration in sub-section 3 of section 5.5 of the EP&A Act.

**Table 5: Matters for consideration under Sub-Section, Section 5.5 of the EP&A Act**

Matter for Consideration	Impacts of Activity
<p><b>Sub-section 3:</b></p> <p>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.</p>	<p>The proposal will not impact any wilderness area.</p>
<p>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.</p>	

## 4.5 Environmental Planning and Assessment Regulation 2021

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

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

## 4.6 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 6: Other Possible Legislative Requirements**

Legislation	Comment	Relevant? Yes/No
<b>State Legislation</b>		
Rural Fires Act 1997	The site is not identified as bushfire prone land.	No
Biodiversity Conservation Act 2016	The site does not contain any critical habitat, threatened species or ecological population or community.	No
Water Management Act 2000	The site is not located within 40 metres of a watercourse.	No.
Contaminated Land Management Act 1997	The site is not listed on the register of contaminated sites.	No.
Heritage Act 1977	The site is of local heritage significance and is known as 'Old areas of Broken Hill Hospital' (I25). The Statement of Heritage Impact prepared by OzArk Environment and Heritage confirms that the proposed activity will have a 'minor or inconsequential impact' on the historical items within the site.	Yes – discussed in <b>Section 6.2.8</b>
Roads Act 1993	No works are being carried out on a public road.	No



Legislation	Comment	Relevant? Yes/No
<b>State Legislation Planning Policies</b>		
State Environmental Planning Policy (Resilience and Hazards) 2021	<p><i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> aims to promote the remediation of contaminated land to reduce the risk of harm to human health or any other aspect of the environment. The SEPP specifies when consent is required for remediation of contaminated land. Section 4.6 of the SEPP states that a consent authority must consent to the carrying out of any development on land unless it:</p> <ul style="list-style-type: none"> <li>• Has considered whether the land is contaminated, and</li> <li>• If contaminated, it is satisfied that the land is suitable in its contaminated state (or will be suitable after remediation) for the purpose for which the development is proposed to be carried out.</li> </ul> <p>Whilst this provision applies only to DAs, it remains a relevant consideration for the works as the object of <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> aims to provide a State-wide planning approach to the remediation of contaminated land.</p>	Yes – discussed in <b>Section 6.2.13</b> .
State Environmental Planning Policy (Transport and Infrastructure) 2021	The TISEPP applies and has been assessed against the applicable Divisions in <b>Table 3</b> .	Yes – discussed in <b>Section 4.2</b> .
<b>Broken Hill Local Environmental Plan 2013</b>		
<b>LEP Clause</b>		
2.1 Land use zones	<p>The site is zoned 'R1 General Residential'. The zone's objectives and permitted and prohibited development are presented below.</p> <p><b>1 Objectives of the Zone</b></p> <ul style="list-style-type: none"> <li>• To provide for the housing needs of the community.</li> <li>• To provide for a variety of housing types and densities.</li> <li>• To enable other land uses that provide facilities or services to meet the day to day needs of residents</li> </ul> <p><b>2 Permitted without consent</b></p> <p>Environmental protection works; Home occupations; Roads.</p> <p><b>3 Permitted with consent</b></p> <p>Attached dwellings; Boarding houses; Building identification signs; Business identification signs; Centre-based child care facilities; Community facilities; Dwelling houses; Food and drink premises; Group homes; Home industries; Hostels; Kiosks; Multi dwelling housing; Neighbourhood shops; Oyster aquaculture; Places of public worship; Pond-based aquaculture; Residential flat buildings; Respite day care centres; Roads; Semi-detached dwellings; Seniors housing; Shop top housing; Tank-based aquaculture; <u><b>Any other development not specified in item 2 or 4.</b></u></p> <p><b>4 Prohibited</b></p> <p>Agriculture; Air transport facilities; Airstrips; Amusement centres; Animal boarding or training establishments; Biosolids treatment facilities; Boat building and repair facilities; Boat launching ramps; Boat sheds; Car parks; Charter and tourism boating facilities; Commercial premises; Correctional centres; Crematoria; Depots; Extractive industries; Farm buildings; Farm stay accommodation; Forestry; Freight transport facilities; Heavy industrial storage establishments; Helipads; Highway service centres; Industrial retail outlets; Industrial training facilities; Industries; Jetties; Local distribution premises; Marinas; Mooring pens; Moorings; Mortuaries; Open cut mining; Public administration buildings; Recreation facilities (major); Research stations; Restricted premises; Rural industries; Rural workers' dwellings; Service stations; Sewage treatment plants; Sex services premises; Signage; Storage premises; Transport depots; Truck depots; Vehicle body repair workshops; Vehicle repair stations;</p>	<p>As outlined in <b>Section 4.1</b>, the proposed development is defined as a '<b>health services facility</b>' under the Standard Instrument.</p> <p>While the development of a '<b>health services facility</b>' is permitted with consent in the zone (as it is development not specified in items 2 or 4), Section 2.61 of the TISEPP allows for the proposed activities to be carried out without consent, as discussed in <b>Section 4.2</b> above.</p> <p>The proposal is also consistent with the zone's objectives as it will deliver accommodation that provides for the housing needs of staff at the Broken Hill Hospital.</p> <p>Further, the proposal will not adversely impact the amenity of the surrounding residential neighbourhood.</p>

Legislation	Comment	Relevant? Yes/No
	Warehouse or distribution centres; Waste or resource management facilities; Water treatment facilities; Wharf or boating facilities; Wholesale supplies.	
4.3 Height of Buildings	There is no height of buildings development standard applicable to the site.	No
4.4 Floor Space Ratio	There is no floor space ratio development standard applicable to the site.	No
5.10 Heritage Conservation	The site is of local heritage significance and is known as 'Old areas of Broken Hill Hospital' (I25). Therefore, this REF is accompanied by a SoHI that assesses the proposal's heritage impacts.	Yes – discussed in <b>Section 6.2.8</b>
5.21 Flood Planning	No part of the site is located within a flood planning area subject to flood-related development controls.	No
6.2 Essential Services	As presented in <b>Section 3.1.2</b> , there are arrangements available for the proposed accommodation to be connected to essential services.	Yes
6.3 Airspace operations	The proposed accommodation blocks are limited to two-storeys in height. As such, they would not penetrate the imitation or Operations Surface for Broken Hill Airport.	No

## 5. Consultation

### 5.1 Statutory Consultation

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

**Table 7: Stakeholders required to be notified**

Stakeholder	Relevant TISEPP Section
Broken Hill City Council	<ul style="list-style-type: none"> <li>Section 2.62(2)(a)(i) – Notification of carrying out of certain development without consent</li> <li>Sections 2.10(1)(a), (c) and (d) – Development with impacts on Council-related infrastructure and services</li> </ul>
Occupiers of adjoining land	<ul style="list-style-type: none"> <li>Section 2.62(2)(a)(ii) – Notification of carrying out of certain development without consent</li> </ul>

The notification period commenced on 23 February 2024 and concluded on 15 March 2024. Copies of the notification letters are provided at **Appendix R**. In addition, the project team met with representatives of the Broken Hill City Council on 27 February 2024 to present the proposal.

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

**Table 8: Issues raised and responses**

Issue raised	Date received	Response	Reference
<b>Occupiers of adjoining land</b>			
A neighbour requested details of the proposal and expressed support.	29 February 2024	The neighbour was provided with an overview of the proposal over the phone.	-
<b>Council</b>			
During the meeting on 27 February 2024, Broken Hill City Council: <ul style="list-style-type: none"> <li>Noted that they were satisfied with the proposal from a landscape and heritage perspective.</li> <li>Queried if the project would incorporate stormwater sustainability measures.</li> </ul>	27 February 2024	During the meeting, the project team advised that they are exploring options to include sustainability measures such as rainwater tanks and solar panels if the residual budget allows for them.	-

As outlined in **Section 2.1.3**, the hospital site is identified as a local heritage item, described as ‘Old areas of Broken Hill Hospital’ (I25 of the Broken Hill LEP). Section 2.11 of the TISEPP applies to development permitted without consent that is carried out by a public authority (such as HI) and is likely to affect the heritage significance of a local heritage item in “a way that is more than minor or inconsequential”. Section 2.11(2) states that the public authority cannot carry out such a development unless it has commissioned a heritage assessment, provided it and the scope of works to the relevant Council, and considered any response from the Council within 21 days of notification.

As presented in **Section 6.2.8**, this REF is accompanied by a SoHI, which assesses and confirms that the proposal will not affect the heritage significance of a local heritage item in a way that is more than minor or inconsequential. Therefore, the proposal does not trigger the consultation requirement under Section 2.11 of the TISEPP.

## 6. Environmental Impact Assessment

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

The relevant assessment considerations under Department of Planning & Environment's (DPE) *Guidelines for Division 5.1 Assessments* (the Guidelines) and Section 171(2) of the EP&A Regulation are provided below.

**Table 9: Summary of Environmental Factors Reviewed in Relation to the Activity**

Relevant Consideration	Response/Assessment	
a) Any environmental impact on a community	As described in <b>Section 6.2</b> , the proposal's environmental impacts are readily managed through the Construction Management Plan ( <b>Appendix P</b> ) and the management measures outlined in <b>Appendix B</b> .  The proposal will also deliver the following positive environmental impacts: <ul style="list-style-type: none"> <li>The Proposal will increase the number of trees within the REF Activity Area's canopy coverage from seven (7) to 17, delivering significantly improved environmental outcomes, such as: <ul style="list-style-type: none"> <li>Increased habitat for local fauna.</li> <li>Cooling the urban environment.</li> <li>Reduction of stormwater runoff.</li> <li>Pollution absorption.</li> </ul> </li> <li>The proposal involves remediating contaminated land.</li> </ul>	<div>-ve</div> <div>Nil</div> <div>+ve ✓</div>
(b) Any transformation of a locality	The proposed accommodation is consistent with the scale and use of existing development at the Broken Hill Hospital. As such, it will not result in a transformation of the Broken Hill locality.	<div>-ve</div> <div>Nil ✓</div> <div>+ve</div>
(c) Any environmental impact on the ecosystem of the locality	The Proposal will not result in a significant impact to any threatened species, ecological communities, or their habitats listed under the <i>Biodiversity Act 2016</i> or the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .	<div>-ve</div> <div>Nil ✓</div> <div>+ve</div>
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality.	The proposal will deliver key health care worker accommodation on an existing health services site. The proposal will result in an improved aesthetic, recreational and environmental outcome for the locality for the following reasons: <ul style="list-style-type: none"> <li>As in <b>Section 6.2.8</b>, the new accommodation's massing and design appropriately complements the site's heritage value.</li> <li>The proposal's landscape design significantly improves the REF Activity Area's visual appearance and canopy coverage (as discussed above).</li> <li>The new accommodation will help retain key healthcare workers at Broken Hill Hospital, therefore supporting the healthcare needs of the Broken Hill community.</li> <li>The proposal will incorporate a range of ESD initiatives.</li> </ul>	<div>-ve</div> <div>Nil</div> <div>+ve ✓</div>
e) Any effect on locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations.	The proposed activity will contribute positively to the Broken Hill locality. The proposed key health care worker accommodation has been designed to integrate with the Broken Hill Hospital's heritage and aesthetic significance.  As discussed in <b>Section 6.2.8</b> , there is a minor risk that archaeological deposits will be uncovered. Nevertheless, the proposed mitigation measures ( <b>Appendix A</b> ) include an unanticipated find protocol that must be followed if unrecorded or unanticipated historic objects are encountered during the proposal's construction.  Overall, the proposed key health care worker accommodation will improve the community's aesthetic, social, and scientific outcomes. The site will retain its social significance to the community as the primary health care facility in Broken Hill.	<div>-ve</div> <div>Nil</div> <div>+ve ✓</div>

Relevant Consideration	Response/Assessment		
(f) Any impact on the habitat of protected fauna (within the meaning of the <i>National Parks and Wildlife Act 1974</i> )	The proposal is unlikely to result in a significant impact on any threatened species, ecological communities, or their habitats listed under the <i>Biodiversity Act 2016</i> or the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .	-ve	
		Nil	✓
		+ve	
(g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air		-ve	
		Nil	
		+ve	
(h) Any long term impacts on the environment	The Proposal will not have any long-term effects on the biophysical environment.	-ve	
		Nil	✓
		+ve	
(i) Any degradation of the quality of the environment	The Proposal will not degrade the environment as the site is highly disturbed. Also, as noted, the Proposal is not likely to result in a significant impact to any threatened species, ecological communities, or their habitats listed under the <i>Biodiversity Act 2016</i> or the <i>Environment Protection and Biodiversity Conservation Act 1999</i> .  The proposed removal of trees will be compensated through the planting of new trees. Mitigation measures will also be implemented during the demolition works to prevent the degradation of the environment's quality.	-ve	
		Nil	
		+ve	✓
j) Any risk of safety of the environment	This REF is accompanied by a Remediation Action Plan outlining measures to remediate the site, thus contributing to protecting the environment's safety.	-ve	
		Nil	
		+ve	✓
(k) Any reduction in the range of beneficial uses of the environment	There will be no reduction in the range of beneficial uses of the environment. Instead, the proposal will enhance the site's existing use as a health services facility.	-ve	
		Nil	✓
		+ve	
(l) Any pollution of the environment	Minor localised air quality impacts during construction works are suitably addressed and will be mitigated through the Construction Management Plan and its anticipated correlated management plans. No further polluting impacts are likely to result from the works,	-ve	
		Nil	✓
		+ve	
(m) Any environmental problems associated with the disposal of waste	The REF is accompanied by a Construction Waste Management Plan that outlines measures to appropriately classify and either reuse, recycle, process or dispose of waste (see <b>Section 6.2.12</b> ). In accordance with the <i>Protection of the Environment Operations Act 1997</i> , waste will be transported to a facility that is licensed to process or dispose of that waste classification to avoid adverse environmental impacts.	-ve	
		Nil	✓
		+ve	
n) Any increased demanded on resources (natural or otherwise) that are, or are likely to become, in short supply	There will not be an increased demand on resources resulting from the proposed key health care worker accommodation.	-ve	
		Nil	✓
		+ve	
(o) Any cumulative environmental effects with other existing or likely future activities.	There will not be any cumulative environmental effects with other existing or likely future activities. A Cumulative Impact Statement is not required.	-ve	
		Nil	✓
		+ve	
(p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions.	Given the site's inland location, the works will have no impact on coastal processes or contribute to coastal hazards.	-ve	
		Nil	✓
		+ve	

Relevant Consideration	Response/Assessment	
q) Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1	As discussed in <b>Section 3.2.1</b> , the Broken Hill Local Strategic Planning Statement 2020 – 2040 (LSPS) is applicable to the site. The proposal is consistent with the LSPS as it will: <ul style="list-style-type: none"> <li>Provide accommodation on the Broken Hill Hospital site to help attract and retain key health workers.</li> <li>Support the local economy by providing short-term and long-term jobs and job incentives.</li> </ul>	<div>-ve</div> <div>Nil</div> <div>+ve ✓</div>
r) Any other relevant environmental factors	As identified in the sections below, there are no other environmental factors that will result in any unacceptable impact on the environment.	<div>-ve</div> <div>Nil ✓</div> <div>+ve</div>

## 6.2 Identification of Issues

### 6.2.1 Traffic, Access and Parking

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

The REF is accompanied by a Traffic Impact Statement (TIS) prepared by SCT Consulting (**Appendix I**) that assesses the proposal's impact on parking, site access, pedestrian movements and the local street network. The following subheadings summarise the Assessment's findings.

#### Parking

As presented in **Section 2.1.5**, the Broken Hill Hospital currently has 91 on-site parking spaces on the upper campus (where the proposal is located) and 155 spaces on the lower campus. The upper campus parking spaces are generally used by staff, while the lower campus parking spaces are typically utilised by patients, visitors, and staff who do not stay on-site. Furthermore, there are 129 spaces on the nearby streets surrounding the Broken Hill Hospital.

Staff living in the proposed accommodation will utilise existing parking spaces in the car park adjacent to the REF Activity Area. Despite this, the Traffic Impact Statement notes that the proposed accommodation will generate no additional demand for on-site parking as these staff would otherwise live in accommodation off-site and drive to work.

Therefore, as the proposal does not involve deleting existing parking spaces or constructing new parking spaces, it will not impact total parking demand and peak occupancy of Broken Hill Hospital's car parks.

#### Traffic Impacts

The TIA anticipates that the proposal will reduce total vehicle trips associated with the hospital, as staff who originally drove to work can now walk to work instead. As such, the proposal will have a negligible (albeit positive) impact on the performance of the surrounding road network.

## Walking and cycling

Staff are anticipated to walk from their accommodation to work, which will result in a minor increase in walking trips. Changes to the footpaths and permeability of the campus are negligible. The existing walking network can accommodate the additional pedestrian trips. No changes to the cycling infrastructure are required.

## Construction Impacts

A Construction Traffic Management Plan will be prepared prior to construction of the proposal. It will seek to minimise traffic, transport and parking impacts during construction. Further, it will address the type of construction vehicles, construction transport routes, dilapidation surveys, traffic control plans, including detours and signage.

During construction, the builder will establish a temporary site office, amenities and storage areas in the car park adjacent to the REF Activity Area. Although this will reduce parking availability at the site during construction, this is considered acceptable as:

- The construction works are expected to be completed within a six-month timeframe.
- There is sufficient on-street parking available on the streets surrounding the hospital. Construction workers are expected to utilise on-street parking to reduce demand for parking on-site.

## 6.2.2 Noise and Vibration

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

## Noise

As outlined in **Section 3.3**, the hours of construction, including the delivery of materials to and from the site, will generally be restricted to the following:

- **Monday-Friday:** 7.00am to 6.00pm
- **Saturday:** 8.00am to 1.00pm
- Sunday and Public Holidays: No work.

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

The REF is accompanied by an Acoustic Advice Letter prepared by Vipac (**Appendix K**) that considered the proposal's potential for adverse noise impacts on nearby sensitive receptors.

The Letter concludes that off-site noise emissions will not adversely impact the proposed accommodation for the following reasons.

- There are no significant noise-generating uses in the surrounding environment, as there are:

- No significant traffic volumes on the surrounding road network.
- No presence of aircraft or aerial ambulance noise.
- No significant impact of noise emissions from the hospital.
- No presence of offsite industry or other offsite noise-generating developments within the vicinity of the site.

Furthermore, the Advice Letter concludes that the proposal will not generate significant onsite noise emissions that could cause nuisance to nearby sensitive receptors for the following reasons.

- The development is for accommodation of staff working at the hospital, and the construction is for a low volume of residential occupancy, which does not generate significant on-site noise emissions.
- Noise emissions from individual condenser units associated with the development are not expected to be significant.

### 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?	✓	

There is potential for dust generation during the proposal's construction. As such, the Preliminary Construction Management Plan (**Appendix P**) includes measures that will appropriately manage dust impacts during construction. These include:

- All machinery and tools that generate dust must be fitted with water attachments or dust removal devices where necessary.
- Exhaust systems, extraction fans and the like will be provided where necessary.
- All trucks carting material to and from the site must have their loads appropriately covered.
- Any work involving the production of silica dust is not to be undertaken without formal controls being determined.

The proposal is not anticipated to generate adverse dust impacts during operation.

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



The proposal will involve minor land disturbance works to prepare the laydown area for the accommodation blocks. This REF is accompanied by an Erosion and Sediment Control Layout Plan (**Appendix E**), which includes measures to mitigate erosion and sediment-laden stormwater-water runoff during construction.

The REF is also accompanied by a combined Preliminary and Detailed Site Investigation (P&DSI) prepared by JBS&G (**Appendix M**). As discussed further in **Section 6.2.13**, the Investigation confirms that the REF Activity Area is affected by contaminated materials. Therefore, the REF is accompanied by a Remediation Action Plan (RAP) and an Asbestos Management Plan (AMP) outlining measures to remediate the site.

The P&DSI also notes that the site has an extremely low probability of acid sulfate soils and salinity.

### 6.2.5 Hydrology, Flooding and Water Quality

Questions to consider	Yes	No
Are the works located near a natural watercourse?		✓
Are the works located within a floodplain?		✓
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?		✓
Stormwater and Wastewater – Is an Integrated Water Management Plan required for the activity?		✓

The site is not identified as a Flood Planning Area, and its nearest water body is a drainage channel approximately 1.2km to the site's northwest. As such, the proposal will not cause adverse impacts to an existing watercourse and will not be subject to flood-related hazards.

This REF is accompanied by a Geotechnical Investigation prepared by CivilTest (**Appendix L**), which involved drilling six boreholes across the REF Activity Area down to a maximum depth of 4.5m. No groundwater was encountered in these boreholes. As such, it is unlikely that groundwater will be intercepted when the proposal's foundation piers are installed.

As presented in **Section 3.1.2**, the REF is accompanied by Civil Plans that outline a proposed stormwater management system that will appropriately collect and discharge stormwater.

### 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?		✓

There are limited visual receptors with views towards the proposed accommodation. The nearest residential development (234 Morgan Street) is approximately 55m to the REF Activity Area's north on the opposite side of Morgan Street (refer to **Figure 15**). However, this location sits below Morgan Street, meaning views towards the site are obstructed (refer to **Figure 16**). Therefore, the development's primary visual receptors will be drivers along Morgan Street and other users at the Broken Hill Hospital.

The proposed accommodation units will not have an adverse visual impact on these receptors for the following reasons.

- The accommodation blocks are two-storeys, which complements the scale of other nearby development on the site (refer to **Figure 17** and **Figure 18**).
- The accommodation blocks are setback some 15m from the nearest site boundary (to Morgan Street). This setback, combined with the planting of screening trees along the development's northern and eastern facades (refer to **Section 3.1.2**), creates a visually appealing setting for the development when viewed from the Street.

- The accommodation blocks incorporate a simple colour palette and simple stepping forms so as not to visually detract from nearby heritage buildings.



Figure 15 Nearest Residential Development

Source: Nearmap, edits by Ethos Urban





Figure 16 View toward the site from 234 Morgan Street, Broken Hill

Source: Google Maps



Figure 17 Northern Elevation

Source: Kearney Architecture



Figure 18 Architectural Render Viewed from Morgan Street

Source: Kearney Architecture

## 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 200m 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 200m below, or above a cliff face.</li> <li>• Within 20m 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?	N/A	
If the above steps indicate that there remains a risk of harm or disturbance, has a desktop assessment and visual inspection been undertaken?		✓
Is the activity likely to affect wild resources or access to these resources, which are used or valued by the Aboriginal community?		✓
Is the activity likely to affect the cultural value or significance of the site?		✓

The REF is accompanied by an AHIMS Web Service search (**Appendix H**). The search of the Heritage NSW AHIMS Web Services (Aboriginal Heritage Information Management System) found that no Aboriginal sites or Aboriginal places have been recorded or declared near or around the site within a 1km radius. Therefore, there are no anticipated impacts to known Aboriginal objects.



The REF's mitigation measures (**Appendix A**) require the preparation of an unexpected finds protocol, which must be implemented if any Aboriginal objects are unexpectedly uncovered during the proposed works.

## 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? NSW heritage database (includes section 170 and local items) Commonwealth EPBC heritage list?	✓	
Will works occur in areas that may have archaeological remains?		✓
Is the demolition of any heritage occurring?		✓

### Heritage Impacts

As outlined in **Section 2.1.3**, the site is identified as a heritage item of local significance under Schedule 5 of the Broken Hill LEP. The item is described as 'Old areas of Broken Hill Hospital' (I25). The site is also adjacent to a Heritage Conservation Area known as the 'Oxide Street Heritage Conservation Area and Willyama Precinct', which is of local significance.

As such, this REF is accompanied by a SoHI prepared by OzArk Environment and Heritage (**Appendix G**) that evaluates the proposal's impact on the site's heritage significance. As outlined in **Section 2.1.3**, the SoHI identified several buildings with historic significance. These include:

- Former Refractory (built 1890).
- Former Operating Theatre repurposed as staff residence (built 1890).
- Elleoura Lodge, formerly the women's and children's nightingale wards (built 1890).
- Workshop Store, formerly the changing and x-ray rooms (built 1890).
- Kincumber House (built 1890 with later modifications in 1907, 1941, and 1961).
- Corrindah House, formerly the Nightingale wards (built 1930).

**Figure 19** shows the REF Activity Area in relation to the Old Hospital precinct and buildings with historic value. The SoHI concludes that the proposal will not significantly impact the heritage significance of these buildings and the 'Old areas of Broken Hill Hospital' more generally for the following reasons.

- The accommodation blocks are sympathetic to the 'Old areas of Broken Hill Hospital' as they are in an area that no longer contains built heritage items, and they are limited to two storeys so as not to impede or obstruct the existing nearby heritage buildings, including Kincumber House and the Workshop Store.
- The proposed works will not impact the fabric, design, or layout of existing buildings within the 'old areas of Broken Hill Hospital'.
- The proposed works will not impede significant views to and from the old hospital precinct and will allow the residents of the newly constructed buildings to view the items from the upper levels of their dwellings.
- Existing pathways and access points will allow the public and hospital staff to continue accessing the heritage items.

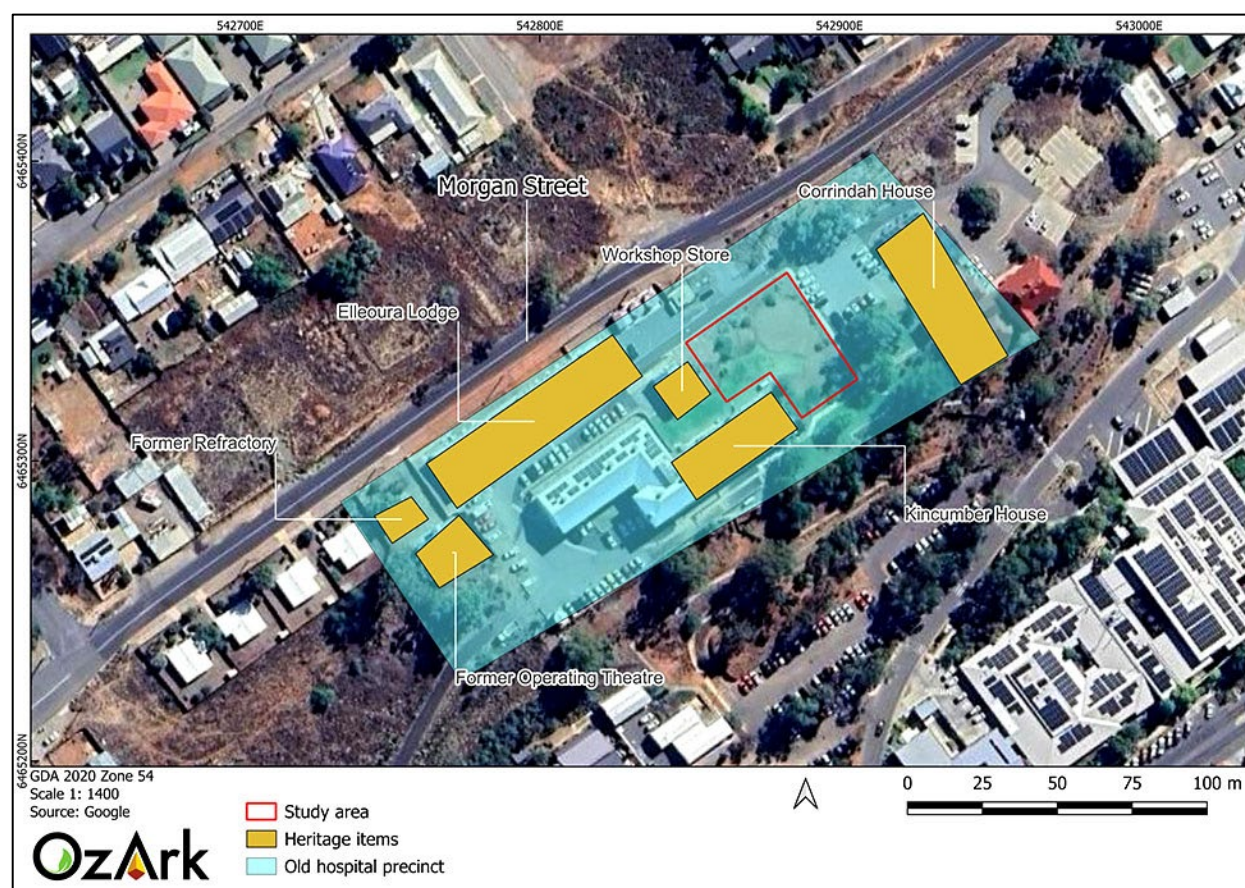


Figure 19 Old Hospital Precinct and Heritage Items in Relation to the Site

Source: OzArk Environment and Heritage

## Archaeology

The SoHI includes a search of historical imagery, which identified that the REF Activity Area was occupied by the eastern part of Kincumber House before its partial demolition. Therefore, there is a minor risk that archaeological deposits will be uncovered as the proposal involves ground-disturbing works.

As such, the SoHI includes an unanticipated find protocol that must be followed in the unlikely event that unrecorded or unanticipated historical objects are encountered during the proposal's construction.

## 6.2.9 Ecology

Questions to consider	Yes	No
Could the works affect any <i>Environmental Protection and Biodiversity Conservation Act 1999 (Cth)</i> listed threatened species, ecological community or migratory species?		✓
Is it likely that the activity will have a significant impact in accordance with the <i>Biodiversity Conservation Act (2016)</i> ? 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)?		✓



Questions to consider	Yes	No
Are there any noxious or environmental weeds present within the work area?		✓
Will clearing of native vegetation be required?	✓	

This REF is accompanied by an Arboricultural Development Impact Assessment Report (ADIAR) prepared by Birds Tree Consultancy (**Appendix J**). The report identifies trees whose removal is necessary to facilitate the installation of the key health care worker accommodation and assesses their significance.

In total, the ADIAR identified seven (7) trees whose removal is necessary to facilitate the proposal. **Table 10** provides an overview of these trees and their assessed landscape significance and retention value, while **Figure 20** shows the location of these trees. Of these seven trees, the ADIAR assesses two (2) as having high landscape significance and retention value and five (5) as having low landscape significance and retention value. The removal of these is considered appropriate for the following reasons:

- Despite the presence of the seven trees, the REF Activity Area was selected as it is predominately cleared of vegetation (amongst other matters). Furthermore, the proposal's layout was designed to retain trees 1,2, 4 and 5 (refer to **Figure 20**), two of which feature high mention value and two feature medium retention value. Therefore, the proposal has implemented measures to minimise and avoid tree impacts.
- The ADIAR notes that none of the trees proposed for removal are identified as threatened species or elements of endangered ecological communities under the *Biodiversity Conservation Act 2016*.
- The proposal compensates for the removal of the trees through the comprehensive landscape strategy presented in **Section 3.1.2**, which increases the number of trees within the REF Activity Area from seven (7) to 17. This increase in canopy coverage will deliver significantly improved environmental outcomes at the site, such as:
  - Increased habitat for local fauna.
  - Cooling the urban environment.
  - Reduction of stormwater runoff.
  - Pollution absorption.

The REF's mitigation measures (**Appendix A**) include measures to protect fauna during construction works.

**Table 10: Trees proposed for removal**

Tree Number in the ADIAR	Species	Landscape Significance <sup>1</sup>	Retention Value <sup>2</sup>	Comments
3.	<i>Acacia melanoxylon</i>	High	High	A mature tree that is approximately 7m tall with a canopy spread of 3m.
6.	<i>Eucalyptus camaldulensis</i>	High	High	A semi-mature tree that is approximately 5m tall with a canopy spread of 2m.
7.	<i>Eucalyptus camaldulensis</i>	Low	Low	A semi-mature tree that is approximately 3m tall with a canopy spread of 1m.
8.	<i>Callistemon viminalis</i>	Low	Low	A mature tree that is approximately 2m tall with a canopy spread of 2m.
9.	<i>Callistemon viminalis</i>	Low	Low	A mature tree that is approximately 2m tall with a canopy spread of 3m.

<sup>1</sup> **Landscape significance** is assessed as high, medium or low based on a tree's health and condition, vitality, form, environmental, cultural, amenity and heritage value.

<sup>2</sup> **Retention Value** is assessed as high, medium or low based on a tree's landscape significance and useful life expectancy.

Tree Number in the ADIAR	Species	Landscape Significance <sup>1</sup>	Retention Value <sup>2</sup>	Comments
12.	<i>Callistemon viminalis</i>	Low	Low	A mature tree that is approximately 3m tall with a canopy spread of 3m.
13.	<i>Eucalyptus camaldulensis</i>	Low	Low	A semi-mature tree that is approximately 4m tall with a canopy spread of 10m.



Figure 20 Tree Removal Plan

Source: Birds Tree Consultancy

### 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?	N/A	

The site is not identified as bushfire prone land.

### 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?	✓	

The proposal will not result in the permanent disruption or loss of services at the Broken Hill Hospital.

During construction, the proposed works will cause minor and temporary disruption to existing uses on the hospital's upper campus, particularly as the construction compound will be in the existing carpark adjacent to the REF Activity Area. However, this temporary disruption is considered minor and acceptable for the following reasons:

- The proposed works will not affect the hospital's public-facing functions as these are located on the hospital's lower campus.
- The construction works are expected to be completed within a six-month timeframe.
- There are other upper campus car parks as well as on-street parking available on the streets surrounding the hospital, which can be utilised while the construction compound is situated in the car park adjacent to the REF Activity Area. Construction workers are expected to utilise on-street parking to reduce demand for parking on-site.
- The Preliminary Construction Management Plan (which will be developed into a final Construction Management Plan) includes measures to minimise waste, dust and noise nuisance.

Once installed, the key health worker accommodation will support the function of the Broken Hill Hospital by helping attract and retain hospital staff.

### 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?	Potentially – see <b>Section 6.2.13</b>	
Will the works result in the generation of wastewater requiring off-site disposal?		✓

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

- **Waste Avoidance and Reduction** – Actions that reduce the amount of generated waste.
- **Waste Reuse** – Reuse of waste without further need for processing.

- **Waste Recycling, Processing or Reprocessing** – Processing waste materials to be used for a similar or different purpose
- **Energy Recovery** – Processing waste materials to recover energy.
- **Waste Disposal** – Where recovery is unachievable, waste is appropriately treated (where necessary) and disposed of in an environmentally sensitive manner.

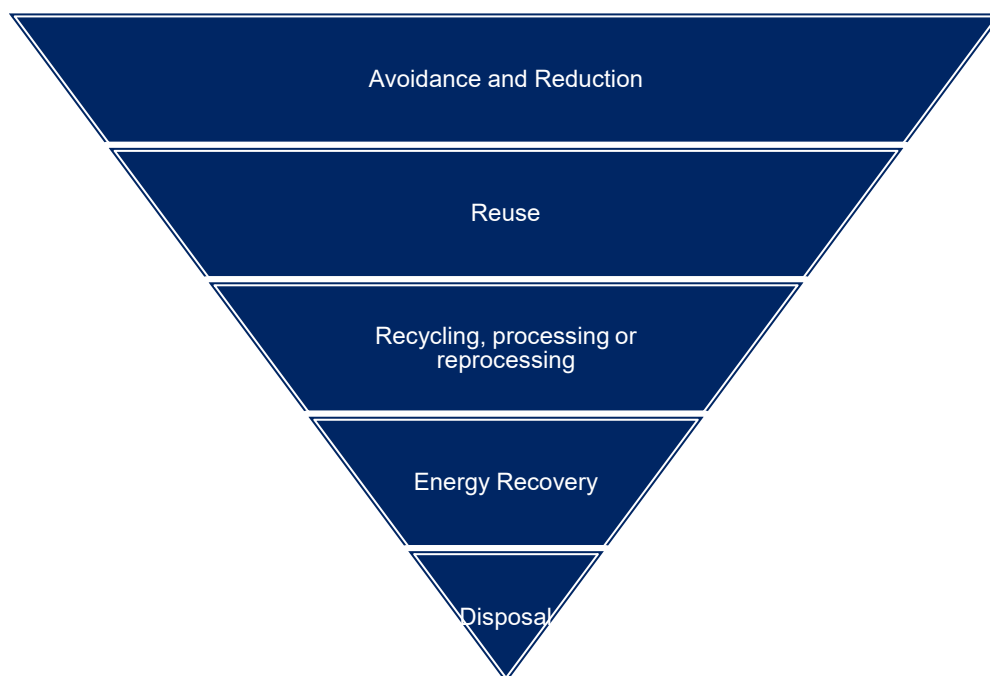


Figure 21 Waste Management Hierarchy  
Source: Ethos Urban

The proposal involves installing modular buildings, which reduces pollution and waste generated on-site. It also reduces the overall waste associated with the development, as the construction of modular buildings within a factory environment allows for the streamlining of materials usage.

During the construction works on-site, the Principal Contractor will be required to ensure that the measures outlined in the Waste Management Plan are implemented, including those that encourage the avoidance, reduction, and reuse of waste. Where waste cannot be reused, recycled, or processed, it will be classified using the NSW EPA's Waste Classification Guidelines and appropriately disposed of in accordance with the *Protection of the Environment Operations Act 1997*.

An appropriately sized temporary waste storage area will be provided during the construction stages based on the number and size of waste storage bins, containers, and stockpile areas needed to store the generated volume of waste. This waste area will be located in the construction compound.

### 6.2.13 Hazardous Materials and Contamination

Questions to consider	Yes	No
Is there potential for the works to encounter any contaminated material?	✓	
Will the works involve the disturbance or removal of asbestos?	✓	
Is the work site located on land that is known to be or is potentially contaminated?	✓	
Will the works require a Hazardous Materials Assessment?		✓
Is a Remediation Action Plan required?	✓	
Is the work category 2 works under Resilience and Hazards SEPP?		✓



The remediation works are category 1 as the site is a heritage item.

The REF is accompanied by a combined Preliminary and Detailed Site Investigation (P&DSI) prepared by JBS&G (**Appendix M**) that assesses the potential for contamination at the site and its suitability for the proposal.

Based on a historical review of the REF Activity Area, the P&DSI identified several potential areas of environmental concern (AECs) and associated primary contaminants of potential concern (COPC). These areas were further investigated via soil sampling across 8 sample locations and assessed against human health and ecological thresholds.

The soil samples produced the following results.

- The concentrations of heavy metals were all less than the human health site assessment criteria and were generally below the ecological criteria, except for:
  - Concentrations of zinc exceeded the Ecological investigation levels in one sample.
  - Concentrations of lead exceeded the health-based investigation levels and ecological investigation levels in one sample.
- The concentrations of polycyclic aromatic hydrocarbons were all less than the human health site assessment criteria and were generally below the ecological criteria, except for:
  - Concentrations of BaP exceeded the adopted generic ecological investigation levels in three samples.
- Concentrations of all other contaminants were below the adopted assessment criteria.

In addition to the above, bonded asbestos-containing material was observed in two samples, and trace-level friable asbestos was detected in one sample location. The results were below the adopted criterion for bonded asbestos-containing material.

Based on the above results, the P&DSI identified the need for a Remediation Action Plan (RAP) to make the site suitable for the proposed land use. In addition, the P&DSI recommended the preparation of an Asbestos Management Plan (AMP) to manage identified asbestos per the applicable Work Health and Safety Regulations. As such, this REF is accompanied by a RAP (**Appendix N**) and an AMP (**Appendix O**). The P&DSI concludes that the REF Activity Area can be made suitable for the proposal following the implementation of the RAP.

As the site is identified as a heritage item, the remediation works outlined in the RAP are classified as ‘Category 1 remediation work’ under Section 4.8 of the *State Environmental Planning Policy (Resilience and Hazards) 2021* and require development consent. Accordingly, the REF’s mitigation measures include a measure stating that development consent must be obtained to remediate the site in accordance with the RAP. On 31 May 2024, HI lodged a development application with Broken Hill City Council for these remediation works.

It is noted that the management works outlined in the AMP can be undertaken as development permitted without consent.

6.2.14 Community Impact / Social Impact

Questions to consider	Yes	No
Is the activity likely to affect community services or infrastructure?	✓ Positive impact	
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?	✓	

Questions to consider	Yes	No
	Positive impact	
Is the activity likely to have an impact on the safety of the community?		✓
Will the activity affect the visual or scenic landscape?	✓	
	Positive impact	
Is the activity likely to cause noise, pollution, visual impact, loss of privacy, glare or overshadowing to members of the community, particularly adjoining landowners?		✓

This REF and the accompanying technical documents confirm that the proposal is unlikely to result in adverse traffic, noise, air quality, visual, heritage and ecological impacts. Instead, the proposal will deliver the following positive impacts.

- The proposal will deliver safe, accessible key health care worker accommodation that will help attract and retain staff at the Broken Hill Hospital, thus supporting the hospital's function.
- As outlined in **Section 6.2.8**, the proposed accommodation blocks are sympathetic to the heritage significance of the 'old areas of Broken Hill Hospital'.
- The proposal will provide a source of short-term construction employment in Broken Hill.

On balance, there are not considered to be significant negative social impacts as a result of the proposal, subject to the implementation of the proposed mitigation methods (see **Appendix A**).

### 6.2.15 Ecologically Sustainable Development

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

An ESD consultant engaged by Health Infrastructure will provide guidance for the design team during the detailed design phase. The following ESD measures have or will be incorporated into the proposal to achieve these targets.

- The proposed units incorporate openings on the northern and southern facades to promote cross ventilation and allow the units to utilise the prevailing winds coming from the south, reducing the reliance on mechanical cooling during the warmer months.
- The proposed units are orientated north to maximise solar access.
- Fixtures and fittings will be selected to provide efficiency for both water and energy use.

Furthermore, the off-site fabrication of the units will help ensure a well-sealed building envelope with an appropriate level of insulation for the hot, dry summer and cool winter climate of Broken Hill. It also reduces construction waste by 80% when compared to traditional construction.

### 6.2.16 Cumulative Impact

Questions to consider	Yes	No
Has there been any other development approved within 500m of the site?	✓	
Will there be significant impacts (for example, including but not limited to, construction traffic impacts) from other development approved or currently under construction within 500m of the site?		✓
Has a cumulative impact statement, proportionate to the activity, been included in REF documentation? If no – why, not?		✓

No nearby development projects are anticipated to generate significant cumulative impacts with the proposal. The NSW Government has committed \$10 million to upgrade Broken Hill Hospital's Emergency Department. However, this upgrade is in the planning phase, and construction works are not anticipated to coincide with the proposal's construction. Nevertheless, this project relates to the hospital's lower campus and is thus removed from the development.

## 7. Summary of Mitigation Measure

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

### 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 activity, it is determined that:

- The extent and nature of potential impacts are minimal and will not have significant adverse effects on the locality, community and the environment.
- The proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a SIS and/or BDAR is not required;
- 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 installation of key health care worker accommodation within the Broken Hill Hospital site at 170-320 Thomas Street, Broken Hill, 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 proposed activity will not be carried out in a declared area of outstanding biodiversity value and is not likely to significantly affect threatened species, populations or ecological communities, or their habitats or impact biodiversity values, meaning a SIS and/or BDAR is not required. 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 5.1 of the EP&A Act. On this basis, it is recommended that HI determine the proposed activity in accordance with Part 5 of the EP&A Act and subject to the adoption and implementation of mitigation measures identified within this report.

## Appendix A Summary of Mitigation Measures

In addition to the HI standard REF conditions, this REF and the appended technical specialist report recommend the project-specific mitigation measures presented in the table below.

Aspect	Mitigation Measure	Timing
<b>Overall Construction Management</b>	<p>The preliminary Construction Management Plan (10/01/2024 – revision C) shall be developed into a final Construction Management Plan endorsed by HI addressing all the necessary requirements of construction that form part of this REF approval.</p> <p>The building contractor will prepare a HSE &amp; Environmental management plan prior to the commencement of works to:</p> <ul style="list-style-type: none"> <li>Identify the environmental issues (aspects and impacts) for this project.</li> <li>Establish, communicate &amp; implement environmental operational controls to reduce any adverse impacts on the environment from the company's activities, products, and services.</li> <li>Ensure compliance by the builder and its suppliers &amp; Subcontractors with all relevant environmental Legislation, any applicable license, approval and permit, regulatory requirements, and this EMP.</li> <li>Ensure that works are managed to reduce adverse impacts on the environment.</li> <li>Action any outcomes from incidents or accidents, project audits or other identified non-conformances and to continually improve the Environmental Management System</li> </ul>	Pre-demolition/construction
<b>Work Site</b>	<p>The hours of demolition or construction, including delivery of materials to and from the site, shall be restricted as follows:</p> <ul style="list-style-type: none"> <li>Monday to Friday: 7.00am to 6.00pm.</li> <li>Saturday: 8.00am to 1.00pm.</li> <li>Sunday and Public Holidays: No Work.</li> </ul> <p>Some work may need to be completed outside of the above hours. If required, these will be planned in consultation with stakeholders and Council to ensure all aspects of work are clearly understood by all parties and minimise disruption to hospital operations. This may include works which are most appropriately carried out outside of main working hours, for critical hospital operational reasons.</p>	Demolition/construction
<b>Remediation</b>	HI shall obtain development consent to remediate the site in accordance with the Remediation Action Plan (05/05/2024).	Pre-demolition/construction
<b>Erosion and Sediment Control</b>	The demolition/building contractor is to confirm all soil erosion and sediment controls on site to suite the programme of works with reference to the Erosion and Sedimentation Control Plans prepared by Kehoe Myers (15 February 2024).	Pre-demolition/construction & demolition/construction
<b>Air Quality</b>	All machinery and tools which generate dust are to be fitted with water attachments or dust removal devices where necessary.	Demolition/construction
	Exhaust systems, extraction fans and the like, will be provided where necessary.	Demolition/construction
	Any works involving the production of silica dusts is not to be undertaken without formal controls being determined.	Demolition/construction
<b>Waste Management (Construction and Demolition)</b>	The waste management measures outlined in the Construction Waste Management Plan (21/02/2024) shall be implemented.	Pre-demolition/construction & demolition/construction
<b>Heritage and Archaeology</b>	The unanticipated find protocol in the Statement of Heritage Impacts prepared by OzArk (dated March 2024) must be followed in the event that unrecorded or unanticipated historic objects are encountered.	Demolition/construction
	<p>An unexpected finds protocol shall be developed for Aboriginal objects.</p> <p>Should any evidence of Aboriginal relics be discovered during construction they shall be reported to Health Infrastructure and an Aboriginal Archaeologist. Any proposal to disturbance suspected relics or Aboriginal heritage site may require consultation with the Office of Environment and Heritage. All work is to cease on site until the relevant permit is received or advice is provided by Health Infrastructure that work can recommence.</p>	Demolition/construction

Aspect	Mitigation Measure	Timing
Ecology	Tree protection measure shall be applied to the trees identified in the Arboricultural Development Impact Assessment Report (dated 06/06/2024) to protect those trees during the proposed works.	Pre-demolition/construction
	An ISA (TRAQ) Level 3 Risk Assessment shall be conducted including internal diagnostic testing to determine if Tree 1 identified in the Arboricultural Development Impact Assessment Report (dated 06/06/2024) has evidence of decay within the trunk, which places this tree at increased risk of failure.	Pre-demolition/construction
	All habitat is to be removed prior to demolition and is to be supervised by a suitably qualified Ecologist to ensure appropriate techniques are utilised. Any fauna injured during such activities should be transported to a veterinary clinic or taken by a Wires volunteer.	Pre-demolition/construction
	Appropriate hygiene measures such as removal of contractor rubbish, vehicle and equipment cleaning protocols are to be implemented to ensure that operations within the site do not contribute to the encouragement or spread of feral pest, disease or weed species.	Demolition/construction