HEALTH INFRASTRUCTURE

Review of Environmental Factors

Wentworth Health Service Redevelopment

Prepared by _planning Pty Ltd

September 2023

Version 5 – Further Updated Final

NSW GOVERNMENT

HI Planning Document Control

Version	Date	Author	Description	Reviewed by	Approved by
12	July 2022	HI	REF Template Revision	RM	RM

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 Wentworth Health Service Redevelopment project at Wentworth Hospital - 24 Hospital Road, Wentworth. The redevelopment involves:

- Construction and operation of a new single-storey health services facility, including a 19-bed In-Patient Unit (IPU) plus 1 HiTH or virtual bed (equating to a 20-bed facility), associated out-patient and community health services, and urgent care centre;
- Three new staff accommodation buildings;
- Demolition of the main existing hospital building and other ancillary buildings; and
- Associated civil engineering works, including retaining the existing levee bank but building the site up to the levee bank's height; as well as tree removal; and new landscaping.

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

This REF provides a true and fair review of the activity in relation to its likely impact on the environment. It addresses to the fullest extent possible all the factors listed in section 170 of the EP&A Regulation (that is, the Department of Planning and Environment's Guidelines for Division 5.1 assessments – June 2022), as well as the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).

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

Declaration	
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Date:	7 September 2023

Document Management, Tracking and Revision History

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Abbreviations

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

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

Executive Summary

The Proposal

The works subject of this REF involve the comprehensive replacement of the existing hospital through a staged redevelopment involving:

- Construction and operation of a new single-storey health services facility, including a 19-bed In-Patient Unit (IPU) plus 1 HiTH or virtual bed (equating to a 20-bed facility), associated out-patient and community health services, and urgent care centre;
- Three new staff accommodation buildings;
- Demolition of the main existing hospital building and other ancillary buildings; and
- Associated civil engineering works including retaining the existing levee bank but building the site up to the levee bank's height; as well as tree removal; and new landscaping.

A detailed description of the scope of works, including its proposed staging, is set out in Section 3 of this REF. Note, site remediation works are subject to a development application to Wentworth Shire Council as Category 1 Remediation Works. This DA (DA2023/071) is presently being finalised, with draft conditions under review, and is anticipated to be approved by Council's officers in September 2023.

Need for the Proposal

The general need for the proposal stems from the existing level of service provided and the hospital's ageing buildings and infrastructure, and through the recommendations and requirements arising from the Wentworth Hospital Clinical Services Plan (CSP). The purpose is to provide a level of health care servicing to meet community need and expectation within contemporary accommodation. The project will include full asset replacement of the existing health service's ageing buildings and infrastructure, along with additional health services in line with contemporary models of care and the ongoing needs of the local area.

The proposed project is a new purpose-built facility that incorporates the NSW Health Multi-Purpose Service (MPS) principles of patient/resident-focused care environments with a high level of functional efficiency suitable for regional and rural facilities. Although the project is not part of the MPS program, many of the MPS design principles apply to the Wentworth Health Service due to its regional location and many operational similarities to a Multi-Purpose Service, including the project size, bed numbers, urgent care unit, and the provision of Transitional Aged Care Program (TACP) beds. The new health service will improve the community's access to health services and deliver additional inpatient and community outpatient health services, reducing the need for residents to travel to Victoria to access some services.

Proposal Objectives

The existing hospital has operated at the site for well over 100 years, with the current accommodation initially built in the 1940s. In addition to comprehensively replacing redundant and outdated health services accommodation, the proposal objectives have included:

- Retaining the existing hospital on-site until the new service is built and can become operational, thereby maintaining a seamless continuity of health services at the site.
- Retaining the existing levee bank which protects the site from flooding.
- Elevating the new hospital building level above both the predicted 0.5% Annual Exceedence Probability (AEP) flood level (1 in 200 year event) and the Probable Maximum Flood (PMF) event.
- Maintaining a bushfire asset protection zone.
- Minimising impacts upon riparian vegetation and the riparian zone along the river.

- Providing adjacencies between various health service departments to address the principles of regional multi-purpose service as identified in the functional brief and schedule of accommodation.
- Allowing for future growth and expansion opportunities on the site.

The preferred option, the subject of this REF, has satisfied these principles / objectives and has provided for a siting and design that seeks to also enhance the amenity of users of the hospital by maximising river views from all in-patient bedrooms.

Options Considered

A range of options were considered including alternative locations within Wentworth in the Master Planning phase of the project, as well as a range of siting options within the existing hospital site during the Concept Design phase.

Overall, a comprehensive review of more than 10 potential sites by HI and the Far West Local Health District (FWLHD) in consultation with hospital staff, local Council and the community, has resulted in the preferred location and option, the subject of this REF.

A do-nothing option was not considered feasible. The option the subject of this REF was determined to be the preferred option. The on-site options are further discussed within Section 3.2 of this REF.

Site Details

Wentworth Hospital is located at Lot 1 in DP 1136392 – 24 Hospital Road, Wentworth. The existing hospital site is located east of the main part of the Wentworth township, east of the Darling River and north of the Murray River in proximity of its confluence. The site is generally devoid of adjacent land uses and neighbours with much of the developed commercial, civic and residential core of Wentworth located west of the Darling River and remote from the site both by road and radially.

The operational hospital part of the overall land parcel is located within the southern portion of the lot and is also encircled by a levee about 1.5m to 1.7m above the existing ground level of the hospital land accommodating the various buildings.

The hospital site presently accommodates a range of buildings of various ages and conditions. The buildings include the main hospital building (the largest building on the site); the Seniors Activity Centre / Physio / Community Centre building adjacent to the existing at-grade car park near the entrance of the site; a number staff and nurses accommodation buildings; and a cluster of workshops, sheds, and co-related infrastructure centrally on the parts of the site contained within the levee.

Various figures further over indicate the location of the hospital to the other parts of Wentworth, the lot and DP, and the clustering of the existing development within the levee to the south of the overall site.

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, amongst other things, to facilitate the effective delivery of infrastructure across the State. Chapter 2 Division 10 of TISEPP outlines the approval requirements for health service facilities. A “hospital” is defined as a health service facility under this division.

The site is zoned RU5 - Village zone under *Wentworth Local Environmental Plan (LEP) 2011*. The RU5 zone is a prescribed zone under the TISEPP.

The delivery of the works is to be undertaken subject to section 2.61(1)(a) and (c) and 2.61(2) of the Transport TISEPP as development without consent as set out below:

> *(1) Any of the following development may be carried out by or on behalf of a public authority without consent on any land if the development is carried out within the boundaries of an existing health services facility—*

(a) the erection or alteration of, or addition to, a building that is a health services facility,

(b) development for the purposes of restoring or replacing accommodation or administration facilities,

(c) demolition of buildings carried out for the purposes of a health services facility,

(d) development for the purposes of patient transport facilities, including helipads and ambulance facilities,

(e) development for the purposes of car parks to service patients or staff of, or visitors to, the health services facility (or to service staff of, or visitors to, other premises within the boundaries of the facility).

(2) This section does not permit the erection of any building that exceeds 15 metres in height or is located closer than 5 metres to any property boundary (or an addition to a building resulting in the building exceeding that height or being closer than that distance to any property boundary).

Consistent with section 2.61(1)(a) and (c) and 2.61(2) of the TISEPP, the works are being carried out by HI (a public authority) within the boundaries of an existing health services facility.

The new hospital building is proposed to the south of the existing hospital building. The new staff accommodation buildings are generally located in the location of existing staff accommodation buildings within the southern boundary of the hospital site. All ancillary works and associated civil engineering works are also within the hospital boundaries and within the existing levee boundaries.

The demolition works relate to the demolition of the existing main hospital building and other ancillary buildings.

The new buildings do not extend beyond 15m above the existing ground level at the site, excluding any proposed earthworks.

The buildings also sit more than 5m from any property boundary. The relevant thresholds of the provisions of section 2.61(2) are therefore satisfied.

Statutory Consultation

Under section 2.62 notification is triggered to Council and occupiers of adjoining land for a period of 21 days.

A notification letter with drawings was issued to Council by email on 30 January 2023. Notification letters and drawings were also provided to occupiers of adjoining land around the hospital's perimeter by email on 2 February 2023.

As the hospital is generally remote from land with permanent occupancy, being surrounded by vacant land and the Darling and Murray Rivers to the west and south, respectively, as well as Tuckers Creek (a tributary of the Darling River) to the north, notification was only made to the nearest user of adjoining land, being the Wentworth District Rowing Club to the west of the hospital over the Darling River.

The (marginally extended) notification period for each concluded on 24 February 2023, for the reason set out below.

Following notification, no public submissions were received and Council also did not provide a submission.

Further, as the hospital site is generally flood liable land and involves a health services facility, being at the confluence of the Darling and Murray Rivers, agency notification was triggered in relation to section 2.13 of the TISEPP with the State Emergency Service (SES) . No other agency notification was applicable.

A notification letter with relevant attached drawings was provided to the NSW SES Area Manager for the Murray - Southern Zone in Wagga Wagga by email on 2 February 2023. This was subsequently forwarded onwards internally within the SES on 3 February 2023 to its newest relevant contact, the NSW SES Western Zone. This was taken to be the correct commencement of notification for the SES.

As the SES notification period concluded on 24 February 2023, the overall notification period is taken to have concluded on that date. The SES did not make a submission.

In the wake of the recent release of the suite of flood-related documents under the Flood Risk Management Manual (June 2023), HI was keen to ensure the SES was given the opportunity to comment on the redevelopment under

contemporary flood risk management guidance. On 22 August 2023 a follow-up referral was made to the SES and included the original notification letter as well as the completed Flood Emergency Response Plan (FERP). The SES responded with a letter dated 5 September 2023 setting out a range of comments. These are addressed in full in Section 5 of this REF.

Environmental Impacts

The environmental impacts of the works are varied given the comprehensive nature of the works, including demolition and civil engineering works, selected tree removal, and the construction or erection of buildings on the hospital campus. The most significant impacts identified to arise relate to localised demolition and construction noise and vibration, and other general demolition and construction impacts, particularly in relation to works adjacent to the existing operational hospital.

Construction noise is likely to impact a range of internal hospital uses within the retained and operational hospital. Management and mitigation will be applied to limit likely impacts. Construction vibration will be localised to within the subject hospital buildings and management and mitigation will again need to be applied to reduce adverse impacts upon sensitive machinery, equipment, activities and patients within the hospital.

Impacts upon vegetation, biodiversity, heritage, Aboriginal cultural heritage, natural systems including stormwater, and traffic and parking have generally been identified as negligible, low, or neutral. The proposed stormwater management works arising from the activity will improve water quantity and quality outcomes over existing base case scenarios. Tree removal will be offset with an increase in native trees at the site at a rate of better than 1:1. Importantly, the building up of the site to the existing levee level (which protects the site in a 1:200 year event), is unlikely to have any new, different, or determental adjacent or downstream flooding impacts.

Justification and Conclusion

The proposed Wentworth Health Service Redevelopment at 24 Hospital Road, Wentworth is subject to assessment under Part 5 of the EPA 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 proposed activity 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 environmental impacts of the proposal are not likely to be significant and therefore it is not necessary for an EIS to be prepared and approval to be sought for the proposal from the Minister for Planning and Public Spaces under Part 5.1 of the EP&A Act. Further, the activity will not significantly affect threatened species, populations, ecological communities or their habitats, and therefore a Species Impact Statement (SIS) and/or Biodiversity Development Assessment Report (BDAR) is not required.

On this basis, it is recommended that HI approve the proposed activity in accordance with Part 5 of the EPA Act and subject to the adoption and implementation of matters outlined in this report.

1. Introduction

NSW Health Infrastructure (HI) proposes the comprehensive replacement of the existing Wentworth Health Service through a staged redevelopment (the proposal) involving:

- Construction and operation of a new single-storey health services facility, including a 19-bed In-Patient Unit (IPU) plus 1 HiTH or virtual bed (equating to a 20-bed facility), associated out-patient and community health services, and urgent care centre;
- Three new staff accommodation buildings;
- Demolition of the main existing hospital building and other ancillary buildings; and
- Associated civil engineering works including retaining the existing levee bank but building the site up to the levee bank's height; as well as tree removal; and new landscaping,

at Wentworth Hospital (the site) as part of their delivery of infrastructure solutions and services to support the healthcare needs of the NSW communities. Site remediation works are subject to a development application to Wentworth Shire Council as Category 1 Remediation Works, with Council assessing and considering this concurrently with this Review of Environmental Factors (REF). This DA (DA2023/071) is presently being finalised, with draft conditions under review, and is anticipated to be approved by Council's officers in September 2023.

This REF has been prepared by _planning Pty Ltd on behalf of HI to determine the environmental impacts of the proposed comprehensive Wentworth Health Service Redevelopment at Wentworth Hospital – 24 Hospital Road, Wentworth. 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 section 170 of the *Environmental Planning and Assessment Regulation 2021* (EP&A Regulation), that is, the Department of Planning and Environment's Guidelines for Division 5.1 assessments – June 2022, as well as 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 Public Spaces under Part 5.1 of the EP&A Act;
- whether the proposed activity is likely to significantly affect threatened species, populations, ecological communities or their habitats, and therefore require a Species Impact Statement (SIS) and/or Biodiversity Development Assessment Report (BDAR); 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

The general need for the proposal stems from the existing level of service provided and the hospital's ageing buildings and infrastructure, and through the recommendations and requirements arising from the Wentworth Hospital Clinical Services Plan (CSP). The purpose is to provide a level of health care servicing to meet community need and

expectation within contemporary accommodation. The project will include full asset replacement of the existing health service's ageing buildings and infrastructure, along with additional health services in line with contemporary models of care and the ongoing needs of the local area.

The proposed project is a new purpose-built facility that incorporates the NSW Health Multi-Purpose Service (MPS) principles of patient/resident-focused care environments with a high level of functional efficiency suitable for regional and rural facilities. Although the project is not part of the MPS program, many of the MPS design principles apply to the Wentworth Health Service due to its regional location and many operational similarities to a Multi-Purpose Service, including the project size, bed numbers, urgent care unit, and the provision of Transitional Aged Care Program (TACP) beds. The new health service will improve the community's access to health services and deliver additional inpatient and community outpatient health services, reducing the need for residents to travel to Victoria to access some services.

A range of options were considered including alternative locations within Wentworth in the Master Planning phase of the project, as well as a range of siting options within the existing hospital site during the Concept Design phase. A do-nothing option was not considered feasible. The option subject of this REF was determined to be the preferred option. The on-site options are further discussed within Section 3.2 of this REF.

2. Site Analysis and Description

2.1 The Site and Locality

2.1.1 Exisiting Development

Wentworth Health Service (Wentworth Hospital) is located at Lot 1 in DP 1136392 – 24 Hospital Road, Wentworth. The existing hospital site is located east of the main part of the Wentworth township, east of the Darling River and north of the Murray River in proximity of its confluence. The site is generally devoid of adjacent land uses and neighbours, with much of the developed commercial, civic and residential core of Wentworth located west of the Darling River – see **Figures 1** and **2** below and over.

Figure 1 – Location map of Wentworth with Wentworth Hospital circled (SixMaps)

The operational hospital part of the overall land parcel is located within the southern portion of the lot and is also encircled by a levee about 1.5m to 1.7m above the existing ground level of the hospital land accommodating the various buildings – see **Figure 3**.

The hospital site presently accommodates a range of buildings of various ages and conditions. The buildings include the main hospital building (the largest building on the site); the Seniors Activity Centre / Physio / Community Centre building adjacent to the existing at-grade car park near the entrance of the site; a number staff and nurses accommodation buildings; and a cluster of workshops, sheds, and co-related infrastructure centrally on the parts of the site contained within the levee – see **Figure 4**.

The existing Wentworth Hospital operates as a ‘health service’ and has historically been a 20-bed in-patient health service with 2-bays dedicated to urgent requirements. 15 beds are currently operational and there is currently no Urgent Care or Emergency facility. The hospital is a short drive from Wentworth with no immediate neighbours or permanent occupancy of adjacent land. It serves approximately 3,700 people from Wentworth and surrounding towns and is supported by a small service in Dareton and a new HealthOne in Buronga.

The nearest hospital within the Local Health District is Balranald (approximately 2hrs away to the east) and Broken Hill (3hrs away to the north). The service is also supported by Mildura Base Hospital, operated by Victoria Health (30 minutes away to the south-east).

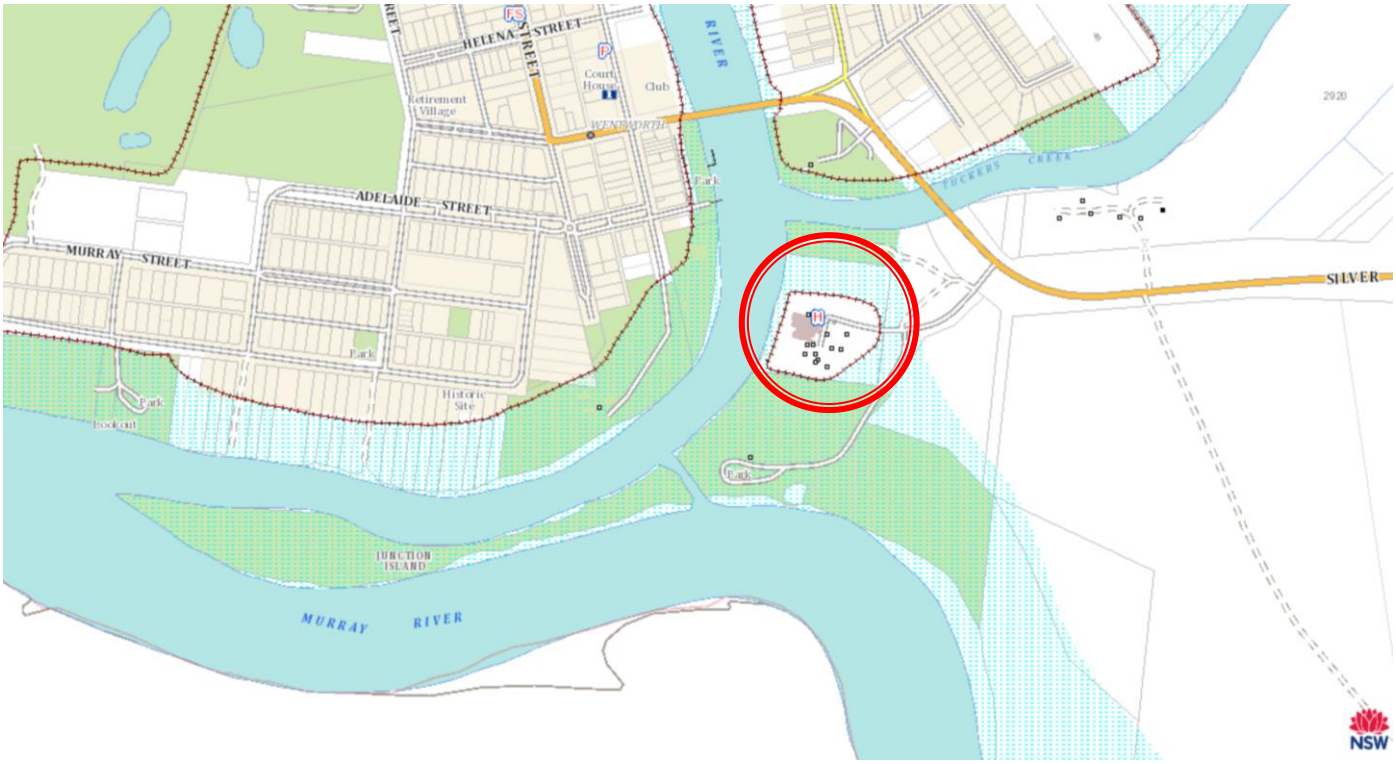


Figure 2 – Location map of Wentworth with Wentworth Hospital circled (SixMaps)

Figure 3 – Lot 1 in DP 1136392 (SixMaps)

A recent aerial photograph of the site is included at **Figure 4** over. The buildings on the site are shown in **Figure 5**. **Figures 6-8** show the main buildings on the site as well as the proposed development site.

It is understood that the site is owned by the Health Administration Corporation (HAC). The NSW Government Gazette of 12 July 2019 identifies a significant number of NSW hospital sites acquired by HAC for the purposes of the Health

Administration Act 1982 as at that date. This includes the lot and DP listed above as forming 'the Wentworth District Hospital'. This acquisition has brought this lot into HAC ownership.

Figure 4 – Aerial photograph of the site in 2022 looking north (Sky View Aerial)

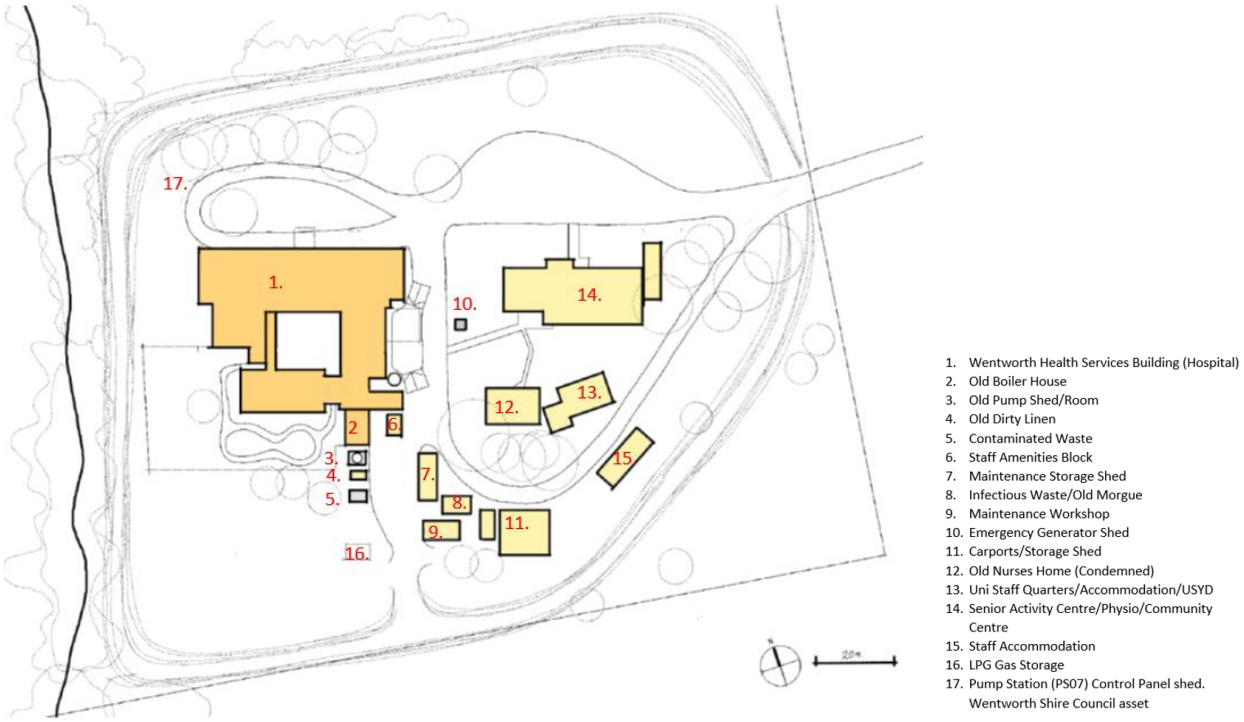


Figure 5 – Existing buildings on the Wentworth Hospital site (HI)

Figure 6 – The existing main hospital building

Figure 7 - The Seniors Activity Centre / Physio / Community Centre building adjacent to the existing at-grade car park

Figure 8 – Existing main hospital building viewed from the levee adjacent to the Darling River with the development site in the foreground

2.1.2 Other Site Elements

The following sets out other relevant site elements.

Topography

Based on a survey prepared for the proposed works, the development site generally sits around RL 34.00 to RL 34.55 and could be generally described as flat. The site sits about 2.0m to 2.5m above the foreshore level outside of the site at the Darling River. The levee bank encircling the hospital buildings is generally at RL 35.70 to RL 36.00 about 1.5m or greater above the existing ground level of the development site. See **Figure 9** providing a range of spot heights within the area of the development site for the new main hospital building. The site survey is found at **Appendix A**.

The levee generally protects the hospital building cluster from flooding, including the record 1956 flood as seen at **Figure 10**. The levee protects the hospital site from a 1:200 year flooding event.

Vegetation

Based on an assessment by TreeIQ, there are 68 trees (or groups of trees) located within the land parcel comprising the hospital site and the adjacent Darling River riverbank frontage outside of the site. The vast majority of the vegetation at the site is remnant native vegetation along the Darling River and to the north of the hospital building cluster outside of the levee bank.

Figure 9 – Spot heights (source unknown)

The areas subject of the works currently accommodates nine (9) trees – Trees T50-T52 and T62-T67 – see **Figure 11** further over. The most visually prominent of these is Tree 67 (as shown as **Figure 12**) which is a mature 17m Stone Pine in good condition. The are also four (4) dead and non-hollow bearing trees located within the eastern part of the site.

OzArk (the project's ecologist) has identified numerous mature native trees, of a non-local origin within the boundaries of the levee which are not able to be assigned to a Plant Community Type (PCT). Their field survey did however identify two plant community PCTs outside of the levee and the development site itself as shown in **Figure 13**:

- PCT 11 – River Red Gum – Lignum very tall open forest or woodland wetland on floodplains of semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion); and
- PCT 15 – Black Box open woodland wetland with chenopod understorey mainly on the outer floodplains in south-western NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion)

Neither of the above PCTs have any associated Threatened Ecological Communities under either the NSW *Biodiversity Conservation Act 2016* or the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999*. No threatened flora or fauna were observed on the subject site by OzArk.

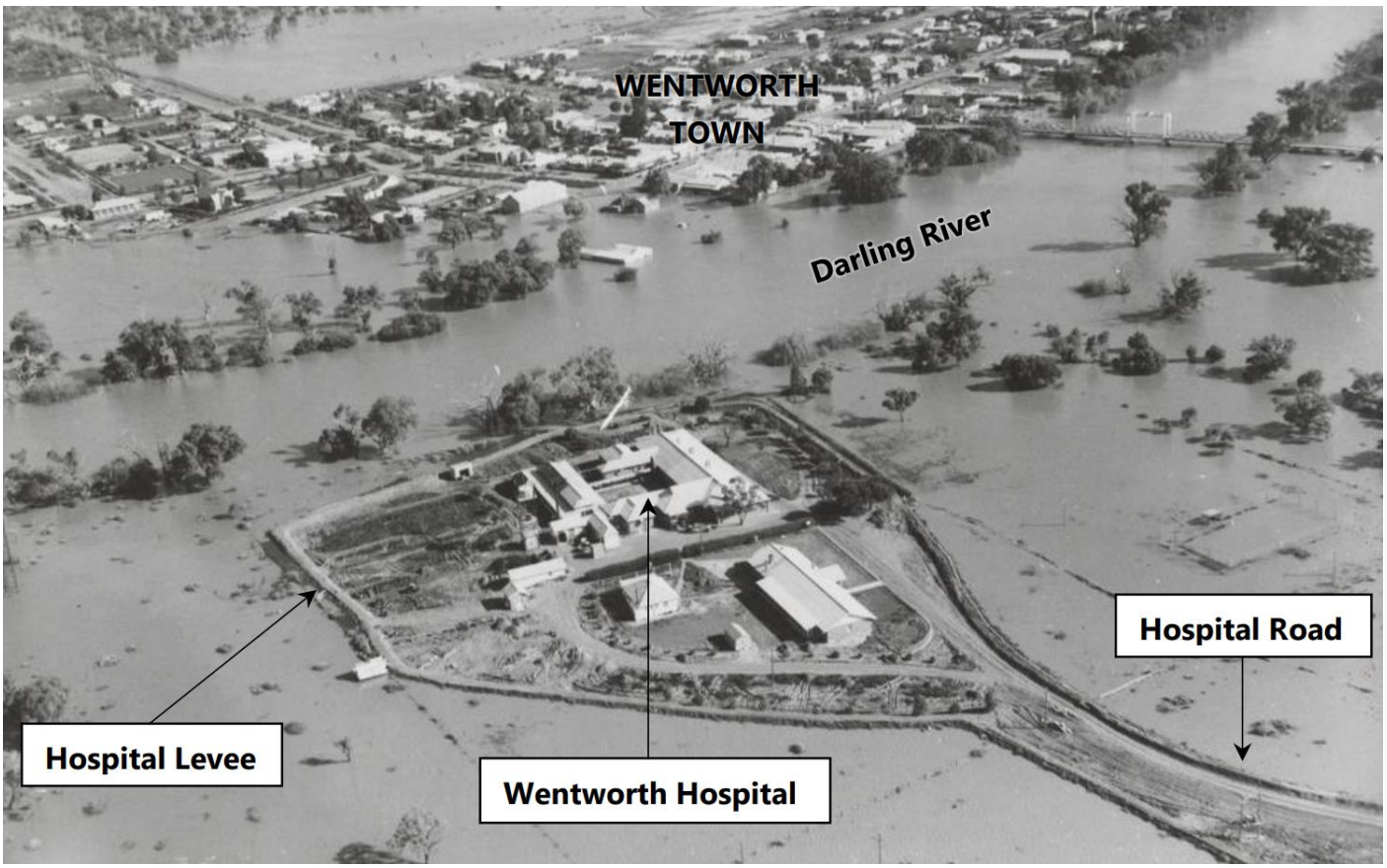


Figure 10 – Aerial photo of Wentworth Hospital during the 1956 flood (Advisian via original aerial photo by Frank Zaetta)

Figure 11 – Tree location plan (TreeIQ)

Figure 12 – Existing Tree T67 from the TreeIQ assessment

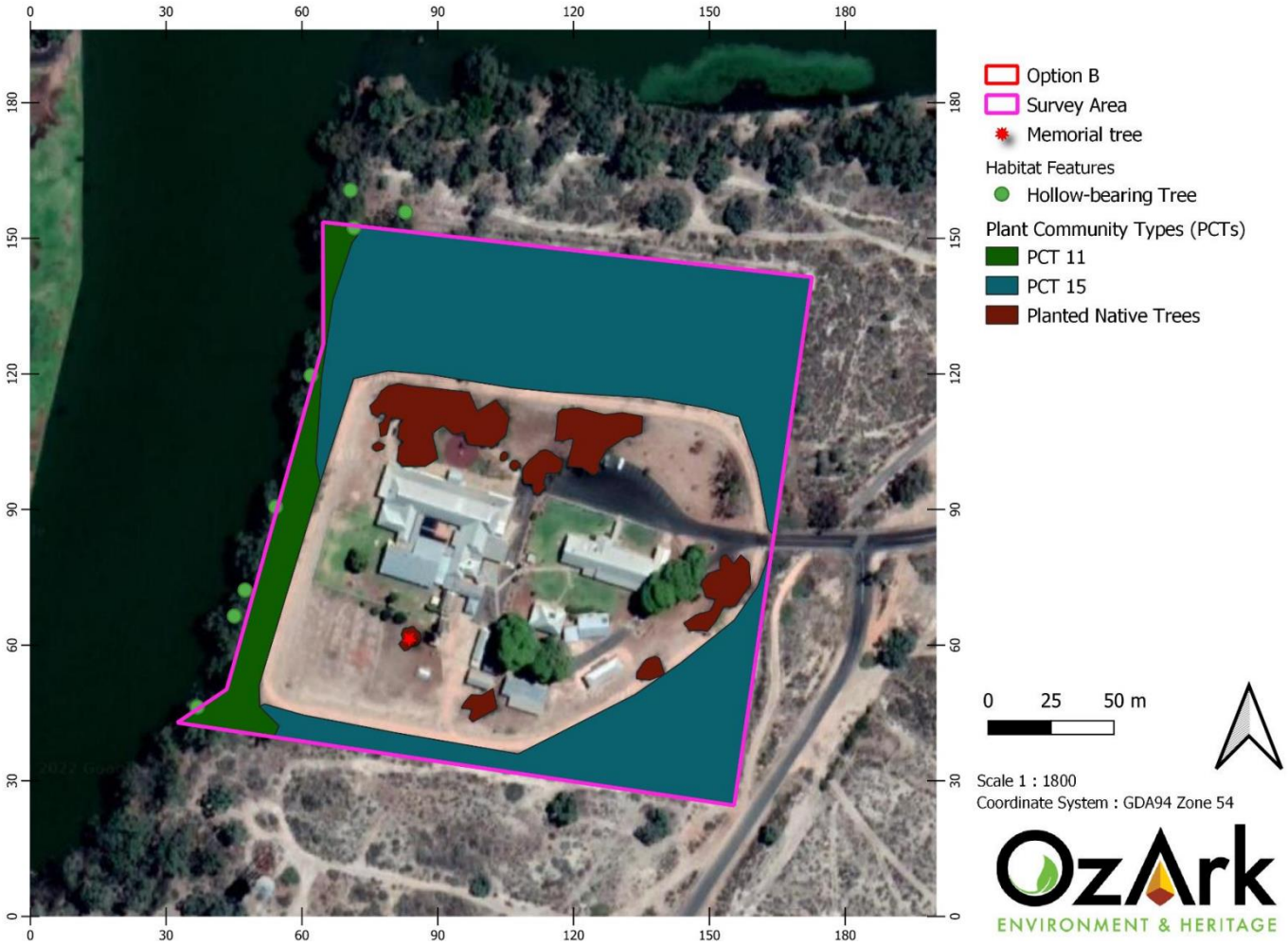


Figure 13 - Habitat features, memorial tree and PCTs within the study area (OzArk)

Access / Transport

The distance from the Wentworth town centre (about 1.3km by road) and other residential areas means that trips to the hospital are primarily made by private vehicle or ambulance.

General access into the hospital for pedestrian and vehicles is via Hospital Road which intersects with the Silver City Highway, the main route between Wentworth and Curlwaa, Dareton and Buronga to the east. The road is sealed and leads directly to the hospital's at-grade car park. The existing site has its own dedicated car park with about 24 parking spaces.

The intersection of Silver City Highway and Hospital Road is a T-junction, with traffic on Hospital Road giving way to traffic on the highway and a deceleration lane for traffic turning left into Hospital Road. Hospital Road also provides access to Ski Reserve Road, which enables access for recreational water sports at the confluence of the rivers.

A traffic survey was undertaken by SCT Consulting on Tuesday 3 May 2022 at the Silver City Highway / Hospital Road intersection, which indicated AM and PM peak hours of 7.45-8.45am and 5.15-6.15pm. The survey indicated about 8 vehicles entering the site and 3 vehicles exiting the site in the AM peak hour, with only one vehicle entering the site and two vehicles exiting the site in the PM peak hour. About 110-160 vehicles per hour were recorded travelling in each direction on the Silver City Highway in the AM and PM peak hours. The intersection would operate with significant spare capacity.

No timetabled bus services service the hospital. The closest bus stop is in Wentworth proper which forms part of the:

- Mildura – Buronga - Dareton – Wentworth 950 bus route; and the
- Wentworth - Dareton – Buronga - Mildura 951 bus route.

This service is operated by CDC Victoria on weekdays only, five times a day.

A shared footpath for pedestrians and cyclists runs adjacent to Silver City Highway and Hospital Road. The quality of the footpath surface is quite poor and anecdotal evidence suggests it is rarely used.

Infrastructure and Services

The hospital site is presently serviced by electricity, communication services, Liquid Petroleum Gas (LPG), potable water and sewer, and water supply fire services.

Council's sewer main traverses the Darling River frontage of the site linking pump station PS09 off the site with pump station PS07 which is located in the far north-western corner of the site outside of the levee.

Figures 14 – **17** show the development site in the broader context of the existing hospital site and its general environs.

Figure 14 – The existing levee adjacent the Darling River with existing main hospital building in the background

Figure 15 – The existing levee running from west to south around the hospital

Figure 16 – The development site viewed from the levee at the hospital's southern boundary

Figure 17 – The development site from the levee viewing the LPG compound, Old Pump Shed and Tower, and main hospital building

2.1.3 Site Considerations and Constraints

Section 10.7 Planning Certificate No. 2022-355 dated 29 November 2022 identifies that the site is located within the RU-5 Village zone under *Wentworth Local Environmental Plan 2011*, and is provided at **Appendix B**.

Table 1: Section 10.7 Planning Certificate

Affectation	Yes	No
Critical habitat		✓
Conservation area		✓
Item of environmental heritage		✓
Affected by 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	✓ Flood Planning Area / Floodway	

2.2 Surrounding Development

The site is relatively isolated from any surrounding development in being segregated and remote from the Wentworth township proper by the Darling River and in part Tuckers Creek to the west and north, respectively. Much of the surrounding land is vacant and in the ownership of Council. The only visible development of any type adjacent to the hospital is the Wentworth water tower as shown in **Figure 18** below. This tower is a local heritage item (Item I94 under the Wentworth LEP 2011).

Based on NSW Heritage inventory, this *prominent high iron tower structure (is) associated with the early water supply of town of Wentworth which has landmark status. The tower being the highest structure in the town is a landmark specially when entering the town from Curlwaa and from the Murray and Darling Rivers. The structure is the only one in Wentworth and rare in the Shire. The tower is reasonably intact, is not used and is fair condition.*

The tank is comprised of a tall pre-stressed tower of nine cylindrical iron columns bolted in four sections, supporting a water tank with galvanised iron polygonal roof and decorative wrought iron finial. It was built in 1888 by Hudson Brothers Ltd of Clyde, Scotland and imported to Wentworth.

The nearest adjacent land uses opposite the Darling River and Tuckers Creek are public reserves and parks, along with the caravan park, which is temporarily closed for renovation and flood protection works (as well as being subject to recent flooding of the area). The Wentworth District Rowing Club is located over the Darling River from the hospital.

Figure 18 – Wentworth Water Tower from the levee on the southern boundary of the site

Figure 19 – The Darling River and western foreshore from the levee at the site

Figure 20 – The Darling River from Wentworth looking east to the hospital

3. Proposed Activity

3.1 Proposal Overview

The works subject of this REF involve the comprehensive replacement of the existing hospital through a staged redevelopment involving:

- Construction and operation of a new single-storey health services facility, including a 19-bed In-Patient Unit (IPU) plus 1 HiTH or virtual bed (equating to a 20-bed facility), associated out-patient and community health services, and urgent care centre;
- Three new staff accommodation buildings;
- Demolition of the main existing hospital building and other ancillary buildings; and
- Associated civil engineering works including retaining the existing levee bank but building the site up to the levee bank's height; as well as tree removal; and new landscaping.

A detailed description of the scope of works, including its proposed staging, is set out further below in this section of the REF. The architectural drawing set and supporting design statement and Connecting with Country report is provided at **Appendix C**. The landscape drawing set and supporting design statement is provided at **Appendix D**.

An indicative render of the proposed new single-storey health services facility is shown below in **Figure 21**.

Figure 21 – Indicative architectural render of the proposed new single-storey health services facility (adapted from NBRS)

Site remediation works are subject to a development application (DA) to Wentworth Shire Council as Category 1 Remediation Works, with Council assessing and considering this concurrently with this REF. Further detail with respect to this application, the categorisation of the works and trigger for the need for a separate DA, and the timing and scope of works is provided later within this REF. This DA (DA2023/071) is presently being finalised, with draft conditions under review, and is anticipated to be approved by Council's officers in September 2023.

Need for the Proposal

The general need for the proposal stems from the existing level of service provided and the hospital's ageing buildings and infrastructure, and through the recommendations and requirements arising from the Wentworth Hospital Clinical

Services Plan (CSP). The purpose is to provide a level of health care servicing to meet community need and expectation within contemporary accommodation. The project will include full asset replacement of the existing health service's ageing buildings and infrastructure, along with additional health services in line with contemporary models of care and the ongoing needs of the local area.

The proposed project is a new purpose-built facility that incorporates the NSW Health Multi-Purpose Service (MPS) principles of patient/resident-focused care environments with a high level of functional efficiency suitable for regional and rural facilities. Although the project is not part of the MPS program, many of the MPS design principles apply to the Wentworth Health Service due to its regional location and many operational similarities to a Multi-Purpose Service, including the project size, bed numbers, urgent care unit, and the provision of Transitional Aged Care Program (TACP) beds. The new health service will improve the community's access to health services and deliver additional inpatient and community outpatient health services, reducing the need for residents to travel to Victoria to access some services.

Proposal Objectives

The existing hospital has operated at the site for well over 100 years, with the current accommodation initially built in the 1940s. In addition to comprehensively replacing redundant and outdated health services accommodation, the proposal objectives have included:

- Retaining the existing hospital on-site until the new service is built and can become operational, thereby maintaining a seamless continuity of health services at the site.
- Retaining the existing levee bank which protects the site from flooding.
- Elevating the new hospital building level above both the predicted 0.5% Annual Exceedence Probability (AEP) flood level (1 in 200 year event) and the Probable Maximum Flood (PMF) event.
- Maintaining a bushfire asset protection zone.
- Minimising impacts upon riparian vegetation and the riparian zone along the river.
- Providing adjacencies between various health service departments to address the principles of regional multi-purpose service as identified in the functional brief and schedule of accommodation.
- Allowing for future growth and expansion opportunities on the site.

The preferred option the subject of this REF has satisfied these principles / objectives and has provided for a siting and design that seeks to also enhance the amenity of users of the hospital by maximising river views from all in-patient bedrooms.

3.1.1 Design Approach

Placemaking and Design

The development will achieve good design in accordance with the seven objectives of *Better Placed* (GANSW, May 2017), namely Better Fit; Better Performance; Better for Community; Better for People; Better Working; Better Value; and Better Look and Feel. Commentary on these is set out below as derived from the NBRS Design Statement (see **Appendix C**).

Better Fit

The proposal has been designed as a direct response to the context of the site, the Country in which it is located, the adjacent river and the constraints of existing development. The designing with Country process fundamentally underpins the design approach.

The building location responds to the views of the river and integration with the landscape along the river bed. In doing this the proposal seeks to create a better built environment for the future. Unique elements such as the proposed entry with a curved wall add a special feature to the building. Tree-like column and an oval skylight drawing reference from

the significant indigenous element of the scar tree; create a connection with the locals. The building massing, high-level skylight and materiality create a connection to the ground plane as well as to the sky.

Better Performance

The proposal is designed to be sustainable in its construction and operation, fit for purpose in its use, and durable in its construction. The building is designed to be 4-star Greenstar equivalent. The building includes numerous sustainability initiatives. Key ESD initiatives incorporated in the project include:

- Full electrification of the site in line with Health Infrastructure's long-term electrification strategy and to reduce carbon footprint. The site currently uses LPG gas, and transitioning to 100% electrification will enable a future of carbon natural operations.
- Consultation and Incorporation of Indigenous Design Elements.
- Onsite Renewable Energy via Rooftop Solar Photovoltaics (PV) cells.
- Outdoor green spaces and access to nature.
- Enhancement of ecological values through green infrastructure and planting selection.
- Reduce building energy use and associated carbon emissions through passive design strategies and energy efficiency considerations.
- Rainwater tanks of 15,000 litres for landscape irrigation with raw water top-up.
- Promote the use of low carbon transport model through the provision of infrastructure to support the installation of EV charging.
- Ongoing development of a Climate Change Risk Assessment (CCRA) and adaptation plan.
- Views to external planting for connection to nature), natural daylighting and glare control.
- Design for Lighting comfort, Acoustic comfort, and Thermal comfort.
- Reduction of embodied energy in construction materials.
- Minimising demolition and construction waste.
- Increasing the use of sustainable materials and recycled content.
- Use of materials with low off-gassing (low VOC's and Formaldehyde).
- Operational waste reduction and recycling.
- Sustainable drainage system considered such as biofiltration and swales.

The building is designed for robustness and durability. Wherever possible materials are selected with integral finishes to minimise wear and maintenance. The strategies will be considered within the project constraints such as budget, programme, site, infection control etc to ensure the appropriate and sensible outcome.

Better for Community

The proposal seeks to provide an inclusive and connected environment for its users and the community.

- The main building entry is designed to be welcoming and accessible.
- The landscaped spaces around the edges of the building and at the entry are designed to provide places for people to either sit quietly or gather with others.
- Indoor gathering space opening to the the courtyard connecting with yarning circle provides a unique meeting space for the families of the patient as well as general community members.

- The building is designed for equitable and dignified equitable access to all areas across Community Health, Urgent Care Centre and the Inpatient Unit.

Better for People

The proposal seeks to provide safe, comfortable and livable spaces for all the people who use it.

- The building is designed with safety in mind, ensuring clear sidelines for safety and surveillance.
- Internal spaces are designed to maximise natural light and create user-friendly and rich enjoyable environments. The inpatient day living areas are designed to provide access to abundant but controlled natural light, generous double height spaces and river outlooks.
- Gathering areas such as Patient lounge, Gym and Indoor Gathering Area allows direct access to outdoor landscape.
- Palliative Care Bedroom and the Family Lounge have a dedicated outdoor area that is accessible directly from the rooms.
- Staff areas are designed to be safe, well lit and well ventilated.

Better Working

The proposal is designed for functionality and effectiveness to ensure its ongoing viability and utilisation. Considerable analysis and design refinement has developed a proposal that has efficient circulation, streamlined workflows, creates consolidated workspaces across hospital considering Protecting People and Property guidelines, and provides flexibility in use as suitable by the staff. Access to natural daylight for most working areas is considered to enhance the work experience.

Better Value

The proposal creates value for the users and the community, setting a high standard in the design of a rural health service, creating social and well-being benefits for users and enhancing the adjacent areas of the site. The design of the building fundamentally considers and integrates responses to the needs of sustainability, social impact and economic viability.

Better Look and Feel

- The proposed development seeks to create an environment in and around the building that contributes to the sense of place and enriches the surrounding environment.
- The unique design approach of the connection with nature contributes to a rich and diverse environment enhancing the experience of the facility.
- The site areas are softened and enriched with a landscape treatment that creates rich and varied environments around the new development. This landscape treatment is underpinned by the regeneration of Country and incorporates direct response to first nations engagement.
- The design of the building entry makes a significant contribution visually and in terms of connecting with Country, through transparency, art, symbolic elements of scar tree and greening of external spaces

In terms of the **Crime Prevention Through Environmental Design (CPTED) Principles**, NBRS has advised as follows with respect to its design decisions.

Surveillance and Visibility

There are clear sight lines between public and private areas. Public access will be controlled to areas that are well supervised and entry points into the building are limited. The use of CCTV will be implemented as required. To be an effective crime prevention tool, cameras must be monitored.

Access Control

There will be access control to define staff only areas throughout the hospital. The access control will be applied to all entry points after hours.

Territorial Reinforcement

Places that are well maintained and designed are often more regularly visited and endowed with a sense of community, accordingly well used spaces reduce crime opportunities, and in this instance, it is intended that the new landscaped permitted will provide patients with recreational and congregating opportunities which, from experience of other facilities, will be well used.

Space Management

Well maintained and cared for spaces discourage crime as they tend to be more actively used and unwelcome persons readily identified. The hospital is a secure facility from the perspective of public access, with monitored access points at the main entry, and CCTV monitoring of the external areas.

Clearly marked, open, visible pedestrian access ways have been provided throughout the landscape to destination points.

Circular movement of traffic providesmore constant natural surveillance of the landscape.

Lighting

Lighting will meet minimum requirements under Australian Standards (AS 1158 for external lighting and AS 1680 for interior lighting). Direct lighting to the external areas and car park so that the staff and visitors can have clear vision of the area.

Connecting with Country/ Engagement

Connecting with Country and Designing with Country has been an important element in the project and an Aboriginal Design Working Group was established as part of the evolution of the project's design.

Engagement has commenced, and will continue, with the local Aboriginal community through the FWLHD, Local Aboriginal Land Council, Barkandji PBC, and other organisations, as appropriate.

From the outset of the project, it was identified that Indigenous guidance and local knowledge is integral to the project's design, longevity and future use. Three Aboriginal Focus groups were facilitated by HI and the FWLHD. This involved talking to local elders about the project design and actively listening to their needs and concerns. The sessions allowed the opportunity to talk to the various Community members for feedback on the design and to understand their needs and priorities.

The following points have been adopted to ensure cultural safety for participants and the design team for the life of the engagement.

- Indigenous-led.
- Community-specific.
- Share knowledge and collaborate.
- Demonstrate respect and honour.

The design and engagement process has resulted in the project team establishing broader connections with the Barkindji community. The engagement has received supportive feedback from the Indigenous community. The process and outcomes are consolidated in the Connecting with the Country report (as found as part of **Appendix C**).

Sustainability

A range of sustainability initiatives have been employed within the main new building consistent with the requirements of HI's Design Guidance Note (DGN) No. 058 Environmentally Sustainable Development (DGN 58). The HI ESD

Evaluation tool has been developed by HI and is based primarily on the Green Star rating scheme and allows projects to target and award sustainability initiatives that offer value to the project. The HI ESD Evaluation tool primarily focuses on sustainability initiatives from the Green Building Council of Australia's Design and As-built tools, as this tool has been specifically developed for the Australian Construction Industry. The HI ESD Evaluation tool utilises the same scoring system and initiatives to align with the best practice sustainable design, however only seek equivalency with those targets rather than formally registering the buildings as having satisfied those targets for certification by the Green Building Council of Australia.

Under the HI ESD Evaluation Tool the minimum required equivalent score is 4-Star or 45 points, with a 5 point buffer. The works must also achieve a minimum 10% improvement upon the GHG Emissions reduction compared to the NCC 2019 Section J requirements.

The following Sustainable Design Initiatives have been incorporated into the project by LCI as part of its ESD reporting (see **Appendix E**). The strategies are organised in nine categories as per the Health Infrastructure DGN 58 ESD Evaluation tool. The categories are:

- Management
- Indoor Environmental Quality
- Energy & GHG Emissions
- Materials
- Transport
- Water
- Land use and Ecology
- Emissions
- Innovation

The strategies will be benchmarked against the HI ESD Evaluation Tool to achieve a minimum 4 Star Rating as per the HI DGN 58 Ecological Sustainable Design.

LCI advises that the project achieves the required 45 Green Star points plus a 5 point buffer, by achieving 53 points as well as the required minimum of 10% Reduction in GHG emissions. The project may aspire to additional Green Star points subject to the project budget.

Further, the EP&A Regulation lists four principles of ESD required to be considered in assessing a project:

- The Precautionary Principle
- Intergenerational equity
- Conservation of biological biodiversity and ecological integrity
- Improved valuation and pricing of environmental resources

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

This REF has not identified any serious threat or irreversible damage to the environment and therefore the precautionary principle is not relevant in this case. The proposed project will be constructed on previously developed land. During the design and construction phases, the main contractor will implement an independently certified Environmental Management System (EMS), which demonstrates formalised systematic and methodical approach to planning, implementing, and auditing. Throughout the building's operation, adherence to procedures that account for environmental risk and that mitigation measures will be met.

Intergenerational equity is concerned with ensuring the health, diversity and productivity of the environment can be maintained or enhanced for the benefit of future generations. The proposal satisfies this by providing a means to providing enhanced and much needed health services for generations to come. Further, to uphold inter-generational equity, the proposed development minimises the consumption of energy and water resources whilst reducing embodied carbon and waste. The ESD principles incorporated into the proposed development facilitates the conservation of energy and water resources through energy and water efficiency measures.

Energy consumption will be designed to achieve a minimum 10% improvement above National Construction Code requirements (NCC BCA 2022) and is targeting even higher levels of efficiency. The building is designed to be fully electric creating a pathway for a future net-zero carbon emissions building when the procured electrical energy comes from a renewable source. Onsite renewable energy from solar PV panels will reduce grid demand. Provision of infrastructure to support the installation of EV charging has been included.

The reduction in water use will be established through high WELS rated water fixtures and fittings and a rainwater capture and reuse for irrigation of the landscape.

Waste generated during the construction and operational phases will be diverted from landfill to be recycled. An Environmental Management System (EMS) will be established and adhered to throughout construction. Operational waste streams will be separated to maximise recycled waste once the building is complete and occupied.

The principle of biological diversity upholds that the conservation of biological diversity and ecological integrity should be a fundamental consideration for any development. The proposal will have no detrimental effect upon this, given the general lack of biodiversity values present on the site in the location of the works.

This redevelopment project sits on a developed block surrounded by the neighbouring rivers and watercourses. The land has previously been built up to protect the buildings from erosion. Therefore, nothing within the project's boundary could be considered undeveloped. This will not have an adverse environmental impact and therefore alleviates concern of serious or irreversible environmental damage. These trees will help prevent erosion, create habitat for fauna, assist in reducing the temperature in the localised area during hot days and increase building occupants' connection to nature. The future designed garden space celebrates the natural environment with input from indigenous consultants.

The project's ESD principles to reduce energy, water and waste consumption have an indirect impact to conserve biodiversity and ecological integrity to the surrounding area. By minimising demand on energy and water resources, the need for land-clearing and the pollution generated from new utility infrastructure to support the surrounding area will be minimised.

The principles of improved valuation and pricing of environmental resources requires consideration of all environmental resources that may be affected by a proposal, including air, water, land and living things. Mitigation measures are included in this REF for avoiding waste and ensuring where possible reuse, recycling and managing waste occurs, as relevant to this scope of works. The valuation of the project's assets and services consider environmental factors through the implementation of various ESD initiatives. An Environmental Management System will be in place throughout the construction to ensure that excessive pollution and waste are minimised, and to establish recycling and avoid landfill waste streams during construction and operational phases. This creates a system where pollution is managed and controlled and creates an incentive to reduce pollution and waste. In operation, the pursuit of resource efficiency for energy and water will reduce running costs and increases the value of the development to HI, the FWLHD and patients and employees alike.

3.1.2 Proposed Activity

The Wentworth Health Service Redevelopment will include a total of 19 in-patient beds (plus 1 HiTH or virtual bed) with 5 Acute, 6 Sub-acute and 8 beds under the Transitional Aged Care Program. Sub-acute inpatient beds will be utilised to rehabilitate or recondition patients either as a step-down from acute care, direct admission from the new Urgent Care Centre (UCC) or transfer from external facilities. The introduction of the UCC and acute inpatient bed-base aims to reduce some of the demand for emergency and acute inpatient presentations at Mildura Base Hospital and reduce the NSW Ambulance transportation of patients to Mildura.

Two existing two-person staff and student accommodation buildings are proposed to be retained, with three additional accommodation buildings proposed (each with 2 x 1-bedroom units side-by-side) to be delivered under the scope of this project.

Delivery of the project is proposed to be completed in three stages:

- Stage 1A, in which the new health service building is constructed.
- Stage 1B, in which the existing health service building is demolished and the circulation loop at the new building is completed.
- Stage 2, in which all proposed roadworks within the site is completed, which also allows for bus access. This stage will be possible subject to project funding / budget allocation.

Broadly, the redevelopment results in:

- Up to 20 staff, broken down as:
  - 13 staff in the AM shift (including Allied Health workers and 6 back of house staff)
  - 4 staff in the PM shift (including 1 back of house staff)
  - 3 visiting staff, assuming that the consultation rooms are 50% occupied.
- An increase in capacity for patients and patient activity by 2036 to 132 acute and sub-acute episodes and 9.9 bed days. This is a marginal growth of 24 episodes and 0.4 bed days on 2021 activity.

Built Form

The proposed new hospital building will replace the existing hospital and be located to its south to enable continued operation of the hospital during construction. The new building will be single storey in height up to a maximum building height of approximately 8.9m from existing ground level but noting the existing ground level will be built-up to the height of the surrounding levee bank. Its finished floor level will be at RL 36.00m AHD to protect the building from flooding in the 1:200 year event and the PMF. The increased ground level will also promote river views over the levee through the riparian vegetation along the river bank.

Pre-fabricated single storey staff accommodation units will also be provided at the site in the staff accommodation zone along the southern boundary of the site inside the levee and towards the site entry. These three new buildings will supplement the retained accommodation units bringing the building units to a total of five (5) such buildings on site. The general, spatial arrangmement of the proposed activity is set out in **Figure 22** below with **Figure 23** further over showing the proposed site plan from the artchitectural drawing set.

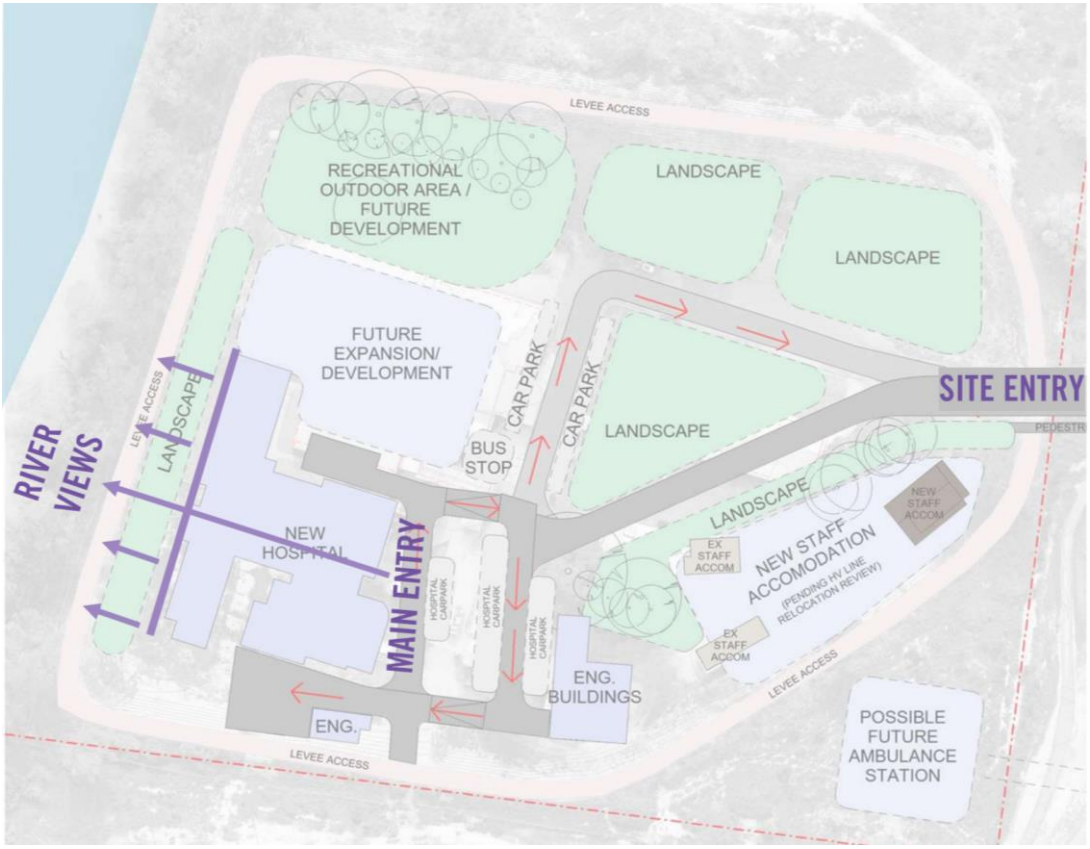


Figure 22 – Site Plan in the initial Concept Design phase (NBRS)

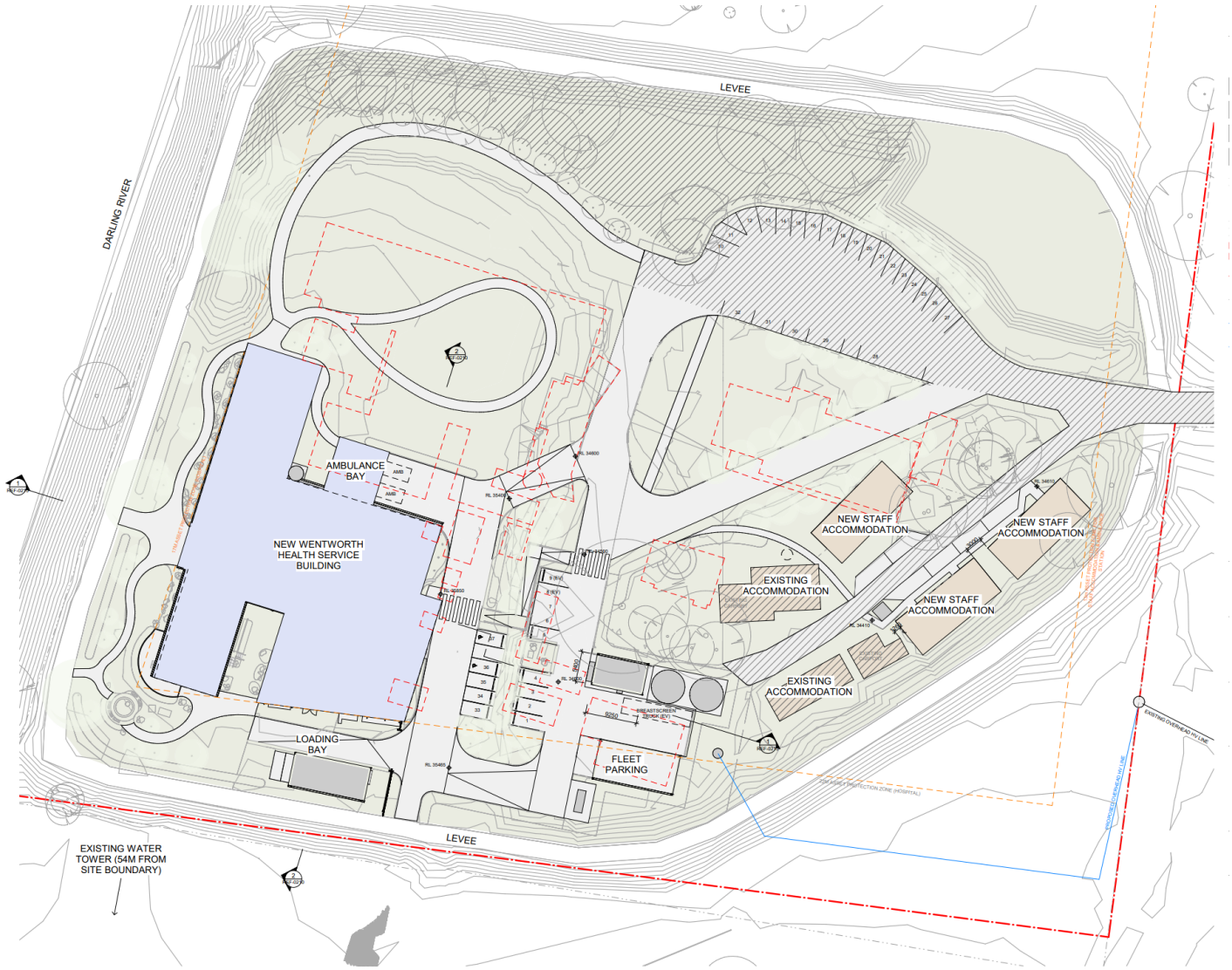


Figure 23 – Site Plan (NBRS)

The internal spatial arrangement of the new hospital building will include the IPU oriented laterally and parallel with the Darling River to afford it a high amenity with views to the riparian vegetation along the river bank, the site's new landscaping in this location, and the river beyond.

The Urgent Care Centre (UCC) will sit more centrally within the building focussed upon the ambulance bay to the building's north.

The new entry and arrival point addresses the reconfigured internal roadway to the east of the building with the Community Health component of the functionality adjacent to this arrival point.

Support areas such as administration, staff areas, and back-of-house including the loading dock are focussed to the south of the building.

Figure 24 over shows this general spatial arrangement.

Figure 24 – Internal functionality and general spatial arrangement (NBRS)

Elevations of the proposed new hospital building are set out in **Figure 25** with **Figure 26** providing an indicative architectural render of the eastern elevation which shows the new building's main arrival / entry point and the ambulance bay behind to the building's north.

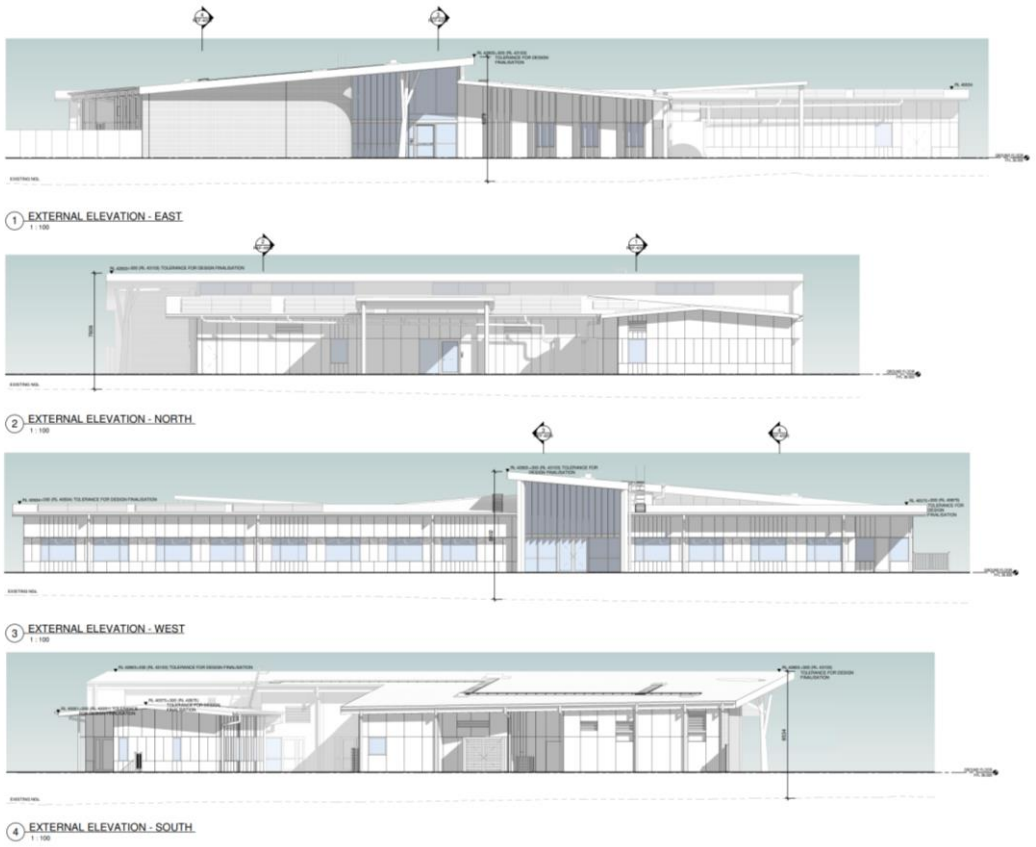


Figure 25 – Elevations (NBRS)

Figure 26 – Indicative architectural render of the new arrival / entry point and ambulance bay (adapted from NBRS)

The staff accommodation includes three (3) new pre-fabricated and studio apartment style dwellings that will be delivered to the site and erected. Each has twin one-bedroom dwellings with robe, bathroom with toilet, laundry, open plan kitchen, and living as set out below in **Figure 27**. Each building unit has an approximate GFA of 93m^2. The Coolibah Cabins drawing set for these pre-fabricated buildings is located at **Appendix F**.

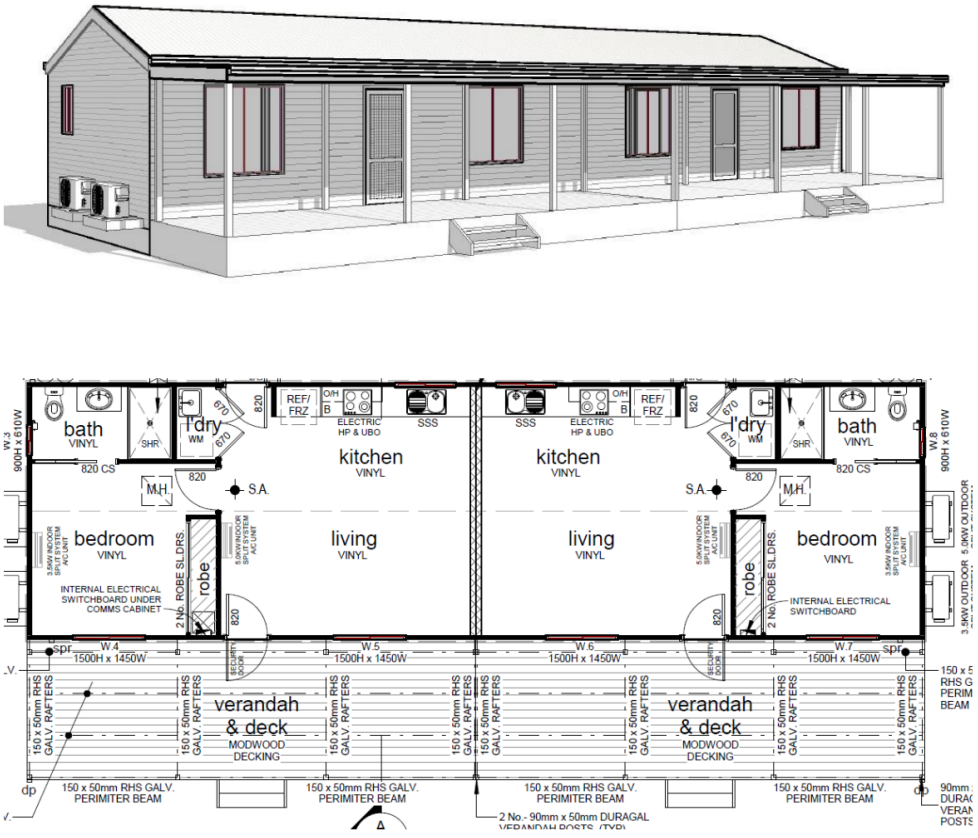


Figure 27 – Example of proposed pre-fabricated staff accommodation dwelling (Coolibah Cabins)

Roadworks and Parking

A range of access, parking and site circulation upgrades are proposed.

Parking

The on-site staff and visitor parking supply is to be increased from some 24 spaces to a total of 37 at-grade spaces, including two accessible spaces.

Designing for Green Star rating requires that 5% of parking on site is dedicated to electric vehicles with charging infrastructure provided for each space. The redevelopment will provide two parking spaces that are future-proofed for EV charging, meeting the Green Star requirements. This will also meet HI's Design Guidance Note (DGN) number 046 which states that car parks should provide for and/or facilitate EV charging, future proofing (power and communication conduits) for 2% of the total number of parking spaces.

Separate to the staff and visitor parking spaces, six (6) parking spaces have been dedicated to the LHD's fleet vehicles. This consists of four (4) car spaces, one (1) space for a 12-seater community transport van (sized for an SRV) and one (1) space for the dental van that is stored seasonally on site.

The FWLHD dental van is a trailer from which dental services are provided to the local schools and is stored at the Wentworth Health Service site during school breaks.

The Breast Cancer Screening service has both trailers and trucks in its fleet. The internal circulation roadways of the redevelopment are designed for HRV access and therefore will not support the "Large Trailer", which is 2.43m wide and 12.5m long without a tractor head. The Breast Cancer Screen service to the site is therefore limited to use of the "Medium Rigid Truck", a vehicle the size of a HRV (12.5m long), which will be able to fit through the internal roadways.

The three new accommodation buildings (each with 2 x 1 bedroom dwellings) will have their own parking spaces.

The new Wentworth Health Service will include a new UCC that caters for low acuity emergencies. The new ambulance bay will have capacity for two ambulances and is located on the northern side of the building with a dedicated entrance. The bays have been sized to allow for the use of the NSW Ambulance Bariatric fleet, which has a maximum width of 2.6m wide and 7.3m long. The increase in on-site car parking also caters for a possible increase in hospital activity that may arise from the current reliance upon non-emergency trips to Mildura Hospital and its partial replacement with the UCC.

Public Transport

It is proposed that the Wentworth to Mildura bus service, routes 950 and 951, will service the hospital with a new bus stop to be provided within the site as part of Stage 2 (subject to funding and budget allocation). Discussions in this regard are underway between the bus service provider (CDC), Transport for NSW and Wentworth Council. Internal roadways delivered in Stage 2 will allow bus access through the first one-way loop of the site. This will allow routes 950 and 951 to service Wentworth Hospital. The internal roadways will also be wide enough to allow coach services, such as the Broken Hill to Mildura service, to access the site if required.

The impact of the Wentworth to Mildura bus services will be positive for customers trying to access health services, as no public transport to the facility currently exists. The route diversion is expected to add a couple of minutes to the trip, which is minimal considering the overall trip length / duration.

Access / circulation

The redeveloped facility will continue to be accessed from Hospital Road at the existing entry from Silver City Highway. The proposal will include a new pedestrian footpath into and through the site. However, as a conservative estimate for traffic and parking impact assessment, all user groups are assumed to arrive on site via motor vehicle as the site is a relatively long distance to access by walking or cycling from a range of locations within Wentworth and its catchment.

As shown in **Figure 28**, a loop roadway will provide circulation into the site, which would also allow for bus access. A further one-way loop provides access to the new Health Service building itself, including the loading dock, pick-up / drop-off, car parking, ambulance bays and mortuary access. Staff accommodation is separated from public movement through a dedicated driveway.

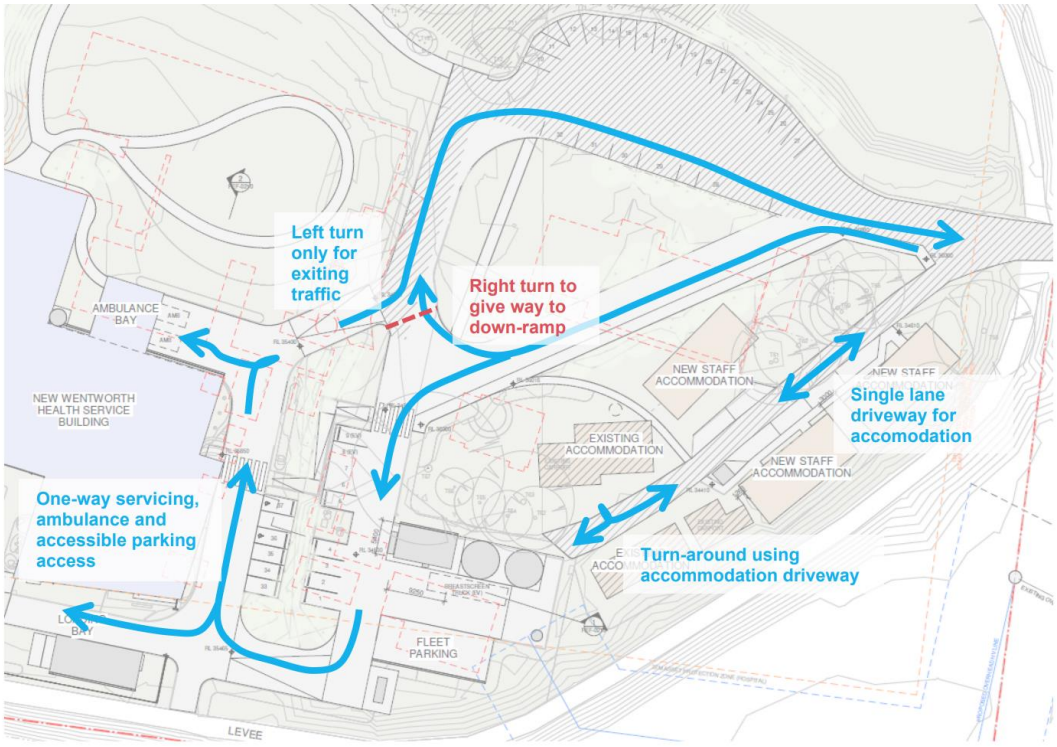


Figure 28 – Vehicle access and circulation at Stage 2 – the completed project – subject to funding and budget allocation (SCT Consulting)

Provision of footpaths within the site will be improved with the proposed redevelopment, with footpaths linking the existing carpark and staff accommodation to the new main building. Zebra crossings will be provided at key crossing points to improve pedestrian priority throughout the site.

The new internal road layout allows the staff accommodation area to be separated from public thoroughfare, with the existing roadway acting as a single lane driveway. A single lane is suitable for this location as sightlines and the road reserve width is adequate to allow drivers to yield to opposing traffic, and the driveway will at most service the 10 staff residing in the five (5) accommodation units. A turnaround bay will be constructed at the southwest end of the driveway to allow cars to turn around – see **Figure 29** below.

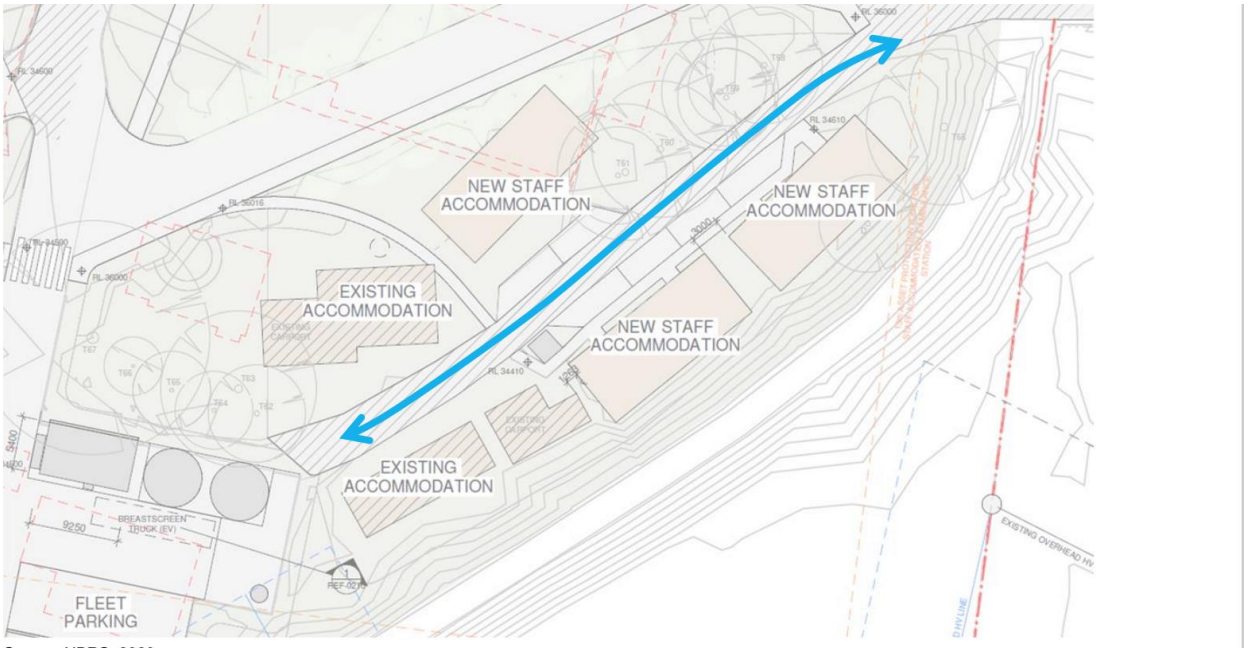


Figure 29 – Proposed staff accommodation and access (SCT Consulting)

Tree Removal and Landscaping

Nine (9) trees are proposed to be removed in relation to the works. These are as set out below:

- Trees 23 and 24 to the north of the existing hospital building and subject to the new fill and capping of remediated soils within the site.
- Trees 50 and 51 within the footprint of the new hospital building.
- Tree 52 within the proposed loop road to the south of the site and Trees 53 and 54 within proximity of the new staff accommodation.
- Trees 56 and 57 near the entry road to Hospital Road and within proximity of the new staff accommodation.

These are shown with red circles in **Figure 30**. Four (4) dead trees located at the site are also able to be removed noting these are not hollow-bearing. These trees are shown with yellow circles in **Figure 30**.

All trees identified have a low to moderate landscape significance.

It is proposed to replace these trees with new planted canopy trees (consistent with the recommendations of the project's ecologist) at a rate of better than 1:1 as per the HI tree replacement policy. The proposed replacement is 40 trees in a range of locations within the site within Stages 1A and 1B, and a total of 68 by Stage 2, predominantly along the levee and within the proposed landscaping within existing and new car parks and loop road. This provides a replacement rate of at least 4.4:1 (by Stages 1A and 1B), and 7.5:1 (with Stage 2), well above that required.

All other trees within the site outsite of the levee are unaffected by the works, and all other trees within the levee and near the proposed works will be retained and protected as required.

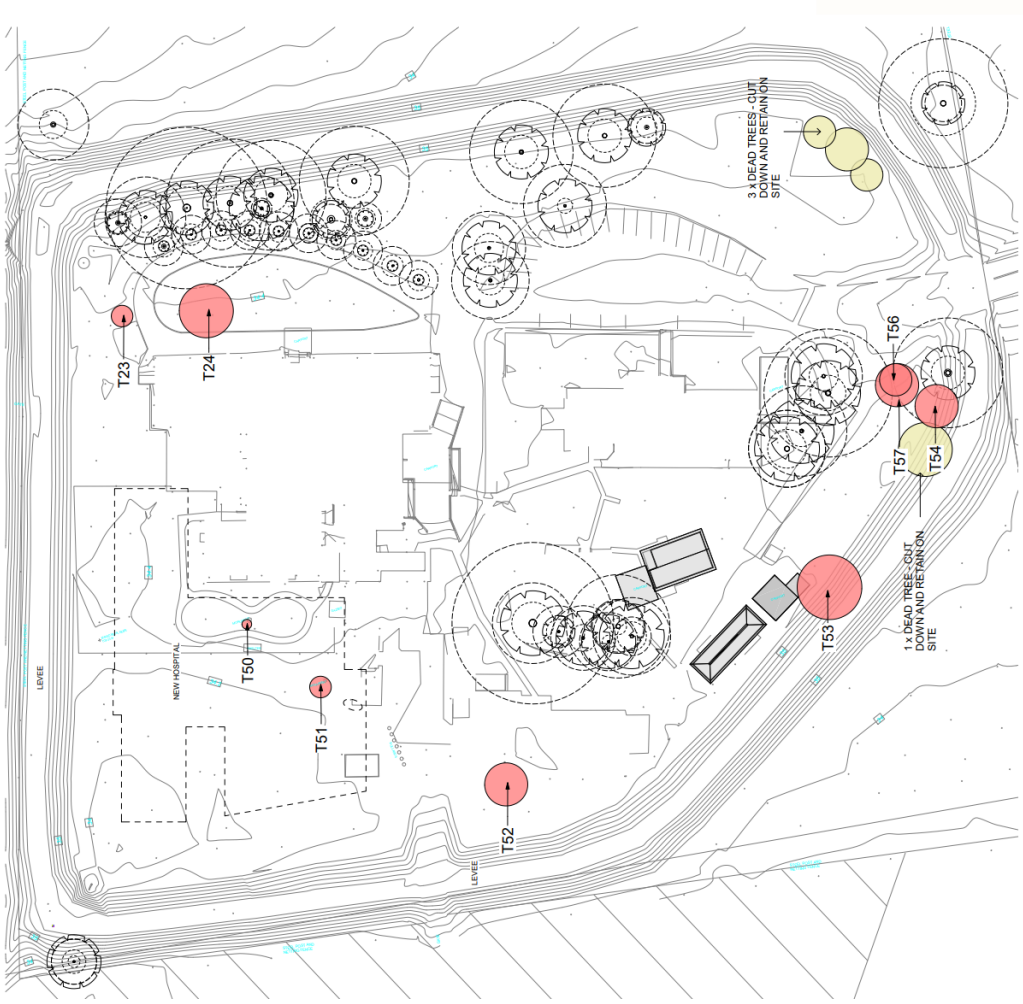


Figure 30 – Tree removal plan (NBRS)

With respect to the new landscaping at the site, the key design consideration and objective is to provide an ecologically robust and naturalistic setting for staff and patients to work and recover in. The landscape design ties together the landscape character external to the site beyond the levee and compliments the functional layout of the hospitals internal design. Where appropriate the design intent is informed by the GA NSW Greener Places Design Guide (2020).

GANSW Greener Places provides guidance for the design of sustainable and resilient public spaces. The guideline aims to support the creation of high-quality public spaces that enhance the health and wellbeing of local communities, support biodiversity, and mitigate the impacts of climate change. The three key tenets for achieving this accommodating a range of opportunities for **Open Space and Recreation**; preserving and enhancing **Tree Canopy** to cool places, shade and shelter and support wildlife; and green infrastructure to contribute to biodiversity conservation by providing habitats or establishing connections between habitats and populations in **Bushland and Waterways**.

NBRS has addressed these three principles and advised how the proposed activity meets the guideline's requirements:

Open Space and Recreation

- Design provides spaces that offer direct visual and cultural connection to the river;
- Pavement types vary from smooth to rough providing a range of safe walking challenges;
- Palliative Courtyard is designed to be enclosed by a slatted fence, providing privacy whilst allowing visual connection to adjacent planting areas; and
- Yarning Circle is an outdoor space designed for social gatherings and cultural ceremonies, constructed using natural cut stone, concrete, and ground plane patterns.

Tree Canopy

- Tree replacement rate is greater than 4:1 for Stage 1B. This is to promote greater shade and canopy cover on site;
- Native species have been selected on site to support habitat values; and
- Retention of existing vegetation and tree canopy cover maintained with only 9 trees removed on site.

Bushland and Waterways

- Surface materials selected to maintain permeability;
- Native vegetation prioritized for cultural usage;
- Planting palette is low maintenance, drought-resistant, and native to the Wentworth region;
- Landscape incorporates mass plantings of local endemic species on areas that a disturbed during construction; and
- Several bioswales are located on the site. These are vegetated channels that are designed to slow down and treat runoff, removing pollutants and recharging groundwater supplies. This also minimises impact on existing riparian zones

The overall project's key design considerations have been to:

- Retain the existing levee bank
- Minimise impact on existing riparian zone along the river
- Minimise impact on existing vegetation
- Allow for future growth opportunities
- Work with the bushfire asset protection zone recommendations
- Improve habitat opportunities and ecosystem health

- Retain and increase existing tree canopy cover
- Promote Connection with Country through a design which has explored the location and access of key spaces and the movement between areas for all users.

As derived from the NBRS Landscape Design Statement (see **Appendix D**), the focus of the landscape design is to reflect and compliment the local characteristics of the Wentworth Hospital Redevelopment, whilst providing amenity and familiarity to the users of the health facility.

The planting and material selection seeks to provide a naturalistic landscape setting. Planting selection has been culturally informed by our engagement with the local Indigenous community. The planting palette is to be low maintenance, drought resistant and native to the Wentworth region, providing species that can withstand local climate conditions.

The entry forecourt is designed to clearly define the main entrance and work in cohesion with the carpark so that it is easily accessible for all users. Low local endemic planting is intended for this area with the opportunity for some informal gathering spaces for public.

To address the level difference between the entrance & the lower car park areas will be battered and boulders will aid in providing passive retaining opportunities minimising the use of retaining walls. A formal ramp allows pedestrian access from the lower carpark. Feature shrub planting is used along the batter between the fleet carpark and eastern façade to screen the carpark. The use of evergreen, native trees to the entry carpark provide a soft screen to the hospital that will help with privacy for the internal occupants and generate shade for pedestrians. Existing trees are a priority to retain with a minimum replacement rate of (beter than) *1:6 for any trees removed.*

Existing Rose bushes are intended to be re-located and re-planted on site to form a memorial garden located near the accommodation zone and shaded by existing trees.

Areas directly adjacent the levee are intended to be mass planted and tie back into the naturalistic landscape of Wentworth. The planting consists of local endemic species that can re-establish the existing site and areas that have been disturbed during demolition.

Lawn area will be limited to the future accommodation zone with the preference of native grasses and shrubs being used. Local species can be seeded via hydroseeding/hydromulching in strategic dense clusters revegetating the site.

The landscape directly adjacent the hospital is to have semi-mature plantings, strategically chosen and positioned to provide views from the hospital rooms. The ground plain is to be made up of varied typologies of gravel with plants emerging from the ground plane in clustered zones. Endemic plant species (grasses/ground covers/shrubs) to a max height of 1m and featuring boulders/logs and a range of gravel in varied sizes, colours & textures are shaped around paths.

The landscape design, provides spaces that offer an opportunity for direct visual and cultural connection to the river, endemic planting species for cultural whilst accommodating for future climatic events.

The proposed landscape design is set out in **Figure 31** over.

Figure 31 – Proposed landscaping plan upon completion of Stage 2 of works (NBRS)

Utilities

In terms of electricity supply and connections, Steensen Varming has advised as follows – see also **Appendix G**.

There is an existing 200 kVA, 22 kV 3-phase pole-mounted Essential Energy transformer right in front of the existing hospital, with its overhead high voltage cables running parallel to Hospital Road to cross over Ski Reserve Road to the south. It is dedicated to the hospital site for the most part, with some public street lighting loads feeding off of it through overhead low voltage cables.

The existing site Main Switchboard (MSB) is floor mounted outdoors adjacent to Essential Energy transformer pole, and is very old and past its lifecycle. It is backed-up by an external diesel generator located adjacent to the MSB. The redevelopment's new maximum demand has been calculated to increase from the current one to 326 Amps per phase, mainly driven by the proposed new staff accommodations loads, additional electrification loads and dental truck / outside services loads.

A new 500 kVA Essential Energy pole-mounted transformer is proposed to accommodate the load increase and will be installed on-site in the engineering buildings compound. The indicative new overhead high voltage cable route has been agreed with the LHD and Level 3 Accredited Service Provider, with the final route to be confirmed and approved by Essential Energy. This cable route is proposed to be located adjacent to the property's southern boundary and away from the development areas, to reduce any impact to proposed and future site developments and to have Essential Energy's easement away from the development areas.

Once the new supply has been connected to the new hospital and the retained and new accommodations, and once the existing hospital has been decanted, it is intended that the existing transformer and its on-site overhead lines and poles be demolished. A new Site Main Switchboard is proposed to be provided inside the new hospital, which will also feed any retained and new accommodations. A new external back-up generator is also proposed. **Note: Essential Energy has provided separate REF approval** for the abovementioned works (as Project ECN-0175518) on 2 August 2023.

Medical gases, such as oxygen and medical air, will be supplied by bottles which will be stored externally and close to the new hospital building. As there is no bulk vessel oxygen proposed, there will not be any significant medial gas infrastructure.

Warren Smith Consulting Engineers have provided a hydraulic services report and drawings (also located at **Appendix G**).

This indicates that as a result of the modest net change in beds and accommodation the demand arising from the new works is a total change in potable water demand by some +1.46 ET (or 1 kl/day) along with a concurrent reduction in sewer services demand of -0.27 ET (or – 1 kl/day).

Existing water supply and sewer discharge connections will be retained for the proposed works and no change to services is required. The infrastructure related to the sewer connection point will however need to be relocated and adjusted within the hospital due to the change in ground level surfaces related to the filling of the site in order to ensure appropriate levels for access for Council's infrastructure.

Earthworks

A range of earthworks is proposed primarily to build-up site of the new hospital building to allow for a finished floor level within the building of at least RL 36.00m AHD. This builds this part of the site up to and consistent with the levee encircling the southern part of the overall hospital land. Additional areas of cut and fill are proposed to provide for disabled access and traffic circulation throughout the site.

Staging

To allow for the existing facility to continue to operate during construction of the project, the redevelopment will be constructed in multiple stages. Stage 1A will deliver the new facility and allow the relocation of the existing services and undertake site remediation works. Once the old building has been vacated, Stage 1B will be delivered, demolishing the old building, and delivering the new ambulance bays and circulation. Finally, Stage 2 will be delivered (subject to funding and budget allocation), which will complete the planned internal road network and allow for bus access to the site. **Figures 32** to **34** show the proposed staging.

Remediation Works

Remediation works **do not** form part of this REF. The remediation works required to be undertaken as part of this project are subject to a separate DA to Wentworth Shire Council. This DA (DA2023/071) is presently being finalised, with draft conditions under review, and is anticipated to be approved by Council's officers in September 2023. This is because the remediation works are classed as Category 1 Remediation works under section 4.8 of *State Environmental Planning Policy (Resilience and Hazards) 2021*, and accordingly require development consent.

The remediation works will however be undertaken as part of the same works program as the substantive project the subject of this REF. Whilst the remediation works are in part within 100m of the Darling River and would be Designated Development (one of the triggers to Category 1 Remediation Works under section 20(1)(a) and (b)(i) of Schedule 3 of the EP&A Regulation), this is excepted by section 49 of the same Schedule as the works are ancillary to other development, and it is not proposed to be carried out independently of the other development.

The trigger to the Category 1 Remediation Works, however, in this instance is the partial mapping of the hospital land as a wetland under *Wentworth Local Environmental Plan 2011* – see **Figure 41** of this REF. The works become Category 1 Remediation Works under section 4.8(e)(x) of *State Environmental Planning Policy (Resilience and Hazards) 2021.*

Council has assessed and determined the DA concurrently with this REF's process, with that DA having provided Council of the relevant context of the scope of works proposed under this REF.

The proposed remediation strategy under the DA will necessitate the containment and capping with landscaping of contaminated soils in two primary locations. One location within the current footprint of the existing hospital will encapsulate some 400m^3 of material within a north sloping area and landscaped batter running from RL 35.70m AHD to an existing ground level of about RL 34.30m AHD. The second area of containment sits north of the existing at-grade car park near the Hospital Road entry point. This will also encapsulate some 740m^3 of material within a landscaped mound at a finished level of about RL 35.76m AHD connecting into the levee at its north and with batters with slopes of 1:3 and 1:4 to the surrounding existing vegetation and the car park and access road. These are shown

in the civil engineering drawings as part of **Appendix H** of this REF and as part of the Remediation Action Plan provided to Council – see **Appendix K** of this REF for information.

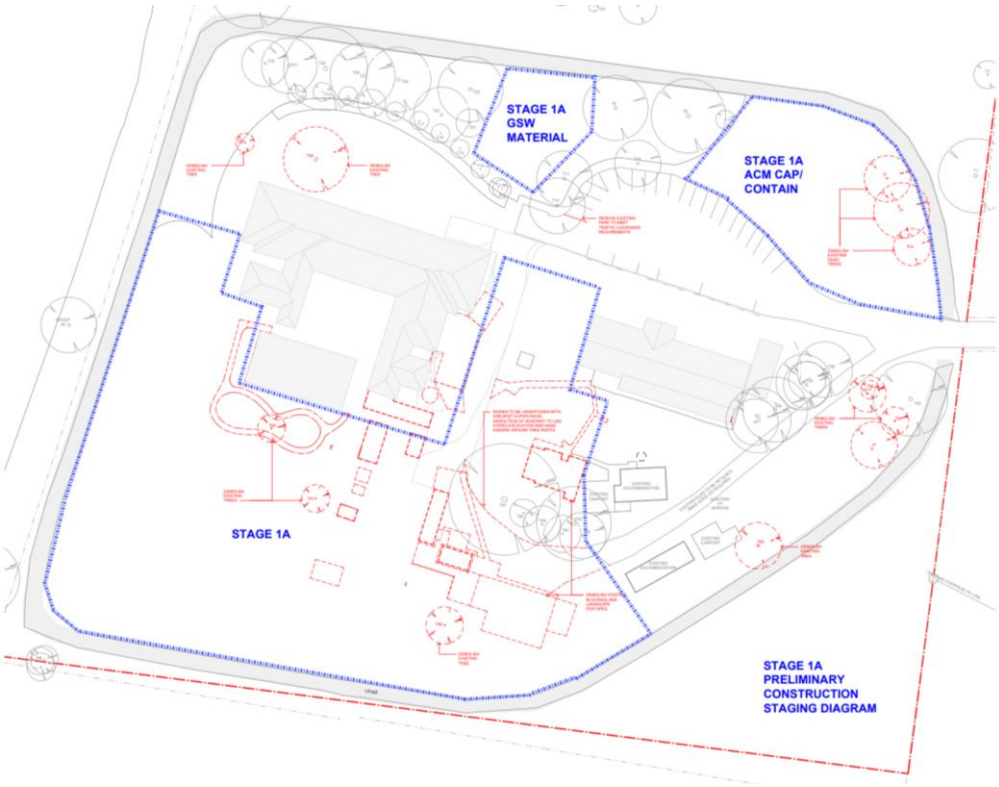


Figure 32 - Stage 1A works (NBRS)

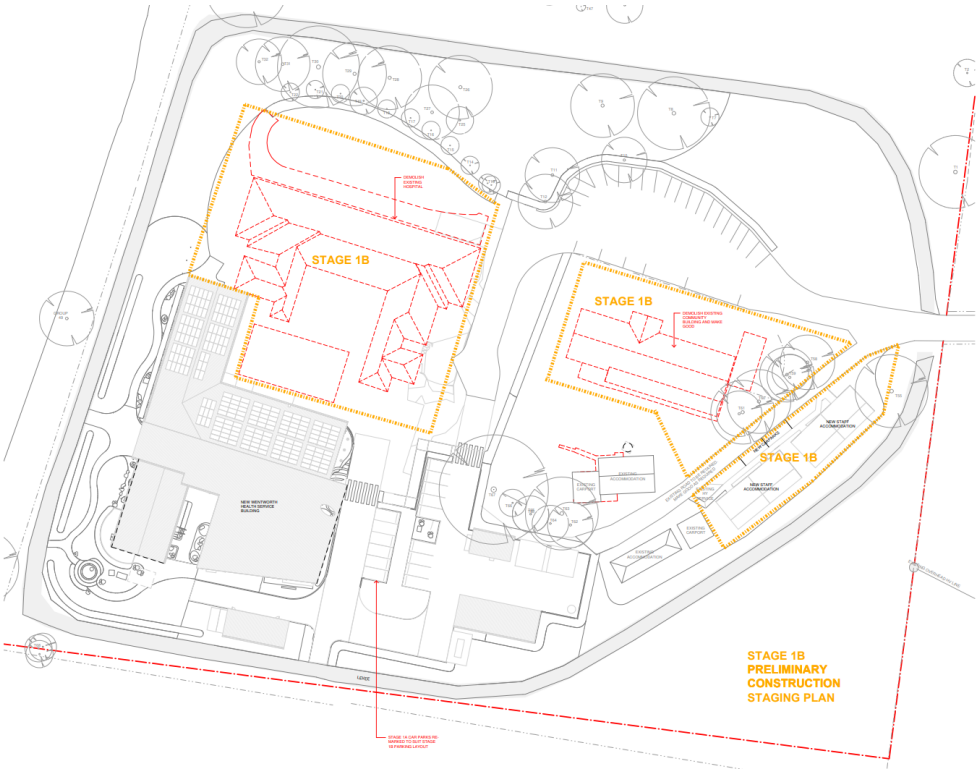


Figure 33 – Stage 1B works (NBRS)

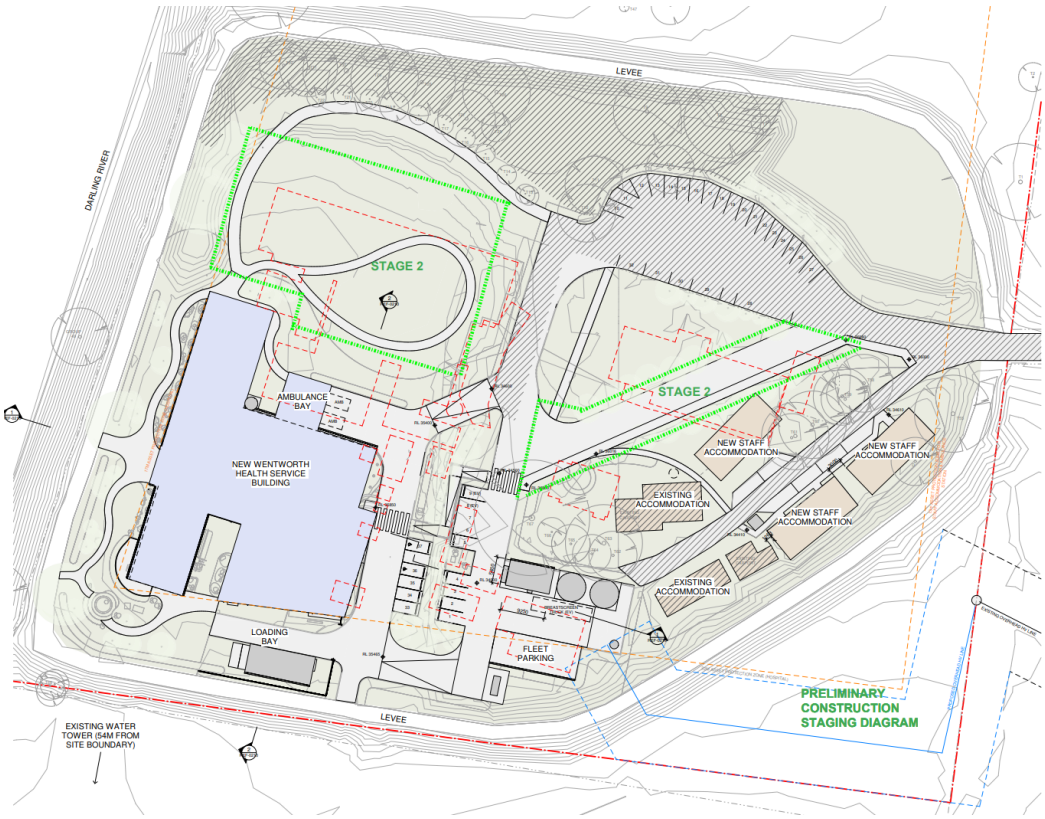


Figure 34 - Stage 2 works – subject to funding and budget allocation (NBRS)

3.2 Proposal Need, Options and Alternatives

3.2.1 Strategic Justification

The existing hospital has operated at the site for well over 100 years, with the current accommodation initially built in the 1940s. In addition to comprehensively replacing redundant and outdated health services accommodation, the proposal objectives have included:

- Retaining the existing hospital on-site until the new service is built and can become operational, thereby maintaining a seamless continuity of health services at the site.
- Retaining the existing levee bank which protects the site from flooding.
- Elevating the new hospital building level above both the predicted 0.5% Annual Exceedence Probability (AEP) flood level (1 in 200 year event) and the Probable Maximum Flood (PMF) event.
- Maintaining a bushfire asset protection zone.
- Minimising impacts upon riparian vegetation and the riparian zone along the river.
- Providing adjacencies between various health service departments to address the principles of regional multi-purpose service as identified in the functional brief and schedule of accommodation.
- Allowing for future growth and expansion opportunities on the site.

The preferred option the subject of this REF has satisfied these principles / objectives and has provided for a siting and design that seeks to also enhance the amenity of users of the hospital by maximising river views from all in-patient bedrooms.

3.2.2 Alternatives and Options

Overall, a comprehensive review of more than 10 potential sites by HI and the FWLHD in consultation with hospital staff, local Council and the community, resulted in the preferred location and option.

During the Master Planning Phase, this involved review of sites / options within the Wentworth township itself as well as the redevelopment of the existing hospital site. The existing hospital site was determined to be the preferred location.

HI worked closely with the FWLHD and local stakeholders to review potential sites. Both greenfield and brownfield sites were considered and site selection criteria was used to determine the most appropriate site. As part of the master planning process, the potential sites were reviewed against the range of selection criteria including zoning, size, and location. A few sites were then shortlisted and explored as possible locations, including the existing hospital.

Following the site selection review, the existing hospital site was selected as the preferred option due to the following: attributes:

- Large lot size with future expansion opportunities.
- Close to the river, allowing for connection to Country and river views supporting patient, staff and visitor health and wellbeing.
- Great outdoor landscaping opportunities.
- The site is already within an existing levee bank.
- Options to retain the existing staff accommodation.
- Adequate on-site parking for patients, visitors and staff.
- No site acquisition process required.

Under the Concept Design phase three options for the existing site were considered. These are reviewed below, with Option C being the preferred option.

An overview of the alternatives, and an identification of the preferred alternatives, for the Proposal are provided within Table 2.

Table 2: Alternatives considered for the proposal

Alternative description	Advantages and disadvantages	Preferred alternative
Option A South of the existing hospital away from the riparian zone, within the existing levee bank and with additional staff accommodation north of that existing.	Option A's advantages were generally similar to that of Option C however its location within an area required to provide for a 22m bushfire Asset Protection Zone ruled this out.	NO
Option B North of existing hospital, away from riparian zone but with a modified levee bank, and with additional staff accommodation north of that existing.	Whilst the advantages would broadly similar to Options A and C, the disadvantages of Option B generally relate to construction outside of the existing levee and the potential to compromise its integrity, a significantly greater quantum of fill compared to the relative consistency between the other two options, potential for greater run-off impacts during works, removal of a significantly greater number of trees including those comprising a listed Plant Community Type, and potential for existing flooding impacts to be adversely altered.	NO

Alternative description	Advantages and disadvantages	Preferred alternative
Option C South of the existing hospital within from the riparian zone, within the existing levee bank and with additional staff accommodation south of that existing.	The preferred location was Option C, with a slight modification to staging such that the entire hospital building can be constructed in one stage. This option provides maximum outlook to the river from the patient bedrooms and is outside of bushfire asset protection zone. The option prioritised the following criteria that were assessed to be important to the project: • Retain existing hospital service until the new service is built and occupied, • Retain existing levee bank, • Elevate the new hospital building level above the predicted 0.5% Annual Exceedance Probability (AEP) flood level (1 in 200 years event), • Maintain bushfire asset protection zone, • Minimise impact on existing riparian zone along the river, • Minimise impact on existing vegetation, and • Provide adjacencies between various health service departments to address the principles of regional multipurpose service as identified in the functional brief and schedule of accommodation. • Allow for future growth opportunities	**YES**

Option A could not be considered further because of its location within the Bushfire Asset Protection Zone. Option B was flagged with many risks. As such, Options A and B were considered unviable, with Option C providing the best opportunity to meet the myriad objectives of the redevelopment within the site.

3.3 Construction Activities

The works are long term (over a period of approximately 24 months). Construction is expected to start in late 2023 with the works expected to be completed over three stages by the end of 2025. The works are staged to allow continued and effective operation of the existing hospital as the new facility is constructed and then decant and expand services into the new hospital. Demolition of the old main hospital building would follow along with the completion of the civil engineering and roadworks and other associated site-wide finishing works whilst the new facility is operational.

Table 3: Project Timeframes and Construction Activities

Construction activity	Description
Commencement Date	Estimated commencement in late 2023 with completion some 24 months later before end of 2025.
Work Duration/Methodology	The duration of works is up to 24 months with three stages comprising: • Stage 1A – Main construction works. • Stage 1B – Demolition of existing hospital building. • Stage 2 – Construction of new access road. The stages will generally be longer during the main construction works and reduced in timeframe but the reduced scopes of Stage 1B and 2.
Work Hours and Duration/Construction	The following hours of operation are proposed for the works: • Monday to Friday ..... 7:00AM to 6:00PM • Saturdays ..... 8:00AM to 1:00PM • Sundays and Public Holidays..... No works. It is not envisaged that the construction works will require work to be undertaken out of normal working hours. Exceptions may be required for the delivery and removal of heavy machinery to minimise impacts on other road users.
Workforce/Employment	Number of construction workers will be in the order of 38.

Construction activity	Description
Ancillary Facilities	The Stage 1A compound will be located to the south of the site within the levee. This location will provide for the sheds, amenities and parking for workers. Once the new building is completed and uses decanted / transferred, the Stage 1B compound will shift to the north and centre of the site to complete demolition and other site works. The sheds, amenities and parking will move to the northern location near the old main hospital building footprint. During Stage 2 this compound location will be retained through to the completion of works – see **Figures 35, 36** and **37** over.
Plant Equipment	The following plant and equipment may be used for the works: • Bulldozers, backhoes and earthmoving equipment • Articulated and fixed trucks • Mobile cranes (if applicable) • Fork lifts • General power tools
Earthworks	One of the considerations for the selection of the final building level was the earthworks material cut and fill balance. Another consideration is the required batter both in cut and fill. The bulk earthworks for the proposed development and associated infrastructure are detailed in the Civil Engineering Drawings. The bulk excavation level for the main building is approximately 0.6m below existing ground level (RL33.46m AHD). Approximate volumes of cut and fill for stages 1A and 1B are 3,130m^3 and 10,660m^3, respectively, with the fill determined by the slab at grade design. As the ACM and GSW is proposed for containment on-site, the fill material is required to be imported to ensure suitable for structural fill. Stage 2 is estimated to require approximately 210m^3 of cut and 120m^3 of fill. All road base material will be imported to site where deemed appropriate by the geotechnical engineer. Additionally any material not suitable as engineered fill will be relocated to stockpiles. Opportunities are being explored to minimise the handling of excavated material due to the potential presence of ACM and other hazardous materials identified following demolition of existing structures. Any material to be imported will be by tipper trucks with tipping dog that can carry approximately 32 tonnes. This would result in approximately 150 truck loads required to import fill material, subject to the final design.
Source and Quantity of Materials	It is anticipated that primary construction materials will be sourced by the Main Contractor utilising suppliers from nearby major towns and cities including Adelaide, Melbourne and Wagga Wagga. Estimated quantities of raw materials are outlined as follows, subject to the final design: • Concrete: 477m3 • Steel (Below Slab): 48t • CFC: 725m2 • Glazing: 195m2 • Roof Sheeting: 1,992m2 • Partitions: 2,703m2 • Ceilings Plasterboard: 1,231m2 • Floor Vinyl: 1,330m2 • Carpet: 133m2 Pre-fabricated and specialist construction materials are to be delivered from the closest manufacturer including windows and façade components. The selected suppliers will be awarded by the Main Contractor based on a market tender and logistics. Finishes, fixtures and equipment are also anticipated to be bulk delivered to site from the relevant distribution centres in Melbourne and Adelaide.

Construction activity	Description
Traffic Management and Access	Whilst no Construction Traffic Management Plan has been prepared and range of assumptions can generally be made with respect to parking and access. Construction workers will park at the site. Additionally, and if required, a shuttle bus could be employed to ferry constructions workers from a centralised location within the township to and from the hospital on a daily basis. All construction access will be via Hospital Road, the sole access point into the site. Given the general lack of existing traffic volumes and spare capacity at the Hospital Road and Silver City Highway intersection no construction traffic impacts are likely to arise to reduce the level of performance of thi intersection during works. As identified, the works will be staged and traffic and access arrangements will be adjusted relatively to the stage being constructed. The intent is to ensure the operational capacity of the existing hospital is not reduced or compromised during works. At this stage this methodology (whilst fundamentally resolved) is potentially subject to review and an innovative approach that can only be finalised with the engagement of the contractor. The final Construction Traffic Management Plan, coupled with a construction methodology is therefore reasonably still to be resolved. **Figures 35, 36** and **37** show a preliminary construction traffic plan for each stage of works.

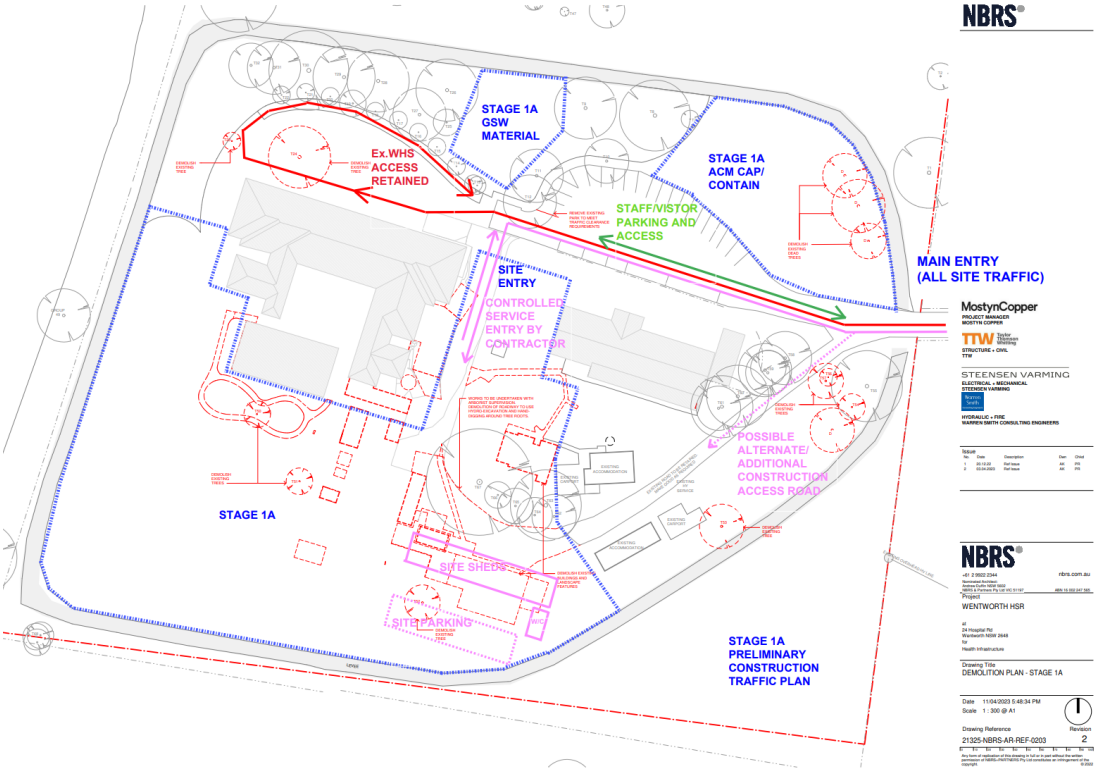


Figure 35 – Stage 1A Preliminary Construction Traffic Management Plan (MostynCopper and SCT)

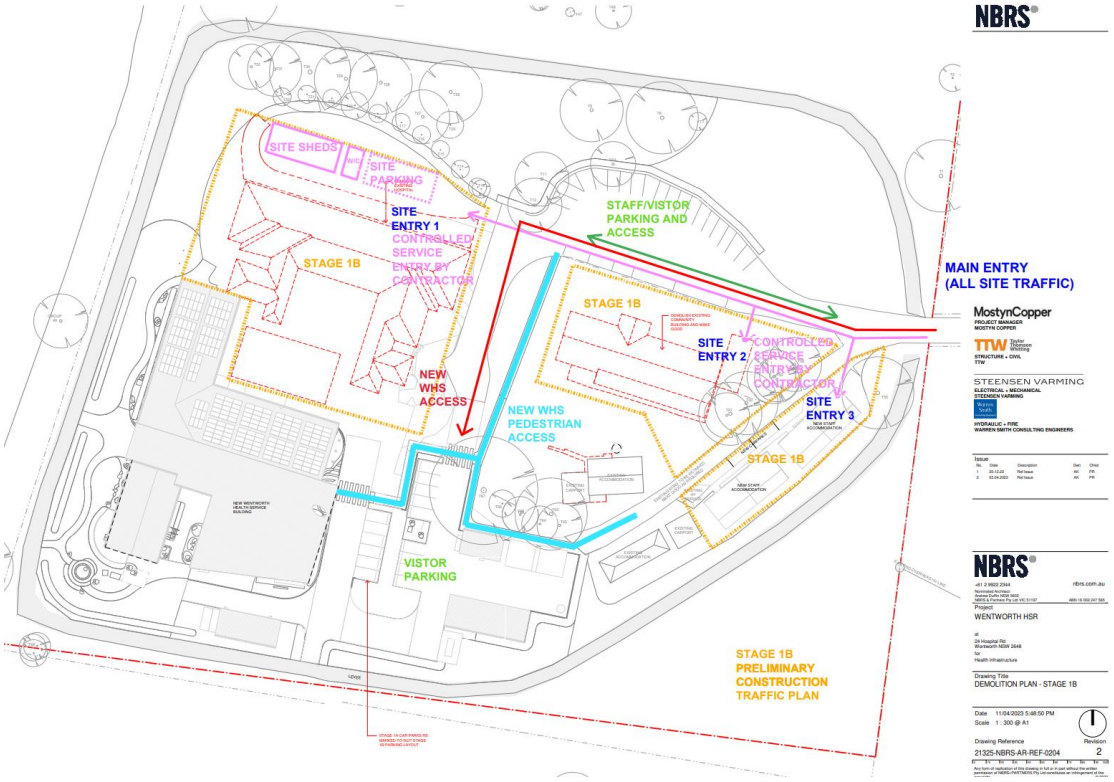


Figure 36 – Stage 1B Preliminary Construction Traffic Management Plan (MostynCopper and SCT)

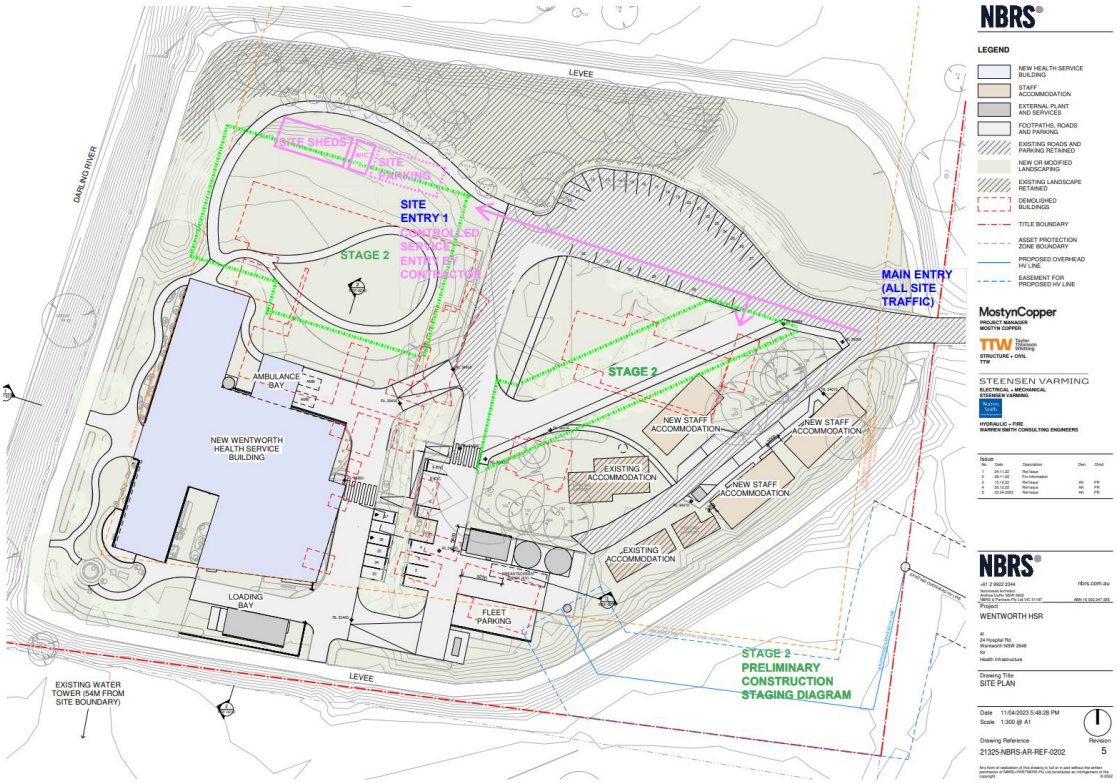


Figure 37 – Stage 2 Preliminary Construction Traffic Management Plan (MostynCopper and SCT)

3.4 Operational Activities

Use

There will be no change to the use of the hospital site. The existing health services facility designation will be maintained and reinforced through the redevelopment and ongoing use of the site as a hospital. Relevantly, however, a new UCC at the site will cater for the proportion of Wentworth's catchment presently required to travel to Emergency Department services in Mildura. Emergency Department admissions will still be made at Mildura, however non-life threatening admissions can now be catered for at Wentworth.

Operation Hours

The hospital's existing hours of operation (24 hours per day / 7 days per week) will be maintained.

Staff / Patients

The existing hospital's capacity provides for 20 in-patient beds consisting of 12 for sub/post-acute care and 8 for transitional care. The proposal is for 19-bed IPU (plus 1 x HiTH or virtual bed), including a resuscitation area.

The number of annual episodes at Wentworth Health Facility is projected to increase by 2036 to 132 acute and sub-acute episodes and 9.9 bed days. This is a marginal growth of 24 episodes and 0.4 bed days on 2021 activity.

The facility is also expected to have out-patients that arrive to visit the visiting medical officers, with an assumption that each visiting staff will have one patient at a time.

The roster for staffing will include a morning shift, afternoon / night shift, and visiting staff for ambulatory and primary health. Staff levels will peak during the crossover period on a weekday, where both shifts will overlap, and visiting staff are present.

During this crossover period, the expected number of staff is 20 staff, broken down as:

- 13 staff in the AM shift (including Allied Health workers and 6 back of house staff)
- 4 staff in the PM shift (including 1 back of house staff)
- 3 visiting staff, assuming that the consultation rooms are 50% occupied.

Traffic and Parking

As noted, access via Hospital Road is to be retained and maintained. Changes to the hospital's internal circulation result. This accommodates all vehicle types required to access the site, from cars, ambulances (including bariatric-sized vehicles), fleet-related vehicles, buses and coaches, and servicing vans and trucks.

The redevelopment will retain the existing carpark while delivering an additional 14 spaces, bringing the total public and staff parking to 37 spaces, two of which are accessible parking spaces. Further, six (6) additional parking spaces have been dedicated to the LHD's fleet vehicles. This consists of four (4) car spaces, one (1) space for a 12-seater community transport van (sized for an SRV) and one (1) space for the dental van that is stored seasonally on site. Staff accommodation parking is also maintained and provided in relation to the number of units.

The number of proposed parking spaces adequately caters for the introduction of the UCC.

4. Statutory Framework

4.1 Planning Approval Pathway

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

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

The site is zoned RU5 - Village under the *Wentworth Local Environmental Plan 2011*. The proposed activity is permissible within the zone noting also that the RU5 – Village zone is a prescribed zone under the TISEPP. See **Figure 38** below.

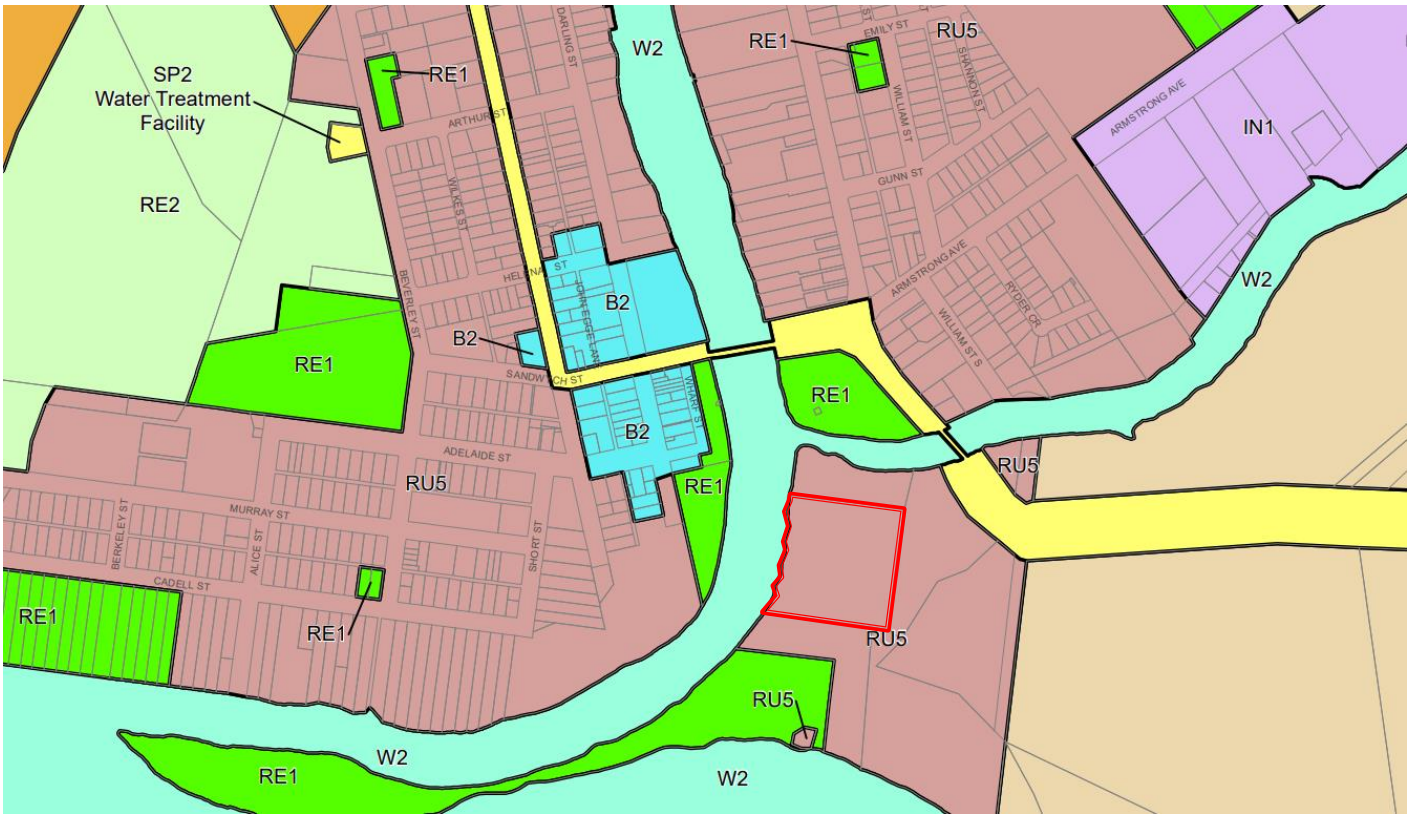


Figure 38 – Wentworth LEP 2011 zoning map

The proposal involves the erection, or the alterations of, or additions to, a building that is a health services facility; demolition of buildings carried out for the purposes of a health services facility; and ancillary and associated works, all of which are classified as development without consent as proposed activity is consistent with section 2.61(1)(a) and (c), as well as section 2.61(2) of TISEPP. The ancillary works are able to be carried out in the same manner through section 2.3(3) 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). The proposal is considered an 'activity' in accordance with section 5.1 of the EP&A Act because it involves the carrying out of a work, the demolition of a building or a work, and the use of land, that is not Exempt Development or prohibited under an environmental planning instrument.

TISEPP consultation / notification requirements are discussed within Section 5 of this REF.

Table 4: Description of proposed activities

Division and Section within TISEPP	Description of Works
Section 2.61(1)(a)	Erection of the new 1-storey hospital building less than 15m in height and more than 5m from any property boundary.
Section 2.61(1)(c)	Demolition of the existing main hospital building and a range of other hospital structures and sheds.
Section 2.2(3)	Civil engineering works, services relocation and other works, and selected tree removal as ancillary works to the construction works.

4.2 Environmental Protection and Biodiversity Conservation Act 1999

The provisions of the EPBC Act do not affect the proposal as it is not development that takes place on or affects Commonwealth land or waters. Further, it is not development carried out by a Commonwealth agency, nor does the proposed Table 5.

Table 5: 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 (see also Appendix E of the OzArk Biodiversity Assessment Report)
The activity will not have any significant impact on listed migratory species?	No (see also Appendix E of the OzArk Biodiversity Assessment Report)
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

4.3 Environmental Planning and Assessment Act 1979

Duty to Consider Environmental Impact

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

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

Section 170 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. This is set out in the Department of Planning and Environment's Guidelines for Division 5.1 assessments – June 2022, which provides reference to factors to be

considered under section 171(2) of the EP&A Regulation. Section 6.1 of this REF specifically responds to the factors for consideration under sections 170 and 171(2).

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

Matter for Consideration	Impacts of Activity
Sub-section 3: Without limiting subsection 1, a determining authority shall consider the effect of any activity on any wilderness area (within the meaning of the *Wilderness Act 1987*) in the locality in which the activity is intended to be carried on.	No effect, as there is no wilderness area (within the meaning of the Wilderness Act 1987) in the locality in which the activity is intended to be carried on.
Note: If a biobanking statement has been issued in respect of a development under Part 7A of the *Threatened Species Conservation Act 1995*, the determining authority is not required to consider the impact of the activity on biodiversity values.	

4.4 Environmental Planning and Assessment Regulation 2021

As above, Section 170 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. This is set out in the Department of Planning and Environment's Guidelines for Division 5.1 assessments – June 2022, which provides reference to factors to be considered under section 171(2) of the EP&A Regulation. These requirements are considered at section 6.1 of this REF.

4.5 Other NSW Legislation

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

Table 7: Other Possible Legislative Requirements

Legislation	Comment	Relevant? Yes/No
State Legislation		
Rural Fires Act 1997	The site is not identified on any Bushfire Prone Land Map and is not designated as bushfire prone land. Therefore, the *Rural Fires Act 1997*; 'Planning for Bushfire Protection' (PBP); and draft NCC 2022 Spec 43 each do not apply in this instance. Notwithstanding, the decision has been made by Peterson Bushfire to apply PBP to the proposal due to the surrounding bushfire hazard, even though it is not a requirement. See further discussion within this REF.	No.
Biodiversity Conservation Act 2016	The site does not contain any critical habitat, threatened species or ecological population or community. No vegetation within, or immediately adjacent to, the subject site is associated with a Threatened Ecological Community (TEC) under either the *Biodiversity Conservation Act 2016* (BC Act), or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). No flora species or populations listed as threatened under the BC or EPBC Act were observed during the field survey. Given the short duration of the field survey, and the lack of targeted surveys, the non-detection of threatened flora species cannot be considered as confirmation of their absence. However, following a desktop review of nearby records and habitat requirements for predicted threatened flora, no species were considered to have a moderate-high probability of occurrence within the subject site. The site is not an Area of Outstanding Biodiversity Value (AOBV) under the NSW BC Act 2016. See further discussion within this REF.	No

Legislation	Comment	Relevant? Yes/No
Water Management Act 2000	Parts of the project's civil engineering works are within 40 metres of a watercourse, being in part within the 40m buffer of an ordered stream – the Darling River. The Office of Water recommends the Vegetated Riparian Zone for the Darling River should be 40 m (each side of the watercourse), based on Strahler Order Size. The current VRZ is significantly less than this. It is recommended that the VRZ be enhanced by planting only those species that are native to the area. The native vegetation surrounding the subject site offers a corridor of connectivity along the Darling (and by extension) Murray Rivers. Supplementary planting with native species will be undertaken to enhance the VRZ, specifically, the planting of River Red Gum (*Eucalyptus camaldulensis*) and River Cooba (*Acacia stenophylla*) is recommended, as these are the native species that currently dominate the VRZ.	Yes, noting however that public authorities are exempted from Controlled Activity approval requirements under the *Water Management Act 2000*. OzArk has considered and provided a range relevant mitigation measures in this regard. See further discussion within this REF.
Contaminated Land Management Act 1997	The site is not listed on the register of contaminated sites.	No
Heritage Act 1977	No impacts on local or state or national heritage arise – see further discussion within this REF and at **Appendix I**.	No
Roads Act 1993	No works to a public road, or pumping of water onto a public road, or involving the connection of a road to a classified road arises.	No
National Parks and Wildlife Act 1974	An Aboriginal Due Diligence report has been prepared consistent with section 57 of the *National Parks and Wildlife Regulation 2019*. The Aboriginal Due Diligence has followed the steps set out in the Code of Practice and concluded that an Aboriginal Heritage Impact Permit (AHIP) is not required for works at the site and that a range of mitigation measures is suitable and shall be employed in this instance. See further discussion within this REF.	No
State Legislation Planning Policies		
State Environmental Planning Policy (Transport and Infrastructure) 2021	Other than the use of relevant provisions to enable the works via this REF, the activity is not traffic-generating development under section 2.122 and Schedule 3 of the TISEPP and referral / notification to Transport for NSW was not triggered in this instance.	No
State Environmental Planning Policy (Biodiversity and Conservation) 2021	**Chapter 4 – Koala habitat protection 2021** Part 5 developments are not subject to this chapter.	No
	Chapter 5 – River Murray lands The aims of this Chapter are to conserve and enhance the riverine environment of the River Murray for the benefit of all users. This Chapter applies to the land shown on the map, that is the riverine land of the River Murray within the City of Albury and the areas of Balranald, Berrigan, Conargo, Corowa, Deniliquin, Hume, Murray, Wakool, Wentworth and Windouran. The Planning Principles of Part 5.2 of this SEPP apply to this REF. Under section 5.8 the following general principles apply. **5.8 General principles** When this Part applies, the following must be taken into account— (a) the aims, objectives and planning principles of this Chapter, (b) any relevant River Management Plan, (c) any likely effect of the proposed plan or development on adjacent and downstream local government areas, (d) the cumulative impact of the proposed development on the River Murray. Section 5.9 of the SEPP sets out a range of **Specific Principles**. Only those relevant to this site, land use, and circumstances have been considered below.	Yes

Bank disturbance

* Disturbance to the shape of the bank and riparian vegetation should be kept to a minimum in any development of riverfront land.

Flooding

* Where land is subject to inundation by floodwater—

(a) the benefits to riverine ecosystems of periodic flooding,

(b) the hazard risks involved in developing that land,

(c) the redistributive effect of the proposed development on floodwater,

(d) the availability of other suitable land in the locality not liable to flooding,

(e) the availability of flood free access for essential facilities and services,

(f) the pollution threat represented by any development in the event of a flood,

(g) the cumulative effect of the proposed development on the behaviour of floodwater, and

(h) the cost of providing emergency services and replacing infrastructure in the event of a flood.

* Flood mitigation works constructed to protect new urban development should be designed and maintained to meet the technical specifications of the Department of Water Resources.

Landscape

* Measures should be taken to protect and enhance the riverine landscape by maintaining native vegetation along the riverbank and adjacent land, rehabilitating degraded sites and stabilising and revegetating riverbanks with appropriate species.

Water quality

* All decisions affecting the use or management of riverine land should seek to reduce pollution caused by salts and nutrients entering the River Murray and otherwise improve the quality of water in the River Murray.

Consultation is required under sections 5.11 and 5.12 with Council or DPE for REFs for certain forms of development and where development is contrary to the aims, objectives or principles of this Chapter and may have a significant environmental effect along the Murray River—the P&D (Vic), C&NR (Vic) and the adjacent local Council in Victoria must be consulted.

The works in themselves are none of the categories set out by the SEPP in this part of the Chapter. Aspects of works are ancillary, for example the establishment of the base RL for the new building, but this is not Flood Control Works exclusively. In any case, Council was notified of the overall works and the existing levee height is not altered.

No other provisions of this Chapter of the SEPP are applicable.

Further assessment and consideration of the Specific Principles of section 5.9 of this SEPP are set out below based on the Advisian Flood Impact Assessment.

Flooding

The proposed development will not lead to any redistribution of floodwaters during floods up to and including the 1 in 200 AEP flood.

Raising the floor level of the proposed main hospital building to be above the peak flood level predicted for an extreme flood event (PMF) reduces the flood risks to the asset compared to existing hospital. This will result in a reduction in the pollution threat of the hospital site during the full range of flood events.

The proposed development will result in no additional risk of cumulative impacts during the full range of flood events.

The cost of replacing infrastructure is reduced compared to existing conditions by ensuring the main hospital building will have FFLs that are above the predicted peak extreme flood level. The proposed hospital building will have FFLs that are between 0.8 and 1.6 metres above those for the existing hospital building that is to be replaced.

Legislation	Comment	Relevant? Yes/No
	Further to the above, OzArk advises as part of its assessment as follows: **Bank disturbance** The development will be situated within the existing levee bank, and no native riparian vegetation will be removed. No landscaping works are proposed outside of the existing levee bank**.** **Flooding** A Flood Study has been carried out by Advisian for the proposal to determine the optimum level for the new proposal as well as outlining strategies to mitigate flood risk. **Land Degradation** The proposal avoids removing any riparian vegetation, or any native PCT. Only non-native vegetation, and planted Australian species that are not locally native will be impacted. Supplementary planting with locally appropriate native species will be undertaken to enhance the quality of the existing habitat (see Landscape Report produced by NBRS). The proposal should not impact salination or soil acidity. There is the potential for the proposal to cause or exacerbate erosion, pollution of ground or surface water, and groundwater accession. This potential will be ameliorated by the mitigation measures in Table 7-1 of the OzArk report and those specified in the CEMP. **Landscape** The proposal avoids removing any riparian vegetation, or any native PCT. Only non-native vegetation, and planted Australian species that are not locally native will be impacted. Supplementary planting with locally appropriate native species will be undertaken to enhance the quality of the existing habitat (see Landscape Report produced by NBRS). **Water quality** There is the potential for the proposal to cause or exacerbate pollution caused by runoff. This potential will be ameliorated by the mitigation measures in Table 7-1 of the OzArk report and those specified in the CEMP.	
State Environmental Planning Policy (Resilience and Hazards) 2021	**Chapter 3 - Hazardous and Offensive Development (former SEPP 33)** does not apply to the proposed activity as an analysis conducted by Steensen Varming based on the existing and proposed Dangerous Goods (DG) storage and handling quantities at the Wentworth Hospital identified that the quantity of DGs held the hospital did not exceed the storage threshold levels listed in “Applying SEPP33”(Ref.1). It was also identified that based on the relatively low quantity of DGs stored and handled, and the type of operations conducted at the hospital, the maximum permissible transport quantity and number of vehicle operation listed in “Applying SEPP33”(Ref.1) would not be exceeded. In addition to the DG storage and transport assessments, a potentially offensive industry assessment was conducted, which identified that the operations at the site would not classify the hospital as offensive. See **Appendix J**.	No
	Chaper 4 – Remediation of Land (former SEPP 55) Category 1 Remediation Works are proposed. They **do not** form part of this REF. Whilst the remediation works are partly within 100m of a water body (the mapped first order stream – the Darling River) which would otherwise make the remediation works Designated Development and require development consent – ie a DA. However, under Schedule 3 Part 3 Exceptions of the EP&A Regulation, section 49 sets out the circumstances when Designated Development does not need a DA / development consent. *49 Ancillary development* *(1) Development of a kind specified in this Schedule, Part 2 is not designated development if—* *(a) it is ancillary to other development, and* *(b) it is not proposed to be carried out independently of the other development.*	Yes, noting the proposed remediation works are subject to a DA to Council as Category 1 Remediation Works. This DA (DA2023/071) is presently being finalised, with draft conditions under review, and is anticipated to be approved by Council’s officers in September 2023.

Legislation	Comment	Relevant? Yes/No
	The subject remediation works are directly related to the hospital redevelopment, and they are ancillary and not being carried out separately or unrelated to the hospital project, they are therefore excepted in this case. Notwithstanding, it is the Wentworth LEP's mapping of part of the hospital land as a wetland (see **Figure 41** further over) which otherwise classes the works as Category 1 Remediation Works via section 4.8(e)(x) of *State Environmental Planning Policy (Resilience and Hazards) 2021*. The required DA is being concurrently assessed and considered by Council. See **Appendix K** of this REF which provides the suite of contamination and remediation-relarted documents as issued to Council with the DA. These are provided for context only**. Appendix K1** contains a separate statement on pre-remedial requirements not lodged with the DA, and which is part of this REF. This sets out the investigation-related requirements related to a current data-gap in characterising soils under existing buildings and structures in relation to anticipated remediation works.	
Wentworth Local Environmental Plan		
Land Use Zone	As set out above, Wentworth LEP 2011 zones the hospital site RU5 – Village. The works are consistent with the zone objectives to which it directly relates and not inconsistent with those it does not directly relate. The works are permitted with consent. Relevant zone objectives are included below: • To provide for a range of land uses, services and facilities that are associated with a rural village. • To promote development in existing towns and villages in a manner that is compatible with their urban function. • To encourage well-serviced sustainable development.	Yes
Height of Buildings	N/A – no building height control applies	N/A
Floor Space Ratio	N/A – no FSR control applies	N/A
Heritage	The site is not a listed or mapped item under the LEP, but sits directly north of the lot that accommodates the Wentworth water tank, a local heritage item (I94) – see further commentary throughout this REF and **Figure 39** below.	No
Flood Planning	The site is partly mapped as being subject to flood planning controls under the LEP – see **Figure 40** below. Note, this mapped part of the site identifiably sits outside of the levee. The proposed works are considered to be compliant with clause 5.21 – Flood Planning of the Wentworth LEP 2011 as through the Advisian flood impact assessment it has been demonstrated that: • The development is not located within the Flood Planning Area, which is defined as the area of land below the Flood Planning Level (1% AEP level plus 750 mm). • The development is compatible with the flood function of the land, not being positioned in any floodway or flood storage area. • There will be no adverse impacts on flood behaviour during events up to and including the 1 in 200 AEP flood. The potential impact during the adopted 'extreme' (or PMF) event is considered insignificant. • Evacuation of people from the site in the event of a flood will be possible with adequate warning time. • The development will incorporate measures to manage the risk to life in the event of a flood, and otherwise does not involve significantly increasing the number of inpatient beds.	Yes
Wetlands	The site is partly mapped as being subject to wetland controls under the LEP, noting the highly pixelated and imprecise nature of the mapping under the formal LEP maps– see **Figure 41 over**.	Yes
Terrestrial Biodiversity	The site is partly mapped as being subject to terrestrial biodiversity controls under the LEP, again noting the highly pixelated and imprecise nature of the mapping under the formal LEP maps– see **Figure 42** over.	Yes

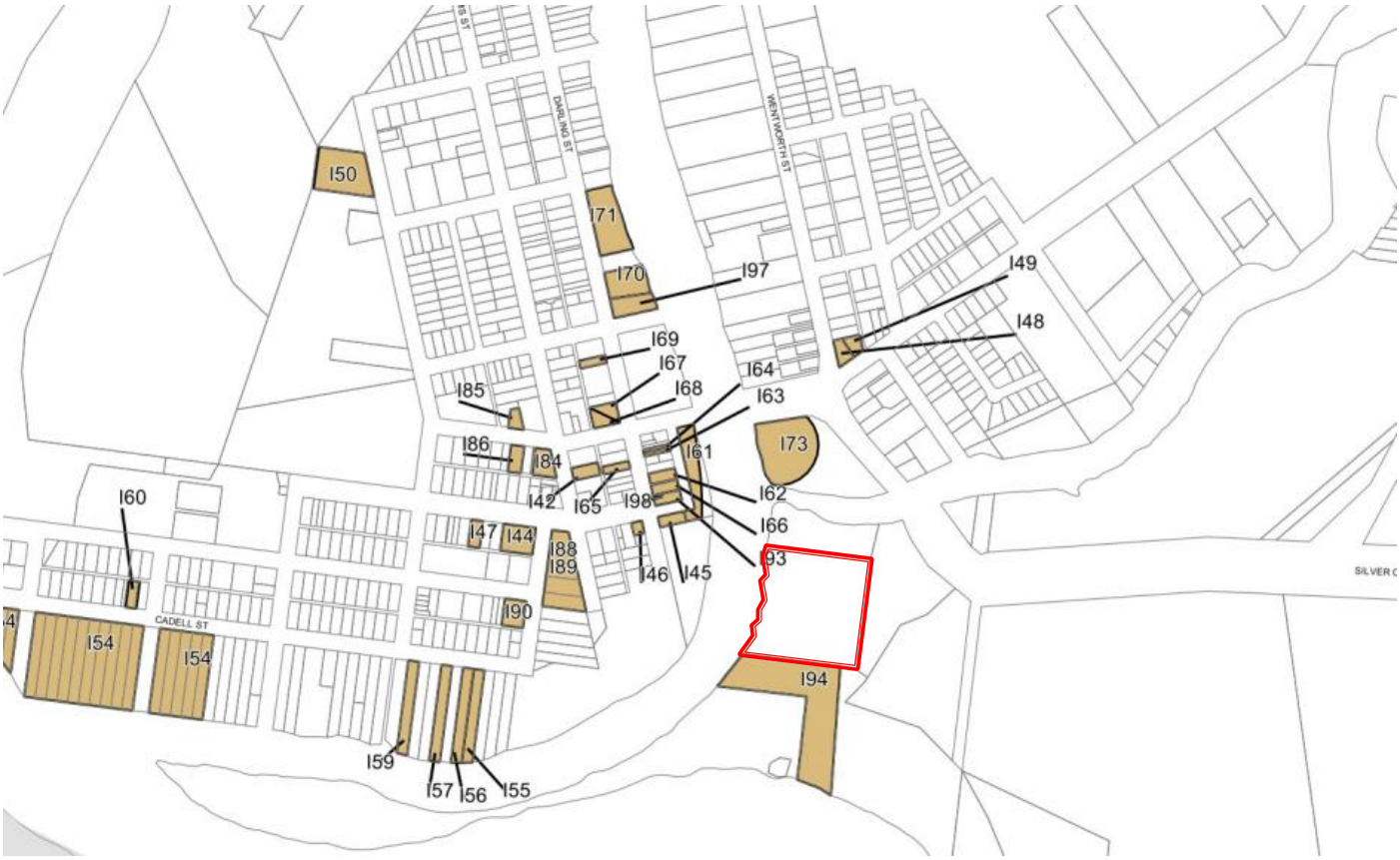


Figure 39 – Wentworth LEP 2011 heritage map

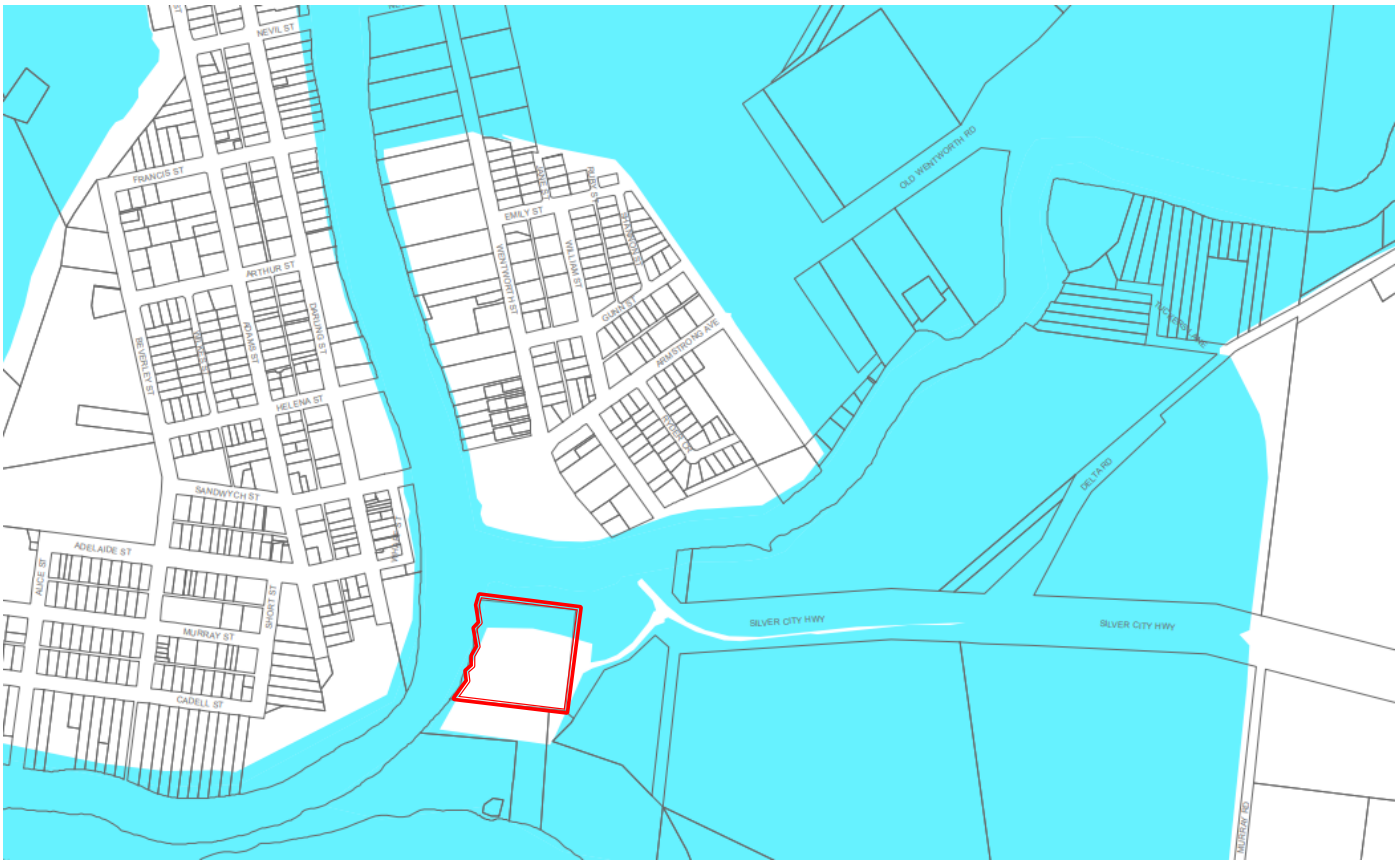


Figure 40 – Wentworth LEP 2011 flood planning area map

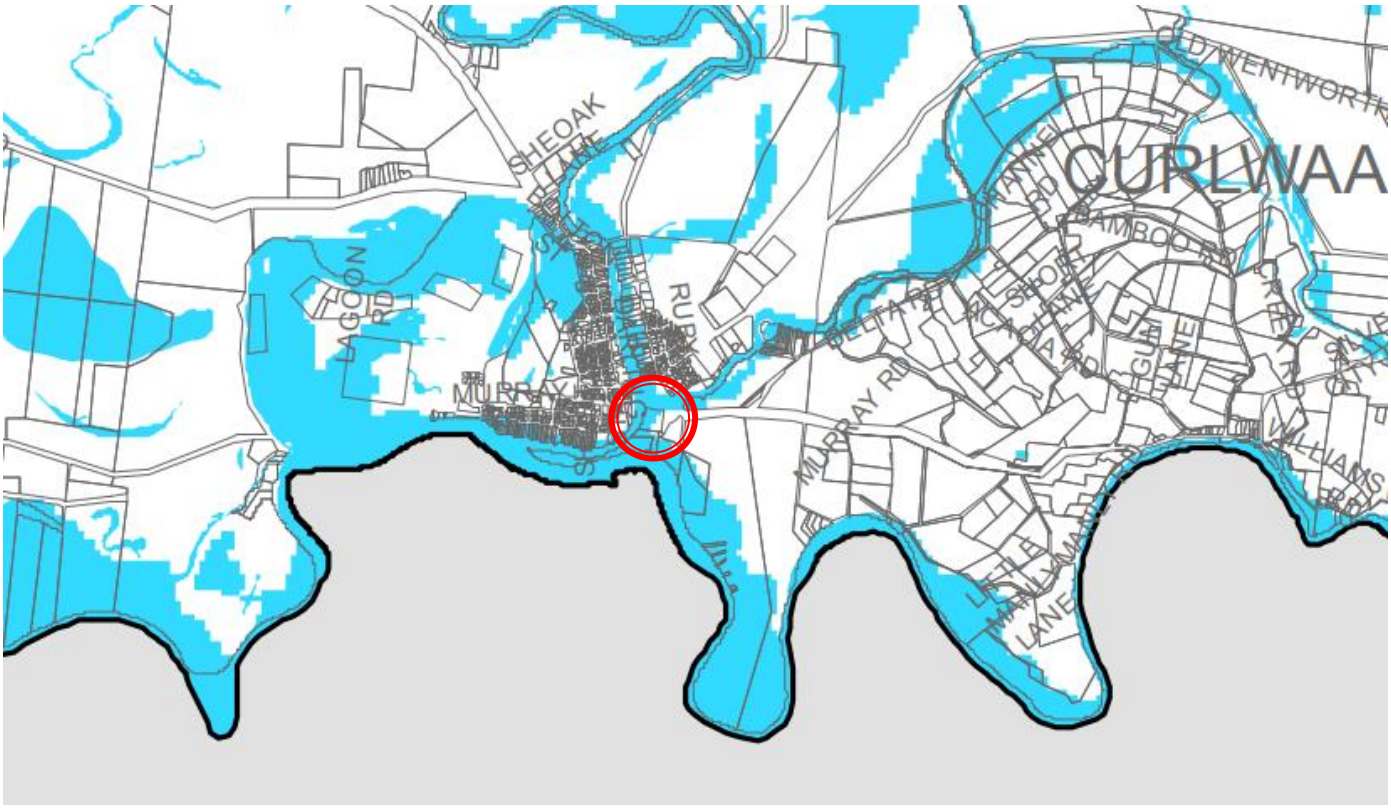


Figure 41 – Wentworth LEP 2011 wetlands map

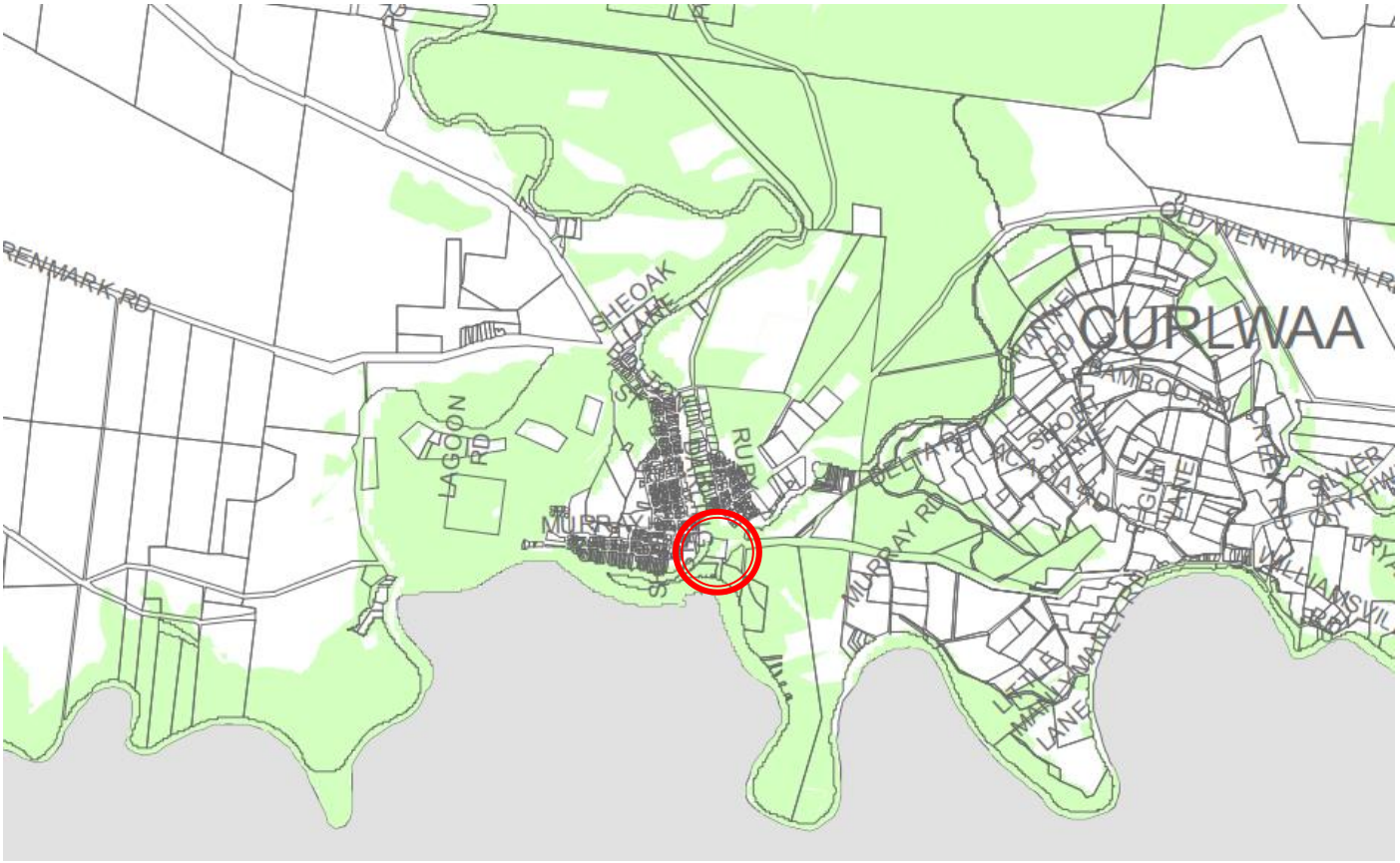


Figure 42 – Wentworth LEP 2011 terrestrial biodiversity map

Assessment of these various matters is made in Section 6 and the corresponding appendices.

5. Consultation

Under section 2.62 of the TISEPP, formal notification the proposed works is triggered to Council and occupiers of adjoining land for a period of 21 calendar days.

A notification letter with drawings was issued to Council by email on 30 January 2023. Notification letters and drawings were also provided to occupiers of adjoining land by email on 2 February 2023. As the hospital is generally remote from land with permanent occupancy, being surrounded by vacant Council-owned land and the Darling and Murray Rivers to the west and south, respectively, as well as Tuckers Creek (a tributary of the Darling River) to the north, notification was only made to the nearest user of adjoining land, being the Wentworth District Rowing Club to the west of the hospital over the Darling River.

Further, as the hospital site is generally flood liable land and involves a health services facility, being at the confluence of the Darling and Murray Rivers, agency notification was also triggered in relation to section 2.13 of the TISEPP with the State Emergency Service (SES). No other agency notification arises.

A notification letter with relevant attached drawings was provided to the NSW SES Area Manager for the Murray - Southern Zone in Wagga Wagga by email on 2 February 2023. This was subsequently forwarded onwards internally within the SES on 3 February 2023 to its newest relevant contact, the NSW SES Western Zone. This was taken to be the correct commencement of notification for the SES.

As the SES notification period concluded on 24 February 2023, the overall notification period is also taken to have concluded on that date, subject to marginal consequential extensions to the notification period for Council and occupiers of adjoining land.

Table 8: Stakeholders required to be notified

Stakeholder	Relevant Section
Wentworth Shire Council	Section 2.62
State Emergency Service (SES)	Section 2.13
Occupiers of adjoining land (Wentworth District Rowing Club)	Section 2.62

Following notification, no public submissions were received and Council also did not provide a submission. Further, the SES also did not make a submission.

Copies of the notification letters are provided at **Appendix L**.

In the wake of the recent release of the suite of flood-related documents under the Flood Risk Management Manual (June 2023), HI was keen to ensure the SES was given the opportunity to comment on the redevelopment under contemporary flood risk management guidance. On 22 August 2023 a follow-up referral was made to the SES and included the original notification letter as well as the completed Flood Emergency Response Plan (FERP). The SES responded with a letter dated 5 September 2023 setting out a range of comments. These are addressed below.

SES Comment	Response
Consider the impact of flooding on the infrastructure up to and including the Probable Maximum Flood (PMF).	In preparing its assessment Advisian applied the Wentworth Flood Study as commissioned by Council (2021) and simulated and modelled the 1956 and 1974 historical floods, the 10%, 5% and 1% AEP events, the 1 in 200 AEP (1 in 200 year) event, and a hypothetical extreme event as the Probable Maximum Flood (PMF). The proposed development will therefore have no impact on peak flood levels or flow velocities for floods up to and including the 1

	in 200 AEP event; an event with an average recurrence interval of once every 200 years. The development would have a negligible impact on flood behaviour during the adopted 'extreme' flood event. The overall intent is to protect the hospital infrastructure (i.e. the new hospital building) to the 1 in 200 AEP event as the key community asset on the site.
Pursue, if relevant, site design and stormwater management that minimises any risk to the community.	As above, the proposed development will therefore have no impact on peak flood levels or flow velocities for floods up to and including the 1 in 200 AEP event; an event with an average recurrence interval of once every 200 years. The development would have a negligible impact on flood behaviour during the adopted 'extreme' (PMF) flood event.
Evacuation of hospitals and aged care can be complex and is known to be associated with an increased rate of mortality in patients and nursing facility residents. Therefore, it is the preference of NSW SES that all hospitals follow the application of sound land use planning and flood risk management. The NSW 2022 Flood Inquiry Recommendation 28 highlights that sensitive uses are known to have a higher risk to life and warrant the consideration of the impacts of even rarer flood events than the 1% AEP flood extent. This includes the impacts of essential services infrastructure disruption on the proposed development. The Inquiry recommends sensitive uses, including aged care facilities are situated on land outside the probable maximum flood (PMF) extent and essential services infrastructure is situated above the flood planning level to minimise disruption. The NSW SES also note there may not be alternative flood free locations in Wentworth and the distance to the next health hospital is approximately 45km, 30 minutes by road.	In determining to redevelop the existing hospital site, consideration of flooding impacts (including the PMF) was a key consideration from both asset protection and evacuation perspectives. Evacuation, through the implementation of the Flood Emergency Response Plan (FERP), has demonstrated to be a readily achievable option with suitable and manageable lead-in times to reduce risk and stress upon the hospital population in the event of such circumstances. The FERP (as may be amended or updated) forms the basis of evacuation procedures for the hospital.
Ensure workers and people using the facility during and after the upgrades are aware of the flood risk, for example by using signage. The level of flood awareness of visiting medical, nursing, and allied health staff to the Wentworth Hospital facility is likely to be significantly lower than within the resident Wentworth community. All warnings issued by the NSW SES are considered official warnings and will be viewed on the NSW SES website and the HazardWatch website and app which was launched by the NSW SES on 30 September 2022 as part of the launch of the Australian Warning System. This new site is geared to displaying official NSW SES warnings and in time flash flood warnings and warnings from other emergency services. The Australian Warning System uses three categories of hazard warnings: Advice, Watch and Act, and Emergency Warning. These categories replace the NSW SES' Evacuation Warnings and Evacuation Orders. Further information about the warning levels and actions can be found on the NSW SES website at https://www.ses.nsw.gov.au/about-us/our-warnings/	This REF's Mitigation Measures have been refined to include this comment / recommendation in the implementation of the FERP at the site.

6. Environmental Impact Assessment

6.1 Environmental Planning and Assessment Regulation 2021 – Assessment Considerations

The relevant assessment considerations under 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	The proposal will have a generally positive and ongoing impact on the health services provided by the hospital for the community of Wentworth, its wider catchment, and for the broader FWLHD. From an environmental standpoint the built form of the new building replaces a building of a similar scale and proportion within the same general footprint, albeit marginally elevated to the existing levee level for internal amenity reasons and asset protection reasons during flood events. The demolition of the existing hospital building (and some other buildings) removes structures with some identified hazardous materials and enables the further clean-up of part of the hospital campus to contemporary standards. Overall the project makes renewed best use of the hospital campus' capacity to provide enhanced services without significant and long-term impact upon (albeit remote) neighbours. During construction, a minor increase in trucks and construction operations may have a noise impact, however this will be managed and mitigated through appropriate measures during works. Dust control will also be a environmental management consideration.	-ve	Short term noise impacts within the immediate environs during construction
		Nil	
		+ve	Long term operational
(b) Any transformation of a locality	As the new building will sit within the same general area within the hospital focussed towards the Darling River and now be perched at the existing levee height to improve internal amenity to facilitate potential for improved health and recovery outcomes, there is potential for the building to become more visible from the Wentworth township itself. The building will be set behind existing vegetation and screened to the greater part. The building's profile and especially its roof has the potential to be seen but this cannot be considered a transformation in the same way as the building being located on a different site and being of a greater scale and visibility. The balance of the works will not generally be visible. Overall the changes to the site, built form, their visibility and the like are not of a scale or dimension to be reasonably considered to transform the locality in any adverse sense.	-ve	
		Nil	X
		+ve	
(c) Any environmental impact on the ecosystem of the locality	No flora species or populations listed as threatened under the Biodiversity Conservation Act or EPBC Act were observed during the field survey. Given the short duration of the field survey, and the lack of targeted surveys, the non-detection of threatened flora species cannot be considered as confirmation of their absence. However, following a desktop review of nearby records and habitat requirements for predicted threatened flora, no species were considered to have a moderate-high probability of occurrence within the subject site. PCT 11 and PCT 15 at the site will not be directly impacted by the current proposal as they sit outside of the confines of the levee. No vegetation within, or immediately adjacent to, the subject site is associated with a Threatened Ecological Community (TEC) under either the *Biodiversity Conservation Act 2016* (BC Act), or the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act). The subject site does contain areas mapped as being of high terrestrial biodiversity value under the Wentworth Local Environmental Plan (2011). However, Tests of Significance have been conducted by OzArk for a range of species associated with the area and the endangered Lowland Darling River aquatic ecological community under the Fisheries Management Act or EPBC Act. Provided that the proposed mitigation methods of the OzArk	-ve	
		Nil	
		+ve	X

Relevant Consideration	Response/Assessment		
	assessment are adhered to, the proposal is not likely to significantly impact any threatened aquatic species, population or community listed under the Fisheries Management Act or EPBC Act. The proposal will result in the loss of 9 planted native trees and 4 dead trees. No tree hollows where observed during the flora and fauna assessment. Given the HI policy of replanting canopy trees at a rate of better than 1:1, and some 68 trees are proposed to further enhance the green and treed nature of the campus, the redevelopment has the potential to result in a significant improvement of the site's green canopy at a ultimate replacement ratio of 7.5:1 once the Stage 2 works are completed.		
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality.	There will be no reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality. The works are broadly confined to existing developed and disturbed areas of the hospital campus within the boundaries of the existing levee.	-ve Nil +ve	 X
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 proposal will not have any adverse effect on locality, place or buildings having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations. The Heritage Impact Statement further states that the errors in accuracy around the NSW Health s170 register listing of the hospital's 1880s buildings will not affect the proposed demolition as these original buildings were demolished in the 1940s. The buildings subject to the proposed demolition are dated from the 1940s onwards do not meet the criteria for local heritage listing. They are, however, valued by the local community for the health services provided over the years. As such, the demolition of the 1940's buildings would only result in a minor loss of social value significant to the locals of Wentworth. However, the social values of Wentworth having a health facility will be retained following the demolition of the 1940's buildings and construction of the new complex. The Wentworth Water Tower's local heritage significance is not impacted by the redevelopment as the works are contained within the levee bank of the hospital and remote from physical and visual impacts upon the tower. The lasting relationship between the water tower and the subject site as a hospital, as originally established in the 1880s, will be mainained.	-ve Nil +ve	 X
(f) Any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974)	No protected fauna (within the meaning of the National Parks and Wildlife Act 1974) will be impacted by the proposal given the urbanised and disturbed context of the hospital campus (within its levee wall) and the nature of the works.	-ve Nil +ve	 X
(g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air	The proposal will not endanger any species or animal or plant – as set out in the Flora and Fauna Assessment accompanying this REF as described above. See further commentary below.	-ve Nil +ve	 X
(h) Any long term impacts on the environment	There will be no long-term or permanent adverse or negative impact on the natural or man-made environment as a result of the operation of the development. The construction works will improve the environmental aspects of the site with respect to hazardous building materials presently at the site. New native and endemic canopy trees at the site will improve the environment within the hospital campus.	-ve Nil +ve	 X
(i) Any degradation of the quality of the environment	The proposal will not reduce the quality of the natural environment, noting vegetation and the few trees lost to the proposal will be replaced at better than a rate of 1:1 with native and endemic species at a rate of 7.5:1. Generally, water quality is improved as a result of the proposed civil engineering works.	-ve Nil +ve	 X

Relevant Consideration	Response/Assessment		
j) Any risk of safety of the environment	There will be no risk to the safety of the environment as a result of the proposal.	-ve	
		Nil	X
		+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 as a result of the proposal.	-ve	
		Nil	X
		+ve	
(l) Any pollution of the environment	The works will reduce the current levels of stormwater run-off pollutants. Indirectly, the under DGN 058 the new building will improve the campus' existing ESD credentials and result in an at-least 4-star Green Star equivalent development which also improves upon the BCA's Section J ESD requirements by at least 10% and any concomitant pollution-generating activities related to energy production and usage, transportation, and other production of building materials.	-ve	
		Nil	
		+ve	X
(m) Any environmental problems associated with the disposal of waste	The works generally result in demolition-related waste (of which only a small portion is standard hazardous materials for which routine waste classifaction and removal and disposal methods will be employed). Ongoing clinical and hospital waste will be addressed through currently employed contemporary waste handling methods. Note, remediation works are subject of a separate DA to Council as Category 1 Remediation Works and approval thereunder.	-ve	
		Nil	
		+ve	X
n) Any increased demanded on resources (natural or otherwise) that are, or are likely to become, in short supply	The proposal will not result in increased demand on resources (natural or otherwise) that are, or are likely to become, in short supply, noting that under DGN 058 the new building will improve the campus' existing ESD credentials and result in an at-least 4-star Green Star equivalent development which also improves upon the BCA's Section J ESD requirements by at least 10%.	-ve	
		Nil	
		+ve	X
(o) Any cumulative environmental effects with other existing or likely future activities.	See further detailed discussion below. Only modest forms of development have been approved in the vicinity of the hospital with the timing and scale of development unlikely to impact the environment should these works be carried out concurrently.	-ve	
		Nil	X
		+ve	
(p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions.	N/A – the site is well removed from coastal areas of NSW.	-ve	
		Nil	X
		+ve	
q) Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1	**Draft Far West Regional Plan 2041** This Plan seeks to update the Regional Plan to 2036 and was on exhibition from 6 October 2022 to 21 November 2022. The exhibition was a key part of the draft plan's first 5-yearly review to reset priorities and extend the plan's reach to 2041. The draft plan's 20-year vision is that the region's communities will be able to adapt to change, supported by a diverse economy, the right infrastructure and an exceptional natural environment. Key parts of the plan also seek to help local councils to deliver the planning system and local Aboriginal land councils to achieve their aspirations for their land. The draft plan supports the region's natural environment. The draft plan aims to protect and harness it to support ongoing prosperity and to improve communities' ability to adapt to a changing climate and withstand and recover from natural hazards. As the future of energy is renewable, the draft plan supports NSW's transition to net zero emissions by 2050. The draft Plan has 16 objectives across the themes of Environment; People and Communities; and Ongoing Prosperity.	-ve	
		Nil	X
		+ve	

Relevant Consideration	Response/Assessment
	The objectives most relevant to this project would include: • Objective 4 - Increase natural hazard resilience in the region (as it relates to addressing flooding and bushfire risk at the hospital) • Objective 5 – Support Aboriginal aspirations through land use planning (indirectly through the design process and engagement with the Aboriginal community and Designing with Country and Connecting with Country). • Objective 7 - Create a network of centres for the dispersed population (by reinforcing the hospital's location in, and service for, the Wentworth community). • Objective 9 - Facilitate accommodation options for seasonal, temporary and key workers (in providing additional on-site accommodation for key workers to enhance the attractiveness to work and live in Wentworth and support the hospital's employment). • Objective 15 – Support the transition to net zero by 2050 (through adoption of, and delivery of a design and infrastructure supporting HI's DGN 058 ESD policy). • Objective 16 - Ensure government and community service provision (through the delivery of the project in itself). Of specific reference to Wentworth and/or health and hospitals, the only direct relationship arises within the Objective related to planning for connected cross-border communities (Objective 10), noting that the objective is to support and maintain connectivity for the benefit of communities. The subject project will clearly seek to meet the immediate needs of the Wentworth community and catchment but does not diminish existing relationships and connections with other health services within NSW and in Mildura. The project supports and supplements a wider and enhanced provision of health services (another fundamental objective of the same Plan). **Wentworth Local Strategic Planning Statement (LSPS)** LSPS's set out • the 20-year vision for land use in the local area • the special characteristics which contribute to local identity • shared community values to be maintained and enhanced • how growth and change will be managed into the future. LSPS show how Councils' visions give effect to the regional or district plan, based on local characteristics and opportunities, and the councils' own priorities in the community strategic plans they prepare under local government legislation. Council's 'Local Strategic Planning Statement (LSPS) – A Vision to 2040 and Beyond' (as adopted on 18 March 2020) sets out the strategic planning framework for the LGA through a series of Planning Priorities. Few of the Planning Priorities directly relate to the proposed development of health services within the LGA and Wentworth township itself. Notwithstanding, the LSPS retains a focus on services and connections to Mildura as the higher order place within the area, including for health services, but also identifies in relation to revitalisation of the Wentworth township that a 'future integrated health and aged care precinct' is proposed or identified in the location of the Town Hall / Council civic precinct site adjacent to Murray House. This figure sits within Planning Priority 6 – Sustainable Settlements which has four separate Directions as follows: *Gives effect to:* ***Direction 20: Manage change in settlements*** ***Direction 21: Strengthen communities of interest and cross-regional relationships*** ***Direction 27: Provide greater housing choice*** ***Direction 28: Deliver greater opportunities for affordable housing of the Far West Regional Plan***

Relevant Consideration	Response/Assessment		
	In this case the project does not support this vision, Priority, and its Directions to the extent of the project's role in being able to do so. The best (value for money) option available in the ongoing improvement of the delivery of health services within Wentworth township and LGA, its catchment, or the FWLHD. was to redevelop at the existing hospital site. Given the nature of the works it is otherwise unlikely to affect the community in a way that is contrary to any of the higher level vision, objectives or actions of the plan. The works reinforce and support the provision of health services in the LGA and the health of the LGA.		
r) Other relevant environmental factors.	None identified	-ve	
		Nil	X
		+ve	

6.2 Identification of Issues

6.2.1 Traffic, Access and Parking

Questions to consider	Yes	No
Will the works affect traffic or access on any local or regional roads?		X
Will the works disrupt access to private properties?		X
Are there likely to be any difficulties associated with site access?		X
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)?		X
Will full or partial road closures be required?		X
Will the proposal result in a loss of onsite car parking?		X
Is there onsite parking for construction workers?		X

A range of access, parking and site circulation upgrades are proposed at the hospital in catering for the redevelopment. The scope of works and the assessment and justification is contained within the Traffic, Transport and Parking Assessment prepared by SCT Consulting at **Appendix M**.

Access

The redeveloped facility will continue to be accessed from Hospital Road at the existing entry from the Silver City Highway. The proposal will include a new pedestrian footpath into and through the site. However, as a conservative estimate for traffic and parking impact assessment, all user groups are assumed to arrive on site via motor vehicle as the site is a relatively long distance to access by walking or cycling from a range of locations within Wentworth and its catchment.

As shown in **Figure 28** earlier in this REF, a loop roadway will provide circulation into the site, which would also ultimately allow for bus access, subject to budgetary considerations. A further one-way loop provides access to the new Health Service building itself, including the loading dock, pick-up / drop-off, car parking, ambulance bays and mortuary access. Staff accommodation is separated from public movement through a dedicated driveway. A Swept Path Analysis is provided as part of the assessment which indicates the proposed internal road network can cater for all user groups that require access at Wentworth Health Service, including bariatric ambulances, servicing and waste vehicles, fleet vehicles and fire brigade vehicles.

Provision of footpaths within the site will be improved with the proposed redevelopment, with footpaths linking the existing carpark and staff accommodation to the new main building. Zebra crossings will be provided at key crossing points to improve pedestrian priority throughout the site.

The new internal road layout allows the staff accommodation area to be separated from the public thoroughfare, with the existing roadway in this location acting as a single lane driveway. A single lane is suitable as sightlines and the road reserve width is adequate to allow drivers to yield to opposing traffic, and the driveway will at most service the 10 staff residing in the five (5) accommodation units. A turnaround bay will be constructed at the southwest end of the driveway to allow cars to turn around – see **Figure 29** of this REF.

Parking

The on-site parking supply is to be increased from some 24 public and staff spaces to a total of 37 at-grade public and staff spaces, including two accessible spaces.

Designing for Green Star rating requires that 5% of parking on site is dedicated to electric vehicles with charging infrastructure provided for each space. The redevelopment will provide two parking spaces that are future-proofed for EV charging, meeting the Green Star requirements. This will also meet HI's Design Guidance Note (DGN) number 046 which states that car parks should provide for and/or facilitate EV charging, future proofing (power and communication conduits) for 2% of the total number of parking spaces.

Separate to the public and staff parking spaces, six (6) parking spaces have been dedicated to the LHD's fleet vehicles. This consists of four (4) car spaces, one (1) space for a 12-seater community transport van (sized for an SRV), and one (1) space for the dental van that is stored seasonally on site.

The FWLHD dental van is a trailer from which dental services are provided to the local schools and is stored at the Wentworth Health Service site during school breaks.

The Breast Cancer Screening service has both trailers and trucks in its fleet. The internal circulation roadways of the redevelopment are designed for HRV access and therefore will not support the "Large Trailer", which is 2.43m wide and 12.5m long without a tractor head. The Breast Cancer Screen service to the site is therefore limited to use of the "Medium Rigid Truck", a vehicle the size of a HRV (12.5m long), which will be able to fit through the internal roadways.

Additional staff accommodation will be delivered next to the existing facilities. The three new accommodation buildings (each with 2 x 1 bedroom dwellings) will have their own parking spaces, so accordingly all five accommodation buildings will have dedicated parking.

The new Wentworth Health Service will include a new UCC that caters for low acuity emergencies. The new ambulance bay will have capacity for two ambulances and is located on the northern side of the building with a dedicated entrance. The bays have been sized to allow for the use of the NSW Ambulance Bariatric fleet, which has a maximum width of 2.6m wide and 7.3m long. The increase in on-site car parking also caters for a possible increase in hospital activity that may arise from the current reliance upon non-emergency trips to Mildura Hospital. The number of parking spaces adequately caters for the introduction of the UCC.

Construction parking is to be provided on site for the staged duration of the works.

Public Transport

It is proposed that the Wentworth to Mildura bus service, routes 950 and 951, will service the hospital with a new bus stop to be provided within the site as part of Stage 2 (subject to funding and budget allocation). Discussions in this regard are underway between the bus service provider (CDC), Transport for NSW and Wentworth Council. Internal roadways delivered in Stage 2 will allow bus access through the first one-way loop of the site. This will allow routes 950 and 951 to service Wentworth Hospital. The internal roadways will also be wide enough to allow coach services, such as the Broken Hill to Mildura service, to access the site if required.

The impact of the Wentworth to Mildura bus services will be positive for customers trying to access health services, as no public transport to the facility currently exists. The route diversion is expected to add a couple of minutes to the trip, which is minimal considering the overall trip length / duration.

Generally, there are no significant traffic, access or parking issues associated with the redevelopment, largely given the low frequency of traffic movements in the general locality; the low frequency of traffic movements to and from the hospital; the adequacy of the existing and proposed car parking arrangements with suitable supply to the demand; and the ability for the redevelopment to accommodate refined access and parking arrangmemts to meet contemporary requirements. No mitigation measures are relevant to the operational aspects of the redevelopment, however, a final

Construction Traffic Management Plan will be required to be developed to minimise impacts during the construction stages of the project, especially while the existing building remains operational. This is included as part of the proposed mitigation measures at **Appendix X**.

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)?		X (only the existing hospital use)
Will any receivers be affected by noise for greater than three weeks?	X	
Are there sensitive land uses or areas that may be affected by noise from the proposal during operation?		X
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		X
Will the works result in vibration being experienced by any surrounding properties or infrastructure?		X

Stantec has prepared a Operational & Construction Noise Impact Assessment based on background noise data collection and consideration of relevant guidelines and standards - see **Appendix N**. It considered noise and vibration affectation upon adjacent sensitive external land uses. These included receivers in relation to construction and operation as follows:

- Receiver 1 (R1) – Residential use some 350m to the north-east of the site over Tucker's Creek
- Receiver 2 (R2) – Residential use some 260m to the north-west of the site over the Darling River.

The hospital itself will also be subject of construction noise impacts.

Construction Noise and Vibration

Based on the likely / assumed plant and equipment, the scope of works, and current works methodology, Stantec has concluded that the works are unlikely to affect the residential receivers with highly affected noise. Only minor exceedances above the Noise Management Level of up to 4dBA to 8dBA may be expected. This is considered a reasonable level of construction noise affectation in the circumstances. Given the proximity of the hospital to the works it may be expected that the hospital will be highly noise affected with noise levels exceeding 75dBA at times.

It is expected that no external properties would be affected by vibration given the relative distances involved.

To suitably address the levels of construction noise, general acoustic recommendations for construction have been made by Stantec. These include managing noise through:

- Increasing the distance between noise sources and sensitive receivers.
- Reducing the line-of-sight noise transmission to residences or other sensitive land uses using temporary barriers (stockpiles, shipping containers and site office transportable can be effective barriers).
- Constructing barriers that are part of the project design early in the project to introduce the mitigation of site noise.
- Installing purpose-built noise barriers, acoustic sheds and enclosures.

Other recommendations detail further screening measures, crane-related measures, and reversing and warning alarm management. A Noise and Vibration Monitoring Strategy also forms part of Stantec's recommendaed approach to managing impacts.

Overall, and based on the above, a detailed construction noise and vibration management plan, in alignment with Stantec's recommendations will be required prior to the commencement of the works. This is included in the REF's mitigation measures at **Appendix X**.

Operational Noise

The operational impacts of the development will be limited to the operation of plant and equipment servicing the proposed development, traffic generated by the development, including, vehicle movements entering and exiting the carpark and site, and noise generated from the operation of the loading docks (unloading/loading activities).

Stantec has identied the following noise emission targets based on the NSW EPA – Noise Policy for Industry (NPfI) 2017 with reference to the same sensitive receivers referred to earlier.

Receiver	Period	Descriptor	Project Noise Trigger Levels dB(A)
Residential	Day (7:00am to 6:00pm)	$L_{Aeq,15min}$	**42**
	Evening (6:00pm to 10:00pm)	$L_{Aeq,15min}$	**42**
	Night (10:00pm to 7:00am)	$L_{Aeq,15min}$	**35**

As is typical at this stage of a project, mechanical plant to service the new building is not yet specified, designed or known. The following noise sources are however considered the most likely by Stantec to cause an adverse noise impact to noise sensitive receivers if not treated effectively:

- External condenser units located on ground level servicing the new hospital
- Ventilation fans servicing the new hospital

In order to assess the worst-case scenario, it is assumed that the air conditioning units associated with the proposed development are running at any time throughout a 24-hour period. Night time is the most stringent period for the noise generated by the operation of the mechanical plant, therefore this criterion was used as the noise target at the boundary of the nearest sensitive receivers for the project.

The details of the plant and equipment will be resolved at certification and can be made to meet the above targets. Accordingly, the above will be achievable through a range of noise mitigating measures such as locating plant as far away from possible noise sensitive receivers as practical to minimise the aggregate noise level; selecting low noise mechanical equipment; and use of acoustic louvres or solid barriers surrounding plant items on the rooftop or other locations.

In any case, a detailed acoustic assessment of the mechanical plant noise is recommended prior to Crown Certification to ensure no adverse noise impacts from external mechanical plant in accordance with the criteria. This is included at **Appendix X** as a mitigation measure.

Traffic-generated noise is not likely to be of concern given the low number of vehicle trips, and that the level of additional traffic generation from the proposed development will be minimal. It is not expected that any net gain in traffic movements to and from the site will generate any discernible or adverse noise impacts to the nearest noise sensitive receivers and is otherwise compliant with the criteria set out in the Stantec assessment.

Further, the likely levels of loading dock noise (noting this faces away and is screened from sensitive uses by the new building) has been predicted to sit well within the 35dBA identified by Stantec as the conservative night time noise emission target.

6.2.3 Air Quality and Energy

Questions to consider	Yes	No
Could the works result in dust generation?	X	
Could the works generate odours (during construction or operation)	X	
Will the works involve the use of fuel-driven heavy machinery or equipment?	X	
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?	X The existing hospital itself	

To manage and mitigate the potential for adverse dust and odour impacts, it is proposed that a robust and rigorous air quality management regime be applied and imposed during works.

The preliminary Construction Management Plan (at **Appendix O**) sets out a range of measures to be imposed as detailed below.

The works will be undertaken in accordance with relevant legislative requirements and as specified in the tender documents related to the awarding of the Main Contract.

With respect to air quality these would include:

- Protection of the Environment Operations Act and Regulations.
- Approved Methods for the Modelling and Assessment of Air Pollutants in NSW (EPA) Environmentally Hazardous Chemicals Act 1985.
- Protection of the Environment Administration Act and Regulations.

The Principal Contractor undertaking the works will be required to submit for approval to the Principal a comprehensive Environmental Management Plan (EMP) to ensure compliance with all statutory requirements as well as NSW Health's

requirements. Management of dust prevention and air quality on site would will be developed by the Main Contractor, and will form part of an the EMP.

The environmental performance of the Principal Contractor will be monitored throughout the works with the following specific environmental management principles implemented on site:

- Dust management
- Erosion and sediment controls

Mitigation strategies for the above will be documented in the EMP and the contractor will be responsible for taking all reasonable steps to minimise dust or reduced air quality generated during the works and affecting current and adjacent occupants.

Management procedures, to be undertaken by the Contractor, will include:

- Ensure measures to prevent tracking of soil onto roadways outside of the site. These may include the provision of measures such as a shaker grid, wheel wash facilities, hosing and general manual cleaning.
- Ensure all trucks leaving and entering the site have their loads covered.
- Undertake construction activities in a manner that minimizes dust including emission of windblown or traffic generated dust.
- To control dust generation water will be sprayed where necessary at the source of origin and surrounding areas to prevent airborne dust particles migrating into the surrounding environment. Management of dust prevention is to be developed by the Principal Contractor and agreed by the project stakeholders.
- Stabilisation of bare soil to prevent dust and erosion. This may include use of mulch or other cover precautions including weather monitoring.
- Ensure land stabilisation works are carried out progressively on site to minimize exposed surfaces.
- Develop contingency plans to prevent any foreseeable impacts from dust.
- Ensure that dust or odour emissions do not adversely affect the health or visual amenity of the WHS or the surrounding communities.
- Ensure compliance with State and Local regulatory requirements in relation to dust management.
- For works immediately adjacent the live Hospital environment, measures will be put in place to separate the construction works from the hospital operations to reduce the impacts of dust.

In terms of the construction activity for the site, it is expected that odour problems will be minimal. All plant and machinery involved in the works will be regularly serviced and checked for exhaust emissions and catalytic converters. These matters have been incorporated into the mitigation measures at **Appendix X.**

6.2.4 Soils and Geology

Questions to consider	Yes	No
Will the works require land disturbance?	X	
Are the works within a landslip area?		X
Are the works within an area of high erosion potential?		X
Could the works disturb any natural cliff features, rock outcrops or rock shelves?		X
Will the works result in permanent changes to surface slope or topography?	X	
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?		X
Are the works within an area affected by salinity?	X 'slight to moderate' only	
Is there potential for the works to encounter any contaminated material?	X (see further below)	

A Geotechnical Investigation was carried out by ARTL Aitken Rowe Geotechnical Engineering (see **Appendix P**).

The purpose of the investigation was to determine the type and condition of the subsurface soils and groundwater conditions by drilling, testing and sampling across the subject site and make recommendations for the proposed redevelopment and provide pavement design options for the proposed pavement areas.

It found the general topography of the area to be flat, gently undulating low tablelands with the 1:500,000 Geological Series Sheet for Wentworth (First Edition 1971) indicating the subject area to be underlain by Quaternary aged floodplains and outwash areas (Qrs) with Pleistocene lacustrine deposits, limestones, clays, shales and well bedded sandstones (Ql) north-west of the Wentworth town centre.

The result of borehole testing at the site (15 boreholes) generally revealed that the site at the location of BH1 to BH4 and BH6 is generally underlain by fill material comprising topsoil of 100 to 200mm thickness, low plasticity sandy silt (BH1 and BH4 only) and various medium and high plasticity clays, silty clays, and sandy clays extending to 0.5m in BH1 and BH2, 0.7m in BH3 and BH4 and 0.6m in BH6 overlying natural alluvial material.

The natural alluvial material encountered at the subject site comprises medium, medium to high, and high plasticity clays and silty clays extending to 4.8m in BH1, 6.5m in BH2, 5.6m in BH3, 4.5m in BH4 and 5.5m in BH6, which is underlain by fine to medium grained clayey sand extending to the borehole termination depth at 7.5m in BH2, BH3, BH4 & BH6 and to 6.4m in BH1, which is then underlain by high plasticity clay extending to the borehole termination depth at 7.5m in BH1. It should be noted that borehole wall collapse in the clayey sand layer occurred in all boreholes, preventing the borehole target depth of 8.0m from being achieved. The fill material encountered in BH1 to BH4 and BH6 appeared to have been placed “uncontrolled” and varying from “poorly compacted” to “moderately compacted”.

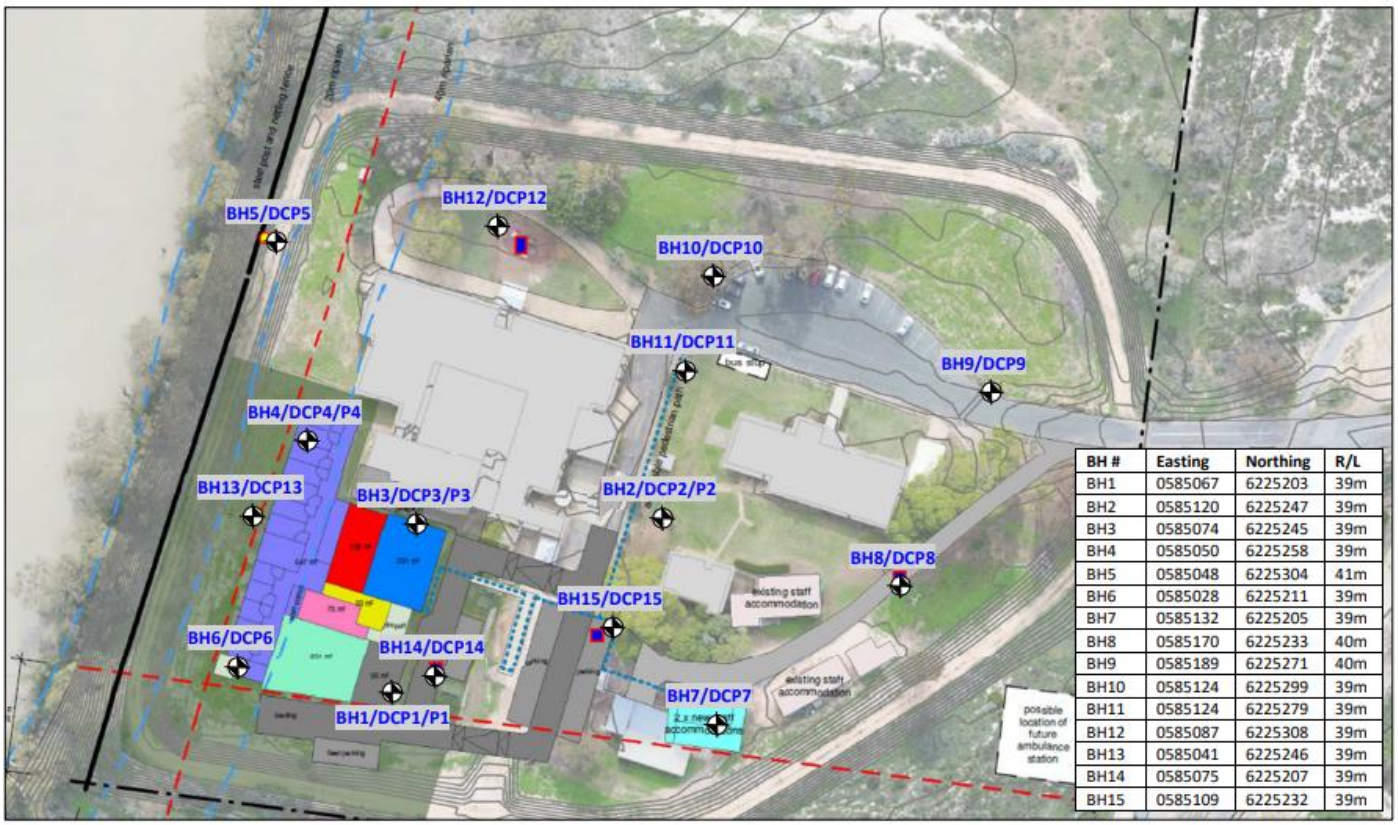
The moisture condition of the underlying natural material was generally varied from less than plastic limit to greater than plastic limit throughout the clay-based profile in BH1 and BH2 however noted as generally greater than plastic limit throughout the entire clay-based profile in BH3, BH4 and BH6, with the underlying sand-based material noted as generally wet where encountered in BH1 to BH4 and BH6 at the time of the investigation.

Seepage was encountered at a depth of 4.8m below the existing surface level and noted to extend to 6.4m in BH1, from 6.0m to 7.5m (end of borehole) in BH2, from 5.6m to 7.5m (EOBH) in BH3, 4.5m to 7.5m (EOBH) in BH4 and from 5.0m to 7.5m (EOBH) in BH6 at the time of the investigation. The borehole locations are shown in **Figure 43**.

No acid sulphate soils are likely to occur at the site. The level of salinity at the site was been identified as ‘slight to moderate’. No recommendations are made with respect to either soil condition in the Geotechnical Investigation.

Groundwater seepage and side collapse should be expected during the footing excavation, particularly for pile footing system within the clayey sand material. Such seepage should be readily controllable by conventional sump and pump dewatering systems installed at the base of the excavation with the provision of temporary liners sealed into the impervious material or by installing a series of well points. Beyond this, no specific groundwater management recommendations are made, other than changed circumstances on-site due to altered climatic conditions which may necessitate renewed geotechnical investigations or review.

Due to the extent of earthworks proposed across the site, a Erosion and Sediment Control Plan is required during construction. TTW has prepared relevant documentation consistent with NSW’s Managing Urban Stormwater, Soils and Construction “Blue Book” to prevent sediment-laden stormwater from discharging into the Darling River within its civil engineering report / Stormwater Management Plan – see also further discussion in the next subsection of this REF. The TTW civil enginmeering and stormwater management reporting is found at **Appendix H**.



BH #	Easting	Northing	R/L
BH1	0585067	6225203	39m
BH2	0585120	6225247	39m
BH3	0585074	6225245	39m
BH4	0585050	6225258	39m
BH5	0585048	6225304	41m
BH6	0585028	6225211	39m
BH7	0585132	6225205	39m
BH8	0585170	6225233	40m
BH9	0585189	6225271	40m
BH10	0585124	6225299	39m
BH11	0585124	6225279	39m
BH12	0585087	6225308	39m
BH13	0585041	6225246	39m
BH14	0585075	6225207	39m
BH15	0585109	6225232	39m

Figure 43 – Borehole locations (ARTL Aitken Rowe)

6.2.5 Hydrology, Flooding and Water Quality

Questions to consider	Yes	No
Are the works located near a natural watercourse?	X	
Are the works located within a floodplain?	X	
Will the works intercept groundwater?	X (see following subsection)	
Will a licence under the *Water Act 1912* or the *Water Management Act 2000* be required?		X

Flooding

Advisian has prepared a Flood Impact and Risk Assessment with respect to the proposed redevelopment - see **Appendix Q**. It has addressed existing flood characteristics at the site including flood extents and levels, flood depths and velocities and flood hazards, as well as the impact of the development upon these characteristics. The assessment also addresses flood risk issues, evacuation procedures and routes and flood warning scenarios. These are set out below.

Existing flooding characteristics

Being at the confluence of the Darling River and the Murray River, the hospital site is highly susceptible to flooding. The site has a long history of flooding with the most notable floods since European settlement along this section of the Murray River being recorded in 1870, 1917, 1931, 1956, 1974 and 1975. The 1956 flood is considered to be approximately equivalent to the design 1% AEP flood. **Figure 10** earlier in this REF shows the 1956 flood and its impact upon Wentworth and the hospital site in particular, however it is not known at what point in the flooding process the aerial photo was taken.

In response to the 1870 flood, levee banks were constructed during the 1880's around the township of Wentworth and around Wentworth Hospital. The 1956 flood showed many sections of these levees to be inadequate, requiring them to be repaired, rebuilt and raised.

Records from historic floods indicate that the current hospital levee can provide protection to the site during major flooding of the Murray and Darling Rivers. During the 1956 and 1974 floods the hospital levee was not breached with peak flood levels reaching 0.5 and 1.3 metres below the typical levee crest elevation, respectively.

Without the hospital levee the site would be at risk of inundation during flood events as frequent as the 5% Annual Exceedance Probability (AEP) flood. Accordingly, the viability of the site for use as a hospital precinct is heavily reliant on maintaining the levee. Topographic surveys undertaken in June 2022 by Walpole Surveying indicate that the hospital levee currently has minimum crest elevations of 35.6 mAHD. In comparison, the official recorded peak flood level for the 1956 flood is 34.85 mAHD. Hence, the existing hospital levee has a crest elevation that is at least 0.75 metres above the peak level of the 1956 flood.

In preparing its assessment Advisian applied the Wentworth Flood Study as commissioned by Council (2021) and simulated and modelled the 1956 and 1974 historical floods, the 10%, 5% and 1% AEP events, the 1 in 200 AEP (1 in 200 year) event, and a hypothetical extreme event as the Probable Maximum Flood (PMF).

The topography across the site has been determined from surveyed spot elevations which have been used to develop the thematic map of elevation shown in **Figure 44**. The survey indicates that topographic elevations across the site generally vary between 34.0 and 35.0 mAHD. These elevations are 1 to 2 metres below the crest elevations of the hospital levee which typically range between 35.6 and 35.8 mAHD. A maximum crest elevation along the levee of 35.85 mAHD was surveyed near the north-western corner of the levee, whilst a low-point exists along the levee system at the Hospital Road entrance to the site. Hospital Road has a crest elevation of 35.3 mAHD at the entrance compared to levee heights of around 35.7 mAHD either side of the road.

Figure 44 – Existing Topography across the hospital site based on the survey (Advisian)

Predicted existing flood characteristics and behaviour

Advisian's modelling has predicted that the hospital site would not be inundated during flooding up to and including the 1 in 200 AEP event - see **Figure 45**. During the 'extreme' (PMF) event, the site would be completely inundated, including the entire length of the hospital levee and Hospital Road – see **Figure 46**.

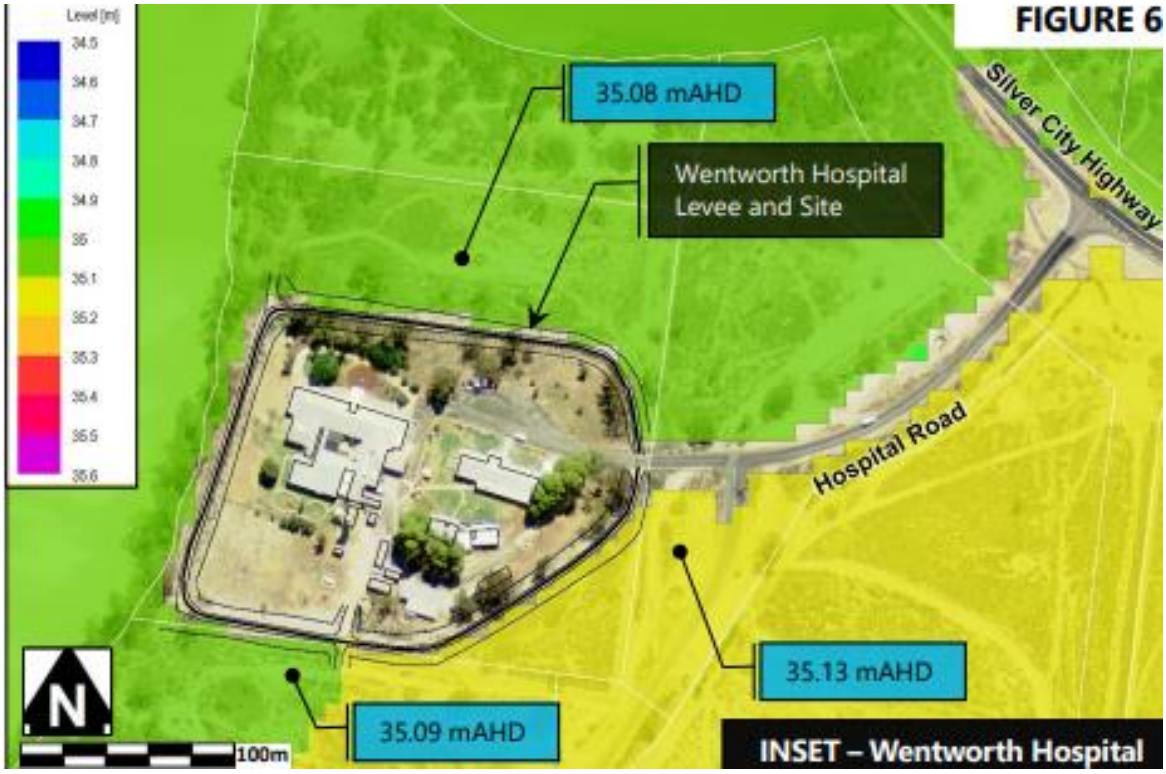


Figure 45 – Predicted Flood Levels at the peak of a 1:200 AEP flood along the Murray and Darling Rivers (Advisian)

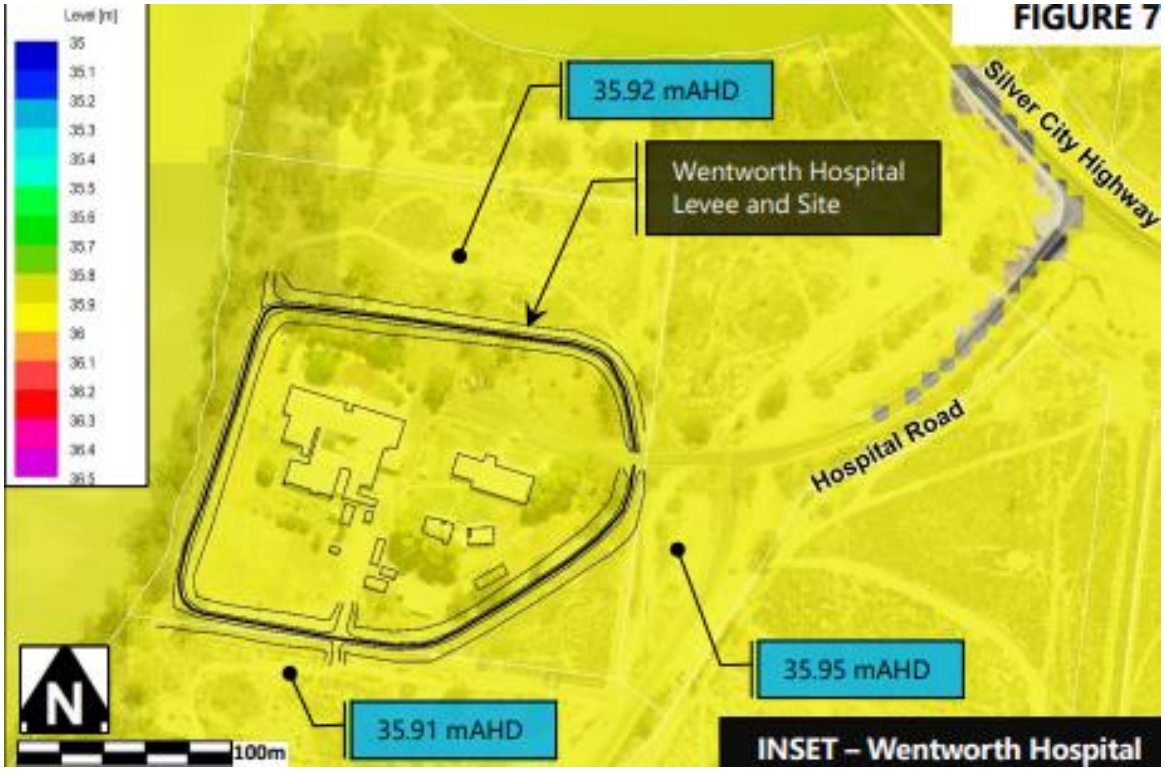


Figure 46 - Predicted Flood Levels at the peak of a PMF flood along the Murray and Darling Rivers (Advisian)

The predicted depths of the flooding at the 1 in 200 AEP event around the hospital is generally in the order of 0.5m outside of the levee in this event. The mapping indicates that flow velocities would be low around much of the site with magnitudes ranging between 0.1 and 0.4 m/s for floods up to and including the 1 in 200 AEP event. Flow velocities are highest along the western site boundary due to its position along the eastern bank of the Darling River. Flow velocities along the Darling River immediately west of the site are predicted to range between 0.5 and 0.7 m/s for floods up to and including the 1 in 200 AEP event.

The categorisation of flooding hazard at the site's environs relative the flood depths and velocities is such that it broadly ranges from being 'unsafe for vehicles, children and the elderly' to 'unsafe for people and vehicles' during the 1% AEP event (that is, the 1 in 100 year flooding event). The site itself inside the levee is free of flooding and flooding hazard categorisation up to the PMF event.

Impacts of the works upon flood characteristics and behaviour

As the proposed works include earthworks which will include construction of a fill pad for the proposed hospital building to a crest elevation of 36.0 mAHD, this will be up to 2.05 metres above existing surface elevations and 0.05 metres above the predicted extreme flood level (PMF) for the site. The hospital building is to be constructed with a slab-on-ground floor with a Finished Floor Level (FFL) of 36.0 mAHD for the main building and 35.85 mAHD for the loading and ambulance bays – see **Figure 47**.

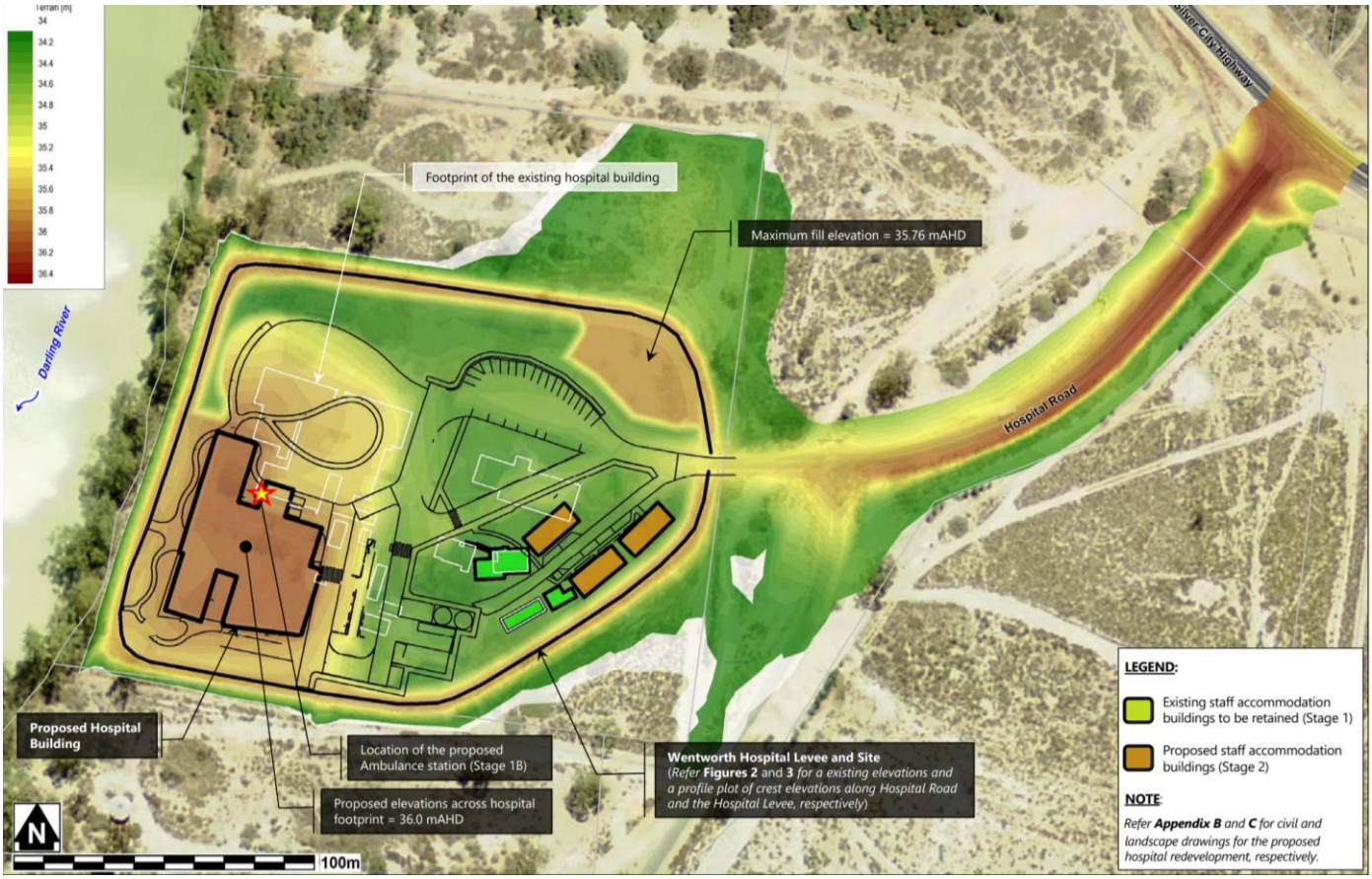


Figure 47 – Proposed surface elevations at the hospital (Advisian)

Advisian indicates that the hospital levee is not predicted to be overtopped during floods up to and including a 1 in 200 AEP event, that is, a flood with an average recurrence frequency of 200 years - see **Figure 48**. Accordingly, the proposed works inside the hospital levee will have no impact on flood behaviour during events up to this magnitude.

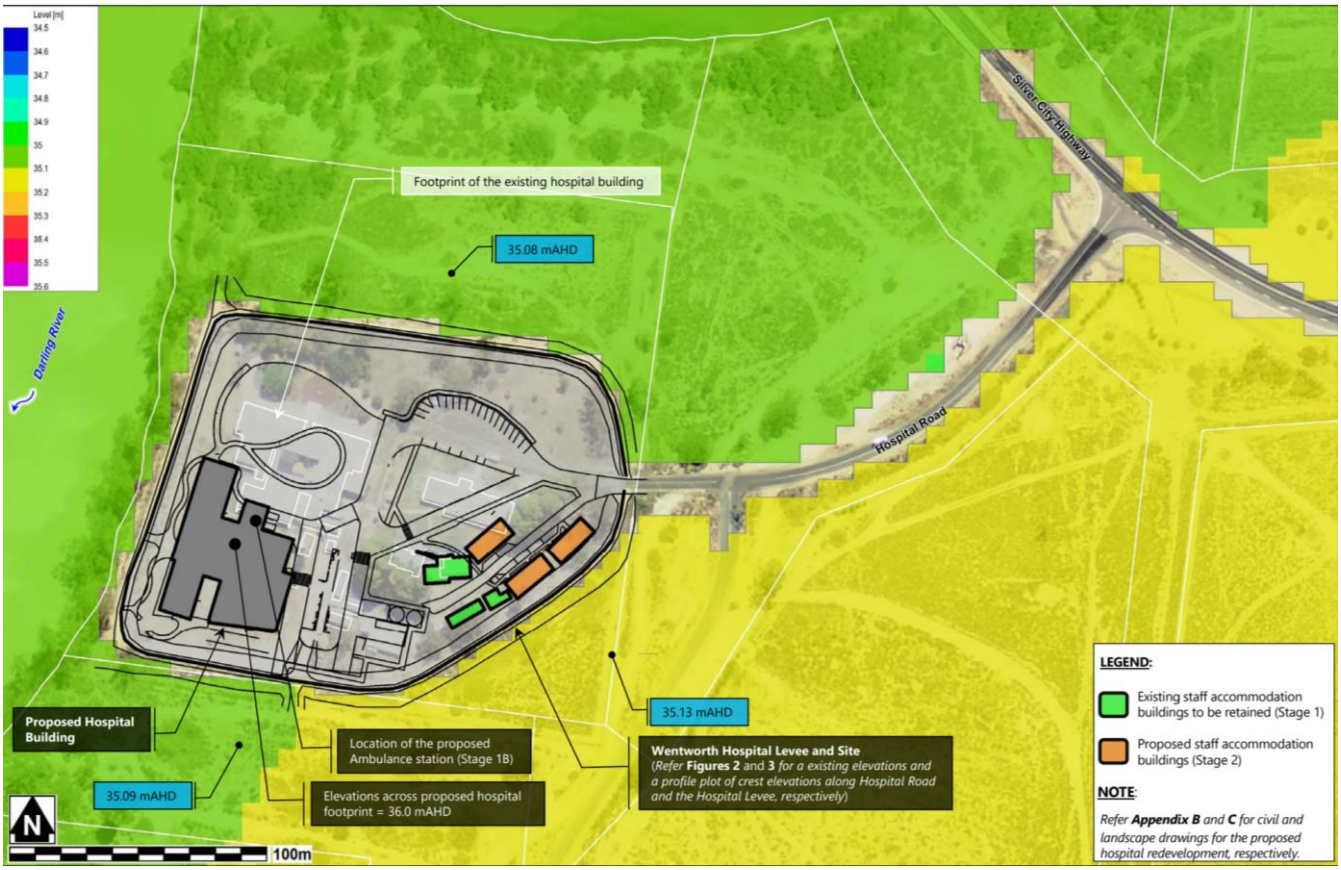


Figure 48 – Predicted Flood Levels and Extents at the peak of a 1:200 AEP flood for post-development conditions (Advisian)

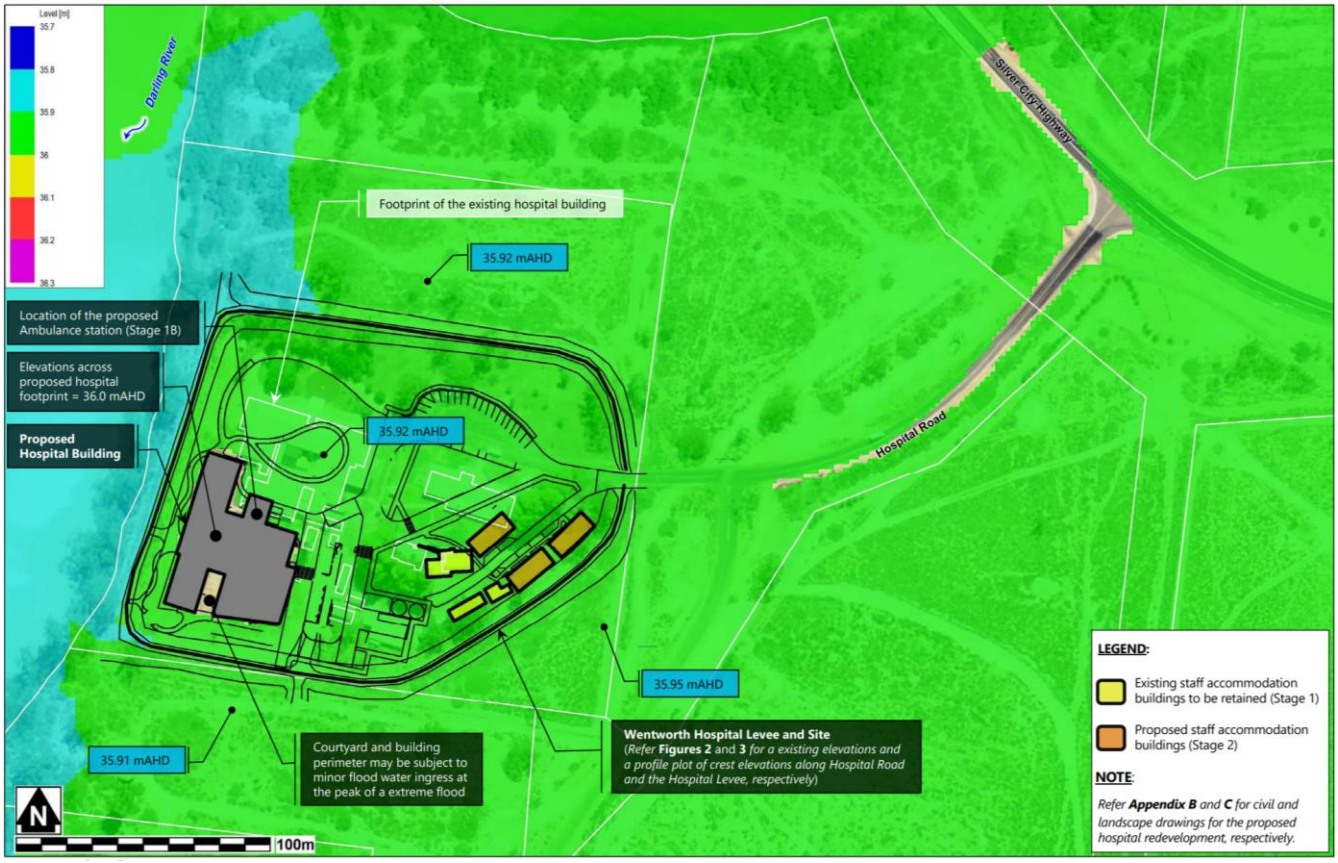


Figure 49 – Predicted Flood Levels and Extents at the peak of an extreme (PMF) flood for post-development conditions (Advisian)

The levee is predicted to be overtopped during the adopted 'extreme' (PMF) flood event – see **Figure 49**. Under existing conditions this is predicted to result in the complete inundation of the site with flow velocities and flood depths of up to 0.1 m/s and 2.1 metres, respectively.

Under post-development conditions the entire hospital site is predicted to be inundated with the exception of the new main hospital building, which will have a Finished Floor Level (FFL) of 36.0 mAHD. This FFL will ensure the building is at least 0.05 metres above the predicted 'extreme' flood level or PMF. Accordingly, the building will not be at risk of overfloor flooding during Murray and Darling River flood events.

Flood modelling for post-development conditions has not been completed for the 'extreme' event. The maximum depth of flow over the levee crest in such an event is only 200 mm, which limits the potential for significant flows across the area inside the levee and therefore, any impacts of the proposed filling on existing flood conditions and flow distribution.

Any potential impact associated with the reduction in the existing flood storage due to the proposed filling is also considered negligible given the width of the floodplain is about 10 km in the vicinity of Wentworth. The loss in flood storage volume is considered negligible against the significant volume of floodwaters associated with Murray and Darling River floods.

The proposed development will therefore have no impact on peak flood levels or flow velocities for floods up to and including the 1 in 200 AEP event; an event with an average recurrence interval of once every 200 years. The development would have a negligible impact on flood behaviour during the adopted 'extreme' flood event.

Flood evacuation and warning

The Advisian assessment considers potential evacuation routes and any constraints, such as low-points in roadways and whether there is adequate warning time available to prepare and safely effect evacuation from the site if required. Note, the hospital is not being used as a proposed 'shelter-in-place' and is to be evacuated in the relevant circumstances. The design of the FFL to 36.0 mAHD also ensures the building is able to be 'flood-free' and to facilitate a suitable level of asset protection of the hospital building.

The proposed crest elevation for the fill mound of 36.0 mAHD is over 1 metre above the predicted peak 1% AEP level at the site of 34.87 mAHD. Accordingly, the proposed hospital redevelopment would exceed the criteria for minimum floor levels and minimum fill mound elevations. This is considered appropriate given the hospital is categorised as a critical facility.

Construction of the hospital on a fill mound above the predicted peak extreme flood level mitigates the potential flood damage to the building. Although the new hospital building would not be inundated, evacuation remains a requirement due to the potential for long durations of inundation and isolation that could range between 3 weeks to 3 months. Accordingly, appropriate measures are required to ensure the hospital can be evacuated prior to evacuation routes being inundated.

Evacuation routes to Mildura and to Wentworth Airport have been considered by Advisian including the timing of the severing of key roads / links from the hospital relative to the flood type. These are generally set out below based on information provided by Advisian. This indicates that ample time is generally available to evacuate the hospital with a worst-case between 1.5 days for an extreme flood to 6.5 days for a 1:100 year flood as identified in flood warning at relevant river gauges as a Major Flood. This enables evacuation to Wentworth Airport. Longer respective timeframes apply for evacuation to Mildura for the same scenarios (7.5 days and 18 days). See both as marked below.

Table 4.4 Flood Warning Assessment for Evacuation to the Wentworth Airfield Based on Monitoring Flood Levels at the Wentworth Weir (Lock 10) gauge

Event	Elevation of Low-Point (mAHD)	Available Warning Time		
		Minor Flood level Reached (32.1 mAHD)	Moderate Flood level Reached (32.7 mAHD)	Major Flood level Reached (33.9 mAHD)
1% AEP	33.80	45 days (6.5 weeks)	38 days (5.5 weeks)	6.5 days (~1 week)
Extreme Flood	33.80	8 days (~1 week)	7.5 days (~1 week)	1.5 days

Table 4.5 Flood Warning Assessment for Evacuation towards Mildura Based on Monitoring Flood Levels at the Wentworth Weir (Lock 10) gauge

Event	Elevation of Low-Point (mAHD)	Available Warning Time		
		Minor Flood level Reached (32.1mAHD)	Moderate Flood level Reached (32.7mAHD)	Major Flood level Reached (33.9mAHD)
1% AEP	35.55	52 days (7.5 weeks)	45 days (6.5 weeks)	18 days (2.5 weeks)
Extreme Flood	35.55	14 days (2 weeks)	13.5 days (2 weeks)	7.5 days (~1 week)

Flood Emergency Response Procedures

A separate and detailed Flood Emergency Response Plan (FERP) has been prepared by Advisian – also included at **Appendix Q**.

The FERP provides a detailed set of protocols for the hospital to follow during a flood emergency, including flood awareness and preparedness of staff and resources; flood evacuation routes and warning times, and evacuation triggers and actions; and flood recovery and clean-up.

The Flood Emergency Response Procedures within the FERP form part of the mitigation measures at **Appendix X** of this REF. In addition to the implementation of the procedures, the FERP is to be reviewed following any flood event. This will ensure any lessons learnt or first-hand knowledge is incorporated into the plan. The review will also include a review of emergency response procedures and monitoring protocols to confirm if appropriate or if improvements can be implemented.

Stormwater Management and Water Quality

Wentworth Shire Council has provided guidance to TTW on the engineering design requirements for control, treatment, and discharge of stormwater from the development site. The Council guidelines and relevant Australian Standards, including AS 3500.3, have been used as the basis for the design of the proposed stormwater system.

The design of the stormwater drainage system for the development includes both minor and major stormwater conveyance systems, consisting of conventional pit and pipe drainage networks within the landscaping, roads, and car parks.

The minor system is comprised of the in-ground pipe network and will be designed to cater for the 1 in 20-year Average Recurrence Interval (ARI), in accordance with AS 3500.3. The major system will incorporate overland flow paths shaped by open channels and the finished design surface and will be designed to cater for the 1 in 100-year ARI event.

The existing site stormwater discharge location at the south-west corner of the site will continue to be utilised for the proposed development with modification required to bring the existing pit up to the proposed landscaping level to match the top of the adjoining levee bank. In liaison with TTW, Council has raised no objection to utilising this existing discharge point.

On-site detention (OSD) is also proposed to meet Council requirements due to the increase in the amount of impervious area created by the proposed building and paved areas in comparison to the existing site conditions. The OSD systems are proposed be sized for the 1 in 10-year ARI event. Flows above the 1 in 10-year ARI event up to the 1 in 100-year ARI event will either sheet flow across the crest of the levee bank and down the riverbank (raised building platform) or will be stored aboveground within the carpark area as a 150mm high extended detention depth (at-grade carpark). A 15 kL inground OSD tank is proposed for the raised building platform catchment and a 25 kL in-ground OSD tank is proposed for the at-grade carpark catchment.

In terms of stormwater run-off quality, Wentworth Shire Council requires the quality of stormwater runoff from the new development minimise potential adverse effects on the downstream environment. This includes treating stormwater runoff prior to its discharge to remove pollutants.

Water quality treatment devices and water sensitive urban design (WSUD) features have been incorporated into the stormwater network to provide the required reduction in pollutant and nutrient loads. As much as possible, bio-filtration methods will be included in the treatment train to reduce maintenance burdens and increase efficiencies, with prefiltration via gross pollutant traps (GPTs) or in pit filtration devices such as Enviropods or Stormsacks.

Rainwater collected form the building roof catchment is proposed to be reused for irrigation as designed by the Hydraulics Engineer.

Council's targets for water quality have been assed by TTW using the standard MUSIC modelling tool, the results of which (including compliance for all relevant matters is set out below as derived from the TTW reporting – see **Appendix H**.

No further mitigation measures are considered relevant or necessary.

Table 1 – Stormwater Quality Treatment Requirements

Pollutant	BPEMG Targets	ESD – GreenStar Level B Targets	Pollutant Reduction Achieved
Total Suspended Solids	80%	80%	82.6%
Total Phosphorus	45%	60%	65.8%
Total Nitrogen	45%	45%	58.4%
Gross Pollutants (>5mm)	70%	90%	93.5%
Total Petroleum Hydrocarbons	-	90%	>90%*
Free Oils	-	90%	>90%*

*cannot be verified within MUSIC and shall be confirmed by the suppliers technical specification/data sheets

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?		X
Will the works be visible from the public domain?	X	
Are the works located in areas of high scenic value?	X	
Will the works involve night work requiring lighting?		X

The existing hospital site is generally visible from two separate locations – peripherally from the Silver City Highway and Hospital Road to the site's east; and more significantly from within the Wentworth township's Darling River foreshore public domain across the river to the west of the site.

In this location views of the roofline and ridge of the main hospital building are seen through a filtered and recessive view. They generally sit below the prevailing vegetation's canopy line – see **Figure 50**.

The roof ridgeline sits nestled in the treeline primarily due to the building's single-storey scale, its setback from the levee bank, and sitting about 1.5 to 2m below the levee bank at a ground level similar to the upper side of the river bank.

The proposed new main hospital building will instead be brought closer to the existing levee bank, built-up to the levee bank's height, moved to the south (right) of the existing Darling River views, and whilst also only single storey in height, be of a height of about 8.9m above existing ground, and about 6.9m above the levee, at its maximum at the western elevation.

The redevelopment's potential profile from the same location has been provided by NBRS in its Design Statement – see **Figure 51**. NBRS in its visual impact assessment section indicates that the existing view over the river primarily comprises of mature trees and vegetation along the river bank that dominates the view aspect. Therefore the sensitivity of the view is considered to be Low / Moderate. The proposal is set behind the trees that are retained. The proposed building is less visible in this view as shown indicatively in the diagram in **Figure 51**. Therefore the magnitude of the proposed development from this viewpoint is considered Low. The combination of the sensitivity of the viewpoint and the magnitude of the proposal on the view provides an integrated impact of Low. The level of impact is lessened by existing (and retained) trees providing coverage for the proposal.

In light of the likely minimal visual impacts arising from the redevelopment, it considered that no specific mitigation measures be imposed, noting also that further potential filtering of views is likely over forthcoming years as proposed

canopy tree planting within the site and in part towards the riverfront will have the beneficial impact of reducing visual impacts over time and reinforcing the green character of the site over that of its built form.

Figure 50 – Existing views to the main hospital building (circled) across the Darling River from public domain within Wentworth

Figure 51 – Proposed views to the new main hospital building (outlined) across the Darling River (NBRS)

6.2.7 Aboriginal Heritage

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

To address and assess any possible impacts upon Aboriginal cultural heritage, OzArk has prepared a due diligence assessment. The due diligence assessment has been prepared in accordance with the *Due Diligence Code of Practice for the Protection of Aboriginal Objects in NSW (OEH 2010)*. It has concluded that neither an Aboriginal Cultural Heritage Assessment Report (ACHAR) nor an Aboriginal Heritage Impact Permit (AHIP) is required. See the OzArk Aboriginal Due Diligence Assessment Report at **Appendix R.** The Aboriginal Due Diligence Assessment Report is provided in both an assessment version for the purposes of the REF and as a public (redacted) version for later publication. The OzArk assessment is accompanied by a separate recent basic AHIMS search.

OzArk has concluded, following its site inspection with the representative of the Dareton Local Aboriginal Land Council and other investigations that no Aboriginal sites or areas with potential subsurface deposits were recorded during the visual inspection.

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

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

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

1) The proposed work may proceed within the study areas without further archaeological investigation under the following conditions:

a) All land and ground disturbance activities must be confined to within the study area, as this will eliminate the risk of harm to Aboriginal objects in adjacent landforms. Should the parameters of the proposal extend beyond the assessed areas, then further archaeological assessment may be required.

b) All staff and contractors involved in the proposed work should be made aware of the legislative protection requirements for all Aboriginal sites and objects.

2) This assessment has concluded that there is a low likelihood that the proposed work will adversely harm Aboriginal cultural heritage items or sites. If during works, however, Aboriginal artefacts or skeletal material are noted, all work should cease and the procedures in the Unanticipated Finds Protocol (Appendix 2 of the OzArk assessment) should be followed.

3) Inductions for work crews should include a cultural heritage awareness procedure to ensure they recognise Aboriginal artefacts (see Appendix 3 of the OzArk assessment) and are aware of the legislative protection of Aboriginal objects under the *National Parks and Wildlife Act 1974* (NPW Act) and the contents of the Unanticipated Finds Protocol.

4) The information presented here meets the requirements of the Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales. It should be retained as shelf documentation for five years as it may be used to support a defence against prosecution in the event of unanticipated harm to Aboriginal objects.

The above have been included in the REF's overall Mitigation Measures as found at **Appendix X**.

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?	X (s170 inaccurately recorded and local item)	
Will works occur in areas that may have archaeological remains?		X
Is the demolition of any heritage occurring?	X (s170 inaccurately recorded)	

A Heritage Impact Statement (HIS) has been prepared by OzArk in relation to the potential impacts of the redevelopment of the hospital - see **Appendix I**.

The HIS considers the likely impacts upon the s170 listing of the 1880s buildings at the site (long demolished in the 1940s when they were replaced by the current buildings which have no heritage listing) as well as the nearby Wentworth Water Tower.

OzArk indicates that *as the original hospital buildings from the 1880s are no longer extant, they will not be impacted by the proposal. The 1940's hospital buildings are proposed for demolition. The Wentworth Water Tower is outside the impact footprint for the proposed hospital redevelopment. As it is near to the hospital, however, indirect impacts in regard to visual amenity will need to be considered.*

As the Original Buildings listed on the Department of Health's s170 register describes the original buildings constructed in 1887, which have since been demolished, there will be no impacts to this listing. No significant archaeological remains from the late 1800s are likely to remain extant. As such, no further management with regard to the demolished 1880's buildings is required.

The extant 1940's buildings do not meet the threshold for local heritage significance. They were not listed as part of the 1989 Wentworth Shire Heritage Study and nor does the assessment undertaken for this project indicate they have

significant values. The site itself, as the location from which health services have been provided to the town of Wentworth since the late 1800s, does have significance to the local community. As a result of the overall importance of the site in providing health services, recording the buildings present on site prior to demolition is recommended.

With respect to the possible impacts upon the Wentworth Water Tower, OzArk variously concludes as follows:

As the new development will only be impacting the area inside the existing hospital levee bank, there will be no direct impacts close to the water tower.

The new buildings have been designed to not dominate the landscape and will remain single storey as all previous hospital buildings have been.

The proposed new Wentworth Hospital is to replace the existing hospital facility on the same site. This site has been the location of health service provision for the town of Wentworth since the 1880s has always been located adjacent to the Wentworth Water Tower. It is important to the community that the hospital remain on the same site as it has been historically and furthermore, the result of the NSW Health Infrastructure's options study regarding the preferred location resulted in the existing hospital site being chosen.

The curtilage is primarily relevant to Lot and DP boundaries, however, to appreciate the water tower from the town of Wentworth, it is important to retain space around the structure to ensure its continued visibility. The proposed new hospital does not encroach on this curtilage.

The landscape context of the water tower and hospital remains relatively unchanged because of the new hospital building. Views from the water tower are less relevant than views from the township to the water tower, and these also will remain relatively unchanged, with no encroachment of curtilage.

In respect of views to the water tower from the new hospital, it is relevant that careful design principles have formally incorporated views to the tower from the new proposed family room, and through the establishment of a courtyard that has been oriented to provide views south towards the tower.

The new (hospital) *structures will not visually dominate as they are distant from the tower and will be single storey. The views to the water tower from Wentworth will not be interrupted and the tower's heritage significance within the landscape will not be negatively impacted.*

OzArk advises that the potential for significant archaeological deposits at the site has been assessed as low.

In conclusion, OzArk has recommended, amongst other things, that formal archival recording of the remaining buildings would provide a suitable historical / heritage record.

Additionally, to correct accuracy issues with the 'Original Buildings' listing relating to the Wentworth Hospital and this listing should be removed from the Department of Health's Heritage and Conservation s170 Register. As per Heritage Council (2005) requirements, all state agencies are required to notify the Heritage Council at least 14 days prior to removing, transferring or ceasing to occupy any asset on their s170 register. As the original buildings are no longer present, an approval for excavation from the NSW Heritage Divisions not required.

No further investigation or management is required for the Wentworth Water Tower (I94), as there are no direct impacts, and indirect impacts have been managed through design as is detailed in this assessment.

Mitigation measures include:

- All works must be contained within the assessed study area, particularly along the southern boundary that intersects with the Wentworth Water Tower LEP listing curtilage.
- Although the risk of the project affecting archaeological deposits at the study area has been assessed as low, the recommended Unanticipated Finds Protocol should be followed if potential significant heritage items are encountered during construction.

These matters as set out above ar included in the mitigation measures for this REF at **Appendix X**.

6.2.9 Ecology

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

Ecology

A Biodiversity Assessment Report (BAR) has been prepared by OzArk to determine the impacts of the redevelopment on local biodiversity in accordance with Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) and Clause 171 of the *EP&A Regulation* (2021). In this instance this requires assessment under the (Commonwealth) *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), and NSW *Biodiversity Conservation Act 2016* (BC Act) and *Fisheries Management Act 1994* (FM Act), as well as a range of State Environmental Planning Policies (SEPPs). The BAR is found at **Appendix S**.

The BAR has assessed and concluded as follows:

The subject site (1.287 ha) largely consists of non-native vegetation, existing road surfaces, and the existing Wentworth District Hospital (1.234 ha). The remaining 0.053 ha contains planted native vegetation that will be removed or disturbed by the proposal. This native vegetation consists of species native to Australia, though not to the Wentworth area. Although these trees provide potential foraging or nesting habitat for native fauna, these plantings cannot be assigned to any PCT.

The vegetation surrounding the subject site was assigned to PCT 11 and PCT 15 and will not be directly impacted by the current proposal as each sit outside of the levee bank encircling the hospital. No vegetation within, or immediately adjacent to, the subject site is associated with a TEC under either the BC Act, or the EPBC Act. The subject site does however contain areas mapped as being of high terrestrial biodiversity value under the Wentworth LEP, noting the highly pixelated and imprecise nature of the mapping under the formal LEP maps.

No flora species or populations listed as threatened under the BC Act or EPBC Act were observed during the field survey by OzArk. Given the short duration of the field survey, and the lack of targeted surveys, the non-detection of threatened flora species cannot be considered as confirmation oftheir absence. However, following a desktop review of nearby records and habitat requirements for predicted threatened flora, no species were considered by OzArk to have a moderate-high probability of occurrence within the subject site.

The native vegetation surrounding the subject site offers a corridor of connectivity along the Darling (and by extension) Murray Rivers. The Vegetated Riparian Zone (VRZ) is already narrow in this area; the Office of Water recommends the VRZ should be 40 m for the Darling River. Supplementary planting with native species will be undertaken to enhance the VRZ, specifically, the planting of River Red Gum (Eucalyptus camaldulensis) and River Cooba (Acacia stenophylla) is recommended, as these are the native species that currently dominate the VRZ.

Twenty-eight fauna species were observed during the field survey; none of these species are listed as threatened or migratory under the BC, FM, and/or EBPC Act. Given the short duration of the field survey, and the lack of targeted

surveys, the non-detection of threatened fauna species cannot be considered as confirmation of their absence. Based on the proximity of past records, distribution records, habitat requirements, and the results of the field survey, 16 threatened or migratory bird species and two threatened mammal species, were assessed by OzArk as having a moderate-to-high likelihood of occurring at the subject site. Tests of significance have been conducted by OzArk for these species under the BC and/or EPBC Act; these tests concluded that due to the small size of the impact footprint, the lack of native PCTs impacted, and the absence of habitat trees from within the footprint, the proposal would not result in a significant impact to any threatened entity.

Although no watercourse passes directly through the subject site, the proposal is positioned at the confluence of south-east Australia's most important river system: the Murray and Darling Rivers. The Darling River, at its closest, is less than 15 m from the subject site, while the Murray River is 300 m to the south. A tributary of the Darling River, Tuckers Creek (a Strahler 3rd order minor perennial watercourse), is 115 m to the north. Therefore, the development footprint is flanked on three sides by Key Fish Habitat and has Protected Riparian Land to the west and south. Furthermore, the subject site falls within the boundaries of the endangered Lowland Darling River aquatic ecological community. In addition, Chapter 5 (River Murray Lands) of the Biodiversity and Conservation SEPP applies to this land as detailed in Section 6.1 of this REF.

For any works that involve dredging or reclamation, the proponent must provide the Minister with written notice of the proposed work prior to undertaking any works, noting no reclamation or dredging is proposed under the scope of works.

The vulnerable Murray Crayfish, the vulnerable Silver Perch, and the endangered Murray-Darling Basin population of the Eel-tailed Catfish, all listed under the FM Act, are mapped as occurring in one or more of the above watercourses. These watercourses also have records for the EPBC Act-listed Vulnerable Murray Cod. Tests of significance have been conducted by OzArk for these species and the endangered Lowland Darling River aquatic ecological community under the FM or EPBC Act. Provided that the proposed mitigation methods are adhered to, the proposal is not likely to significantly impact any threatened aquatic species, population or community listed under the FM or EPBC Act.

Based on the above, a Biodiversity Development Assessment Report (BDAR) and Species Impact Statement (SIS) is not required for this redevelopment project.

A key part of the proponent's management of biodiversity for this proposal is the application of the 'avoid, minimise, mitigate and offset' hierarchy, as follows:

1. Avoid and minimise impacts as the highest priority
2. Mitigate impacts where avoidance is not feasible or practicable in the circumstance
3. Offset where residual, significant unavoidable impacts would occur

A detailed range of mitigation measures are proposed to ensure appropriate management of the site during works and operation in relation the vegetation clearing process, weed management, and installation of erosion and sediment controls.

The recommended mitigation measures have been adopted into **Appendix X** of this REF, and include such matters as:

- Clearing of native vegetation
- Direct impacts upon fauna
- Indirect impacts upon fauna
- Light
- Soil Management
- Introduction and spread of priority weeds and pathogens
- Disturbance of fallen timber, dead wood, and bush rock
- Rehabilitating cleared areas
- Exacerbating invasive fauna
- Increased risk of fire
- Degradation of riparian vegetation and water quality.

Arboricultural matters

As noted earlier in this REF, based on an assessment by TreeIQ (see **Appendix T**), there are 68 trees (or groups of trees) located within the land parcel comprising the hospital site and the adjacent Darling River riverbank frontage outside of the site. The vast majority of the vegetation at the site is remnant native vegetation along the Darling River and to the north of the hospital building cluster outside of the levee bank. Trees within the levee bank are generally planted trees.

The areas subject of the works currently accommodates nine (9) trees – Trees T50-T52 and T62-T67 – see **Figure 11**. The most visually prominent of these is Tree 67 (as shown as **Figure 12**) which is a mature 17m Stone Pine in good condition.

Nine (9) trees are proposed to be removed in relation to the works. These are as set out below:

- Trees 23 and 24 to the north of the existing hospital building and subject to the new fill and capping of remediated soils within the site.
- Trees 50 and 51 within the footprint of the new hospital building.
- Tree 52 within the proposed loop road to the south of the site and Trees 53 and 54 within proximity of the new staff accommodation.
- Trees 56 and 57 near the entry road to Hospital Road and within proximity of the new staff accommodation.

These are shown with red circles in **Figure 30** in Section 3 of this REF and in the Tree IQ report. Four (4) dead trees located at the site are also able to be removed noting these are not hollow-bearing. These are also shown in **Figure 30** as yellow circles.

All trees identified have a low to moderate landscape significance.

It is proposed to replace these trees with new planted canopy trees (consistent with the recommendations of the project's ecologist) at a rate of better than 1:1 as per the HI tree replacement policy. The proposed replacement is 40 trees by Stage 1B and 68 trees by Stage 2 trees in a range of locations within the site, predominantly along the levee and within the proposed landscaping within existing and new car parks and loop road. This provides a replacement rate of 4.5:1 (by Stage 1B) and 7.5:1 (by Stage 2), well above that required.

All other trees within the site outsite of the levee are unaffected by the works, and all other trees within the levee and near the proposed works will be retained and protected as required.

Mitigation measures are included in **Appendix X** addressing tree protection during works.

6.2.10 Bushfire

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

Peterson Bushfire has undertaken a Bushfire Assessment of the redevelopment as found at **Appendix U**.

The assessment indicates that the subject land and surrounding lands are not identified as 'bushfire prone land' and bushfire prone land mapping for the area demonstrates that the closest area of bushfire prone land is more than 7.5 km to the north-east.

There is no statutory requirement to consider or comply with specific bushfire protection legislation captured under the EP&A Act for development proposals on land not mapped as bushfire prone. Further, there is also no requirement to consult the RFS or obtain development approval from NSW Rural Fire Service (RFS).

Despite the subject land and adjoining lands not being mapped as bushfire prone land, Peterson Bushfire has identified that a bushfire hazard is present in the form of open woodland and riverine forest adjacent to the site. As such, HI has requested an assessment of the proposal against the RFS document 'Planning for Bush Fire Protection 2019' (PBP) and the application of bushfire protection measures to the proposal as if the land were mapped bushfire prone land.

The hospital use is defined as Special Fire Protection Purpose (SFPP) development under PBP. SFPP developments require more stringent bushfire protection controls than that required for other development types such as general residential or employment lands. Chapter 6 of PBP outlines the planning requirements for SFPP development. The requirements are divided into a suite of bushfire protection measures such as Asset Protection Zones (APZ), access and evacuation, as well as water supply, landscaping, vegetation management and building construction standards (i.e. Bushfire Attack Levels – BAL) for new building works.

Based on its assessment, Peterson Bushfire has provided for mapped APZs for the site and redevelopment. These are shown in **Figure 52** below.

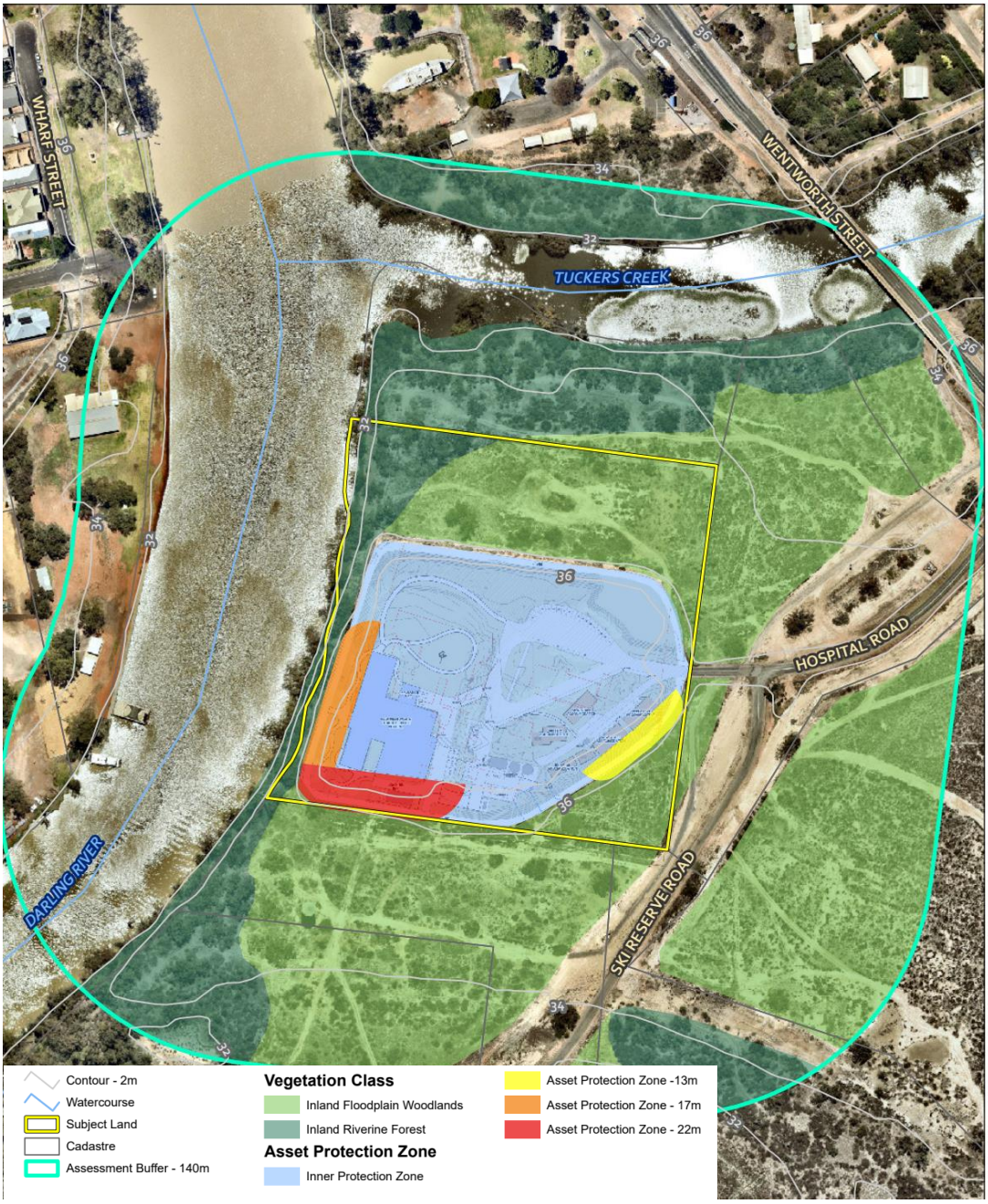


Figure 52 - Bushfire Hazard Analysis and Asset Protection Zone (APZ) (Peterson Bushfire)

As can be seen, the proposed new buildings on the site are positioned at the fringes and outside of the respective APZs applicable to the identified potential risk.

The proposed landscaping has also been considered in terms of its capacity to promote new risk. Peterson Bushfire advises that the APZs and the area within the levee are to be managed to comply with APZ fuel management standards referred to as an Inner Protection Area (IPA) standard as described within Appendix A4.1.1 of PBP.

The landscaping plans prepared for the proposal by NBRS Architecture (17 April 2023 printed set) have been reviewed and achieve the IPA requirements.

The landscape plans address the site inside the levee from the perimeter trail. Maintenance of vegetation and bushfire fuels within the eastern and southern APZs that extend beyond the perimeter trail will also be required to the standard of an IPA.

The Bushfire Attack Levels (BAL) for the proposed buildings have been determined using the same alternate solution related to the APZs. The hospital and staff accommodation buildings are rated BAL-12.5 and are therefore recommended to be designed and constructed to comply with BAL-12.5 of Australian Standard AS 3959-2018 Constructions of buildings in bushfire-prone areas (AS 3959). The NSW variation to AS 3959 is also to be applied to the BAL-12.5 requirements. The variation can be found at Section 7.5.2 of PBP.

Buildings ancillary to the hospital and staff accommodation buildings are not required to comply with AS 3959 as they will be located more than 6 m from the hospital and staff accommodation buildings.

Peterson Bushfire notes that the existing public road access provides adequate access for the development, and the proposed internal access roads will cater for emergency response. Recommendations are also made for water supply, electricity supply, and gas supply.

With the adoption of the recommendations below (see Section 4.2 of the Peterson Bushfire assessment), the proposed development will comply with Planning for Bush Fire Protection 2019 for the redevelopment of a Special Fire Protection Purpose (SFPP) use.

Accordingly, the relevant mitigation measures in relation to bushfire protection arising from the rercommendations of Peterson Bushfire's assessment are:

- APZs are to be applied to the proposal as mapped on **Figure 52** of this REF and Figure 4 of the Peterson Bushfire assessment. The APZs and the site within the perimeter trail are to be managed compliant with the standard of an Inner Protection Area (IPA) as described within Section A4.1.1.
- The proposed hospital buildings and staff accommodation buildings are to be designed and constructed to comply with BAL-12.5 as prescribed by Australian Standard AS 3959-2018 Construction of buildings in bushfire-prone areas. The NSW variation to AS 3959 is also to be applied to the BAL-12.5 requirements. The variation can be found at Section 7.5.2 of Planning for Bush Fire Protection 2019.
- A hydrant system is to be installed to comply with Australian Standard AS 2419.1 – 2005 Fire Hydrant Installations - System Design, Installation and Commissioning (AS 2419).
- The vegetation clearance distances to any overhead electrical supply line is to comply with the distances specified in ISSC 3 Guideline for Managing Vegetation Near Power Lines (Industry Safety Steering Committee 2005).
- Any gas services are to be installed and maintained in accordance with AS/NZS 1596-2014 The storage and handling of LP gas.
- A 'Bushfire Emergency Management and Evacuation Plan' is to be prepared prior to occupation of the new buildings. The Plan is to be prepared in accordance with the NSW Rural Fire Service document 'A Guide to Developing a Bushfire Emergency Management and Evacuation Plan' (RFS 2014).

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?		X
Will the works involve the installation of structures or services that may be perceived as objectionable or nuisance?		X
Will the works impact on, or be in the vicinity of other services?		X

6.2.12 Waste Generation

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

Both hazardous and non-hazardous waste will be generated during the construction and operational phases of the redevelopment.

During construction, where possible, any material waste generated from the works will be recycled. Where this is not possible it will be classified and handled subject to the relevant legislative requirements. Please see further discussion on hazardous building materials and contamination below.

A formal Construction Waste Management Plan will be produced by the Main Contractor prior to works commencing. All material that cannot be recycled or reused will be disposed to an approved landfill facility. Waste will be minimised and that generated will be separated to maximise recycling. The highest waste production will be during the construction of the structure.

The FWLHD's standard waste handling guidelines will continue to be applied in relation to operational waste arising from the new health services facility.

Mitigation measures are imposed at **Appendix X** to address waste generation.

6.2.13 Hazardous Materials and Contamination

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

Hazardous Materials

JBS&G has undertaken a Pre-Demolition Hazardous Building Materials Survey for the proposed demolition works at the site – see **Appendix V**. The structures proposed for demolition were inspected for the following hazardous materials:

- Asbestos containing materials (ACMs);
- Asbestos containing dust (ACD);
- Lead based paints (LP);
- Lead containing Dust (LCD)
- Synthetic mineral fibres (SMF); and
- Polychlorinated biphenyls (PCB).

The structures included as part of this investigation are identified as follows:

- Wentworth Health Services Building (Hospital)
- Old Boiler House
- Old Pump Shed/Room
- Old Dirty Linen
- Contaminated Waste
- Staff Amenities Block
- Maintenance Storage Shed
- Infectious Waste/Old Morgue
- Maintenance Workshop
- Emergency Generator Shed
- Carports/Storage Shed
- Old Nurses Home (Condemned)
- Uni Staff Quarters/Accommodation/USYD
- Senior Activity Centre/Physio/Community Centre
- Staff Accommodation
- LPG Gas Storage
- Pump Station (PS07) Control Panel shed. Wentworth Shire Council asset

Generally, and broadly, Asbestos containing materials and/or asbestos dust was found in the following buildings, where inspections were made:

- Wentworth Health Services Building (Hospital)
- Old Boiler House
- Old Pump Shed/Room
- Old Dirty Linen
- Staff Amenities Block
- Maintenance Storage Shed
- Infectious Waste/Old Morgue
- Maintenance Workshop
- Old Nurses Home (Condemned)
- Senior Activity Centre/Physio/Community Centre

Lead containing dust in poor condition was identified in the Wentworth Health Services Building (Hospital); the Old Boiler House; and the Old Nurses Home (Condemned). Lead-based paints were also broadly prevalent in numerous buuldings across the site.

With respect to Polychlorinated Biphenyls (PCBs), detailed inspection of capacitors in light fittings could not be undertaken due to the electricity supply to the fittings being active. Therefore, PCB containing capacitors are assumed to be present within the older light fittings throughout the site.

Suspected Synthetic mineral fibres (SMF) materials were identified in various forms throughout the site. Full details of all identified SMF materials are provided in the Hazardous Materials Register (Appendix A of the JBS&G assessment). The typical forms of SMF identified are summarised below:

- Internal insulation to hot water systems and boilers;
- Insulation lagging to ducting and pipework;
- Insulation batts within ceiling cavities; and
- Insulation to roof sarking.

Due to the levels of hazardous materials contained within the buildings at the site, JBS&G has made detailed recommendations in Section 5 of its assessment with respect to the removal and demolition methodologies for particular materials. These are set out in detail in the proposed Mitigation Measures supporting this REF at **Appendix X**. This includes further investigation, preparation of a Hazardous Materials Management Plan, restrictions on access to certain areas, and an Unexpected Finds protocol being established.

Contamination

JBS&G has also prepared a Preliminary Site Investigation (PSI), Detailed Site Investigation (DSI) and Remediation Action Plan (RAP) in relation to in-ground and surficial contamination at the site - see **Appendix K**.

The PSI concluded that a Detailed Site Investigation (DSI) inclusive of intrusive sampling be undertaken to characterise potential contamination at the site and confirm the suitability of the site (from a contamination perspective) for the proposed ongoing health services facility land use.

The DSI concluded, amongst other things, based on the results of the intrusive sampling and laboratory testing that:

- The site history review identified that the site was historically used as a health care facility since the late 1800s.
- The review of historical site use information, previous reports and inspection of site conditions identified potential AECs and associated COPCs, which were associated with potential importation of fill materials from unknown origins, hazardous materials associated with historical demolition, refurbishment and construction works, biological COPCs related to sewer infrastructure, PFAS from fire hydrants, and the application of pesticides for maintenance of vegetated areas.
- Bonded ACM was encountered on the ground surface and in surface soil in large areas of the site to the north, southeast and southwest, exceeding adopted HSL, with potential for surface asbestos to be present on/in surface soil around existing structures.
- Bonded ACM was encountered within fill in six test pit locations, including surface soil at four of the locations, exceeding adopted HSLs.
- Laboratory analysis of selected soil samples indicated that asbestos fines or fibrous asbestos (AF/FA) and ACM were not detected above of laboratory LOR in any of the samples analysed.
- No friable asbestos was detected above the LOR/site assessment criteria in all soil samples and as such fibre release and migration is considered a low risk, except where uncontrolled ground disturbance works may disturb ACM causing release of respirable fibres.
- Concentrations of other COPCs were not identified at levels posing an unacceptable risk to human or ecological receptors relating to the proposed redevelopment of the site.
- Bonded ACM encountered on/in surface soils and in fill at some locations across the site are considered to pose a potentially unacceptable health risk and an aesthetic issue with respect to the future land use proposed. No other significant aesthetic issues (odours or staining) were identified.
- Concentrations of arsenic, chromium, copper, and zinc reported in groundwater are considered indicative of naturally occurring background levels and potential for COPC migration to groundwater or off-site migration of contamination via surface water/groundwater is considered to be low.
- No soil background issues or chemical mixtures, or significant offsite migration risks were identified.
- Based on the findings of the investigation, and subject to the limitations in Section 11 of the JBS&G assessment, it is concluded that the site can be made suitable for the proposed ongoing hospital use subject to implementation of a suitable management strategy.

The DSI recommended that a RAP be prepared for the redevelopment footprint to manage the identified soil impacts. The report would address:

- Data gaps including the characterisation of soils beneath existing building footprints following demolition.
- Typical site management controls including protocols to manage unexpected finds if encountered during any ground disturbance works associated with future site development.
- Remediation and validation actions including validation sampling, analysis and quality planning to enable the site to be considered suitable for proposed land use.

The RAP prepared for this project is also found at **Appendix K** for information and context.

As noted earlier in this REF, remediation works at the site are classed as Category 1 Remediation Works under section 4.8(e)(x) of *State Environmental Planning Policy (Resilience and Hazards) 2021*, as the hospital site is partly mapped as a wetland by Wentworth LEP 2011. Accordingly, the remediation works require development consent in order to undertaken and cannot and do not form part of this REF.

A DA has been lodged with Wentworth Shire Council to assess and consent to the works. This assessment was undertaken concurrently with this REF. Each of the REF and DA provide suitable and sufficient reciporical information concerning the context of the remediation works to that of the substantive project the subject of this REF. This DA

(DA2023/071) is presently being finalised, with draft conditions under review, and is anticipated to be approved by Council's officers in September 2023.

Separate to the PSI, DSI and RAP, and focussed on existing data gaps in determining the characterisation of soils beneath the footprints of existing buildings and structures, and which were inaccessible during the preparation of the DSI, JBS&G has prepared a pre-remedial Requirements statement setting out the procedures for further investigations – see **Appendix K1**.

JBS&G has advised that based on review of the DSI, *sufficient data has been collected to characterise the site and detail the remedial works/framework required to make the site suitable for the proposed land use. However, further environmental data is required to confirm DSI findings and close out potential remedial extent uncertainties in areas below and immediately adjacent building footprints where soil investigation locations were unable to be advanced.*

Numerous permanent structures are present on the site. These structures are anticipated to require demolition to facilitate future development. To reduce uncertainties based on limited available soil contamination data beneath buildings, further data is required to evaluate the quality of soils underlying buildings and the quality of surficial/shallow soils proximal to the buildings.

Following demolition of structures and associated demolition clearance activities, the Environmental Consultant shall complete soil sampling within the former building footprints including an area around each structure which may have been impacted by demolition activities. Sampling locations shall be advanced at a spatial density consistent with guidance of EPA (2022) Sampling design part 1 – application, as implemented during the DSI investigation (JBS&G 30/6/2023). Samples will be analysed for a range of contaminants of potential concern (COPC) relating to hazardous building materials including asbestos and lead, as well as other heavy metals and organochlorine pesticides (OCP)s. As noted above, sample collection, analysis and quality assurance and control (QA/QC) will be consistent with the SAQP in the DSI (JBS&G 30/6/2023).

The results and conclusions of the pre-remedial investigation will be documented in an addendum report, which will also document any recommendations regarding remedial extents and associated validation requirements additional to the existing Remedial Action Plan.

This effectively operates to replace the unexpected finds propocol beneath building footprints and provided further detailed information. Subject to the pre-remedial investigation results, any further remediation works can either be undertaken via Council's consent and its relevant conditions, or as new Category 2 remediation works dependent upon the location of required works outside of any wetlands designation of the site, and further consideration of section 4.8 of *State Environmental Planning Policy (Resilience and Hazards) 2021*.

6.2.14 Community Impact / Social Impact

Questions to consider	Yes	No
Is the activity likely to affect community services or infrastructure?		X
Does the activity affect sites of importance to local or the broader community for their recreational or other values or access to these sites?		X
Is the activity likely to affect economic factors, including employment numbers or industry value?		X
Is the activity likely to have an impact on the safety of the community?		X
Will the activity affect the visual or scenic landscape? This should include consideration of any permanent or temporary signage.		X
Is the activity likely to cause noise, pollution, visual impact, loss of privacy, glare or overshadowing to members of the community, particularly adjoining landowners?		X

Whilst a Social Impact Statement has not been prepared in support of this REF, the obvious and palpable social benefits arising from the redevelopment are as expressed in the vision, objectives and scope of the project in supporting the Clinical Services Plan for the hospital.

As noted, the site is generally remote from the centre of the Wentworth township and is generally remote from land having any permanent occupancy. There are not likely to be any adverse impacts of the works from a social impacts

perspective given the general location of the works and its scale. The intensity of the use will largely be the same, albeit in contemporary accommodation and facility as would be expected. Construction-related impacts are otherwise addressed elsewhere within this section of the REF.

The visual impacts of the redevelopment are as described above and are considered to the suitable in the context of the wider scope of works to provide appropriate accommodation, levels of care, and a building that is provided with asset protection in the event of bushfires and flooding in particular.

6.2.15 Cumulative Impact

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

A search has been undertaken of each of:

- Department of Planning and Environment – major project register;
- Sydney and Regional Planning Panels Development and Planning Register; and
- The ePlanning Portal in lieu of Council's development application (DA) register.

The only development near the site and/or of any scale is the proposed Junction Island Viewing Platform DA currently under assessment by Council. This relates to a development within the recreation space at the Murray River and Darling River confluence also known as Two Rivers Ski Reserve. This development sits at the tip of the island beyond the termination of Ski Reserve Road. The scale of that development and lack of direct proximity is unlikely to have any traffic or noise-related cumulative impacts once it is approved and under construction.

There are no recorded Regionally Significant Developments or Major Projects within the proxmity of the site or within the Wentworth township itself that are under assessment or recently approved where works are likely to coincide with the works subject of this REF.

Additional Considerations

BCA / DDA Compliance

BM+G has prepared a BCA and Access Compliance Statement with respect to this scope of works (see **Appendix W**).

The statement confirms that BM+G has undertaken a review of the architectural documentation that will accompany the REF submission for the development of the new Wentworth Health Service, against the Building Code of Australia 2022 (BCA 2022), and Access provisions of the Disability (Access to Premises – Buildings) Standards 2010.

BM+G concludes that any amendments required to the design documentation in order to comply with the BCA can be addressed in the preparation of the detailed documentation for Crown Certificate without giving rise to significant changes to the proposal as submitted for REF approval.

Arising from BM+G's review, the proposed development can readily achieve compliance with the relevant provisions of the BCA. In terms of accessibility to the proposed staff accommodation, BM+G advises that the option would be to relax accessibility to any of the new staff accommodation buildings and devise a performance-based overlay management plan to coordinate accessible accommodation in town, organised by LHD. This would apply to any LHD staff members who attend and/or intend to stay at the site. This should be devised / completed ahead of the commencement of operation of this accommodation. This included as a mitigation measure within **Appendix X** of this REF.

7. Summary of Mitigation Measures

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

7.1 Summary of Impacts

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

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

8. Justification and Conclusion

The proposed Wentworth Health Service Redevelopment project involving construction and operation of a new single-storey health services facility, including 19-bed IPU (plus 1 x HiTH or virtual bed), associated out-patient and community health services and urgent care centre; new staff accommodation buildings; demolition of the main existing hospital building and other ancillary buildings; and associated civil engineering works, including retaining the existing levee bank but building the site up to the levee bank's height; tree removal; and new landscaping at Wentworth Hospital, 24 Hospital Road, Wentworth 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 environmental impacts of the proposal are not likely to be significant and therefore it is not necessary for an EIS to be prepared and approval to be sought for the proposal from the Minister for Planning and Public Spaces under Part 5.1 of the EP&A Act. Further, the activity will not significantly affect threatened species, populations, ecological communities or their habitats, and therefore a SIS and/or BDAR is not required.

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.