HEALTH INFRASTRUCTURE

Review of Environmental Factors – New Ambulance Station, Fairy Meadow

Prepared by GeoLINK

Version Number Final V3

NSW GOVERNMENT

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 a proposed new Ambulance Station development at 7 Squires Way, Fairy Meadow.

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

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

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

Declaration	
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Contents

Tables

Figures

Appendices

Appendix	Description	Author	Rev/Ref/Date
A	Architectural Plans	DJRD Architects	28.04.2023
B	Planning Certificate 10.7(2) & (5): Cert-2022/1150	Wollongong City Council	07.07.2022
C	Civil Works Package	Meinhardt Bonacci	28.04.2023
D	Design Development Report (Rev. A)	DJRD Architects	17.08.2022
E	Due Diligence Report: Electrical & Hydraulic Services	JHA Services	01.07.2022
F	Services Package	JHA Consultants	30.09.2022
G	BCA Assessment Report	BCA Logic	06.10.2022
H	Access Assessment Report	BCA Access	06.10.2022
I	Searches: AHIMS Contaminated Land Heritage Items EPBC Act Protected Matters Report	 NSW Government DECCW NSW Government Commonwealth Government	 08.07.2022 08.07.2022 Undated 26.08.2022
J	Traffic Impact Assessment	RoadNet	12.08.2022
K	Acoustic Report	JHA Services	06.07.2022
L	Energy Statement	JHA Consultants	26.09.2022
M	Preliminary & Detailed Site Investigation Report	Alliance	05.08.2022
N	Civil Engineering Design Report (Rev.B)	Meinhardt Bonacci	12.07.2022
O	Flood Assessment	Advisian	05.04.2023
P	Heritage Impact Statement	Wehir Phillips Heritage & Planning	13.07.2022
Q	Landscaping Plans	Site Image (NSW) Pty Ltd	16.11.2022
R	Clinical & Related Waste Management for Health Services	NSW Government	14.12.2022
S	Geotechnical Investigation	Alliance	05.08.2022
T	Arboricultural Impact Assessment	Civica	26.10.2022
U	Mitigation Measures	GeoLINK	25.10.2022
V	Notification Letters, Responses and Summary	REF notification letter Council REF Notification letter SES REF notification letter Occupiers Council Response no 1 Council Response no 2 SES Response	14.12.2022 14.12.2022 14.12.2022 23.01.2023 22.02.2023 19.01.2023
W	Business Continuity Plan	NSW Ambulance	01.03.2023
X	HI Brief: Endorsement of Preferred Site	Health Infrastructure	10.08.2022
Y	Pedestrian Arrangements	Health Infrastructure	03.11.2022
Z	Due Diligence Aboriginal Heritage Assessment	Heritage Management & Planning Pty Ltd	08.05.2023

Abbreviations

Abbreviation	Description
AEC	Area of Environmental Concern
AHD	Australian Height Datum
AHIP	Aboriginal Heritage Impact Permit
AHIMs	Aboriginal Heritage Information Management System BC Regulation
AMG	Australian Map Grid
BC Act 2016	Biodiversity Conservation Act 2016
BC Act 2017	Biodiversity Conservation Act 2017
BC Regulation	Biodiversity Conservation Regulation 2017
BAM	Biodiversity Assessment Method
CA	Certifying Authority
CE	Chief Executive
Codes SEPP	State Environmental Planning Policy (Exempt and Complying Development Codes) 2008
CM Act	Coastal Management Act 2016
CMP	Construction Management Plan
CWC	Connecting with Country
CRA	Conservation Risk Assessment
DPC	Department of Premier and Cabinet
DPE	Department of Planning and Environment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EES	Environment, Energy and Science
EPA	Environment Protection Authority
EP&A Act	Environmental Planning and Assessment Act 1979
EP&A Regulation	Environmental Planning and Assessment Regulation 2021
EPBC Act (Cwth)	Environment Protection and Biodiversity Conservation Act 1999
EPI	Environmental Planning Instrument
EPL	Environment Protection License
FM Act	Fisheries Management Act 1994
Ha	Hectares
HHIMS	Historic Heritage Information Management System
HI	Health Infrastructure
LEP	Local Environmental Plan
LGA	Local Government Area
MPS	Multipurpose Service
MNES	Matters of National Environmental Significance

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

Executive Summary

- **The Proposal**

Health Infrastructure (HI) and Ambulance Service of NSW (NSW Ambulance) proposes to construct a new ambulance station within the grounds of the University of Wollongong's Innovation Campus, located at 7 Squires Way, Fairy Meadow. The new and purpose-built ambulance station for the Fairy Meadow community will feature internal parking for emergency ambulance vehicles, administration and office areas, staff rest facilities, logistics and storage areas; internal wash bay; and staff parking. The site is part of a larger lot comprising University land, of which a portion will be excised by subdivision as exempt development as outlined in **Section 4.1** of this report. The site is in the northern section of the campus adjacent to Innovation Way where it intersects with Cowper Street.

- **Need for the Proposal**

HI and NSW Ambulance are improving infrastructure across regional and rural areas. The Rural Ambulance Infrastructure Reconfiguration (RAIR) Program for NSW Ambulance was initiated to provide high quality, improved services for rural NSW that protect and maintain the health of the community, and to do so with timely access and effective infrastructure. NSW Government's initial $132.1 million RAIR Program, was supplemented in November 2020 when the NSW Budget for 2020-2021 announced $100 million to accelerate the implementation of Stage 2 of the Rural Ambulance Infrastructure Reconfiguration, improving access to emergency health services for communities across regional NSW and improve workplace conditions for a significant proportion of NSW Ambulance employees. The RAIR 2 Program includes various locations across the state that will benefit from an upgraded, rebuilt or entirely new ambulance station. The proposed new Ambulance Station is part of this initiative.

- **Proposal Objectives**

The primary objective of the Proposal is to provide improved emergency health services for regional and rural NSW. Secondary objectives for the development of the site include:

- Minimising visual, noise and vibration impacts on adjoining properties;
- Minimising traffic impacts;
- Minimising impacts on heritage items;
- Minimising soil and stormwater impacts; and
- Maintaining adequate services.

- **Options Considered**

The preferred option is for the provision of the new ambulance station at land owned and occupied by the University of Wollongong's Innovation Campus. This option requires the acquisition of the subject site from the University which will be subdivided by HAC. The development will provide contemporary facilities and equipment to support the delivery of emergency health services for the Fairy Meadow community.

The only other option is to continue using the existing Wollongong and Bulli Stations, which would not meet the ongoing requirements of NSW Ambulance for the Illawarra region as additional service is required to respond to the increased population.

- **Site Details**

The proposed Activity is to be located on the northern section of the University of Wollongong Innovation Campus which is described as Lot 1 DP1172135, 7 Squires Way Fairy Meadow. The site will be excised by subdivision to create a separate lot to accommodate the Ambulance Station.

- **Planning Approval Pathway**

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

State Environmental Planning Policy (Transport and Infrastructure) 2021 (TISEPP) aims to facilitate the effective delivery of infrastructure across the State. Division 10 TISEPP outlines the approval requirements for emergency services facilities.

Section 2.52(1) of TISEPP enables development for the purpose of an emergency services facilities, including ambulance facilities, to be carried out by or on behalf of a public authority without consent in a prescribed zone. The site is zoned SP1 Special Activities, which is a prescribed zone under the TISEPP.

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

- **Statutory and Non-Statutory Consultation**

Pursuant to Section 2.62(2) of TISEPP the proponent of the development has given written notice of the intention to carry out the development to Wollongong City Council, NSW State Emergency Services (SES) and to the occupiers of adjoining land. Additional and follow up consultation has also occurred with Council, NSW SES and some of the occupiers of adjoining land. This additional consultation included meetings phone calls and presentations to go through issues raised during the consultation phase.

Additional non-statutory consultation activities included:

- Project media release to generate community awareness about the proposal.
- Leafleting of community flyer to 150 local homes and businesses.
- Local doorknock and offer for project briefing to neighbours.
- Project information page on the RAIR website, dedicated phone and email contact points.

- **Environmental Impacts**

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

The proposed ambulance station will predominantly result in environmental impacts that are either negligible or low. The most notable potential environmental impact relates to short-term noise impacts associated with the proposal construction, stormwater management and flooding.

The activity will provide improved emergency health services for the region. The Proposal will result in a long-term positive impact on health service delivery within the community.

- **Justification and Conclusion**

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

- The extent and nature of potential impacts will not have significant adverse effects on the locality, community and the environment.

- Potential impacts can be appropriately mitigated or managed to ensure that there is minimal effect on the locality and community.
- From an analysis of the environmental impacts associated with the proposed development activity, it has been determined that preparation of an EIS is not required.
- The proposed development will not have any effect on matters of national significance and approval of the activity under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* is not required.
- There are no separate approvals, authorisations or notifications required in relation to the proposed development activity prior to determination under Part 5 of the EP&A Act or under any other Acts.
- It is recommended that HI approve the proposed activity in accordance with Part 5 of the EP&A Act and subject to adoption and implementation of matters outlined in Section 6.

1. Introduction

NSW Health Infrastructure (HI) proposes to construct a new Ambulance Station (the proposal) within the grounds of the University of Wollongong's Innovation Campus at 7 Squires Way, Fairy Meadow (the site) as part of their delivery of infrastructure solutions and services to support the healthcare needs of the NSW communities. The new and purpose-built ambulance station for the Fairy Meadow community will feature internal parking for emergency ambulance vehicles, administration and office areas, staff rest facilities, logistics and storage areas; internal wash bay; and staff parking.

This Review of Environmental Factors (REF) has been prepared by GeoLINK on behalf of HI to determine the environmental impacts of the proposed Ambulance station at 7 Squires Way, Fairy Meadow. For the purposes of these works, HI is the proponent and the determining authority under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

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

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

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

- Whether the proposed activity is likely to have a significant impact on the environment and therefore the necessity for an EIS to be prepared and approval to be sought from the Minister for Planning and Homes under Part 5.1 of the EP&A Act;
- Whether the activity is likely to significantly affect threatened species, populations, ecological communities or their habitats, in which case a SIS and/or BDAR is required; 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

Construction of a new Ambulance Station at the proposed site will improve the delivery of emergency services within the region and alleviate pressures currently being experienced by existing stations in Wollongong City. It also presents an opportunity to provide purpose-built and contemporary facilities which comply with current standards.

Consideration was given to the continued use and/or redevelopment of existing stations located at Wollongong and Bulli. However, these options would not meet the ongoing requirements of NSW Ambulance nor meet the future health needs of the local community. Refurbishment of existing stations would also be cost prohibitive, restricted by site conditions, and would not provide sufficient coverage of the targeted area.

2. Site Analysis and Description

2.1 The Site and Locality

Fairy Meadow is a suburb in the City of Wollongong, located in the Illawarra Region on the South Coast of New South Wales. Wollongong is approximately 60 km from Bowral, 40 km from Kiama and 80 km from Sydney. It is the third largest city in NSW. The traditional land-owners for the Wollongong region are the Dharawal nation. The Local Aboriginal Land Council area is the Illawarra Local Aboriginal Land Council. The land is owned and occupied by the University of Wollongong Innovation Campus.

The Activity site is addressed as 7 Squires Way, Fairy Meadow, however the land is located on Innovation Way which provides vehicular access through the University campus. No access is available from Squires Way which is located approximately 120 m east of the site. The site is described in real property terms as Lot 1 DP1172135 and is approximately 4 kilometres from the city centre. The proposed site area is 3520m^2 and is located in the north-western section of a much larger lot extending to the south that comprises University land.

The activity site covers approximately two-thirds of a square portion of Lot 1 DP1172135 that is bound by Innovation Way on two sides, a laneway to the south and residential properties to the east. This portion is currently used as open space. It has an elevation of approximately 3.5 m AHD in the north-east and 4.5 m AHD in the south-west and is generally flat, sloping only 1.6%.

A concrete pedestrian path crosses the site linking residential areas with University facilities in the south. A small, landscaped garden and flagpole are located in the south-east corner of the block. The area is fenced on all four sides by low open fencing along the road frontages and high fences, mostly Colorbond®, along the western residential boundaries. Vehicular access to and from the site will be gained from Innovation Way to the north of the site.

Lot 1 DP1172135 is zoned SP1 Special Activities (Innovation Campus) under the Wollongong Local Environmental Plan 2009 (WLEP 2009).

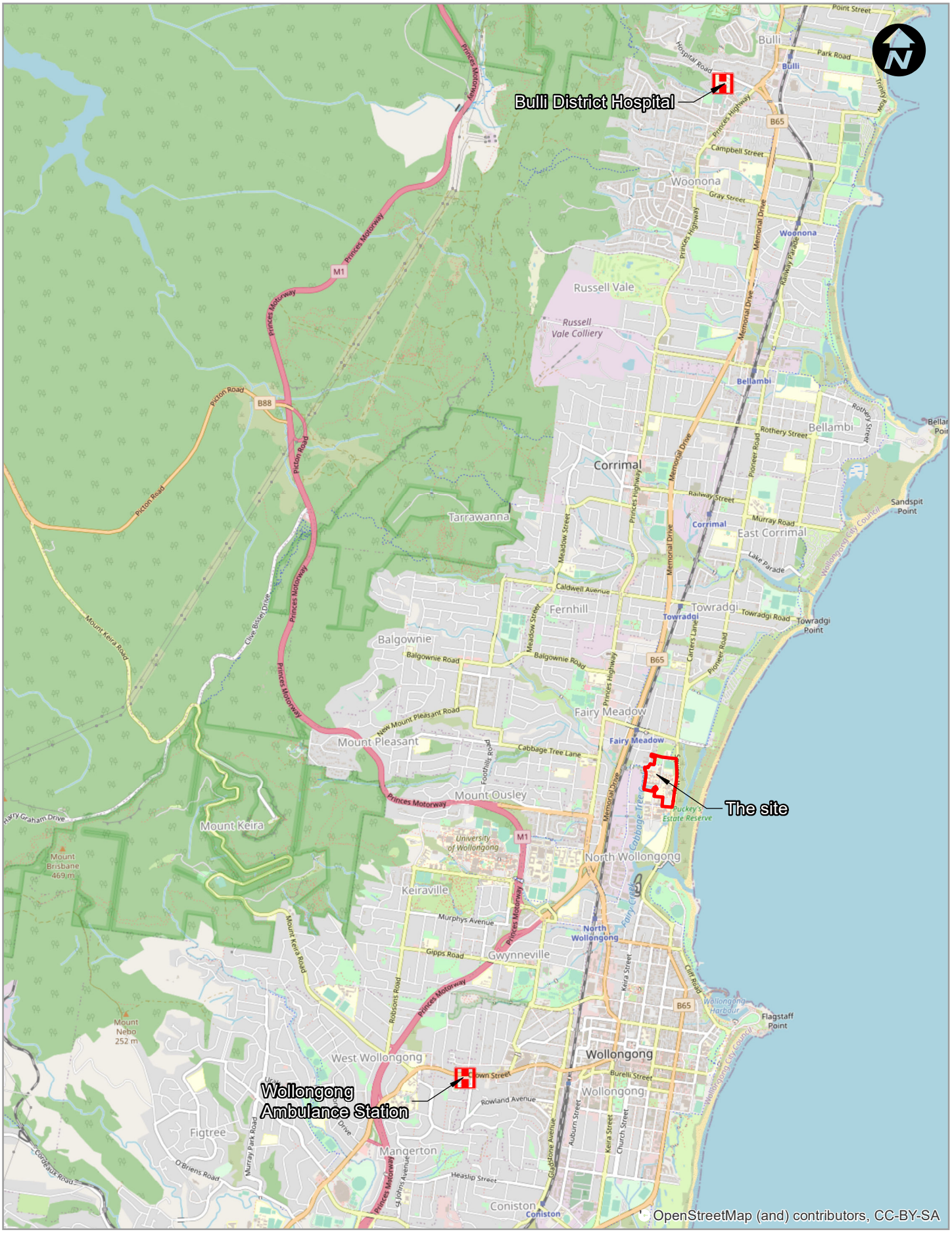
A Site Locality Plan is provided at **Illustration 2.1** and a Site Context Plan is provided at **Illustration 2.2**.

2.1.1 Existing Development

The remainder of Lot 1 is utilised by the University Campus. Immediately north and east of the site are further open space/sporting areas. Immediately south of the site is an outdoor carpark and student accommodation. The main part of the Campus is located further south. Residential properties adjoin immediately to the west and further north (separated by sporting fields). Puckeys Estate Reserve/Wollongong Botanic Garden are located further east between Squires Way and Fairy Meadow Beach. An area zoned IN2 Light Industrial (Montague Street Industrial Estate) is located west of the University Campus.

A childcare centre is located to the north-east on adjoining Lot 2 DP1172135. The childcare centre (9 Squires Way) is heritage listed under WLEP 2009 due the site's historical association with the former Balgownie Migrant Workers' Hostel.

Innovation Way runs north-south centrally through the lot and is the primary access through the Campus. It is a bitumen sealed, two-laned road, with roll-back kerb and gutter. The un-named bitumen sealed laneway borders the site to the south and appears to transition into a concrete pedestrian pathway linking west to Montague Street. The Freeway (Memorial Drive, formerly identified as the Northern Distributor), Illawarra Railway line and the Fairy Meadow Commercial Area are located west of the site (over 300 m), while the other major transport route, Squires Way, is approximately 120 m east of the site.



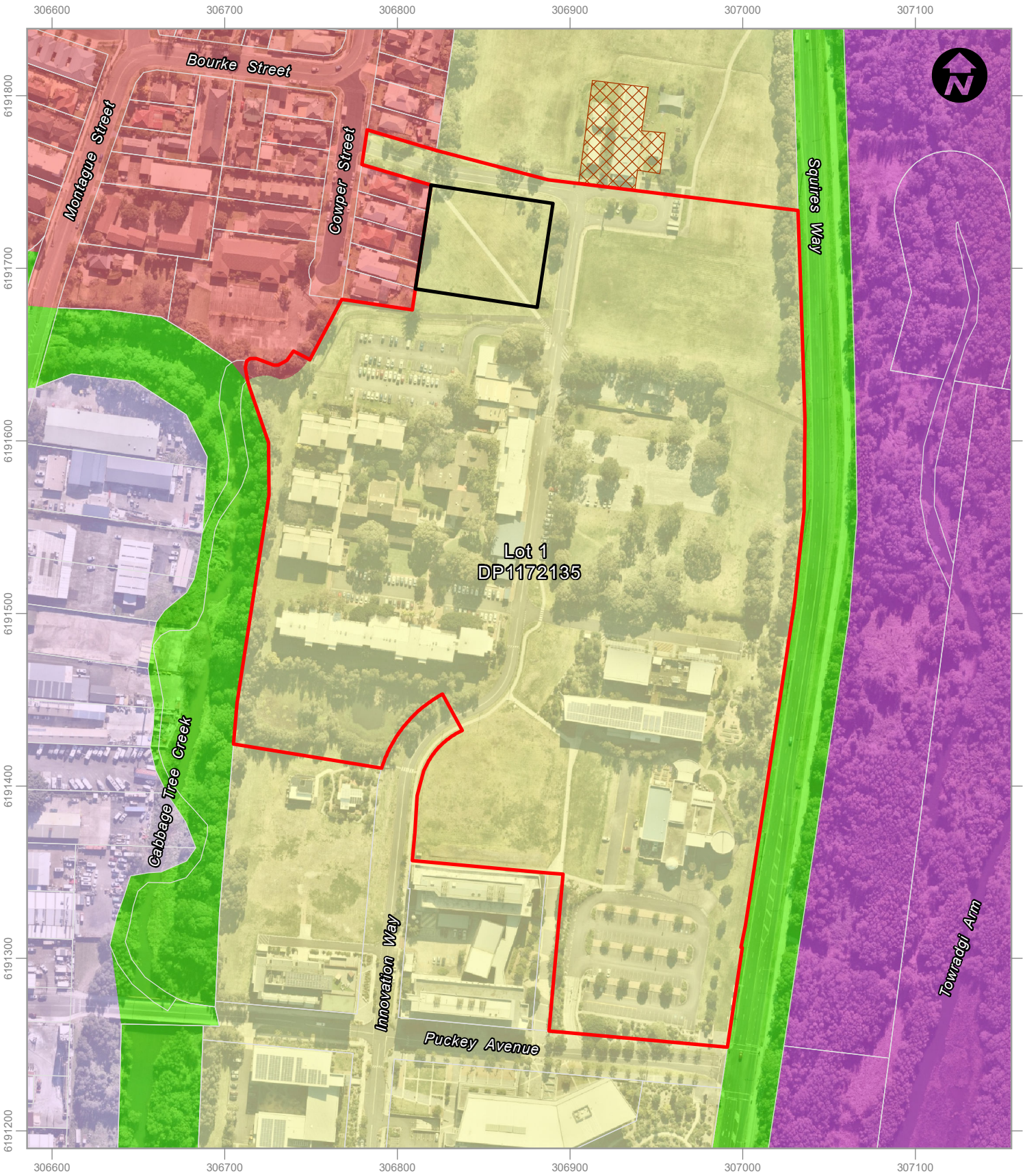
0 1 Km

Site Locality - Illustration 2.1

GeoLINK environmental management and design

Review of Environmental Factors - New Ambulance Station, 7 Squires Way, Fairy Meadow
3730-1384

Information shown is for illustrative purposes only
Drawn by: AB Checked by: RE Reviewed by: EA
Source of base data: OpenStreet Map
Date: 20/07/2022



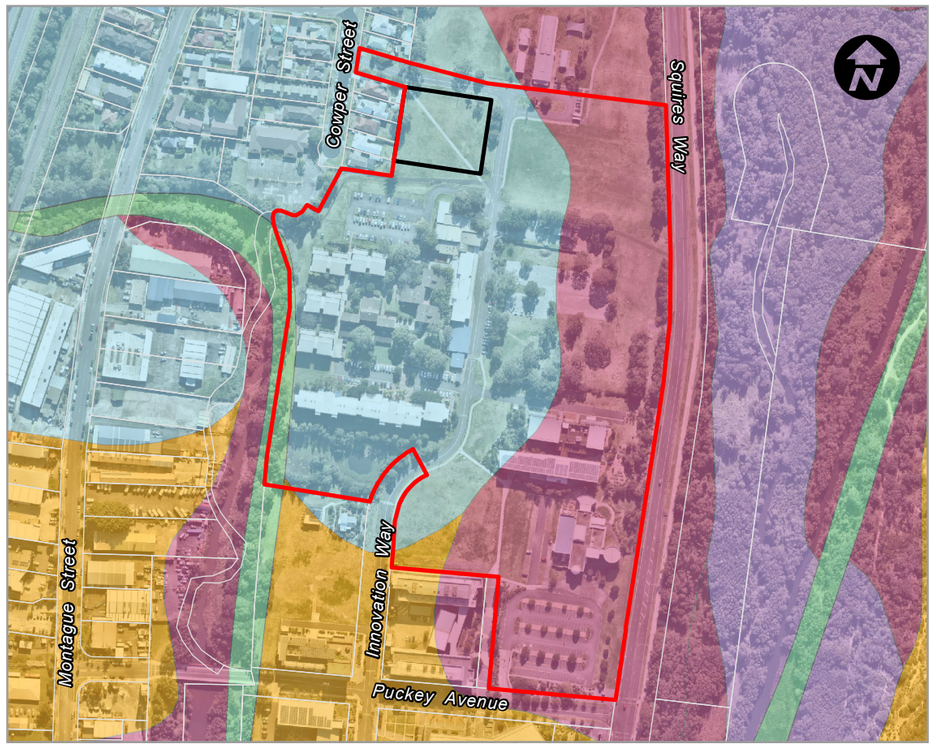
GDA 1994 MGA Zone 56

LEGEND

- Site boundary
- Activity area
- Cadastre
- Balgownie Migrant Workers Hostel: Huts 201, 204 and 210
- C2 Environmental Conservation
- IN2 Light Industrial
- R3 Medium Density Residential
- RE1 Public Recreation
- SP1 Special Activities

0 60 Metres

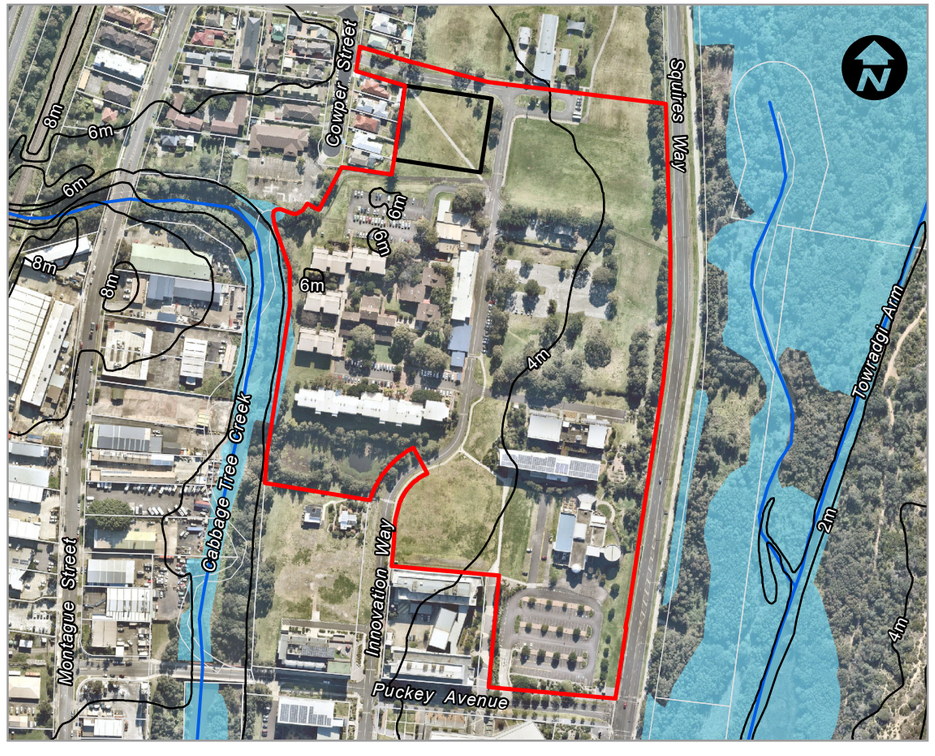
Site Context - Illustration 2.2



Acid Sulfate Soil
- Site boundary
- Activity area
- Cadastre
- Class 1
- Class 2
- Class 3
- Class 4
- Class 5

Conservation and Heritage
- Site boundary
- Activity area
- Cadastre
- Biodiversity values mapping
- General heritage

Bushfire Prone Land
- Site boundary
- Activity area
- Cadastre
- Vegetation Category 1
- Vegetation Category 2
- Vegetation Buffer



SEPP
- Site boundary
- Activity area
- Cadastre
- Coastal Wetland *
- Contours at 2m intervals
- Watercourse

*Note: entire site within Coastal Environmental Area and Coastal Use Area SEPP

0 100 Metres

Site Analysis - Illustration 2.3

Information shown is for illustrative purposes only
Drawn by: AB Checked by: RE Reviewed by: EA
Source of base data: Nearmap 29/07/2021
Date: 20/07/2022

2.1.2 Vegetation and Watercourses

Towradgi Arm Creek is located within the Puckeys Estate Reserve east of Squires Way. Cabbage Tree Creek provides a green, riparian area approximately 100 m south-west of the site, before it diverts south and joins with Towradgi Arm Creek. The coastal vegetated land to the east is identified as an area of sensitive biodiversity. This area is also mapped as Coastal Wetlands and Coastal Wetlands buffer area. The Activity site is located within the Coastal Environment Area and the Coastal Use Area under the provisions of the State Environmental Planning Policy (Resilience and Hazards) 2021.

The Activity site itself is not classified as biodiversity values land. Vegetation at the site is managed open space, with isolated mature trees along the roadside and western boundary.

2.1.3 Hazards

The Activity site is not classified as bushfire prone land or 'buffer'. The eastern fringes of Lot 1 DP1172135 are classified 'buffer' with vegetated areas east of Squires Way 'bushfire hazard'. The site is flood affected and forms part of the Cabbage Tree and Towradgi Arm Creek Catchments.

Lot 1 DP1172135 contains potential acid sulfate soils, primarily Class 5 at the development site, and Class 1, 3 and 4 further afield.

2.1.4 Existing Services

A utility review of existing services indicated that all services are available to the site as follows:

- High Voltage reticulated power lines are located along Innovation Way at the northern boundary of the site. An existing 100kVA Pole-mount transformer currently serves the adjacent childcare facility on Innovation Way. An alternative pole mounted substation is also located on Cowper Street.
- Light poles adjacent the footpath currently crossing the site are owned by the University of Wollongong and served by inground conduits in the north-west corner of the site.
- NBN and Telstra network infrastructure is located along the northern side of Innovation Way via underground conduits and pits.
- The nearest water main is located in Cowper Street.
- There are two sewer mains in the vicinity; one located south of the development site (750 mm) and the other (150 mm) main located on Cowper Street west of the site.
- Four street hydrants and a natural gas main are located in Cowper Street.

The review revealed that currently there are no major underground electrical assets on site that will require relocation or re-diversion or telecommunication services to be decommissioned and/or diverted. A 100kVA Pole-mount transformer serving the childcare facility could be used as a connection point. Information on the authority sewer and water main indicates that authority assets will not be impacted by the proposed building and lot boundaries.

2.1.5 Site Considerations and Constraints

Section 10.7 Planning Certificate No. Cert-2022/1150 dated 7 July 2022 identifies that the site is located within the SP1 Special Activities (Innovation Campus) zone under WLEP 2009, and is provided at **Appendix B**.

Table 2-1 Section 10.7 Planning Certificate

Affectation	Yes	No
Critical habitat		✓
Conservation area		✓
Item of environmental heritage		✓

Affectation	Yes	No
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	✓	
List other relevant constraints	n/a	

3. Proposed Activity

3.1 Proposal Overview

The proposed Activity relates to the construction of a new Ambulance Station at the University of Wollongong University Campus in Fairy Meadow to improve the delivery of emergency services within the region.

The new single storey ambulance station will have a gross floor area of 766.5m^2 and will include:

- Operations rooms including amenities, administration and office space, outdoor areas, lockers, common room, medical store and a gymnasium.
- Plant room providing five ambulance parking bays, one internal wash bay, oil separation, delivery area and waste storage area.
- External hardstand areas including walkways, seven light vehicle parking bays, one relief parking space, one PWD parking space and one DOM covered parking bay.
- Two access points via Innovation Way.

The Activity involves one tree removal, excavation works, and landscaping at the completion of construction works.

A set of Architectural Plans is provided as **Appendix A**. A Civil Works Package is provided as **Appendix C**.

3.1.1 Design Approach

3.1.1.1 Placemaking and Design

The primary focus of the NSW Government's RAIR Program is to deliver improved access to emergency health services to communities across regional NSW in addition to providing improved workplace conditions for NSW Ambulance employee. It also provides opportunities for the Government to partake in "place making", to *"deliver a multi-faceted approach to the planning, design and management of public spaces".*

In 2017 the NSW Government Architect produced *Better Placed* (GANSW, May 2017), which is *"an integrated design policy for the built environment of New South Wales".* Better Placed provides an effective Design Guide which, *"is about enhancing the design quality of our built environment, raising expectations and raising standards, about working better and creating better environments".* HI has effectively adopted the principles outlined in Better Placed to provide facilities that not only serve their local communities but capitalise on the available opportunities to provide integrated places that link communities, functions and activities within a cohesive place.

The design of the new RAIR projects, including the Fairy Meadow Station, present a consistent and recognisable identity that also responds to the local environment and contributes to the public realm. To achieve this the RAIR program has involved consultation with local communities and service providers and utilised the services of a range of development and building professionals. This is demonstrated throughout this REF which assesses and presents these results in its findings.

There are seven objectives identified in *Better Placed* that define the key considerations that are necessary in the design of the built environment. **Table 3-1** below provides an assessment of how these objectives are demonstrated in the overall design of the proposed Fairy Meadow Ambulance station.

Table 3-1 Better Placed Assessment

Design Objectives	
Objective 1: Better fit	The development site is in an area of mixed uses; University campus, residential and recreational. The character of the proposed site is predominantly characterised by open recreational space. The closest buildings are low-scale residential and the childcare facility. The proposal features a contemporary design which is recognisable and consistent with new ambulance buildings. However, the low-rise, simplified design, neutral colour palette and its location within open space ensures that the new building will be compatible within the mixed uses of the surrounding area and with the scale of the local built form.

Design Objectives	
Objective 2: Better performance	The RAIR programme is targeting compliance with Design Guidance Note No. 058 rating tool for new rural ambulance stations. To achieve this, a pathway has been developed which identifies which credits will be targeted to meet this rating (ref. Design for a better future, Rural Ambulance Station Facilities ESD Design Guidelines, Sept 2021). The implementation of this system will create buildings that feature reduced energy and water demand, be adaptable over time, provide comfortable, healthy working environments, maintain value into the future and reduce overall environmental impacts over time.
Objective 3: Better for community	The new Ambulance station will improve local emergency health services and workplace conditions for employees. The site will be utilised by NSW Ambulance and will generally not be available to the general public. As a place for employees, the accessibility of the building has been assessed against the applicable requirements and found to comply or be capable of complying. The site has ready access to public transport, pedestrian/cycle ways, commercial and residential areas and will provide improved emergency services coverage within the Wollongong area. The operation of the proposed development will not jeopardise traffic safety and will contribute to improved public safety in its location. The building's design and site selection is consistent with the implementation of Crime Prevention through Environmental Design principles which have been considered and incorporated in the design.
Objective 4: Better for people	The proposed Station includes facilities and amenities to maintain the health of and accommodate the needs of NSW Ambulance employees. The Rural Ambulance Station Facilities ESD Design Guidelines referenced above includes design responses to maintain a safe and comfortable work environment (i.e. indoor air quality, acoustic and visual comfort, material selection, thermal comfort, microbial control and fire safety). External issues are also addressed (i.e. light pollution, night sky pollution). The Development Report addresses due diligence and safety in design considerations appropriate to Ambulance Stations. These factors result in a well-designed building that is suitable for its purpose and its people.
Objective 5: Better working	The proposed development is a 'fit -for-purpose', functional building which is designed for the specific purpose of providing improved and contemporary health services to the community, both now and into the future. This has been achieved through the extensive consultation process and involvement of a wide range of professionals involved in the development and building industry.
Objective 6: Better value	The RAIR program represents the investment by NSW Ambulance into providing improved facilities and services for regional communities and its people. As a result, the proposed new Station will meet contemporary standards, deliver good design outcomes and high-quality construction standards, and will deliver social, environmental and economic benefits to the proponents and the community.
Objective 7: Better look and feel	The design of the proposed Ambulance station will utilise high quality materials and provide an aesthetically pleasing, contemporary building which will contribute in a positive fashion to the public realm.

A Design Development Report prepared by the RAIR Program Architects, DJRD Architects is attached as **Appendix D**.

3.1.1.2 Sustainability

The proposed Fairy Meadow Ambulance Station has been designed and will be constructed in accordance with the requirements of DGN058 and aligns with to industry good practice sustainability and NSW Government Sustainability policy. A list of sustainability initiatives for the project will be provided to HI Planning and Sustainability. A pathway has been developed to identify the credits that will be targeted to achieve DGN 058 equivalence as a minimum of 45 points and targeting 50 points. The Contractor for the project will be provided with a design that is able to achieve the required credits and it will be a condition of Contract that they engage a qualified sustainability professional to assist them in ensuring that the completed station meets or exceeds the minimum of 45 credit points.

3.1.2 Proposed Activity

3.1.2.1 Site Acquisition and Exempt Subdivision

The proposed new ambulance station is to be located on land currently owned by the University of Wollongong, on land described as Lot 1 DP1172135.

It is proposed to excise a portion of the site for the ambulance station development, in accordance with the exempt development provisions in State Environmental Planning Policy (Exempt and Complying Development Codes) 2008. The current size of Lot 1 DP1172135 is approximately 3.85 hectares (38,500 m^2). This will be reduced to approximately 3.58 hectares as a result of the subdivision. Whilst subdivision does not form part of the Activity as it is exempt development, for completeness a review of the development against the relevant requirements is undertaken in **Section 4.1** of this report.

The site selection process involved the formation of a Property Acquisition Working Group consisting of representatives from NSW Ambulance, HI and the team of consultants engaged to oversee the project. Lot 1 DP1172135 was identified as the preferred site by the Working Group from 'heat mapping' provided by NSW Ambulance to demonstrate the most suitable location for a new station (refer **Figure 3.1** below). The site at Fairy Meadow satisfied the required response times and access provisions and was considered to be the most suitable in the primary response zone which is flood affected during major flood events. Preliminary flood investigations were also carried out to determine the suitability of a number of sites, including land owned by the University.

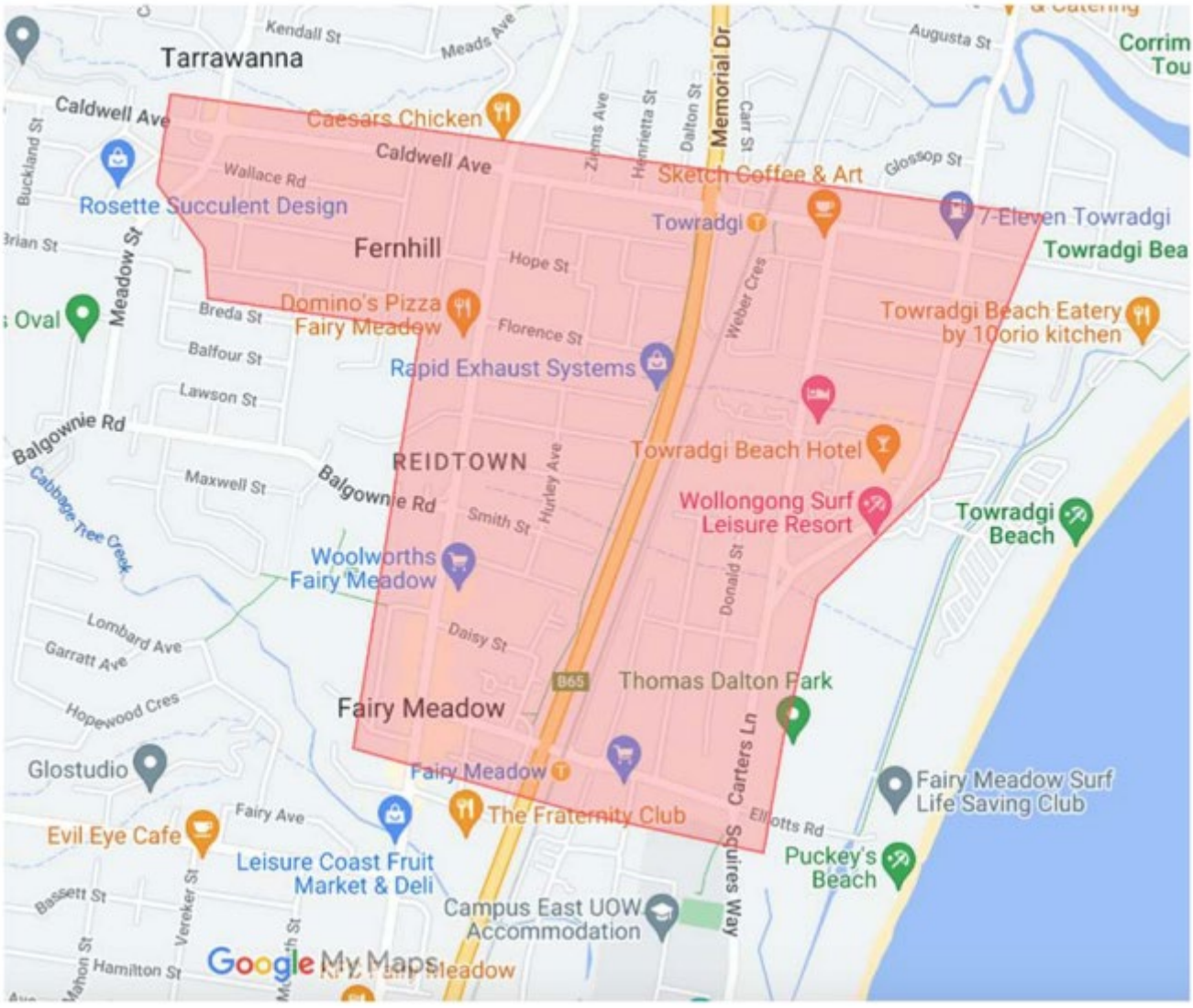


Figure 3.1 Heat Map for new Ambulance Station

The NSW Ambulance Operational Management Report for the Fairy Meadow site reported 4,966 incidents responded to in the Fairy Meadow area in 2019, with demand projected to increase to 5,851 incidents annually by 2036. The travel time from a station at Fairy Meadow was estimated to be within 5 minutes of 2,625 current P1 incidents and superior to other locations considered such as Bulli and Wollongong.

The Fairy Meadow site was presented to and endorsed by the Executive Steering Committee. A copy of the HI Brief and abovementioned Operational Management Report is provided as **Appendix W**.

3.1.2.2 Built Form

The building has been developed in conjunction with other new RAIR projects. Its overall form, material selection and aesthetics will be similar to the other RAIR stations, providing a recognisable and consistent approach for new RAIR buildings. This is considered important to reflect the cohesive nature of the ambulance service and provide staff with

workplaces that do not differ significantly from one RAIR station to another. Selection of the colour of materials will be used appropriately with consideration given to the site context.

The building height and form has been simplified to maintain an efficient building shape. The roof is a skillion roof and kept to a low pitch of approximately 3.5 degrees to further refine the building form. In maintaining as small and simple a form as possible, overshadowing or overpowering adjacent buildings has been minimised. Considering the interior minimum height requirements and the internal clear spans of the office and plant areas, an efficient steel portal frame has been incorporated as the primary structure for the building envelope. Internal walls are non-load bearing to allow for future flexibility and internal rearrangement of spaces. The ambulance station's common room, meals room and outdoor area have been located to the west of the plant room and have been provided with windows that offer natural light and outlook.

The height of the proposed ambulance station will be 7.32 m. The gross floor area will be 766.5 m^2.

Figure 3.2 Proposed Ambulance Station

3.1.2.3 Roadworks and Parking

Onsite parking for the new Station is proposed as follows:

- Five ambulance parking bays.
- Seven staff car parking spaces.
- One wash bay.
- One accessible park.
- One directorate of management (DOM) covered parking bay.
- One relief bay.

Two new driveways will be constructed off Innovation Way for the proposed station.

3.1.2.4 Tree Removal and Landscaping

No trees around the site have been identified as being of national, state or local heritage significance, and all are likely planted species that are common to the local area and have limited botanical significance.

There is a large Melaleuca tree along the boundary of the residential properties to the west which is proposed for retention based on advice and recommendation of the project arborist. This tree will need to have specific tree protection measures as outlined in the Arborist Report (refer **Appendix T**). One small Eucalypt tree (possibly a flowering gum) is proposed to be removed to allow the construction of an access point onto Innovation Way. Four other mature trees along the road frontage are to be retained. Landscaping of the site, incorporating 11 trees and a mix of shrubs, grasses, and groundcovers, will be implemented as part of the overall project. Palisade fencing will be installed delineating the ambulance station site. Due to the level site, excavation will be minimal for construction of the slab and installation of services only.

3.1.2.5 Demolition

The existing footpath and light-poles crossing the site will be demolished, and also the northern and eastern boundary fence along Innovation Way and adjacent fencing along the residential properties to the west.

3.1.2.6 Utilities

A copy of Due Diligence Report prepared by JHA Services is attached as **Appendix E**. Design drawings for the proposed Electrical, Hydraulic and Mechanical Services are also attached as **Appendix F**.

The Report identifies that all services are available to the site (namely electrical, telecommunications, water, and sewer) and can be provided to the proposed new Ambulance station subject to approval by the relevant authority of the extensions, connections and upgrades as outlined in the report. The following specific requirements are noted:

- Existing light poles and associated inground conduits associated with the illuminated University-owned footpath crossing the site will need to be capped-off on the north-west corner and the light poles returned to the University.
- Utility power network is available on Innovation Way. Supply connection may not be readily available, and the existing substation may need to be upgraded, subject to utility provider's terms and conditions. Due to the estimated maximum demand for the site being above 63 Amps 3-phase and the existing substation required to be upgraded, it is envisaged that the authority might request the involvement of an ASP Level 3 Designer for any network alterations required. An alternative pole mounted substation is also located on Cowper Street.
- There is Telstra/NBN network infrastructure on the northern side of Innovation Way, the opposite side to the property boundary. New NBN/Telstra lead-in pathway is required from this point to the communications room of the site, subject to utility provider terms and conditions.
- Sewer connection is envisaged to drain via gravity to the 750mm authority sewer main south of the site via an Authority Wastewater mains extension into the Lot. Further survey information is required to confirm a gravity connection can be made without the need for a pumping station.
- New water connection is to be made to the 100mm authority water main located along Cowper Street and a 100mm water main extension is required from the 100mm authority water main.
- There are no gas services required for this development. The existing university's water and gas piping within the ambulance lot are to be covered by an easement in favour of the University lot.
- There are four street hydrants surrounding the property located in Cowper Street. It has been determined that sufficient fire hydrant coverage cannot be obtained from the street hydrant located along Cowper Street. Therefore, a feed hydrant (onsite hydrant) is required to provide fire hydrant coverage to the new building. The pressure and flow of the 100 mm water main on Cowper Street is sufficient to meet this demand.

3.1.2.7 Ancillary Facilities

A temporary site compound and material stockpile areas would be established within the activity area. The appointed contractor will be required to undertake an initial site-specific safety check prior to site establishment. Site containment fencing will be erected to restrict public access to the works zone. The temporary fencing will be secured from any unauthorised access via padlock.

Prior to the commencement of work, contractor staff will be inducted on the works methodology, environmental issues and key mitigation measures relating to the works. The immediate neighbours will be given written notification of the works and anticipated works period.

Erosion and sediment controls would be designed and implemented prior to undertaking the activity. The controls would be maintained during the project and would not be removed until the site has been suitably stabilised.

3.1.2.8 Building Code of Australia

A BCA Assessment Report was prepared for the Proposal by BCA Logic and is attached as **Appendix G**. The building is required to be of Type C Construction under provisions of the Building Code of Australia (BCA). The ambulance station is classified under the BCA as:

- Class 3: Sleeping pods (sole occupancy unit).
- Class 5: Offices, amenities, meeting and communal ancillary areas.
- Class 7a: Plant room used for the parking of the ambulances.

The Report assessed the design documentation against the applicable provisions of the BCA and determined that the documentation either complies or is capable of complying with the relevant provisions of the BCA.

3.1.2.9 Accessibility

BCA Access have prepared an Access Assessment Report for the proposed new Ambulance Facility (attached as **Appendix G**). The following areas of the building are required to be accessible:

- Class 3 Sleeping pods: An exemption under Clause D3.4 has been assumed, on the basis that the occupants of the sleeping pods will be operational ambulance employees. It is readily assumed that the operational ambulance workers will be able-bodied persons who will not require the room to have accessible features.
- Class 5 Offices, amenities, meeting and communal ancillary areas: To and within all areas normally used by the occupants.
- Class 7a Plant room used for the parking of the ambulances: There are no accessible carparking spaces in the plantroom, however there is an accessible sanitary compartment provided in the plant room and therefore an accessway shall be provided to this compartment. Furthermore, there is an accessible carparking space located in the external public parking area, therefore access from this space to the building must be provided.

The Access Assessment Report assessed the design documentation against the applicable provisions for Accessibility and determined that the documentation complies or is capable of complying with those documents.

3.2 Proposal Need, Options and Alternatives

3.2.1 Strategic Justification

HI and NSW Ambulance are improving infrastructure across regional and rural areas as part of the Rural Ambulance Infrastructure Reconfiguration (RAIR) Program. The RAIR 2 Program includes various locations across the State that will benefit from an upgraded, rebuilt or entirely new ambulance station. The proposed new Ambulance Station at Fairy Meadows is part of this initiative.

3.2.2 Alternatives and Options

The population of the Illawarra Shoalhaven region is predicted to increase by a further 100,000 people by 2041, with the city of Wollongong to increase by a further 55,375 people (Illawarra Shoalhaven Regional Plan 2041, NSW Government, May 2021). The area between Fairy Meadow and Thirroul was identified in the Draft Regional Growth and Infrastructure Plan 2014 (NSW Government) as the “Northern Growth Corridor”. The construction of a new Ambulance Station at Fairy Meadow will assist to cater for the anticipated growth in the region and also support existing Ambulance services located at Bulli and Wollongong.

The construction of a new Ambulance Station in Fairy Meadow will:

- Provide modern facilities and improved service delivery to the community.
- Provide contemporary staff facilities which comply with modern standards.
- Onsite parking would comprise five ambulance parking bays and one internal wash bay within the Plant Room, seven staff car parking bays, one accessible parking space, one relief bay and one Directorate of Management (DOM) covered parking bay.
- Ensure that stormwater and trade waste discharge is appropriately managed and treated in accordance with relevant standards.
- Incorporate design measures to achieve ecologically sustainable development objectives.

Table 3-2 Alternatives Considered For the Proposal

Alternative description	Advantages and disadvantages	Preferred alternative
• Construct new Ambulance Station for Fairy Meadow at the selected site.	Advantages: • Provision of new station will improve emergency services coordination and delivery throughout the region. • Provision of new station will alleviate existing pressures on available services. • Availability of essential services. • Availability of suitable, unconstrained land. • Minimal impacts. • Proximity to hospitals, town centre and major transport routes. Disadvantage: • Loss of open space.	✓
Redevelopment of the existing Ambulance Stations at Wollongong and/or Bulli.	Disadvantages: • Lack of space for expansion. • Distance from identified future growth area. • Lack of suitable vacant, unconstrained land. • Cost prohibitive.	
Continue using existing Ambulance Stations.	Disadvantages: • Would not provide sufficient coverage of the targeted area. • Cost prohibitive.	
Identify a new location and build a new station.	• Lack of available, suitable land in proximity to targeted area.	.

3.3 Construction Activities

Construction works are considered to be short term and will occur over eight months. The Activity site is separate from the University facilities and therefore construction activities will not affect the ongoing operation of the University or the Childcare facility.

Table 3-3 Project Timeframes and Construction Activities

Construction activity	Description
Commencement Date	Works are expected to commence in July 2023 and be completed by April 2024..
Work Duration/Methodology	The works are expected to take approximately eight months. The general works methodology would involve: • site establishment and preparation; • construction works; and • site clean-up and reinstatement.

Construction activity	Description
Work Hours and Duration/Construction	Works will be undertaken during standard hours as per the Interim Construction Noise Guideline: • Monday to Friday: 7:00 am to 6:00 pm • Saturday: 8:00 am to 1:00 pm • Sunday and Public Holidays: No work
Ancillary Facilities	A temporary site compound and material stockpile areas would be established within the Activity area. Site containment fencing will be erected to restrict public access to the works zone. Erosion and sediment controls would be designed and implemented prior to undertaking the activity. The controls would be maintained during the project and would not be removed until the site has been suitably stabilised.
Plant Equipment	The main plant likely to be used for the works would include, but are not limited to: • Trucks; • Excavator; • Concrete trucks; • Handheld power and battery-operated tools; • Dump trucks/skips; and • Other small equipment.
Earthworks	Cut and fill earthworks will be required for the construction of the new station, pavement and carparking areas. Any clean excess spoil (soil) will be used within landscaping treatments throughout the site or removed from site and disposed of appropriately.

3.4 Operational Activities

3.4.1 Use

The new building will be for the purpose of a new ambulance station for the services of NSW Ambulance. The building will be used by ambulance service paramedics and administration staff. The building is not intended for public access, and it is not anticipated that there will be a high number of visitors to the building.

A Business Continuity Plan has been prepared for the new Station and is attached as **Appendix W**.

3.4.2 Staff

The station is expected to be staffed at a rate of 24 full time equivalent (FTE) staff by the year 2031, with emergency vehicle crews on 12-hour shifts and shifts being allocated according to expected callouts and staff fatigue management policies. Office staff hours are typically 0800-1600 on weekdays. Typical emergency crew shift times (as advised by NSW Ambulance) include:

- 0800– 1800
- 0800 – 2000
- 1200 – 0000
- 1500 – 0000
- 2000 – 0800

NSW Ambulance has advised that the expected maximum number of people on-site at any one time will be 7 people, occurring at 8:00 am on a weekday. This will be during the change of shifts between night and day shift for emergency crews and the beginning of the office staff day shift and includes allowance for ‘ride-alongs’ and staff or students in training. A copy of the Return Brief dated 17 August 2022 for the Fairy Meadow Station is included in the Design Development Report **(Appendix D)**.

3.4.3 Traffic and Parking

Onsite parking would comprise five ambulance parking bays and one internal wash bay within the Plant Room, seven staff car parking bays, one accessible parking space, one relief bay and one Directorate of Management (DOM) covered parking bay.

Access would be provided via new driveways constructed off Innovation Way.

4. Statutory Framework

4.1 Planning Approval Pathway

4.1.1 Subdivision

Whilst subdivision is not part of the proposed Activity, it is proposed to excise a portion of Lot 1 DP1172135 for development of the ambulance station, via an exempt development process. The existing and proposed property boundaries are shown on the architectural drawings at Appendix A. The resulting lot will be used for emergency services purposes. Section 2.75(f) of the Exempt & Complying Development Codes SEPP states:

Part 2 Exempt Development codes

2.75 Specified development

The subdivision of land, for the purpose only of any one or more of the following, is development specified for this code-

…(f) excising from a lot land that is, or is intended to be, used for public purposes, including drainage purposes, rural fire brigade or other emergency service purposes or public toilets.

As such, the creation of such a lot can be undertaken as exempt development, provided the general requirements for exempt development in Section 1.16 of the Codes SEPP are met. For completeness, a review of the development against these requirements is provided below.

Table 4-1 Section 1.16 Assessment

Clause	Comment
1. To be exempt development for the purposes of this policy, the development-	
(a) must meet the relevant deemed-to-satisfy provisions of the Building Code of Australia, or if there are no such relevant provisions, must be structurally adequate, and	The proposed development will meet the relevant deemed-to-satisfy provisions of the Building Code of Australia.
(b) must not, if it relates to an existing building, cause the building to contravene the Building Code of Australia, and	Not applicable
(b1) must not be carried out on land that is a declared area of outstanding biodiversity value under the Biodiversity Conservation Act 2016 or declared critical habitat under Part 7A of the Fisheries Management Act 1994	The land is not declared to have outstanding biodiversity value. The land is not declared critical habitat under the *Fisheries Management Act 1994*.
(b2) must not be carried out on land that is, or is part of, a wilderness area (within the meaning of Wilderness Act 1987), and	The land is not a wilderness area.
(c) must not be carried out on land that is, or on which there is, an item that is listed on the State Heritage Register under the *Heritage Act 1977,* or that is subject to an interim heritage order under that Act, and	The land does not contain any State listed heritage items.
(d) must not be carried out on land that is described or otherwise identified on a map specified in Schedule 4.	The land is not identified in a map in Schedule 4.
2. Development that relates to an existing building that is classified under the *Building Code of Australia* as class 1b or class 2-9 is exempt development for the purposes of this Policy only if:	
(a) the building has a current fire safety certificate or fire safety statement, or	Not applicable
(b) no fire safety measures are currently implemented, required or proposed for the building.	
3. To be exempt development for the purposes of this Policy, the development must:	
(a) be installed in accordance with the manufacturer's specifications, if applicable, and	Not applicable
(b) not involve the removal or pruning of a tree or other vegetation that requires a permit or a development consent for removal or pruning unless that removal or pruning is undertaken in accordance with a permit or development consent.	The subdivision will not require the removal or pruning of any vegetation. The removal of vegetation is assessed as part of the ambulance station development.

It is noted that before Council can issue a subdivision certificate it must consider the provisions set out in Section 6.15 of the EP&A Act. A review of the development against these requirements is undertaken below.

Table 4-2 Section 6.15 Assessment

Clause	Comment
1. A subdivision certificate must not be issued for subdivision unless-	
(a) the subdivision is not prohibited by or under this Act; and	The subdivision is not prohibited.
(b) in the case of subdivision that cannot be carried out except with development consent, a development consent is in force with respect to the subdivision, and	Not applicable – development consent is not required.
(c) in the case of subdivision for which a development consent has been granted, all the conditions of the development consent that, by its terms, are required to be complied with before a subdivision certificate may be issued in relation to the plan of subdivision have been complied with, and	Not applicable – development consent is not required.
(d) in the case of subdivision of land to which a planning agreement referred to in Part 7 applies, all the requirements of the agreement that, by its terms, are required to be complied with before a subdivision certificate may be issued in relation to the plan of subdivision have been complied with, and	Not applicable – a planning agreement does not apply.
(e) in the case of subdivision for which the operation of the development consent has been deferred under Part 4, the applicant has satisfied the consent authority concerning all matters as to which the consent authority must be satisfied before the development consent can operate, and	Not applicable – a 'deferred commencement' consent has not been granted.
(f) in the case of subdivision the subject of a development consent for which the consent authority is required by or under this Act to notify any objector: i. at least 28 days have elapsed since the objector was notified, or ii. if an appeal has been made by the objector within that time, the appeal has been finally determined.	Not applicable – development consent is not required.
2. Without limiting subsection (1), a subdivision certificate must not be issued for a subdivision that involves subdivision work unless: (a) the work has been completed, or	Not applicable – no work is required.
(b) agreement has been reached between the applicant for the certificate and the consent authority: i. as to the payment by the applicant to the consent authority of the cost of carrying out the work; and ii. as to when the work will be completed by the consent authority, or	Not applicable – no work is required.
(c) agreement has been reached between the applicant for the certificate and the consent authority; i. as to the security to be given by the applicant to the consent authority with respect to the work to be completed, and ii. as to when the work will be completed by the applicant,	Not applicable – no work is required.
3. Subsection (2) does not prevent the issue of a subdivision certificate for part only of land that may be subdivided in accordance with a development consent as long as the requirements of that subsection have been complied with in relation to that part.	Not applicable – development consent is not required.

In summary, the proposed subdivision for use as an ambulance station is classified as exempt development in accordance with Clause 2.75(f) of the Codes SEPP. A preliminary review of the subdivision against the general requirements for exempt development has been undertaken and the subdivision meets all of these requirements. Section 6.15 of the EP&A Act sets out the matters that Wollongong City Council must consider before issuing a subdivision certificate.

An application for a Subdivision Certificate will be lodged with Wollongong City Council separately, after Health Infrastructure have approved this REF for the land use.

4.1.2 Ambulance Station

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 6 of the TISEPP outlines the approval requirements for emergency services facilities.

An ambulance station is defined as an emergency services facility, which is defined in the TISEPP as a building or place (including a helipad) used in connection with the provision of emergency services by an emergency services organisation. An emergency services organisation includes the Ambulance Service of NSW.

Section 2.52(1) of TISEPP permits development for the purpose of an emergency services facility to be carried out by or on behalf of a public authority (other than the NSW Rural Fire Service) without consent in a prescribed zone. The site is zoned SP1 Special Activities (Innovation Campus) under the WLEP 2009. The SP1 Special Activities zone is a prescribed zone under the TISEPP.

Section 2.52(5) does not permit the erection of any building that exceeds 12 m in height or that is located closer than 5 m to any property boundary. However, subsection (6)(a) permits development for the purposes of an ambulance facility carried out by or on behalf of the Ambulance Service of NSW which may result in a building being located closer than 5 m to a property boundary.

The proposal involves the construction of a new ambulance facility by HI and NSW Ambulance within the prescribed SP1 Special Activities Zone, which is classified as development without consent as the proposed activity is consistent with clause 2.52(1) of TISEPP. Furthermore, the proposed station will not exceed 12 m in height and will be greater than 5 m from the nearest property boundary.

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 the development involves the erection of a building and the carrying out of a work. The development is also not any act, matter or thing for which development consent under Part 4 is required, is not prohibited under an environmental planning instrument, and is not exempt development.

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

Table 4-3 Description of proposed activities

Division and Section within TISEPP	Description of Works
Section 2.52(1)	The proposed Activity is for the construction of a new Ambulance Station, which may be carried out by or on behalf of a public authority without consent within a prescribed zone.

4.2 Environmental Protection and Biodiversity Conservation Act 1999

Pursuant to the *Commonwealth Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), any action that has, or is likely to have, a significant impact on matters of national environmental significance (MNES) or other aspects of the environment, such as on commonwealth land, may progress only with approval of the Commonwealth Minister for the Environment under Part 9 of the EPBC Act.

An EPBC Act Protected Matters Report was undertaken on 26 August June 2022 to identify records of threatened species recorded within a .25 km x .25 km search area centred on the site **(Appendix I)**. Results indicate 20 migratory species and 46 threatened species have been recorded within the search area and potential habitat occurs for four Threatened Ecological Communities.

The Activity site is within the cleared, maintained grounds of the Wollongong University Campus. The tree removal required will not constitute loss of habitat. Due to the nature and scope of the proposed works, the Activity would have

negligible impacts on biodiversity. The Activity is unlikely to have a significant impact on any threatened species or communities listed under the BC Act, EPBC Act or FM Act.

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. Furthermore, it is not development carried out by a Commonwealth agency, nor does the proposed development affect any matters of national significance. An assessment against the EPBC Act checklist is provided at **Table 4-4** below.

Table 4-4 EPBC Checklist

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

4.3 Environmental Planning and Assessment Act 1979

Duty to Consider Environmental Impact

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

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

The Guidelines issued under Section 170 of the EP&A Regulation sets out the factors which must be considered when assessing the likely impact of an activity on the environment under Part 5 of the EP&A Act. Section 7.1 specifically responds to the factors for consideration.

Table 4-5 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 4-5 Matters for consideration under Sub-Section, Section 5.5 of the EP&A Act

Matter for Consideration	Impacts of Activity
Sub-section 3: Without limiting subsection 1, a determining authority shall consider the effect of any activity on any wilderness area (within the meaning of the *Wilderness Act 1987*) in the locality in which the activity is intended to be carried on.	The land is not a wilderness area.

Matter for Consideration	Impacts of Activity
Note: If a biobanking statement has been issued in respect of a development under Part 7A of the *Threatened Species Conservation Act 1995*, the determining authority is not required to consider the impact of the activity on biodiversity values.	

4.4 Environmental Planning and Assessment Regulation 2021

Section 171(1) of the Environmental Planning and Assessment Regulation (2021) notes that when considering the likely impact of an activity on the environment, the determining authority must take into account the environmental factors specified in the guidelines that apply to the activity.

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

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

4.5 Other NSW Legislation

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

Table 4-6 Other Possible Legislative Requirements

Legislation	Comment	Relevant? Yes/No
State Legislation		
Rural Fires Act 1997	*Is the site identified on the Bushfire Prone Land Map* No	No
Biodiversity Conservation Act 2016	*Does the site contain any critical habitat, threatened species or ecological population or community?* Part 7 of the *Biodiversity Conservation Act 2016* (BC Act) sets out the requirements for biodiversity assessment and approvals under the EP&A Act. For the purposes of Part 5 of the EP&A Act, an activity is to be regarded as likely to significantly affect the environment if it is expected to significantly affect threatened species. The proposed activity occurs on an urban site and will not affect important vegetation or habitat. It will not have a significant impact upon any threatened species, ecological communities or populations such that a viable local population will be placed at risk of extinction. An EPBC Act Protected Matters Report is attached as part of **Appendix I**.	No. Refer s.6.2.9
Water Management Act 2000	*Are the works within 40 metres of a watercourse?* No. Cabbage Tree Creek is the nearest watercourse and is more than 100 m south-west of the Activity site.	No. Refer s.6.2.5
Contaminated Land Management Act 1997	*Is the site listed on the register of contaminated sites?* A search of the NSW Environmental Protection Authority (EPA) contaminated land data base was undertaken for the Fairy Meadow area. The closest site is located over 200 m from the Activity site and noted with an 'Amendment or Repeal of Order or Notice' and a 'Declaration of Remediation Site'. The site would not have an impact on the Activity. A copy of the search is attached as **Appendix I**. A Preliminary (Stage 1) Site Investigation (PSI) and Detailed (Stage 2) Site Investigation has been undertaken (refer to **Appendix M**). The scope of work was undertaken to satisfy the requirements of the Contaminated Land Management Act (1997). It was determined that the site is suitable for the proposed activity.	No Refer s.6.2.13
Heritage Act 1977	*Any impacts on local or state or national heritage? If any assessment provided, note where.* The *NSW Heritage Act 1977* provides for the conservation of items of environmental heritage in NSW. The Act defines heritage as items or places that are of State and/or local heritage significance and includes: places, buildings, works, relics, moveable objects and precincts. As part of NSW heritage protection and management, the Act establishes a register including an inventory and list to protect the listed items. The Balgownie Migrant Workers Hostel adjacent the site on Lot 2 DP1172135 is included as a State heritage item in Schedule 5 of the WLEP 2009 (Item No. 61075). However, no part of the Activity site is	Yes

Legislation	Comment	Relevant? Yes/No
	State listed. State Item No. 61075 is contained within a separate allotment approximately 50 m north-east of the Activity site. The proposed Activity will not affect the heritage significance of the site (refer **Section 6.2.9**). The archaeological provisions of the *NSW Heritage Act 1977* are applicable, however, as all "relics" are protected under the NSW Heritage Act, regardless of whether or not the place is listed as a heritage item at a local, State or national level. Should any unexpected relics be disturbed during excavation of the site they must be managed under the archaeological provisions of the NSW Heritage Act. Searches of the State Heritage Register were undertaken for the activity on 08/07/2022 refer to **Appendix I**	
Roads Act 1993	*Any works to a public road, or pumping of water onto a public road, or involve the connection of a road to a classified road?* Section 138 of the NSW Roads Act requires that all activities undertaken within Council's road reserve be approved by Council prior to the activities being undertaken. Health Infrastructure will need to obtain a Section 138 Approval for works within a Council road reserve. It is noted that part of the section of Innovation Way that runs through the UoW Innovation Campus is under the care and control of the University and works on this section of the road would not require approval from Council under the Roads Act.	Yes
Other Acts as required	*Any other acts as required to be addressed?* Yes – see below.	
Protection of the Environment Operations Act 1997	There are no Protection of the Environment Policies (PEPs) that are relevant to the activity. No licenses will be required pursuant to the Protection of the Environment Operations Act 1997. HI and/ or contractors working on behalf of HI are required to notify OEH when a 'pollution incident' occurs that is likely to impact upon the environment. It is an offence to negligently dispose of waste in a manner that harms the environment. Waste will be managed in accordance with the Waste Avoidance and Resource Recovery Act 2001. The activity will aim to reduce the environmental impact of dumping waste and include mechanisms to recover resources and reduce the production of waste where possible.	No
National Parks and Wildlife Act 1974	The *National Parks and Wildlife Act 1974* (NPW Act) provides for the legal protection and management of Aboriginal sites within NSW. The key principles of the Act in relation to Aboriginal heritage are the prevention of unnecessary or unwarranted destruction of Aboriginal objects, and the active protection and conservation of objects which are of high cultural significance. It is an offence to knowingly disturb an Aboriginal object, irrespective of its nature or significance, without the prior consent of the relevant Director-General. Given the activity affects urban land that has been disturbed as part of the historical use associated with the Innovation Campus, the potential for undiscovered Aboriginal heritage items would be very low and unexpected. However, to limit any potential impact on any unknown Aboriginal sites or objects, mitigation and management measures are proposed in this REF to provide the necessary safeguards. AHIMS search was undertaken on 08/07/2022 for the site and there are no registered items within the site (refer to **Appendix I**).	Yes. Refer s.6.2.7
Local Government Act 1993	Various activities (e.g. water, sewer, stormwater connections, amongst other things) generally require the approval of Council under Section 68 of the Local Government Act 1993. However, pursuant to Section 69 (Crown exemption from approval to do things incidental to erection or demolition of building) of the Local Government Act 1993, Section 68 does not require the Crown or a person prescribed by the regulations to obtain the approval of a council to do anything that is incidental to the erection or demolition of a building.	Yes
State Legislation Planning Policies		
State Environmental Planning Policy (Biodiversity and Conservation) 2021	• *Chapter 2 Vegetation in non-rural areas* This SEPP applies (as applicable) to clearing vegetation in non-rural areas of the State, including special purpose zones, not associated with a Development Application. Section 2.7 outlines clearing that does not require authority under this Policy, including: (1) A permit or approval to clear vegetation is not required under this Chapter if it is clearing of a kind that is authorised under the Local Land Services Act 2013 (Clearing authorised under other legislation) section 60O or under Part 5B (Private native forestry). On this basis and Clause 60O of the Local Land Services Act 2013 (LLS Act), and given the Proposal is a Part 5 Activity, any vegetation clearing is authorised by way of compliance with that part of the EP&A Act and authority under the Vegetation SEPP is not required. • *Chapter 4 - Koala habitat protection 2021* Chapter 4 of the BCSEPP aims to encourage the conservation and management of areas of natural vegetation that provide habitat for koalas to support a permanent free-living population over their	No

Legislation	Comment	Relevant? Yes/No
	present range and reverse the current trend of koala population decline. It applies when Councils assess development applications within all local government areas (LGAs) listed under Schedule 2, which includes City of Wollongong City. Although this SEPP does not technically apply to the Part 5 Approval Pathway under the EP&A Act, Koala habitat and associated protections have been considered in the context of assessing the potential environmental impacts of the proposed Activity to the fullest extent possible, in order to fulfill the requirements of Part 5. The proposed works occur within an urban area and there would be no impact to Koala feed trees or Koala habitat as a result of the Activity.	No
State Environmental Planning Policy (Resilience and Hazards) 2021	• *Chapter 2 Coastal management* Chapter 2 of State Environmental Planning Policy (Resilience and Hazards) 2021 (RHSEPP) contains planning provisions for land use planning within the coastal zone, in a manner consistent with the objects of *the Coastal Management Act 2016.* It defines the four coastal management areas through detailed mapping and specifies assessment criteria that are tailored for each area. Councils and other consent authorities must apply these criteria when assessing proposals for development that fall within one or more of the mapped areas. The Ambulance Station does not require consent, however in order to fully assess the environmental impact of the development, an assessment against the relevant parts of Chapter 2 has been completed. The site is within the Coastal Environment Area, Coastal Use Area and proximity area for Coastal Wetlands. It is not within mapped Coastal Wetlands, Littoral Rainforests or the Proximity Area for Littoral Rainforests. As such, sections 2.8, 2.10 and 2.11 of the RHSEPP apply and are addressed below. Section 2.8 Development on land in proximity to coastal wetlands or littoral rainforest. The SEPP requires that development must not significantly impact on— a. the biophysical, hydrological or ecological integrity of the adjacent coastal wetland or littoral rainforest, or b. the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland or littoral rainforest. The REF has assessed impacts in relation to Hydrology, flooding, and water quality (refer **Section 6.2.6**). Given the stormwater and flooding control measures proposed and the mitigation measures recommended, it is considered unlikely that the activity will impact on the biophysical, hydrological or ecological integrity of the adjacent coastal wetland and the quantity and quality of surface and ground water flows to and from the adjacent coastal wetland. Section 2.10: Development on land within the coastal environment area: 1. The proposed development will not impact on the coastal environment or environmental values, natural coastal processes, water quality of the marine estate or sensitive coastal lakes, native vegetation and fauna or coastal landscapes, public open space or access, aboriginal culture or use of the surf zone. 2. The development site and design have been carefully considered to avoid adverse impacts on the natural environment. Stormwater management measures and erosion and sediment controls will be in place to prevent adverse impacts on any nearby watercourses. Further details are located in **Section 6** of this report. (2) N/A Section 2.11: Development on land within the coastal use area (1)(a) The proposed development will not cause an adverse impact on any existing access, or the enjoyment, amenity or scenic qualities, or cultural or built environment, including Aboriginal culture or places, within the coastal use area. (b) The development site and design have been carefully considered to avoid adverse impacts on the natural environment. Potential impacts during construction stage would be minimal and managed by controls incorporated into the design and mitigation measures as outlined in this REF. (c) The development is low, scale and well designed and will be compatible with the existing coastal and built environment. (2) N/A • *Chapter 4 Remediation of land* The objective of Chapter 4 of the RHSEPP is to provide for a State-wide planning approach to the remediation of contaminated land. It aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment. Chapter 4 applies to rezoning and development applications for development requiring consent.	Yes Yes

Legislation	Comment	Relevant? Yes/No
	A Preliminary (Stage 1) and Detailed (Stage 2) Site Investigation (PSI/DSI) was undertaken for the proposed activity (refer **Appendix M**). The investigations determined that the site is suitable for the proposed development and that remediation is not required. An unexpected finds protocol was recommended to manage any unexpected finds during the development. The findings of the PSI/DSI and potential impacts associated with hazardous materials and contamination are discussed further in **Section 6.2.14**.	
State Environmental Planning Policy (Transport and Infrastructure) 2021	The proposed activity is for the construction of a new ambulance station within the University of Wollongong Education Campus. Division 6 of the TISEPP outlines the approval requirements for emergency services facilities. An "ambulance station" is defined as an emergency services facility under this division. Section 2.52 (1) of TISEPP enables development for the purpose of an emergency services facility to be carried out by or on behalf of a public authority (other than the NSW Rural Fire Service) without consent in a prescribed zone. The proposed ambulance station development is to be undertaken on behalf of HI and NSW Ambulance within the prescribed SP1 Special Activities Zone. The proposed ambulance station will not exceed 12 m in height nor be located within 5 m of the property boundary and is therefore compliant with Section 2.52(1) of TISEPP. The development becomes an 'activity' for the purposes of Part 5 of the EP&A Act and is subject to an environmental impact assessment.	Yes

Wollongong Local Environmental Plan 2009

Figure 4.1 Zoning Map (Source: ePlanning Spatial Viewer)

Zone	The site is zoned **SP1 Special Activities (Wollongong Innovation Campus).** Objectives of the SP1 zone include: • To provide for special land uses that are not provided for in other zones. • To provide for sites with special natural characteristics that are not provided for in other zones. • To facilitate development that is in keeping with the special characteristics of the site or its existing or intended special use, and that minimises any adverse impacts on surrounding land. The activity represents the provision of ongoing health services (health infrastructure) for the community and will not jeopardise the ongoing operation of the Wollongong Innovation Campus nor adversely impact the surrounding environment or land uses. The proposal is therefore consistent with the SP1 zone objectives presented above. (Refer also Clause 7.15 below.)	Yes

Wollongong Local Environmental Plan 2009		
Clause 4.3 Height of buildings	The adopted maximum building height for the activity site is 24 m (Height of Buildings Map - Sheet HOB_025). The proposed ambulance station is single-storey and the height is compatible with the character of the area.	Yes
Clause 4.4 Floor space ratio Clause 4.4A Floor SPACE RATIO – Wollongong City Centre	The activity site is not in an area with an adopted Floor Space Ratio (Floor Space Ratio Map - Sheet FSR_025). The activity site is not within the Wollongong city centre.	No
Clause 5.10 Heritage conservation	The development site adjoins an item of State heritage significance in Schedule 5 of the Wollongong LEP (I61075). The site itself is not identified as a heritage item under any local or State listing. A Heritage Impact Statement has been prepared **(Appendix P**) for the proposed activity and concluded that the development is acceptable and would not adversely impact the heritage significance of nearby heritage items. (Refer **Section 6.2.9**).	Yes
Clause 5.21 Flood Planning	The site is affected by flooding. A flood assessment undertaken for the proposed Activity flood prone confirmed that the building will be constructed above the PMF and that the anticipated flood frequency, depth and velocity is likely to be low and such that adequate vehicular access would be maintained and offsite impacts would be unlikely. Refer to **Section 6.2.6** for further discussion.	Yes
Clause 7.5 Acid Sulfate Soils	Council mapping identified the site is within an area classified as Class 5 for Potential Acid Sulfate Soils, where ASS are likely to be found where works are within 500 m of adjacent Class 1,2, 3 or 4 land that is below 5 m AHD and by which the water table is likely to be lowered below 1 m on adjacent Class 1,2,3, or 4 land. An assessment undertaken for the activity site found that PASS are likely to be encountered to a depth of 3 m below ground level (BGL) (based on an assumed maximum disturbance depth of 2 m BGL. It provided recommendations requiring further assessment of PASS soils to be undertaken and an ASS management plan prepared to address identified ASS. This matter is discussed further at **Section 6.2.14**.	Yes
Clause 7.1 Public Utility Infrastructure	A utility review process undertaken for the site revealed that currently there are no major underground electrical assets on site that will require relocation or re-diversion. Essential Energy GIS information detailed the presence of a 100kVA Pole-mount transformer serving the adjacent childcare facility on Innovation Way, which could be used as a connection point. Information on the size and location of the authority sewer and water main indicates that authority assets will not be impacted by the proposed building and lot boundaries. Arrangements for essential services in relation to the proposed Activity have been addressed at **Section 3.1.2.6.**	Yes
Clause 7.6 Earthworks	The Activity is precluded from requiring development consent by virtue of Section 2.52(1) of the TISEPP. The proposed excavation works are determined to be minor disturbance. The required earthworks are relatively minor and would not result in any adverse impacts. Standard construction management practices, including erosion and sedimentation control measures in accordance with the “Blue Book”, will be applied to ensure this. Furthermore, recommendations provided in the Remedial Action Plan and Stormwater Management controls would be implemented in accordance with The Civil Engineering Design Report and Civil Works Package.	Yes
Clause 7.15 Wollongong innovation campus	*(1) The objectives of this clause are as follows—* *(a) to permit the establishment of a research and development campus that includes a hotel, student and campus related residential accommodation and necessary support services and facilities,* *(b) to provide an area where enterprises that carry out research and development as an integral part of their operations can be located,* *(c) to promote collaborative research and development between users of the land to which this clause applies and the University of Wollongong and other enterprises in the Illawarra region,* *(d) to promote links between the University of Wollongong’s research activities and the initiatives of the business community,* *(e) to ensure that the development of the site is undertaken in a manner that demonstrates design of a high quality with respect to the context of the site, scale, built form and density of the development, resources, energy and water efficiency, landscape, amenity, safety and security, social dimensions and aesthetics,* *(f) to ensure that development of the site is in harmony with the coastal and foreshore landscape,*	Yes

Wollongong Local Environmental Plan 2009

(g) to permit the provision of university related facilities including student and campus related residential accommodation and support services, incidental or ancillary to research and development activities.

Comment:

The proposed Activity is not inconsistent with the objectives of Clause 7.15.

The proposed station has been designed to meet the functional requirements of NSW Ambulance and to have a positive aesthetic impact on its context.

Careful site analysis was undertaken of the existing built and natural environments and considered during the design phase so that the proposed building could effectively respond. As a result, the proposed Ambulance Station will present a consistent and recognisable identity that also responds to the local environment, contributes to the public realm and integrates with existing land uses.

The proposed Activity will not conflict with the University's function nor jeopardise ongoing future strategic goals. The Activity will result in a minor loss of open space only with the majority of existing open space/recreational areas maintained.

The station will be located within a part of the University Campus that has not been identified for future development and it will not restrict or impede the ongoing enjoyment or use of existing land uses within the Campus.

(2) This clause applies to land shown as being within the Wollongong innovation campus on the Wollongong Innovation Campus Map.

Comment: Noted.

(3) Development consent must not be granted for the subdivision of land to which this clause applies unless the consent authority is satisfied that the subdivision is for the purpose only of defining the boundaries of lots that are to be the subject of leases.

Comment: N/A. Development Consent is not required.

(4) Development consent must not be granted to development for the purposes of building on land to which this clause applies if the gross floor area of the building would be greater than 135,000 square metres.

Comment: N/A. The Activity is permitted as Development without Consent in accordance with the TISEPP. The gross floor area will be 766.5m^2.

5. Consultation

5.1 Statutory Consultation

Consultation requirements are established through Part 2.2 Division 1 and Section 2.52(7) of the TISEPP.

Pursuant to Section 2.10 and 2.12 of TISEPP the proposed development is required to be notified to Council in relation to potential impacts on Council services and developments with impacts on flood liable land.

Section 2.13 contains provisions requiring consultation with State Emergency Service (SES) for development with impacts on flood liable land. The Activity is located within flood liable land. Therefore, consultation with the SES is required.

The activity also triggers notification to Council and adjoining occupiers of land pursuant to Section 2.52(7) of TISEPP. In all instances, written notice of the intention to carry out the development is required, and HI and NSW Ambulance must take into consideration any response to the notice that is received within 21 days after the notice is given.

The REF scope of works was notified for 21 calendar days to the stakeholders outlined in **Table 5-1** below.

Table 5-1 Stakeholders Required to be Notified

Stakeholder	Relevant Section
Wollongong City Council	Section 2.52(7) and 2.12 of the TISEPP
NSW State Emergency Services	Section 2.13 of the TISEPP
Adjoining Occupiers	Section 2.52(7) of the TISEPP

The notification commenced on 14 December 2022 and concluded on 22 January 2023. Responses were received from Council, NSW SES and two members of the public. Copies of the notification letters, as well as responses received from Council and NSW SES are provided at **Appendix V**.

An overview of the comments received are outlined and responded to in **Table 5-2** below.

Table 5-2 Response to Statutory Consultation

Issue raised	Response	Reference
Wollongong City Council (dated 23 January 2023)		
WOLLONGONG INNOVATION CAMPUS PRECINCT		
• The development site is located within the Wollongong Innovation Campus (as show on the Wollongong Local Environmental Plan 2009 (LEP). The development should be consistent with Clause 7.15 of the LEP.	• The proposal is consistent with Clause 7.15 of WLEP2009	Section 4.5
• The development should be consistent with Chapter D14 - Wollongong Innovation Campus of the Wollongong Development Control Plan 2009.	• Although Development Control Plans are not relevant to activities assessed under Division 5.1, the proposal is generally consistent with objectives of the DCP(refer **Section 6.2.5**).	
• This matter should be resolved prior to progressing the proposal. • Council records list the site as flood affected (medium risk). The flood planning level should be ascertained from Council's Development Engineering Division and considered in the design of the building and site layout. This may have implications for floor levels, cut/fill etc.	• Noted • Flood mapping confirms that the site lies within the Medium FRP (i.e., is affected by ≤H3 hazard in the 1% AEP). A Flood Assessment obtained for the activity (**Appendix N**) investigated relevant levels for consideration in setting the design floor level. A finished floor level of 5.25 m AHD was recommended to be adopted. This level is 0.1 m higher than the post-development PMF at a critical location outside the south-western corner of the building and is also above the 1% AEP level plus 0.5 m freeboard. This level is considered appropriate to reduce the potential for flood damage to the facility and the risk to life of occupants.	Section 6.2.6 and Appendix O

Issue raised	Response	Reference
• Chapter E13 – Floodplain Management of Wollongong Development Control Plan 2009 should be referenced in the progression of the proposal.	• While the proposed ambulance station would not be subject to development assessment by Council under the DCP, it is understood that HI would aim to align with its objectives. An assessment of the development against relevant clauses from Chapter E13 of DCP 2009 was undertaken as part of the abovementioned flood assessment. Key findings include the following: o It is understood that the ambulance station is considered an 'essential community facility'. Schedule 5 of DCP Chapter E13 indicates that this is an unsuitable landuse within the floodplain (i.e., low, medium and high FRPs). However, through a significant clinical planning process that analyses triple zero data, NSW Ambulance has identified that an ambulance station in Fairy Meadow would significantly improve paramedic response times and provide critical lifesaving care to the local community. Figure 1 of the Flood Assessment displays the optimal location for the station against the 1% AEP flood extent, showing that much of the area is flood affected. By designing the floor level of the ambulance station to be above the PMF level, the flood risk at the facility is reduced such that there is little potential for flood damage or risk to life of occupants. o 'Government infrastructure projects' are not to increase off-site flood levels on residential properties by more than 100 mm in events up to the 1% AEP. Flood modelling shows that the maximum adverse flood level impact during the 1% AEP event is 80 mm along the boundary of neighbouring residential yards. Impacts have been mitigated by designing swales to direct overland flows to the north and east around the building. o Adverse flood level impacts are indicated within the yards of neighbouring properties in the PMF. However, these would not alter above floor flooding, and would result in only minor changes in hazard that would not pose any material change in risk to life or property. o The proposal would not result in affectation of additional lots or buildings in any flood events. o In the 1% AEP, the proposal would result in an increase in the extent of H2 hazard (unsafe for small vehicles) on Innovation Way (a private internal UoW road) but would not increase the maximum road hazard and therefore would not materially alter potential for access or egress from the Innovation Campus. In the PMF, the hazard classification at part of Innovation Way would increase from H4 to H5, however the road would be impassable under both conditions and therefore potential for access or egress from the Innovation Campus would not be materially altered. Under both existing and post-development conditions in the 1% AEP and PMF events the majority of the Innovation Campus would become isolated due to inundation of Innovation Way 200 m to the south of the ambulance site. This would occur prior to inundation of the road adjacent to the site. Accordingly, the existing constraints to evacuation of the Innovation Campus would not be materially altered. o The proposal would involve filling below the 1% AEP level, resulting in a net loss in flood storage of about 350 m^3.. However, this occurs in a 'flood fringe' area and does not result in exceedance of the permissible flood impacts specified in Table 2 of Chapter E13.	
• A Flood Emergency Response plan should be prepared by a suitably qualified engineer.	• According to Schedule 5 of DCP Chapter E13 a Site Emergency Response Flood Plan is required where floor levels are below the PMF. All proposed floor levels will be located above the PMF level. However, NSW Ambulance will prepare a Business Continuity Plan outlining how the ambulance station would be managed during flooding including how they will be alerted of flooding and how they will return to the station.	
STORMWATER/FLOODING		
• Council records list the site as flood affected (medium risk). The flood planning level should be ascertained from Council's Development Engineering Division and considered in the design of the building and site layout. This may have implications for floor levels, cut/fill etc.	• A comprehensive flood study and assessment has been undertaken for the proposal and is attached as Appendix N. Emergency Services uses are required to be built at or above the Probable Maximum Flood. The proposed floor level meets this requirement.	Section 6.2.6 and Appendix O and N

Issue raised	Response	Reference
• Please refer to Chapter E13 – Floodplain Management of Wollongong Development Control Plan 2009 should be referenced in the progression of the proposal. • A Flood Emergency Response plan should be prepared by a suitably qualified engineer. • This matter should be resolved prior to progressing the proposal.	• Noted refer to previous comments on flooding. • Comprehensive flood emergency protocols will be included in the Station's Business Continuity Plan • Noted	
HERITAGE		
• A locally listed item is located in close proximity of the development (item 16075 - Balgownie Migrant Workers Hostel). The proposal should not derogate from any heritage value of this item	• A Heritage Impact Assessment (HIS) in relation to the proposed development was prepared by Weir Phillips Heritage and Planning. The HIS concludes that the existing curtilage around the heritage item is largely unaffected and does not impede appreciation of the heritage significance of the site. Vegetation screening and the setback of the new station ameliorates any visual impacts from the proposed development on the former Balgownie Migrant Workers Hostel and visual impacts are therefore generally considered acceptable. The proposed works fulfil the requirements for works within the vicinity of Heritage Items as set out by the Wollongong LEP 2009 and the Wollongong DCP 2009	Section 6.2.7 and Appendix P
CONTAMINATION		
• The proposed site is potentially contaminated including asbestos-containing materials contain fill materials, appropriate removal, remediation and site validation is required prior to construction.	• Alliance Geotechnical and Environmental Solutions undertook a Detailed (Stage 2) Site Investigation (DSI) for the Activity. The investigations determined that unacceptable land contamination, human health and ecological exposure risks have not been identified for the site and the site is suitable for the proposed use.	Section 6.2.3 and Appendix M
ENVIRONMENTAL IMPACTS		
• Consideration of acoustic and illumination disturbance of surrounding residents – related to vehicle movements, servicing of vehicles, lighting of site, vehicle sirens etc. • All the affected residents along Cowper St shall be informed about the proposal. • Acoustic mitigation measures should be considered e.g. acoustic boundary wall is recommended along western side (adjoining residential dwellings)	• JHA Consulting Engineers have prepared an Acoustic Report for the proposal. Based on the information presented in the acoustic report, relevant objectives will be satisfied and therefore the proposed Activity is acceptable. Lighting will be in accordance with relevant Australian Standard on Control of the obtrusive effects of outdoor lighting. • Adjoining properties have been notified. Further notification to residents will be undertaken prior to construction. • Appropriate acoustic measures have been proposed in the Acoustic report and included in the REF. Offices are located along the side closest to adjoining residential boundaries while plant areas, vehicles and wash bays etc located on the opposite side of the building.	Section 6.2.2 and Appendix K
TRAFFIC AND CAR PARKING		
General		
• The applicant should refer to Chapter E3 – Car Parking, Access, Servicing/ Loading Facilities and Traffic Management of the Wollongong Development Control Plan 2009. • The applicant must ensure that all grades, access widths, parking aisle widths etc comply with AS2890.1.	• Development Control Plans are not relevant to activities assessed under Part 5. However, the proposal is generally consistent with relevant provisions of the DCP and consistent with relevant standards. • The proposal is consistent with AS2890.1.	Section 6.2.1 and Appendix J
Access and Manoeuvring	• Access and Manoeuvring are addressed in the TIA.	
• The proposed access design must comply with the AS2890 series and be designed for the largest anticipated vehicle to enter the site with adequate clearances adjacent to obstructions such as high walls, and adequate headroom clearances. • The gradient of the access driveway must comply with Clause 3.3 of AS2890.1.	• The proposal is consistent with AS2890. • The proposal is consistent with AS2890.1. • The proposal is consistent with AS2890.1.	

Issue raised	Response	Reference
• The access design should ensure that adequate pedestrian and vehicle sight distance is provided as per AS2890.1. • The proposed driveway and circulation aisle must be wide enough to allow a B99 vehicle to pass a B85 vehicle.	• The proposal is consistent with AS2890.1.	
Car Parking • The applicant will need to ensure that the proposed car parking provision supports the expected number of staff numbers present on site at any one time and takes into account the temporarily increased parking demands during shift changes.	• The Fairy Meadow ambulance station proposes to provide seven staff car parking spaces, one accessible parking, one DOM parking bay, one relief space and five ambulance parking bays, which is appropriate to cater for the estimated demand and satisfies the requirements of the Fairy Meadow RAIR Ambulance Station Return Brief, and in the case of the seven staff spaces, exceeds the requirements by two.	
Disabled Car Parking • Disabled car parking must be provided in accordance with AS2890.6.	• Disabled car parking is provided in accordance with AS2890.6	
Bicycle Parking • In the interests of promoting non car sustainable travel the applicant should consider providing some secure bicycle parking for staff members. Staff bicycle parking needs to be located within a compound with a self-closing door and combination keypad. Visitor bicycle parking (protected from the weather) could also be considered at the front of the facility as rails where visitors can lock their bicycles to.	• End of Trip facilities (i.e. showers and change rooms, locker facilities etc) are included in the proposal. There is sufficient area onsite for the provision of bicycle parking and these will be included onsite as part of the development.	
Waste Servicing and Deliveries • It is noted that a bin storage area has not been shown on the submitted plans. • Waste collection details need to be provided, such as the location of the bins for storage and collection, method of collection, and size of collection vehicle. • Turning for waste collection vehicles (no more than 3 turning movements) should be demonstrated using swept paths. Overhead clearances for garbage and service vehicles must also be observed and kept clear of obstruction (adjacent eaves, building overhang etc). AS2890.2 requires the maximum grade for service vehicles to be 15.4% which should also be taken into consideration.	• An enclosed bin storage area is included internally at the front of the ambulance station. • Waste collection activities are proposed to be conducted kerbside. Waste bins will be wheeled from the waste storage area, within the site, to the kerb by staff prior to collection day/time and wheeled back to the storage area following collection. • The proposal includes a service bay for maintenance and delivery vehicles and is suitable for a Small Rigid Vehicle (SRV). A swept path analysis has been undertaken demonstrating the ability for the vehicle to access and manoeuvre through the site.	
• This assessment should also be carried out for service and delivery vehicles, noting that the applicant will need to demonstrate access for an ambulance which has a headroom clearance requirement of 3.5 metres.	• Noted. The proposal includes a service bay for maintenance and delivery vehicles and is suitable for a Small Rigid Vehicle (SRV). A swept path analysis has been undertaken demonstrating the ability for the vehicle to access and manoeuvre through the site.	
Wollongong City Council (dated 22 February 2023)		
Flooding • Design to be in accordance with Wollongong DCP – Chapter E13. The site is categorised as a Medium Flood Risk, and please note that Schedule 5 defines Essential Community Facilities as "Unsuitable Land Use".	• This matter has been addressed above	Section 6.2.6 and Appendix O
Stormwater		

Issue raised	Response	Reference
• Concept stormwater is to be in accordance with Wollongong DCP-Chapter E14, noting the site is within an OSD concession zone.	• A comprehensive stormwater management plan has been prepared that demonstrates compliance with Wollongong DCP-Chapter E14.	Section 6.2.6 and Appendix N
Wollongong City Council (dated 2 May2023 and 31 May 2023)		
Aboriginal Cultural Heritage		
2 May2023 • Regarding the Aboriginal heritage issue at the site. Council's Heritage Officer has advised that there are ongoing investigations at Innovation Canvas in relation to a potential burial ground associated with the Battle of Fairy Meadow. The broader site has documented cultural significance and the potential for Aboriginal Sites to be present is also being considered as part of other proposals on the site. If required to address this matter in order to satisfy requirements under Part 5 of the EPA Act 1979 and the SEPP SEPP (Transport and Infrastructure) 2021, an Aboriginal Cultural Heritage Assessment Report should be prepared to support the proposal. This should consider the Kelleher Nightingale work on the broader site and include consultation with the local Aboriginal Community. You may need to review the implications of this matter regarding the provisions of the SEPP (Transport and Infrastructure) 2021 for Emergency services facilities and any requirements under the National Parks and Wildlife Act 1974 and whether they're applicable. Unfortunately, due to the status of the matter it the implications are not explicitly clear.	• An Aboriginal Heritage (Due Diligence) Assessment was subsequently prepared by Heritage Management & Planning Pty Ltd. The Due Diligence Assessment addressed Council issues as outlined in its feedback and found that that the proposed construction of the Fairy Meadow Ambulance Station will not likely result in harm to Aboriginal objects. As such an AHIP or additional archaeological excavation is not required, and the works can proceed under the Due Diligence approval pathway (NPW Act 1974 Section 87) subject to recommended precautionary mitigations measures.	Section 6.2.8 and Appendix Z
31 May 2023 Following review of the information you provided and presentation of some further investigation into the site last week, Council's Heritage Officer has provided the following updated comments to note: • A Kate Waters Draft Cultural Values Assessment Report has now been prepared which identifies cultural values associated with existing waterways (including modified alignments), such as the waterway that runs along the boundary of the site as well as visual connections through the broader site to Mt Keira and the Escarpment. This Report and its potential impacts on cultural values have not been considered in the Due Diligence Assessment or any consultation undertaken with the Registered Aboriginal Parties or knowledge holders identified for the site. • The Draft Waters Report has also indicated there is no consensus on the potential for burials to be present on the site.	• Refer to Aboriginal Cultural Heritage (Due Diligence) Assessment. *"Cultural landscape values are relevant to the extent to which they increase the likelihood that an area will contain Aboriginal objects or that an activity will harm Aboriginal objects. The presence of culturally significant waterways and topographic features is common along the NSW coastline and there is no specific information provided in the Aboriginal Cultural Values Assessment Report summary that demonstrates the Activity Area is a unique or significant part of the cultural landscape or that an additional building will have a cumulative impact on the cultural landscape. The proposed Ambulance Station will not result in changes to the waterways, a decrease in water quality or in any way reduce the Aboriginal communities use of Cabbage tree Creek."* • Refer to Aboriginal Cultural Heritage (Due Diligence) Assessment. *"The primary record of the Battle of Fairy Meadow has been the subject of an extensive review by GML Heritage (2023) which has indicated that the Activity Area is within the northern portion of a area which is mapped as a 'possible' post-battle burial ground. Based on the available information it is not considered 'likely' that the proposed Ambulance Station will impact on Aboriginal burials and there is no requirement under the Due Diligence Code of Practice to undertake additional community consultation or archaeological investigation with respect to potential impacts on burials. An appropriate mitigation measure for potential*	Sections 6.2.8 and 6.29 and Appendices P and Z

Issue raised	Response	Reference
	burials is the engagement of spotters to assist the construction teams during excavation of soil below the historic fill that has the residual potential to contain burials.	
• Council remains of the view that due to these risks, a full ACHAR that considers the previous work undertaken for the Innovation Campus, both in terms of the Kelleher Knightgale ACHAR and Draft Water Cultural Values assessment should be prepared. This would allow for formal engagement with the local Aboriginal Community and Heritage NSW and consider cumulative impacts to the broader cultural values of the site.	• Refer to Aboriginal Cultural Heritage (Due Diligence) Assessment. *"A full ACHAR is designed to understand the cultural context and significance of Aboriginal objects and is required to ensure that the Aboriginal community have an opportunity to comment on proposals which would reasonably result in the harm to Aboriginal objects. As the Due Diligence assessment has concluded that harm to Aboriginal object is not likely a application for a Aboriginal Heritage Impact Permit, and therefore a comprehensive cultural heritage assessment, is not required. In this instance documentation of the Due Diligence assessment is sufficient to comply with the requirements of the NSW National Parks and Wildlife Act (1974) and Regulations (2019).*	
• The HIS indicates that the Ambulance Station design 'is consistent with other rural ambulance station designs across New South Wales.' A standard design is not considered an appropriate justification for the design outcome of a site in a highly sensitive area adjacent to a SHR item with landmark qualities. There does not appear to be any consideration of SHR item, its form and scale, such as ensuring the proposed height is below the ridgeline of nissan huts, the former structures that were located on the site, or interpretation of this site as part of the Migrant Hostel area such as through built form outcomes otherwise.	• Refer to Heritage Impact Statement *"This Heritage Impact Statement has considered the proposal. The site is not listed as a heritage item but is located within the vicinity of a heritage item listed on the Wollongong LEP 2009 and on the NSW State Heritage Register.* *The existing curtilage around heritage item in the vicinity is largely unaffected, allowing ongoing appreciation of heritage significance of the site. Visual impacts from the proposed development on the former Balgownie Migrant Workers Hostel will be ameliorated to some extent by screening the proposed building by vegetation and setting the form back from Innovation Way to minimise visual encroachment on the curtilage. The visual impacts of the proposed development on identified heritage items in the vicinity of the proposed development are generally considered acceptable. The proposed works fulfil the requirements for works within the vicinity of Heritage Items as set out by the Wollongong LEP 2009 and the Wollongong DCP 2009.*	
• The Heritage Impact Statement also does not consider views through the site to the Illawarra Escarpment Heritage Conservation Area to the west and no visual impact analysis has been prepared to support the assessment on visual impacts.	• Weir Phillips has advised that the HCA is over 3km away from the site and the station is a single-story structure, this seems an excessive and unnecessary assessment requirement.	
• No comment has been provided on compliance with Chapter D14 of the DCP or the adopted Masterplan, including open space requirements that contributed to the open setting of the SHR item.	• Although Development Control Plans are not relevant to activities assessed under Division 5.1, the proposal is generally consistent with objectives of the DCP(refer **Section 6.2.5**).	
• Comment from Heritage NSW should be sought in relation to both potential impacts to Aboriginal Cultural values, requirements under the National Parks and Wildlife Act 1974 and use of Due Diligence in this location and impacts on the setting of the SHR item under the NSW Heritage Act 1977.	• Refer to Aboriginal Cultural Heritage (Due Diligence) Assessment There is no requirement to refer the Due Diligence desktop report to Heritage NSW prior to determination of the Review of Environmental Factors. Documentation of the Due Diligence assessment is a minimum requirement and is typically provided to Heritage NSW only if the Unexpected Find Procedure is triggered by a find. Weir Phillips has advised that there is no statutory requirement to undertake consultation with Heritage NSW in this instance.	
NSW State Emergency Service (dated 19 January 2020)		
• Consider the impact of flooding on the infrastructure and its' occupants up to and including the PMF, including consideration of building material and construction.	• The finished flood level of the ambulance station building is to be above the PMF. Accordingly, flood compatible building components would not be required. The maximum site hazard classification in the PMF is H4. Such conditions would generally not be expected to cause significant structural damage. It should be confirmed that the retaining wall along the southern side of the building can withstand PMF forces. If required, it would be safe for occupants to take shelter in the building during floods up to and including the PMF.	Section 6.2.6 and Appendix O

Issue raised	Response	Reference
• We note that Wollongong Local Environment Plan has not currently adopted the special flood consideration clause, however the Department of Planning and Environment is proposing to strengthen the planning rules to better protect and manage new development through the special flood considerations clause in all NSW council LEPs or the Resilience and Hazards SEPP 2021. Consideration should also be given to using the PMF as the flood planning level when siting and developing emergency response facilities such as ambulance stations (Floodplain Development Manual 2005, Section K3.1). Particularly in light of the recent NSW Flood Inquiry 2022. • Ensure workers and people using the facility during and after the construction are aware of the flood risk, for example by using signage.	• The Flood Assessment **(Appendix X)** investigated relevant levels for consideration in setting the design floor level. It is not uncommon for a conservative floor level based on the PMF to be adopted for sensitive development types such as emergency response facilities (e.g., NSW Floodplain Development Manual 2005, Section K3.1). This notion is further supported by recent flood planning advice in NSW including the Local Environmental Planning (LEP) "special flood considerations clause" (not yet adopted by Council), and the findings of the NSW Flood Inquiry 2022. A finished floor level of 5.25 mAHD is recommended to be adopted. This level is 0.1 m higher than the post-development PMF at a critical location outside the south-west of the building and is also above the 1% AEP level plus 0.5 m. This level is considered appropriate to reduce the potential for flood damage to the facility and the risk to life of occupants. • NSW Ambulance will prepare an Ambulance Station Business Continuity Plan. This will include comprehensive flood emergency response protocols and requirements for relevant signage on the property.	
• Pursue, if relevant, site design and stormwater management that minimises any risk to the community.	• A comprehensive stormwater and flood assessment have been prepared and provided as part of the REF.	Section 6.2.6 and Appendix N
• Ensure workers and people using the facility during and after the construction are aware of the flood risk, for example by using signage.	• Comprehensive flood emergency protocols must be included within the Ambulance Stations Business Continuity Plan which will include signage.	Section 6.2.6 and Appendix N
• Develop an appropriate business emergency plan to assist in being prepared for, responding to, and recovering from flooding. The NSW SES has a template which can assist in this process: http://www.sesemergencyplan.com.au/.	• NSW Ambulance Service prepare comprehensive Business Continuity Plans for all of its stations which contain flood emergency protocols.	Section 6.2.6 and Appendix N
Occupiers of Adjoining Properties		
• Adjoining Occupier 1 (22 January 2023) Please note that by demolishing the diagonal footpath across the site and not planning a new footpath around the edge of the site will mean pedestrians and cyclists will have to walk on the road to get to the train station/shops/work/ home/student accommodation and therefore may be endangered by vehicles using the road. I would suggest that the site is moved closer to the IC East Student accommodation to provide adequate room to include a new pavement around the site to replace the existing one.	• Discussions have been held with UoW and it is agreed that an alternative footpath will be constructed on the other side of the Ambulance Station. This will be carried out as part of the Community and High Performance Centre development proposed by the St George Illawarra Dragons. A mark-up of the plans is attached as **Appendix Y** detailing the temporary pedestrian access that will be implemented during construction stage of the Ambulance Station and up until the permanent footpath is provided under the St George Illawarra Dragons development.	Section 6.2.1 and Appendix Y
• A teleconference was held with the adjoining resident of 25 Cowper St, Fairy Meadow who raised the following issues: Discussion/feedback about the proposal ○ Dish drain performance, flooding and overland flows. ○ Stakeholder noted concern about the performance of the existing dish drain to the rear of his property and that the development may worsen the issue. ○ Stakeholder queried whether the drain's performance could be improved.	• Local runoff and drainage: ○ The neighbouring properties slope down at about 1.5% from Cowper Street, draining eastward towards an existing dish drain along the western edge of the ambulance station site. Flow of local runoff from the properties into this dish drain is partially impeded by existing fences and sheds. The local landform is quite flat and, therefore, drainage from the dish drain is naturally slow. ○ A comprehensive stormwater management plan has been prepared that demonstrates compliance with Wollongong DCP-Chapter E14. The proposal has incorporated an augmented swale along the site boundary in place of the dish drain as well as additional stormwater drainage pipes. This is intended to improve site drainage and the flow of runoff away from the residential backyards. • Flooding:	Section 6.2.6 and Appendix N

Issue raised	Response	Reference
○ Stakeholder queried how overland water flows in major weather events.	○ A comprehensive flood study and assessment has been undertaken for the proposal and is attached as **Appendix N** which demonstrates compliance with Council's DCP.	Section 6.2.6 and Appendix O
• Level of staff carparking provision for a station of this size	• Ten onsite car parking spaces will be provided for parking (i.e. staff car parking spaces (7), accessible parking (1), DOM parking bay (1), relief space (1) and ambulance parking bays (5)), which is appropriate to cater for the estimated demand and satisfies the requirements of the Fairy Meadow RAIR Ambulance Station Return Brief. Disabled car parking is provided in accordance with AS2890.6	Section 6.2.1 and Appendix J
• Building design and landscaping ○ Discussion around building plans and elevations including height of building at front and rear, building floor level and setback from neighbour fence. ○ Discussion on landscaping elements and query regarding tree placement to avoid overshadowing issues.	• These issues have been addressed in Section 6.2.7. The proposal would not result in any unreasonable environmental amenity impacts to adjoining properties, such as overshadowing, sunlight access reduction, privacy issues or visual bulk. Shadow diagrams have been provided in the Architectural plans. • Landscaping has been carefully considered with species chosen to complement the surrounding area and avoid impacts on adjoining properties.	Section 6.2.7 and Appendix D
• Construction ○ Proposed timeline for construction. ○ Community notification, work hours and managing construction impacts.	• Works are anticipated to commence in July 2023 and be completed in late April 2024. Works will not be undertaking outside of standard working hours. • A comprehensive acoustic noise assessment has been prepared **(Appendix K)**. Mitigations measures have been provided to minimise impacts on the surrounding amenity during construction works. These include the preparation of a Construction Noise and Vibration Management Plan and a procedure for consultation and complaints handling.	Section 6.2.2 and Appendix K
• Operations ○ Stakeholder queried noise and operational impacts through issues such as lights and sirens by emergency vehicles, use of roller doors and staff smoking in outdoor area.	• The acoustic assessment addressed operations noises from mechanical plant, vehicles, staff, sirens etc with areas of concern identified (refer **Section 6.2.2**) with mitigation measure provided.	Section 6.2.2 and Appendix K

5.2 Non-Statutory Community & Stakeholder Engagement

Additional non-statutory consultation activities included:

- Project media release to generate community awareness about the proposal - 9 December 2022.
- Leafleting of community flyer to 150 local homes and businesses - 13 December 2022.
- Local doorknock and offer for project briefing to neighbours – 13 December 2022.
- Project information page on the RAIR website, dedicated phone and email contact points.

The abovementioned consultation resulted in:

- One written piece of community feedback regarding the public footpath.
- Follow-up phone calls from residents of 25, 31, 33 Cowper Street.
- Three requests to receive the community flyer or REF notification pack in digital format.
- Two meetings with residents of 25 Cowper Street (including an initial online briefing during the notification period 11 January 2023 and a follow-up meeting held on-site 13 March 2023).

Areas of interest and discussion include topics responded to in **Table 5-2**:

- Station operations and the use of lights and sirens.
- Drainage and local flooding.
- Staff carparking provision.

- Design and landscaping of the site.
- Proximity to Community and High Performance Centre proposal.

Dragons High Performance Centre

Health Infrastructure is aware of the proposal to build the new Community and High Performance Centre on land directly to the north of the station site and have held discussions with University representatives in relation to the timing and required co-ordination of activities. Discussions between HI, contractors and the University will continue to be ongoing to ensure the projects do not affect each other or adjoining uses, or cause disruptions or conflict within the general community.

6. Environmental Impact Assessment

6.1 Environmental Planning and Assessment Regulation 2021 – Assessment Considerations

Section 171(1) of the *Environmental Planning and Assessment Regulation* (2021) notes that when considering the likely impact of an activity on the environment, the determining authority must take into account the environmental factors specified in the environmental factors guidelines that apply to the activity.

The *Guidelines for Division 5.1 Assessments (June 2022)* apply to the activity. The relevant assessment considerations under Section 3 of these Guidelines are provided below:

Table 6-1 Summary of Environmental Factors Reviewed in Relation to the Activity

Relevant Consideration	Response/Assessment	Positive/Negative	
a) Any environmental impact on a community	The site selected for the proposed Development is compatible with the existing mixed uses surrounding the site. Impacts on the existing University facility will be negligible. In addition to the appropriateness of the site, the design of the Station will contribute in a positive fashion to the adjoining residential and recreational areas. Potential impacts will be either short-term or negligible. The proposed Activity will provide improved health services to the broader community in general.	-ve	
		Nil	✓
		+ve	
(b) Transformation of a locality	The proposed Ambulance Station is well designed and appropriately scaled and located to be compatible with the existing character. It is appropriate in the context of the character of the surrounding mixed uses.	-ve	
		Nil	
		+ve	✓
(c) Any environmental impact on the ecosystem of the locality	One small tree in the road reserve will need to be removed to construct the proposed Station. There is no important vegetation or habitat onsite; none of the trees are heritage listed. A full assessment of environmental impacts, including ecology and water quality, is contained in **Section 6**. Any environmental impacts will be minimal and will be subject to appropriate mitigation measures.	-ve	
		Nil	✓
		+ve	
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality.	No. Visual impacts associated with construction works will be short-term. The proposed new Station will contribute in a positive fashion to the existing neighbourhood character and will not impact heritage items in the locality.	-ve	
		Nil	
		+ve	✓
e) Any effect on locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific, or social significance or other special value for present or future generations.	No. A Heritage Impact Statement undertaken for the proposed Activity concluded that the development is acceptable and would not adversely impact the heritage significance of nearby heritage items (refer **Section 6.2.9**). Based on the Due Diligence Code of Practice for the Protection of Aboriginal Objects (DECCW 2010) there is very low probability of Aboriginal objects occurring in the Activity Area (refer **Section 6.2.8**).	-ve	
		Nil	✓
		+ve	
(f) Any impact on the habitat of protected fauna (within the meaning of the National Parks and Wildlife Act 1974)	No. The Activity site is within the maintained grounds of an existing University campus and is not identified as important vegetation or habitat (refer **Section 6.2.10**).	-ve	
		Nil	✓
		+ve	
(g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air	As above. The site is unlikely to include habitat utilised by any threatened species.	-ve	
		Nil	✓
		+ve	
(h) Any long term impacts on the environment	Impacts associated with construction works will be temporary and subject to mitigation measures (e.g. noise, visual, air quality). Permanent variation to the man-made environment as a result of the proposed Activity would	-ve	
		Nil	✓

Relevant Consideration	Response/Assessment	Positive/Negative	
	be low impact (i.e. visual) and not detrimental or unreasonable in the locality. Long term impacts on the natural environment will be negligible. These matters are discussed in further detail in **Section 6**.	+ve	
(i) Any degradation of the quality of the environment	No. Increased storm water generated as a result of the proposed Activity has been assessed and management strategies will be incorporated to reduce the amount of runoff and maintain water quality. Erosion control measures will be implemented on site to minimise soil erosion.	-ve	
		Nil	✓
		+ve	
j) Any risk of safety of the environment	No. Where required mitigation measures will be implemented to minimise any potential impact from contamination.	-ve	
		Nil	✓
		+ve	
(k) Any reduction in the range of beneficial uses of the environment	No.	-ve	
		Nil	✓
		+ve	
(l) Any pollution of the environment	The proposed design responds to the characteristics of the site and appropriate mitigation measures will be incorporated to minimise any potential pollution of the environmental (e.g. erosion control, water quality, contamination).	-ve	
		Nil	✓
		+ve	
(m) Any environmental problems associated with the disposal of waste	No. Waste management (refer **Section 6.2.13**) safeguards will be implemented during construction works to minimise potential waste impacts during construction. The proposed Station will operate in accordance with the NSW Health Policy Clinical and Related Waste Management for Health Services (refer to **Appendix H**).	-ve	
		Nil	✓
		+ve	
n) Any increased demanded on resources (natural or otherwise) that are, or are likely to become, in short supply	Impacts associated with the consumption of natural resource would be minimal (refer **Section 6.2.15**).	-ve	
		Nil	✓
		+ve	
(o) Any cumulative environmental effects with other existing or likely future activities.	No (refer Section **6.2.17**).	-ve	
		Nil	✓
		+ve	
(p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions.	No. The site is within the Coastal Environment Area and Coastal Use Area (refer **Section 4.5**).	-ve	
		Nil	✓
		+ve	
q) Applicable local strategic planning statements, regional strategic plans or district strategic plans made under the Act, Division 3.1	The proposed Activity is consistent with the Illawarra Shoalhaven Regional Plan 2041, NSW Government, May 2021) and Draft Regional Growth and Infrastructure Plan 2014 (NSW Government).	-ve	
		Nil	
		+ve	✓
r) Any other relevant environmental factors	No other factors are relevant in assessing impacts to the fullest extent	-ve	
		Nil	✓
		+ve	

6.2 Identification of Issues

6.2.1 Traffic, Access and Parking

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

Existing Environment

Access is proposed off Innovation Way which services the University Campus and links to Cowper Street. The surrounding road network is predominantly Local Roads managed by Council. Innovation Way is one lane each way, with a 7 m wide, undivided carriageway. The speed limit is 10 km/hr, being within a shared zone providing access to childcare and the University Campus.

A Traffic Impact Assessment (TIA) for the proposed Ambulance Station was undertaken by RoadNet **(Appendix J)**. The purpose of the report, dated 12 August 2022, was to assess and document the proposed car park, vehicular access and internal circulation arrangements and its compliance with relevant Australian Standards, Wollongong City Council's standards and Transport for New South Wales (TfNSW).

The TIA notes that crash history within areas surrounding the site in a five-year period from 2016 to 2020, indicates there was a total of three minor, three serious and one moderate casualties/crashes. On Squires Way within the immediate vicinity of the site, there was one minor and one serious casualty/crash. There were no crashes or casualties recorded on Innovation Way.

Available public transport consists of a free public bus service running every 10-20 minutes from Wollongong Station to the University and four bus stops along Squires Way, two within 120-200 walking distance of the site. There is a train line within 500 m west of the site. Fairy Meadow Station connects to Elliotts Road to the north.

The site is highly accessible by active travel modes (e.g. walking and cycling), with an off-road path along the eastern side of Squires Road connecting coastal areas in Wollongong used by pedestrians and cyclists. There is also a cycle route from the Fairy Meadow train Station to the Elliotts Road/Squires Way intersection, north-east of the site.

Impact Assessment

The key transport elements of the proposal were identified in the TIA as follows:

Components	Proposed Ambulance Station
• Hours of operation	24/7 morning shift / night shift
• No. of full time equivalent (FTE) staff	24
• No. of Directorate of Management (DOM)	1
• Maximum number of staff on site at any one time	7
• No. of car parking spaces (internal)	Five ambulance spaces, One Wash Bay
• No. of car parking spaces (external)	Ten car parking spaces including, seven car parking spaces, one accessible bay, one DOM park and one relief bay.

Components	Proposed Ambulance Station
• Access	Two Station accesses: One all movements access on Innovation Way and one egress only on Innovation Way for Ambulance vehicles only.

Figure 6.1 Development Components

Traffic Generation

- ***Ambulance Station:*** Based on advice from NSW Ambulance and available data on population (now and future populations), the TIA adopted a trip generation of three trips per hour during the AM peak period and three trips per hour during the PM peak hour (assuming that there is a trip in and out of the proposed ambulance station for each call).
- ***Staff:*** Based on a figure for full-time equivalent staff of 24 and one DOM, shift information and available public transport, the new Station is estimated to generate ten trips during both peak hours, equating to approximately two vehicles every 12 minutes during the peak hour periods. The additional traffic generated by the proposed development is not expected to result in any substantial impact on the operation or safety of the surrounding road network.

Parking

- ***Number of spaces:*** The Fairy Meadow ambulance station proposes to provide seven staff car parking spaces, one accessible parking space, one DOM parking bay, one relief park space and five ambulance parking bays, which is appropriate to cater for the estimated demand and satisfies the requirements of the Fairy Meadow RAIR Ambulance Station Return Brief. Note: Council's DCP does not specify parking rates for ambulance stations.
- ***Access & design review:*** The proposed access and parking layout were reviewed against the relevant sections of Australian Standard AS2890 and Council's DCP and were found to comply.

Access

- Two access points are proposed on Innovation Way: one 'all movements access' for staff and Ambulances and one egress only access for Ambulance vehicles.
- Sight distance requirements for both accesses have been assessed to be in accordance with the requirements of AS2890.1. 'All approaches sight distance' comply at 40km/h for both accesses, but not the western approach for the eastern driveway. However, since the posted speed is 10km/h, the TIA assumes that the sight distance is compliant due to the low-speed environment.

Council's DCP (Servicing & Waste Collection)

- One service bay is proposed for the new station which is compliant with the requirements Council's DCP. A swept path analysis was undertaken which demonstrated the ability of vehicles to access and manoeuvre the site.
- Innovation Way is a private University owned road. Therefore, waste collection will be by kerbside collection via an agreement with the University.

Geometric Layout

- The off-street geometric layout is generally in accordance with the relevant requirements of Council's DCP and Australian Standard As2890.1 Parking Facilities – Part 1: Off-Street Car Parking.

Swept Path Analysis

- A swept path analysis for ambulance internal movements (using an off-street commercial vehicle Small Rigid Vehicle (SRV) most closely resembling the size of larger ambulances within the NSW Ambulance fleet) was undertaken to demonstrate that the ambulance vehicles would be able to access the proposed parking bays and manoeuvre through the site.

No mitigation measures are required in relation to the ongoing operation of the new Ambulance Station.

Potential Impacts During Construction

It is considered that an increase in daily traffic and parking demand is likely during construction works for the new station. However, the volume of additional traffic would be temporary and not significant and be unlikely to have more than minor impacts on the local traffic network. The increase would be associated with the arrival of work crews and the transport of machinery and waste materials.

Additional vehicle movements may contribute to a minor increase in road traffic noise and minor disruption of existing traffic and pedestrian movements immediately around the site. However, it is considered that any impact would be temporary and would have only a minor contribution to road traffic volumes. The potential impacts are considered reasonable and unlikely to cause significant adverse impacts to traffic, access and parking. It is also likely that construction traffic arrival and departure peaks would be outside normal commuter peak hours and therefore not likely to impact on the operation of the broader local road network, given that background traffic flows are significantly lower than during peak periods.

There does not appear to be an existing direct vehicular access to the site. However, roll-back kerbing along the frontage of the project site will enable vehicles to temporarily access the site at a suitable point.

There is sufficient space available onsite to accommodate short-term parking during construction works. Furthermore, arrangements have been formalised with the University to be able to utilise additional parking space sufficient for approximately 100 cars.

To effectively manage car parking and access requirements during the construction period, a traffic control and access plan will be required to ensure the safety of the public during construction. There will be no loss of any existing parking as a result of the works.

In relation to pedestrian movements around the site during construction works, the existing concrete pathway through the site will be removed to enable construction works. Arrangements will be maintained to enable pedestrians to continue to safely manoeuvre around the area and to maintain access to the University Campus, childcare facility, and sporting grounds during and after the construction phase. There is an existing concrete footpath along the northern side of Innovation Way. The St George Illawarra Dragons plan to build a new 'Community and High Performance Centre' on this land directly north of the station site (Lot 200 DP 1172135) which is currently used for sporting fields, and will include connectivity to new and existing public cycle and pedestrian paths. It has been confirmed at a meeting held with a representative of the University on 14 April 2023 that the Dragons will construct a permanent footpath as part of the development along the frontage of the Performance Centre site. Construction of the Performance Centre is likely to commence in 2024. There is an existing footpath along the frontage of the property to the north which will be cleaned and maintained by the contractor for the Ambulance Station for the duration of works. Furthermore, at the commencement of works for the new Station, two new pedestrian crossings will be provided at a traffic island located east of both development sites. These crossings will connect with the existing and/or proposed footpath along the Dragon's site and an existing concrete path along the eastern roadside which culminates at an existing crossing to the south, hence maintaining access to the greater University complex (refer **Appendix Y**).

There is also some potential that construction traffic may result in minor damage to the local road formation as a result of heavy vehicle traffic entering and exiting the site. The project manager will need to negotiate with Council or the University in relation to the reinstatement of road related infrastructure as a result of damage during construction works.

It is anticipated that any temporary impacts associated with the activity will be confined to the site or its immediate surrounds. The broader community is unlikely to experience adverse impacts in relation to traffic and parking. There are no sensitive areas in close proximity of the site.

Mitigation Measures

With respect to traffic generated by the construction works, the following mitigation measures are to be implemented:

- A Traffic Control Plan (TCP) shall be prepared by a suitably qualified person and implemented for the works in accordance with the requirements of the Traffic Control at Worksites Manual (RTA 2010 V4) and AS1742.3. Licensed traffic controllers will assist with traffic control during the project.
- The Traffic Control Plan is to address the provision and maintaining of safe pedestrian movements around the project site during construction works.

- Any affected Council or University infrastructure associated with pedestrian facilities or road related infrastructure would be reinstated consistent with its prior condition.
- Where possible, current traffic movements will be maintained during the works.
- Regard to public safety will be maintained at all times.
- Appropriate signage will be erected, and details will be confirmed by appropriate Project personnel responsible for site safety during the development.
- Traffic delay notifications will be issued to Council at least two weeks prior to commencement of works requiring full or partial road closure. An Access Management Plan shall be prepared to manage internal site traffic and pedestrian movements to ensure the safety of workers and public within the site.
- Neighbouring residents and property owners are to be informed in writing at least two weeks prior with respect to any changes to pedestrian movements and parking restrictions associated with the development.
- Public roads and access points will not be obstructed by any materials, vehicles, refuse skips or the like, under any circumstances.

6.2.2 Noise and Vibration

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

Existing Environment

The development site is surrounded by residential and educational buildings, recreational areas, and large open conservation spaces in a suburban residential environment. There are continuous traffic flows along Squires Way during peak periods. The proposed development will operate 24 hours per day, 7 days per week.

The surrounding noise sensitive receivers around the site have been identified as residential, educational and recreational. The nearest sensitive receivers are residential development located at 25-33 Cowper Street, which is less than 5 m from the activity site. There are also facilities associated with the day care facility (35 m) and university accommodation (30 m).

Impact Assessment

To identify any potential noise and vibration impacts as a result of the proposal, JHA Consulting Engineers have prepared an Acoustic Report for the proposal (refer **Appendix K**). The report noted that if noise impacts from the proposal are controlled at the nearest noise sensitive receivers, then compliance with the recommended criteria at all noise sensitive receivers will be achieved. Therefore, the nearest residential receiver was used for assessment purposes.

The report outlines noise survey and monitoring carried out around the site to establish ambient and background levels. The report also lists the regulatory framework and relevant standards and guidelines, which includes the *Noise Policy for Industry (EPA, 2017)* (NSW NPI), NSW Interim Construction Noise Guidelines (DECC 2009) and Assessing Vibration: A Technical Guideline (Dec. 2006).

Operational Noise

The sources of potential noise break-out from the proposed Ambulance Station which may impact on existing noise sensitive receivers have been assumed to be noise emissions from mechanical plant and from traffic generated by the proposed development and noise emissions from the wash bay. These noise sources were considered in the noise emissions assessment and the acoustic assessment has considered the following:

- Noise levels have been considered as continuous over assessment time period to provide the worst-case scenario.
- Distance attenuation, building reflections and directivity.
- Lowest measured background noise levels at the nearest noise sensitive receiver have been used to provide a worst-case scenario.

- *External Mechanical Plant*

  The mechanical plant will operate continuously during all day periods. Noise from the proposed development mechanical plant should be controlled to ensure that external noise emissions are not intrusive and do not impact on the amenity of the sensitive receivers.

  Based on the results of the noise assessment and the NSW NPI noise level criteria, the mechanical plant will meet the noise level criteria at the nearest noise sensitive receivers. Acoustic assessment of all mechanical plant should continue during the detailed design phase of the project in order to confirm any noise control measures. If new or replacing external mechanical plant is proposed, then an acoustic assessment of all mechanical plant should continue during the detailed design phase of the project in order to confirm any noise control measures.

- *Vehicle Noise Emissions: Ambulance & Staff Movements*

  The potential noise sources associated with proposed vehicle operations will be noise generated by vehicle movements (particularly ambulances dispatched for emergencies during night-time), ambulance sirens and staff vehicles movements.

  It is expected that vehicles will be moving slowly, and the number of movements will be low compared with the existing traffic flows. There will only be a slight increase in traffic flows from five Ambulance vehicles and ten staff carpark spaces (n.b. seven spaces, one PWD space, one relief and one DOM parks). Therefore; there will be no significant increase in existing ambient and background noise levels from the proposed station. Therefore, traffic noise associated with ambulance movements is expected to meet the NSW RNP recommendations.

- *Vehicle Noise Emissions: Ambulance Sirens*

  The use of ambulance sirens on site (when ambulances depart to attend incidents) is not specifically addressed in the relevant regulations. When in use, noise levels from ambulance sirens will be audible at the nearest residential receivers. Events identified as Priority One events (Life Threating Emergencies), require that warning devices must be used, including warning lights and sirens.

  It is understood that ambulance drivers will make a judgement call on whether to use ambulance sirens on a case-by-case basis. Furthermore, it is the practice of Paramedics to minimise the use of sirens when it will cause a noise disturbance and the sirens are deemed unnecessary. In relation to noise from ambulance sirens, it is recommended that their operation within the development and surroundings should be addressed in the Management Plan and minimised whenever possible.

- *Ambulance Wash Bay*

  Wash bay operations are expected to comply with the relevant noise criteria as it is proposed within the ambulance plantroom and as a result, the building façade will offer shielding to the nearest noise sensitive receivers. Distance attenuation will further reduce noise levels. It is expected that the pressure washer will not impact the nearest noise sensitive receivers. However, it is recommended to restrict its use to 7 am to 8 pm Monday to Friday and 8 am and 8 pm on Saturdays, Sundays, and Public Holidays, whenever reasonable.

  Wash bay operations will not be used continuously and are expected to comply with the relevant noise criteria as it is proposed within the ambulance plantroom and, therefore, the building façade will offer shielding to the nearest

noise sensitive receivers. It is expected that the pressure washer will not impact the nearest noise sensitive receivers.

As required by the NSW POEO NCR 2008, noise from all power tools, including the pressure washer, shall not be audible within any habitable room in any residential premises outside the proposed hours. The allowed operation time period is between 7 am and 8 pm Monday to Friday, and between 8 am and 8 pm on Saturday, Sundays and Public Holidays. Therefore, whenever reasonable, the pressure washer shall only be used during these hours.

- *Noise Intrusion*

The noise level within the internal spaces of the proposed development will be a result of the combination of external noise and noise from the building services. Noise generated by building services, particularly the air-conditioning and ventilation systems, needs to be considered to ensure that the internal noise levels for each space of the Ambulance Station meet the ambient noise levels as per NSW Health Infrastructure ESG.

In order to achieve these internal noise levels for each space, noise control treatments will need to be incorporated into the mechanical systems as required.

Construction Noise & Vibration Planning

Preliminary construction noise and vibration management planning has been presented in the report and recommendations based on the relevant guidelines provided. This preliminary advice is to form the basis for the contractor's Construction Noise and Vibration Management Plan (CNVMP) which will identify any noise criteria exceedance once construction methods and stages are known.

The proposed construction hours are within the recommended NSW EPA hours.

Conclusion

Based on the information presented in the acoustic report, relevant objectives will be satisfied and therefore the proposed Activity is acceptable.

Mitigation Measures

The following noise and vibration controls measures/strategies are recommended by the Acoustic Report:

- The following construction hours are proposed:
  - Monday to Friday: 7 am to 6 pm.
  - Saturday: 8 am to 1 pm.
  - Sundays and Public Holidays: No excavation or construction works.

  Noise control measures are to be implemented during these hours in accordance with the approved Construction Noise and Vibration Management Plan.

  High noise level works – i.e. piling, excavation, etc – shall be scheduled to not occur during shoulder periods of the recommended standard hours – i.e. 7am to 8am and 5pm to 6pm.
- A detailed Construction Noise and Vibration Management Plan (CNVMP) is to be prepared to further assess the noise impact of construction works, include a protocol to minimise any potential noise impacts to identified sensitive receivers, and to ensure that appropriate noise control measures are defined and implemented to comply with all relevant noise guidelines.

  In order to meet the noise and vibration requirements for the site, the Contractor will be required to engage a qualified acoustic consultant to assist in the compilation of a Construction Noise and Vibration Management Plan (CNVMP) and undertake noise and vibration monitoring for the duration of the project, if required by the CNVMP and/ or Conditions of Consent.
- Plant and equipment:
  - Employing quieter techniques for all high noise activities such as rock breaking, concrete sawing, and using power and pneumatic tools.

- Use quieter plant and equipment based on the optimal power and size to most efficiently perform the required tasks.
- Selecting plant and equipment with low vibration generation characteristics.
- Operate plant in a quietest and most effective manner.
- Where appropriate, limit the operating noise of equipment.
- Regularly inspecting and maintain plant and equipment to minimise noise and vibration level increases, to ensure that all noise and vibration reduction devices are operating effectively.

- On site noise management:
  - Maximising the distance between noise activities and noise sensitive receivers. Strategically locate equipment and plant.
  - Undertaking noisy fabrication work off-site where possible.
  - Avoid the use of reversing beeping alarms or provide for alternative systems, such as broadband reversing alarms.
  - Maintaining any pre-existing barriers or walls on a demolition or excavation site as long as possible to provide optimum sound propagation control.
  - Constructing barriers that are part of the project design early in the project to afford mitigation against site noise.
  - Using temporary site building and material stockpiles as noise barriers. These can often be created using site earthworks and may be included as a part of final landscape design.
  - Installing purpose-built noise barriers, acoustic sheds and enclosures.

- Work scheduling:
  - Provide respite periods, including restricting very noisy activities to daytime, restricting the number of nights that after-hours work is conducted near residences, or by determining any specific requirements, particularly those needed for noise sensitive receivers.
  - Scheduling activities to minimise impacts by undertaking all possible work during hours that will least adversely affect sensitive receivers and by avoiding conflicts with other scheduled events.
  - Scheduling work to coincide with non-sensitive periods.
  - Scheduling noisy activities to coincide with high levels of neighbourhood noise so that noise from the activities is partially masked and not as intrusive.
  - Planning deliveries and access to the site to occur quietly and efficiently and organising parking only within designated areas located away from sensitive receivers.
  - Optimising the number of deliveries to the site by amalgamating loads where possible and scheduling arrivals within designated hours.
  - Designating, designing and maintaining access routes to the site to minimise impacts.

- Consultation, notification and complaints handling:
  - Provide information to neighbours before and during construction.
  - Maintain good communication between the community and Project staff.
  - Have a documented complaints process and keep register of any complaints.
  - Give complaints a fair hearing and provide for a quick response.
  - Implement all feasible and reasonable measures to address the source of complaint. Implementation of all reasonable and feasible mitigation measures for all works will ensure that any adverse noise impacts to surrounding receivers are minimised when noise goals cannot be met due to safety or space constraints.

- If, during construction, an item of equipment exceeds either the noise criteria at any location or the equipment noise level limits, the following noise control measures, together with construction best practices, shall be considered to minimise the noise impacts on the neighbourhood.
  - Schedule noisy activities to occur outside of the most sensitive times of the day for each nominated receiver.
  - Consider implementing equipment-specific screening or other noise control measures recommended in Appendix C of AS 2436:2010.

  - Limit the number of trucks on site at the commencement of site activities to the minimum required by the loading facilities on site.
  - When loading trucks, adopt best practice noise management strategies to avoid materials being dropped from height into dump trucks.
  - Avoid unnecessary idling of trucks and equipment.
  - Ensure that any miscellaneous equipment (extraction fans, hand tools, etc.) not specifically identified in the CNVMP incorporates silencing/shielding equipment as required to meet the noise criteria.

- Whenever possible, the pressure washer and other power tools shall be operated between 7 am to 8 pm during Monday and Friday and between 8 am to 8 pm on Saturdays, Sundays, and Public Holidays.
- Use of ambulance sirens within the Ambulance Station lot and surroundings should be minimised whenever possible and their operation be addressed in the Management Plan.
- To minimise impact on the surrounding amenity, Waste Collection movements are recommended to occur during the daytime.

6.2.3 Air Quality and Energy

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

Existing Environment

The site and surrounding area is zoned SP1 Innovation Campus and surrounded by open space/ recreational areas and facilities associated with the University. It is bordered by Innovation Way on two sides and adjoins residential properties to the west. There is a childcare facility on the adjacent property to the north-east. The local air quality is generally good. Potential airborne particles within the locality would be restricted to low level vehicle emissions.

Impact Assessment

In the short-term construction period, the Activity has potential to generate dust and may cumulatively contribute to generating exhaust emissions locally through:

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

Dust generation during the proposed construction works is likely but would be minimal and limited to the immediate vicinity of the work area. Mobilisation of dust during construction works pose risks to worker and public safety. Notwithstanding these risks, significant quantities of dust are unlikely, especially with effective implementation of appropriate safeguards and mitigation measures.

The Traffic Impact Study determined that there would be only a slight increase in traffic generated by the new station. The ongoing operation of the station is therefore not anticipated to affected local air quality.

The new building will feature a 30.14kW (total 90-OFF 335W Panels or equivalent) solar power system. New fixtures and fittings would meet relevant energy efficiency standards and benefit emission reduction and energy efficiency.

As discussed in **Section 3.1.1**, the RAIR programme aims to satisfy the Design Guidance Note No. 058 rating tool for new rural ambulance stations. In accordance with Design for a better future, Rural Ambulance Station Facilities ESD Design Guidelines, Sept 2021 a pathway has been developed identifying credits to be targeted to meet this rating. These targets include features that measure and reduce energy consumption.

Attached as **Appendix L** is a statement prepared by JHA Consultants that demonstrates the proposed building's design compliance with the energy efficiency provisions of Section J Part J1 of the National Construction Code 2019.

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

Mitigation Measures

The following mitigation measures would be implemented to manage impacts relating to air quality and energy:

- No materials will be burnt on site.
- Vehicles transporting waste or other materials that may produce dust will be covered during transportation.
- Vehicles, machinery and equipment will be maintained in accordance with manufacturer's specifications in order to meet the requirements of the Protection of the Environment Operations Act 1997 and associated regulations.
- Vehicles and equipment will be switched off when not operating.
- Debris and waste will be immediately collected into appropriate storage facilities and removed from the site as soon as practical to ensure light-weight material is not dispersed by wind gusts.
- Stockpiles and exposed soils will be covered or dampened to reduce incidence of air dispersal.
- Appropriate practices are to be in place to minimise dust that could be dispersed during excavation.
- New fixtures and fittings would meet relevant energy efficiency standards.

6.2.4 Soils and Geology

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

Existing Environment

The vacant site is within a vacant, grass covered area in the north-western portion of Lot 1 DP1172135, bound by residential properties on one side and roadways on three sides. It is relatively flat, with a range of approximately 3.53 m to 4.49 m AHD. Cabbage Tree Creek and Towradgi Arm are located within 500 m from the site.

In relation to potential contamination, details of the Preliminary and Detailed Site Investigation (PSI/DSI) prepared for the site are provided in **Section 6.2.15**.

A detailed Geotechnical Investigation Report was prepared by Alliance Geotechnical Pty Ltd (**Appendix M**). The objectives of the investigation were to address the subsurface conditions encountered and provide comments and recommendations regarding:

- The site subsurface soil and rock profile and groundwater conditions.

- Seismic sub-soil class.
- Reactivity of site soils in terms of shrink-swell potential.
- Temporary and permanent earth retaining structures.
- Geotechnical design parameters required for shallow and deep foundations.
- Recommendations on footings and suitable foundation material.
- Earthworks including topsoil stripping and suitability of site won material for re-use.
- Geotechnical input parameters for Pavement Design.

The investigation involved fieldwork and four boreholes (refer figure below) drilled to termination depths between 4.0m and 8.0m below existing surface levels with sampling undertaken for laboratory testing.

Figure 6.2 Borehole locations

Impact Assessment

Earthworks associated with the proposed activities are estimated to be as follows:

- Cut – 195 m^3
- Fill – 1,685 m^3

The majority of earthworks involve fill and will require import of approximately 1,490 m^3 of fill material.

Minimal excavation not exceeding 1.5 m is expected as a result of the activity and is generally limited to footings, slab construction, hard stand areas and services. Potential impacts to soils and geology that could arise from the Activity generally include disturbance of soils and loss of ground cover resulting in wind/rain erosion.

The investigation determined that the site is underlain by uncontrolled fill to a maximum depth of 0.6m bgl at Borehole BH02. Although the fill is uncontrolled in nature, it is suitable to be reused on site provided any organic or deleterious materials are removed. Groundwater was encountered in boreholes BH2 and BH3 as seepage between depths 5.0 m and 5.3 m (Note: groundwater seepage condition is subject to seasonal and climatic conditions and may vary across the site).

The recommendations contained in the Geotechnical Investigation Report prepared by Alliance provide specific construction and design requirements for different stages of the proposed works and would be taken into consideration during the detailed design and construction phases of the project.

To minimise loss of soil from the site and potential effects on water quality a Stormwater Management Plan has been prepared by Meinhardt Bonacci (**Appendix N**). This Plan includes erosion and sediment control measures to be implemented during construction in accordance with the Landcom "Blue Book" (refer **Section 6.2.5**) and include:

- A sediment fence.
- Temporary access to site with shaker pad.
- An indicative stockpile area with sediment fence around it during construction.
- Geotextile inlet pit filters or sandbags to be placed around existing stormwater pits.

Mitigation Measures

The following mitigation measures would be implemented to manage impacts relating to soil, erosion and sedimentation:

- Implement the recommendations contained in the Geotechnical Assessment prepared by Alliance, dated 5 August 2022;
- Erosion and sediment controls would be implemented in accordance with the Landcom/ Department of Housing Managing Urban Stormwater, Soils and Construction Guidelines (the Blue Book) and ensure any water diversion or control outlets associated with the site compound/ stockpile do not result in scouring;
- The Stormwater Management Plan, including sediment and erosion notes and conditions would be implemented in accordance with The Civil Engineering Design Report by Meinhardt Bonacci, dated July 2022;
- Works would only commence once all erosion and sediment controls have been established. The controls would be maintained in place until the works are complete, and all exposed erodible materials are stable;
- Erosion and sedimentation controls would be checked and maintained (including clearing of sediment from behind barriers) on a regular basis (including after any precipitation events) and records kept and provided on request;
- All sediment control measures would be checked and repaired or re-installed (if required) if heavy rainfall was forecast;
- Imported materials would be sourced as clean fill from an approved site; and
- Disturbance of natural sediments and vegetation would be minimised.

6.2.5 Coastal Risks

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

Existing Environment

The site is in proximity to the Pacific Ocean.

Impact Assessment

The Section 10.7 Planning Certificate issued by Wollongong City Council indicates that Council has adopted Wollongong City Council Coastal Zone Study (Cardno, Lawson, Treloar 2010). The ambulance station site and the entire Wollongong University Innovation Campus are not within any areas that are mapped has having coastal risk or hazards.

Pursuant to State Environmental Planning Policy (Resilience and Hazards) 2021, the site is within the Coastal Environment Area, Coastal Use Area and proximity area for Coastal Wetlands. It is not within mapped Coastal Wetlands, Littoral Rainforests or the Proximity Area for Littoral Rainforests. the State Environmental Planning Policy (Resilience and Hazards) 2021. The relevant provisions of the Resilience and Hazards SEPP are addressed **Table 4-6**.

Mitigation Measures

No mitigation measures are required above and beyond those required under **Section 6.2.6**.

6.2.6 Hydrology, Flooding and Water Quality

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

Existing Environment

The site is within an open grass area with an existing concrete footpath and an area of approximately 3,520m^2. It is flat, sloping 1.6% from southwest to northeast towards the site low point where existing drainage is located.

The nearest surface water bodies located on or near the site include Cabbage Tree Creek approximately 125 m south-west of the site and Towradgi Arm approximately 350 m to the east. Given the location of the water bodies and site topography groundwater flow is likely to be towards the north-east to east, while surface water flow direction at the site is likely to be towards the south-west. There are no registered groundwater features located within a 500m radius of the site.

The Section 10.7 Planning Certificate confirms that the property is located within a Flood Affected – Flood Risk Precinct and that a Flood Study indicates that the property "is affected by flooding or at risk of isolation in the event of a flood". The activity site is within the lower Fairy and Cabbage Tree Creeks catchment which has a history of flooding, with extensive damage occurring to private and public property in August 1998. The site is located in the lower reaches of this catchment and is mapped within an Onsite Stormwater Detention Concession (OSD) Zone in accordance with Chapter E14: Stormwater Management of the Wollongong Development Control Plan 2009.

Impact Assessment

Groundwater

The Geotechnical Report (refer **Appendix F**) noted that groundwater was encountered in boreholes BH2 and BH3 as seepage between depths 5.0m and 5.3m during the geotechnical investigation. The report noted that groundwater seepage condition is subject to seasonal and climatic conditions and may vary across the site. The Geotechnical report also identified that if bored piles are adopted for the project, groundwater inflow may occur during pile drilling. HI has advised that bored piles are not proposed as part of the design rather a stiffened raft slab will be utilised. The Preliminary and Detailed Site Investigation for the site (refer **Appendix M**) also determined it to be unlikely that contamination of soils would cause unacceptable impacts to groundwater or surface water bodies. It is therefore not considered that the proposal would have significant impacts on groundwater.

Stormwater Management

A Civil Engineering Design Report (July 2022) attached as **Appendix N** outlines the proposed plan for stormwater management. The report, prepared by Meinhardt Bonacci, addresses the requirements of the Wollongong Development Control Plan 2009 (WDCP), the Australian Rainfall and Runoff (1987 and 2019 versions), Australian Standard AS3500.0 – Stormwater Drainage, WDCP Chapter E13: Floodplain Management, and the requirements of WDCP Chapter E15: Water Sensitive Urban Design.

- *Stormwater Drainage Strategy*

  The existing site is 5% impervious and, based on the proposed concept design details, will increase to approximately 59% impervious. To limit the post-development flows to the pre-development conditions a bioretention basin will be required. A 9000 L inground rainwater tank will also be added and roof water collected to be used for irrigation within the site.

  Using DRAINS computer software a preliminary analysis indicated that a volume of approximately 49m^3 of detention storage is required. Basin storage will have an outlet pipe and also allow for infiltration into silty clay subgrade at the rate of 3.6 mm/hr. In a large rainfall event, the basin could be filled up to embankment level and water will overflow as sheet flow (like the current condition).

  The estimated pre-development stormwater flow rate is 0.201m^3/s = 201L/s, and the unmitigated post-development is 222L/s for the 1 in 100 years ARI rainfall event (Q100). With basin storage, the post-development stormwater flow rates are smaller than the pre-development flow rates, also, for other rainfall events.

  A major system is also required for the proposed development in the form of overland flow paths. The major system should be designed to convey flows surcharged from the underground drainage system for storm events up to 100-year ARI. The overland flow would be directed away from the buildings and carparks and towards the north-east along the existing 1%AEP flood path and Squires Way.

- *Stormwater Quality Management Strategy*

  To protect the existing ecology the development will be required to satisfy the water quality requirements over the full range of rainfall events to maintain the long-term protection of the pre-determined Environmental Values. Chapter E15: Water Sensitive Urban Design, WDCP, demonstrates that the development will achieve the post development pollutant load standards required in WDCP.

  Treatments were determined in accordance with the more conservative value between WDCP Table 2, WSUD Stormwater Quality Performance Targets and NSW Ambulance Water Quality Set B Targets.

  A bioretention for water quality treatment is proposed. To reduce the demand on water supply, a rainwater harvesting system could be proposed onsite via the provision of a rainwater tank (to be confirmed).

  Music Analysis results and DRAINS calculations are provided in the report **(Appendix N)**.

Flooding

A Flood Assessment has been prepared for the activity. A copy of the report, prepared by Advisian, is attached as **Appendix O**. The report:

(a) documents existing flood behaviour at the site;

(b) presents expected impacts of the proposed development on flood behaviour;

(c) provides information relevant to flood emergency response at the site and for determining an appropriate design floor level for the ambulance station;

(d) and provides responses to queries raised by Council, the SES and neighbouring residents.

Utilising hydraulic modelling that was developed for use in the Fairy and Cabbage Tree Creeks Flood Study (Advisian 2020), a series of flood mapping was produced for various flood events. Existing conditions at the site were identified to be as follows:

- 1% AEP level: 4.61m AHD
- PMF event: 4.91m AHD

Finished Floor Level

The Ambulance development was initially proposed to be constructed on a fill platform ranging from approximately 4.6 to 5.0 m AHD, with a subsequent Finished Floor Level (FFL) above the PMF and swales to direct stormwater runoff and flood flows around the building.

The flood assessment calculated floods levels for post-development conditions resulted in a 1% AEP of 4.66m AHD and PMF of 5.15m AHD. Consequently, the flood assessment recommends a **Finished Floor Level of 5.25 m AHD**.

As explained in the Flood Assessment this is more conservative than the FFL defined in the Wollongong DCP 2009. However, a more conservative floor level based on the PMF is not uncommon when applied to sensitive development types (e.g. NSW Floodplain Development Manual 2005, Section K3.1) and includes emergency services facilities (such as ambulance stations) that provide an important contribution to community safety during and after flood events. It is also noted that this approach is also consistent with recent flood planning advice in NSW including the Local Environmental Planning (LEP) “special flood considerations clause” and the findings of the NSW Flood Inquiry 2022.

Post-Development Flood Impacts

The Flood Assessment incudes mapping that provides comparisons of flood hazard under ‘existing’ and ‘post-development’ conditions, as well as a summary of simulated flood level and hazard impacts associated with the proposed development for the 1% AEP, the 1 in 500 AEP and the PMF (refer **Appendix O**). A summary of the flood level and flood impacts for the 1% AEP and the PMF events is provided below.

1% AEP flood level and hazard impacts

The extent and depth of inundation on Innovation Way is increased:

- Depths on the roadway to the east of the development are increased from a maximum of about 0.1 m to a maximum of about 0.2 m.
- An area of roadway to the north-west of the development becomes newly inundated to peak depths of 0.05 to 0.15 m.
- The road in the vicinity of the development is affect by H1 (generally safe) and H2 hazard (unsafe for small vehicles) under existing conditions. Simulations indicate that the development would result in an increase in the extent of the road affected by H2 hazard. It would not, however, result in an increase in the maximum hazard that a vehicle must pass through to leave the Innovation Campus.

The depth of inundation in the back yards of two Cowper Street properties is increased:

- A maximum increase of 80 mm is indicated locally. However, this appears to relate to the proposed swale within the development site and is mapped marginally (less than 1.5 m) within the neighbouring property due to the 1.5 metre horizontal resolution of the TUFLOW model and results.
- Increases of 20 to 30 mm are indicated extending a distance of less than 6 metres into the yard of one of the properties.
- The above flood level increases are less than the ‘permissible flood impact’ set o t in Table 2 of Wollongong Development Control Plan (DCP) 2009, Chapter E13. Specifically, the cited permissible flood level impact for ‘Government Infrastructure Projects’ is 100 mm on residential properties.
- The hazard within the back yards of the properties remains H1 (generally safe).

PMF flood level and hazard impacts

Inundation of Innovation Way

- No increases in the depth or extent of inundation on Innovation Way is indicated.
- Under existing conditions, the road in the vicinity of the development is subject to a maximum hazard of H4 (unsafe for all vehicles and people). Under post-development conditions some H5 hazard (unsafe for all vehicles and people, buildings vulnerable to structural damage) is indicated on Innovation Way to the east of the development. The road would be impassable under both scenarios.

The depth of inundation in the back yards of four Cowper Street properties is increased:

- Maximum increases of 0.10 to 0.15 m extend about 5 metres into one property and about 10 metres into another.
- Increases of 20 mm or more extend 10 to 20 metres into the yards of four properties. Increases of 20 to 40 mm affect part of the house footprint at one property, however the house appears to be raised well above the ground and would not be flooded above floor level.
- Under existing conditions, hazard within the properties is predominantly H1 and H2 (generally safe for people). Under post-development conditions there is a slight increase in the extent of H2 hazard and there is a localised area of H3 hazard (unsafe for children and the elderly) in one yard across an area totalling about 30 m2. This is not considered to represent a material change in risk to life or property.

Results of mapping for the PMF indicate that there would be no increases in the depth or extent of inundation on Innovation Way, while inundation in the backyards of four (4) Cowper Street properties would be increased by 0.1 – 0.15m in one property and 20mm into the yard of four properties (refer Figures B-1 to B-3 of **Appendix O**). The footprint of one house would be affected, however it is noted that this house is raised "well above the ground and would not be flooded above floor level". Under existing conditions the hazard level within the properties is predominantly H1 and H2 (generally safe for people). The identified hazard level is "not considered to represent a material change in risk to life or property."

Flood Emergency Response

Chapter 3 of the Wollongong DCP 209 requires a Site Emergency Response Flood Plan where floor levels are below the flood planning level. This will not be required as the floor level of the proposed building is to be constructed above the PMF. Regardless, given the identified flood risk and the likelihood of the ambulance station to contribute to community safety during flood events, it is recommended in the Flood Assessment that HI prepare a Business Continuity Plan. This plan would outline how the ambulance station would be managed during extreme flooding and is consistent with other NSW stations located within the floodplain. The requirements for this Plan were outlined in the report and are included in the Mitigation Measures below.

Wollongong Development Control Plan 2009

While Development Control Plans are generally not considered for the purposes of an REF, it is appropriate in the circumstances to address Council's requirements in relation to Chapter E13: Flood Plain Management, particularly in light of the NSW Flood Inquiry 2022. The relevant DCP controls were therefore addressed in the Flood Assessment (refer **Appendix O**) which is summarised below:

Item	Requirement	Response
Section 6.4.3 – General Prescriptive Controls		
1	'Government infrastructure projects' are not to increase off- site flood levels on residential properties by more than 100 mm in events up to the 1% AEP.	Flood level impact mapping for the 1% AEP event as presented in Figure B-1 indicates that the proposal would not result in adverse flood level increases of more than 80 mm on neighbouring residential properties.
2	In the PMF the development is not to: • Cause adverse flood impacts to evacuation routes or onsite refuge service levels. • Result in additional flood affected allotments.	Flood level impact and hazard mapping for the PMF event is presented in Figure B-3 and Figure B- 6 and indicates that the proposal: • Would result in an increase in hazard on part of Innovation Way (a private UoW road) from H4 to H5. The road would be impassable under both existing and post-development conditions, while the majority of the

Item	Requirement	Response
	• Adversely impact flood warning times. • Cause changes to above yard or above floor flooding.	Innovation Campus would become isolated prior to this occurrence due to inundation of Innovation Way 200 m to the south of the ambulance site. Accordingly, the existing constraints to evacuation of the Innovation Campus would not be materially altered. • Would not result in affectation of additional lots. • Would not adversely impact flood warning times, as localised impacts do not alter the arrival time of flows from Cabbage Tree Creek. • Would result in increases in peak flood levels of 20 to 150 mm within the yards of 4 residential lots. This would result in only minor changes in hazard (predominantly remaining in the H1-H2 range) and is not considered to represent a material change in risk to life or property.
3	The development must not increase over floor flooding of residential, commercial, or industrial buildings in a 20% AEP, 1% AEP or PMF event.	The proposal would not alter flood levels at any houses or commercial/industrial buildings in the 20% or 1% AEP events (refer Figure B-1). In the PMF event flood level increases of 20 to 50 mm would reach part of the house footprint at one property. However, the affected area is raised approximately 1 metre above ground level and would not be flooded above floor level in the PMF.
4	The development must not cause additional lots to be impacted in the 1% AEP or PMF event.	No additional lots are impacted in the 1% AEP or PMF events.
Section 6.6.3 – Fencing, Prescriptive Standards		
5	Council requires a Development Application for all new solid (non-porous) and continuous fences above 0.6m high, in the High and Medium FRP's. It must be demonstrated that the fence would not impede flow or floodwaters.	If fencing is proposed, typical porous cyclone wire fencing (or similar) should be adopted to avoid impeding the passage of floodwaters through the site.
Section 7 – Filling of the Floodplain		
6	Any proposed filling of a site must be accompanied by an analysis of the effects on flood levels of similar filling of developable sites in the area.	A cumulative filling analysis has not been undertaken. However, the proposed filling occurs within a 'flood fringe' area (as opposed to 'flood storage' or 'floodway') and, accordingly, would not result in loss of a significant storage and would not be expected to contribute to significant cumulative development impacts in this regard. It is understood that development of the 'Dragons High Performance Centre' has been proposed in an adjacent area of the Innovation Campus. HI has liaised with the UoW and Dragons HPC design team and will endeavour to coordinate the final earthworks design for the site to minimise the combined flood level impacts of the two developments.
7	Generally, there is to be no net increase in fill in the floodplain. Compensatory excavation of a lower, adjacent area of similar flood function may be used to offset fill.	Analysis of flood storage volumes for existing conditions and for the proposed landform was undertaken using the waterRIDE software and found a net loss in 1% AEP flood storage of about 350 m3. However, this occurs in a 'flood fringe' area and does not result in exceedance of the permissible flood impacts specified in Table 2 of Chapter E13 (refer Item 1 above).
8	Filling above the 1% AEP level may be permitted if there are no adverse impacts in rarer events.	The majority of filling on the site occurs above the 1% AEP level, resulting in a greater loss of storage in the PMF event. However, the resulting impacts in the PMF event do not manifest as a material change in risk to life or property (refer Item 2 above).
Schedule 5 – Prescriptive Controls for the Fairy & Cabbage Tree Creeks Floodplain		
9	Land use to be suitable for Medium FRP. It is noted that filling of the site, where acceptable to Council, may change the FRP considered to determine the controls applied in the circumstances of individual applications.	The ambulance station would be considered a 'Essential Community Facility' under Chapter E13 and would be deemed an unsuitable land use' within the Medium FRP. However, by designing the floor level to be above the PMF the flood risk at the facility is reduced such that there is little potential for flood damage or danger to life. Additionally, analysis of ambulance call outs and response times by NSW Ambulance has highlighted that the ambulance station would provide considerable benefit to the community under normal conditions.
10	No floor level criterion is set for 'Essential Community Facilities'.	Chapter 4 of this report investigated relevant levels for consideration in setting the design floor level. A finished floor level of 5.25 m AHD is recommended to be adopted. This level is 0.1 m higher.
11	All structures to have flood compatible building components below or at the 1% AEP flood level plus 0.5m (freeboard).	All building components are to be located above the 1% AEP level plus 0.5 m and the PMF level.

Item	Requirement	Response
12	All structures to withstand the forces of floodwater, debris and buoyancy up to and including a 1% AEP flood plus freeboard, or a PMF plus freeboard if required to satisfy evacuation criteria.	All buildings are to be located above the 1% AEP plus 0.5 m and the PMF. It should be confirmed that the retaining wall along the southern side of the building can withstand PMF forces (peak depth 1.2 m, velocity 2.1 m/s at ~45 degrees, velocity-depth product 2.1 m2/s).
13	Engineers report required to certify that the development will not increase flood affectation elsewhere.	Refer to Items 1 to 4 above.
14	Reliable access or refuge required during a 1% AEP flood. The development is to be consistent with any relevant flood evacuation strategy or similar plan.	The building is to be located above the PMF level. As such, it would be safe to shelter-in-place in the building during a flood. The building would be safely accessible from the rest of the site. There are no special evacuation issues at the site that would prevent adherence to any existing regional evacuation plans. A NSW Ambulance Continuity Plan will be prepared outlining how the ambulance station would be managed during flooding, as has been done with other stations located in the floodplain.
15	Site Emergency Response Flood Plan required (except for single dwelling-houses) where floor levels are below the PMF.	Proposed building floor levels are located above the PMF level. However, a NSW Ambulance Continuity Plan will be prepared outlining how the ambulance station would be managed during flooding.
16	Area to be available to store goods above the 1% AEP flood level plus 0.5m (freeboard).	All floor levels are located above the 1% AEP level plus 0.5 m and the PMF level.
17	No external storage of materials below the flood planning level which may cause pollution or be potentially hazardous during any flood.	No potentially polluting or hazardous materials should be stored externally below the 1% AEP level plus 0.5m. It is understood that none is proposed.

Conclusion

The activity will not affect a natural waterbody, wetland or groundwater aquifer or natural water drainage pattern. Erosion and sediment control measures will be put in place in accordance with the Blue Book to prevent any materials entering the public stormwater system. To manage increased stormwater and maintain water quality post construction adequate stormwater management measures will be implemented.

A Flood Assessment has been undertaken which has identified the existing flood behaviour at the subject site and the anticipated impacts of the proposed development on flood behaviour. Consequently, the recommended finished floor level is 5.25 m AHD which is above the PMF. Impacts on flood behaviour as a result of the development are anticipated to be minor and less than the 'permissible flood impacts' of Council's DCP and not to an extent considered to be a material change in risk to life or property.

Potential impacts to hydrology and water quality could arise from the Activity as a result of soil disturbance and chemical spills during construction and/or operation by entering the public stormwater system and potentially making their way into natural waterways. A spill kit will be on-site as a precaution in the event of any potential spills (refer **Section 6.2.14**).

Mitigation Measures

The following mitigation measure would be implemented to manage impacts relating to hydrology, flooding and water quality:

- Stormwater Management controls including onsite detention would be implemented in accordance with The Civil Engineering Design Report by Meinhardt Bonacci dated July 2022.
- The erosion and sediment control measures for the site will be implemented during construction. The design of these measures is to be in accordance with the Landcom "Blue Book". These will include:
    - A sediment fence.
    - Temporary access to site with shaker pad.
    - An indicative stockpile area with sediment fence around it during construction.

- Geotextile inlet pit filters or sandbags to be placed around existing stormwater pits.

- Prior to occupation of the site a Business Continuity Plan would be prepared outlining how the ambulance station would be managed during an extreme flood event. The Plan is to consider and address the following matters:

i) During a flood, it would be safe to shelter-in-place in the building at the site (provided that the floor level is constructed above the PMF as intended).

ii) The duration of inundation across the catchment may range from as little as 30 minutes through to several hours depending on the location and the nature of the storm event. The site itself may experience inundation of 1 to 4 hours duration in events of a 2% AEP magnitude or larger.

iii) Do not attempt to drive through floodwater. Driving through floodwater is the major cause of death during floods. Floodwater may be deeper or faster flowing than it appears and can contain hidden snags or debris, or the road beneath may be damaged. Ambulance drivers who may be required to drive through floodwaters should be provided with specialist training.

iv) If evacuation of the site is being considered during a storm or flood event, water levels at the Cabbage Tree Creek gauge should be monitored (https://mhl.nsw.gov.au/Station-214405) and consideration given to the following:

- A level of 5.3 mAHD is used by the SES as a response trigger level, indicating that some roads are likely to begin experiencing inundation soon thereafter. At a level of 5.5 mAHD the Princes Highway at Hungry Jacks is likely to be inundated, as is Montague Street. These levels could be considered as a threshold for determining whether it is appropriate to complete an early evacuation.
- If floodwaters have begun to spill across the site from the south-west, it is expected that hazardous road conditions would be encountered during evacuation and it would be preferable to remain at the site until conditions abate.
- The safest route out of the local floodplain is to the north along Carters Lane via Storey Street and Holder Street. If significant inundation is encountered on local roads (e.g., Elliots Road, Carters Lane or Squires Way) when leaving the site, it is likely that hazardous road conditions would be encountered elsewhere during the journey. Accordingly, it would be preferable to return to the site and shelter-in-place until conditions abate.

(v) On receipt of a Bureau of Meteorology (BoM) Preliminary Flood Warning, Flood Warning, Flood Watch, Severe Thunderstorm Warning or a Severe Weather Warning for Flash Flooding consider whether it is appropriate to complete an early evacuation of the site prior to flooding by:

- Monitoring the BoM website (http://www.bom.gov.au/nsw/warnings/index.shtml) and local radio stations for updates; and,
- Checking water levels at the Cabbage Tree Creek gauge (https://mhl.nsw.gov.au/Station 214405).

(vi) The SES may advise the community to evacuate. The SES will issue an 'Evacuation Warning' when the intent is to warn the community of the need to prepare for a possible evacuation. The SES will issue an 'Evacuation Order' when the intent is to instruct the community to immediately evacuate in response to an imminent threat. In such case, follow the instructions issued by the SES. The SES will issue an "All clear" notification when return to evacuated areas is safe after floodwaters have receded and reliable access is available.

6.2.7 Visual Amenity

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

Existing Environment

The activity will occur within a level, open site, bordered by roads on three sides and surrounded predominantly by recreational land and sporting fields. Backing onto the site from the west is a block of five residential properties while a childcare facility is located on the adjacent block to the north-east. An open carpark and buildings associated with Innovation campus student accommodation are located south of the site. Vegetation is managed open space, with isolated mature tree species dotted along the roadside and western boundary. Visual amenity in the location of the development area is considered moderate.

Impact Assessment

The construction phase of the Project will require the establishment of a site compound including the presence of works crew, plant and equipment, representing a minor short-term variation in the visual environment.

Upon completion of the new ambulance building, the visual amenity of the site will be changed from open space to the new Ambulance Station. The new Station will be primarily visible from adjoining playing fields, the childcare facility and vehicular traffic along Innovation Way. Residential properties to the west fronting Cowper Street are a mix of single and double storey with rear yards backing onto the site, separated by solid fences (n.b. one property may have an open timber fence).

The proposed new building will be well designed and visually pleasing. Consistent with other RAIR projects the building height and form is simple with a low-rise, skillion roof and neutral colour palette. The Project is therefore compatible with the scale of the local built form and is considered to be an appropriate form of development within the mixed uses of the surrounding areas. Ground level at the site is consistent with those of adjoining properties, minimising the building's visual impact from adjoining properties and the street. The Plant Room is internal and parking areas are on the eastern side separated from the residential properties by the new building. An area of open space will be maintained between the new station and the adjoining properties.

The new station will be setback from the street, allowing for landscaping to be incorporated into the street frontages. One small tree along the road reserve will be removed. New landscaping will incorporate 11 new trees around the frontage facing the roads, as well as a mix of shrubs, groundcovers and grasses which will complement the site and provide some screening. It will also be consistent with the existing character of the streetscape and surrounding areas. Views towards the station from the childcare centre and the street will be screened by the proposed vegetation. Views from adjoining open space areas will also be screened and visual impacts softened as a result.

The nearest campus building is a single storey facility, separated from the activity area by the remainder of the site, an access road and open space and is partially screened by a stand of Casuarina trees. Other multi-storey accommodation located further to the south is separated by the large open carpark between the buildings and the site.

Houses to the west front away from the Activity site. However, views from the yards or rear parts of the houses will change as result of the new station. Uses along the western side of the station will be administration and amenities facilities and a small outdoor area. The plant room, including delivery area, wash bay and waste storage areas and external parking areas will be located on the other side of the building. Physical separation from the dwellings to the activity site is also provided by the existing rear yards. Plans show palisade fencing along the boundary. It is recommended that, to maintain the privacy of residential properties, the project manager liaise with property owners regarding the retention or replacement of any open fencing along the boundary with the development site.

Overall, the development proposed would result in a low impact permanent variation in the visual environment, however this would not be detrimental or unreasonable in the locality. The proposal's low profile, simple material palette and neutral tones, combined with landscaping and physical separation mitigates any visual domination over external areas.

The proposal would not result in any unreasonable environmental amenity impacts to adjoining properties, such as overshadowing, sunlight access reduction, privacy issues or visual bulk. Shadow diagrams have been provided in the Architectural plans.

Mitigation Measures

The following mitigation measures would be implemented to manage impacts relating to Visual Amenity:

- The Project Manager, or appropriate person, will liaise with adjoining residents regarding the retention or possible replacement of any open fencing along the boundary with the development site.
- Upon completion of construction, any works areas would be restored to an acceptable visual state.
- The construction worksite would be maintained, kept free of rubbish and cleaned up at the end of each workday.
- Existing solid fences along the western boundary should be maintained to minimise impacts on privacy.

6.2.8 Aboriginal Heritage

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

Existing Environment

Heritage Management & Planning Pty Ltd has undertaken a desktop Aboriginal Cultural Heritage (Due Diligence) Assessment of the activity to support this Review of Environmental Factors. The assessment is attached as **Appendix Z**. The Due Diligence Assessment has taken into consideration the likely impact of the proposed activity on Aboriginal archaeological sites and whether the proposed ambulance station can be approved under the due diligence approval pathway (section 87 of the National Parks and Wildlife Act NSW (1974)). The due diligence assessment includes the following:

- A description of the nature of the works with specific consideration of movement of topsoils with the potential to contain Aboriginal objects.
- A review of relevant legislation and its applicability to the activity.
- A search of relevant Aboriginal heritage registers, including the Aboriginal Heritage Information Management System.
- A review of environmental information to consider the potential that the ancillary work areas are located in landforms or landscapes with an elevated potential to contain Aboriginal objects or cultural values.
- A review of historic ground disturbance to consider factors which might have removed Aboriginal objects from the area of the proposed ambulance station.

- A review of available reports and assessments in relation to investigations into Aboriginal Cultural Heritage for the locality.
- Documentation of the assessment outcomes including:
  - A summary of any known Aboriginal archaeological sites within the Activity Area or its immediate vicinity.
  - Appropriate mitigation measures to avoid known Aboriginal archaeological sites or landforms with the potential to contain Aboriginal archaeological sites.
  - Statements on the adequacy of the assessment including the requirement for additional archaeological investigation.

The activity site is within 200 m of Cabbage Tree Creek. It is located within the grounds of the University of Wollongong's Innovation Campus and the site has been historically cleared and disturbed in association with the campus facilities and previous land uses. These uses are documented in the Preliminary and Detailed Site Investigations carried out to determine if the land has been contaminated (Refer **Appendix M**) and include farming, sports courts and structures which have subsequently been demolished. **Figure 6-3** shows an aerial image of the site in 1966 when it was utilised as part of the Balgownie Migrant Workers Hostel which was constructed in late 1950 and 1951 as a migrant workers' hostel to meet the demand for housing created by a Commonwealth government policy for increased immigration as documented in the Statement of Heritage Impact (refer **Appendix P**).

Figure 6.3 Aerial Image of the site in 1966

The due diligence assessment has concluded that based on a review of the available site history it is reasonable to proceed with the assessment on the basis that the Activity Area has been disturbed within the meaning of the Due Diligence Code of Practice. The history of ground disturbance includes:

- Removal of original vegetation.

- Increase alluvial flooding as a result of forest clearing and urbanisation.
- Tilling, cropping and pasture improvement.
- Introduction of fill as part of the migrant camp construction (confirmed by the results of the geotechnical Assessment (refer **Appendix S**) and the contamination assessments (refer **Appendix M**).
- Construction of a sports facility (concrete courts).
- Accumulation of topsoil during the use of the area as a park/ open space.

Impact Assessment

Ground disturbing works with the potential to impact on Aboriginal archaeological sites would likely include:

- Removal of topsoils for slabs, foundations and footings;
- Excavation of trenches for underground utilities;
- Excavation and construction of drains and stormwater detention basins;
- Removal of topsoils for contractor offices and parking, and
- Disturbance from temporary material stockpiles.

In considering the impacts of the above ground disturbing works, the due diligence assessment has concluded that the proposed Fairy Meadow Ambulance Station will not likely result in harm to Aboriginal archaeological sites. This is based on the following:

Proximity to known Aboriginal sites: No Aboriginal sites have been recorded within or immediately adjacent to the Activity Area on the AHIMS database. The AHIMS site records are located in relatively undisturbed environments along the coastline or in the reserve near Fairy Creek to the south of the Activity Area. The Activity Area is located in the northern portion of a possible burial area associated with the Battle of Fairy Meadow (GML Heritage 2023), however the GML Heritage study does not provide definitive information that burials occurred in the local area stating only that the post-battle burials occurred on the eastern side of the creek which is nearby to the Activity Area but also includes the University of Wollongong campus.

Potential of landform to contain Aboriginal sites: The Activity Area comprises alluvial deposits between two small creeks. Where elevated dunes and estuaries are located nearby, coastal creek flats were not typically selected as campsites as the marine and aquatic environments provide substantially more food resources than swamps and closed forests. In coastal environments this includes extensive shell middens fringing the mangroves/mudflats or the inter-tidal zone. Additionally, elevated ground was sought after as it provided visual access to the surrounding landscape and moved campsites away from the forest environments which were set aside for hunting and gathering, particularly where freshwater was available for larger marsupial and macropods.

The account of the Battle of Fairy Meadow indicates that the post-battle burials were located on the creekbank- however it is not possible to verify the exact location of burials as the historical account was not specific on this matter and the extent of change and modification of the coastal plain and creek systems makes interpretation of the historic environment difficult. An additional consideration is that the soil qualities of the Activity Area below the recent fill is not conducive to the digging of traditional burials or the preservation of bone material.

Previous disturbance history: The analysis of historical aerial photos and the geotechnical and soil contamination investigations have concluded that the Activity Area has been subject to disturbance that would disturb or remove the upper soil profile with the greatest potential to contain Aboriginal archaeological deposits. For the purposes of the assessment the Activity Area has been disturbed within the meaning of Due Diligence Code of Practice (DECCW 2010A:18), being:

Land is disturbed if it has been the subject of a human activity that has changed the land's surface, being changes that remain clear and observable.

In the context of the Due Diligence Code of Practice the geotechnical investigation and soil contamination report demonstrate that the Activity Area has been subject to ground disturbance, being the fill for the construction of the sports courts and temporary houses. The analysis of historical aerial photos show that the Activity Area has been subject to historical disturbance that would significantly disturb or remove the upper soil profile with the greatest potential to contain Aboriginal archaeological deposits. Given the disturbance history of the Activity Area, which includes a number of more recent works such as the upgrade of the footpath, installation of lights and construction of verges and drains associated with Squire Way it is reasonable to conclude that if an archaeological site was present, it would have become visible or would have been identified within exposed ground during these construction works.

Conclusion

The Due Diligence assessment has concluded that the proposed construction of the Fairy Meadow Ambulance Station will not likely result in harm to Aboriginal objects or burials associated with the Battle of Fairy Meadow. As such an AHIP or additional archaeological excavation is not required, and the works can proceed under the Due Diligence approval pathway (NPW Act 1974 Section 87(2)). However, it is recommended that an Aboriginal Objects Find Procedure is put in place as a precautionary measure.

Mitigation Measures

The following mitigation measures have been recommended by the Due Diligence Assessment and would be implemented to manage impacts relating to Aboriginal Heritage:

It is recommended that if it is suspected that Aboriginal objects have been uncovered as a result of development activities within the Project Area:

- All personnel working on site would receive induction on their responsibilities under the NPW Act
- Work in the surrounding area is to stop immediately and records are made of the finds via project reporting procedures.
- A temporary fence is to be erected around the site and appropriate controls put in place to ensure that no additional ground disturbance happens in the vicinity of the find.
- An appropriately qualified archaeological consultant and a representative of the Illawarra Local Aboriginal Land Council are to be engaged to identify the material and provide an initial assessment of the significance of the object and the likely nature and extent of any associated archaeological sites.
- If the material is found to be of Aboriginal origin, the find must be reported on the AHIMS database.
- In the event that the Aboriginal objects are considered to have been damaged or disturbed, the incident must be reported through the NSW Enviro Hotline.
- Works may only recommence after advice from Heritage NSW on the requirement for an AHIP or where design, engineering or construction measures are identified to mitigate further damage to the Aboriginal site (i.e. site avoidance).
- As a precautionary measure, a qualified archaeologist should be employed to observe ground works below the layer of construction fill to determine if the soils have the potential to contain Aboriginal burials (i.e. dry sandy soils) or are waterlogged alluvial clays with a low potential to preserve organic material.
- In the unlikely event that Human Remains are located at any stage during ground works within the Project Area, all works must halt in the immediate area to prevent any further impacts to the remains. The burial site should be cordoned off and the remains themselves should be left untouched. The nearest police station (Wollongong), Illawarra Local Aboriginal Land Council and Heritage NSW (Parramatta) are all to be notified as soon as possible. If the remains are found to be of Aboriginal origin and the police do not wish to investigate the site for criminal activities, the Aboriginal community and Heritage NSW should be consulted as to how the remains should be dealt with. Work may only resume after agreement is reached between all parties, provided it is in accordance with all parties' statutory obligations.

6.2.9 Non-Aboriginal Heritage

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

Existing Environment

The site is not listed as a heritage item or located within a Heritage Conservation Area.

The former Balgownie Migrants Worker's Hostel is located northwest of the site at 9 Squires Way (Lot 2 DP1172135). The former hostel features three buildings, currently used as a childcare facility and University bookshop) is listed as a local heritage item in Schedule 5 of in the Wollongong LEP (Item No. I61075 – see figure provided below). This item is also an item of State Significance listed under the *NSW Heritage Act 1997*.

Statement of Significance (SIS) for Item No. I16075 describes the former Hostel buildings as follows:

> *"The Nissen hut (building 204) and the two Quonset huts (buildings 201 and 210) have historical significance as physical evidence of the Balgownie Migrant Workers Hostel that was constructed at Fairy Meadow in 1950 and 1951 (and in use until 1982) as part of an Australia-wide post-World War II immigration program."*

The SIS notes that the buildings have some technical significance and social significance.

There are no other heritage listed sites within proximity to the development site.

Figure 6.4 Wollongong LEP 2009 Heritage Map

Impact Assessment

A Heritage Impact Assessment (HIS) in relation to the proposed development was prepared by Weir Phillips Heritage and Planning. The assessment was considerate of the objectives and controls of the Wollongong LEP 2009 and the Wollongong DCP 2009. A copy of the HIS is attached as **Appendix P**.

The HIS notes that the Balgownie Migrant Workers Hostel is visible from most angles but not overtly visible from Squires Road. It also observes that both the subject site and heritage site are visible from either site.

In relation to any effect of the proposed development on the heritage item, the following is provided:

- The set back from the boundaries of Innovation Way to the proposed Ambulance station provides "as much landscaped curtilage as possible to the item diagonally opposite".
- The proposed development will not impede the ability to read and understood the remnants of the former Balgownie Migrant Workers Hostel.
- Users of the items in the vicinity will be able to view and appreciate the item's significance.
- The open space located to the north, east, and west of the item remains unimpeded by the development and allows appreciation of the original migrant Huts from some distance.
- The simple material palette and neutral tones of the new Station helps to ensure that it does not dominate or detract the heritage item.
- Views towards the proposed Ambulance station from the former Balgownie Migrant Worker's Hostel buildings will be screened by the proposed vegetation. The proposed ambulance station will also be partially screened from the item through the proposed boundary plantings around the site perimeter.
- Where visible the simple form, finishes and detailing of the proposed station will "clearly read as secondary, contemporary buildings in response to the parkland setting" which is "an appropriate response".
- The low profile of the station, coupled with the physical separation mitigates any visual domination of this item.
- The low profile of the proposed Ambulance Station will ensure that no views towards the former Hostel buildings will be impacted. Views towards the north-eastern part of the site from Innovation Way will still be extant, owing to the setback of the station from Innovation Way. Views from the other directions will remain unimpeded.
- No known archaeological deposits are located on site.

The HIS concludes that the existing curtilage around the heritage item is largely unaffected and does not impede appreciation of the heritage significance of the site. Vegetation screening and the setback of the new station ameliorates any visual impacts from the proposed development on the former Balgownie Migrant Workers Hostel and visual impacts are therefore generally considered acceptable. The proposed works fulfil the requirements for works within the vicinity of Heritage Items as set out by the Wollongong LEP 2009 and the Wollongong DCP 2009.

Mitigation Measures

No specific measures are required. The following standard protocol will be adapted for unexpected finds:

- The stop work provision should be applied in line with the requirements of the *NSW Heritage Act 1977* if any unexpected archaeological both historical and Aboriginal find be exposed during construction and earthworks. An appropriately qualified heritage professional and an archaeologist should be engaged to assess the finds and advise on their management.

6.2.10 Ecology

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

Questions to consider	Yes	No
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: o Section 7.2 (a) – Test for significant impact in accordance with section 7.3 of the BC Act. o Section7.2 (c) – it is carried out in a declared area of outstanding biodiversity value.		✓
Could the works affect a National Park or reserve administered by EES?		✓
Is there any important vegetation or habitat (i.e. Biodiversity and Conservation SEPP) within or adjacent to the work area?		✓
Could the works impact on any aquatic flora or habitat (i.e. seagrasses, mangroves)?		✓
Are there any noxious or environmental weeds present within the work area?		✓
Will clearing of native vegetation be required?		✓

Existing Environment

The site is an urban land parcel and is not identified as biodiversity certified land. It is currently managed as cleared open space in association with the University Campus. Isolated trees are dotted long the street frontages and a small, landscaped area and flagpole is located in the south-east corner.

Coastal vegetated land east of Squires Way and approximately 200 m from the site is mapped for Biodiversity values on the Biodiversity Values Mapping. This land includes the coastal nature reserve, Puckeys Estate Reserve and Towradgi Arm Creek, roughly 350 m east of the site. South-west, Cabbage Tree Creek is also mapped for Biodiversity values. This land also contains areas mapped as Coastal Wetlands and Coastal Wetlands buffer area under the R&HSEPP. The development site is outside of the Coastal Wetland buffers.

An EPBC Act Protected Matters Report undertaken on 26 August 2022 identified habitat for four threatened ecological communities and 46 threatened species (16 flora and 70 fauna species) within .25 km of the site (refer **Appendix I**).

Impact Assessment

A small tree (species unknown) along the road reserve will be removed to allow for the construction of a new access points. The tree in the road reserve appears to be a small, planted Eucalypt species and is located along the northern road reserve of Innovation Way. A large Melaleuca tree along the boundary of the residential properties is proposed for retention based on the recommendation of the project arborist with recommendations for protection (refer **Appendix T**). Four other large trees will be retained along the road reserve. These appear to be native species, possibly a Water Gum and Melaleuca/ Paper Bark species.

The tree proposed to be removed does not provide important habitat for any threatened fauna or represent threatened flora or communities listed under the *Biodiversity Conservation Act 2016* or *Environment Protection and Biodiversity Conservation Act 1999.* The Activity will not impact biodiversity. None of the vegetation proposed to be removed is considered to be of conservation significance or part of a cultural landscape value.

To complement the development and compensate the tree removal, landscaping will be installed at the site at the completion of works. A Landscape Plan prepared by Site Image (NSW) Pty Ltd **(Appendix Q)** shows that plantings will include ten *Melaleuca linariifolia* (Flax-leaved Paperbark) and one *Tristaniopsis Laurina 'Luscious'* (Water Gum) along the road boundaries, as well as a mix of shrubs, grasses and groundcovers. Plant selection will range in size from trees to grasses and ground covers and provide visual and species diversity. The planting design embodies a low maintenance and sustainable approach in terms of species choices and incorporates trees and low plantings, while maintaining existing trees where possible.

Mitigation Measures

The following mitigation measures would be implemented to complement the site and prevent impacts on existing trees:

- Landscaping of the site will be carried out in accordance with the plans and specifications prepared by Site Image Landscape Architects dated 5 August 2022.
- Trees identified for retention will be protected during construction in accordance with the Landscape Specification prepared by Site Image Landscape Architects dated 5 August 2022 and in accordance with the recommendations contained with the Arboricultural Impact Assessment Report prepared by Civica and dated 26 October 2022.

6.2.11 Bushfire

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

Existing environment

Although part of the Wollongong University Innovation Campus is mapped as being bushfire prone, the ambulance site is not identified as bushfire prone land.

Impact Assessment

There are no significant stands of vegetation in proximity to the ambulance site and given the surrounding development that is very limited risk to the ambulance station in terms of bushfire attack.

Mitigation Measures

No mitigation measures are required.

6.2.12 Land Uses and Services

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

Existing Environment

The site is located in the Wollongong University Innovation Campus and is currently an area of maintained open space and contains a pedestrian pathway between the campus and adjoining streets. The proposal will change the use of this land to an emergency services facility and reduce the amount of available open space. It will also result in the loss of the pedestrian pathway.

Impact Assessment

The change in use of land to an Ambulance Station will integrate well with the existing mix of surrounding land uses. As noted in previous sections, the proposed Station is not likely to result in significant impacts on adjoining properties and is compatible with the mixed uses and building types in the area. The station will replace an existing area of open space, however adjoining recreational areas are maintained ensuring that recreational opportunities and open space is maintained in the area. The proposed activity will require the demolition of an existing concrete pathway and lighting. While an existing pedestrian linkage will be maintained to the south through to Montague Street, consideration should be given to maintaining a direct pedestrian pathway from the campus to residential areas into the north in Cowper Street.

In relation to the use of land currently part of the Wollongong Innovation Campus the proposal is not inconsistent with the objectives outlined in Chapter D14: Wollongong Innovation Campus of the WDCP 2009 and the site is not identified in the DCP for any future use.

Information on the size and location of the sewer and water main obtained from Council indicates authority assets are not impacted by the proposed building or lot boundaries.

Notification will be provided of any potential services disruptions.

Mitigation Measures

The following mitigation measures would be implemented to manage impacts relating to Land Uses and Services:

- Any potential services interruptions shall be communicated to the relevant services authorities to enable flow on notifications to any affected services customers.
- Any affected Council or university infrastructure would be reinstated consistent with its prior condition.

6.2.13 Waste Generation

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

Existing Environment

The site is currently maintained as public open space.

Impact Assessment

The activity will be undertaken to ensure minimal impacts are generated from waste material produced on-site by ensuring that all waste is collected and disposed of or recycled in accordance with legislative waste disposal protocols and EPA guidelines. No materials will be used in a manner that poses a risk to public safety.

The proposed construction will generate waste products in the form of spoil and vegetative matter (lawn and tree) removed to enable construction of the new ambulance station. This material will be reused on-site and within landscaping maintenance activities across the site where feasible, or otherwise disposed of at a licenced waste facility.

Packaging, plastic, and timber waste may be generated during construction and would be disposed of in accordance with legislative waste disposal protocols and EPA guidelines. Waste bins will be established within the ancillary facility to separate waste streams to foster waste avoidance and resource recovery. Overall, the proposed construction presents a minor short-term impact regarding waste generation.

Operation of the ambulance station will generate the following waste streams:

- Special waste (clinical and related waste);
- Liquid waste;
- Hazardous waste and restricted solid waste;
- General solid waste (putrescible); and
- General solid waste (non-putrescible).

Operation of the ambulance station will be undertaken in accordance with legislative waste disposal protocols and EPA guidelines. The facility will be required to operate in accordance with the NSW Health Policy Clinical and Related Waste Management for Health Services (refer to **Appendix R**).

The ambulance station will be connected to the internal sewer/ stormwater system that links into the public network for both services.

The ambulance station will have a bin enclosure with an area of 9 m^2, capable of housing four large wheelie bins.

Mitigation Measures

The following safeguards will be implemented in order to manage potential waste impacts:

- Working areas are to be maintained, kept free of rubbish and cleaned up at the end of each construction day.
- Waste material is not to be left on site once the works have been completed.
- The working areas will accommodate separate bins and other waste storage structures to cater for waste streams required to foster waste avoidance and resource recovery.
- Operation of the ambulance station will be undertaken in accordance with the NSW Health Policy Clinical and Related Waste Management for Health Services.
- The contractor is required adopt an approach to reducing waste and improving recycling of waste generated through construction activities. This should result in a maximum diversion of building waste from landfill. The contractor will be required to report during construction and at completion on the volume of material that was sent to landfill. The contractor should make themselves aware of NSW Government Waste and Sustainable Materials Strategy (available at **www.dpie.nsw.gov.au/our-work/environment-energy-and-science/waste-and-sustainable-materials-strategy**)

6.2.14 Hazardous Materials and Contamination

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

Existing Environment

The site is within a vacant grassed public open space area owned by the University of Wollongong.

The site is mapped for potential acid sulfate soils, namely Class 5 at the development site, and Class 1, 3 and 4 further afield.

A search of the NSW EPA Contaminated Land Register was undertaken in July 2022 to determine if any areas of registered/known contaminated land occur in proximity to the site. The nearest recorded site related to a Caltex Fuel Depot at 45 Montague Street, over 300 m to south-east (refer to **Appendix I**).

As discussed further below, Preliminary and Detailed Site Investigation (PSI/DSI) prepared for the Activity in August 2022 confirmed that the site was not the subject any Orders or Notices under the *Contaminated Land Management (CLM) Act 1997*. It also confirmed that the site (and adjacent land) was not listed on the NSW EPA online list of NSW contaminated sites, nor was it on the NSWP EPA POEO public register as the subject of a licence, application, notice, audit, pollution study or reduction program. There is no evidence to indicate a potential for licensable quantities of Schedule 11 hazardous chemicals (dangerous goods) to have been stored on the site.

Impact Assessment

Alliance Geotechnical and Environmental Solutions undertook a Detailed (Stage 2) Site Investigation (DSI) for the Activity dated 5 August 2022. A copy is attached as **Appendix S**. Investigations involved a review of site history, onsite investigations, soil sampling from four boreholes and 13 test pits, groundwater sampling and laboratory analysis.

The objectives of the Investigations were to:

- Assess the potential for land contamination to be present at the site as a result of current and previous land uses;

- Assess whether identified potential land contamination would present an unacceptable human health or ecological exposure risk, based on the proposed land use scenario;
- Assess whether the site is suitable, in the context of land contamination, for the proposed land use scenario;
- Provide recommendations for further investigations, and management or remediation of land contamination (if warranted); and
- Assess the potential for acid sulfate soils to be present at the site, in the context of the proposed development work.

Based on the site history and physical observations, the PSI/DSI identified the following potential land contaminating activities for the site:

- Uncontrolled filling;
- Uncontrolled demolition;
- Use of hazardous building materials; and
- Termite treatment of buildings.

Investigations also identified four areas of environmental concern (AEC) and likely contaminants of potential concern (COPC) associated with potential land contaminating activities at the site. Also included in the investigation was consideration of likely exposure pathways and their potential to human health.

As a result of the assessment undertaken by Alliance of site history information, fieldwork observations and data, laboratory analytical data, the context of the proposed land use and objectives of this project, the following conclusions were made:

1. Unacceptable land contamination human health and ecological exposure risks have not been identified for the site;

2. The site is suitable for a commercial/industrial land use, such as shops, offices, factories and industrial sites;

3. Potential acid sulfate soils (PASS) are likely to be encountered in soils from the surface to at least a depth 3m below ground level (based on an assumed maximum disturbance depth of 2m below ground level). In the event the proposed development requires soil disturbance below a depth of 2m below ground level, further assessment would be required; and

3. Specific assumptions applying to the adopted land use scenario and human health risks were presented in the report (refer Section 9).

Based on the above, it was recommended that:

- Further assessment of soils classified as Potential Acid Sulfate Soils should be undertaken;
- An Acid Sulfate Soils Management Plan should be prepared to address identified acid sulfate soils; and
- Further assessment and management plan works should be undertaken by a suitably experienced environmental consultant.

Mitigation Measures

The following mitigation measures would be implemented to manage impacts relating to hazardous materials and contamination:

- The following recommendations from the Detailed (Stage 2) Site Investigation (DSI) dated 5 August 2022 are to be implemented as part of the Activity:

  (a) Further assessment of soils classified as PASS should be undertaken to:

  - Assess the nature and extent of natural soil layers that have a pH of 5.5 or more, and that would meet the definition of virgin excavated natural material (VENM) even though they contain sulfidic ores. This assessment

could facilitate offsite disposal of those soils (if excavated) below the permanent water table without treatment, at a suitably licensed facility.

- Assist with delineation of relevant PASS layers that cannot be disposed of below the permanent water table without treatment, to better inform relevant liming rates for acid sulfate soil treatment of those soils, prior to waste classification and offsite disposal.

(b) An acid sulfate soils management plan should be prepared to address identified acid sulfate soils; and

(c) Further assessment and management plan works should be undertaken by a suitably experienced environmental consultant.

- Storage and handling of material shall be in accordance with AS1940 The Storage and Handling of Flammable and Combustible Liquids, SafeWork NSW Code of Practice - Managing Risks of Hazardous Chemicals at Workplaces, *Protection of the Environment Operations Act 1997* and *Work Health and Safety Act and Regulations 2011*.
- A spill containment kit would be available at all times. All personnel would be made aware of the location of the kit and trained in its effective deployment.
- Any hazardous materials would be handled, managed, transported, and disposed of according to applicable regulations, including WH&S and EPA waste protocols.
- In the event that any unexpected conditions are encountered during earthworks (e.g. underground storage tanks, stained or odorous soils, fibre cement fragments, etc), all work should cease in that section of the site and an environmental consultant should be engaged to inspect the site and address the issue.
- Any hazardous materials would be handled, managed, transported, and disposed of according to applicable regulations, including WH&S and EPA waste protocols.

6.2.15 Sustainability and Climate Resilience

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

Existing environment

The site and surrounding area is zoned SP1 Innovation Campus and surrounded by open space/ recreational areas and facilities associated with the University. It is bordered by Innovation Way on two sides and adjoins residential properties to the west. There is a childcare facility on the adjacent property to the north-east. The site is flood prone and is mapped as Coastal Environment Area, Coastal Use Area and proximity area for Coastal Wetlands under State Environmental Planning Policy (Resilience and Hazards) 2021.

Impact Assessment

The Fairy Meadow Ambulance Station has been designed will be constructed in accordance with the requirements of DGN058 and aligns with to industry good practice sustainability and NSW Government Sustainability policy. A pathway is to be developed to target the credits needed to achieve compliance with DGN 058 which for this particular Ambulance Station in this location is 60 points. A list of sustainability initiatives for the project will be provided to HI Planning and Sustainability.

Attached as **Appendix L** is a statement prepared by JHA Consultants that demonstrates the proposed building's design compliance with the energy efficiency provisions of Section J Part J1 of the National Construction Code 2019.

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

Mitigation Measures

- Prior to the commencement of construction, unless otherwise agreed by HI's Program Manager, Sustainability, it must be demonstrated to the Crown Certifier that the that the project is able to achieve:

  a) compliance with Section 2.5.6 of the Health Infrastructure Engineering Services Guidelines dated 6 August 2021 (including Design Guidance Note No. 058) by attaining a minimum of 60 points in accordance with the ESD Evaluation Tool, the equivalency of a 5 Star Green Star rating under Design Guidance Note No. 058; or

  b) that the activity achieves the list of sustainability initiatives that align with Health Infrastructure Sustainability Commitment and Strategy, NSW Government Policy and industry good practice and approved by HI's Program Manager, Sustainability.

- A list of sustainability initiatives for the project will be provided to HI Planning and Sustainability prior to the completion of the project.
- Wastewater from the wash bay area shall be recycled and reused on site.
- A Climate risk assessment under DGN058 is to be prepared to assess projections of flooding, heat and other climate risk assessment criteria to ensure continued resilience and adaptation planning.

6.2.16 Community Impact/Social Impact

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

Impact Assessment

The proposed new Fairy Meadow Ambulance Station is part of the RAIR program and development of a new contemporary Ambulance Station will provide improved health services to the community of Wollongong and surrounding areas. The new facility will have a significant positive impact on residents in the area improving ambulances services which will effectively result in more lives being saved to reduced response times to incidents.

The location of the Station within the University Campus provides a centralised location for the delivery of emergency services that will enable greater efficiencies for hospital transfers and response timeframes. The new station will be close to major transport routes, the CBD, residential, recreational, and mixed-use areas.

Heritage qualities associated with the adjoining childcare site are maintained and the design of the new station will ensure that the new building contributes to the surrounding streetscape and University Campus in a positive fashion.

Visual impacts from recreation areas and adjoining residential will be minor and will be ameliorated by good design, appropriate setbacks and complementary landscaping. Shadow diagrams provided with the plans demonstrate there will be no impacts from overshadowing.

Some temporary minor amenity impacts resulting from construction works associated with noise, visual change and air quality may be experienced by adjoining residents, but overall, the new Ambulance Station represents a benefit to the community. To minimize impacts on the community, environment, and existing services the Station design has evolved from extensive consideration of site characteristics, availability of existing services and operational requirements and functions of the new Station. Environmental issues associated with potential contamination, erosion control, water

quality, traffic, visual amenity, noise, and waste management have been addressed in **Section 6** and found to be satisfactory.

Where necessary the implementation of appropriate mitigation measures have been proposed. No further measures are required.

6.2.17 Cumulative Impact

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

Existing Environment

The Activity site is located in proximity to the Central Business District, recreational, residential, industrial and mixed-use zones.

Impact Assessment

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

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

A review of DPIE's major projects register and Wollongong Council's website found no recently lodged or approved significant developments within proximity to the site that would result in significant implications in regard to traffic, infrastructure services, amenity and/or environmental impacts when considered in-light of the proposed ambulance station.

Health Infrastructure is aware of the proposal to build the new Community and High Performance Centre on land directly to the north of the station site and have held discussions with University representatives in relation to the timing and required co-ordination of activities. Discussions between HI, contractors and the University will continue to be ongoing to ensure the projects do not affect each other or adjoining uses, or cause disruptions or conflict within the general community.

Given the absence of any significant local projects or urban growth, the proposed activity has no potential of affecting any major approvals or projects locally. The cumulative impacts of undertaking the proposed activity in the context of the local region is therefore considered low.

Mitigation Measures

The following safeguards will be implemented in order to manage potential cumulative impacts:

- HI and project staff shall monitor DPIE's major projects register and Wollongong City Council's Development Application tracker for any significant developments that may occur locally and with potential to coincide with the activity construction period.
- Where required project staff will undertake pre-construction review and liaison with other development sites to co-ordinate works and minimise impacts (e.g. delivery times, parking).

7. Summary of Mitigation Measure

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

7.1 Summary of Impacts

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

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

8. Justification and Conclusion

The proposed Ambulance Station at 7 Squires Way, Fairy Meadow is subject to assessment under Part 5 of the EP&A Act. The REF has examined and taken into account to the fullest extent possible all matters affecting, or likely to affect, the environment by reason of the proposed activity.

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

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

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

The activity is not likely to significantly affect threatened species, populations, ecological communities or their habitats, and therefore it is not necessary for a Species Impact Statement and/or a BDAR to be prepared. The environmental impacts of the proposal are not likely to be significant and therefore it is not necessary for an EIS to be prepared and approval to be sought for the proposal from the Minister for Planning under Part 5 of the EP&A Act. On this basis, it is recommended that HI determine the proposed activity in accordance with Part 5 of the EP&A Act and subject to the adoption and implementation of mitigation measures identified within this report.