HumeLink East

Bushfire Emergency Management and Evacuation Plan

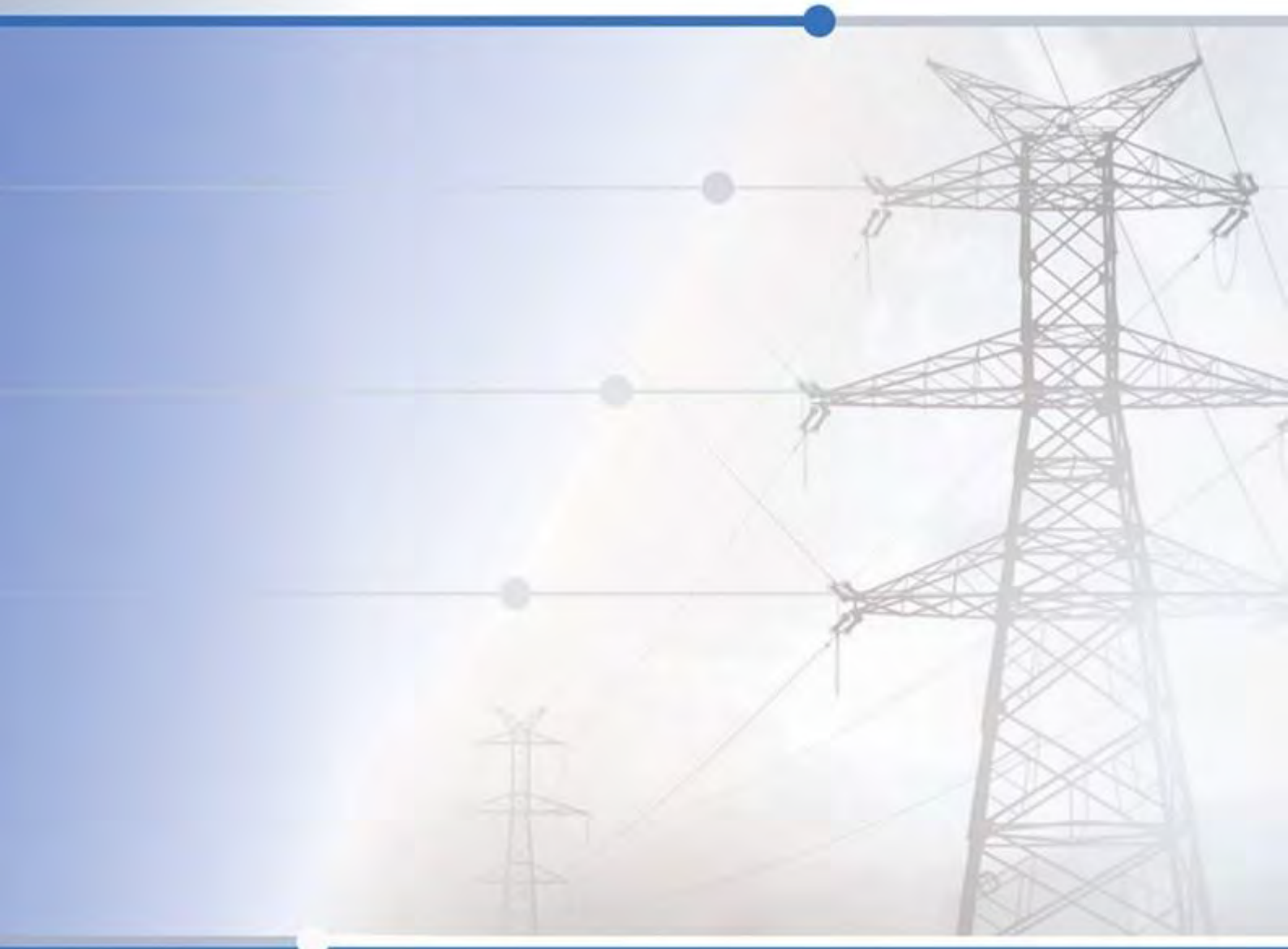
HLE-AUR-ENV-ALE-PLN-0000-00001

HumeLink East

Transgrid

Date: 11/08/2025

HumeLink East



Bushfire Emergency Management and Evacuation Plan

HLE-AUR-ENV-ALE-PLN-0000-00001

Client: Transgrid | Project: HumeLink East
Revision: 01.7
Date: 11/08/2025

Document control record

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PROJECT AUTHORISATION

Report Details						
Report Title	Bushfire Emergency Management and Evacuation Plan					
Document Code	HLE-AUR-ENV-ALE-PLN-0000-00001		**EDMS Number**	TBC		
Status	Issued for review		**Client**	Transgrid		
Rev	**Date**	**Revision details/status**	**Author**	**Reviewer**	**Verifier** (if required)	**Approver**
A01	2023-12-21	Concept Design – draft for AGJV review	JT / RR	KH		AE
A	2024-01-25	Concept Design – TG submission	JT / RR	KH		AE
B	2024-04-2	Updated draft incorporating TG and AGJV comments	JT / RR	KH	PF	AE
C	2024-07-05	Updated draft incorporating TG comments and design	JT / RR	KH	PF	ML
00	2024-08-09	IFC	JT / RR	KH	PF	ML
01.1	2024-11-21	IFC	JT / RR	KH		ML
01.2	2024-12-19	IFC	JT	RR		ML
01.3	2025-04-04	IFC	JT / RR	KH	PF	ML
01.4	2025-04-11	IFC	JT	RR		ML
01.5	2025-07-16	IFC	GW	JM		JM
01.6	2025-07-21	IFC	GW	JM		JM
01.7	2025-08-11	IFC	GW	JM		JM
Current revision	**01.7**					

Approval			
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Title	Aurecon Design Manager	Title	AGJV Environmental Approvals Manager

Contents

Appendices

Figures

Tables

Legislative and policy context

For background context, the relevant legislation and guidelines used in the development of the BFEMEP is provided in Table 0-1.

Table 0-1: Project relevant legislation and guidelines

Legislation/Guideline	Description
Australian Standard AS3959:2018 Construction of Buildings in Bushfire-Prone Areas	Australian Standard AS3959:2018 (Standards Australia, 2018) is applicable to construction activities on bushfire prone lands throughout Australia. Its requirements aim to improve the resistance of structures from ember attack, radiant heat loads, and direct flame contact.
Australian Standard AS5577:2013 Electricity Network Safety Management Systems	Australian Standard AS5577:2013 (Standards Australia, 2013) identifies national standards for an Electricity Network Safety Management System for an Electricity Network Operator to ensure the safe design, construction, commissioning, operation, maintenance, and decommissioning of its electricity network.
Australian Standard AS3745:2010 Planning for Emergencies in Facilities	Australian Standard AS3745:2010 (Standards Australia, 2010) was prepared to enhance the safety of people in facilities, by providing a framework for emergency planning.
Australian/New Zealand Standard AS/NZS1221:1997 Fire hose reels	Australian/New Zealand Standard AS/NZS1221:1997 (Standards Australia, 1997) Fire hose reels was prepared to provide guidelines and specifications for the design, installation, and maintenance of fire hose reels in buildings. The standard outlines the requirements for the size and placement of fire hose reels to ensure they are easily accessible and can effectively extinguish fires.
Australian Standard AS2419.1:2005 Fire hydrant installations - System design, installation, and commissioning	Australian Standard AS2419.1:2005 (Standards Australia, 2005a) Fire hydrant installations - System design, installation, and commissioning provide guidelines and specifications for the design, installation, and commissioning of fire hydrant systems in buildings to ensure their effectiveness in case of a fire.
Australian Standard AS2441:2005 Installation of fire hose reels	Australian Standard AS2441:2005 (Standards Australia, 2005b) Installation of fire hose reels ensure the correct installation, maintenance and locations of fire hose reels in buildings for effective firefighting purposes.
Australian Standard AS4083:2010 Planning for emergencies – Health care facilities	Australian Standard AS4083:2010 (Standards Australia, 2010) Planning for emergencies – Health care facilities aims to ensure healthcare facilities are well prepared and equipped to handle emergencies, minimizing risk, protecting lives, and maintaining continuity of care during crisis situations.
Australian/New Zealand Standard AS/NZS1596:2014 The storage and handling of LP Gas	Australian/New Zealand Standard AS/NZS1596:2014 (Standards Australia/New Zealand, 2014) The storage and handling of LP Gas provides guidelines and specifications for the safe storage, handling, and usage of liquefied petroleum gas (LP Gas) in various applications.
Australian/New Zealand Standard AS/NZS 7000:2016 Overhead Line Design	Australian/New Zealand Standard AS/NZS7000:2016 (Standard Australia/New Zealand, 2016) specifies general requirements for new overhead powerlines, so that they are suitable for their intended purpose, including construction, maintenance, and operational safety requirements, and environmental considerations. The standard includes guidance on clearance and easement widths.

Legislation/Guideline	Description
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) (Commonwealth Legislation)	The EPBC Act provides that any action (i.e. a project, development, undertaking, activity, or series of activities) that has, will have, or is likely to have a significant impact on Matters of National Environmental Significance (MNES), or other matters protected under the EPBC Act requires approval from the Commonwealth Environment Minister.
Forestry Act 2012	The Forestry Act 2012 regulates the Forestry Corporation of NSW (FCNSW). The object of the Act is the maintenance of a long-term sustainable timber supply for NSW. The Act integrates the regulatory regimes for environmental planning and assessment, for the protection of the environment and for threatened species conservation.
National Parks and Wildlife Act 1974	The National Parks and Wildlife Act 1974 regulates conservation and land management. The objectives of the Act are to be achieved by applying the principles of ecologically sustainable development.
Environmental Planning and Assessment Act 1979	The NSW EP&A Act and the Environmental Planning and Assessment Regulation 2021 regulate the planning approval and environmental assessment process in NSW.
Biodiversity Conservation Act 2016	The Biodiversity Conservation Act 2016 serves as a key NSW legislative tool to protect threatened species, ecological communities, protected plants, and animals, and identify associated key threatening processes. The purpose of this Act is to maintain a healthy, productive, and resilient environment for the greatest wellbeing of the community, now and into the future, consistent with the principles of ecologically sustainable development. In this context of this assessment, consideration would be given to the aims of this Act including through the mitigation measures to manage bushfire risk which require vegetation clearance, including APZs (refer to section 5.1).
National Electricity Network Safety Code	The National Electricity Network Safety Code (ENA, 2019b) provides an overview of the safety principles applying to design, construction, operation, maintenance, commissioning and decommissioning of Electricity Networks. The objectives of this code is to ensure safety as a priority for customers, the public and industry workers, alignment with the relevant Australian Standards, nationally consistent practices to improve safety and economic efficiency through standardisation.
Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers (NSW RFS, 2019)	Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers (PBP) (NSW RFS, 2019) provides the basis for development on BFPL in NSW (BFPL are areas able to support a bushfire or be subject to a bushfire attack).
Fire and Rescue NSW Act 1989	The Fire and Rescue NSW Act 1989 is an act to provide protection of persons and property from fire and from hazardous material incidents. The objective of this act is to establish and maintain a permanent and retained fire brigade system. The act sets out the functions and responsibilities of Fire and Rescue NSW, including fire prevention, suppression, and emergency response. It also outlines the powers and duties of firefighters, as well as the organization and administration of the fire brigade system.
Rural Fires Act 1997	The Rural Fires Act 1997 (Rural Fires Act) regulates the suppression and management of bushfires. The objectives of the Act are to provide for the duties and requirements regarding the NSW Rural Fire Service (NSW RFS), Neighbourhood Safer Places, Fire Trails, and Bush Fire Prevention.

Legislation/Guideline	Description
Work Health and Safety Act 2011 (Commonwealth) and Work Health and Safety Regulation 2017	The Work Health and Safety Act 2011 (WHS Act) outlines the legal responsibilities and duties for ensuring the health and safety of workers and workplaces. It is applicable to all companies and individuals engaged in work activities across various industries. The Work Health and Safety Regulation 2017 (WHS Regulation) complements the WHS Act by providing more detailed requirements and practical guidance on specific areas. It covers a wide range of matters, including general workplace management, hazardous substances, plant and equipment, construction work, and health and safety committees.
Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW, 2005)	The Storage and Handling of Dangerous Goods Code of Practice (2005) is a document developed by WorkCover NSW in Australia. This code provides guidance and sets out best practices for the safe storage and handling of dangerous goods in workplaces. The code applies to businesses that store, handle, or transport hazardous substances that have the potential to cause harm to people, property, or the environment. It helps organizations comply with their legal obligations under work health and safety legislation.
Development Planning: A guide to developing a bush fire emergency management and evacuation plan NSW Rural Fire Service (NSW RFS) (2014).	The Development Planning guide provides a comprehensive framework for creating a bushfire emergency management and evacuation plan. It emphasizes the importance of preparedness, response, and recovery in the face of bushfire threats. The guide outlines steps for risk assessment, identifying vulnerable areas, establishing communication strategies, and coordinating with emergency services. It also emphasizes the need for community involvement, training, and regular review of the plan to ensure effectiveness.
TransGrid Bushfire Risk Management Plan (2021)	The TransGrid Bushfire Risk Management Plan for 2021 outlines strategies and protocols aimed at mitigating the risk of bushfires on their electricity infrastructure. The plan includes measures such as vegetation management, asset inspections, and early detection systems to reduce the likelihood of bushfires damaging their facilities. This plan supports the Bushfire FSA and serves to demonstrate compliance with the Electricity Supply (Safety and Network Management) Regulation 2014 and AS5577-2013: Electricity Network Safety Management Systems.

Abbreviations

Abbreviation	Description
AFDRS	Australian Fire Danger Rating System
APZ	Asset Protection Zone
AS	Australian Standard
Asl	Above sea level
BAL	Bushfire Attack Level
BCA	Building Code of Australia
BFEMEP	Bushfire Emergency Management and Evacuation Plan
BFMC	Bushfire Management Committee
BFPL	Bush Fire Prone Land
BoM	Bureau of Meteorology
BRAR	Bushfire Risk Assessment Report
FFDI	Forest Fire Danger Index
FDR	Fire Danger Rating
LGA	Local Government Area
NASH	National Association of Steel Framed Housing
NSP	Neighbourhood Safer Place
PBP	Planning for Bush Fire Protection: A guide for Councils, planners, fire authorities and developers (NSW RFS 2019)
PCT	Plant Community Type
NSW RFS	NSW Rural Fire Service
SFPP	Special Fire Protection Purpose development as defined under the *Rural Fires Act 1997*
TOBAN	Total Fire Ban, as issued by the NSW RFS
PFSE	Prescribed Fire Safety Equipment
DHWA	Designated Hot Works Area
PMT	Project management team

Definitions

Term	Definition
Asset Protection Zone (APZ)	A fuel-reduced area around a structure or built asset that helps reduce the impact of a bush fire.
Authorised Officer	A person who has been assessed as competent to assess Hot Work and Fire Risk Work and compile and issue a Hot Work permit or Fire Risk Assessment and Control Measures (FRACM) form.
Bushfire Emergency Management Plan (BFEMEP)	A strategic document that outlines how to prevent and respond to bushfires in a specific area or property. BFEMEP consider factors like: ■ vegetation management, ■ access routes, ■ water supply, and ■ evacuation procedures
Bushfire Risk Assessment (BRAR)	Details all the bushfire protection measures that will be put in place as part of a development to reduce the risk from bushfire to an acceptable level.
Bush Fire Prone Land (BFPL)	land that has been identified by local council which can support a bush fire or is subject to bush fire attack.
Combustible Material	Material that can maintain combustion with the addition of an external heat or ignition source, e.g. timber or linings present within wall and ceiling framing, flammable liquids/fibres, vapours, dry vegetation/grass or combustible liquids
Confined Spaces	An enclosed or partially enclosed space that: a) is not designed or intended primarily to be occupied by a person, and b) is, or is designed or intended to be, at normal atmospheric pressure while any person is in the space, and c) is or is likely to be a risk to health and safety from: i) an atmosphere that does not have a safe oxygen level, or ii) Contaminants, airborne gases, vapours and dusts that may cause injury from fire or explosion, and/or harmful concentrations of any airborne contaminants, or engulfment.
Declared Bushfire Danger Period (BDP)	The time of high fire danger prescribed by the NSW Rural Fire Service, ACT Emergency Service Agency or CFA Victoria. The statutory Bush Fire Danger Period in NSW runs from 1st October to 31st March but it may vary due to local conditions.
Designated Hot Work Area (DHWA)	Area specifically configured to undertake Hot Work activities. DHWAs must be free of Combustible Materials and have appropriate control measures in place. They are generally, a workshop or welding bay (but may be located outside a building) and need to comply with the following: ■ No flammable materials within the room. ■ Hot Work must be 15 metres away from any combustible material. ■ Fire extinguisher is within 10 metres of the work area. ■ Work area must be contained within four walls or screened with fit for purpose fire resistant material. ■ No cavities in walls or eaves suitable to prevent escape of sparks; and

Term	Definition
	■ Drains need to be covered Caution - Adequate ventilation must be supplied for the operator
ESA	Emergency Services Agency
Essential or Emergency work	For the purposes of performing Hot Work or Fire Risk Work on a day declared 'Catastrophic', essential or emergency works include: ■ Works required to restore parts of the network, including transmission lines assets or HV apparatus. ■ Works required to ensure staff or public safety. ■ Works requested to be undertaken by Government agencies. Note: Essential or Emergency works doesn't include works required to meet construction or maintenance timelines/schedules.
Exemptions and Permits (for Hot Work)	During a Total Fire Ban the lighting or maintaining a fire 'in the open' is prohibited, however, certain activities may be exempted or approved by Permit during total fire bans. The following exemptions may apply to TransGrid: ■ The NSW RFS Commissioner may grant exemptions (which can be issued or are detailed in the NSW Government Gazette each time a total fire ban is declared.)
Fire Risk Work	Work (other than Hot Work) that has the potential to cause a fire. Fire Risk Work involves heat or potential spark producing activities that have the potential of creating a fire risk, Fire Risk Work includes: ■ Slashing; ■ Mulching; ■ Operation of steel tracked machines or steel attachments on mobile plant (e.g. grading, boring, excavation and the like); ■ Chainsaw operation; ■ Chipping; ■ Mowing; ■ Brush cutting; and ■ Operation of motor vehicles/rubber tyred mobile plant (excluding their use on sealed or unsealed gravelled roads).
Fire Risk Management Plan (FRMP)	A separate plan either attached to a WHSMP or CEMP that highlights fire risks and control measures specific to that project. FRMPs must be in accordance with this procedure.
Final Fire Check	Mandatory surveillance undertaken at the completion of Hot Work or Fire Risk Work to observe the workplace for any signs of smouldering, ignition or other factors that may start a fire.
Fire Watch Observer	A Fire Watch Observer is responsible for observing Hot Work and Fire Risk Work activities and must: • Be an Authorised Officer; • Be alert for any fire outbreak or hazards; • Take immediate action to combat any outbreak of fire that may occur, if safe to do so;

Term	Definition
	• Not allow Hot Work to proceed outside the area specified on the Hot Work Permit; • Immediately stop the work and withdraw the Hot Work Permit if a hazardous condition is observed; • Be aware of the need to use PPE where Hot Work involves arc welding, cutting or arc gouging; and • Not leave the work site(s) unless properly relieved by an Authorised Officer. Note: A single person may be nominated as the Fire Watch Observer for multiple permits across multiple locations as long as they can adequately satisfy the conditions above.
Hazardous Area	Any work area where flammable/combustible materials may come into contact with flames, sparks, molten materials or hot surfaces. Hazardous Areas may include (but not exclusively); ■ Confined spaces; ■ Buildings where there are materials that are made of or contain combustible matter; ■ Dry/combustible vegetation; ■ Rubbish; and ■ Oil and Fuel storage areas. An area is deemed not to be hazardous where there are no combustible materials such as oil/chemicals/fuel storage, dry/combustible vegetation or rubbish, within 15m (or as approved by TransGrid management) of the work area/zone.
High Risk Activity	High risk activity means the following: a) welding; b) grinding; c) soldering; d) gas cutting; e) any other activity prescribed by regulation as a high risk activity.
Hot Work	Hot Work is any action that involves high temperatures and has a high risk of creating a fire. Examples of Hot Work are as follows, but are not limited to: ■ Welding, Oxy-Acetylene or Plasma cutting; ■ Grinding/cutting of metal including the use of flexible sanding disks; ■ Production of heat, flammable fumes and gases during work activities; and ■ Dry concrete metal grinding/cutting.
Hot Work Area	The area within a radius of 15m from the point where the Hot Work is to be undertaken (including the space above and below that area). The Hot Work Area should be made safe by various techniques, preparation and testing to ensure that any risk of fire or explosion resulting from the Hot Work is eliminated.
Indoors	Inside a building or other structure that is fully enclosed on all four sides and has a door and roof to prevent sparks from escaping.
Instructed Person	A person advised by or supervised by an Authorised Officer.
In the open	Locations that are in the open air, including areas such as: ■ Easements and outdoor public spaces

Term	Definition
	■ Substations/switchyards; ■ Communications facilities; ■ Depots and perimeter lands.
LGA	Local Government Areas
Neighbourhood safer Places (NSP)	Community place of last resort for people to shelter during a bushfire emergency, if they have not relocated earlier. These are designated and approved by the NSW RFS based on the site having adequate facilities, access and being located well away from bushfire risk. For the Project, it is the responsibility of the Superintendent or Senior Project Engineer or delegate to understand where the nearest NSP is for each site. In the event of a fire, access to the nearest town centre may also be the most appropriate for evacuation so that the Project is not overloading a NSP that is intended for the general community.
One working day	A shift with the same work party. This is typically between 7am and 7pm, or may include a shift that occurs overnight due to required work activities.
Plant Community Type (PCT)	Identifications of recurring patterns of native plant species assemblages in relation to environmental conditions such as soil, temperature, moisture and other factors.
Prescribed Fire Safety Equipment (PFSE)	The minimum fire safety equipment to be available and deployed for all Hot Work and Fire Risk Work, which includes: ■ Rake-hoe or shovel, and ■ A water knapsack spray pump of 16 litre minimum capacity filled with water or; ■ A fire extinguisher (liquid type) of 9 litre minimum capacity; or ■ A dry powder type extinguisher of 0.9 kg minimum capacity. Refer to Appendix B for the complete Fire Safety & Equipment Requirements for Hot Work and Fire Risk Work
Pre-work risk Assessment (PWRA)	The process conducted and documented before commencing a work activity. It includes assessing the risks associated with the tasks to be performed, the workplace and the environment.
Premises	Premises are areas within a security fence such as switchyards/substations and depots. Note: Premises includes new substations still under construction, if the security fence has been fully erected.
RFS	NSW Rural Fire Service.
Security fence	Palisade/man-proof fence surrounding substations, depots, switching stations and communication facilities.
Total Fire Ban (TOBAN)	A TOBAN is declared by the RFS or ACT ESA due to extreme weather conditions or when widespread fires are seriously stretching firefighting resources. When declared, it prohibits the lighting of any fires in the open air and any other activities that may start a fire. A declaration of a TOBAN covers specific identified areas of the relevant state. In this procedure the term TOBAN applies to a declaration of a Total Fire Ban (or Code Red day in Victoria). TOBAN declarations are made in accordance with, either:

Term	Definition
	a) Section 99 of the Rural Fires Act 1997 (NSW), by way of a notice in the b) Government Gazette, c) Section 4 of the Country Fire Authority Act 1958 (VIC), or d) (c) Section 114 of the Emergencies Act 2004 (ACT).
Work	Any physical maintenance, survey or construction/augmentation activity.
Working alone	Applies to any unexpected Hot Work or Fire Risk Work that is undertaken on easement or along access tracks where the Authorised Officer is alone.
Unfavourable	Adverse conditions such as extreme hot dry windy weather or in an area of increased fire activity.

1 Introduction

1.1 Overview

Transgrid is proposing to increase the energy capacity across New South Wales (NSW) through the development of around 365 kilometres of new 500 kilovolt (kV) high voltage transmission lines and associated infrastructure between Wagga Wagga, Bannaby and Maragle. This project is collectively referred to as HumeLink.

“HumeLink East” is the section of the HumeLink project between Wondalga and Bannaby. These works are being completed by the Acciona Genus Construction Joint Venture (AGJV), and Aurecon have been commissioned to undertake detailed design of this package of works. A project locality map is provided in Figure 1-1 showing the location of the HumeLink East project (‘the project’).

The project was approved by the Minister of Planning and Public Spaces under Section 5.19 of the *Environmental Planning and Assessment Act 1979* on the 13th of November 2024 (Application number: SSI 36656827). Construction of the project is scheduled to commence in 2025, subject to the finalisation of required approvals. Once construction has commenced, the project is estimated to take approximately 2.5 years to build and would become operational by the end of 2028.

1.2 Key components of the project

The project includes works and activities associated with the following (refer to Figure 1-1):

- Upgrades to the existing Bannaby 500kV substation
- A new ~227 km 500kV double circuit transmission line connecting the augmented Bannaby 500kV substation to the Interface Point where it will connect with HumeLink West
- Infrastructure required at the Interface Point to enable the connection of the HumeLink West and HumeLink East transmission line works – including the interface tower and associated infrastructure

It is noted that during the development of this document, changes to the infrastructure associated with construction has occurred during the detailed design activities. Table 1-1 details the current infrastructure associated with the construction of the Project, and details where changes have occurred since the completion of the EIS.

Where new accommodation facilities have been included into this BFEMEP.

Table 1-1: Updates to infrastructure associated with the construction

EIS construction infrastructure	Current infrastructure	Details on update since the completion of the EIS
Yass substation compound (C10)	Yass substation compound (C10)	Nil
Amended Bannaby substation compound (C12)	Amended Bannaby substation compound (C12)	Nil
Gadara Road compound (C19)	Gadara Road compound (C19)	Nil
Adjungbilly accommodation facility and compound (AC04)	Adjungbilly accommodation facility and compound (AC04)	Nil
Crookwell compound (AC06)	Crookwell compound (AC06)	Removal of accommodation facility and to be used as a laydown area only.
Yass accommodation facility and compound (AC05)	Yass Faulder Ave compound (AC05)	Removal of accommodation facility and to be used as a laydown area, and office buildings only.

EIS construction infrastructure	Current infrastructure	Details on update since the completion of the EIS
-	Yass Valley Way Accommodation Camp (AC05B)	Inclusion of a new accommodation facility. Bushfire Risk assessment completed for the site and can be seen in *Bushfire Risk Assessment - Yass Valley Way Accommodation Camp (AC05B) (*Aurecon, 2025).

1.3 Interface with other planning documents

This Plan is a component of a suite of documents, prepared as part of the implementation of the Project's Environmental Management System. The Environmental Management System overview is described in Section 3.1 of the Construction Environmental Management Plan (CEMP).

The key documents that interface with this Plan are outlined in Table 1-2.

Table 1-2 Key interfaces with this document

Plan	Interface
Construction Environmental Management Plan	■ Provides the overall environmental management framework for construction of the Project ■ Provides details on overall Project staging, interactions between Sub-Plans of the CEMP, and management of cumulative impacts ■ Identifies procedures, processes and management systems that will apply in relation to construction activities ■ Provides environmental planning and controls for construction including environmental risk assessment, regulatory requirements, protection measures and sustainability requirements.
Accommodation Camp Management Plan	Provides details on the Project Accommodation Camps to: ■ Provide a framework for how the camps will be managed, including APZ's ■ Indicate compliance with relevant council specification and standards ■ Provide the site layout including building locations, vehicle access and movement, site servicing and utilities infrastructure ■ Include measures to support local suppliers in servicing the camp where possible.

Legend

- Cities
- Major highways
- Local government areas
- Humelink East Corridor
- Project compounds and accomodation facilities

File path: 525260 - NO CONTRACT HumeLink East - 5 Working Files\GIS\P525260_BushfireEMEP\Pro\BFEMEP_Figures
Export date: 13/12/2023
Map by: JT
Project No: P525260

Service layers: Esri, TomTom, Garmin, FAO, NOAA, USGS, Earthstar Geographics

Revision: B
Verified: RR
Date: 20/03/2024

A3 scale: 1:1,000,000

0 9 17 26 34 43 km

Coordinate system: GDA2020 MGA Zone 55

Humelink East - Bushfire Emergency Management and Evacuation Plan

Figure 1-1: Site locality

1.4 Purpose and scope of this report

The preparation of this Bushfire Emergency Management and Evacuation Plan (BFEMEP) for the project is required in accordance with Conditions of Approval (CoA) B51 and B52 and Updated Mitigation Measures (UMM) HR1, 2, 4, 5 and 15. These requirements are listed below in Table 1-3, including reference to where they are addressed in the BFEMEP. For all other CoA and UMMs refer to Appendix B of the CEMP for information on where they are addressed.

The BFEMEP is a significant control document for on-site and off-site emergency provisions in relation to bushfire. It includes identification of potential risks, bushfire prevention and mitigation measures, bushfire and hazard awareness for employees, contractors and visitors, bushfire preparedness actions, bushfire emergency response actions, and monitoring and compliance measures. The BFEMEP can also provide the basis for inducting new starters and contractors.

Two copies of this BFEMEP will be present in hard copy, and digitally in all construction facility compounds and accommodation areas.

Prepare, Act and Survive Plan (Appendix A) is included and must be updated by the Project Management Team (PMT) and Superintendent or Senior Project Engineer specific to the local compound or accommodation, and be present and displayed in all construction / accommodation facility buildings prior to the commencement of construction.

Emergency Services Information Pack (Appendix B) is included and must be updated specific to the local compound or accommodation, and present and displayed in all construction / accommodation facility buildings to provide essential information for fire and emergency services personnel in the event of a fire. This document will be completed prior to the starting of construction and is the responsibility of the PMT and Superintendent or Senior Project Engineer to implement.

This BFEMEP has been developed by a suitably qualified bushfire consultant as per the requirements of *Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers* (PBP) (NSW RFS, 2019).

Table 1-3: Condition compliance for BFEMEP

Condition number	Description	Compliance / section reference
Conditions of Approval (CoA)		
B51	**Bushfire Safety – Operating Conditions** The Proponent must: a) minimise the fire risks of the development, including managing vegetation fuel loads on-site; b) ensure that the development; i. complies with the relevant asset protection requirements in the RFS's Planning for Bushfire Protection 2019 (or equivalent) and Standards for Asset Protection Zones; ii. is suitably equipped to respond to any fire on site, including provision of a 20,000 litre water supply tank fitted with a 65 mm Storz fitting and a FRNSW compatible suction connection located at each of the construction compounds; iii. incorporates the recommendations of a fire risk assessment as per the network operator's design standards; c) ensures that buildings within the compounds comply with Australian Standard AS3959-2018 Construction of buildings in bushfire-prone areas (or equivalent) and RFS's Planning for Bushfire Protection 2019; d) ensure any fire trails or asset protection zones associated with the development are wholly contained within the approved disturbance area; e) develop procedures to manage potential fires on site, in consultation with the RFS, FRNSW, FCNSW and NPWS; f) assist the RFS, FRNSW, FCNSW, NPWS and emergency services as much as practicable if there is a fire in the vicinity of the site; and g) notify the relevant local emergency management committee following completion of construction of the development, and prior to commencing operations.	Plan references for B51 condition compliance: a) Included in section 5.1, 5.4 and 5.5. b) i. Included in sections 5.1, 5.2 and 5.4. Presented in Figure 5-1 to Figure 5-7 for each location. ii. Included in section 5.6. iii. Assessment of key bushfire risks of the project are described in section 3 and section 4.1. Fire risk assessments have been completed as part of the detailed design reports for the Project, and referenced directly in the EIS Technical Report 13. The network operators design standards are referenced directly where required. The recommendations of the bushfire risk assessments are incorporated into this plan as required, primarily in relation to the APZ's. c) Included in section 5.2. d) Included in sections 5.1 and 5.10. Presented in Figure 5-1 – Figure 5-7 for each location. e) Included in sections 2.3, 2.4, 6.1 and Appendix C. f) Included in sections 2.3, 2.4, 6.1 and Appendix C. g) Included in section 2.2.

Condition number	Description	Compliance / section reference
B52	**Bushfire Safety – Emergency Plan** Prior to commencing Enabling Works (unless the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of condition B64) and/or construction, the Proponent must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development, including an evacuation plan for the accommodation camps, and provide a copy of the plan to the local Fire Control Centre and FRNSW. The Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry point(s) to the construction compounds and substations at all times. The plan must: a) be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 1, 'Emergency Planning' and RFS's Planning for Bushfire Protection 2019 (or equivalent); b) be consistent with the NSW RFS document: *A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan*; c) detail access provisions for emergency vehicles and contact details for both a primary and alternative site contact who may be reached 24/7 in the event of an emergency; d) include procedures for the storage and maintenance of any flammable materials; e) include fire emergency management planning, including: i. details of the location, management and maintenance of the Asset Protection Zone and on-site water supply tanks; ii. a list of works that should not be carried out during a total fire ban; iii. identify the fire risks and hazards and details measures for the development to prevent fires igniting; iv. include availability of fire suppression equipment, access and water; v. details of how RFS would be notified, and procedures that would be implemented in the event that: • there is a fire on-site or in the vicinity of the site; • there are any activities on site that would have the potential to ignite surrounding vegetation; or	Plan references for C52 condition compliance: a) BFEMEP consistent with key legislation and reference documents listed (and referenced directly where required). b) BFEMEP consistent with key legislation and reference documents listed (and referenced directly where required). c) Access points are in Figures 5-1 to 5-7 in section 5.15 and 24/7 contacts are presented in Appendix A. d) Included in section 5.9. e) i. Included in sections 5.1, 5.2 and 5.4. Presented in Figure 5-1 to Figure 5-7 for each location. ii. Included in section 5.8. iii. Included in section 5.8. iv. Included in section 5.6, and 5.8.0 v. Included in section 5.7.4, 5.8, and 6. vi. Refer to Flood Response Plan (AGJV, 2024b) in Appendix F. vii. Included in section 5.13 and detailed in Flood Response Plan (AGJV, 2024b) in Appendix F. viii. Included in section 6.8 and to be detailed in the Emergency Service Information Pack in Appendix B. ix. Included in section 5.12 and Appendix A. x. Included in section 5.11.

Condition number	Description	Compliance / section reference
	• there are any proposed activities to be carried out during a bushfire danger period; and vi. detail specific response measures in the case of flood to ensure site safety; vii. describe the specific emergency exit routes to be used in the case of flood and include evidence of access agreements with relevant landowners (e.g. right of carriageway); and viii. include an Emergency Services Information Package in accordance with *Emergency Services information and tactical fire plan* (FRNSW, 2019) to the satisfaction of FRNSW and RFS; ix. operational procedures in the event of bushfires to minimise interference with aerial firefighting operations; and x. include details of how live transmission infrastructure can be safely isolated in an emergency.	
Updated mitigation measures (UMM)		
HR1	Asset protection zones (APZs) will be managed in accordance with Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers requirements (NSW RFS, 2019) (PBP), and associated criteria.	Plan provides HR1 condition compliance in section 5.1.
HR2	Vegetation within the proposed transmission line easement will be managed in accordance with Transgrid's existing vegetation management standards consistent with the clearance requirements principle identified in AS/NZS7000:2016 Overhead Line Design.	Plan provides HR2 condition compliance in section 5.5.
HR4	Access to substations and project buildings within the bushfire survey area will be established in accordance with: • Planning for Bushfire Protection 2019 requirements (NSW RFS, 2019) criteria • Access requirements will be in accordance with NSW Fire Trail Standards (NSW RFS, 2016) and Fire.	Plan provides HR4 condition compliance in section 5.3.
HR5	The project will be designed and constructed in accordance with a Bush Fire Emergency Management and Evacuation Plan (BFEMEP). The BFEMEP will be prepared by a suitably qualified person and will include:	BFEMEP consistent with key legislation and reference documents listed (and referenced directly where required).

Condition number	Description	Compliance / section reference
	• Bushfire Emergency Evacuation Plan • Bush Fire Risk Management Plan (BRMP) protocols during construction, considering activities during days with fire danger rating 'high' or greater • bushfire response and notification measures to report fires at the earliest opportunity • bushfire mitigation measures including maintaining asset protection zones (APZs) and mechanisms for the handling and use of any dangerous goods • bushfire risk induction and training for personnel, including risks and management measures associated with construction equipment and activities • fire reporting, emergency areas, on-site refuges, and evacuation procedures and is to be consistent with *Development Planning: A guide to developing a bush fire emergency management and evacuation plan* (NSW RFS, 2014). The BFEMEP will be consistent with relevant Australian standard and development plans and guides. For the Special Fire Protection Purpose (SFPP), the BFEMEP will include planning for the early relocation of occupants in the event of a potential bushfire or other emergency situation. A copy of the BFEMEP will be provided to the Local Emergency Management Committee for its information prior to occupation of the development.	
HR15	A minimum of 20,000 litre static water supply for firefighting purpose will be provided for each construction compound and worker accommodation facility where no reticulated water is available in accordance with Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers (NSW RFS, 2019).	Plan provides HR15 condition compliance in section 5.6.

1.4.1 BFEMEP scope

The project footprint utilised for the BFEMEP (this document) is based on the project footprint for the eastern part of the HumeLink Project assessed within the EIS and Amendment Report. It includes the indicative location of project infrastructure, the area that would be directly disturbed during construction and any easement required during operation.

As the detailed design for the project is occurring in parallel during development of the BFEMEP, this document may require updating and review when further design details have been progressed to incorporate construction staging and emergency management procedures.

This BFEMEP has only been created for construction purposes of the project completed by AGJV and excludes the operational phase. It also excludes any construction activities outside of the ancillary facilities documented in the key components section of this report.

Any handover of infrastructure to Transgrid (particularly vegetation management and asset protection zone maintenance) will require clear responsibility and delegations transfer to continue to mitigate bushfire risk for the Humelink East project post construction phase.

2 Summary of activities

2.1 Construction activities

Construction of the project is targeted to commence in 2025 and is expected to take approximately 2.5 years to complete. Construction activities will vary across the construction phase of the project, however during peak activities, the project could have up to 750 full-time equivalent construction workers across multiple fronts. However, at each transmission line structure or ancillary infrastructure, activities would not occur at any one location for the full project duration.

Construction activities associated with the project would include (but not be limited to):

- Site establishment works, which would involve preparing the site for future activities
- Construction compounds, laydowns and worker accommodation facilities
- Main construction work, involving the construction of transmission lines and substations
- Testing and commissioning of the transmission line to ensure the project has been installed in accordance with the relevant standards and operates as expected
- Demobilisation and rehabilitation of temporary material, waste and structures and restoration of disturbed areas

It is expected that a range a different plant and equipment will be required (depending on the work) to execute the construction phase of the project. For further details on the construction's environmental controls, please refer to the Construction Environmental Management Plan (AGJV, 2024a).

2.2 Roles and responsibilities

An understanding of the key roles and responsibilities for the implementation of the BFEMEP is crucial for construction purposes, and the mitigation of bushfire risk. As described in Table 2-1, the following roles and responsibilities have been established for the project. Reference to the responsibilities associated with each role are directly related to sections covered within the BFEMEP (this document).

Table 2-1: Key roles and responsibilities as part of the BFEMEP

Role	Responsibility
Project Management Team (PMT)	Key responsibilities for this role are listed in (but not limited to) Sections 5.5 (Transmission line vegetation management), 5.7 (Bushfire awareness), 5.8.2 (Elevated fire danger and total fire ban days), 5.8.3 (Fire safety equipment), 5.11 (Isolation of live transmission infrastructure), 6.2 (Bushfire alert levels), 6.7 (Prepare Act Survive Plan), 6.8 (Emergency Services Information Pack) of this BFEMEP.
Superintendent or Senior Project Engineer	Key responsibilities for this role are listed in (but not limited to) Sections 5.1.2 (Maintenance of asset protection zones), 5.4 (Building maintenance and preparedness), 5.7 (Bushfire awareness), 5.8.2 (Elevated fire danger and total fire ban days), 5.8.3 (Fire safety equipment), 5.11 (Isolation of live transmission infrastructure), 6 (Fire response, including Appendix A and Appendix B) of this BFEMEP. The site manager also provides hot works permits to all staff and contractors during bushfire season and must complete Transgrid's Hot Work and Fire Risk Work online training to provide hot works permits.

Role	Responsibility
Supervisor or Authorised officer as per Transgrid Hot Work and Fire Risk Work Corporate Wide Procedure	An authorised officer may provide hot works permits to all staff and contractors during bushfire season and must complete Transgrid's Hot Work and Fire Risk Work online training to provide hot works permits.
Delegate	A delegate can be appointed to assign responsibilities to other members of the construction team. However, it is important to note that all delegations of roles and responsibilities must receive written approval from the PMT before the delegate assumes the assigned role.
All staff, including contractors	All staff and contractors are responsible for following the details outlined in this BFEMEP.

A copy of this plan will be provided to the relevant Bush Fire Management Committee (BFMC), Local Emergency Management Committees, FRNSW, and local fire control centres by the PMT prior to the commencement of construction activities. All relevant BFMC and Local Emergency Management Committees will be notified post the construction of HumeLink East, and prior to commencing operations.

Should any changes to the roles, responsibilities and mitigation measures identified in this plan, a revision of this BFEMEP will be updated. Should any corrective actions be required, the PMT will inform all stakeholders, and ensure all workers are informed.

2.3 Consultation with NSW RFS

Consultation with the New South Wales Rural Fire Service (NSW RFS) was completed as part of the HumeLink EIS phase of the project. Issues raised by the NSW RFS detail specifically the compliance with *Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers* (PBP) (NSW RFS, 2019). These items were considered in the development of the CoA, and UMM requirements of the project.

Items raised that are directly related to the approval conditions in relation to the BFEMEP include:

- Implementation of a Fire Management Plan (FMP) for all ancillary infrastructure
- Asset protection zones (APZ) to be managed in accordance with the PBP (NSW RFS, 2019)
- APZs for any new accommodation facilities should be provided to achieve <10KW/m^2 radiant heat exposure (based on a flame temperature of 1200K) and accommodation buildings be constructed to AS3959 BAL 12.5 standards, as per SFPP requirements under PBP
- Vegetation management to be completed in accordance with the *AS/NZS7000:2016 Overhead Line Design* as detailed in the *Humelink Vegetation Clearing Method and Memorandum* (Transgrid, 2023)
- Access (both proposed and existing) should be constructed/upgraded to allow for safe access and evacuation, including emergency service personnel as per the PBP (NSW RFS, 2019)
- Suitable water supply with adequate firefighting access (i.e., a minimum 20,000-litre water supply (tank) fitted with a 65 mm Storz fitting at each ancillary facility, if reticulated water is not available).

During the detailed design phase of the YVWAC accommodation compound, it was identified that the site constraints and required layout could not be compliant with PBP in relation to the APZ requirements for an SFPP. Consultation with the NSW RFS, Planning and Environmental Services (South) team, on the 23rd of September 2024 was completed to discuss the constraints, and an appropriate application of PBP given the site context and use for temporary accommodation (NSW RFS, 2019).

This discussion acknowledged the YVWAC low bushfire risk profile, including adequate and easy access/egress from the site to non-hazard/urban areas, the temporary nature of the accommodation

structures, potential to design to BAL-29 standard, adequate separation distance for BAL-29 defendable space, and adequate water supply.

As such, NSW RFS advised that APZs providing for <29KW/m^2 radiant heat as per Table A1.12.2 in PBP (NSW RFS, 2019), with BAL-29 building design can be achieved and would be an acceptable level of risk. This is also considering that all other bushfire protection measures would be in compliance with PBP for SFPP.

2.4 Consultation during development of the BFEMEP

As part of the CoA 51, the development of procedures to manage potential fires on site, must be completed in consultation with the NSW RFS, Fire Rescue NSW (FRNSW), Forestry Corporation NSW (FCNSW) and NSW National Parks and Wildlife Service (NPWS).

Table 2-2 details the current consultation and reviews undertaken as part of the development of this BFEMEP to date.

Table 2-2: Consultation and comments associated with the development of BFEMEP

Stakeholder	Revision number	Date	Comments
NSW RFS	Revision 00	August 2024	Nil
FRNSW	Revision 00	August 2024	Nil
FCNSW	Revision 00	August 2024	Comments received and incorporated into the BFEMEP in section 5.8.2.
NSW RFS, FCNSW, NPWS, FRNSW	Revision 01.2	February 2025	Comments received as part of consultation activities with relevant agencies. Comments received by these agencies have been incorporated as part of Revision 01.3 where required. A breakdown of this consultation can be seen in Appendix C.

3 Bushfire risk assessment

A Bushfire Risk Assessment Report (BRAR) was developed to support the Hume Link Environmental Impact Statement (EIS), that identifies and assesses the bushfire risk during construction and operation of the project (EIS Technical Report 13 – Aurecon, 2023a). Due to ongoing design and construction methodology improvements, the BRAR is now supported by an addendum report (EIS Technical Report 13 – Bushfire Risk Assessment Addendum, Aurecon, 2024), and site specific *Bushfire Risk Assessment - Yass Valley Way Accommodation Camp (AC05B) (*Aurecon, 2025). The bushfire assessments specifically addressed areas within the project footprint identified as having an elevated bushfire risk, comprising areas located within Bush Fire Prone Land (BFPL) and where project related personnel may work, sleep, or assemble. These include substations, construction compounds, and worker accommodation facilities. These bushfire survey areas were assessed against the performance criteria outlined in *Planning for Bush Fire Protection: A guide for councils, planners, fire authorities and developers* (PBP) (NSW RFS, 2019).

Due to the extensive, dynamic and varying landscape across the transmission line easement, the transmission line was conservatively classified in the BRAR as having the highest bushfire risk. This is consistent with Transgrid's approach to asset management and assumes that every transmission line has the potential to be impacted by fire, or to initiate fire, including bushfire (Transgrid, 2003). Therefore, site specific assessments were not undertaken for the proposed transmission lines.

A summary of the existing environment and bushfire risk profile relevant to the HumeLink East project and this BFEMEP is provided in the following sections. The inputs from these sections have been used utilised to calculate the Bushfire Attack Level (BAL), and the required Asset Protection Zone (APZ) distances, as outlined in Section 5.1.

3.1 Regional fire weather and climate risk

The project is located across the Southern Tableland and South West Slopes fire management districts applicable to fire weather forecasting and fire emergency response operations by authorities. The two relevant weather stations to the project (Taralga Post Office; 845 metres asl; BoM station no. 070080: Nangus Road, Gundagai; 225 metres asl; BoM station no. 073141) record mean annual rainfall from 600.4 – 804.0 millimetres. Temperatures between the two BoM stations range from the average highest temperature in January at 26.3°C – 32.8°C, and the average lowest temperature in July from 0.6°C – 2.6°C (BoM, 2023).

Mostly, the areas near Bannaby (northern location of the project) have been identified by the Southern Tableland BFMC, 2019 as having:

- A temperate to cool climate with warm to hot summers, and cool winters
- Predominantly winter and spring rainfall
- Bushfire danger period between October and March/April
- North/north-westerly winds with late afternoon southerly and easterly winds
- Frequent lightning strikes during storms

While areas near Adjungbilly (the southern location of the project) have been identified by the South West Slopes BFMC, 2020 as having:

- A temperate climate
- Mostly winter and spring rainfall
- Bushfire danger period between October and March
- North-westerly to south westerly winds
- High daytime temperatures and low humidity

- Frequent dry lightning storms

Prevailing hazardous fire conditions in south eastern Australia that increase the risk and spread of fires comprise of:

- Wet spring and summer the preceding year, producing increased fuel loads, especially in grassy ecosystems
- Dry winter and spring in the current year, reducing moisture content of soil and fuels
- Strong north-westerly winds as a result of blocking summer high pressure systems

The Southern Tableland BRMP area has on average five large fires per year, 260 smaller fires and a 2.5-year cycle on major fires (Southern Tableland BFMC, 2019). In the past decade there have been two major bushfire events; in January 2013 near Talmo (NSW RFS, 2013), and in December/January 2020 near Maragle (NSW RFS, 2020). The statutory Bush Fire Danger Period runs from 1 October to 31 March, subject to adjustments based on local conditions (NSW RFS, 2021).

Fire weather may be altered during climate change conditions, altering the duration of some bushfire seasons. The frequency of high fire danger days that support high intensity fire events is predicted to increase during climate change conditions (Abram et al 2021), having a subsequent negative effect on the project.

Climate risk is also variable through the southern oscillation index. Changes may result in a sustained period of hot dry weather (El Niño) or cooler wetter cycles (La Niña), which may increase or reduce the likelihood of adverse fire seasons throughout the project footprint.

3.2 Bush Fire Prone Land

Bush Fire Prone Land (BFPL) maps are certified by the commissioner of the NSW RFS as areas that are able to support a bushfire or be subject to a bushfire attack. BFPL is categorised as follows:

- Vegetation Category 1 are areas of forests, woodlands, heaths (tall and short), forested wetlands, and timber plantations. These areas generally support the highest intensity bushfires and are considered the highest risk vegetation.
- Vegetation Category 2 comprises lower risk vegetation including rainforest, remnant vegetation, and vegetation separated from other larger tracts of vegetation.
- Vegetation Category 3 comprises grasslands, freshwater wetlands, semi-arid woodlands, alpine complex, and arid shrublands. This category includes grazed grasslands and woodlands. These areas can support faster moving bushfires than other categories in high winds.
- Buffer areas are either 30 metres from Vegetation Category 2 and 3 or 100 metres from Vegetation Category 1.

The following table details the interaction between the BFPL mapping and the proposed infrastructure of HumeLink East (refer Table 3-1, and

Figure 3-1).

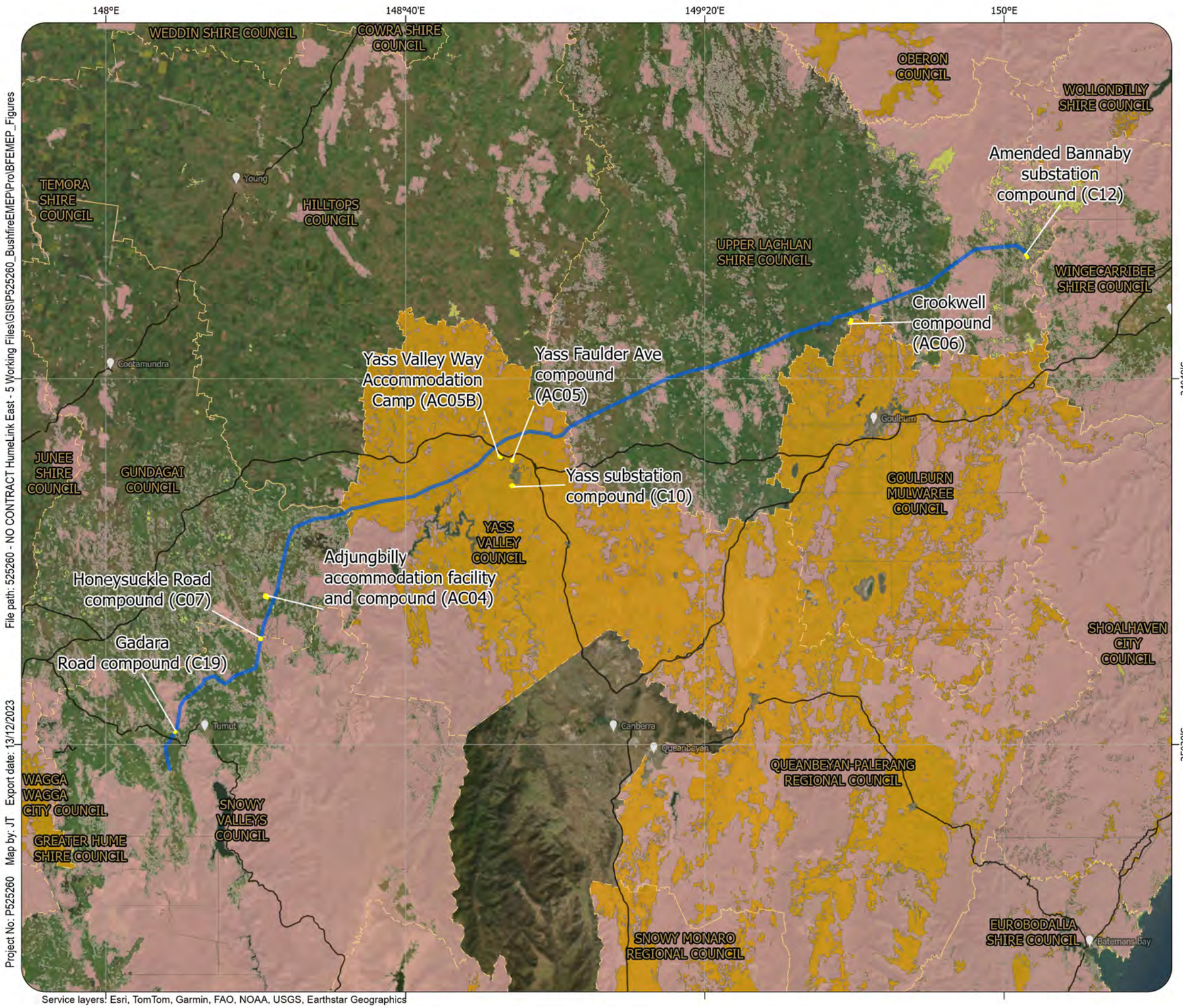
Table 3-1: Bush Fire Prone Land Category per compound or accommodation facility

Site	Bush Fire Prone Land – Vegetation Category
Yass substation compound (C10)	Within vegetation buffer and Category 3 BFPL. Surrounded by Category 3 BFPL.
Amended Bannaby substation compound (C12)	Not in BFPL. Presence of vegetation Buffer, Category's 1 and 2 surrounding.
Crookwell compound (AC06)	Not on BFPL, but adjacent to Category 1 and Category 3 BFPL, and vegetation buffer.
Yass compound (AC05)	Within and surrounded by Category 3 BFPL.

Site	Bush Fire Prone Land – Vegetation Category
Gadara Road compound (C19)	Not on BFPL, but adjacent to Category 1 BFPL and vegetation buffer.
Adjungbilly accommodation facility and laydown (AC04)	Not on BFPL, but adjacent to Category 1 BFPL and vegetation buffer.
Yass Valley Way Accommodation Camp (AC05B)	Surrounded by Category 1 and Category 3 BFPL.

Large areas of the project are categorised as Category 1 BFPL (forests, woodlands, timber plantations of State forests, Crown lands and adjoining national parks). These areas support large and intense bushfires. The remaining parts of the project area are Category 2 and 3 BFPL which can support fast moving grassfires under certain adverse conditions, resulting in loss of life and major property and stock losses.

Field assessment during the EIS bushfire surveys (Aurecon, 2023a; Aurecon, 2024) confirmed that bushfire prone vegetation is present immediately adjoining each compound – with mainly forest, woodland and grassland vegetation.



File path: 525260 - NO CONTRACT HumeLink East - 5 Working Files\GIS\P525260_BushfireEMEP\Pro\BFEMEP_Figures

Export date: 13/12/2023

Map by: JT

Project No: P525260

Service layers: Esri, TomTom, Garmin, FAO, NOAA, USGS, Earthstar Geographics

aurecon

Legend

- Cities
- Major highways
- Humelink East Corridor
- Local government areas
- Project compounds and accomodation facilities

Bush Fire Prone Land - Category

- Vegetation Buffer
- Vegetation Category 1
- Vegetation Category 2
- Vegetation Category 3

Revision: B

Verified: RR

Date: 20/03/2024

A3 scale: 1:1,000,000

0 9 17 26 34 43 km

Coordinate system: WGS 1984 Web Mercator Auxiliary Sphere

Humelink East - Bushfire Emergency Management and Evacuation Plan

Figure 3-1: Bush Fire Prone Land Mapping

3.3 Vegetation risk

Vegetation type is a key characteristic influencing bushfire behaviour; vegetation fuel loads (type, amount, arrangement, moisture content) vary between vegetation groups and these affect fire characteristics (ignition, spread, intensity). Forest communities usually support higher intensity fires, shrublands and heathlands support medium intensity fires, and woodland and grassland usually support relatively lower intensity and fast-moving grassfires.

Vegetation throughout the proposed transmission line is highly variable. The following communities (based on Keith, 2004 formations) are found surrounding the proposed footprints:

- Grassland
- Woodland
- Forest

The current vegetation classification system used in NSW is Plant Community Type (PCT) mapping (Department of Planning and Environment 2022). PCTs relevant to the project have been mapped and detailed by Niche (2022) in the Technical Report 1 – Biodiversity Development Assessment Report as part of the EIS. These PCTs were also verified during the bushfire surveys in the BRAR (Aurecon, 2023a), to confirm the predominant classification of either forest or woodland (as per Keith 2004).

Protected vegetated areas within 2km of the project corridor include:

- Back Arm Nature Reserve
- Bango Nature Reserve
- Burrinjuck Nature Reserve
- Minjary National Park
- Mudjarn Nature Reserve
- Tarlo River National Park

Within the project area, there are large areas of non-native vegetation including softwood radiata pine plantations, which have the potential to support high intensity bushfires and are classified as ‘Forest’ for bushfire assessment purposes. Pine plantations have been long established on the southern slopes (NSW Forestry Corporation, 2021b), and include Red Hill State Forest, located 18 kilometres north-east of Tumut, is a mix of commercial radiata pine plantation and native forest.

Large parts of these areas south of Tumut were impacted by the December/January 2020 Dunns Road bushfire which burnt a range of PCT vegetation groups.

3.4 Slope

Fire behaviour including spread rate and intensity is influenced by slope. A fire burning in forests and woodlands upslope is usually faster and more intense than that burning on level ground or downslope (NSW RFS, 2019). The BRAR (Aurecon, 2023a), Addendum Report (Aurecon, 2024) and Bushfire Risk Assessment - Yass Valley Way Accommodation Camp (AC05B) (Aurecon, 2025) measured effective slope of the vegetation across the project footprint and classified the construction compounds effective slope to be no greater than 10°. For a detailed breakdown of slope at each construction compound, refer to the BRAR, Addendum Report and Bushfire Risk Assessment - Yass Valley Way Accommodation Camp (AC05B) (Aurecon, 2023a; Aurecon, 2024; Aurecon, 2025).

4 Construction hazards and risks

4.1 Construction related ignition sources

Mitigation of several different potential ignition sources during the construction of the project will be required to reduce the risk of starting or contributing to a bushfire event. These sources have the potential to ignite adjacent vegetation and structures and pose a risk to the safety of workers and the community, and the surrounding assets. These sources include:

- Hot works
- Construction equipment
- Electrical faults
- Motor vehicles
- Dangerous materials
- Accidental ignitions.

The construction ignition sources are to be discussed in the following sections.

Without mitigation measures, these ignition sources elevate the risk of ignition and spread of bushfires within the construction footprint. When combined with high environmental risks (such as Category 1 BFPL) and unmanaged APZ, the risk of ignition is highest. However, when construction activities are conducted within identified APZ and mitigation measures and procedural controls are implemented, or where construction is located outside BFPL, the likelihood of risk is highly reduced.

Procedures identified in Section 5.8 of this report covers the mitigation measures associated with the construction related ignition sources, and emergency response incorporate the prepare, act, survive framework is detailed in Appendix A.

4.1.1 Hot works

Construction activities that involve hot works, such as grinding, welding or cutting, or otherwise produce sparks are potential ignition sources. When sparks become airborne or come into direct contact with dry vegetation there is a high ignition risk. Hot works should be conducted in alignment with the Transgrid Hot Work and Fire Risk Work Corporate Wide Procedure (Transgrid, 2022). Hot works should be conducted in alignment with the TransGrid Hot Work, Fire Risk Work Corporate Wide Procedure (TransGrid, 2022) and AGJV Hot works Procedure. Further mitigation measures for construction and hot works are detailed in section 5.8.

4.1.2 Fire risk work

Generally, fire risk work involves heat or potential spark producing activities that have the potential of creating a fire risk. Specifically, fire risk work includes:

- Slashing
- Mulching
- Operation of steel tracked machines or steel attachments on mobile plant (e.g., grading, boring, excavation and the like)
- Chainsaw operation
- Chipping
- Mowing

- Brush cutting
- Operation of motor vehicles/rubber tyred mobile plant (excluding their use on sealed or unsealed gravelled roads).

4.1.3 Construction equipment

Equipment used in the construction of the project such as bulldozers and excavators, pose a bushfire risk through the increased risk in sparks and ignition of adjacent vegetation. Steel blades on the construction equipment have the potential to collide with rock to generate sparks accidently. Where mitigation and control measures are not applied, construction equipment has the potential to be a risk to bushfire ignition.

4.1.4 Electrical faults in equipment

Faults in the construction electrical equipment can create a high ignition risk to adjacent vegetation. The potential faults or weakness in electrical equipment should be checked for visible weaknesses in accordance with the manufacturer's specification and Transgrid's inspection and maintenance requirements including vegetation management.

4.1.5 Substation and transmission lines

The projects substations and transmission line operations are unlikely to have a large bushfire risk where operations occur in established APZs, where Transgrid's procedural controls are implemented, or where operations are located outside BFPL. During operation, ongoing vegetation management will occur within the transmission line easement in accordance with Transgrid's and nationally established industry standards AS/NZS7000:2016 to avoid direct contact with live transmission lines. High frequency inspections along the transmission lines will occur as part of the operational activities, to identify at risk direct contact vegetation and unmaintained APZs. The transmission lines will also be regularly inspected to account for any potential mechanical failures such as failure of conductors/insulators, line to line contact, or line failures which would reduce the potential of unwanted ignitions.

4.1.6 Motor vehicles

Motor vehicles are potential ignition sources in the construction phase of the project, in particular diesel-powered trucks and light vehicles with pollution controlling exhaust devices, that may emit burning diesel particles. Motor vehicles accidents across the project footprint could result in fuel spillage, and or sparks that may be an ignition source.

4.1.7 Dangerous materials

Dangerous materials include chemicals, explosives or other flammable materials used during the construction phase of the project. Inappropriate storage of these dangerous materials, and insufficient fuel-free buffers around work sites, pose a potential ignition source to adjacent vegetation. Chemical fire or explosion, or a grass or bushfire impacting on a storage area with dangerous materials present a significant risk of ignition.

4.1.8 Ignition due to negligence

Ignitions due to negligence include ignitions from sources such as smoking, and not-deliberate ignitions occurring from accidents or error and are not specified under any other ignition risk. It also includes ignitions from arson, although unlikely to occur.

4.2 Risks to construction from bushfire

Bushfires starting in the surrounding landscape have the potential to spread to the project areas and impact project infrastructure (as identified within BRMPs in the project area). Ignition of bushfires in the landscape can result from the following ignition sources:

- Lightning activity in storms (late spring to summer, mostly likely in years with below average rainfall or dry landscape)
- Legal and illegal burning off (mid to late sprint, early summer; between autumn and spring)
- Operations and machinery use external to the project including harvesting, faulty equipment and inappropriate use, or hot works during inappropriate times.

To mitigate the risk of unplanned bushfire affecting the project area, Transgrid actively manages vegetation within powerline easements during maintenance programs (further detailed in section 5.5).

AGJV will be responsible for the management of the corridor during construction including maintenance within construction compounds and designated accommodation facilities.

5 Bushfire prevention and mitigation measures

5.1 Asset Protection Zones

5.1.1 Locations of asset protection zones

Bushfires impact structures through direct flame contact, radiant heat and/or embers igniting flammable materials. An APZ is a key bushfire protection measure that provides a low-fuel buffer to limit fire spread to buildings as well as providing defendable space around buildings and other assets to enable firefighting personnel to operate in relative safety. An APZ must be established and maintained for the life of the development / operations in accordance with the relevant standards set out in Appendix 4 of PBP (NSW Rural Fire Service 2019).

Table 5-1 details the intended use at each site, and APZ requirements based on PBP.

APZs were calculated within the BRAR for each compound, in accordance with the site assessment methodology of PBP. The inputs used to determine the APZ are detailed in the following Table 5-2 to Table 5-5. Where vegetation and slope differ around assets, the APZ distance has been determined by considering the specific vegetation hazard in each direction, to enable most efficient use of the sites for the proposed buildings and uses. All APZs are contained within the project boundary.

For each compound, the APZs have been determined as follows:

- For non-habitable buildings (such as offices), APZ distances shall provide setbacks for BAL-29 (C12, AC05, AC04) (Table 5-2, Table 5-3 and Table 5-4, respectively)
- For worker accommodation at Adjungbilly accommodation facility (AC04), which is Special Fire Protection Purpose (SFPP) development as defined under the *Rural Fires Act 1997*, APZ distances are calculated to provide <10KW/m^2 radiant heat impact (based on a flame temperature of 1200 Kelvin (K)), based on table A1.12.1 of PBP for SFPP
- For worker accommodation at Yass Valley Way Accommodation Camp (AC05B), also SFPP development, APZ distances are calculated to for BAL-29 due to the constraints of the site and low risk profile (and as agreed in consultation with the NSW RFS, described below).

Note that during the detailed design phase of the Yass Valley Way Accommodation Compound (AC05B), it was identified that the site constraints and layout could not achieve compliance with PBP in relation to the APZ requirements for an SFPP. Consultation with the NSW RFS, Planning and Environmental Services (South) team, on the 23rd of September 2024 was completed to discuss the constraints, and an appropriate application of PBP given the site constraints and use for temporary accommodation only.

This discussion noted the Yass Valley Way Accommodation Compound (AC05B) low bushfire risk profile – includes adequate and easy access/egress from the site to non-hazard/urban areas, the temporary nature of the accommodation structures, potential to design to BAL-29 standard, adequate separation distance for BAL-29 defendable space, and adequate water supply. As such, NSW RFS advised that APZs providing for <29KW/m^2 radiant heat as per Table A1.12.2 in PBP (NSW RFS, 2019), and BAL-29 building design can be achieved and would be adequate at this site.

It is noted that the Yass Valley Way Accommodation Compound (AC05B) also contains a portion of land with current woodland vegetation described. It is assumed that this woodland area will be maintained as an Asset Protection Zone (APZ) in accordance with PBP standards throughout the lifecycle of the YVWAC. This maintenance will allow the woodland patch to be classified as 'low threat vegetation' as per section A1.10 of PBP. No tree removal is necessary due to the sufficient spacing between trees that represents <15% cover which is acceptable within an APZ.

It is also noted that laydown areas are not captured under PBP and therefore there are no specific requirements to design APZs and other bushfire protection measures around such areas. However, if combustible or

flammable/hazardous storage and materials are to be located or stored within the laydown area, an APZ and other bushfire protection measures would be required to meet the objectives of PBP and applicable Australian Standards. Typically, this would take the form of a fuel free buffer of at least 10m around the laydown area and/or non-combustible structure such as a metal fence or concrete barrier to contain stored materials and provide a heat barrier, and provision of fire suppression equipment.

Table 5-1: Intended use at each site and the application of APZ requirements

Site	Intended use
Yass substation compound (C10)	Laydown only; no APZ required
Amended Bannaby substation compound (C12)	Laydown and offices; APZ required for offices (BAL 29 AS3959-2018)
Crookwell compound (AC06)	Laydown only; no APZ required
Yass Faulder Ave compound (AC05)	Laydown and offices; APZ required for offices (BAL 29 AS3959-2018)
Gadara Road compound (C19)	Laydown only; no APZ required
Adjungbilly accommodation facility and laydown (AC04)	Accommodation facility, offices and laydown; APZ required for accommodation facilities (BAL 12.5 AS3959-2018) (SFPP) and offices (BAL 29 AS3959-2018)
Yass Valley Way Accommodation Camp (AC05B)	Accommodation facility, offices and laydown; APZ required for accommodation facilities and offices (BAL 29 AS3959-2018), as per NSW RFS consultation and explanation above

Table 5-2: Amended Bannaby substation compound (C12): Bushfire hazard analysis and APZ requirements (BRAR, Aurecon 2024)

Direction from site boundary	Slope	Vegetation	APZ requirement (BAL-29) (PBP 2019)
North	Downslope >0.5 º, >5-10º	Grassland	12 m
South	Downslope >5-10º	Grassland	13 m
East	Downslope >0-5º, >5-10º	Grassland	12 m
West	All flat / upslope	Grassland	10 m

Table 5-3: Yass Faulder Ave compound(AC05): Bushfire hazard analysis and APZ requirements (BRAR, Aurecon 2024) and subsequent calculated BAL-29

Direction from site boundary	Slope	Vegetation	APZ requirement (BAL 29) (PBP 2019)
North	Downslope >0-5º	Grassland	12 m
South	Downslope >0-5º	Grassland	12 m
East	All flat / upslope	Grassland	10 m
West	All flat / upslope	Grassland	10 m

Table 5-4: Adjungbilly accommodation facility and compound (AC04): Bushfire hazard analysis and APZ requirements (BRAR, Aurecon 2024) and subsequent calculated BAL-29

Direction from site boundary	Slope	Vegetation	APZ requirement (BAL 12.5) (PBP 2019) (SFPP)	APZ requirement (BAL 29) (PBP 2019)
North	All flat / upslope	Forest	67 m	20 m
South	Downslope >0-5º	Forest and grassland	79 m	25 m
East	Downslope >0-5º	Forest	79 m	25 m
West	Downslope >0-5º	Forest and woodland	79 m	25 m

Table 5-5: Yass Valley Way Accommodation Camp (AC05B): Bushfire hazard analysis and APZ requirements (Aurecon, 2025)

Description	Slope	Vegetation	APZ requirement (BAL 12.5) (PBP 2019) (SFPP)	APZ requirement (BAL 29) (PBP 2019)
North	Downslope >0 to 5°	Non hazard vegetation	Nil	Nil
North east	Downslope >0 to 5°	Non hazard vegetation	Nil	Nil
East	Downslope >0 to 5°	Woodland	50m	16m
South east	Downslope >0 to 5°	Non hazard vegetation	Nil	Nil
South	Downslope >0 to 5°	Woodland	50m	16m
South west	Downslope >0 to 5°	Grassland	40m	12m
West	Downslope >0 to 5°	Woodland	50m	16m
North west	Downslope >0 to 5°	Grassland	40m	12m

5.1.2 Maintenance of asset protection zones

In accordance with PBP (NSW RFS, 2019) requirements, APZs around buildings and assets with potential to exacerbate fire ignition risk should be in place prior to the Bush Fire Danger Period and be maintained continuously throughout the year. Superintendent or Senior Project Engineers will be required to ensure the APZ vegetation management requirements are maintained throughout the duration of construction of the project, as per Table 5-6.

The Yass Valley Way Accommodation Compound (AC05B) includes a woodland area that is expected to be maintained as an Asset Protection Zone (APZ) per PBP standards (NSW RFS, 2019), allowing it to be classified as ‘low threat vegetation’ under PBP (A1.10) (NSW RFS, 2019). The APZ requirements described in Table 5-6 will be applied in this instance. Note that no tree removal is necessary due to the sufficient spacing between trees that represents <15% cover which is acceptable within an APZ.

A maintenance schedule will need to be implemented throughout the construction phase of the project to ensure the adequate maintenance of APZs.

Table 5-6: APZ requirements – Inner Protection Area and Outer Protection Area (NSW RFS, 2019)

Vegetation Component	Inner Protection Area	Outer Protection Area
Trees	■ The mature tree canopy cover should be less than 15%. ■ Trees should not touch or overhang buildings. ■ The lower limbs of trees should not be less than 2 m in height. ■ Canopies should be separated by 2 - 5 m.	■ Tree canopy cover should be less than 30%. ■ Tree canopy cover should be separated by 2 – 5 m.
Shrubs	■ Shrubs should have large gaps in vegetation. ■ Shrubs should not be located under trees. ■ Shrubs should not constitute more the 10% ground cover. ■ Shrubs should be distanced from windows and doors by a distance at least twice the height of the vegetation.	■ Shrubs should not form a continuous canopy. ■ There should be no more than 20% ground cover.
Grasses	■ Grasses should be mown lower than 100 mm in height. ■ Leaves/ vegetation debris should be removed.	■ Grasses should be mown lower than 100 mm height. ■ Leaves/ vegetation debris should be removed.

5.2 Construction standards and building requirements

5.2.1 Construction standards

Bushfire construction standards for buildings are set out in AS3959:2018 *Construction of Buildings in Bushfire-Prone Areas* and are intended to provide the minimum standard of construction for a building to withstand the predicted level of bushfire attack at the site, and are required in parallel with the APZ requirements described above.

Construction standards are based on the following:

- NCC performance requirements for the construction of buildings in bushfire prone areas apply to Class 1-3 buildings, and some designated Class 10 buildings. For these buildings, the NCC references the AS3959:2018 *Construction of Buildings in Bushfire-Prone Areas* and the *NASH Standard: Steel Framed Construction in Bushfire Areas 2014* as the deemed-to-satisfy construction. There are no specific bushfire protection requirements under the NCC for Class 4-8 buildings located on BFPL, however in NSW these must still satisfy the aims and objectives of PBP and specific measures outlined in PBP Chapter 8 'Other Development' (NSW RFS, 2019). For Class 4-8 buildings such as offices, storage and other industrial buildings, the general fire safety provisions of the NCC are taken as acceptable solutions for construction, in addition to an APZ to provide <29KW/m^2 radiant heat impact to buildings. This approach is adopted for the office facilities at each compound.
- The accommodation facilities (AC04) are considered NCC Class 3 buildings under the BCA and SFPP development under the Rural Fires Act 1997, consistent with their use for workers accommodation on a short-stay basis. The SFPP measures provide elevated bushfire protection on the assumption that workers may be unfamiliar with the area and the bushfire risk. This includes an APZ to provide <10KW/m2 radiant

heat impact to buildings and construction to a minimum BAL 12.5 standard as set out in AS3959. This has been adopted for the accommodation facility at Adjungbilly compound.

- Construction of accommodation buildings at Yass Valley Way Accommodation Compound (AC05B) is to comply with BAL-29, in conjunction with an APZ providing for <29KW/m2 radiant heat as per Table A1.12.2 in PBP, on the basis that the site is constrained in size and cannot achieve the larger <10KW/ m^2 APZ, also that the site has a relatively low bushfire risk profile.
- Design and construction of transmission lines would be in accordance with the Transgrid Transmission Line Design Standard (Transgrid, 2018).

5.2.2 Bushfire Attack Levels

All proposed buildings should be constructed in accordance with BAL under AS3959:2018 *Construction of Buildings in Bushfire-Prone Areas*. BAL is the predicted severity of potential ember attack, radiant heat, and direct flame contact impacting a building. The site-assessed BAL is used to specify the bushfire construction standard in accordance with AS3959:2018 and the NCC (Australian Building Codes Board (ABCB), 2019). There are five levels of BAL across a 100 metre guideline radius, with buildings designated BAL-40 and BAL-Flame Zone at highest risk of bushfire effects due to the geography of the surrounding area and proximity of vegetation generating the greatest flame and radiant heat impacts.

BAL is determined as per PBP Table A1.12.5 (for FFDI 100, residential development) and PBP Table A1.12.6 (for FFDI 80, residential development). The BAL assessment for the proposed construction compounds were outlined in the BRAR (Aurecon, 2023a: Aurecon, 2024). Those relevant to the scope of this BFEMEP are listed in Table 5-7.

Adjungbilly accommodation facility and laydown (AC04) is assessed as BAL-12.5 for SFPP (Building Class 3, accommodation infrastructure) and BAL-29 for all other ancillary infrastructure (Building Class 8). Yass Valley Way Accommodation Compound (AC05B) design will be to BAL-29 due to the low risk profile and site constraints (as agreed during consultation with the NSW RFS).

Table 5-7: Building classification, FFDI, and BAL for the sites relevant to this BFEMEP

Site	Building Class	FFDI	BAL
Amended Bannaby substation compound (C12)	Class 8 (Office)	100	BAL-29
Yass Faulder Ave compound (AC05)	Class 8 (Office)	100	BAL-29
Adjungbilly accommodation facility and laydown (AC04)	Class 3 (SFPP - accommodation) Class 8 (Office)	80	BAL-12.5 (SPFF) BAL-29
Yass Valley Way Accommodation Camp (AC05B)	Class 3 (SFPP - accommodation) Class 8 (Office)	80	BAL-29*

* Due to the low bushfire risk profile, Yass Valley Way Accommodation Compound (AC05B) design will be to BAL-29 construction standard and APZs providing for no more than 29KW/m2 radiant heat as per Table A1.12.2 in PBP (NSW RFS, 2019).

5.3 Access

Road access is required to be maintained to safe operating standards for the construction and operation of the project, including construction equipment and worker vehicle access, emergency services access and safe evacuation routes. The project has existing access points as outlined below:

- Snowy Mountains Highway (B72) crosses the amended project footprint north of Gardara

- Several other major roads as well as several local and private rural roads with varying speed limits and conditions.

All access roads to compounds and accommodation facilities where there is a routine presence of work personnel and/or accommodation must be constructed and maintained in accordance with the criteria outlined in the PBP (NSW RFS, 2019) and/or *NSW Fire Trail Standards* (NSW RFS, 2016) and *NSW RFS Fire Trail Construction and Design Maintenance Manual* (Soil Conservation Service, 2017).

Access roads are to be designed to allow safe access and egress for emergency services vehicles and evacuating personnel. This includes:

- to provide two-wheel-drive, all weather access
- have adequate carrying capacity for fully-laden firefighting vehicles
- passing bays of 6m width at no greater than 200m spacing, or adequate road width
- primary and secondary access from compounds and accommodation to the public road system.

Existing primary and secondary access routes were considered within the BRAR bushfire survey areas (Aurecon, 2023a; Aurecon, 2024) and are outlined in Table 5-8. Primary access provides a route for emergency response as well as evacuation, with secondary access providing an alternative option should primary access become unsafe due to an approaching fire or otherwise obstructed such as by fallen trees.

Access tracks within State forests which are the responsibility of Transgrid must meet FCNSW requirements (State Forest NSW, 1999; Soil Conservation Service, 2017).

In the event of a flood, evacuation will be via a determined safe route given by the PMT. To determine the safest route, the PMT will monitor warning channels to determine the status of surrounding roads. Further mitigation measures evacuation during the event of a flood can be seen in the Flood Response Plan (AGJV, 2024b).

In accordance with the PBP (NSW RFS, 2019), primary and secondary access routes should be provided for locations with buildings where people may work or use for accommodation purposes. All access routes comply with the PBP acceptable solutions for access routes detailed in the EIS Technical Report BRAR (Aurecon, 2023a) and Addendum Report (Aurecon, 2024).

Table 5-8: Existing access routes associated with bushfire survey areas and HumeLink East components.

Site	Access	Description
Yass substation compound (C10)	**Primary:** Perry Street (North) **Secondary:** Perry Street (South)	Perry Street is a sealed two-way road. Access to Perry Street includes: ■ Primary northern access from Grand Junction Road, a major two-way sealed road (site access 1.2 km from Grand Junction Road). ■ Secondary access to Perry Street is from Wee Jasper Road/Green Street, through Victoria Street (0.2 km) (site access 1 km from Wee Jasper Road/ Green Street).
Amended Bannaby substation compound (C12)	**Primary:** Hanworth Road (West) **Secondary:** Hanworth Road (West)	Hanworth Road is a sealed road. Access to Hanworth Road includes: ■ Primary western access from Bannaby Road (site access approximately 6.3 km from Bannaby Road). ■ Secondary eastern access from unsealed rural road providing property access, 16 km to Wollondilly River.
Crookwell compound (AC06)	**Primary:** Graywood Siding Road **Secondary:**	Primary access into the Crookwell facility is via two-way unsealed Graywood Siding Road. Access to Graywood Siding Road includes:

Site	Access	Description
	Crookwell 3 Windfarm secondary emergency access **Secondary (to be constructed):** Crookwell East access track and tracks to the transmission line corridor	■ Northern access from Woodhouselee Road (site access 2 km from Woodhouselee Road) ■ Southern access from Woodhouselee Road (site access 5 km from Woodhouselee Road). Secondary access via Crookwell 3 Windfarm secondary emergency access is an unsealed two-way private access road and includes: ■ Western access from Woodhouselee Road (site access is 3.3 km from Woodhouselee Road via Turbine 10 and Steeves Creek and Pejar Creek). Secondary (to be constructed) access will be the Crookwell East access track and tracks to the transmission line corridor: ■ North-eastern access from AC06 to Middle Arm Road.
Yass Faulder Ave compound(AC05)	**Primary:** Faulder Avenue (South) **Secondary:** Faulder Avenue (North)	Faulder Avenue is a sealed two-way road. Access to Faulder Road includes: ■ Primary southern access from Yass Valley Way (site access 0.3 km from Yass Valley Way). ■ Secondary northern access from Cooks Hill Road (site access 2.6 km from Cooks Hill Road).
Gadara Road compound (C19)	**Primary:** Gadara Road (South) **Secondary:** Gadara Road (North)	Gadara Road is an unsealed two-way road. Access to Gadara Road includes: ■ Primary southern access from Snowy Mountains Highway (site access 2 km from Snowy Mountains Highway). ■ Secondary northern access from Reka Road (site access 5.2 km from Reka Road).
Adjungbilly accommodation facility and laydown (AC04)	**Primary:** Adjungbilly Road (South or East) **Secondary:** Adjungbilly Road (Northwestern)	Adjungbilly accommodation facility and compound is accessible directly from Adjungbilly Road. Access to Adjungbilly Road includes: ■ Primary southern access (site access 5.2 km from Fern Hill Road) or, eastern access (site access 5.2 km from Nanangroe Road). ■ Secondary north-western access to Gobarralong Road (site access 13.8 km from Gobarralong Road).
Yass Valley Way Accommodation Camp (AC05B)	**Primary:** Commercial Road (East) **Secondary:** Enterprise Place (East)	Yass Valley Way Accommodation Camp is accessible through: ■ Primary access: Eastern access from Commercial Road, a newly developed two-way sealed road which joins onto Yass Valley Way (site access 0.3 kilometres on Commercial Road). Heading north-west on Yass Valley Way provides access to the Hume Highway in under 1.5 kilometres, or south-east into Yass township. ■ Secondary access: Eastern access from: Enterprise Place, a newly developed two-way sealed road which joins onto Industrial Close and leads into Commercial Road.

Should access be required through National Park and Wildlife Service estate, it must be authorised by NPWS under the *National Parks and Wildlife Act 1974*. The type of authorisation will be based on the nature and intent of the access required for the Project. Direct contact to the respective NPWS Area in writing must be completed to provide reasoning and the Project base relevance to support the type of access requested. NPWS will advise if any additional environmental assessment, or approval requirements are required on a case-by case basis prior to issuing any approval for access.

Standard notifications, access requests or general communications around emergency management are to be directed to the relevant NPWS Area offices via:

- NPWS Illawarra-Highlands Area Office (Tarlo River National Park plus adjoining Part 11 lands) email the Area Office via npws.illawarrahighlands@environment.nsw.gov.au or phone 02 4887 8210
- NPWS Alpine–Queanbeyan Area Office (Burrinjuck Nature Reserve, Bango Nature Reserve and Back Arm Nature Reserve) email the Area Office via npws.alpinequeanbeyan@environment.nsw.gov.au or phone 02 6229 7166
- NPWS Riverina Highlands Area Office (Kosciuszko National Park, Minjary National Park, Mudjarn Nature Reserve and Wereboldera State Conservation Area) email the Area Office via riverinahighlands.npws@environment.nsw.gov.au or phone 6947 7000.

5.4 Building maintenance and preparedness

During construction of the project, any buildings within the construction compounds and accommodation facilities are to be well-prepared prior to the start of the bushfire season, and monthly within the bushfire period. Buildings should be well prepared with the suppliers recommended internal checks on alarms and fire extinguishers. It is essential for the Superintendent or Senior Project Engineer to ensure all buildings and structures have adequate maintenance and bushfire preparedness measures are completed.

Key activities to ensure the buildings are well prepared for the bushfire season include:

- Clearing of leaf litter and debris from:
  - Gutters
  - Garden beds
  - Roofs
  - External assets
- Ensuring all external walls, eaves and roofs are sealed and painted and any window fly wires or screens are repaired to reduce the potential for ember attack
- Servicing of fire extinguishers
- Completing testing of fire hose reels and alarm systems, where installed.

5.5 Transmission line vegetation management

To manage bushfire risks on its existing transmission network, Transgrid maintains a vegetation clearance and vegetation management program, focused on removing all tall woody vegetation growing in the easement, in accordance with Transgrid's BRMP (Transgrid, 2021). The objective of vegetation management is to remove vegetation that has the potential to grow into the clearance space and reduce fuel load under the assets, therefore reducing potential fire threats. This is achieved through a combination of chemical control, individual tree trimming/ removal and mechanical treatment to prevent woody vegetation within and directly adjacent to the corridor from growing back.

Vegetation management is to be completed in accordance with Transgrid's BRMP (Transgrid, 2021) and Industry Safety Steering Committee Guidelines *ISSC3 – Guideline for Managing Vegetation near Powerlines*

(Resources and Energy NSW, 2016) based on the distances identified in AS/NZS7000:2016 *Overhead Line Design*. Vegetation management is in accordance with the project specific strategy developed for vegetation clearance – *HumeLink Vegetation Clearing Method and Management Memorandum* (Transgrid, 2023).

Easement widths and vegetation clearance widths are shown in Table 5-9, with annual regrowth rates along the easement considered moderate (0.5 to 1 metre per year) to fast (greater than 1.5 metres per year).

Transgrid's vegetation clearance requirements (Transgrid, 2020a) include:

- vegetation which may impede on the vegetation clearance requirements, as assessed by a Level 4 or Level 5 arborist
- vegetation within 20 meters of transmission line structures
- hazardous trees within the easement, hazardous trees are those which pose a risk of infringing on the vegetation clearance requirements if they fall
- hazardous trees outside the easement, as assessed by a Level 4 or Level 5 arborist
- Undergrowth and scrub removal is required only in accordance with the vegetation clearance requirements (refer to Table 5-9).

Table 5-9: Transmission Line Design Standard: vegetation clearance requirements for 500 kV transmission easements (Transgrid, 2018; Transgrid, 2020b)

Design standard	Requirement for 500 kV transmission easements (Transgrid 2018)
Easement width	Double circuit – 70 m Single circuit – 80 m Transposition locations may require easements of up to 110 m and up to 130 m wide where new transmission line would parallel the relocated section of Line 51.
Vegetation clearance (safe working distance plus regrowth rate)	3.9 m plus regrowth allowance
Horizontal clearance space without sway/sag allowance	6.4 m
Vertical clearance space without sway/sag allowance	6.4 m
Width around any structure (minimum)	20 m

Transgrid's BRMP (Transgrid, 2021) and associated vegetation management, and infrastructure inspection procedures provide overarching methodology on how inspection and maintenance activities on Transgrid's assets would be carried out prior to and during the bushfire danger period. These include the requirements for ignition prevent and vegetation clearance. During construction, AGJV and the PMT will be responsible for the execution of the initial clearing for the construction of the transmission line, and maintenance during the construction period.

5.6 Water supply and services

Adequate water supply is essential during construction to put out any unwanted spot ignitions, and to provide water sources for firefighting agencies within the bushfire prone areas throughout the project and construction infrastructure.

Water supply is to be maintained in accordance with PBP requirements (NSW RFS, 2019) throughout construction and operation of the project. Appropriate water supply for firefighting and appropriate location of

utilities are important mitigation measures of bushfire risk during construction. Alternative water supply may also be sourced from permanent water such as dams during fire response.

As per the CoA:B51 – Bushfire Safety – Operating Conditions, and HR15 (refer section 1.4, provision of a 20,000L water supply tank fitted with a 65 mm Storz fitting and FRNSW compatible suction is required to be located at each of the construction compounds and accommodation camps (including all-weather access to the water supply tanks for Category 1 tankers). Performance criteria and acceptable solutions for utilities (water supply, electricity and gas) for any accommodation that is SFPP complies with the PBP (NSW RFS, 2019).

5.7 Bushfire awareness

5.7.1 Site induction and training requirements

Bushfire awareness is required for all workers, occupants, and personnel on site. This includes, but is not limited to, observing the landscape, weather and ignition risks, monitoring communication sources, and maintaining a comprehensive understanding of the bushfire preparedness procedures and emergency response.

Bushfire awareness will be primarily communicated through a project induction for all new staff members, contractors, visitors and site users to include the following:

- fire weather awareness and preparedness in response to forecast Fire Danger Rating
- fire reporting actions
- emergency response actions responses in relation to an emergency warning being issued
- location of closest Staging Areas and Neighbourhood Safer Places
- site evacuation procedures
- emergency contact systems (mobile or radio)
- operation of fire suppression equipment

Transgrid Hot Work and Fire Risk Work Corporate Wide Procedure (Transgrid, 2022) including the Fire Risk Assessment and Control Measures (FRACM). Site induction requirements and training for all staff members, contractors, visitors and site users is the responsibility of the PMT and relevant Superintendent or Senior Project Engineer.

The Superintendent or Senior Project Engineer or authorised officer is responsible for providing a hot works permits to all staff and contractors during the bushfire season (refer section 5.8). The Superintendent or Senior Project Engineer and any appointed authorised officers must complete the Transgrid's Hot Work and Fire Risk Work online training to provide hot works permits. Authorised officers must also ensure compliance with the Transgrid Hot Work and Fire Risk Work Corporate Wide Procedure (Transgrid, 2022) including the Fire Risk Assessment and Control Measures (FRACM). A Fire Watch Observer must be present on site at all times during the fire season.

5.7.2 Staff briefing and toolbox talks

All workers must be briefed on how to avoid a fire ignition and what to do in a fire or bushfire (Transgrid, 2022). These briefings will take form through toolbox talks and the above site induction requirements. AGJV PMT and the relevant Superintendent or Senior Project Engineer will ensure that all personnel are informed of site-specific fire and emergency procedures as part of toolbox talks given at:

- the commencement of each bushfire season
- new starter induction

- daily during the bushfire season.

5.7.3 Weather and fire danger awareness

The PMT and Superintendent or Senior Project Engineer during construction and operation of the project is responsible for daily monitoring of fire conditions during the fire season, and advising all personal of:

- Fire Preparedness Works Colour Code (Australian Fire Danger Rating System, AFDRS)
- Significant changes to weather conditions
- Increases in wind or temperature
- Reductions in humidity
- Wind changes
- Any official emergency alert issued for the site and its surrounding local government areas (LGAs).

The PMT is responsible for monitoring fire warnings for bushfire emergency alerts on:

- ABC Listen App or ABC local radio
- NSW RFS website and/or NSW Hazards Near Me App
- Monitor for fire danger weather warnings and changes in weather conditions on the Bureau of Meteorology (BOM) website.

The NSW Hazards Near Me App is the official warning application for New South Wales which displays information from the emergency services. A Watch Zone will be created by the Superintendent or Senior Project Engineer daily (High Fire Danger Rating forecast or greater) during fire season to provide a proximity alert to any hazards near the project.

Further, NPWS estate alerts are posted on the Alerts list/map | Alerts list | NSW National Parks. The alerts contain information about NPWS estate closure types, safety risks, and timeframes. This includes status on, and closures associated with the NPWS Hazard reduction programs.

5.7.4 Liaison with National Parks and Wildlife Service, the local NSW RFS, Forestry Corporation of NSW and Fire Rescue NSW

The PMT and relevant Superintendent or Senior Project Engineers should annually (prior to the bushfire season) invite the local NSW RFS Brigade, National Parks Wildlife Service (NPWS), Forestry Corporation of NSW (FCNSW) and Fire Rescue NSW (FRNSW) representatives onsite for site familiarisation, fire response, evacuation drills and liaison of personnel. This should be conducted with key staff in the construction phase of the project. During this liaison event, procedures and operations detailed in this plan will be discussed. It is noted that there are no immediate NPWS fire detection towers within the vicinity of the project.

5.7.5 Evacuation drills

An evacuation drill will be completed annually (prior to the bushfire season) at each compound and accommodation facility. The PMT (including relevant Superintendent or Senior Project Engineer) will communicate the date and time to all staff and subcontractors prior to the commencement of the evacuation drill. Key outcomes from the evacuation drill include:

- All staff and subcontractors ability to respond and follow the details outlined in this plan
- Any lessons learnt are communicated to the PMT (including Superintendent or Senior Project Engineer or delegate)
- All potential improvements are implemented immediately.

Representatives from the local NSW RFS Brigade, National Parks Wildlife Service (NPWS), Forestry Corporation of NSW (FCNSW) and Fire Rescue NSW (FRNSW) will be notified of the evacuation drill and invited to complete a joint exercise.

5.8 Construction activity limits

5.8.1 Hot Works

All personnel and contractors must work in accordance with the Transgrid Hot Work and Fire Risk Work Corporate Wide Procedure (Transgrid, 2022), as detailed in the Acciona / AGJV Health and Safety Management Plan (HSMP). This procedure provides guidance on the following:

- Risk assessment, testing, process and controls for when a hot work permit is required
- Risk assessment and control measures for fire risk work (including if a TOBAN is in place)

A Hot Work Permit must be completed by an Authorised Officer when (refer Plate 1):

- Hot Work is being undertaken outside a Designated Hot Work Area (DHWA), and
- Approval by TransGrid Management and Notification to the RFS/CFA/ESA may be required if Hot Work is proposed during a TOBAN (refer to Section 5 for detailed information).

The duration of a Hot Work Permit cannot exceed a period of one (1) workday.

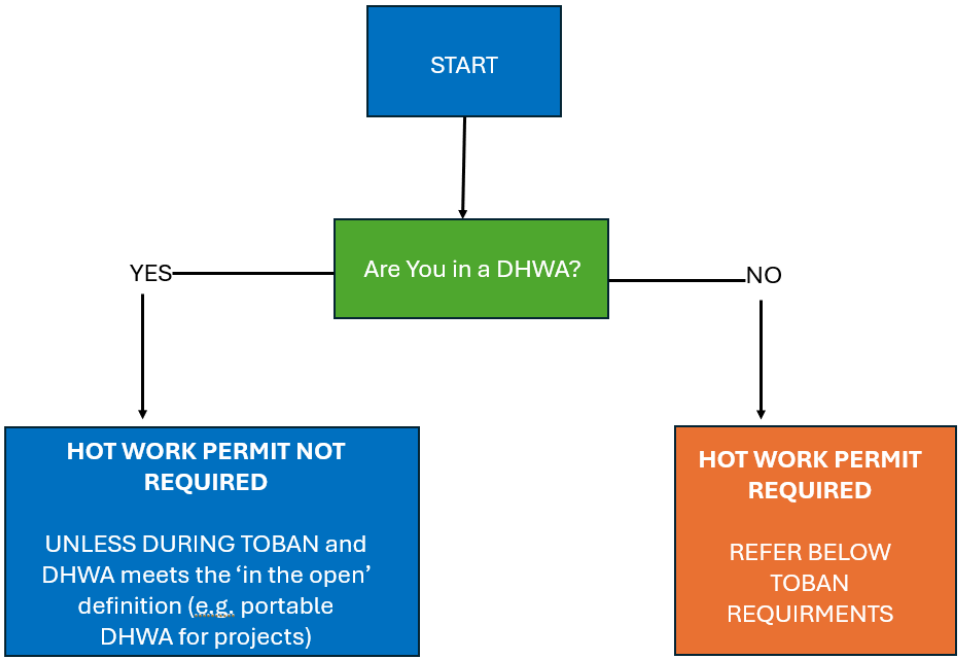


Plate 1 Hot Work Permit process decision tree

The first step in the Hot Work Permit process is to identify risks as part of a Pre-work risk assessment process, including:

- Assess the risks on site. Determine if conditions are unfavourable to undertake Hot Work. If yes postpone the Hot Work until conditions are suitable.

- Identify and control (remove) any fire hazard (including the presence of flammable or combustible liquids, gases, vapours, dusts, fibres or substances) within 15 metres from the Hot Work location.
- Consider relevant hazards that may exist outside the 15-metre area.
- Consider the possibility of changing circumstances during the progress of the Hot Work and whether they may render the area unsafe for the work to continue;
- Properly ventilate the Hot Work area;
- Suitably position the equipment, including emergency firefighting equipment;
- Isolate the area where the Hot Work is to be performed; and
- Provide a safe entry to and exit from the Hot Work area.

Testing for the presence of gas and vapour is only required for work where there is the potential for the presence of flammable gas and flammable vapour. This only applies to Hot Work in or adjacent to any pipe, drum, tank or vessel that has the potential to carry a flammable gas or vapour.

The majority of Hot Work undertaken by AGJV will not require gas/vapour testing before Hot Work is undertaken.

If testing is required, prior to the commencement of Hot Work the following must be complied with:

- The detectors used for the testing must comply with AS 2275.1 and AS2275.2;
- Each detector used for the testing shall be used by a person skilled in its operation, limitations and maintenance;
- Testing must continue until every source and potential source of flammable gas and flammable vapour has been tested; and
- Testing must take place as late as practical before the Hot Work is commenced, subject to it being not more than two hours beforehand.

5.8.2 Elevated fire danger and total fire ban days

During the bushfire season on days of elevated forecast fire danger (High Fire Danger Rating forecast or greater), the PMT (including Superintendent or Senior Project Engineer) will maintain a 'listening-watch' of the ABC Listen App or ABC local radio for changes in fire danger and official bush fire warnings. The PMT and relevant Superintendent or Senior Project Engineer will consider the suspension of activities which may cause sparks in areas of vegetation hazard (elevated fuels), and ‘Hot Work’ activities must be in accordance with Hot Works Permit conditions.

During a TOBAN, the following rules apply:

- Cannot light, maintain or use a fire in the open, or carry out any activity in the open that causes, or is likely to cause, a fire
- General purpose hot works (such as welding, grinding or gas cutting or any activity that produces a spark or flame) are not to be done in the open
- No use of machinery in open or grassy areas, to help reduce the chance of ignition
- For more information, contact the local NSW RFS Fire Control Centre

All personnel and contractors must work in accordance with the Transgrid Hot Work and Fire Risk Work Corporate Wide Procedure (Transgrid, 2022) on elevated fire danger and total fire ban days; including the use of the Fire Risk Assessment and Control Measures (FRACM). A FRACM is required if Fire Risk Work is being undertaken in a Hazardous Area or within the bushfire danger period or if a TOBAN has been declared. Plate 2 details the decision tree for hot works during a TOBAN.

A FRACM form must be completed by an authorised officer when:

- Fire risk work is being undertaken in a Hazardous Area; or
- Fire risk work is being undertaken during declared bushfire danger period; and
- Approval by the Transgrid Project Director and notification to the RFS or Fire and Rescue station if hot works want to be completed during TOBAN days

Restrictions and guidance from emergency authorities provided during the Fire Danger Period, days of high fire danger and TOBAN days must be adhered to.

Where appropriate, during elevated forecast fire danger (High Fire Danger Rating forecast or greater), FCNSW will communicate with the PMT the operations being undertaken in pine plantation areas to assist with the completion of the FRACM.

Standard exemptions for Services and utilities – construction, essential repairs or maintenance orders made by the Minister or the Commissioner of NSW RFS are described in Appendix D. The excerpt is from the NSW Government Gazette listed under the Rural Fires Act 1997 Notification under Section 99, Schedule 5 of the Total Fire Ban Notification *Schedule of Standard Exemptions to Toal Fire Bans*. It is noted that this information is current as per the finalisation of this BFEMEP, and should be reviewed for currency before the commencement of exempt works.

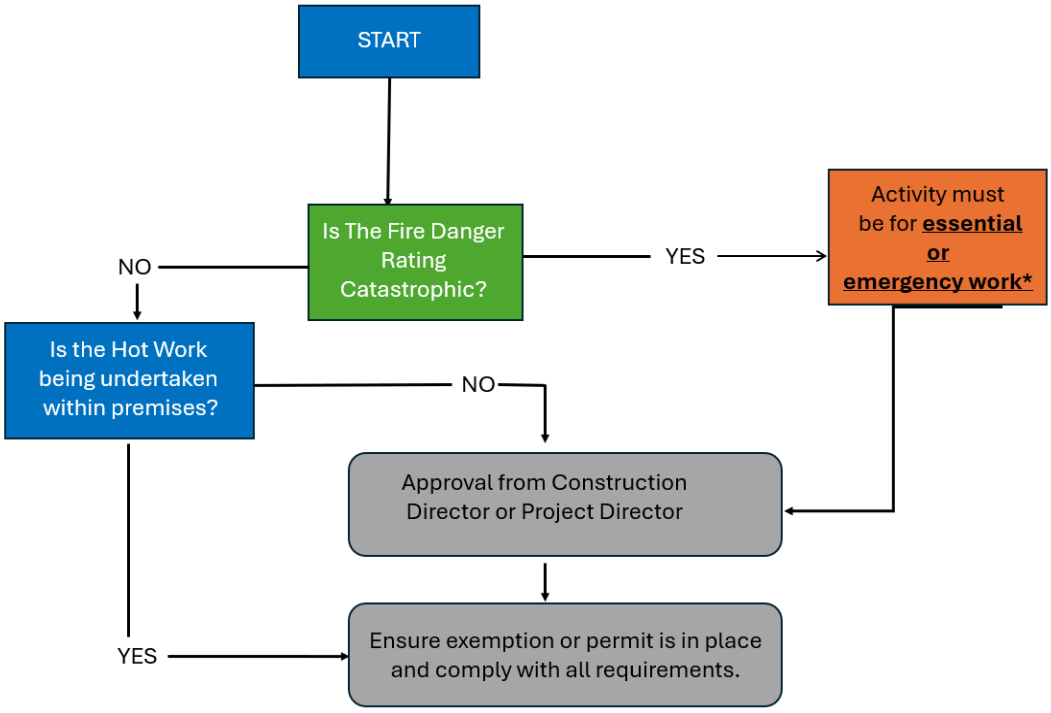


Plate 2 TOBAN process decision tree

5.8.3 Fire safety equipment

As per the Hot Work and Fire Risk Work Corporate Wide Procedure and FRACM (Transgrid, 2022), the minimum Prescribed Fire Safety Equipment (PFSE) to be available and deployed for all Hot Work and Fire Risk Work include:

- Rake-hoe or shovel

- A water knapsack spray pump of 16 litre minimum capacity filled with water; or
- A fire extinguisher (liquid type) of 9 litre minimum capacity; or
- A dry powder type extinguisher of 0.9 kg minimum capacity
- Welding pads/shields (specific to hot works)

In some instances (AFDRS Extreme and above), as per the Hot Work and Fire Risk Work Corporate Wide Procedure and FRACM (Transgrid, 2022), a fire trailer or vehicle mounted water tank (400L) may be required.

All plant and heavy equipment must carry at least a 9-litre water stored-pressure tank with a minimum rating of 3A, or firefighting equipment as a minimum when on-site.

It is the responsibility of the PMT and relevant Superintendent or Senior Project Engineer to ensure all fire safety equipment is in working order, and present where relevant.

Further details on the required fire safety and equipment requirements for Hot Work and Fire Risk Work can be seen in Appendix E.

5.8.4 Fire watch observer and final fire check

The decision to appoint a fire watch observer is made based on the risks on the particular day and part of the control measures in a FRACM. If appointed, the fire watch observer must:

- Be an Authorised Officer
- Be alert for any fire outbreak or hazards
- Take immediate action to combat any outbreak of fire that may occur, if safe to do so
- Not allow Hot Work to proceed outside the area specified on the Hot Work Permit
- Immediately stop the work and withdraw the Hot Work Permit if a hazardous condition is observed
- Be aware of the need to use PPE where Hot Work involves arc welding, cutting or arc gouging; and
- Not leave the work site(s) unless properly relieved by an Authorised Officer.

A single person may be nominated as the Fire Watch Observer for multiple permits across multiple locations as long as they can adequately satisfy the conditions above.

Hot works ignition sources can get into areas not easily seen, providing the opportunity for fires to smoulder. A final fire check must be completed and signed off at the completion of any hot works activities, dependant on the activity and weather conditions:

- Extreme or above declared fire danger rating days inside designated hot works areas
- High or above declared fire danger rating days outside designated hot works areas.

5.8.5 General site mitigation measures

General site mitigation measures include wide-ranging actions to further reduce the risk of fire ignition. These include:

- Maintenance of equipment to ensure good working order to reduce risk of ignition
- All plant and equipment are to be fitted with appropriate spark arrestors, where practicable
- Designated smoking areas to be defined and adequate designated rubbish bins to be implemented.

5.9 Hazardous goods storage

Storage of flammable and combustible liquids will be in accordance with the guidelines specified in Australian Standard for hazardous goods storage is AS1940:2017 - The storage and handling of flammable and combustible liquids.

Key aspects covered by this standard are:

- Design and construction of storage facilities: AS1940 specifies the requirements for the design and construction of storage installations for flammable and combustible liquids, including tanks, pipes, and other storage equipment
- Fire protection measures: The standard outlines fire protection measures such as fire-resistant construction, sprinkler systems, fire extinguishers, and spill containment systems to mitigate the risks associated with flammable and combustible liquids
- Segregation and separation: AS1940 provides guidance on the segregation and separation of different classes of hazardous goods to prevent the mixing of incompatible substances and minimize the risk of fire or chemical reactions
- Ventilation and ventilation systems: The standard lays out requirements for ventilation to control vapor emissions and avoid the accumulation of flammable vapours in storage areas
- Handling and transfer procedures: AS1940 outlines safe procedures for handling, transferring, and decanting flammable and combustible liquids to prevent spills, leaks, or accidental releases
- Emergency response: The standard provides recommendations for emergency response planning and procedures, including spill containment, fire suppression, and evacuation measures.

Adhering to AS1940 ensures that hazardous goods storage facilities meet the necessary safety standards to mitigate the risks associated with flammable and combustible liquids. It is important for organizations and individuals responsible for the storage and handling of such materials to be familiar with and comply with this Australian Standard.

The storage and handling of LP Gas will be in accordance with Australian/New Zealand Standard AS/NZS1596:2014 (Standards Australia/New Zealand, 2014). This standard provides guidelines and specifications for the safe storage, handling, and usage of liquefied petroleum gas (LP Gas) in various applications. The following additional measures are required in accordance with PBP for development sites exposed to bush fire risk (NSW RFS 2019):

- all fixed gas cylinders are kept clear of all flammable materials to a distance of 10m and shielded on the hazard side;
- connections to and from gas cylinders are metal;
- polymer-sheathed flexible gas supply lines are not used; and
- above-ground gas service pipes are metal, including and up to any outlets.

Location, quantity and types of hazardous materials present at each compound will be captured in the Emergency Service Information Pack (refer Appendix B).

5.10 Fire trails

Any fire trails, trail signage, passing bays, turn-around points and fire breaks are to be maintained and serviceable before the start of each fire season and during the season. The Superintendent or Senior Project Engineer or delegate will identify and implement any trail maintenance required.

The fire trail standards of the NSW RFS should be used as guide, including the *Fire Trail Standards* (NSW RFS, 2023), which were gazetted on 1 December 2023, and the guide for the application of these standards *Fire Trail Design Construction and Maintenance Manual* (Soil Conservation Service, 2017).

It is noted no current fire trails are proposed as part of the Project and any new fire trails will be contained within the approved Project Footprint as per CoA 51 Bushfire Safety – Operating Conditions.

5.11 Isolation of live transmission infrastructure

Isolation of live transmission infrastructure can occur through a process known as a planned outage. This would require communication with the line controller to request the transmission line to be isolated. This would be completed through the PMT, at the request of the Superintendent or Senior Project Engineer. It is essential to prioritize safety and adhere to established protocols and regulations throughout the isolation process. Continuous communication and coordination with stakeholders help mitigate any potential disruptions and ensure effective restoration of power after the planned outage.

5.12 Aerial activities

Identified in the EIS (Aurecon 2023b), helicopters and drones may be used during construction of the project to deliver materials and equipment, transfer personnel to construction areas, and be used for stringing of transmission lines. It is noted, operations of aerial construction techniques will not impact aerial firefighting operations in the event of a fire. Should there be a fire in the vicinity of the construction, all aerial activities will be grounded.

5.13 Flood risk and response

The hydrology and flood impact assessment during the EIS indicates that the flood risk during construction is minimal. Based on the localised works associated with the Project and the level of flood impacts anticipated, the project is highly unlikely to impact on any existing flood risk management plans, strategies or procedures. However, the implementation of a Flood Response Plan (AGJV, 2024b) has been established to mitigate any flood risks, and response requirements in the unlikely event of a flood. The Flood Response Plan forms part of the overarching Traffic and Transport Management Plan and provides further information on the flood preparation and response for the Project. The Flood Response Plan (AGJV, 2024b) can be seen in Appendix F.

All access tracks (primary and secondary) described in Section 5.3 are to be constructed in accordance with PBP (NSW RFS, 2019) and will be used in the event of a flood.

5.14 Survivability of structures

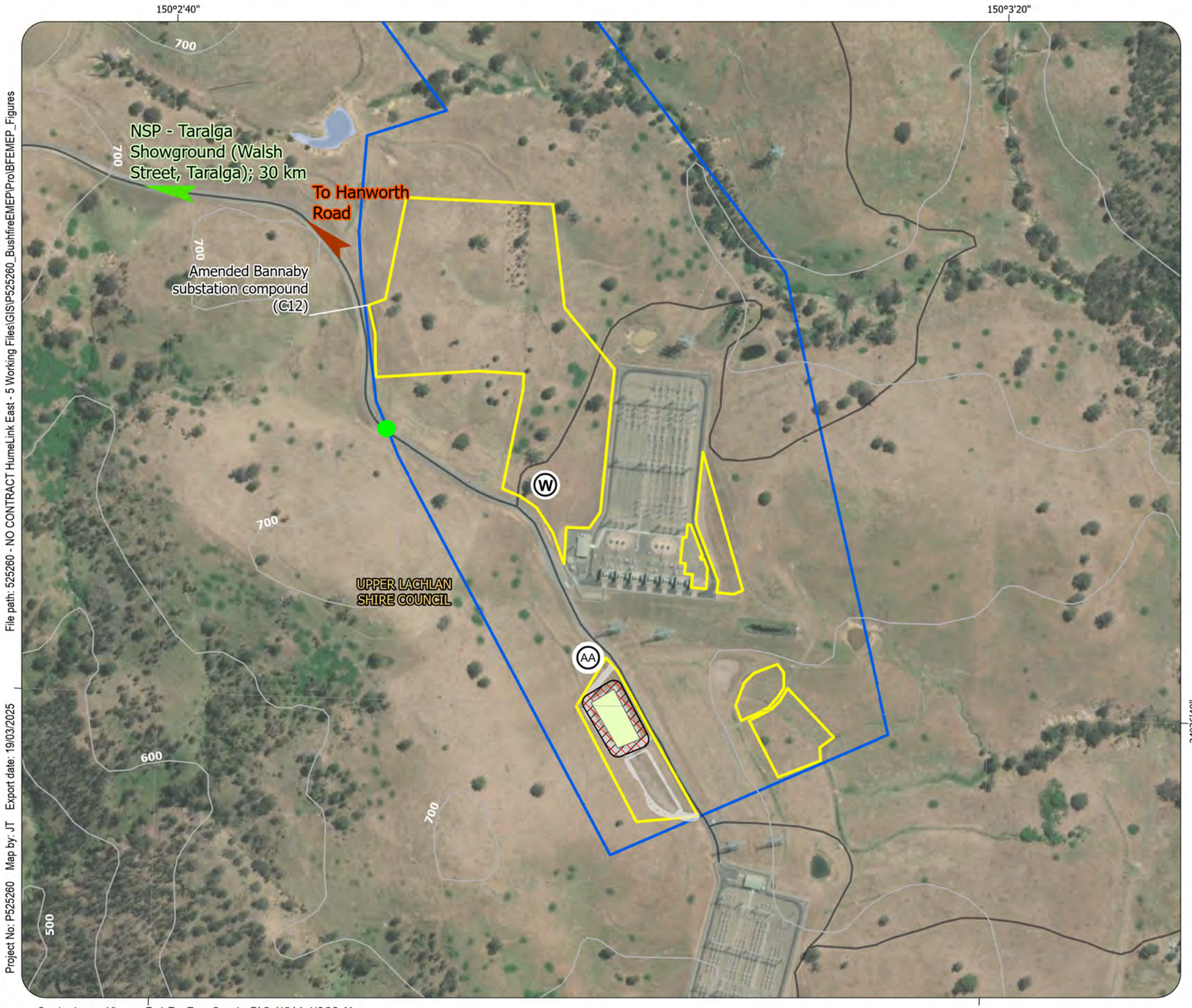
The mitigation measures identified in this plan cannot guarantee that a building or structure would survive a bushfire event on every occasion. This is due to the unpredictable nature of fire behaviour, and potential for weather conditions to exceed the extreme conditions underpinning the existing models for bushfire attack. The survivability of a building or structure is dependent on a combination of measures including vegetation management within a site and adjoining lands, landscaping, water supplies, access, building design and condition, and ongoing building maintenance.

5.15 Mitigation Measures & Fire Management Plan (FMP)

The following section details figures associated with the key mitigation measures discussed in Section 0 of this report. More specifically, Figure 5-1 to Figure 5-7 detail the following at each compound and accommodation facility:

- Asset Protection Zones
- Water supplies
- Assembly areas

- Access roads
- Address
- Latitude/longitude
- Local emergency authority
- Nearest NSP or township for evacuation purposes.



Service layers: Vicmap, Esri, TomTom, Garmin, FAO, NOAA, USGS, Maxar

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Legend

- Assembly area
- Static water supply (20,000L)
- Roads
- Contours (50m)
- Site office
- Asset Protection Zone (APZ)
- Ancillary infrastructure
- Water bodies
- Project compounds and accommodation facilities
- Local government areas
- Humelink East Corridor
- Access point

Amended Bannaby substation compound (C12)	
Address:	Hanworth Road, Bannaby, NSW
Latitude / longitude:	-34.4439° / 150.0502°
Nearest Rural Fire Service station:	Canyonleigh (Canyonleigh, Road, Canyonleigh); 50km
Nearest Fire and Rescue station:	Bundanoon Fire Station (Anzac Parade, Bundanoon); 90km
Primary and secondary access:	Hanworth Road is a sealed road. Access to Hanworth Road includes: • Primary western access from Bannaby Road (site access approximately 6.3 km from Bannaby Road). • Secondary eastern access from unsealed rural road providing property access, 16 km to Wollondilly River.
APZ requirements:	APZ required for offices (BAL 29 AS3959-2018) North: 12m (BAL 29) South: 13m (BAL 29) East: 12m (BAL 29) West: 10m (BAL 29)

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A3 scale: 1:5,000

0 30 60 90 120 150 Meters

HumeLink East - Bushfire Emergency Management and Evacuation Plan

Figure 5.1: Mitigation Measures & Fire Management Plan (FMP) - Amended Bannaby substation compound (C12)

Coordinate system: GDA2020 MGA Zone 55

149°39'20"

-34°34'

Service layers: Vicmap, Esri, TomTom, Garmin, FAO, NOAA, USGS, Maxar

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Map by: JT
Project No: P525260

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Legend

- AA — Assembly area
- W — Static water supply (20,000L)
- Roads
- Contours (50m)
- Water bodies
- Project compounds and accommodation facilities
- Local government areas
- Access point

Crookwell compound (AC06)	
Address:	Woodhouselee Road, Woodhouselee, NSW
Latitude / longitude:	34.55944 / 149.658
Nearest Rural Fire Service station:	Roslyn (Middle Arm Road, Roslyn); 14km
Nearest Fire and Rescue station:	Goulburn Fire Station (Bourke Steet, Goulburn); 37km
Primary and secondary access:	Primary access into the Crookwell facility is via two-way unsealed Graywood Siding Road. Access to Graywood Siding Road includes: • Northern access from Woodhouselee Road (site access 2 km from Woodhouselee Road) • Southern access from Woodhouselee Road (site access 5 km from Woodhouselee Road). Secondary access via Crookwell 3 Windfarm secondary emergency access is an unsealed two-way private access road and includes: • Western access from Woodhouselee Road (site access is 3.3 km from Woodhouselee Road via Turbine 10 and Steeves Creek and Pejar Creek). Secondary (to be constructed) access will be the Crookwell East access track and tracks to the transmission line corridor: • North-eastern access from AC06 to Middle Arm Road.
APZ requirements:	Laydown only; no APZ required

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A3 scale: 1:5,000

0 30 60 90 120 150 Meters

Coordinate system: GDA2020 MGA Zone 55

HumeLink East - Bushfire Emergency Management and Evacuation Plan

Figure 5.2: Mitigation Measures & Fire Management Plan (FMP) - Crookwell compound (AC06)

Service layers: Vicmap, Esri, TomTom, Garmin, FAO, NOAA, USGS, Maxar

aurecon

Legend

- (AA) Assembly area
- (W) Static water supply (20,000L)
- Roads
- Ancillary infrastructure
- Contours (50m)
- Site office
- Asset Protection Zone (APZ)
- Water bodies
- Project compounds and accommodation facilities
- Local government areas
- Access point

Yass substation compound (C10)	
Address:	Perry Street, Yass, NSW
Latitude / longitude:	-34.86104° / 148.9076°
Nearest Rural Fire Service station:	Yass Valley FCC (Yass Valley Way, Yass); 1.5km
Nearest Fire and Rescue station:	Yass Fire Station (Meehan Street, Yass); 5km
Primary and secondary access:	Perry Street is a sealed two-way road. Access to Perry Street includes: ▪ Primary northern access from Grand Junction Road, a major two-way sealed road (site access 1.2 km from Grand Junction Road). ▪ Secondary access to Perry Street is from Wee Jasper Road/Green Street, through Victoria Street (0.2 km) (site access 1 km from Wee Jasper Road/ Green Street).
APZ requirements:	Laydown only; no APZ required

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A3 scale: 1:4,000

0 30 60 90 120 150 Meters

Coordinate system: GDA2020 MGA Zone 55

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HumeLink East - Bushfire Emergency Management and Evacuation Plan

Figure 5.3: Mitigation Measures & Fire Management Plan (FMP) - Yass Faulder Ave compound (AC05)

148°9'20"

-35°18'40"

GADARA ROAD

Gadara Road compound (C19)

SNOWY VALLEYS COUNCIL

NSP - Gilmore RFS Shed (Batlow Road, Gilmore); 7 km

400

400

W

AA

Service layers: Vicmap, Esri, TomTom, Garmin, FAO, NOAA, USGS, Maxar

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Legend

- AA — Assembly area
- W — Static water supply (20,000L)
- Roads
- Contours (50m)
- Project compounds and accommodation facilities
- Local government areas
- Humelink East Corridor
- Access point

Gadara Road compound (C19)	
Address:	Gadara Road, Gadara, NSW
Latitude / longitude:	-35.31233 / 148.1533
Nearest Rural Fire Service station:	Gilmore (Batlow Road; Gilmore); 7km
Nearest Fire and Rescue station:	Tumut Fire Station (Wynyard Street, Tumut); 15km
Primary and secondary access:	Gadara Road is an unsealed two-way road. Access to Gadara Road includes: ▪ Primary southern access from Snowy Mountains Highway (site access 2 km from Snowy Mountains Highway). ▪ Secondary northern access from Reka Road (site access 5.2 km from Reka Road).
APZ requirements:	Laydown only; no APZ required

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A3 scale: 1:4,000

0 30 60 90 120 150 Meters

Coordinate system: GDA2020 MGA Zone 55

HumeLink East - Bushfire Emergency Management and Evacuation Plan

Figure 5.4: Mitigation Measures & Fire Management Plan (FMP) - Gadara Road compound (C19)

Service layers: Vicmap, Esri, TomTom, Garmin, FAO, NOAA, USGS, Maxar

aurecon

Legend

- AA — Assembly area
- W — Static water supply (20,000L)
- Roads
- Contours (50m)
- Project compounds and accommodation facilities
- Local government areas
- Access point

Yass substation compound (C10)	
Address:	Perry Street, Yass, NSW
Latitude / longitude:	-34.86104° / 148.9076°
Nearest Rural Fire Service station:	Yass Valley FCC (Yass Valley Way, Yass); 1.5km
Nearest Fire and Rescue station:	Yass Fire Station (Meehan Street, Yass); 5km
Primary and secondary access:	Perry Street is a sealed two-way road. Access to Perry Street includes: ▪ Primary northern access from Grand Junction Road, a major two-way sealed road (site access 1.2 km from Grand Junction Road). ▪ Secondary access to Perry Street is from Wee Jasper Road/Green Street, through Victoria Street (0.2 km) (site access 1 km from Wee Jasper Road/ Green Street).
APZ requirements:	Laydown only; no APZ required

Revision: D Verified: RR Date: 19/03/2025

A3 scale: 1:4,000

0 30 60 90 120 150 Meters

HumeLink East - Bushfire Emergency Management and Evacuation Plan

Figure 5.5: Mitigation Measures & Fire Management Plan (FMP) - Yass substation compound (C10)

Coordinate system: GDA2020 MGA Zone 55

148°21'20"

-35°4'

Adjungbilly accommodation facility and compound (AC04)

GUNDAGAI COUNCIL

600

AA

W

ADJUNGBILLY ROAD

NSP - Brungle NSW RFS Station (Brungle Road, Brungle); 17 km

Service layers: Vicmap, Esri, TomTom, Garmin, FAO, NOAA, USGS, Maxar

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Project No: P525260

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Legend

- (AA) Assembly area
- (W) Static water supply (20,000L)
- Roads
- Ancillary infrastructure
- Contours (50m)
- Accommodation facility
- Asset Protection Zone (APZ)
- Project compounds and accommodation facilities
- Local government areas
- Access point

Adjungbilly accommodation facility and laydown (AC04)	
Address:	Adjungbilly Road, Adjungbilly, NSW
Latitude / longitude:	-35.0655 / 148.3595
Nearest Rural Fire Service station:	Adjungbilly (Red Hill Road, Adjungbilly); 6km
Nearest Fire and Rescue station:	Gundagai Fire Station (Otway Street, Gundagai); 50km
Primary and secondary access:	Adjungbilly accommodation facility and compound is accessible directly from Adjungbilly Road. Access to Adjungbilly Road includes: ▪ Primary southern access (site access 5.2 km from Fern Hill Road) or, eastern access (site access 5.2 km from Nanangroe Road). ▪ Secondary north-western access to Gobarralong Road (site access 13.8 km from Gobarralong Road).
APZ requirements:	APZ required for accommodation facilities (BAL 12.5 AS3959-2018) (SFPP) and offices (BAL 29 AS3959-2018). North: 67m (SFPP) and 20m (BAL 29) South: 79m (SFPP) and 25m (BAL 29) East: 79m (SFPP) and 25m (BAL 29) West: 79m (SFPP) and 25m (BAL 29)

Revision: D Verified: RR Date: 19/03/2025

A3 scale: 1:5,000

0 30 60 90 120 150 Meters

Coordinate system: GDA2020 MGA Zone 55

HumeLink East - Bushfire Emergency Management and Evacuation Plan

Figure 5.6: Mitigation Measures & Fire Management Plan (FMP) - Adjungbilly accommodation facility and compound (AC04)

148°52'40"

-34°48'40"

Enterprise Place

Industrial Close

Commercial Road

YASS VALLEY WAY

Yass (8km)

YASS VALLEY COUNCIL

Yass Valley Way Accommodation Camp (AC05B)

AA

W

BLACK RANGE ROAD

TELEGRAPH CLOSE

500

Service layers: Vicmap, Esri, TomTom, Garmin, FAO, NOAA, USGS, Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community

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Map by: JT

Project No: P525260

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Legend

- AA — Assembly area
- W — Static water supply (20,000L)
- Roads
- Contours (50m)
- Ancillary infrastructure
- Project compounds and accommodation facilities
- Local government areas
- Accommodation
- Office
- Area to be maintained as low threat vegetation as per PBP
- Asset protection zone (BAL 12.5; 32 m)
- Asset protection zone (BAL 19; 23 m)
- Access point

Yass Valley Way Accommodation Compound (AC05B)	
Address:	Commercial Road, Yass, NSW
Latitude / longitude:	-34.80955 / 148.87849
Nearest Rural Fire Service station:	Yass Valley FCC (Yass Valley Way, Yass); 6.5km
Nearest Fire and Rescue station:	Yass Fire Station (Meehan Street, Yass); 4km
Primary and secondary access:	Yass Valley Way Accommodation Camp is accessible through: • Primary access: Eastern access from Commercial Road, a newly developed two-way sealed road which joins onto Yass Valley Way (site access 0.3 kilometres on Commercial Road). Heading north-west on Yass Valley Way provides access to the Hume Highway in under 1.5 kilometres, or south-east into Yass township. • Secondary access: Eastern access from: Enterprise Place, a newly developed two-way sealed road which joins onto Industrial Close and leads into Commercial Road.
APZ requirements:	APZ required for accommodation facility and offices (BAL 29 AS3959-2018)*. North/North east: Nil South: 23m (BAL 19) / 32 (BAL 12.5) East: 23m (BAL 19) / 32 (BAL 12.5) South west: 17m (BAL 19) / 25 (BAL 12.5) West: 23m (BAL 19) / 32 (BAL 12.5) North west: 17m (BAL 19) / 25 (BAL 12.5)

Revision: D

Verified: RR

Date: 31/07/2025

A3 scale: 1:3,000

0 20 40 60 80 100 Meters

Coordinate system: GDA2020 MGA Zone 55

HumeLink East - Bushfire Emergency Management and Evacuation Plan

Figure 5.7: Mitigation Measures & Fire Management Plan (FMP) - Yass Valley Way Accommodation Camp (AC05B)

6 Fire response

6.1 Fire reporting and suppression

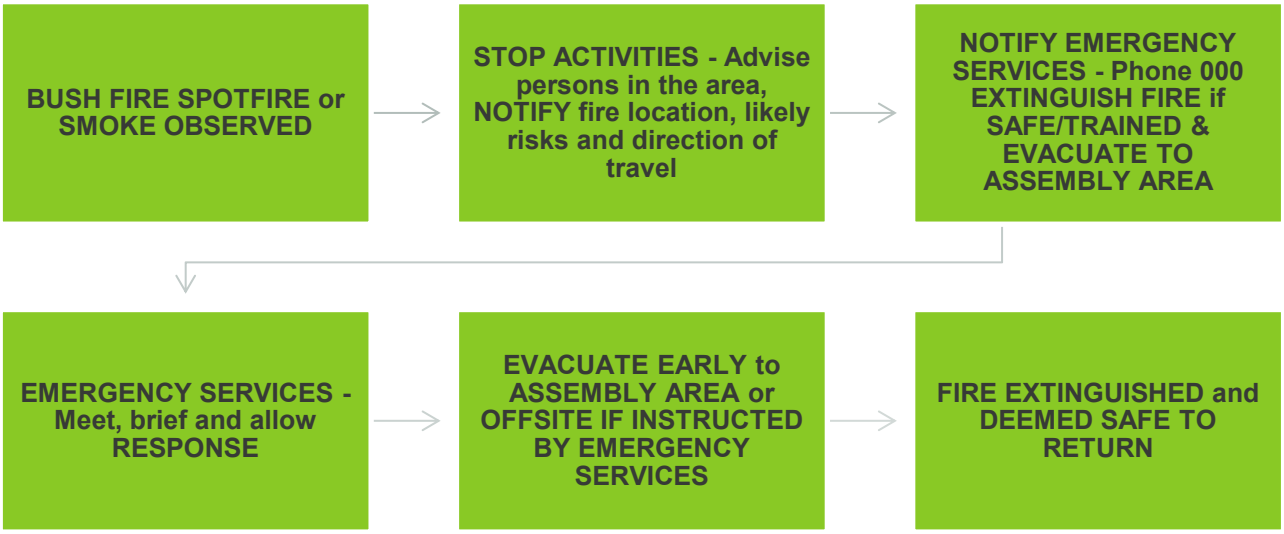
Fire response and suppression resources are required to be maintained at each construction compound and accommodation facility, including fire hose reel systems, and appropriate access and service requirements as per PBP (NSW RFS, 2019). All staff onsite must have knowledge on how to appropriately use or activate all fire suppression equipment.

During the life of the project, all personal working on and travelling to and from site will remain vigilant to potential fire ignitions. All suspected bush fire smoke sightings or a fire will be reported to **000**, then reported to the Superintendent or Senior Project Engineer or delegate. If possible, the location, size and direction of travel of the fire will also be reported.

In the event that an Emergency Warning alert is issued by the NSW RFS, emergency procedures will be enacted by the Superintendent or Senior Project Engineer or delegate and will apply to all site personnel.

The Superintendent or Senior Project Engineer or their delegate is the initial incident controller until being replaced by the responding external fire authority incident controller. The replacement will occur on the after a handover briefing has occurred with the external fire authority incident controller.

If a fire is observed on site, this procedure will be followed.



Should a fire be encroaching NPWS estate, afterhours or emergency notifications must be directed to the NPWS Southern Ranges Branch Duty Officer (BDO) via phone (02) 8275 1750, and/or via email at npwsSRB.dutyofficer@environment.nsw.gov.au.

6.2 Bushfire Alert Levels

There are three levels of bushfire warning Alert Levels which may be issued by the NSW RFS to advise the public of the potential threat from a bushfire; these are Advice, Watch and Act, and Emergency Warning, as per below and detailed in Table 6-1. These alert levels are consistent with the new Australian Warning System.

An Emergency Warning is the highest level of bushfire alert warning, indicating potential danger and immediate action required. In the event that an Emergency Alert warning is issued by authorities, the PMT and Superintendent or Senior Project Engineer or delegate, is required to document all response actions. Response actions include any actions that are taken in response to formal emergency warning alerts by

emergency services authorities, or actions taken in response to bushfire/smoke sightings. There are three level of Bush Fire Alerts and procedures:

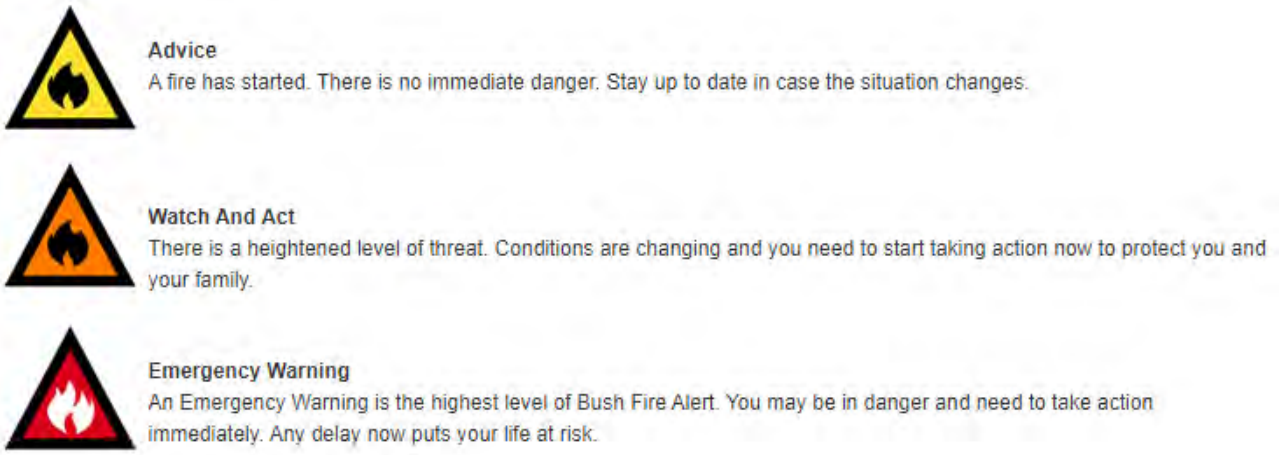


Table 6-1: Site action in response to a formal emergency alert being issued by emergency services.

ALERT LEVEL	Description	Site Action
ADVICE	*There is a fire in your local area. There is no immediate danger. Monitor fire conditions.*	Business as usual. The Superintendent or Senior Project Engineer is to monitor local bush fire situation on the RFS website and ABC local radio. All work units and contractors are to follow the directions of the Superintendent or Senior Project Engineer.
WATCH & ACT	*A fire is approaching. There is a heightened level of threat to life and property. You need to be aware of your situation and be prepared to take action to protect yourself and others.*	In addition to above, close windows and ensure immediate surrounds of all buildings are clear of combustible materials. Determine those individuals deemed to be non-essential and initiate 'go early' actions. All personnel should return to the site office and remain there awaiting further instructions from the Superintendent or Senior Project Engineer, or as directed by emergency services authorities.
EMERGENCY WARNING	*An 'Emergency Warning' is the highest level of alert and advises you of immediate danger. It may start with a siren sound.* ***You are in danger and you need to take immediate action recommended by the fire service.***	All personnel listen on ABC local radio to Emergency Warning evacuation location advised by emergency services. Proceed early to evacuation location if SAFE and route is CLEAR. In the event of an evacuation, the Superintendent or Senior Project Engineer to advise the local emergency that the centre is being evacuated and arrange transportation. Move all persons to the assembly point for evacuation and ensure all workers are accounted for prior to departure and once arriving at the evacuation site. Advise the local emergency service that all persons have been evacuated and are accounted for. Commence contacting families affected. If off-site evacuation is not possible, within vehicles in a cleared area of vegetation. Personnel must not 'self-evacuate' in the event of receiving an Emergency Warning. **Note: Flee-in-panic responses and last-minute evacuation into uncertain fire situations can be deadly. Any off-site evacuation must be controlled and authorised by the Emergency Incident Controller.** When the bush fire threat has passed, and the area is deemed safe by emergency services, no person should re-enter any evacuated buildings until advised by the emergency service. The Superintendent or Senior Project Engineer will arrange the movement of occupants back to the site and or their separate accommodation. All occupants

ALERT LEVEL	Description	Site Action
		are to be accounted for on their return. Inform the police/emergency service of the return of persons to the premises.

6.3 Emergency authorities

The location of the nearest RFS station, Fire and Rescue Station and Fire Control Centre for the relevant sites during the construction stage are provided below in Table 6-2. It is the responsibility of the Superintendent or Senior Project Engineer or delegate to understand where the nearest emergency authority is for each site.

Table 6-2: Site and corresponding fire services locations

Site	Rural Fire Service Station	Fire Control Centre	Fire and Rescue Station
Yass substation compound (C10)	Yass Valley FCC (Yass Valley Way, Yass); 1.5km	Southern Tablelands Office (Laidlaw Street, Yass) Phone Number: 02 6226 3100	Yass Fire Station (Meehan Street, Yass); 5km Phone number: 02 6229 6711
Amended Bannaby substation compound (C12)	Canyonleigh (Canyonleigh, Road, Canyonleigh); 50km	Southern Tablelands Office (Macintosh Road, Crookwell) Phone Number: 02 4832 0268	Bundanoon Fire Station (Anzac Parade, Bundanoon); 90km Phone number: 02 4824 7242
Crookwell compound (AC06)	Roslyn (Middle Arm Road, Roslyn); 14km	Southern Tablelands Office (Macintosh Road, Crookwell) Phone Number: 02 4832 0268 Southern Tablelands Office (Combermere street, Goulburn) Phone Number: 02 4822 2900	Goulburn Fire Station (Bourke Steet, Goulburn); 37km Phone number: 02 4824 7205
Yass Faulder Ave compound (AC05)	Yass Valley FCC (Yass Valley Way, Yass); 6.5km	Southern Tablelands Office (Laidlaw Street, Yass) Phone Number: 02 6226 3100	Yass Fire Station (Meehan Street, Yass); 4km Phone number: 02 6229 6711
Gadara Road compound (C19)	Gilmore (Batlow Road; Gilmore); 7km	Riverina Highlands Office (Wynyard Street, Tumut) Phone number: 02 6981 4222	Tumut Fire Station (Wynyard Street, Tumut); 15km Phone number: 02 6929 5767

Site	Rural Fire Service Station	Fire Control Centre	Fire and Rescue Station
Adjungbilly accommodation facility and laydown (AC04)	Adjungbilly (Red Hill Road, Adjungbilly); 6km	Riverina Highlands (Burley Griffin Way, Cunningar) Phone Number: 02 6386 1700 South West Slopes Office (Wynyard Street, Tumut) Phone Number: 02 6981 4222	Gundagai Fire Station (Otway Street, Gundagai); 50km Phone number: 02 6929 5713
Yass Valley Way Accommodation Camp (AC05B)	Yass Valley FCC (Yass Valley Way, Yass); 6.5km	Southern Tablelands Office (Laidlaw Street, Yass) Phone Number: 02 6226 3100	Yass Fire Station (Meehan Street, Yass); 4km Phone number: 02 6229 6711

6.4 Neighbourhood Safer Places

Neighbourhood Safer Places (NSP) are places of last resort for people to shelter during a bush fire emergency, if they have not relocated earlier. These are designated and approved by the NSW RFS based on the site having adequate facilities, access and being located well away from bushfire risk. The following neighbourhood safer places are relevant to the HumeLink East project area (refer Table 6-3). It is the responsibility of the Superintendent or Senior Project Engineer or delegate to understand where the nearest NSP is for each site.

In the event of a fire, access to the nearest town centre may also be the most appropriate for evacuation so that the Project is not overloading a NSP that is intended for the general community. Detailed in Table 6-3 is the nearest town centre applicable to each site proposed as part of the Project.

Table 6-3: Neighbourhood safer places relevant to compound and accommodation areas

Site	LGA	Nearest town centre	Neighbourhood Safer Places
Yass substation compound (C10)	Yass Valley Council	Yass (North 4.5km)	EAST: Gunning Primary School (Yass Street, Gunning); 40kms Gunning Showground Hall and Grounds (Nelango Street, Gunning); 40kms WEST: Jugiong Polo Field (Riverside Drive, Jugiong); 74 kms
Amended Bannaby substation compound (C12)	Upper Lachlan Shire Council	Taralga (West 30km)	WEST: Taralga Showground (Walsh Street, Taralga); 30 km EAST: Berrima Reserve (Corner of Old Hume Highway and Market Place, Berrima); 60km
Crookwell compound (AC06)	Upper Lachlan Shire Council,	Crookwell (Northwest 33km)	SOUTH: Middle Arm RFS Shed (Cnr Middle Arm Road and Rhyanna Road, Middle Arm); 12 km

Site	LGA	Nearest town centre	Neighbourhood Safer Places
			NORTH: Laggan Primary School (Laggan Road, Laggan); 30km
Yass Faulder Ave compound(AC05)	Yass Valley Council	Yass (South 4.5km)	EAST: Gunning Primary School (Yass Street, Gunning); 40kms Gunning Showground Hall and Grounds (Nelango Street, Gunning); 40kms WEST: Jugiong Polo Field (Riverside Drive, Jugiong); 74 kms
Gadara Road compound (C19)	Snowy Valleys Council	Tumut (East 14km)	EAST: Gilmore RFS Shed (Batlow Road, Gilmore); 7 km WEST: Adelong Showground (Campbell Street, Adelong); 15 km
Adjungbilly accommodation facility and laydown (AC04)	Cootamundra-Gundagai Council	Gundagai (West 47km)	SOUTH: Brungle NSW RFS Station (Brungle Road, Brungle); 17 km WEST: Gundagai Racecourse (Oibell Drive, Gundagai); 47 kms
Yass Valley Way Accommodation Camp (AC05B)	Yass Valley Council	Yass (South 8km)	EAST: Gunning Primary School (Yass Street, Gunning); 40kms Gunning Showground Hall and Grounds (Nelango Street, Gunning); 40kms WEST: Jugiong Polo Field (Riverside Drive, Jugiong); 74 kms

6.5 Evacuation procedures

Evacuation is the process of moving people from where they are staying or working to another safer location some distance away from the expected bush fire impact. If fire authorities advise the Superintendent or Senior Project Engineer or delegate to evacuate due to a fire in the surrounding area evacuation procedures will be initiated. Evacuation may also be triggered if the Superintendent or Senior Project Engineer or delegate decides on a leaving early initiative, considering the Emergency Warning advice (as per section 6.2).

In the event of an evacuation, the following steps will be followed (as per the NSW RFS Development Planning: A guide to developing a bush fire emergency management and evacuation plan, 2014):

- The Superintendent or Senior Project Engineer is to advise the local emergency service that the centre is being evacuated (include how many people and where they are going) and arrange transportation
- Ensure all site buildings have all doors and windows closed prior to leaving site
- Move all persons to the assembly point to prepare for evacuation and ensure all workers are accounted for prior to departure and once arriving at the evacuation site
- The Superintendent or Senior Project Engineer will advise the local emergency service that all persons have been evacuated and are accounted for and safe at the designated evacuation site
- After all the occupants are accounted for and safe at the designated evacuation site nominated staff will commence contacting families affected

- Maintain situational awareness through radio, NSW RFS website, 1800 NSW RFS, smart phone applications and local firefighting resources.

When the bush fire threat has passed, and the area is deemed safe by emergency services:

- No person should re-enter any evacuated building until advised by the emergency service
- The Fire Warden (or person responsible) to arrange the movement of occupants back to the site and or their separate accommodation
- All occupants are to be accounted for on their return
- Inform the police/emergency service of the return of persons to the premises.

Leaving early is always the safest option. Leaving early may mean staff stay at home and only critical personnel attend the ancillary facility on Extreme or greater Fire Danger days (no contractors or visitors). On-site staff /contractors should seek the instructions of the Superintendent or Senior Project Engineer about options to leave early when:

- Extreme or Catastrophic fire danger is forecast for the Southern Slopes and Southern Ranges Areas
- Staff are not physically or mentally prepared
- Ancillary facility is not defendable from bush fire under the conditions forecast
- You are instructed by emergency services authorities or the Chief Warden to do so.

6.6 Surviving a fire

The decision to Stay and Defend at a site must not be taken without careful planning and preparation of a specific incident action plan (and a backup plan) that carefully considers all the local risk factors associated with a bush fire in the vicinity of the facility. Regardless of a decision to leave early or stay and defend, the facility should be prepared for direct flames, radiant heat, or ember attack from bush fire. This site is better prepared (even if you choose to leave) and potentially defendable if, by the start of the fire season and during the fire season, you have undertaken all mitigation measures detailed in this plan. It is the responsibility of the Superintendent or Senior Project Engineer or delegate to understand key procedures to survive a fire.

If you find that you are in the path of a bush fire and cannot escape, the following details highlight the actions taken in the event workers need to survive a fire:

- Do not attempt to drive through or near a fire. Ideally you should find a building made from non-combustible (brick, concrete) material with limited openings that can be closed
- Stay informed: Mobile devices (www.rfs.nsw.gov.au or Fires Near Me App) and ABC local radio may provide information about how close the fire front is to you
- Stay in touch: If your phone is working, ensure that authorities know your location. However, do not assume any assistance will result
- Avoid heat exposure: Cover exposed skin, preferably in heavy cotton materials. Drink water as often as required
- Protect your sheltering place: If possible as the fire approaches ensure gutters and walls are free of potential bush fire fuels such as leaf litter, twigs and rubbish. Close all doors and windows. Block gaps under doors with wet towels. Secure a water supply by filling sinks, bathtubs and buckets
- When the fire arrives stay inside the building as most fire fronts will pass quite quickly. Inside is the safest place to be but do not shelter in bathrooms. Have fire extinguishers on standby should the structure catch alight. As the fire front approaches and after it passes there are likely to be small spot fires or residual fires that pose a significant risk. When safe to do so, put these out.

6.7 Prepare, Act, Survive Plan

To detail bushfire emergency response and preparation for each compound or infrastructure location, a Prepare Act Survive Plan has been provided in Appendix A. This is a comprehensive framework (summarising sections 5-6 of this BFEMEP), to guide activities on site before, during, and after a bushfire to be able to make informed decisions and maximise safety.

The Prepare, Act, Survive template is designed to be able to be printed out and displayed in a construction office, to clearly demonstrate the emergency management protocols in place for the project and specific section of construction. The template should be populated with relevant local information for each compound (i.e., local RFS, NSP, nearest firefighting resources and contact details). Appendix A should also be accompanied by the relevant figure (refer to Figure 5-1 to Figure 5-7) detailing the mitigation measures at each ancillary facility. It is the responsibility of the PMT and relevant Superintendent or Senior Project Engineer to ensure that the Prepare Act Survive Plan is accurately completed, and up to date at all times during construction.

It is noted that the Hot Work and Fire Risk Work Corporate Wide Procedure and FRACM (Transgrid, 2022) references an outdated Fire Preparedness Works Colour Code (Australian Fire Danger Rating System, AFDRS), and therefore control measures have been conservatively placed in the updated fire danger rating for this project.

6.8 Emergency Services Information Pack

An Emergency Services Information Pack (ESIP) in accordance with the Emergency Services Information and Tactical Fire Plan (FRNSW, 2019), provides essential information for fire and emergency services personnel in the event of a fire or other emergency at a specific location. The package is designed to ensure the safety and efficiency of emergency response teams, as well as facilitate effective coordination during incidents.

An ESIP has been developed in accordance with the Emergency Services Information and Tactical Fire Plan (FRNSW, 2019) for Adjungbilly Camp and is presented in Appendix B. Further ESIPs will be added to this BFEMEP prior when completed in accordance CoA B52(e)(viii) prior to use of the relevant sites for construction.

It is the responsibility of the PMT and relevant Superintendent or Senior Project Engineer to ensure that the ESIP is accurately completed, and up to date at all times during construction.

7 Review and improvement

7.1 Continuous improvement

As outlined in Section 3.11 of the CEMP, management reviews will be undertaken as part of the continual improvement process. The reviews will be initiated by the Environmental Manager and include relevant project team members and stakeholders. Continuous improvement of this BFEMEP will be achieved by the ongoing evaluation of environmental management performance against planning approval requirements, environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance.
- Determine the cause or causes of non-conformances and other issues.
- Develop and implement a plan of corrective and preventative action to address any non-conformances and other issues.
- Verify the effectiveness of the corrective and preventative actions.

- Document any changes in procedures resulting from process improvement.

7.2 Plan update and amendment

This BFEMEP will be reviewed at least annually and updated, if required, in accordance with Section 3.11 of the CEMP. This includes the review and, if necessary, revision of this BFEMEP in accordance with CoA C2 within three months of the following:

- Submission of an incident report under CoA A20/C10 of the Infrastructure Approval
- Submission of an audit report under CoA C14 of the Infrastructure Approval, or
- Any modifications to the Infrastructure Approval.
- The issue of a direction of the Planning Secretary under condition A3 which requires a review.

Any updates to the BFEMEP will be approved as described in Section 3.11 of the CEMP.

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Appendix A: Prepare, Act Survive Plan

Prepare, Act, Survive plan

To detail bushfire emergency response and preparation for each compound or infrastructure location, a Prepare Act Survive Plan has been provided. This is a comprehensive framework to guide activities on site before, during, and after a bushfire to be able to make informed decisions and maximise safety.

The following Prepare, Act, Survive template is designed to be able to be printed out and displayed in a construction office, to clearly demonstrate the emergency management protocols in place for the project and specific section of construction. The template should be populated with relevant local information for each compound (i.e., local RFS, NSP, nearest firefighting resources and contact details (also provided below in). Appendix A will also be accompanied by the relevant figure (refer to Figure 5-1 - Figure 5-7) detailing the mitigation measures and Fire Management Plan (FMP) at each ancillary facility.

It is the responsibility of the PMT and relevant Superintendent or Senior Project Engineer to ensure that the Prepare Act Survive Plan is accurately completed, and up to date at all times during construction.

Table 4: 24/7 Emergency contacts

Site	Primary contact	Alternative contact
Yass substation compound (C10)	N/A – not in use by AGJV	N/A – not in use by AGJV
Amended Bannaby substation compound (C12)	Werner Braack – 0449 235 371	Jacques Coetzee – 0400 736 983
Gadara Road compound (C19)	Werner Braack – 0449 235 371	Jacques Coetzee – 0400 736 983
Adjungbilly accommodation facility and compound (AC04)	Werner Braack – 0449 235 371	Jacques Coetzee – 0400 736 983
Crookwell compound (AC06)	Werner Braack – 0449 235 371	Jacques Coetzee – 0400 736 983
Yass Faulder Ave compound (AC05)	Werner Braack – 0449 235 371	Jacques Coetzee – 0400 736 983
Yass Valley Way Accommodation Camp (AC05B)	Werner Braack – 0449 235 371	Jacques Coetzee – 0400 736 983

PREPARE

It is essential that you understand what to do if a bush fire occurs on site, and what precautionary actions may be required during the fire danger period. Preparation is the key to survival, and you need to be physically and mentally ready with a plan.

The **fire danger period** ('bush fire season') usually runs from 1 October to 31 March, but it may be brought forward or extended by fire authorities. Daily fire danger ratings are issued during this period for each day and following three days, with the HumeLink East project being within the **Southern Slopes and Southern Ranges Areas**. When the fire danger is above **HIGH** it is very difficult for fire fighters to extinguish a bush fire, be aware of fire danger forecasts for the day and following three days. Weather reports (www.bom.gov.au, www.rfs.nsw.gov.au) and roadside signs will alert you to the current fire danger.

On days of elevated fire danger prepare yourself and your colleagues, contractors and visitors

Leaving early

Leaving early is always the safest option. Leaving early may mean staff stay at home and only critical personnel attend [INSERT TEXT] location on **Extreme** or greater Fire Danger days (no contractors or visitors). On-site staff /contractors should seek the instructions of the Chief Warden (or delegate) about options to leave early when:

- **Extreme** or **Catastrophic** fire danger is forecast for the **Southern Slopes and Southern Ranges Areas**.
- Staff are not physically or mentally prepared, and are not capable.
- [INSERT TEXT] is not defendable from bush fire under the conditions forecast.
- You are instructed by emergency services authorities or the Chief Warden to do so.

Where can you go? – Follow the instructions of the Chief Warden (or their delegate) or emergency services officer for a coordinated managed evacuation – don't self-evacuate.

Stay and defend

The decision to **Stay and Defend** at a site must not be taken without careful planning and preparation of a specific incident action plan (and a backup plan) that carefully considers all the local risk factors associated with a bush fire in the vicinity of [INSERT TEXT].

Regardless of a decision to **Leave Early** or Stay and Defend, [INSERT TEXT] should be prepared for direct flames, radiant heat, or ember attack from bush fire.

This site is better prepared (even if you choose to leave) and potentially defendable if, by the start of the fire season (annually before September) and during the fire season, you have undertaken the Mitigation Actions in the **Act Section**.

Weather and fire danger awareness

The Superintendent or Senior Project Engineer or delegate during construction and operation of the project is responsible to at least daily during the fire season, monitor and advise all personal of:

- Fire Preparedness Works Colour Code (AFDRS)
- Significant changes to weather conditions
- Increases in wind or temperature
- Reductions in humidity
- Wind changes
- Any official emergency alert issued for the site and its surrounding local government areas (LGAs)

The Superintendent or Senior Project Engineer, a delegate, an authorised officer, or a designated fire watch observer is responsible for monitoring fire warnings for bushfire emergency alerts on:

- ABC Listen App or ABC local radio
- NSW RFS website and/or NSW Hazards Near Me App (if 4G network coverage available)
- Monitor for fire danger weather warnings and changes in weather conditions on the Bureau of Meteorology (BOM) website

Authorised officers are responsible for providing a hot works permits to all staff and contractors during the bushfire season. Hot works permits should be required for activities such as grinding, welding, or cutting, or otherwise activities that would produce sparks.

The Superintendent or Senior Project Engineer or their delegate is the initial incident controller until being replaced by the responding external fire authority incident controller. The replacement will occur on the after a handover briefing has occurred with the external fire authority incident controller.

The project manager: [INSERT TEXT]

The Superintendent or Senior Project Engineer: [INSERT TEXT]

Approved delegate (if applicable): [INSERT TEXT]

Contact details: [INSERT TEXT]

After hours contact details: [INSERT TEXT]

Compound address: [INSERT TEXT]

Number of employees/occupants: [INSERT TEXT]

Number of buildings: [INSERT TEXT]

Primary and secondary access route: [INSERT TEXT]

The Australian Fire Danger Ratings (AFDRS) levels are:

MODERATE Plan and prepare	HIGH Be ready to act
EXTREME **Take action now** to protect life and property	CATASTROPHIC For your survival, **leave bushfire risk areas**

FIRE DANGER RATING	WHAT YOU SHOULD DO	WORKING RESTRICTIONS AND EMERGENCY ACTIONS
NO RATING		No action
MODERATE	**Plan and prepare.** Stay up to date and be ready to act if there is a fire.	No specific restrictions in place for personnel. Site works must be in accordance with standard procedures including compliance with contract conditions (including Hot Works Permit conditions). PFSE Required.
HIGH	**Be ready to act.** • There's a heightened risk. Be alert for fires in your area. • Decide what you will do if a fire starts. If a fire starts, your life and property may be at risk. The safest option is to avoid bush fire risk areas.	*As for Moderate* plus: All personnel working in or adjacent to hazardous bushfire fuels are briefed/advised on appropriate ignition prevention measures and what to do in a fire. Issue Hot works Permit for activities likely to cause sparks or ignitions. All site users within areas of bush fire hazard should have an emergency contact system in place (mobile phone or radio). Construction Manager/Project Manager or delegate to maintain a 'listening-watch' of ABC Local Radio for changes in fire danger and official bush fire warnings. Consider the suspension of activities which may cause sparks in areas of vegetation hazard (elevated fuels). 'Hot Work' activities must be in accordance with Hot Works Permit conditions. Fire watch observer, final fire check, welding pads/shields required.
EXTREME	**Take action now to protect your life and property.** • These are dangerous fire conditions. • Check your bush fire plan and ensure that your property is fire ready. • If a fire starts, take immediate action. • If you and your property are not prepared to the highest level, go to a safer location well before the fire impacts. • Reconsider travel through bush fire risk areas.	*As for above* plus: TOTAL FIRE BAN Only essential work to be completed on site, preferably before the onset of adverse fire conditions. All non-essential work suspended. Construction Manager/Project Manager ready to evacuate personnel from site if required, or shelter within the site, in the event of a bush fire. All hot work is prohibited (welding, grinding, soldering, grass cutting, or any work that can generate sparks) in accordance with NSW RFS requirements. Fire trailer or vehicle mounted water tank (400L) required.
CATASTROHPIC	**For your survival, leave bush fire risk areas.** • These are the most dangerous conditions for a fire. • Your life may depend on the decisions you make, even before there is a fire. • Stay safe by going to a safer location early in the morning or the night before. • Homes cannot withstand fires in these conditions. • You may not be able to leave and help may not be available.	*As for above* plus: TOTAL Fire BAN Only essential or emergency work to be completed on the site, preferably before the onset of adverse fire conditions. Approval from PMT required to work in these conditions.

ACT

Report all fires

Report suspected bush fire smoke sightings or a fire to **000**, then report the sighting to Superintendent or Senior Project Engineer or delegate.

If possible, communicate information about the location, size and direction of travel of the fire.

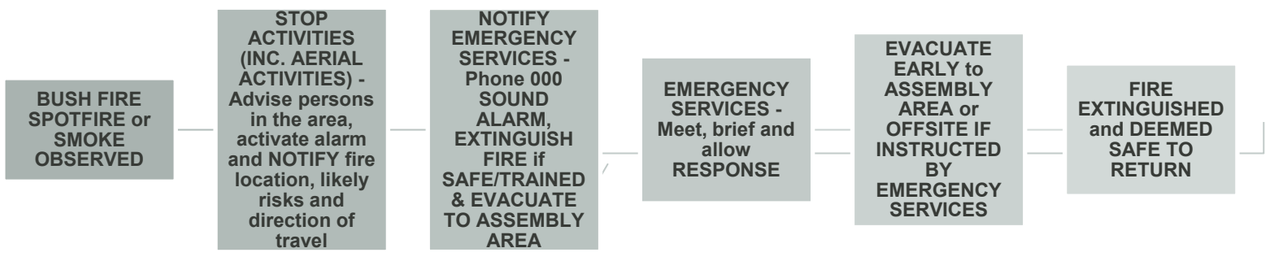
Know what to do when a fire occurs

You may (or may not) be alerted to the presence of a bush fire in your local area by the NSW Rural Fire Service through the media, or you may receive a text message. Further information may be available at (**www.rfs.nsw.gov.au**).

There are three levels of Bush fire Alert that may be issued; Advice, Watch and Act and Emergency Warning.

Site action in response to a formal emergency alert being issued by emergency services		
ALERT LEVEL	**Description**	**Site Action**
ADVICE	*There is a fire in your local area. There is no immediate danger. Monitor fire conditions.*	Business as usual. The Superintendent or Senior Project Engineer (or delegate) is to monitor local bush fire situation on the RFS website and ABC local radio. All work units and contractors are to follow the directions of the Superintendent or Senior Project Engineer.
WATCH & ACT	*A fire is approaching. There is a heightened level of threat to life and property. You need to be aware of your situation and be prepared to take action to protect yourself and others.*	In addition to above, close windows and ensure immediate surrounds of all buildings are clear of combustible materials. Determine those individuals deemed to be non-essential and initiate 'go early' actions. All personnel should return to the site office and remain there awaiting further instructions from the Superintendent or Senior Project Engineer (or delegate), or as directed by emergency services authorities.
EMERGENCY WARNING	An 'Emergency Warning' is the highest level of alert and advises you of immediate danger. It may start with a siren sound. You are in danger and you need to take immediate action recommended by the fire service.	All personnel listen on ABC local radio to Emergency Warning evacuation location advised by emergency services. Proceed early to evacuation location if SAFE and route is CLEAR. In the event of an evacuation, the Superintendent or Senior Project Engineer to advise the local emergency that the centre is being evacuated and arrange transportation. Move all persons to the assembly point for evacuation and ensure all workers are accounted for prior to departure and once arriving at the evacuation site. Advise the local emergency service that all persons have been evacuated and are accounted for. Commence contacting families affected. If off-site evacuation is not possible, within vehicles in a cleared area of vegetation. Personnel must not 'self-evacuate' in the event of receiving an Emergency Warning. **Note: Flee-in-panic responses and last-minute evacuation into uncertain fire situations can be deadly. Any off-site evacuation must be controlled and authorised by the Emergency Incident Controller.** When the bush fire threat has passed, and the area is deemed safe by emergency services, no person should re-enter any evacuated buildings until advised by the emergency service. The Superintendent or Senior Project Engineer will arrange the movement of occupants back to the site and or their separate accommodation. All occupants are to be accounted for on their return. Inform the police/emergency service of the return of persons to the premises.

Site action in response to smoke detected or a fire nearby



Site Induction Process

Induction of new staff members, contractors, visitors and site users to include:

- fire weather awareness and preparedness (in response to forecast Fire Danger Rating (see Prepare Section.
- fire reporting actions (see Act Section)
- emergency response actions responses in relation to an emergency warning being issued
- location of closest Staging Areas and Neighbourhood Safer Places
- site evacuation procedures
- emergency contact systems
- Transgrids Hot Works and Fire Risk Work Corporate Wide Procedure (Tansgrid,2022).

Site induction requirements and training for all staff members, contractors, visitors and site users is the responsibility of the Superintendent or Senior Project Engineer.

All personnel with responsibilities within the emergency control organisational structure must have the appropriate level of competency-based training in accordance with Australasian Inter-Service Incident Management System (AIIMS).

Staff briefings and toolbox talks

Include site specific fire and emergency procedures as part of a tool-box talk given to all staff and contractors:

- at the start of each fire season,
- Daily toolbox talks during the fire season, and
- as a new starter induction.

Bush fire mitigation measures applicable to the HumeLink East project include:

- Removal of any long grass and/or deep leaf litter from areas where plant and heavy equipment will be working;
- Monitoring of weather and local bush fire ratings;
- Maintain equipment in good working order to reduce risk of ignition;
- Maintain buildings and access roads by clearing gutters, garden beds, roofs, external decks of all leaf litter and debris;
- Maintain asset protection zone around the construction compounds and accommodation facilities
- All plant and heavy equipment must carry at least a 9-litre water stored-pressure with a minimum rating of 3A, or firefighting, or firefighting equipment as a minimum when on-site during the summer Fire Danger Period;
- Provision of a 20,000L water supply tank fitted with a 65 mm Storz fitting and FRNSW compatible suction is required to be located at each of the construction compounds and accommodation camps (including all-weather access to the water supply tanks for Category 1 tankers). Alternative water supply may also be sourced from permanent water such as dams during fire response.
- All plant and equipment are to be fitted with appropriate spark arrestors, where practicable;
- Implement adequate storage and handling requirements for potentially flammable substance in accordance with the relevant guidelines.
- New building construction to be in accordance with the Building Code of Australia and AS3959:2018
- Designated smoking areas to be defined and designated rubbish bins to be implemented; and
- Restrictions and guidance from emergency authorities provided during the Fire Danger Period, days of high fire danger and Total Fire Ban days must be adhered to.

Access

- Primary and secondary access routes should be provided for locations with buildings where people may work or use for accommodation purposes. New and upgraded temporary and permanent access tracks and roads will need to be constructed in areas where there are no existing roads or tracks.
- Access roads will have adequate capacity for firefighting vehicles, and firefighting vehicles should have safe all-weather access to hazards and assets. Access roads are designed to allow safe access and egress for emergency services vehicles and evacuating personnel
- Consult with Rural Fire Service and Fire and Rescue NSW to allow for emergency access to be maintained during construction, and to coordinate bushfire emergency actions (refer details in contact information table below).

SURVIVE

During a bush fire the Superintendent or Senior Project Engineer is initially the Incident Controller (IC) until replaced by responding external Fire Authority IC (on arrival, following handover briefing).

Offsite evacuations must only be undertaken at the direction of the Superintendent or Senior Project Engineer, or IC as a coordinated action and must not be undertaken at the last minute (when it may be too late/dangerous to evacuate).

Be familiar with the nearest *Neighbourhood Safer Place* [INSERT TEXT].

Personnel may be directed by the Construction Manager/Project Manager, or IC to a Staging Area to await further instructions.

Nearest external firefighting resources:

Fire and Rescue NSW

- Local Fire Station – Address [INSERT TEXT]

NSW Rural Fire Service

- Closest RFS Brigade – Address [INSERT TEXT]

Important Emergency Contact Information	
Emergency Information	
ABC Local Radio:	[INSERT TEXT]
Bush Fire Information Line (NSW RFS)	1800 679 737
Current Fire Information	https://www.rfs.nsw.gov.au
NSWRFS Social Media Updates	https://www.facebook.com/nswrfs https://twitter.com/nswrfs
New South Wales Traffic Information	13 27 01
Endeavour Energy (emergencies)	13 10 03
Origin Energy (gas emergency)	1800 808 526
State Emergency Service	132 500
Other Information (non-emergency)	
NSW Rural Fire Service	Report all fires to 000
- Local Fire Control Centre	[INSERT TEXT]
Fire and Rescue NSW	Report all fires to 000
- Local Fire Station	[INSERT TEXT]
- Local Fire Station / RFS location	[INSERT TEXT]
Police assistance (non-emergency)	131 444
Telstra (report phone line faults)	13 22 03
Bureau of Meteorology	www.bom.gov.au

IN AN EMERGENCY DIAL 000
Secondary Emergency Call from Mobiles – Dial 112

Do not call 000 for information or advice. Calling 000 unnecessarily may put others who are in a genuine emergency situation at risk.

Basic bush fire survival

You should assume that fire services will not attend site.

If you find that you are in the path of a bush fire and cannot escape: Do not attempt to drive through or near a fire. Ideally you should find a building made from non-combustible (brick, concrete) material with limited openings that can be closed.

Stay informed: Mobile devices (www.rfs.nsw.gov.au or Fires Near Me App) and ABC local radio may provide information about how close the fire front is to you.

Stay in touch: If your phone is working, ensure that authorities know your location. However, do not assume any assistance will result.

Avoid heat exposure: Cover exposed skin, preferably in heavy cotton materials. Drink water as often as required.

Protect your sheltering place: If possible as the fire approaches ensure gutters and walls are free of potential bush fire fuels such as leaf litter, twigs and rubbish. Close all doors and windows. Block gaps under doors with wet towels. Secure a water supply by filling sinks, bathtubs and buckets.

When the fire arrives stay inside the building. Most fire fronts will pass quite quickly. Inside is the safest place to be but do not shelter in bathrooms. Have fire extinguishers on standby should the structure catch alight.

Extinguish small fires: As the fire front approaches and after it passes there are likely to be small spot fires or residual fires that pose a significant risk. When safe to do so, put these out.

Remember; the best place to be is somewhere else - follow any instructions to evacuate.

Appendix B: Emergency Service Information Pack/s

HumeLink East

acciona | GENUS

Important information

Do not remove from front gate

Adjungbilly Camp Emergency Services Information Package

| Rev C

DOCUMENT CONTROL

APPROVAL AND AUTHORISATION

	Name	Signature	Date
Prepared By:	Gregor Wilson Werner Braack	[Insert]	Signed by: Gregor Wilson 4/8/25
Approved By:	Peter Scott	[Insert]	Signed by: Peter Scott 4/8/25
Principle Endorsement:	Francis Houlihan	[Insert]	Signed by: Francis Houlihan 4/8/25
This document must be completed, approved and signed by the Project Manager, Managing Director and Principal Representative before the commencement of work. It is acknowledged that this Project Management Plan is valid nationally and incorporated the Health and Safety coordination plan required by each state's OHS legislation and has been tailored to suit this particular project.			

DOCUMENT STATUS

Revision History				
Rev:	**Date:**	**Pages:**	**Revised By:**	**Description:**
Rev A	4/7/25	All	Gregor Wilson Werner Braack	For FRNSW and RFS review
Rev B	31/7/25	9	Gregor Wilson	Update to diesel volume
Rev C	4/8/25	9	Gregor Wilson	Update to diesel volume
History Reference:				[Insert]

CONTENTS

1. FUNCTION AND PURPOSE

This Emergency Services Information Package (ESIP) is to provide firefighters and other emergency services with specific information that can be used during operations and develop effective strategies and tactics to manage a fire or emergency incident at the Adjungbilly accommodation facility and compound.

Note: The ESIP is intended for use only by emergency services and supplements the emergency plan for occupants. Operational considerations may result in attendance by fire fighters who are totally unfamiliar with the premises.

The ESIP is to provide guidance to the Emergency Servies Incident Commander (IC) on specific tasks critical to the safety managing the emergency (e.g. occupant evacuation, emergency shutdown procedure, special extinguishing agents or systems).

2. PREMISES OVERVIEW

Adjungbilly accommodation facility and compound will support the accommodation and construction needs for the southern end of the HLE project from the Murrumbidgee River to Tumut. Accommodation consists of about 86 temporary buildings of which 15 are complexed together. Facilities consist of 192 bedrooms, gym, recreation room, wet/dry mess, kitchen, food storage, dining room, office, prayer room. At peak, the camp will have a maximum of 192 people during the nighttime, during a normal working day, besides deliveries, there should be about 20 people (mainly O&M staff) around camp. A site layout is included in Appendix 1.

The site manager: Paul Vincent

Approved delegate (if applicable): Werner Braack

Contact details: Paul Vincent – 0429 563 250 / Werner Braack – 0449 235 371

After hours contact details: Paul Vincent – 0429 563 250 / Werner Braack – 0449 235 371

Compound address: Adjungbilly Road, Adjungbilly

Centroid location coordinates: Latitude, longitude: -35.06514554, 148.35623012

Number of employees/occupants: 192

Number of buildings: 86, of which 15 are complexed together – All single storey.

Operating hours: 24/7

3. CONTACT LIST

A list of AGJV personnel to be contacted in an emergency is provided in Table 1.

Table 1: List of key personnel to be contacted in an emergency

Name	Position	Organisation	Phone Number
Peter Scott	Safety Manager	AGJV	0460 873 798
Jacques Coetzee	Construction Manager	AGJV	0400 736 983
Nigel McFeeley	Delivery Director	AGJV	0490 486 536
Werner Braack	Project Manager	AGJV	0449 235 371
Paul Vincent	Site Manager	AGJV	0429 563 520

4. EVACUATION OVERVIEW

Shelter-in-Place at the designated Shelter location in Adjungbilly Camp will be the preferred action unless Shelter-in-Place location or road to shelter location is compromised, or NSW RFS / NSW SES orders an evacuation to an alternative Neighbourhood Safer Place. The main dining hall and its associated crib sheds has been designated as the primary Shelter-in-Place area, due to its ability to withstanding flooding and fire.

If evacuation to a Neighbourhood Safer Place is deemed necessary and the path is clear, personnel will systematically attempt to evacuate to the Neighbourhood Safer Place directed by Emergency Services and/or Chief Emergency Controller (CEC). Project Neighbourhood Safer Places are detailed in Table 2. Evacuation routes are listed in Table 3 and shown in Figure 1. Routes to Neighbourhood Safer Places are shown in Figure 2 to Figure 5.

Table 2: List of neighbourhood safer places relevant to Adjungbilly accommodation facility and compound

#	Name	Type	Location	LGA
Primary	Brungle NSW RFS Station	Building	Brungle Road, Brungle	Snowy Valleys
Secondary	Gundagai Racecourse	Open space	Oibell Drive, Gundagai	Cootamundra-Gundagai

Table 3: List of evacuation routes

#	Access / egress	Description
Primary	Adjungbilly Road (West)	Adjungbilly accommodation facility and compound (AC04) interfaces with Adjungbilly Road. The primary route is to the west towards Gundagai.
Alternate	Adjungbilly Road (East)	Adjungbilly Road to the East provides access onto Nanangroe Road to travel north.
Alternate	Adjungbilly Road (East)	Adjungbilly Road to the East provides access to Threeways Road to travel south.

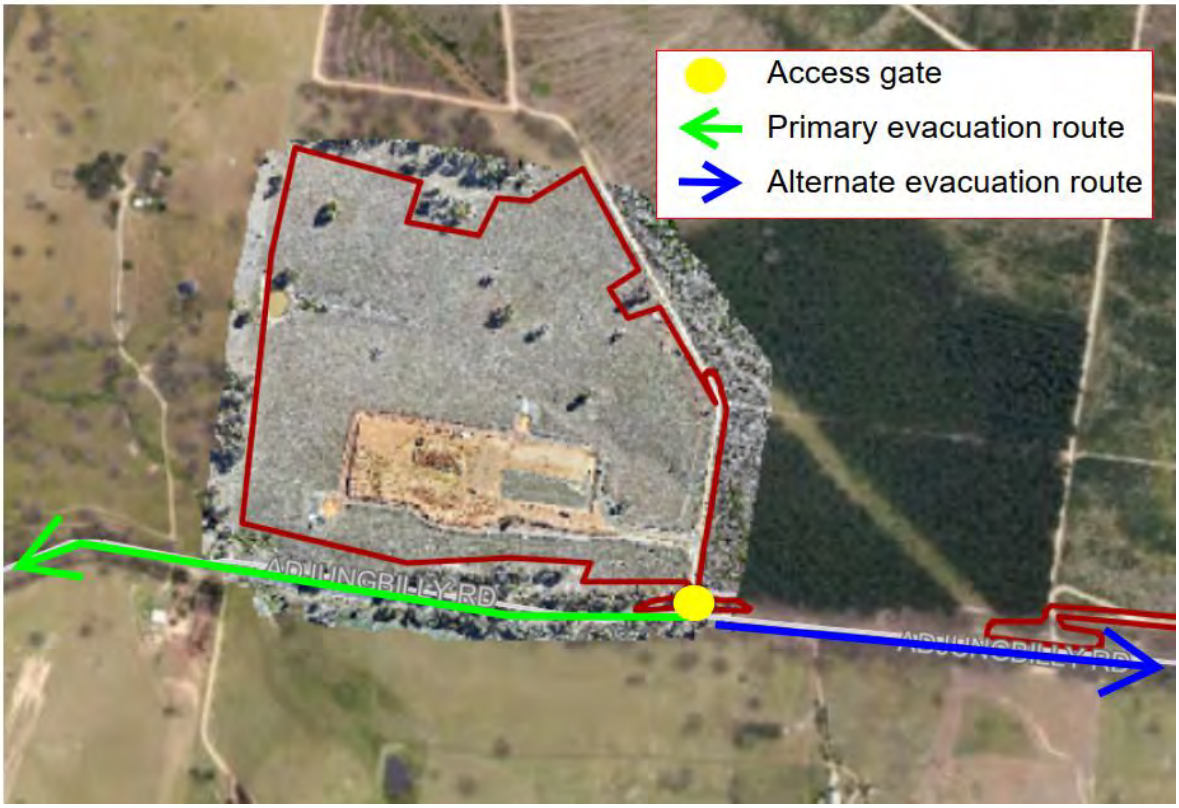


Figure 1: Evacuation routes overview

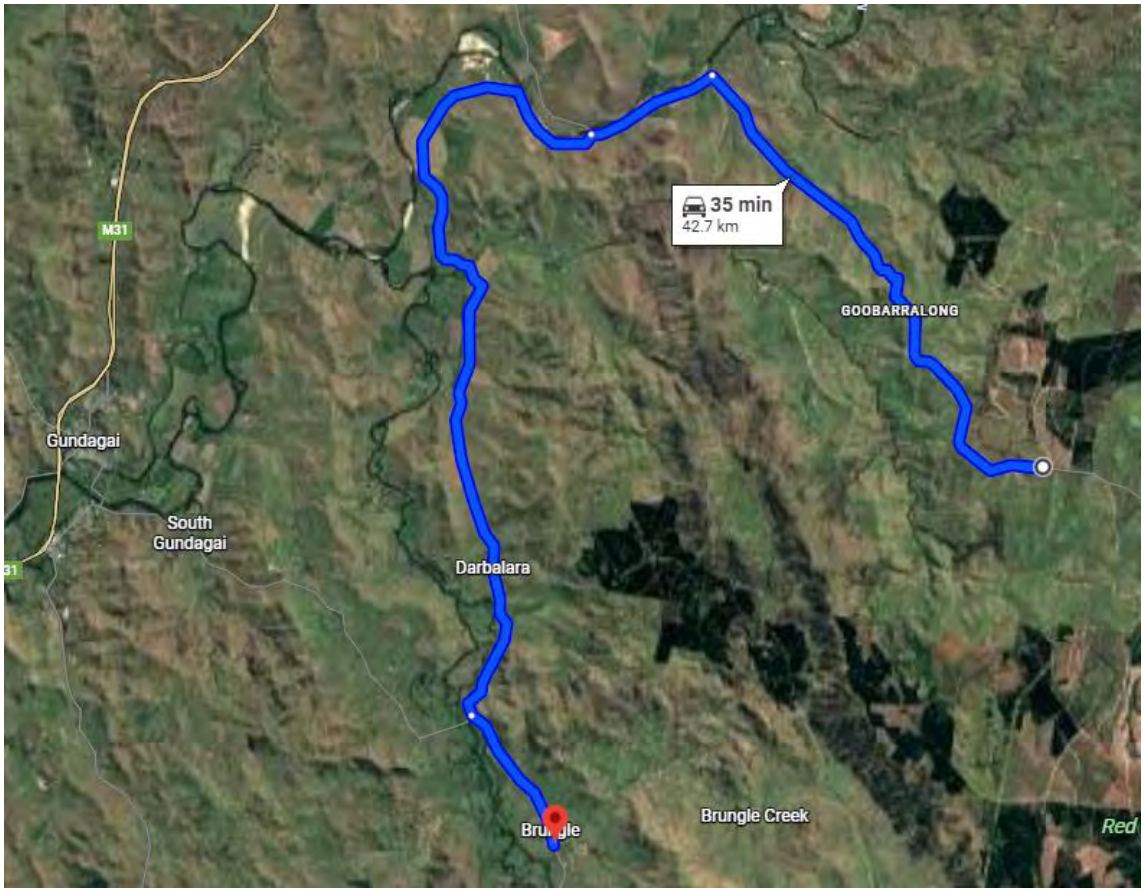


Figure 2: Primary evacuation route to Brungle NSW RFS Station

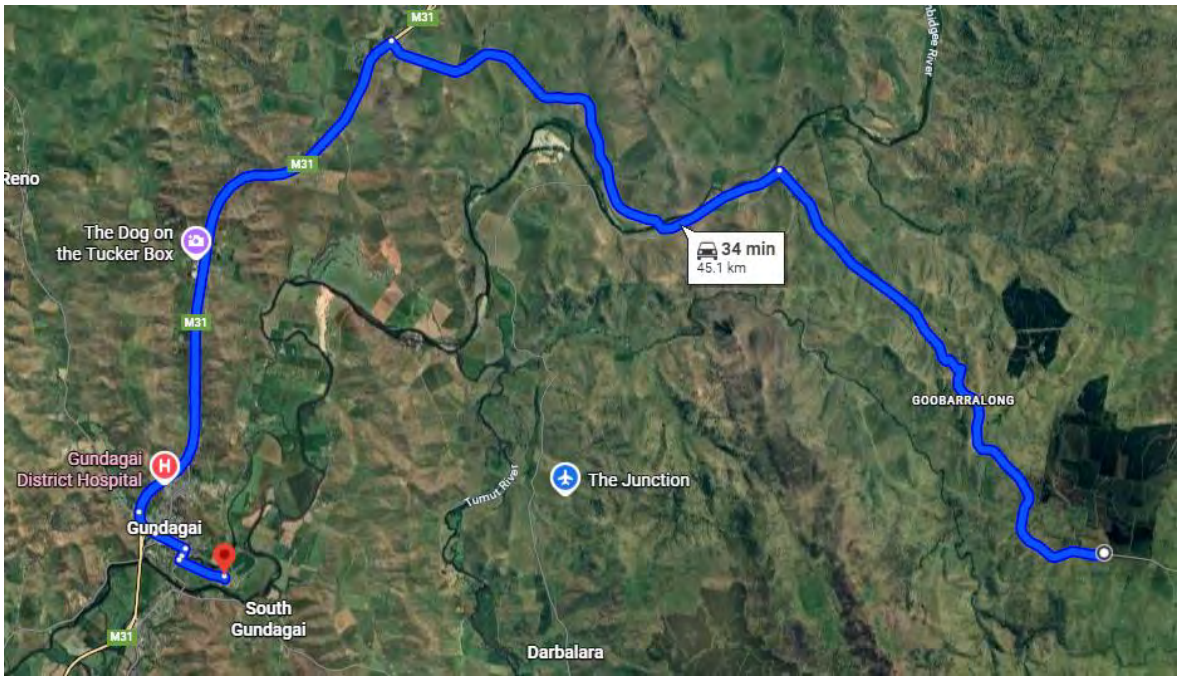


Figure 3: Primary evacuation route to Gundagai Racecourse

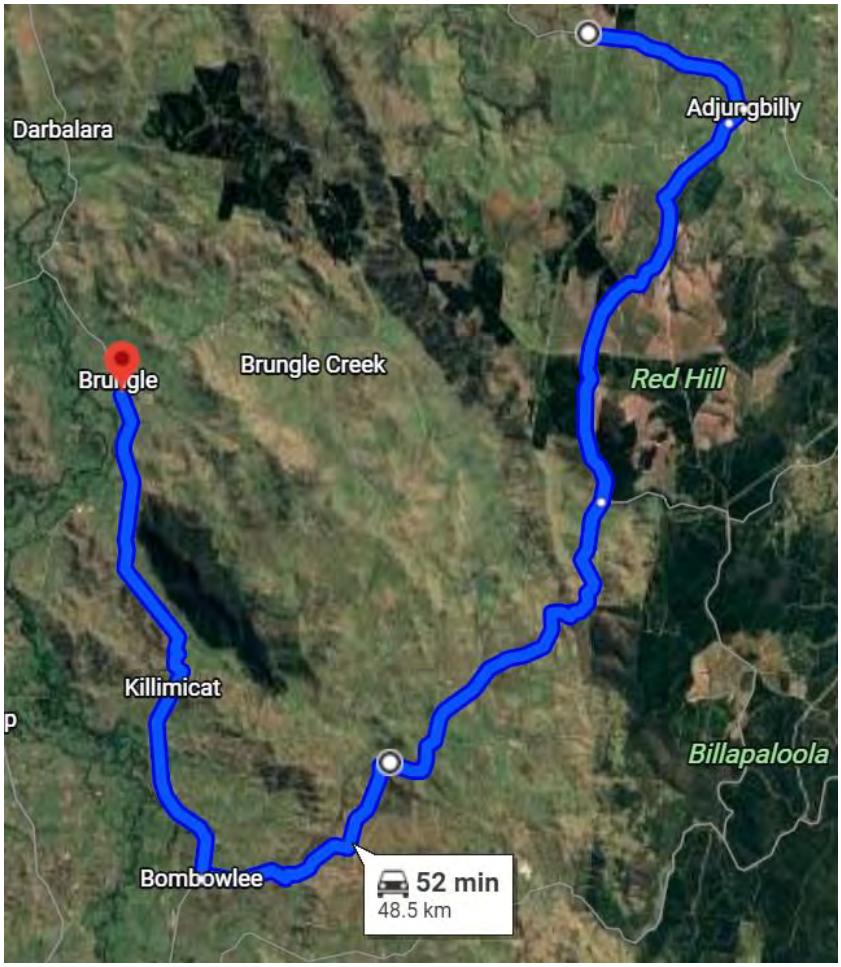


Figure 4: Alternative evacuation route to Brungle NSW RFS Station

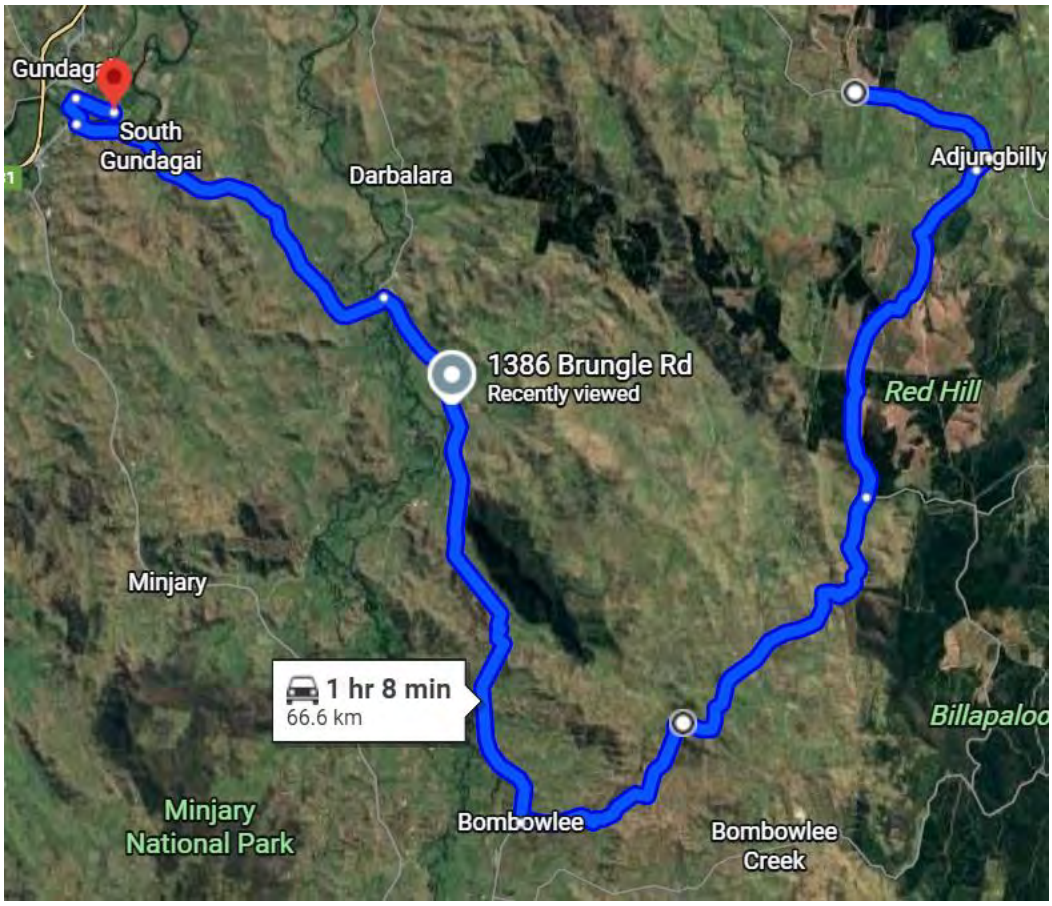


Figure 5: Alternative evacuation route to Gundagai Racecourse

5. TACTICAL CHECKLISTS

Placeholder - This pack will be updated to include the tactical checklists when developed in collaboration with Fire Safety Engineer and Fire and Rescue, if required.

6. HAZARDOUS CHEMICALS MANIFEST

A manifest of hazardous chemicals stored at Adjungbilly accommodation facility and compound is provided in Table 4.

Table 4: Hazardous chemicals manifest

Storage area	Proper shipping name	UN No.	Class/Division	PG	Type	Typical quantity
PS3*	Caustic Soda 50%	1824	8	II	Dangerous Goods Container	200L
PS3*	Citric Acid 30%	3265	8	III	Dangerous Goods Container	200L
PS3*	Culture AB	-	-	-	Dangerous Goods Container	500 L
PS3*	Pacfloc 20% - Polyaluminium Chloride	-	-	-	Dangerous Goods Container	500L
PS3*	Sodium Hypochlorite 12.5%	1791	8	II	Dangerous Goods Container	500L
PS3*	Diesel	1202	3		Self Bunded Diesel Bowser/s	56000L

*Refer to Appendix 1 for location

7. PERFORMANCE SOLUTION SUMMARY

The building design incorporates a combination of Performance Solutions and Deemed-to-Satisfy (DtS) Solutions that must together comply with the Performance Requirements of the Building Code of Australia (BCA). The Performance Solutions relating to fire safety for this project based on the NCC report are summarised in Table 5.

Table 5: Performance Solutions

Analysis No.	NCC DTS Provision	Description of the Performance Solution	Performance Requirement(s)
A	C3D8 S5C24	To allow fire walls separating the sole occupancy unites (SOU do not extend through the sub floor space).	C1P1 C1P2 C1P4
B	C3D8 C4D12	To allow The Bounding Construction of the public corridors to not achieve and FRL of 60/60/60 and the window opening does not have an FRL	C1P1 C1P2 C1P4
C	D2D3, D2D5 D2D6 D2D10 D2D11 D2D14 D2D15	To allow the covered corridors to not lead to any of the listed ‘exits’. Note This is due to the need to pass back through / under another building (such as the roofed area of the adjacent class 3 buildings) doesn’t allow the unroofed space between them to be utilised as open space.	D1P4, D1P6
D	E1D4	To allow fire extinguishers at distances of more than 10m from every entrance door	E1P2
E	E4D2 E4D5	To allow non provision of Emergency Lights and Exit Signs	E4P1 E4P2

8. TACTICAL FIRE PLAN

Refer to Appendix 1 for the Adjungbilly accommodation facility and compound Tactical Fire Plan. This includes the specific location of the water tanks and other firefighting equipment. It should be noted that the design and specific location of the firefighting equipment is still underway, and this document will be continuously updated and documented as we progress.

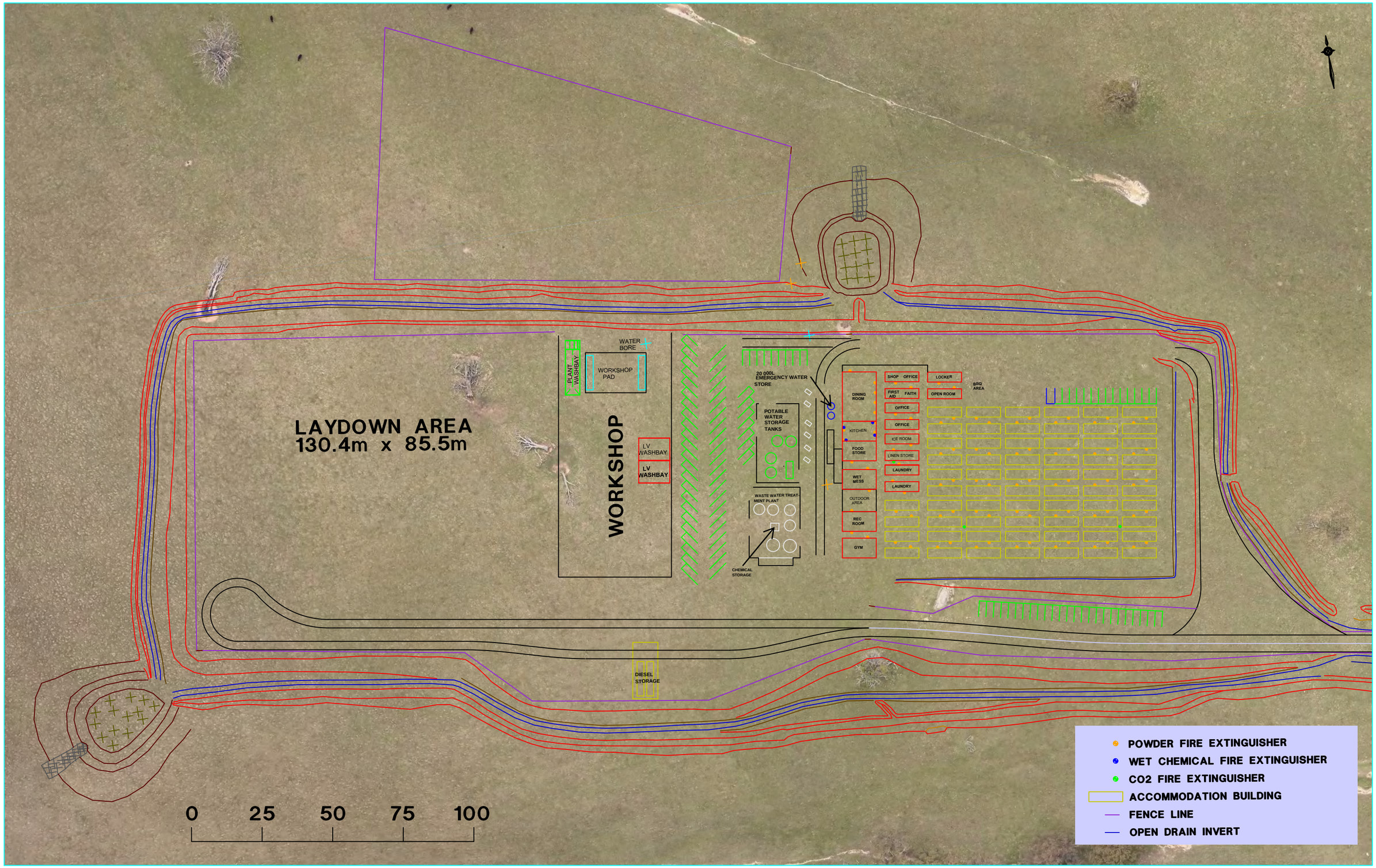
9. COMPLIANCE TABLE

This ESIP has been prepared in accordance with the Emergency Services information and tactical fire plan (FRNSW, 2019) document. Refer the compliance table in Table 6.

Table 6: Compliance table

Reference	Requirement	Section
7	Emergency Services Information Package (ESIP)	This document
7.1	Function	Section 1
7.2	Form and construction as directed in the Emergency Services information and tactical fire plan (FRNSW, 2019)	This document
7.3	The ESIP is to contain the following:	-
(a)	Title page, following the directions of the Emergency Services information and tactical fire plan (FRNSW, 2019)	Page 1
(b)	Premises overview	Section 2
(c)	Contact list	Section 3
(d)	Evacuation overview	Section 4
7.4	Tactical checklists	Section 5
7.5	Hazardous chemicals	Section 6
7.6	Alternative solutions summary	Section 7
8	Tactical fire plan	Section 8 and Appendix 1

APPENDIX 1: TACTICAL FIRE PLAN



REV	ZONE	AMENDMENTS	APP'D	DATE

GENERAL NOTES / REFERENCES

SURVEYED / DRAWN BY: P.C.

COORDINATE SYSTEM: GDA 2020 Z55

HEIGHT DATUM: A.H.D

SCALE 1:1250

PLOT DATE: Fri Jul 4 11:43:11 2025

LOCATION: GDA2020 Z55

250704 ADJUNGBILLY LAYOUT

SHEET 1 of 250704

ACCIONA

Project: Adjungbilly Compound

HumeLink East

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Important information

Do not remove from front gate

Yass Camp Emergency Services Information Package

| Rev B

DOCUMENT CONTROL

APPROVAL AND AUTHORISATION

	Name	Signature	Date
Prepared By:	Gregor Wilson Werner Braack	[Insert] Signed by: Gregor Wilson	4/8/25
Approved By:	Peter Scott	[Insert] Signed by: Peter Scott 3C1223480FE6429...	4/8/25
Principle Endorsement:	Francis Houlihan	[Insert] Signed by: Francis Houlihan 6284433... 010D3D30A611411...	4/8/25
This document must be completed, approved and signed by the Project Manager, Managing Director and Principal Representative before the commencement of work. It is acknowledged that this Project Management Plan is valid nationally and incorporated the Health and Safety coordination plan required by each state's OHS legislation and has been tailored to suit this particular project.			

DOCUMENT STATUS

Revision History				
Rev:	**Date:**	**Pages:**	**Revised By:**	**Description:**
Rev A	29/7/25	All	Gregor Wilson Werner Braack	For FRNSW and RFS review
Rev B	4/8/25	Page 8	Gregor Wilson	Revision to Table 4
History Reference:				[Insert]

CONTENTS

1. FUNCTION AND PURPOSE

This Emergency Services Information Package (ESIP) is to provide firefighters and other emergency services with specific information that can be used during operations and develop effective strategies and tactics to manage a fire or emergency incident at the Yass accommodation facility and compound.

Note: The ESIP is intended for use only by emergency services and supplements the emergency plan for occupants. Operational considerations may result in attendance by fire fighters who are totally unfamiliar with the premises.

The ESIP is to provide guidance to the Emergency Servies Incident Commander (IC) on specific tasks critical to the safety managing the emergency (e.g. occupant evacuation, emergency shutdown procedure, special extinguishing agents or systems).

2. PREMISES OVERVIEW

Yass accommodation facility and compound will support the accommodation and construction needs for the central area of the HLE project from the Murrumbidgee River north. Accommodation consists of about 107 temporary buildings of which 32 are complexed together. Facilities consist of 170 bedrooms, gym, recreation room, wet/dry mess, kitchen, food storage, dining room, office, prayer room. At peak, the camp will have a maximum of 170 people during the nighttime, during a normal working day, besides deliveries, there should be about 20 people (mainly O&M staff) around camp. A site layout is included in Appendix 1.

The site manager: Werner Braack

Approved delegate (if applicable): Jacques Coetzee

Contact details: Werner Braack – 0449 235 371

After hours contact details: Werner Braack – 0449 235 371 / Jacques Coetzee – 0400 736 983

Compound address: Commercial Road, Yass Industrial Park, Yass

Centroid location coordinates: Latitude, longitude: -34.80923589, 148.87725510

Number of employees/occupants: 170

Number of buildings: 107, of which 32 are complexed together – All single storey.

Operating hours: 24/7

3. CONTACT LIST

A list of AGJV personnel to be contacted in an emergency is provided in Table 1.

Table 1: List of key personnel to be contacted in an emergency

Name	Position	Organisation	Phone Number
Peter Scott	Safety Manager	AGJV	0460 873 798
Jacques Coetzee	Construction Manager	AGJV	0400 736 983
Nigel McFeeley	Delivery Director	AGJV	0490 486 536
Werner Braack	Project Manager	AGJV	0449 235 371

4. EVACUATION OVERVIEW

Shelter-in-Place at the designated Shelter location in Yass Camp will be the preferred action unless Shelter-in-Place location or road to shelter location is compromised, or NSW RFS / NSW SES orders an evacuation to an alternative Neighbourhood Safer Place. The main dining hall and its associated crib sheds has been designated as the primary Shelter-in-Place area, due to its ability to withstanding flooding and fire.

If evacuation to a Neighbourhood Safer Place is deemed necessary and the path is clear, personnel will systematically attempt to evacuate to the Neighbourhood Safer Place directed by Emergency Services and/or Chief Emergency Controller (CEC). Project Neighbourhood Safer Places are detailed in Table 2. Evacuation routes are listed in Table 3 and shown in Figure 1. Routes to Neighbourhood Safer Places are shown in Figure 2 and Figure 3.

Table 2: List of neighbourhood safer places relevant to Yass accommodation facility and compound

#	Name	Type	Location	LGA
East	Gunning Showground Hall and Grounds	Open space	Nelango Street, Gunning	Upper Lachlan Shire
West	Jugiong Polo Field	Open space	Riverside Drive, Jugiong	Hilltops

Table 3: List of evacuation routes

#	Access / egress	Description
Primary	Commercial Road (West)	Eastern access from Commercial Road, a newly developed two-way sealed road which joins onto Yass Valley Way (site access 0.3 kilometres on Commercial Road). Heading north-west on Yass Valley Way provides access to the Hume Highway in under 1.5 kilometres, or south-east into Yass township.
Alternate	Enterprise Place (East)	Eastern access from: Enterprise Place, a newly developed two-way sealed road which joins onto Industrial Close and leads into Commercial Road.

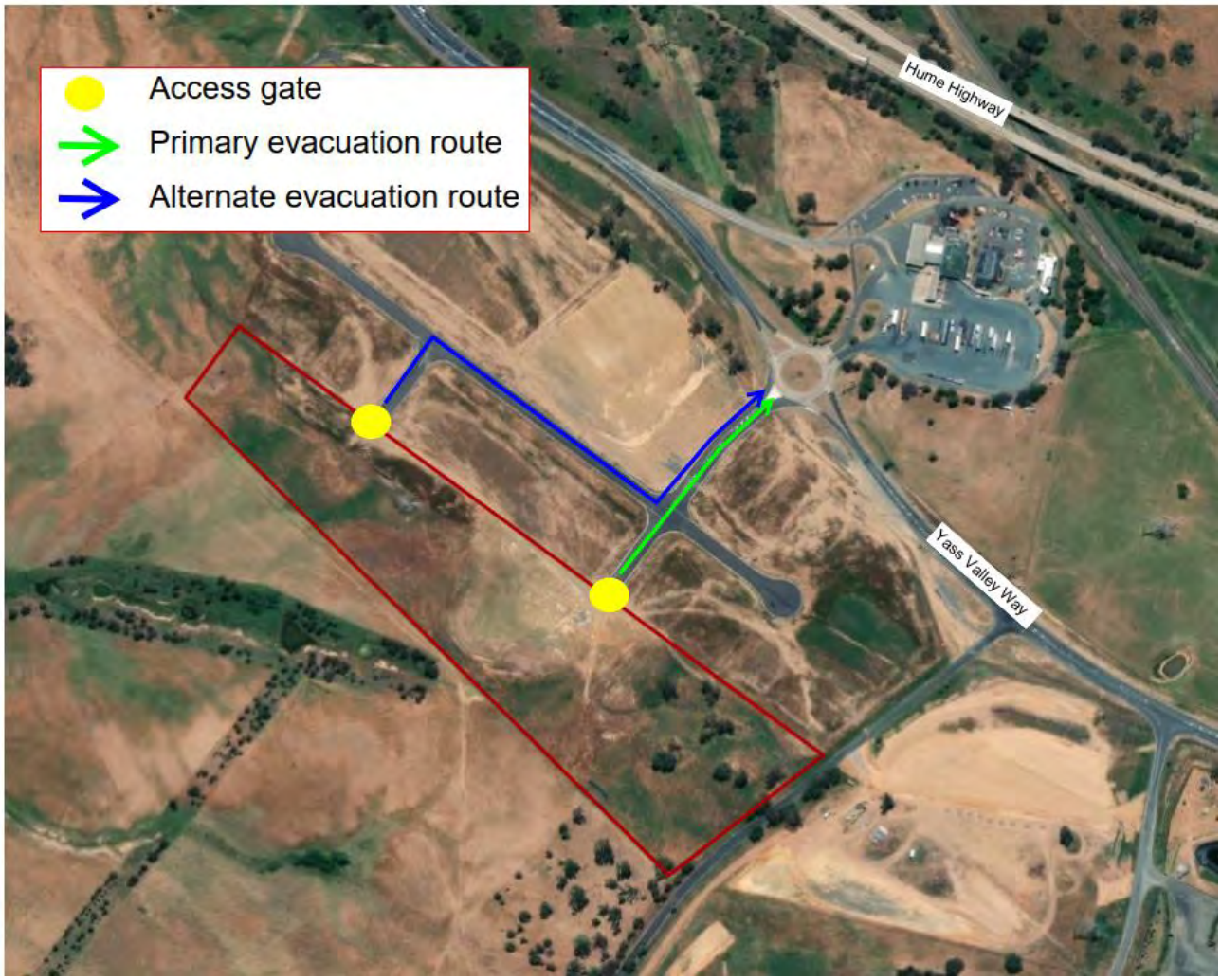


Figure 1: Evacuation routes overview

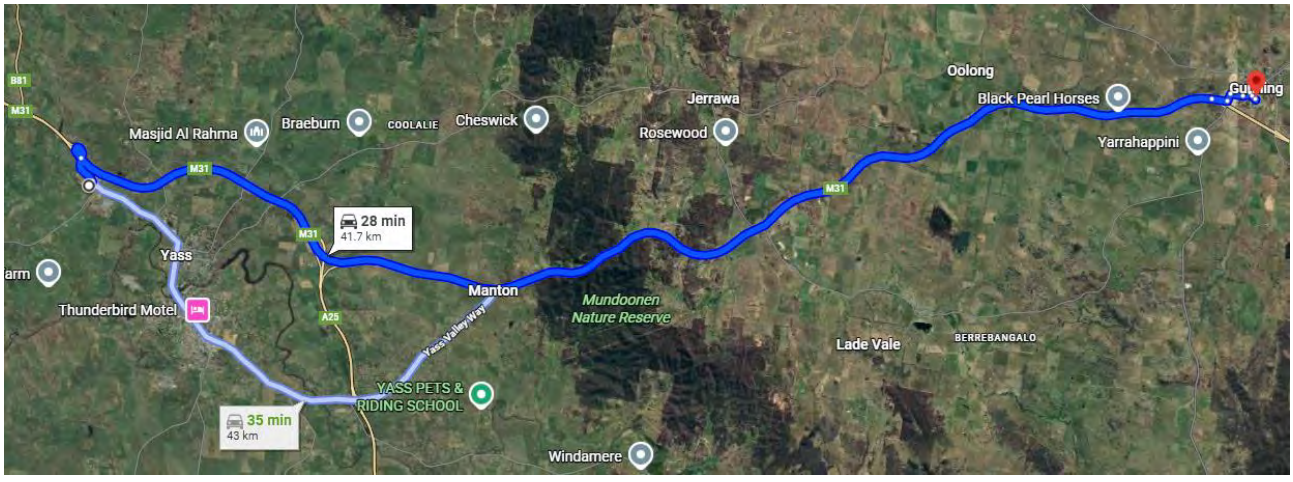


Figure 2: Evacuation route to Gunning Showground Hall and Grounds

Figure 3: Evacuation route to Jugiong Polo Field

5. TACTICAL CHECKLISTS

Placeholder - This pack will be updated to include the tactical checklists when developed in collaboration with Fire Safety Engineer and Fire and Rescue, if required.

6. HAZARDOUS CHEMICALS MANIFEST

A manifest of hazardous chemicals stored at Yass accommodation facility and compound is provided in Table 4.

Table 4: Hazardous chemicals manifest

Storage area	Proper shipping name	UN No.	Class/Division	PG	Type	Typical quantity
PS3*	Sodium Hypochlorite 12.5%	1791	8	II	Dangerous Goods Container	500L
PS3*	Diesel	1202	3		Self Bunded Diesel Bowser	99255L

*Refer to Appendix 1 for location

7. PERFORMANCE SOLUTION SUMMARY

The building design incorporates a combination of Performance Solutions and Deemed-to-Satisfy (DtS) Solutions that must together comply with the Performance Requirements of the Building Code of Australia (BCA). The Performance Solutions relating to fire safety for this project based on the NCC report are summarised in Table 5.

Table 5: Performance Solutions

Analysis No.	NCC DTS Provision	Description of the Performance Solution	Performance Requirement(s)
A	C3D8 S5C24	To allow fire walls separating the sole occupancy unites (SOU do not extend through the sub floor space).	C1P1 C1P2 C1P4
B	C3D8 C4D12	To allow The Bounding Construction of the public corridors to not achieve and FRL of 60/60/60 and the window opening does not have an FRL	C1P1 C1P2 C1P4
C	D2D3, D2D5 D2D6 D2D10 D2D11 D2D14 D2D15	To allow the covered corridors to not lead to any of the listed ‘exits’. Note This is due to the need to pass back through / under another building (such as the roofed area of the adjacent class 3 buildings) doesn’t allow the unroofed space between them to be utilised as open space.	D1P4, D1P6
D	E1D4	To allow fire extinguishers at distances of more than 10m from every entrance door	E1P2
E	E4D2 E4D5	To allow non provision of Emergency Lights and Exit Signs	E4P1 E4P2

8. TACTICAL FIRE PLAN

Refer to Appendix 1 for the Yass accommodation facility and compound Tactical Fire Plan. This includes the specific location of the water tanks and other firefighting equipment. It should be noted that the design and specific location of the firefighting equipment is still underway, and this document will be continuously updated and documented as we progress.

9. COMPLIANCE TABLE

This ESIP has been prepared in accordance with the Emergency Services information and tactical fire plan (FRNSW, 2019) document. Refer the compliance table in Table 6.

Table 6: Compliance table

Reference	Requirement	Section
7	Emergency Services Information Package (ESIP)	This document
7.1	Function	Section 1
7.2	Form and construction as directed in the Emergency Services information and tactical fire plan (FRNSW, 2019)	This document
7.3	The ESIP is to contain the following:	-
(a)	Title page, following the directions of the Emergency Services information and tactical fire plan (FRNSW, 2019)	Page 1
(b)	Premises overview	Section 2
(c)	Contact list	Section 3
(d)	Evacuation overview	Section 4
7.4	Tactical checklists	Section 5
7.5	Hazardous chemicals	Section 6
7.6	Alternative solutions summary	Section 7
8	Tactical fire plan	Section 8 and Appendix 1

APPENDIX 1: TACTICAL FIRE PLAN

SEDIMENT BASIN 1 WITH 823 M³ CAPACITY

LAYDOWN AREA

PARKING

VEHICLE SWEPT PATH

1.8 M CHAINLINK FENCE

10 000 L Rainwater Tank

WTP

WASTE STORAGE AREA

INDICATIVE STOCKPILE LOCATION

KITCHEN

ACCOMMODATION

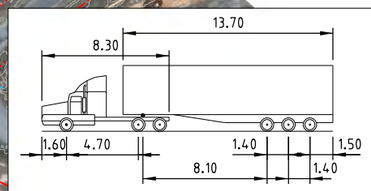
ALL WEATHER PERIMETER TRACK

RETAINED TREES

SEDIMENT BASIN 2 WITH 135 M³ CAPACITY

LEGEND

- ACCOMMODATION
- OFFICE
- PARKING
- KITCHEN
- FUEL FARM
- PLANT WASHBAY
- WORKSHOP PAD
- VEGETATION
- STOCKPILE
- VEHECLE SWEPT PATH
- ALL WEATHER PERIMETER TRACK
- (W) WATER SUPPLY POINT
- (E) ELECTRICAL SUPPLY POINT
- (S) SEWER DISCHARGE POINT
- POWDER FIRE EXTINGUISHER
- WET CHEMICAL FIRE EXTINGUISHER
- CO2 FIRE EXTINGUISHER
- SITE BOUNDARY



AV - ARTICULATED VEHICLE

OVERALL LENGTH	19.000m
OVERALL WIDTH	2.500m
OVERALL BODY HEIGHT	4.301m
MIN BODY GROUND CLEARANCE	0.418m
TRACK WIDTH	2.500m
LOCK-TO-LOCK TIME	6.00s
CURB TO CURB TURNING RADIUS	12.500m

10m 50m 100m
10m 0
1:1250

NOTE:
1. OFFICE, CAMP, PARKING, LAYDOWN AREA FACILITIES ARE OUT OF THIS DOCUMENT SCOPE AND THEREFORE ARE INCLUDED AS A REFERENCE.

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AMENDMENT:		

AMDT	AMENDMENT DETAILS	DRN	DES	CHK	VRY	APP	DATE
A	ISSUED FOR INFORMATION	RP	AVL	PC	PC	JS	17/04/2025

HumeLink East

acciona | GENUS

HLE-AGJ-TMP-TLCE-DRG-1512-00010

Transgrid

TL400797	CROSS SECTONS
TL400778	GENERAL LEGEND
TL400794	EARTHWORK ISOPACH
TL400800	PAVEMENT LAYOUT
TL400886	TYPICAL DETAILS
TL400814	COMPOUND & ROAD DESIGN
TL400791	GENERAL PLAN & SETOUT

REFERENCE DRAWINGS

DRAWN		
REVIEWED		
VERIFIED		
APPROVED	JS	25/07/2025

TENTATIVE
APPROVAL STATUS

SCALE AS SHOWN

YASS ACCOMMODATION FACILITY AND COMPOUND (AC05B)
FUNCTIONAL LAYOUT & TURNING PATH
PLAN

A1	PREFIX TL	NUMBER 400881	SHEET	AMDT A

566x801mm

PLOT ISSUE DATE 7/31/2025 9:28:27 AM

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INDEX CLASS'N 02-20

SOURCE DESIGN FILE: c:\pwworkdir\iso19650\haoxuan.wen\dms04272\HLE-AGJ-TMP-TLCE-DRG-1512-00010.dgn

Appendix C: Consultation with agencies

Refer to A8 report

Appendix D: Exemptions during a Total Fire Ban NSW

Exemptions during a Total Fire Ban NSW

The following excerpt is from the NSW Government Gazette listed under the Rural Fires Act 1997 Notification under Section 99, Schedule 5 of the Total Fire Ban Notification *Schedule of Standard Exemptions to Total Fire Bans*.

It is noted that this information is current as per the finalisation of this BFEMEP, and should be reviewed for currency before the commencement of exempt works.

GOVERNMENT NOTICES

Rural Fire Service Notices

SCHEDULE OF STANDARD EXEMPTIONS TO TOTAL FIRE BANS

Note 1. The NSW Rural fire service can be contacted on 1800 679 737 and Fire and Rescue NSW can be contacted on 1800 422 281.

Note 2. This schedule sets out standard exemptions to total fire bans orders made by the Minister or the Commissioner of the NSW Rural Fire Service (by delegation). A total fire ban order may specify that some or all of the following standard exemptions will apply during the total fire ban. A standard exemption will not apply unless specifically referred to in the total fire ban order.

1 Definitions

In this Schedule:

fire includes a flame, spark or incandescent or burning material.

landholder, in respect of land, means:

(a) if the land is controlled or managed by a local authority—the local authority, or

(b) in the case of a State forest, flora reserve or timber reserve within the meaning of the *Forestry Act 2012*, or land acquired for the purpose of dedication or reservation under that Act, or in respect of which the Forestry Corporation has obtained the benefit of a forestry right within the meaning of Division 4 of Part 6 of the *Conveyancing Act 1919*—the Forestry Corporation, or

(c) in the case of land dedicated or reserved, or acquired for the purpose of dedication or reservation, under the *National Parks and Wildlife Act 1974*—the National Parks and Wildlife Service, or

(d) in the case of land vested in, or under the control of, Rail Corporation New South Wales, Transport for NSW, Residual Transport Corporation of New South Wales, Transport Infrastructure Development Corporation or Rail Infrastructure Corporation—that authority, or

(e) in the case of land within the catchment area of a water authority—that water authority, or

(f) in any other case—the owner or occupier of the land.

Standard Exemptions

6 Services and utilities—construction, essential repairs or maintenance

(1) Fire lit, maintained or used by, or on behalf of, a provider of a utility or transport service, in connection with the construction or the essential repair or maintenance of facilities or equipment required for the provision or continuation of the utility or transport service provided that:

(a) the fire is lit, maintained or used in a manner which will prevent the escape of the fire, and

(b) adequate fire fighting equipment is provided at the site of the fire to prevent the escape or spread of the fire, and

(c) In the case of construction, the provider of the utility or transport service has:

(i) if the land where the construction works is to be undertaken within a rural fire district—notified the NSW Rural Fire Service Fire Control Centre for that district, or

(ii) if the land where the construction works is to be undertaken is within a fire district—notified the officer in charge of the nearest Fire and Rescue NSW fire station.

(2) The provider of the utility or transport service must comply with any direction or additional condition which may be imposed by the NSW Rural Fire Service or Fire and Rescue NSW, which may include a direction that a fire not be lit.

(3) In this clause:

utility or transport service means a sewerage, drainage, water, gas, electricity, telephone service or the operation of a road or railway.

Appendix E: Fire Safety & Equipment Requirements for Hot Work & Fire Risk Work

Fire Safety & Equipment Requirements for Hot Work & Fire Risk Work

The following excerpt is from the Hot Work and Fire Risk Work (Transgrid, 2022) Corporate-wide Procedure for Fire Safety & Equipment Requirements for Hot Work & Fire Risk Work.

A FRACM is required if Fire Risk Work is being undertaken in a Hazardous Area OR within the Bushfire Danger Period (BFP) OR if a TOBAN has been declared1.					A Hot Work Permit is required if Hot Work is undertaken outside a Designated Hot Work Area (DHWA) OR if a TOBAN has been declared AND working 'in the open'.		
Permit Type		**FRACM[1]**			**Hot Work Permit**		
		Non-Hazardous Area	**Hazardous Area**	**TOBAN Day**	**Inside Premises**	**Outside Premises**	**TOBAN Day**
MODERATE	↓ Hierarchy of controls to be implemented	Prescribed Fire Safety Equipment (PFSE) {Rake-hoe **or** shovel **AND** 16L water filled knapsack **or** 0.9kg dry chemical extinguisher **or** 9kg water extinguisher}	Prescribed Fire Safety Equipment (PFSE)	Work in accordance with FRACM and ensure all mandatory controls are in place prior to works commencing.	Prescribed Fire Safety Equipment (PFSE) {Rake-hoe **or** shovel **AND** 16L water filled knapsack **or** 0.9kg dry chemical extinguisher **or** 9kg water extinguisher} **AND** Welding Pads/Shields (as required) **AND** Final Fire Check	Prescribed Fire Safety Equipment (PFSE) **AND** Welding Pads/Shields (as required) **AND** Final Fire Check	Confirm exemption or permit applies to the works **AND** Notify local fire authority and comply with any conditions **AND** Approval by is required by GM, Maintenance/, Infrastructure Delivery or Major Projects PD **(if works are outside premises)**
HIGH			Prescribed Fire Safety Equipment (PFSE) **AND** Fire Watch Observer[2] **AND** Final Fire Check			Prescribed Fire Safety Equipment (PFSE) AND Welding Pads/Shields (as required) **AND** Fire Watch Observer[3] **AND** Fire Trailer or vehicle mounted water tank (400L)[3] **AND** Final Fire Check	
EXTREME			Prescribed Fire Safety Equipment (PFSE) **AND** Fire Watch Observer[2] **AND** Final Fire Check **AND** Fire Trailer or vehicle mounted water tank (400L)[3]		Fire Watch Observer[3] **AND** Final Fire Check		
CATASTROPHIC				**Approval is required by GM, Maintenance/Infrastructure Delivery or Major Projects PD if the work involves:** **Steel tracked mobile plant** **Excavation using mobile plant** **Slashing/mulching**			**Essential or emergency works only.**

[1]A FRACM is not required for the operation of motor vehicles/rubber tyred mobile plant on sealed or unsealed gravelled roads.

[2]Not required if *working alone* **or** when traversing vehicles/mobile plant.

[3]Required if working in a *Hazardous Area* unless defined as *working alone*.

Appendix F: Flood Response Plan

Flood Response Plan

HumeLink East

acciona | GENUS

Flood Response Plan

HLE-AGJ-ENV-ALE-PLN-0000-00007| Rev H

APPROVALS

	Name	Signature	Date
Author:	G Wilson Environmental Approvals Advisor		08/06/25
Sponsor:	J Mackenzie Environmental Approvals Manager		08/06/25
Project Director:	Carel Nagel Project Director		08/06/25

The authorized use of this document shall only be once approved by way of presence of signatories under Approvals.

DOCUMENT CONTROL – REVISION HISTORY

Revision History

Rev	Date	Pages	Revised By	Description
A	14/3/2024	All	G Wilson	Initial draft
B	22/4/2024	All	G Wilson	Update to address Transgrid comments
C	23/5/2024	All	G Wilson	Update to address Amendment Report finalisation
D	4/11//2024	Section 4.5.1.1	G Wilson	Update to address final CoA's and Council comment
E	21/3/2025	All	G Wilson	Update to address ER comments
F	11/4/2025	Appendix A	G Wilson	Update to address ER comment
G	24/4/2025	Section 2.2, Appendix A and Appendix B	G Wilson	Update to address ER comments
H	8/6/2025	Various	G Wilson	Update to address ER BFEMEP comments

GENERAL REQUIREMENTS

The Project Director is responsible for the distribution of this Management Plan. The controlled master version of this document is available for distribution as appropriate and maintained on RIB | CX. All circulated hard copies of this document are deemed to be uncontrolled. The implementation of this Management Plan is under the authority of AGJV and the Project Director. All personnel employed on the Project will perform their duties in accordance with the requirements of this Management Plan, supporting management plans, and related procedures.

CONTENTS

TERMS AND DEFINITIONS

Abbreviations	Expanded text
AG JV	Acciona Genus Joint Venture
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
EIS	Environmental Impact Statement
FRP	Flood Response Plan
mAHD	Metres above the Australian height datum
NSW	New South Wales
OSOM	Oversized/overmass
PMT	Project Management Team
Project, the	HumeLink East
SES	State Emergency Service
TTMP	Traffic and Transport Management Plan
UMM	Updated mitigation measure
WHS	Work, Health and Safety

1. INTRODUCTION

1.1 CONTEXT

This Flood Response Plan (FRP) forms part of the Traffic and Transport Management Plan (TTMP) (HLE-AGJ-MGT-ALE-PLN-0000-00031) for the HumeLink East Project (the Project). The TTMP in turn forms part of the Construction Environmental Management Plan (CEMP) (HLE-AGJ-MGT-ALE-PLN-0000-00006) for the Project. This FRP has been prepared to address the relevant requirements of the Conditions of Approval (CoA) for the HumeLink Project, the Project Environmental Impact Statement (EIS) and Amendment Report.

1.2 PURPOSE AND OBJECTIVE

The purpose of this FRP is to address the requirements of CoA B39(g), which requires the preparation of a FRP as part of the TTMP. The key objective of the FRP is to meet the requirements of CoA B39(g) and B39(d) and to therefore detail the procedures and options for safe access to and from the Project in the event of flooding.

2. ENVIRONMENTAL REQUIREMENTS

2.1 LEGISLATION

There are no legislative requirements relevant to this FRP.

2.2 CONDITIONS OF APPROVAL

The CoA's relevant to this FRP are presented in Table 1. A cross reference is also included to indicate where and how the conditions are addressed in the Plan or other Project management documents.

Table 1: CoA relevant to the FRP

CoA No.	Condition Requirements	Document Reference	How Addressed
B39	Prior to commencing construction or road upgrades identified in condition B37 (whichever comes first) but excluding Enabling Works where the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of condition B64, the Proponent must prepare a Traffic Management Plan for the development in consultation with FCNSW, TfNSW, Snowy Valleys Council, Wagga Wagga City Council, Cootamundra-Gundagai Regional Council, Yass Valley Council, Upper Lachlan Shire Council and Goulburn-Mulwaree Council, and to the satisfaction of the Planning Secretary. This plan must include:	-	-
	(d) details of the measures that would be implemented to: … • responding to local climate conditions that may affect road safety such as fog, dust, wet weather and flooding;	This Plan	This Plan outlines measures to be implemented in the event of flooding.
	(g) a flood response plan detailing procedures and options for safe access to and from the site in the event of flooding.	This Plan	This Plan is the Flood Response Plan prepared to address B39(g)
B52	Prior to commencing Enabling Works (unless the relevant requirements of this condition are adequately addressed in the Enabling Works Management Plan of condition B64) and/or construction, the Proponent must develop and implement a comprehensive Emergency Plan and detailed emergency procedures for the development, including an evacuation plan for the accommodation camps, and provide a copy of the plan to the local Fire Control Centre and FRNSW. The Applicant must keep two copies of the plan on-site in a prominent position adjacent to the site entry point(s) to the construction compounds and substations at all times. The plan must:	-	-
	(e) include fire emergency management planning, including:	-	-
	(vi) detail specific response measures in the case of flood to ensure site safety;	This plan	This Plan outlines measures to be implemented in case of flooding.
	(vii) describe the specific emergency exit routes to be used in the case of flood and include evidence of access agreements with	Section 4.5	Section 4.5 describes evacuation routes. Note. All evacuation routes

CoA No.	Condition Requirements	Document Reference	How Addressed
	relevant landowners (e.g. right of carriageway); and		are to the public road network and do not trigger access agreements.

2.3 UPDATED MITIGATION MEASURES

There are no Updated Mitigation Measures (UMMs) specifically relevant to flood response/preparedness.

3. SITE CHARACTERISTICS

This section describes and summarises the existing environmental setting in relation to the hydrology and flooding aspects within and adjacent to the Project. The information was sourced from Chapter 18 of the EIS (Hydrology and flooding) and Technical Paper 11 – Hydrology and Flooding Impact Assessment.

3.1 TOPOGRAPHY

The topography of the Project (HumeLink East specifically) is variable. From Tumut to Yass the topography is somewhat hilly, with elevations ranging between approximately 261 metres above the Australian height datum (mAHD) and 768 mAHD. Between Yass and Bannaby the topography continues to be hilly but with more areas of steep terrain, ranging from approximately 537 mAHD to 958 mAHD.

3.2 CLIMATE AND RAINFALL

Rainfall data has been obtained from the weather stations relevant to the Project described in the EIS, those being the weather stations at Goulburn TAFE (BoM station ID: 070263) (refer to Table 2) and Burrinjuck Dam (BoM station ID: 073007) (refer to Table 3).

Goulburn TAFE has detailed rainfall records from 1971. The average annual rainfall for the period of 1971 to 2023 has ranged from a minimum of 362 millimetres (recorded in year 1982) to a maximum of 1049.3 millimetres (recorded in year 1974).

Burrinjuck Dam has detailed rainfall records from 1908. The average annual rainfall for the period of 1908 to 2023 has ranged from a minimum of 358.1 millimetres (recorded in 2006) to a maximum of 1684.7 millimetres (recorded in year 1956).

Table 2: Summary of rainfall records from Goulburn TAFE (BoM station ID: 070263)

Goulburn (BoM station ID: 070263)				
Month	Monthly Rainfall depth (mm)			Mean number of rain days
	Mean	Highest	Lowest	
January	64.5	214	3	10
February	61.2	167	2.5	9.8
March	62.5	180.8	2.4	10.2
April	43.9	208.2	0.2	8.8
May	41.1	124.6	2.6	9.2
June	51.7	191.2	9.4	11.7
July	39.9	97.2	4	11.8
August	54.8	215	5.2	11.7
September	47.6	101.6	4.4	10.3
October	52.8	148.4	0	10.9
November	67.3	208	4.6	11.1
December	61.9	228.4	0.8	9.7

Table 3: Summary of rainfall records from Burrinjuck Dam (BoM station ID: 073007)

Burrinjuck Dam (BoM station ID: 073007)				
Month	Monthly Rainfall depth (mm)			Mean number of rain days
	Mean	Highest	Lowest	
January	63.1	339.8	0.3	6.5
February	56.1	205	0	5.7
March	62.5	384.2	0.5	6.3

Burrinjuck Dam (BoM station ID: 073007)				
April	64.7	300	0	6.9
May	79.8	322.7	0	9.3
June	96	314.1	5	12
July	100.1	253.4	6	13.2
August	97.7	280.3	1.3	13.4
September	83.4	245.7	12	10.9
October	85.5	225.8	4.8	10.3
November	74.3	206.3	0.2	8.6
December	63.1	260.5	0.2	7.4

3.3 WATERCOURSES

Surface water investigations were undertaken as part of the EIS and are presented in Technical Working Paper 12: Surface Water and Groundwater. The Project intersects the following river catchment areas:

- Murrumbidgee River Catchment
- Lachlan River Catchment
- Wollondilly River Catchment (sub-catchment to the larger Hawkesbury-Nepean River catchment).

A description of the catchment relevant to the Project as detailed in Table 18-2 of the EIS is outlined in Table 4.

Table 4: Catchment characteristics

Catchment	Sub-catchment	Description of catchment
Murrumbidgee River catchment	Tumut River at Upstream Nimbo offtake (gauge #410199)	About 85 per cent of the sub-catchment is covered by dense forest. Major water storages such as the Blowering Dam, Talbingo Dam and Jounama Dam are located east of the project. Storage areas are connected by the Tumut River, which is the primary waterway for the catchment.
	Brungle Creek at Red Hill no.2 (gauge #41000269)	The upper reaches of the catchment are covered by bushland and dense forest. Brungle Creek is the main waterway flowing down to flatter parts of the catchment.
	Yass River at upstream Burrinjuck Dam (gauge #410176)	The topography is relatively flat with upstream areas covered by patches of dense forest. Downstream areas are mostly covered with bushland and grasslands. Yass River is the main waterway for the sub-catchment.
Lachlan River Catchment	Lachlan River at Narrawa (gauge #412065)	The topography is generally flat and mostly covered by grassland with few patches of forest areas. Lachlan River is the main waterway in the catchment.
Wollondilly River catchment	Wollondilly River at Jooriland (gauge #212270)	The topography is typically flat and covered with open space grasslands. Few patches of vegetation are found in upstream areas with heavier vegetated forest area across the downstream areas. Wollondilly River is the main waterway draining the catchment. Warragamba Dam storage area is located about 10 kilometres downstream of the gauge station outlet.

The locations of the catchments associated with the project are shown in Figure 1.

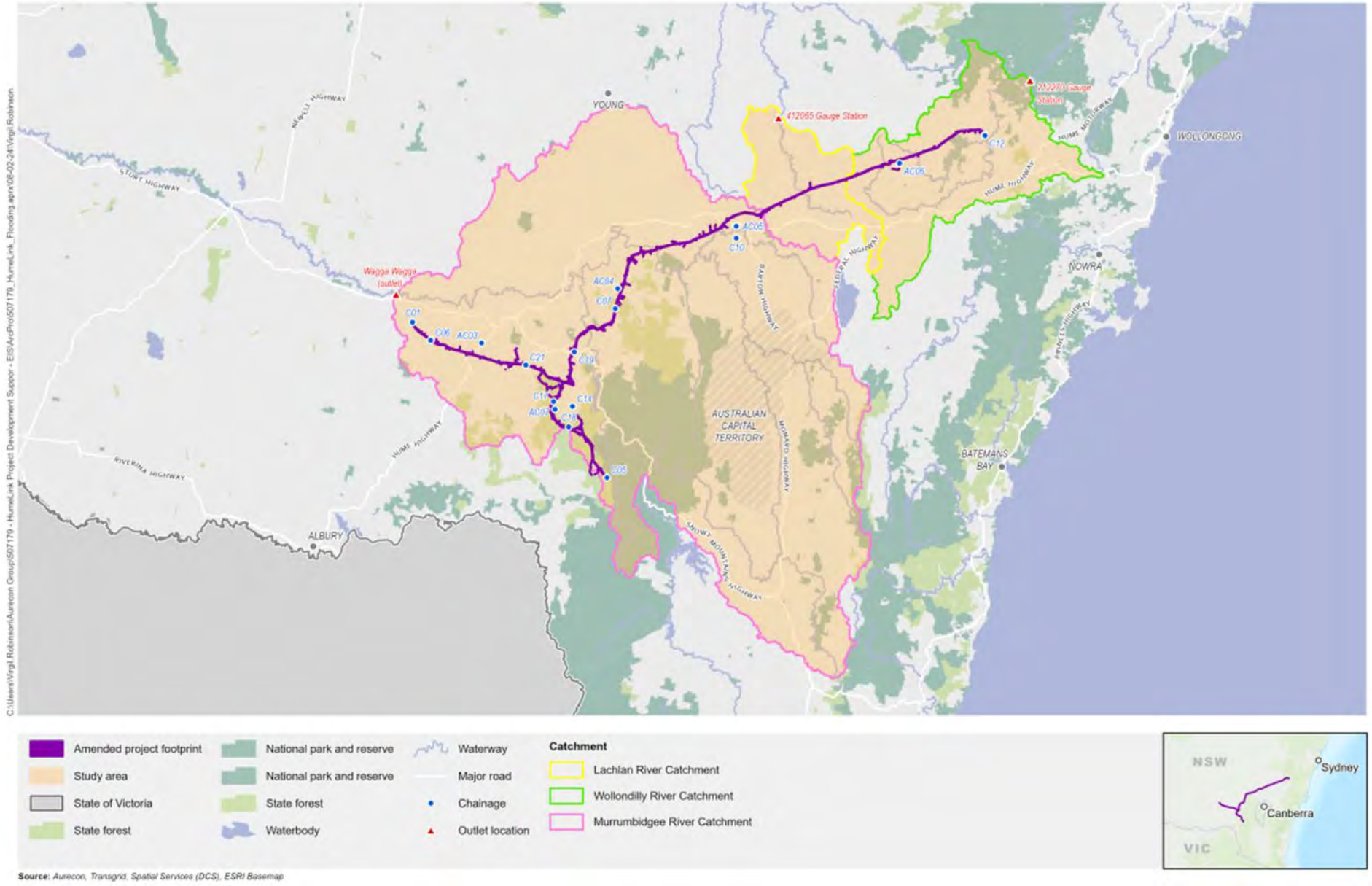


Figure 1: Locations of the catchments associated with the project (Source: Amendment Report Figure 4-1)

3.4 FLOODING

The hydrology and flood impact assessment within Chapter 18 and Technical Paper 10 Hydrology and Flooding Impact Assessment of the EIS has identified generally minor adverse impacts on flood behaviour during construction. Based on the localised works associated with the project and the level of flood impacts anticipated, the project is highly unlikely to impact on any existing flood risk management plans, strategies or procedures.

In relation to transmission line structures and access tracks, flooding has the potential to impact construction activities, particularly if these activities are undertaken in flood-prone areas. During construction, the temporary stockpiling of spoil, topsoil, materials, equipment and machinery to support construction activities have the potential to be washed away or scoured out by overland flows in a flood event, particularly those located near waterways and drainage lines. Excavations have the potential to become filled with flood water, requiring dewatering and result in unstable embankments. Regional flood mapping, as presented on the EIS, is included in Appendix B.

The flood risk at the proposed construction compounds and the worker accommodation facilities are generally low. A summary of the flooding impacts on construction compounds identified in the EIS is presented in Table 5.

Table 5: Summary of flooding impacts on construction compounds and accommodation facilities

Construction compound and accommodation facilities	Impact of flooding
Adjungbilly accommodation facility and compound (AC04)	No regional flood risk. Local overland flow path within the construction compound extent observed just upstream of Gatleys Creek. Earthwork filling, stockpiling or civil structures within this overland flow path could result in an impact on flooding.
Yass accommodation facility and compound (AC05)	No regional flood risk. Local flooding risk from Bango Creek along the western and southern boundary of the compound. Any earthwork filling, stockpiling or civil structures along these boundaries have the potential to cause flood impacts within the site.
Crookwell accommodation facility and compound (AC06)	No regional flood risk. Local flooding risk from the local catchment. The site has an overland flow path conveying localised surface runoff through the middle of the site. The flood extent divides the site, isolating flood free areas. Any earthwork filling, stockpiling or civil structures in the middle of the site have the potential to cause flood impacts within the site.
Amended Honeysuckle Road compound (C07)	Located on high ground. No regional flood risk. Unlikely at risk of local flooding.
Yass substation compound (C10)	No regional flood risk. Minor local flood risk via multiple overland flowpaths through the site.
Amended Bannaby 500 kV substation compound (C12)	Located on the hillside of the local catchment. No regional flood risk. Local drainage management required for the extended area to the west as part of the amended project.
Gadara Road compound (C19)	No regional flood risk. Local overland flooding observed through the site that could result in impacts on construction activities.

4. FLOOD PREPARATION AND RESPONSE

Response encompasses actions to reduce the threat to life, property and the environment following the onset of an emergency. This includes mobilisation prior to the on-set of a flood.

As outlined in Section 3.4, the project footprint is generally not impacted by substantial flooding, except for where transmission line structure and access track construction work is located in flood prone areas. Where flood risk is present, any associated impacts are likely to be localised in nature. Roads used for access and egress to and from sites during flooding events will be subject to the discretion of the Work, Health and Safety (WHS) Manager and site supervisor based on advice from media reports, NSW State Emergency Services (SES), council Local Emergency Management Officers, Water NSW and emergency services.

The following is a prepared response in case of extreme and severe weather events.

4.1 EXTREME WEATHER MONITORING

Local conditions and weather will be monitored and interpreted onsite via the BoM Warning Centre website (http://www.bom.gov.au/australia/flood/).

In the lead up to severe or extreme weather events (as defined by BoM), there may also be warnings of a flood or storms through:

- Media reports
- NSW State Emergency Service (SES) total flood warning systems
- NSW SES Dam failure alerts
- Water NSW's early warning network.

Monitoring of information via these channels will be used to inform the appropriate planning for work tasks to be undertaken for the day, including consideration of potential flooding to various work zones and access to and from site.

The Acciona Genus Joint Venture (AG JV) engineering staff and site supervisors that are responsible for ordering items that require over-sized overmass (OSOM) will notify the haulage contractors when there are road closures on the haulage route due to flooding.

Heavy vehicles that are in the vicinity of the project will follow the direction provided by the Site Supervisors regarding which access route should be used in the event there are local road closures due to flooding. Refer to Section 4.5.1 for further information on the evacuation routes.

Where a weather event is expected to be a localised inundation event (storm), pre-rainfall inspections would be undertaken as required by the Soil and Water Management Plan (HLE-AGJ-MGT-ALE-PLN-0000-00028).

4.2 SITE PREPARATION

All construction areas will be inspected and prepared in accordance with the Health and Safety Manual (HLE-AGJ-WHS-ALE-MAN-0000-00001), which is relevant to the on-site emergency response.

4.3 FLOOD RESPONSE

If a flood event is forecast, site personnel requirements will be reviewed.

Personnel on site will follow instructions at their work site and/or accommodation where a roll-call will be completed. Communication with personnel in the event of a flood will occur through two-way radio.

All personnel will be directed to seek shelter at their designated accommodation camp, construction compound or nominated off-site accommodation (where safe to do so), at the appropriate times staged as below:

- Non-essential personnel including support personnel shall return to flood refuge (accommodation location), via a determined safe route as described in Section 4.4
- Semi-essential personnel may be required to remain on site to assist with flood preparedness. This may include the work teams, engineers, and anyone deemed useful by the Superintendent to carry out preparedness duties
- Skeleton crew will involve essential personnel to carry out final preparedness, including supervisors, riggers and welders and anyone deemed appropriate.

No attempt should be made to enter or cross any flood waters that are above a minor flood level, or where the flood inundation level is not known. Should a life-threatening situation arise in a flood event, emergency services will be contacted (000) immediately. Based on an assessment of the likely length of disruption to site activities, site personnel remaining may be directed to vacate the site if it is safe to do so.

4.4 ACTION AND ALARM

The following actions and alarm levels are proposed in the event of severe or extreme weather:

4.4.1 CATEGORY 1: SITE PREPARATION

When 80mm (or greater) of rainfall is forecast over a 24-hour period (or less). Site preparation in accordance with Section 4.2 of this plan will occur.

4.4.2 CATEGORY 2: ALARM

Project Management Team (PMT) will determine when to raise a Category 2 Alarm. The Site Supervisor and relevant members of the PMT are to monitor weather and river conditions for potential warning signs of flood events and overland flows. It should be noted that severe rainfall events occurring in areas beyond the project boundary can flow into the river systems that are part of the project's catchment area. Following the assessment, if a flood event is imminent, the appropriate evacuation procedures will be initiated and followed. Further details relating to evacuation are provided in Section 4.5 of this plan.

4.5 EVACUATION

The construction compound and accommodation camps and all other construction compounds are either not at risk of flooding or at risk of only minor overland flow paths. As such, areas within each construction compound and accommodation camp will be nominated by the Project Team as muster points in the event that personnel are required to stop work and muster. Other project areas not subject to flooding will be nominated as required dependent on the proximity of construction activities to the accommodation camps and construction compounds.

Prior to or during a flood, personnel may be required to leave the site to return to their accommodation or place of residence.

Weather monitoring and monitoring of media would provide identification of potential flooding risk and would allow safe and orderly evacuation of site personnel if required. The site would be closed and remain closed for the duration of the flood event except in an emergency or as directed by emergency service providers.

4.5.1 SITE ACCESS AND EGRESS

4.5.1.1 TRANSMISSION LINE STRUCTURES AND ACCESS TRACK CONSTRUCTION AREAS

In the event of a flood, evacuation of transmission line structure and access track construction areas will be via a determined safe route given by the PMT. To determine the safest route, the PMT will monitor warning channels to determine the status of surrounding roads.

The safest route will always be used in the event of a flood. Relevant personnel within the PMT (such as the WHS Manager and/or Construction Manager) will monitor road closure conditions, with direction provided to site personnel (Site Supervisors). Site Supervisors will provide direction to personnel regarding which access route should be used, via two-way radio.

Information on road closures can be obtained from:

- Snowy Valleys Council - https://www.snowyvalleys.nsw.gov.au/Home
- Upper Lachlan Shire Council - https://upperlachlan.nsw.gov.au/
- Cootamundra–Gundagai Regional Council - https://www.cgrc.nsw.gov.au/
- Yass Valley Council - https://www.yassvalley.nsw.gov.au/Home
- Goulburn–Mulwaree Council - https://www.goulburn.nsw.gov.au/Home
- Transport for NSW - https://www.livetraffic.com/ or 132 701. The Live Traffic App can also be used to provide information on mobile devices
- NSW SES - https://www.ses.nsw.gov.au/ or 132 500
- Hazards Near Me app - https://www.nsw.gov.au/emergency/hazards-near-me-app

4.5.1.2 CONSTRUCTION SITES AND ACCOMODATION FACILITIES

Access and egress from construction sites and accommodation facilities is summarised in Table 6.

Table 6: Construction site and accommodation facilities Access and egress routes

Site	Access / egress	Description
Adjungbilly accommodation facility and laydown (AC04)	**Primary:** Adjungbilly Road (West) **Secondary:** Adjungbilly Road (East)	Adjungbilly accommodation facility and compound (AC04) interfaces with Adjungbilly Road. The primary route is to the west towards Gundagai. Adjungbilly Road to the East provides access onto Nanangroe Road to the North, or Threeways Road to the south. Adjungbilly Road is a two-way sealed road.
Yass accommodation facility and compound (AC05)	**Primary:** Faulder Avenue **Secondary:** Wargeila Road	Faulder Avenue is a sealed two way road that allows access to Yass Valley Way and Cooks Hill Road. Faulder Avenue is the primary access on the eastern side of the accommodation and laydown facility. Wargeila Road is a sealed two way road that allows access onto the Yass Valley Way and tracks north onto Laverstock Road. Yass Valley Way has direct northern access onto the Hume Highway.
Crookwell accommodation facility and compound (AC06)	**Primary:** Tracks heading towards Woodhouselee Road **Secondary:** Tracks heading towards Graywood Siding Road	Access into the Crookwell facility is via tracks from primary Woodhouselee Road and Graywood Siding Road as a secondary option via the south. Access tracks are unsealed, however, Woodhouselee Road is a sealed two-way road.
Amended Honeysuckle Road compound (C07)	**Primary:** Honeysuckle Road (western access) **Secondary:** Honeysuckle Road	Honeysuckle Road is an unsealed road in good condition. It joins with various unsealed roads within Red Hill State Forest. Red Hill State Forest can be accessed from the west (Brungle Creek), north (Adjungbilly), and south (Wyangle). Honeysuckle Road (western access) from Brungle Creek (site access 9.5 km from Brungle Creek Road) is the primary access route for the Honeysuckle Road compound (C07). The following are potential secondary access routes for the Honeysuckle Road compound (C07): • Northern access from Adjungbilly, via on Red Hill Road and Honeysuckle Road (site access 9.4 km from Threeways Road/Adjungbilly Road) • Southern access from Wyangle, via Wee Jasper Road. Wee Jasper Road joins Red Hill Road, 4 km south of Honeysuckle Road compound (C07) • Red Hill Road joins Honeysuckle Road, 1.2 km east of Honeysuckle Road compound (C07).
Yass substation compound (C10)	**Primary:** Perry Street (northern access) **Secondary:** Perry Street (southern access)	Perry Street is a sealed two-way road. Primary access to Perry Street is through northern access from Grand Junction Road, a major two-way sealed road (site access 1.2 km from Grand Junction Road). Secondary access to Perry Street is from Wee Jasper Road/Green Street, through Victoria Street (0.2 km)

Site	Access / egress	Description
		(site access 1 km from Wee Jasper Road/ Green Street). Perry Street can be accessed from multiple two-way sealed roads within Yass, including Victoria Street.
Amended Bannaby 500kV substation compound (C12)	**Primary:** Hanworth Road (western access) **Secondary:** Hanworth Road	Hanworth Road is sealed to the existing Bannaby 500 kV substation from Taralga. Hanworth Road (western access) from Bannaby Road is the primary access route for the Bannaby 500 kV substation and compound. Unsealed gravel road within property between Hanworth Road and Bannaby 500 kV substation compound (C12) is subject to erosion. Secondary access is via an unsealed rural road providing property access, 16 km to Wollondilly River.
Gadara Road compound (C19)	**Primary:** Gadara Road (South) **Secondary:** Gadara Road (North)	Gadara Road is an unsealed two way road that heads south into Tumnut and North towards Califat Road. Both North and South access roads can connect to the Snowy Mountains Highway. Directly from the South and via Batchelors Valley Way to the North.

5. FLOOD RECOVERY

5.1 SITE INSPECTIONS

The site would be opened only once it is deemed safe following a site inspection by the WHS Manager and Site Supervisor. Other specialists, such as structural engineers, may be requested to assess the site prior to reopening. The inspection would identify if any environmental and/or safety hazards remain.

5.2 REPORTING

Should the flood event and associated project response actions constitute an incident, then investigation, notification and reporting will occur in accordance with Section 3.8 of the CEMP – Incidents and emergency management. Incidents may include for example, a spill or release of contaminants due to floodwaters inundating machinery or equipment.

The investigation will include a review of events leading up to the incident and implement improved practices as required.

6. FLOOD RESPONSE SUMMARY PROCEDURE

The flood response procedure to be undertaken in the event of extreme weather or flooding is summarised in Table 7.

Table 7: Summary of flood response procedure

Response item	Action	Procedure	Responsibility	Timeframe
Monitor	Daily weather monitoring	Monitor BoM website, SES flood information, SES 'Hazards Near Me' app and media coverage on a daily basis	Environmental Manager Site Supervisor	Daily
BoM warning for flooding or flash flooding	Increase level of alert	Monitor BoM website Notify all Site Supervisors of warning Complete actions within Section 4.2 and Section 4.3	Environmental Manager	In event of a flood
Flood occurrence	Raise a category 2 Alarm and commence procedure	Once alarm has been raised under Section 4.4, complete Section 4.5	Site Supervisor Construction Manager Project Manager	When 80mm of rainfall is expected within 24 hours
Post-flood	Conduct safety walk	Determine whether it is safe to return to site and repair any damage	Environmental Manager Construction Manager Site Supervisor WHS Manager	Following flood event

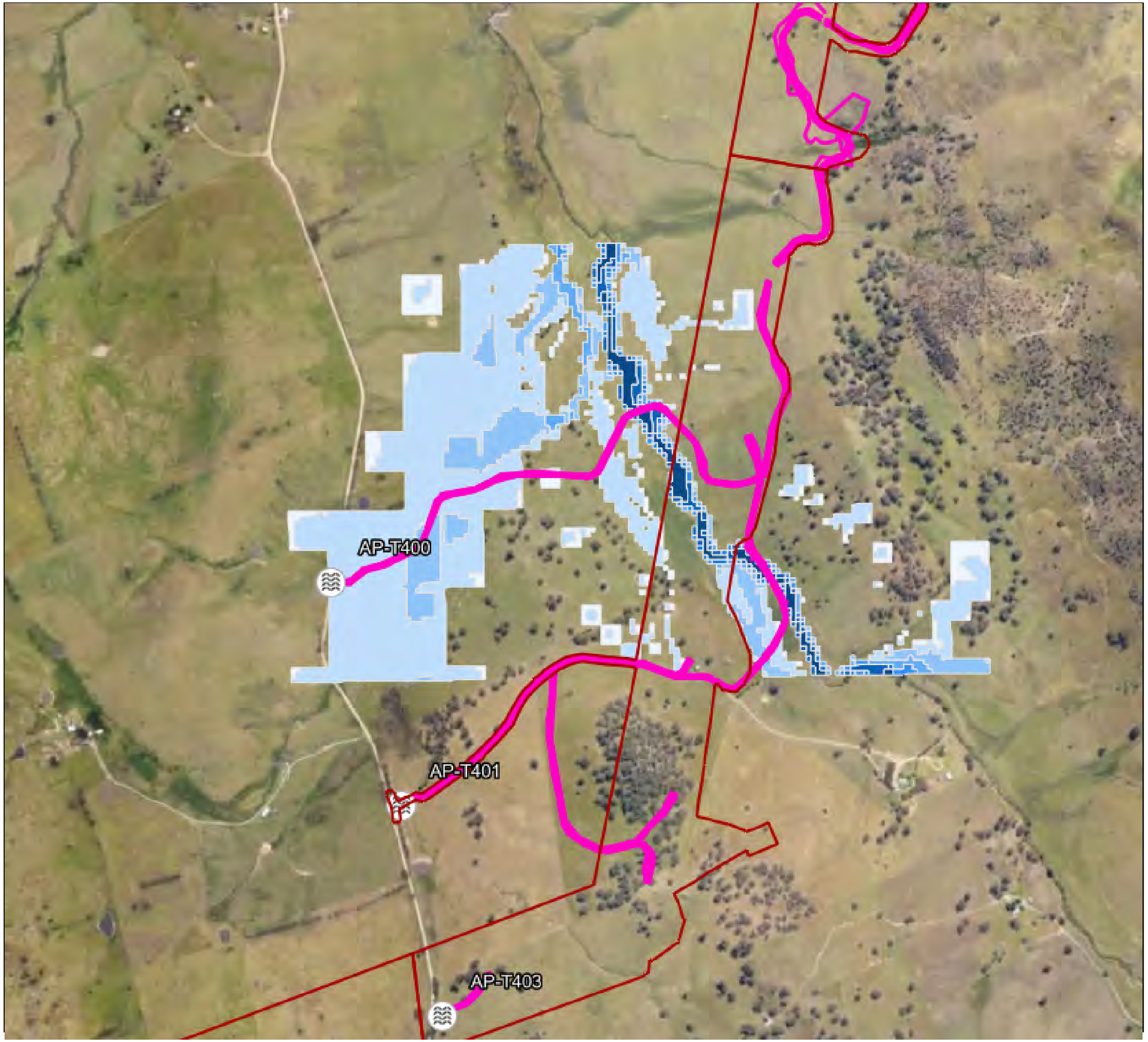
APPENDIX A: EMERGENCY CONTACT LIST

Position / organisation	Name	Phone
Environment Protection Agency	-	131 555
Fire and Rescue NSW	-	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
NSW Ambulance		000
NSW Ministry of Health	-	02 9391 9000
SafeWork NSW	-	131 050
NSW SES	-	132 500
Cootamundra–Gundagai Regional Council	-	1300 459 689
Goulburn–Mulwaree Council	-	02 4823 4444 02 4823 4500 (after hours emergency)
Snowy Valleys Council	-	1300 275 782
Upper Lachlan Shire Council	-	02 4830 1000
Yass Valley Council	-	02 6226 1477
AG JV WHS Manager	Peter Scott	0460 873 798
AG JV Construction Manager	Jacques Coetzee	0400 736 983
AG JV Environment and Sustainability Manager	Jon May	0476 845 891
AG JV Environment Managers	West – Amy-Lee Conroy	0427 590 445
	East – Kyle Redshaw	0449 925 870
AG JV Project Director	Carel Nagel	0418 950 435
Environmental Representative	Derek Low	0402 403 716
Transgrid Environmental Manager	Sam Pathammavong	0461 465 726

APPENDIX B: REGIONAL FLOOD MAPPING

HumeLink East Project

1% AEP flood depth (m) at Brungle Creek - Murumbidgee Catchment



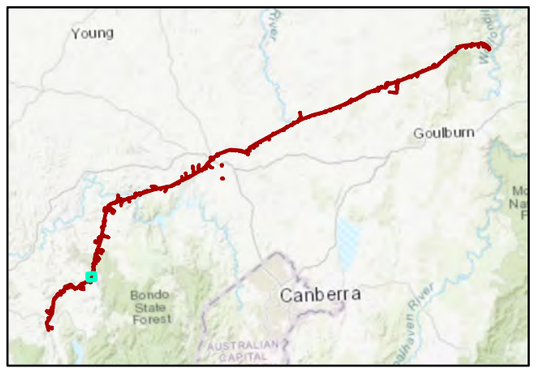
Legend

- Project Construction Boundary
- Flood Depth (m)
  - <= 0.03
  - 0.03 - 0.1
  - 0.10 - 0.25
  - 0.25 - 0.5
  - 0.50 - 0.75
  - 0.75 - 1
  - 1.00 - 1.5
  - > 1.5
- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



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HumeLink East Project

1% AEP flood depth (m) at Tumut River/ Gocup Creek - Murumbidgee Catchment

Legend

- Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

- Access Point V8.4
- Access track model

AP-T429

AP-T433

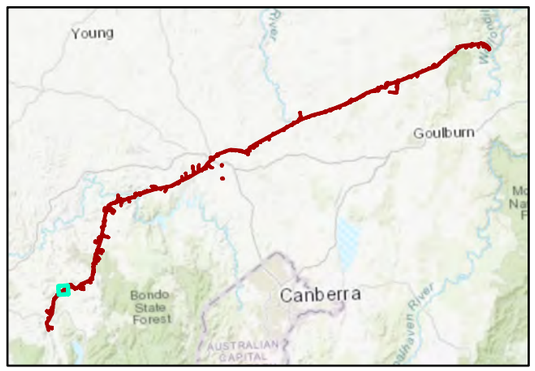
AP-T436

AP-T434

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

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HumeLink East Project

1% AEP flood depth (m) at Adjungbilly Creek - Murumbidgee Catchment

Legend

- Project Construction Boundary

Flood Depth (m)

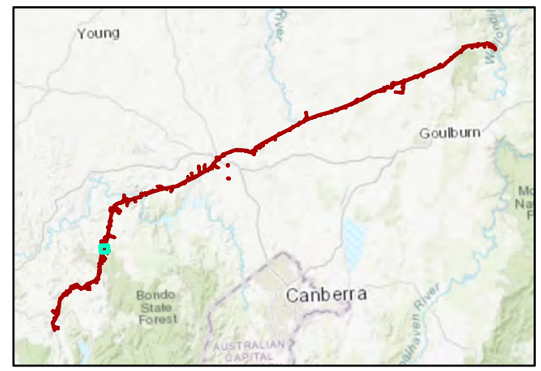
- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



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HumeLink East Project

1% AEP flood depth (m) at O'Briens Creek - Murumbidgee Catchment

Legend

- Project Construction Boundary

Flood Depth (m)

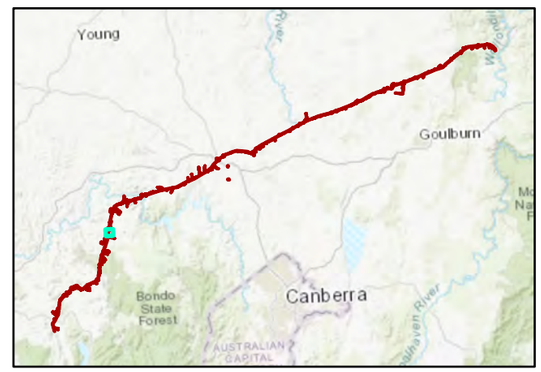
- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



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HumeLink East Project

1% AEP flood depth (m) at Cart Road Creek (1) - Murumbidgee Catchment

Legend

- Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

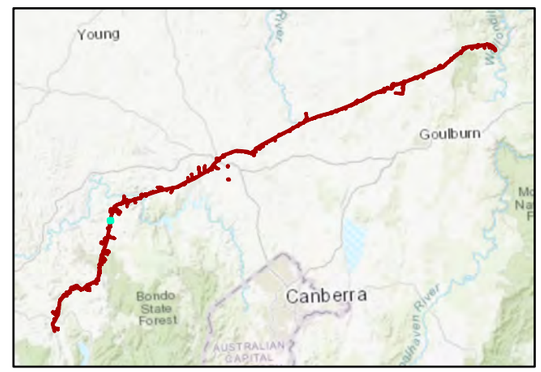
Access Point V8.4

Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

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HumeLink East Project

1% AEP flood depth (m) at Yellow Clay Creek - Murumbidgee Catchment

Legend

- Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

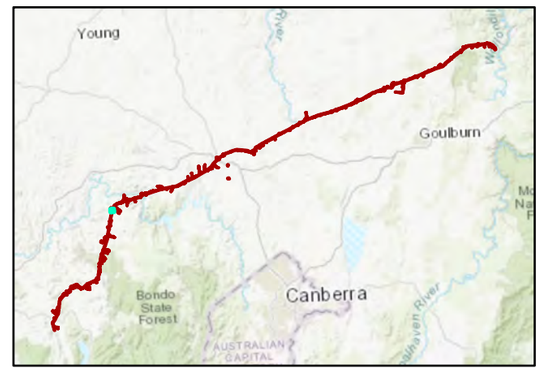
Access Point V8.4

Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

acciona | GENUS

HumeLink East Project

1% AEP flood depth (m) at Bannaby Creek (2) - Wollondilly Catchment

Legend

- Project Construction Boundary

Flood Depth (m)

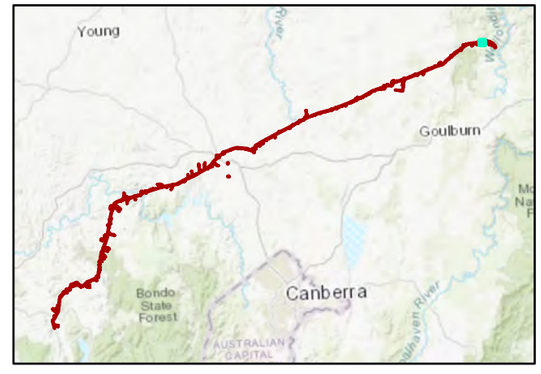
- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

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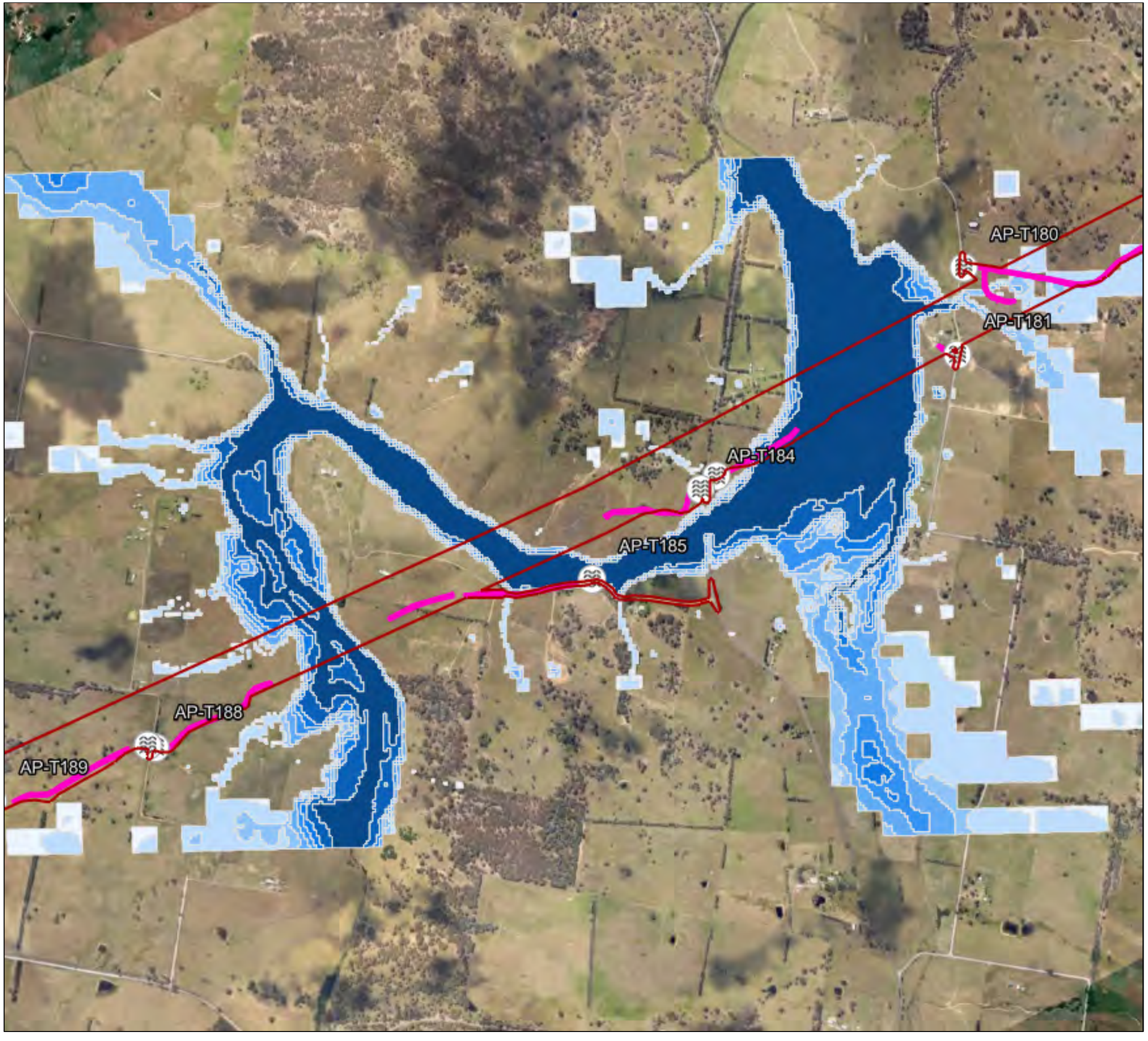
HumeLink East Project

1% AEP flood depth (m) at Jerrawa Creek - Lachlan Catchment



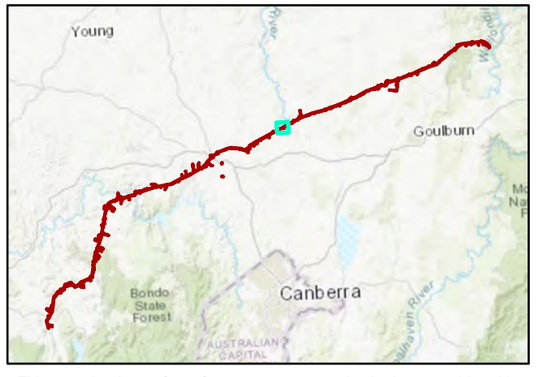
Legend

- Project Construction Boundary
- Flood Depth (m)
  - <= 0.03
  - 0.03 - 0.1
  - 0.10 - 0.25
  - 0.25 - 0.5
  - 0.50 - 0.75
  - 0.75 - 1
  - 1.00 - 1.5
  - > 1.5
- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

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HumeLink East Project

1% AEP flood depth (m) at Myrtle Creek

Legend

- Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

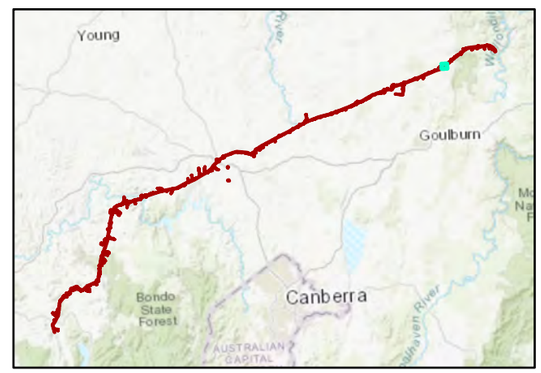
Access Point V8.4

Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

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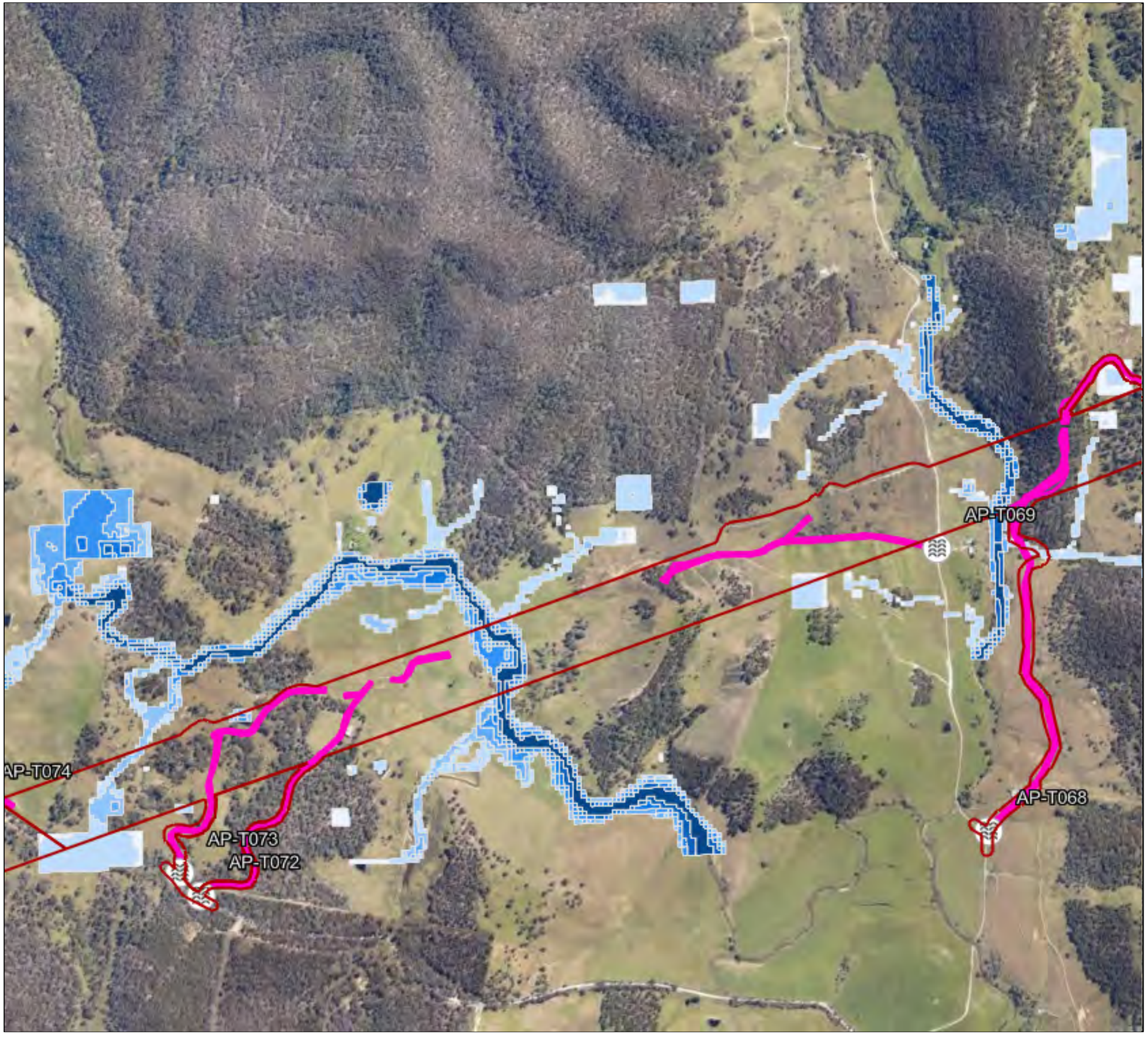
HumeLink East Project

1% AEP flood depth (m) at Tarlo River



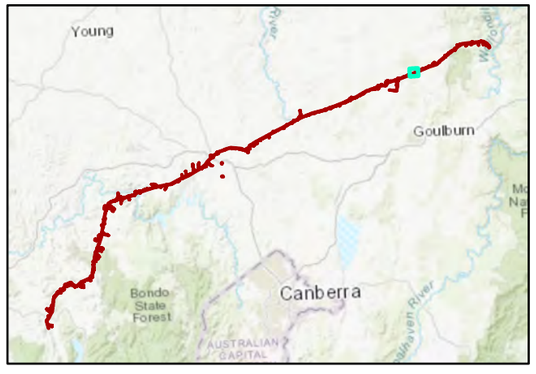
Legend

- Project Construction Boundary
- Flood Depth (m)
  - <= 0.03
  - 0.03 - 0.1
  - 0.10 - 0.25
  - 0.25 - 0.5
  - 0.50 - 0.75
  - 0.75 - 1
  - 1.00 - 1.5
  - > 1.5
- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

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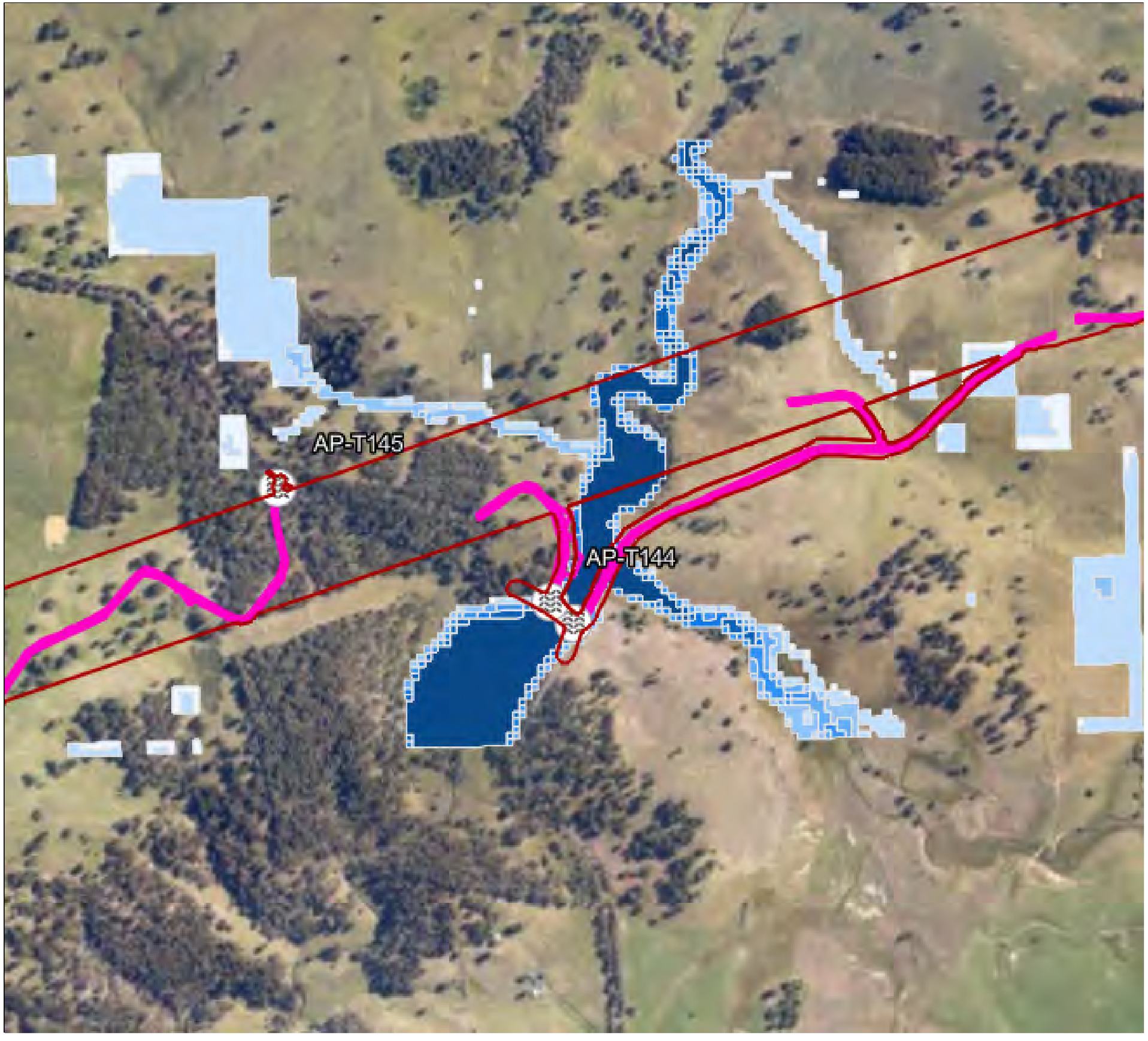
HumeLink East Project

1% AEP flood depth (m) at Humes Creek



Legend

- Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

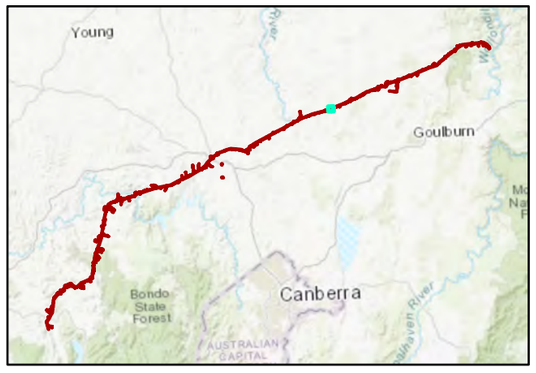
Access Point V8.4

Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

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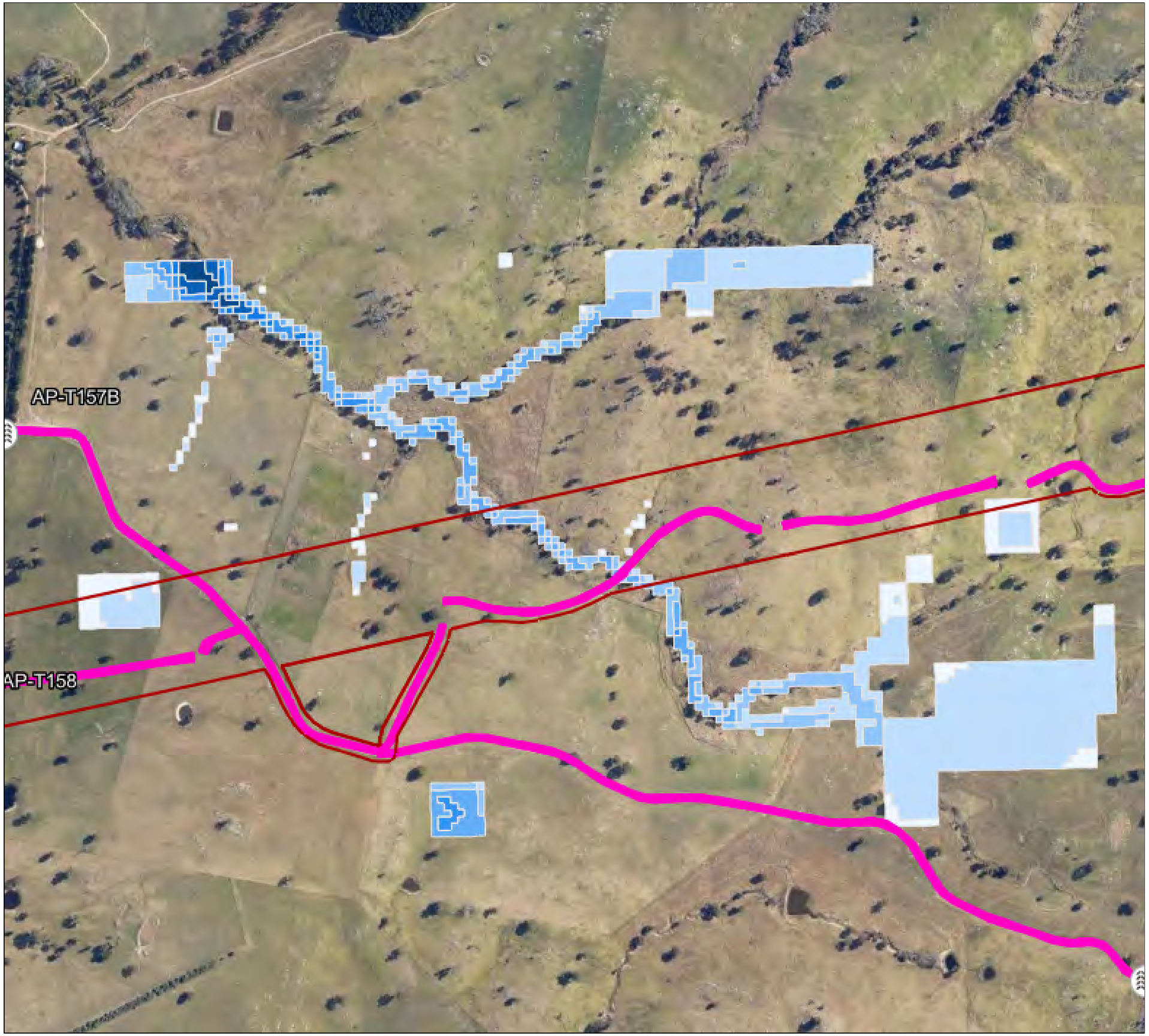
HumeLink East Project

1% AEP flood depth (m) at Merril Creek



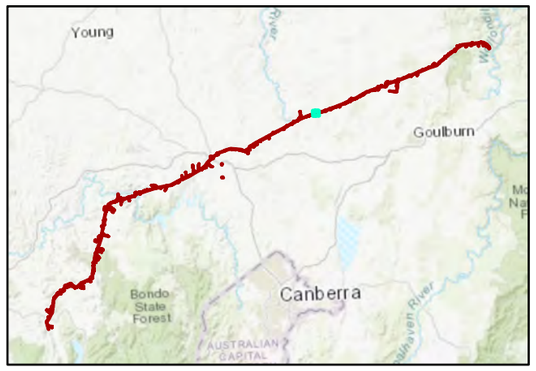
Legend

- Project Construction Boundary
- Flood Depth (m)
  - <= 0.03
  - 0.03 - 0.1
  - 0.10 - 0.25
  - 0.25 - 0.5
  - 0.50 - 0.75
  - 0.75 - 1
  - 1.00 - 1.5
  - > 1.5
- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

acciona | GENUS

HumeLink East Project

1% AEP flood depth (m) at Lachlan River

Legend

Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

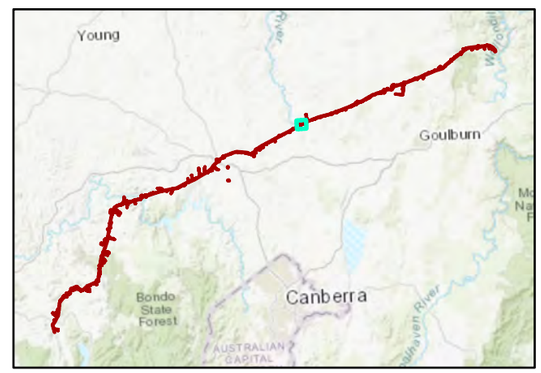
Access Point V8.4

Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

acciona | GENUS

HumeLink East Project

1% AEP flood depth (m) at Felled Timber Creek

Legend

- Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

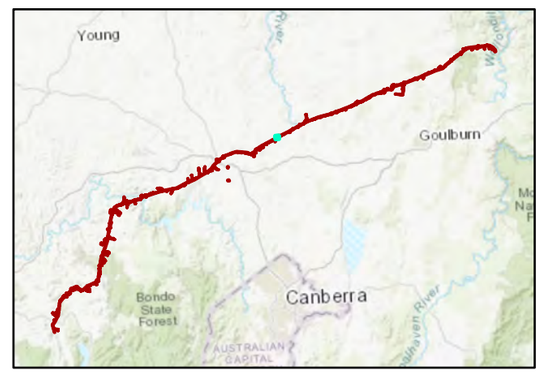
Access Point V8.4

Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55

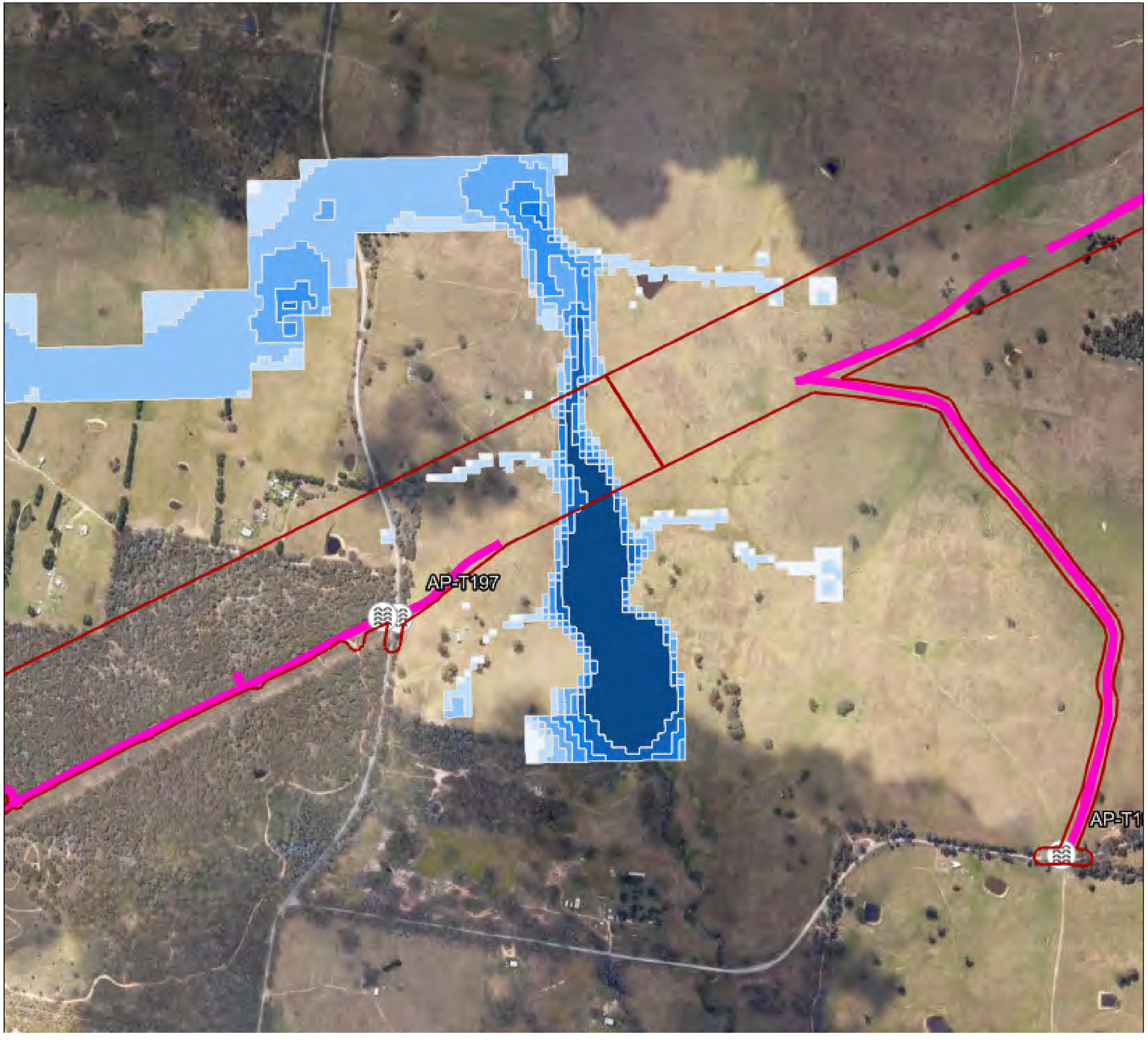


HumeLink East

acciona | GENUS

HumeLink East Project

1% AEP flood depth (m) at Flacknell Creek



Legend

- Project Construction Boundary

Flood Depth (m)

- <= 0.03
- 0.03 - 0.1
- 0.10 - 0.25
- 0.25 - 0.5
- 0.50 - 0.75
- 0.75 - 1
- 1.00 - 1.5
- > 1.5

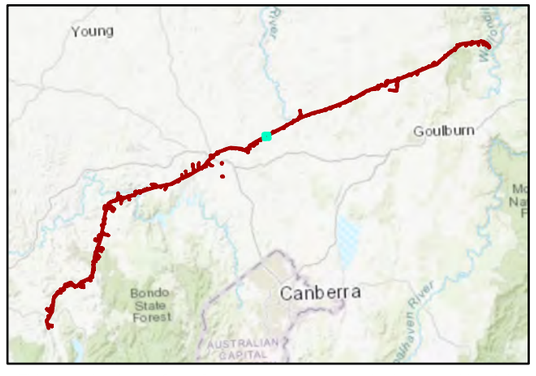
Access Point V8.4

Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



HumeLink East

acciona | GENUS

HumeLink East Project

1% AEP flood depth (m) at Bogolong Creek

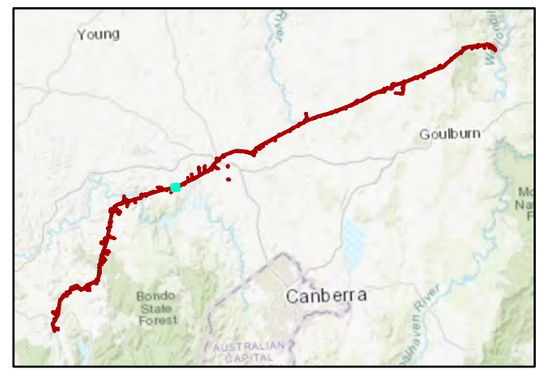
Legend

- Project Construction Boundary
- Flood Depth (m)
  - <= 0.03
  - 0.03 - 0.1
  - 0.10 - 0.25
  - 0.25 - 0.5
  - 0.50 - 0.75
  - 0.75 - 1
  - 1.00 - 1.5
  - > 1.5
- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



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1% AEP flood depth (m) at Murrumbidgee River

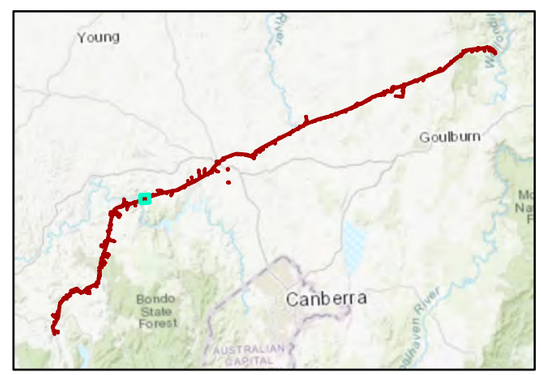
Legend

- Project Construction Boundary
- Flood Depth (m)
  - <= 0.03
  - 0.03 - 0.1
  - 0.10 - 0.25
  - 0.25 - 0.5
  - 0.50 - 0.75
  - 0.75 - 1
  - 1.00 - 1.5
  - > 1.5
- Access Point V8.4
- Access track model

N

500 Meters

Projection : GDA 2020 MGA Zone 55



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