Plan

Emergency Plan – Sub Plan – Bushfire Management Plan

P810060-EN-PL-TL-ALL-002

Project Name: Mount Piper to Wallerawang Transmission Line Upgrade

Project Location: Central West region of NSW within the Lithgow City Council Local Government Area (LGA).

Original Prepared by: Victor Sayaxang, Senior Project Engineer

Reviewed by: Doug Giffin, Health and Safety Business Partner

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Document Approval

	Position Title	Name	Date
Approved	Project Director	Karl Littlemore	27/10/226

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B	21/04/2026	Victor Sayaxang	Updated based on draft CoA
C	12/05/2026	Hayley Pottenger	Updated in response to Transgrid comments
D	07/07/2026	Karl Littlemore	Updated following Consultation. Refer to Appendix D for the sections of the document updated.
E	31/7/2026	Karl Littlemore	Section 5.2.6 updated following Consultation.
F	01/10/2026	Ruvimbo Vusango	Updated compliance tables, management measures, performance criteria and bushfire emergency arrangements revised.
G	19/10/2026	Ruvimbo Vusango	Updated to resolve ER Comments received 16 Oct 2026.
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Bringing our Reconciliation Action Plan to life

"We recognise Aboriginal and Torres Strait Islander peoples as the Traditional Owners and Custodians of this land, and we pay our respects to Elders past, present and emerging."



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Glossary

Abbreviation	Definition
ABC	Australian Broadcasting Corporation
AHD	Australian Height Datum
APZ	Asset Protection Zone
AWS	Automated Weather Station
BAL	Bushfire Attack Level
BFDP	Bushfire Danger Period
BFMC	Bushfire Management Committee
BFPL	Bushfire Prone Land
BOM	Bureau of Meteorology
BP	Business Partner
PBP	Planning for Bush Fire Protection 2019 (NSW RFS)
BMP	Bushfire Management Plan
CEMP	Construction Environmental Management Plan
CoA	Conditions of Approval
CWOREZ	Central West Orana Renewable Energy Zone
DHWA	Designated Hot Works Area
EIS	Environmental Impact Statement
FRACM	Fire Risk Assessment and Control Measures
FRNSW	Fire and Rescue NSW
kV	Kilovolt
LGA	Local Government Area
NPWS	National Parks and Wildlife Service
NSP	Neighbourhood Safer Place
OOHW	Out of Hours Works
PCT	Plant Community Type
R&R	Rest and Recover
RFS	Rural Fire Service (NSW)
RMM	Revised Mitigation Measures
SCA	State Conservation Area
SDS	Safety Data Sheet
TOBAN	Total Fire Ban
VCR	Vegetation Clearance Requirement
UHF	Ultra-High Frequency

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Compliance Tables

Conditions of Approval

The Conditions of Approval (CoA) requirements relevant to bushfire management and addressed by this Plan are summarised in Table 1. The table identifies where each requirement is addressed and how the Project will implement the requirement.

Table 1 - Conditions of Approval Evidence of Compliance

CoA	Condition of Approval	Where Addressed	How Addressed
B45(a)	Minimise the fire risks of the development, including managing vegetation fuel loads on-site.	Sections 4, 5.1.2 and 5.3.2	Zinfra will minimise bushfire risk during construction by identifying and controlling project ignition hazards, managing vegetation and fuel loads within APZs, maintaining plant and equipment, and implementing the preventative controls detailed in Sections 4 and 5.
B45(b)(i)	Ensure the development complies with relevant asset protection requirements in RFS Planning for Bush Fire Protection 2019 and Standards for Asset Protection Zones.	Sections 5.1, 5.1.1 and 5.1.2	The Project will establish and maintain APZs for the construction compound in accordance with the applicable requirements of Planning for Bush Fire Protection 2019. APZ locations, dimensions and vegetation management requirements are detailed in Section 5.1.
B45(b)(ii)	Access tracks to construction compounds must comply with the property access requirements of Table 5.3b of Planning for Bush Fire Protection 2019.	Sections 5.2.6 and 5.5	Access to the construction compound will comply with the relevant property access requirements of Table 5.3b of Planning for Bush Fire Protection 2019. Project access tracks and emergency access arrangements are addressed in Sections 5.2.6 and 5.5.
B45(b)(iii)	The development must be suitably equipped to respond to any fire on site, including a 20,000 L water supply tank fitted with a 65 mm Storz fitting and an FRNSW-compatible suction connection at each construction compound.	Sections 3.6 and 5.3.1	The Project will maintain suitable firefighting equipment and water supply for fire response. A dedicated 20,000 L water supply tank with a 65 mm Storz fitting will be provided at the Project site facilities, together with portable and towable firefighting equipment as detailed in Section 5.3.1.
B45(b)(iv)	Incorporate the recommendations of a fire risk assessment as per the network operator's design standards.	Sections 3, 4 and 5; EIS Technical Report 9	The Project will implement the bushfire controls arising from the Project bushfire risk assessment and applicable Transgrid requirements. Sections 3 and 4 identify the relevant bushfire hazards and risks, with preventative and mitigation controls established in Section 5.
B45(c)	Ensure buildings within the compounds comply with AS 3959-2018 Construction of buildings in bushfire-prone areas and Planning for Bush Fire Protection 2019.	Section 5.1.1	Buildings and site facilities within the construction compound will be sited and managed in accordance with the applicable bushfire protection requirements, including AS 3959-2018 and Planning for Bush Fire Protection 2019, as addressed in Section 5.1.1.

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CoA	Condition of Approval	Where Addressed	How Addressed
B45(d)	Ensure any fire trails or asset protection zones associated with the development are wholly contained within the approved development area.	Sections 5.1.2 and 5.5	All Project APZs and fire trails will be maintained within the approved development area. Section 5.1.2 establishes this requirement for APZs and Section 5.5 addresses fire trails and access.
B45(e)	Develop procedures to manage potential fires on site, in consultation with RFS, FRNSW and NPWS.	Sections 1.4, 5, 6; Appendices C and D	The Project will implement the fire prevention and emergency response procedures established in Sections 5 and 6 and Appendix C. The procedures have been informed by consultation with RFS, FRNSW and NPWS, with consultation outcomes recorded in Section 1.4 and Appendix D.
B45(f)	Assist RFS, FRNSW, NPWS and emergency services as much as practicable if there is a fire in the vicinity of the site.	Sections 5.2.5, 6.2 and 6.3; Appendix C	The Project will assist emergency services as far as practicable by maintaining site access, providing current site and incident information, making personnel available to meet responding appliances, and coordinating with emergency services during a bushfire event.
B45(g)	Notify the relevant local emergency management committee following completion of construction and prior to commencing operations.	Section 1.4	The relevant local emergency management committee will be notified following completion of the construction phase and prior to commencement of operations, as committed in Section 1.4.
B46(b)	The emergency plan must be prepared in consultation with FRNSW, RFS and NPWS.	Section 1.4 and Appendix D	This Bushfire Management Plan forms a supporting sub-plan to the Emergency Response Plan. Bushfire-specific emergency arrangements will be developed and maintained in consultation with FRNSW, RFS and NPWS, with consultation outcomes documented in Section 1.4 and Appendix D.
B46(d)	The emergency plan must be consistent with Hazardous Industry Planning Advisory Paper No. 1 Emergency Planning and Planning for Bush Fire Protection 2019.	Sections 1.1, 1.5, 5 and 6	The Bushfire Management Plan will be implemented as part of the Project Emergency Response Plan and applies the relevant bushfire planning, prevention and response requirements of Planning for Bush Fire Protection 2019. The applicable guidance is identified in Section 1.5.
B46(f)	Detail access provisions for emergency vehicles and primary and alternative site contacts available 24/7.	Sections 5.2.5 and 5.5; Appendix B	Emergency access arrangements are detailed in Sections 5.2.5 and 5.5. Primary and secondary Project contacts are provided in Appendix B for emergency contact and site coordination.
B46(g)	Include procedures for storage and maintenance of flammable materials.	Sections 4.1.6 and 5.4	Flammable and combustible materials will be stored and managed in accordance with Section 5.4, including separation, bunding, labelling and inspection requirements, to minimise ignition and fire risks.
B46(h)(i)	Include the location, management and maintenance of APZs and on-site water supply tanks.	Sections 3.6, 5.1, 5.1.1, 5.1.2 and 5.3.1	APZ locations and requirements are identified in Section 5.1 and will be maintained throughout construction. The location of the dedicated 20 000l Firefighting water supply tank is shown in Section 3.6 (Figure 7). Firefighting water supply and equipment requirements are detailed in Section 5.3.1.

CoA	Condition of Approval	Where Addressed	How Addressed
B46(h)(ii)	Include a list of works that should not be carried out during a Total Fire Ban.	Sections 4.1.1, 5.2.3 and 5.3	The Project will apply the restrictions in Section 5.3 during a Total Fire Ban, including restrictions on general hot works and machinery use in open or grassy areas unless the required approvals and controls are in place.
B46(h)(iii)	Identify fire risks and hazards and detail measures to prevent fires igniting.	Sections 3, 4 and 5	Bushfire hazards and ignition sources are identified in Sections 3 and 4. Preventative and mitigation measures, including APZ management, hot work controls, equipment maintenance and hazardous goods controls, are detailed in Section 5.
B46(h)(iv)	Include availability of fire suppression equipment, access and water.	Sections 5.2.5, 5.3.1 and 5.5	Fire suppression equipment and firefighting water will be maintained as detailed in Section 5.3.1. Emergency access arrangements are addressed in Sections 5.2.5 and 5.5.
B46(h)(v)	Detail how RFS would be notified and procedures for fire on-site or nearby, ignition-risk activities, and proposed activities during the bushfire danger period.	Sections 4.1.9, 5.2.3, 5.3, 6.2 and 6.3; Appendix C	The Project will monitor bushfire conditions and notify emergency services of bushfire incidents in accordance with Section 6.2 and Appendix C. Hot work and fire-risk activities will be controlled according to current fire danger conditions, Total Fire Bans and the bushfire danger period.
B46(l)	Include operational procedures during bushfires to minimise interference with aerial firefighting operations.	Sections 5.7 and 6.2; Appendix C	All Project aerial activities, including helicopters and drones, will cease and be grounded where a bushfire may involve aerial firefighting operations, as detailed in Section 5.7 and the emergency response arrangements.
B46(m)	Include details of how live transmission infrastructure can be safely isolated in an emergency.	Section 5.8 and Appendix B	Emergency isolation of live transmission infrastructure will be coordinated between the Zinfra site representative and Transgrid in accordance with Section 5.8, with emergency contact details provided in Appendix B.

Revised Mitigation Measures

The Revised Mitigation Measures (RMM) relevant to bushfire management are summarised in Table 2. The table identifies where each measure is addressed in this Plan and the Project commitments that will be implemented to achieve compliance.

Table 2- Revised Mitigation Measures Evidence of Compliance

ID	RMM	Document Reference	How Addressed
HR3	A Bushfire Management Plan will be prepared in accordance with Planning for Bush Fire Protection 2019 in consultation with RFS and NPWS and implemented as part of the Emergency Management Plan.	Sections 1.1, 1.4 and 1.5	This Bushfire Management Plan has been prepared as a supporting sub-plan to the Emergency Response Plan and will be implemented during construction. It applies the relevant requirements of Planning for Bush Fire Protection 2019 and records consultation with RFS and NPWS in Section 1.4 and Appendix D.
HR3	APZs for construction compounds following consultation with relevant landowners in relation to APZ locations and management.	Section 5.1	The Project will establish and maintain APZs for the construction compound in accordance with Section 5.1. The Project will consult with the relevant landowner regarding the location and management of the APZ before it is established, and where changes to the APZ arrangements are proposed.
HR3	APZs to be managed to the standards of Inner Protection Area outlined in Appendix 4 of PBP.	Section 5.1.2	APZ vegetation will be managed throughout construction in accordance with the applicable Inner Protection Area requirements, including controls for trees, shrubs, grasses and vegetation debris detailed in Section 5.1.2.
HR3	Avoid local concentration of bushfire fuels from vegetation removal.	Section 5.1.2	Vegetation and accumulated debris within APZs will be managed to avoid concentrations of combustible fuel and maintain the required low-fuel condition.
HR3	Maintain infrastructure and equipment to reduce bushfire risk.	Sections 4.1.7, 4.1.8 and 5.3.2	Plant, equipment and infrastructure will be maintained in good working order to minimise ignition risk, including appropriate controls for machinery, electrical equipment and spark generation.
HR3	Provide safe work systems for workforce and firefighter safety, including hazard identification, hazard reduction and controls for flammable materials.	Sections 4 and 5	The Project will apply the hazard identification and preventative controls in Sections 4 and 5 to protect workers and responding firefighters, including controls for ignition sources, access, APZs and flammable materials.
HR3	Provide safe work procedures for activities with potential for fire ignition, including hot works and flammable material storage.	Sections 4.1.2, 4.1.3, 5.3 and 5.4	Hot work and fire-risk work will be undertaken in accordance with Transgrid procedures, permits and FRACMs. Hot work and fire risk work will be undertaken in compound/hardstand areas where practicable; combustible materials, dry vegetation, chemicals and fuel sources to be kept at least 15 m away where practicable; otherwise maximise separation, remove or cover fuels, provide the required firefighting unit and fire-water observer, and comply with the Transgrid procedure. Flammable materials will be stored and managed in accordance with Section 5.4.

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ID	RMM	Document Reference	How Addressed
HR3	Induct and train personnel in bushfire risks and management measures associated with construction equipment and activities.	Sections 5.2.1 and 5.2.2	All personnel will receive bushfire awareness information through induction, pre-starts and toolbox talks, including fire weather, ignition risks, emergency response, evacuation and hot work requirements.
HR3	Provide firefighting equipment on site.	Section 5.3.1	The Project will maintain firefighting equipment including extinguishers, hand tools, water supply and towable firefighting units as detailed in Section 5.3.1.
HR3	Provide details of site access and internal road plans based on construction staging.	Sections 5.2.6 and 5.5; Figure 10; Appendix C	Project access and emergency egress arrangements are described in Sections 5.2.6 and 5.5 and shown in the evacuation arrangements. Access suitability will be managed with regard to work stage and prevailing conditions.
HR3	Provide details of the location and quantity of water supplies and storages for firefighting purposes.	Sections 3.6 and 5.3.1	Section 3.6 identifies existing water availability and Section 5.3.1 commits to Project firefighting water supply, including the dedicated 20,000 L tank and mobile water units.
HR4	Include bushfire emergency management and an evacuation plan consistent with the Guide to Developing a Bush Fire Emergency Management and Evacuation Plan 2014 and section 8.3.5 of PBP 2019.	Sections 6 and 6.4; Figure 10; Appendix C	The Project will implement the bushfire emergency response and evacuation arrangements in Section 6, Figure 10 and Appendix C, including alert levels, notification, accountability, evacuation and recovery actions.
HR4	Address evacuation routes and access in accordance with NSW Fire Trail Standards 2023.	Sections 5.5 and 6.4; Figure 10	Project emergency access and evacuation routes will be maintained and managed with reference to NSW Fire Trail Standards 2023, with evacuation arrangements detailed in Section 6.4 and Figure 10.

1. Introduction

1.1 Purpose/Scope

The purpose of this Bushfire Management Plan (BMP) is to document the system implemented to respond to foreseeable bushfire emergency events associated with the project, with the aim of minimising impacts to health and safety, life, the environment, property, plant and equipment. This Bushfire Management Plan is incorporated as a supporting sub-plan within the Emergency Response Plan.

This Plan covers the construction period of the project. The construction period is complete once the Project reaches practical completion and is handed over to Transgrid.

Beyond the construction the lands will be returned to be under the control of the landowners in conjunction with Transgrid. This Plan is not intended to cover the operational phase post construction.

All personnel with emergency response or emergency management responsibilities under this BMP are required to have access to the Plan and to receive an appropriate level of training to enable an effective, coordinated and integrated response to the potential emergency events identified and addressed in this document.

The contents of this BMP are to be read and understood by relevant project personnel, including employees, supervisors, field crews, contractors and subcontractors engaged on the transmission line project. Where applicable, visitors, delivery personnel and other parties entering project work areas are to be made aware of critical emergency information through site induction, pre-start briefings and/or other relevant training or communication processes.

The Bushfire Management Plan will be readily available on site for emergency services. All relevant stakeholders such as Zinfra employees, subcontractors and visitors shall comply with this BMP at all times.

1.2 Aims/Objectives

The aims of this BMP are to:

- provide a structured system, clear responsibilities and appropriate resources to respond to bushfire emergency events and protect personnel, the public, property, plant, equipment and the environment; and
- minimise the actual and potential impacts of bushfire emergency events associated with the project.

The objectives of this BMP are to:

- maintain a high level of bushfire emergency preparedness across all project work areas and activities;
- prevent and minimise the consequences of bushfire emergency events;
- ensure bushfire emergency events are identified, reported and responded to in a timely and effective manner;
- inform workers of the contents of the BMP and allow for contributions
- manage emergency situations until emergency services arrive and assume control, where required;
- support emergency services and other relevant authorities through the provision of accurate information, site access details, local knowledge, personnel and available equipment; and
- protect project personnel, emergency responders, landholders, nearby stakeholders and the broader community from harm.

1.3 Plan Interfaces

This Plan interfaces with the following Plans:

Table 3 - Plan interface with other Management Plans

Plan	Interface
Construction Environmental Management Plan	• Provides the overall environmental management framework for construction of the project. • Provides details on overall staging, interactions between sub-plans of the CEMP and management of cumulative impacts. • Identifies procedures, processes and management systems that apply in relation to construction activities • Provides environmental planning and controls during construction.
Emergency Response plan	• Provides overall response and systems for emergencies. • Provides the roles and responsibilities for emergencies and how they are to be managed. • Provides different scenarios and their responses.
Work Health and Safety Management Plan	• Provides overall health and safety framework for the lifecycle of the project. • Provides details on the health and safety systems and how they are implemented on the project. • Identifies the roles and responsibilities for health and safety.

Note: Emergency planning and coordination arrangements for the Project are established through the overarching Emergency Response Plan. This Bushfire Management Plan forms a supporting sub-plan and applies those arrangements specifically to bushfire preparedness, response and evacuation.

1.4 Stakeholder Consultation

As part of the Environmental Impact Statement (EIS)'s mitigation measure HR3 and Condition B45(e) of the Condition B45(e) of the Conditions of Approval (CoA), it is a requirement that the development of this Bushfire Management Plan be completed in consultation with NSW RFS, NSW National Parks and Wildlife Service (NPWS) and FRNSW. Table 4 below shows a synopsis of the consultation that occurred with the parties in accordance with these requirements.

Table 4 - Consultation associated with development of BMP

Stakeholder	Discussion	Outcome
NSW RFS	Bushfire prevention, ignition notification, emergency access, appliance suitability, communications, elevated fire danger, agency liaison and pre-incident planning.	Advice incorporated throughout Sections 3 to 6 and Appendices B to D. See Appendix D for the detailed consultation close-out.
NPWS	Fire-weather restrictions, estate closures, NPWS contact arrangements, aerial firefighting, fire monitoring and access-track requirements.	Advice incorporated throughout Sections 4 to 6 and Appendices B to D. See Appendix D for the detailed consultation close-out.
FRNSW	Declined to comment	N/A – Declined to comment.

Upon completion of the construction phase of the Project, the relevant local emergency management committee will be notified prior to commencement of operational activities.

1.5 Relevant legislation, standards and documentation

The following legislation, standards and documentation have been consulted in the development of this Plan:

Legislation

- Work Health and Safety Act 2011(NSW)
- Work Health and Safety Regulations 2017 (NSW)

- Environmental Planning and Assessment Act 1979 (NSW)
- Protection of the Environment Operations Act 1997 (NSW)
- Rural Fires Act 1997 (NSW)
- Dangerous Goods (Road and Rail Transport) Act 2008 (NSW)
- Gas Supply Act 1996 (NSW)
- Electricity Supply Act 1995 (NSW)

Australian Standards:

- AS 3745 — Planning for emergencies in facilities
- AS 3959 — Construction of Buildings in Bushfire-Prone Areas

Other

GHD. (2025). Mount Piper to Wallerawang Transmission Line Upgrade EIS Technical Report 9 – Hazard and Risk Assessment.

NSW Department of Planning, Housing and Infrastructure, (2011), Hazardous Industry Planning Advisory Paper No 1, Emergency Planning.

NSW RFS, (2019), Planning for Bushfire Protection

NSW RFS, (2023), Fire Safety Guideline – Emergency Services Information Package and Tactical Fire Plans

NSW RFS, (2023), NSW Fire Trail Standards

TRANSGRID (2025), EIS – Mount Piper to Wallerawang Transmission Line Upgrade Project

Zinfra (2025) Construction Environmental Management Plan – SP5

Zinfra (2026) Emergency Response and Management Plan

NSW RFS (2014), A Guide to Developing a Bush Fire Emergency Management and Evacuation Plan

2. Project Description

2.1 Project Overview

The Project involves the construction of approximately 8 km of new 330 kV transmission line between the Mount Piper and Wallerawang 330 kV substations. Over half of the proposed transmission line would use an existing 132 kV transmission line easement which is to be widened to accommodate both the new and existing transmission lines. The remaining sections would involve either a new transmission line easement or adjusting an existing easement where it overlaps with other transmission lines. It also includes the replacement of existing transmission structures, adjustments to existing transmission lines, and the establishment of permanent and temporary access tracks, construction compounds, and laydown areas.

The upgrade is required to enhance the reliability and capacity of the transmission network, ensuring the secure supply of electricity from the Central-West Orana region to the Greater Sydney region.

2.2 Site Location

The Project is located approximately 14 kilometres (km) west of Lithgow in the City of Lithgow Local Government Area (LGA) in the central west of NSW as shown in

Figure 1. The Project footprint covers approximately 90.4 hectares.

The main site office is located at 140 Main Street, at the location of the old Wallerawang Social Club.

The Project footprint is generally bounded by the following:

- Castlereagh Highway to the north
- Former Wallerawang Power Station site to the east
- Gardens of Stone State Conservation Area (SCA) to the south
- Mount Piper Power Station to the north-west.

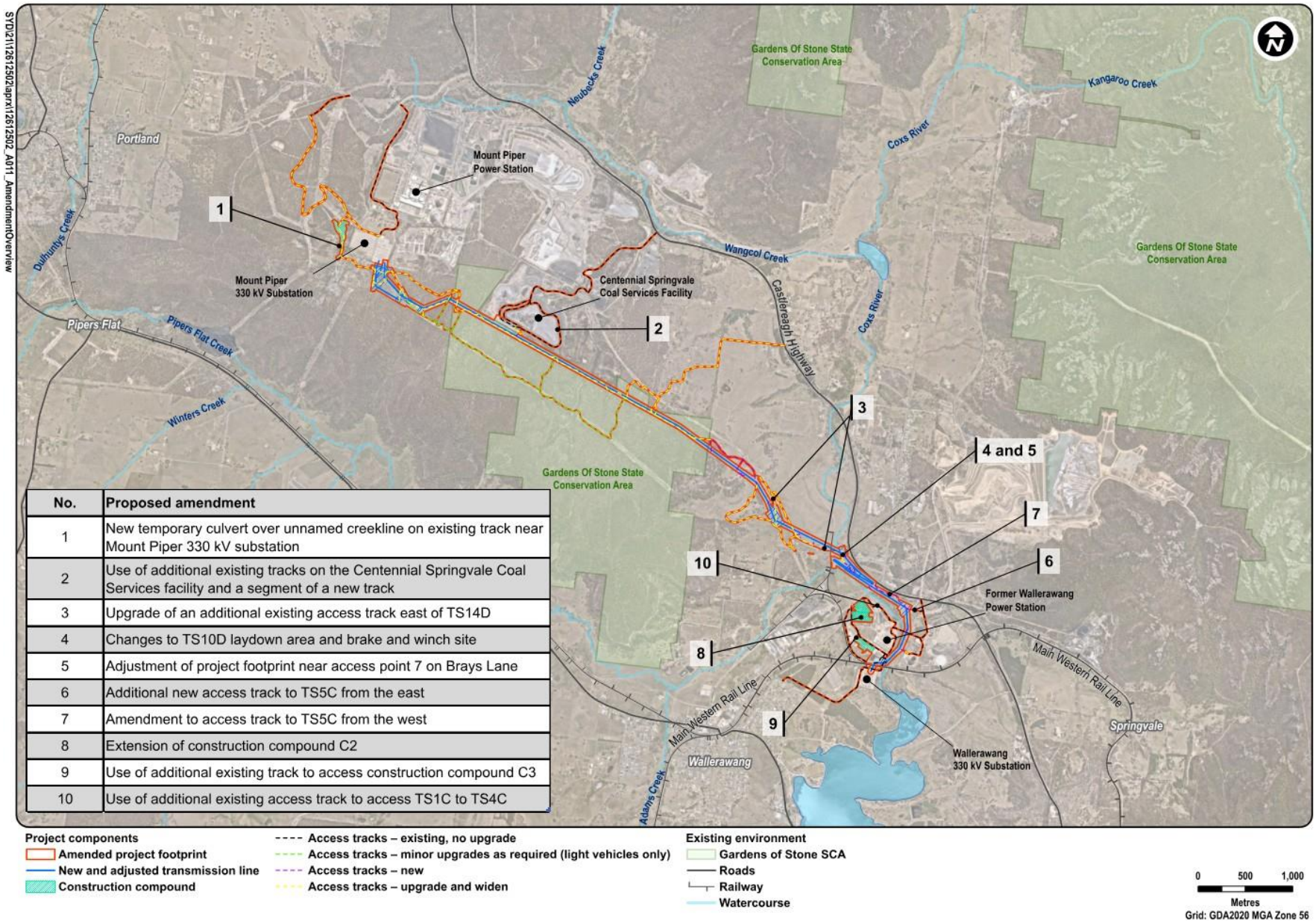
Land uses within and adjacent to the Project footprint include:

- electricity generation at Mount Piper Power Station
- electricity transmission, including the Mount Piper and Wallerawang 330 kV substations, and associated transmission lines
- mining activities, with several Centennial Coal operations including the former Ivanhoe Coal Mine and Springvale Coal Services overlapping the Project footprint
- agriculture, primarily livestock grazing
- conservation, notably the Gardens of Stone SCA
- state and local road reserves including the Castlereagh Highway, Boulder Road and Brays Lane
- rail corridors including the Main Western Rail Line and a disused railway line near Brays Lane.
- Mixed land uses are proposed at the former Wallerawang Power Station site. This may include commercial and industrial land use

Table 5 - Project Details

Component	Description
Client / Customer	Transgrid
Location	**Work Locations** New Transmission Line between Mt. Piper Substation and Wallerawang Substation. Refer to figure 1.
Project operating hours	The planned working hours are 06:30am to 6pm Monday to Sunday. Noting some of this period will be subject to approval of an out of hours works (OOHW) permit.

Component	Description
	The works will be performed on a roster with a period of 20 working or travel days and 8 days for the team to rest and recover off site (R&R). The site will be left in a safe and stable condition during the R&R period. The contact details however provided in this plan can be used at any time, including R&R periods.
Phone Coverage	The site has been shown to have coverage over the 4G phone network.
Project Duration	18 Months
Project Commencement	Expected November 2026



No.	Proposed amendment
1	New temporary culvert over unnamed creekline on existing track near Mount Piper 330 kV substation
2	Use of additional existing tracks on the Centennial Springvale Coal Services facility and a segment of a new track
3	Upgrade of an additional existing access track east of TS14D
4	Changes to TS10D laydown area and brake and winch site
5	Adjustment of project footprint near access point 7 on Brays Lane
6	Additional new access track to TS5C from the east
7	Amendment to access track to TS5C from the west
8	Extension of construction compound C2
9	Use of additional existing track to access construction compound C3
10	Use of additional existing access track to access TS1C to TS4C

Figure 1 - Project location and regional context

2.3 Scope of Works

The Project involves the construction and operation of approximately 8 km of new 330 kV transmission line between the Mount Piper and Wallerawang 330 kV substations. It also includes the replacement of transmission structures, partial adjustment of existing transmission lines, and the establishment of permanent and temporary access tracks, construction compounds, and laydown areas.

The key features of the Project include:

- Widening approximately 0.5 km of existing easements near the Mount Piper 330 kV substation by up to 40 m to accommodate the new 330 kV transmission line and adjustments to existing 132 kV and 330 kV transmission lines.
- Widening the existing 132 kV easement from 45 m to 60 m over 4.8 km to accommodate double-circuit transmission structures for both the existing 132 kV line and the new 330 kV line.
- Installation of three 132 kV pole structures where the existing 132 kV line will be restrung onto the new double-circuit transmission structures.
- Construction of 1.2 km of new 330 kV transmission line from the existing 132 kV line southeast to the intersection of Main Street and the Castlereagh Highway on a 60 m easement.
- Construction of 1.5 km of new 330 kV transmission line on a 40 m easement running parallel to existing 330 kV lines for approximately 1.1 km, then diverging and widening to 60 m for the remaining 0.4 km to the Wallerawang 330 kV substation.

2.4 Roles and Responsibilities

Roles and responsibilities for implementing this Plan are summarised in Table 6. The roles in Table 6 relate to the day-to-day implementation and management of bushfire controls under this Plan. During an emergency, the emergency management and response roles established in the Project Emergency Response Plan apply. The Construction Manager or Nominee / Site Controller will coordinate the initial Project response until control is transferred to the responding emergency service, where applicable. All personnel are responsible for complying with the requirements relevant to their work and for following directions issued during bushfire preparedness and emergency response activities.

A copy of this plan will be made available on site for all persons to view.

Where changes are made to the roles, responsibilities or mitigation measures identified in this Plan, the Plan will be reviewed and updated as required.

Table 6 - Roles and Responsibilities

Role	Responsibility
Project Manager	Overall accountability for implementation of the Bushfire Management Plan; ensure adequate resources are available; ensure bushfire requirements are incorporated into Project planning; support consultation with emergency services; and ensure significant corrective actions and Plan updates are implemented.
Construction Manager	Ensure bushfire prevention and preparedness requirements are implemented across construction activities; coordinate construction activities in response to elevated fire danger, Total Fire Bans and emergency warnings; ensure adequate firefighting resources and emergency access are maintained; and support emergency response and evacuation.
Site Supervisor	Implement bushfire controls at the workface; confirm current fire conditions and applicable restrictions are communicated at pre-starts; verify required firefighting equipment is available; ensure hot work and fire-risk controls are implemented; cease or modify activities where required; and immediately report fire, smoke or control failures.

Role	Responsibility
HSE Manager / HSE Advisor	Support implementation and review of bushfire risk controls; monitor relevant fire weather and emergency information; support inductions, toolbox talks, inspections and emergency drills; record and track corrective actions; and support incident investigation and review of this Plan.
Construction Manager or Nominee / Site Controller	Coordinate the Project response during a bushfire emergency until control is transferred to the responding emergency service; initiate notifications, work cessation, muster or evacuation; ensure personnel are accounted for; and coordinate Project information and site access for emergency responders.
Authorised Officer under the Transgrid Hot Work and Fire Risk Work Procedure	Assess proposed hot work and fire-risk activities; issue required Hot Work Permits and/or FRACMs; verify applicable fire weather restrictions, approvals and controls; and ensure permit conditions are communicated before work commences.
Workers, contractors and subcontractors	Comply with this Plan and applicable bushfire controls; attend required inductions and briefings; comply with hot work and fire-risk restrictions; maintain required controls at the workface; immediately report fire, smoke or unsafe conditions; and follow emergency, muster and evacuation directions.

3. Bushfire Risk Assessment

A bushfire risk assessment was developed to support the Mount Piper to Wallerawang Transmission Line Upgrade Environmental Impact Statement (EIS) that identifies and assesses the bushfire risk during construction and operation of the project (EIS Technical Report 9 Hazards and Risks Appendix C – GHD, 2025a).

The recommendations and controls identified through the bushfire risk assessment have been incorporated into the Project's design, construction planning and bushfire management measures, where applicable, in accordance with relevant Transgrid design standards and procedures.

The assessment addressed areas within the Project footprint that are mapped as bushfire-prone land. Bushfire risk in this area is primarily associated with vegetated areas in the Gardens of Stone State Conservation Area (SCA) and around the Mount Piper Power Station and Centennial Springvale Coal Services facilities. The study area for assessment includes the existing operational infrastructure including the 132kV and 330kV transmission lines between the Mount Piper and Wallerawang 330kV Substation and up to 140 metres (m) from the project footprint as defined in *Planning for Bush Fire Protection* (PBP; RFS 2019).

The residual bushfire risk to the Project during construction and operation was assessed as low following implementation of the recommended design, prevention and response controls. Inherent bushfire hazard remains material in surrounding Category 1 vegetation and during adverse fire weather. Robust fire risk controls are implemented using both Zinfra's and Transgrid's Hot Work and Fire Risk Work procedures.

3.1 Regional Fire Weather and Climate

The project is located within the Lithgow City Council LGA and has a Fire Danger Index of 80 as part of the Central Ranges fire weather district.

The proclaimed bushfire danger period (BFDP) in NSW is from 1 October to 31 March each year, however, the start and end of the BFDP may be varied locally by the RFS Commissioner.

The worst extremes of fire weather on the Central West Slopes / Central Ranges are typically associated with hot dry north-westerly to westerly winds. Historically, the most severe fires in the Central West Slopes region have been fanned by north-westerly to westerly winds.

Dry lightning storms occur frequently during the BFDP with lightning strikes as the most common source of ignition in the Lithgow Bushfire Management Committee (BFMC) Region, mainly in late spring and early summer (SEED, 2024; LBFMC, 2020).

The Mount Boyce Automatic Weather Station (AWS) (063292) was used as the source for historical weather and climate across the study area. The mean minimum and maximum summer temperatures range between 12.9°C – 23.4°C with mean winter and maximum winter temperatures ranging between 3.2°C and 10.4°C (BOM, 2024).

The mean annual rainfall recorded at the Mount Boyce AWS between 1994 and 2024 is 1030.1mm (BoM, 2024). Relative humidity shows slight variation across the year with a decrease in relative humidity in the spring / summer months and a decrease in relative humidity from 9am to 3pm (BoM, 2024).

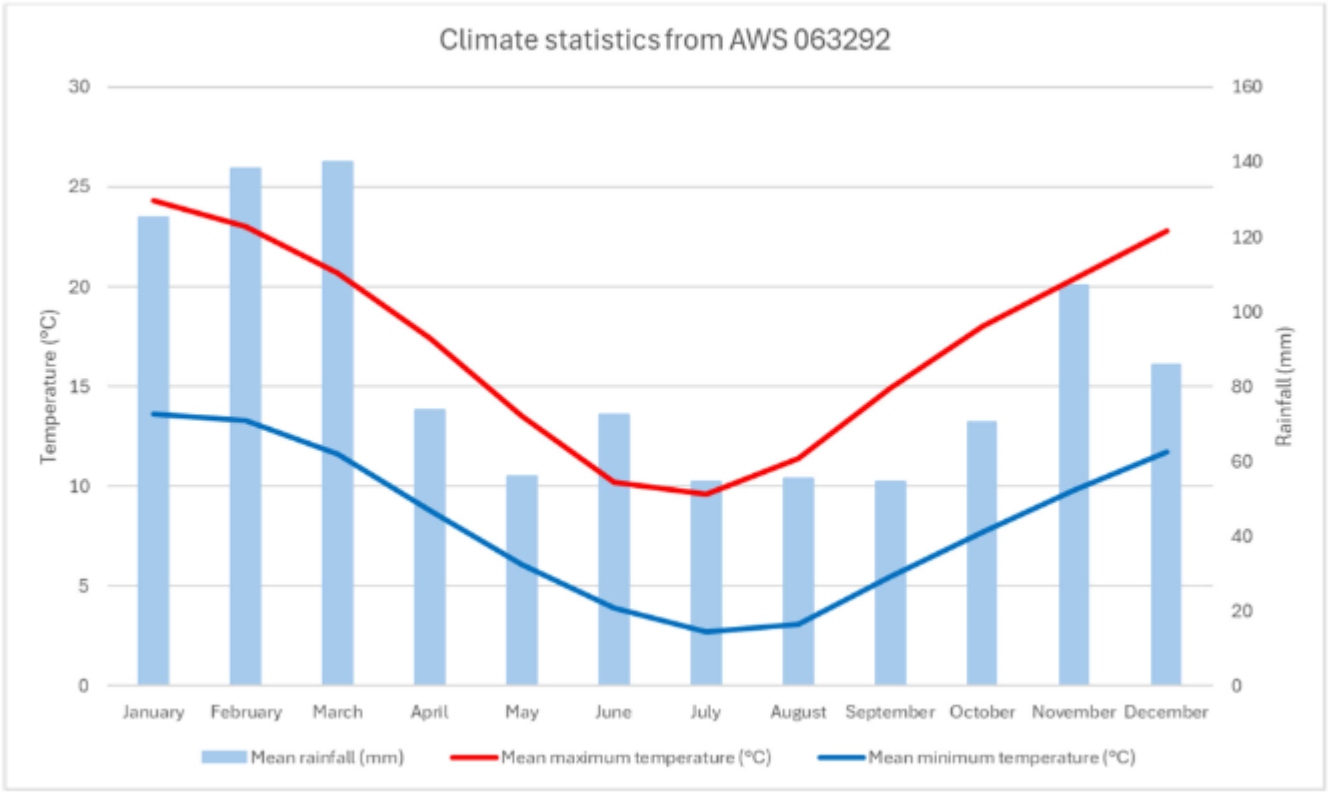


Figure 2 - Seasonal rainfall and temperature variations in the study area

The overall annualised wind direction is from the west (with stronger gusts) and the north-east. The predominant wind direction through the summer months is north-east.

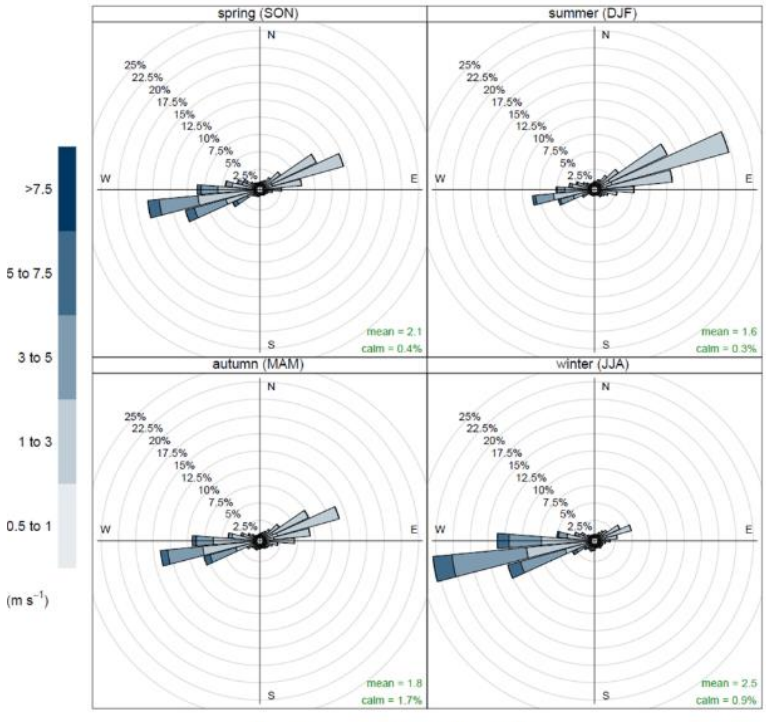


Figure 3 - Wind roses for the study area

3.2 Bushfire Prone Land

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

- **Vegetation Category 1 (Red)** – Highest risk – areas of forests, woodlands, heaths and timber plantations. These areas have a 100-metre buffer.
- **Vegetation Category 2 (Orange)** – Lower risk – areas of rainforests, remnant vegetation and managed lands. These areas have a 30-metre buffer.
- **Vegetation Category 3 (Orange)** – Medium risk – areas of grasslands, freshwater wetlands and shrublands. These areas have a 30-metre buffer.

Figure 4 provides a BFPL of the project footprint.

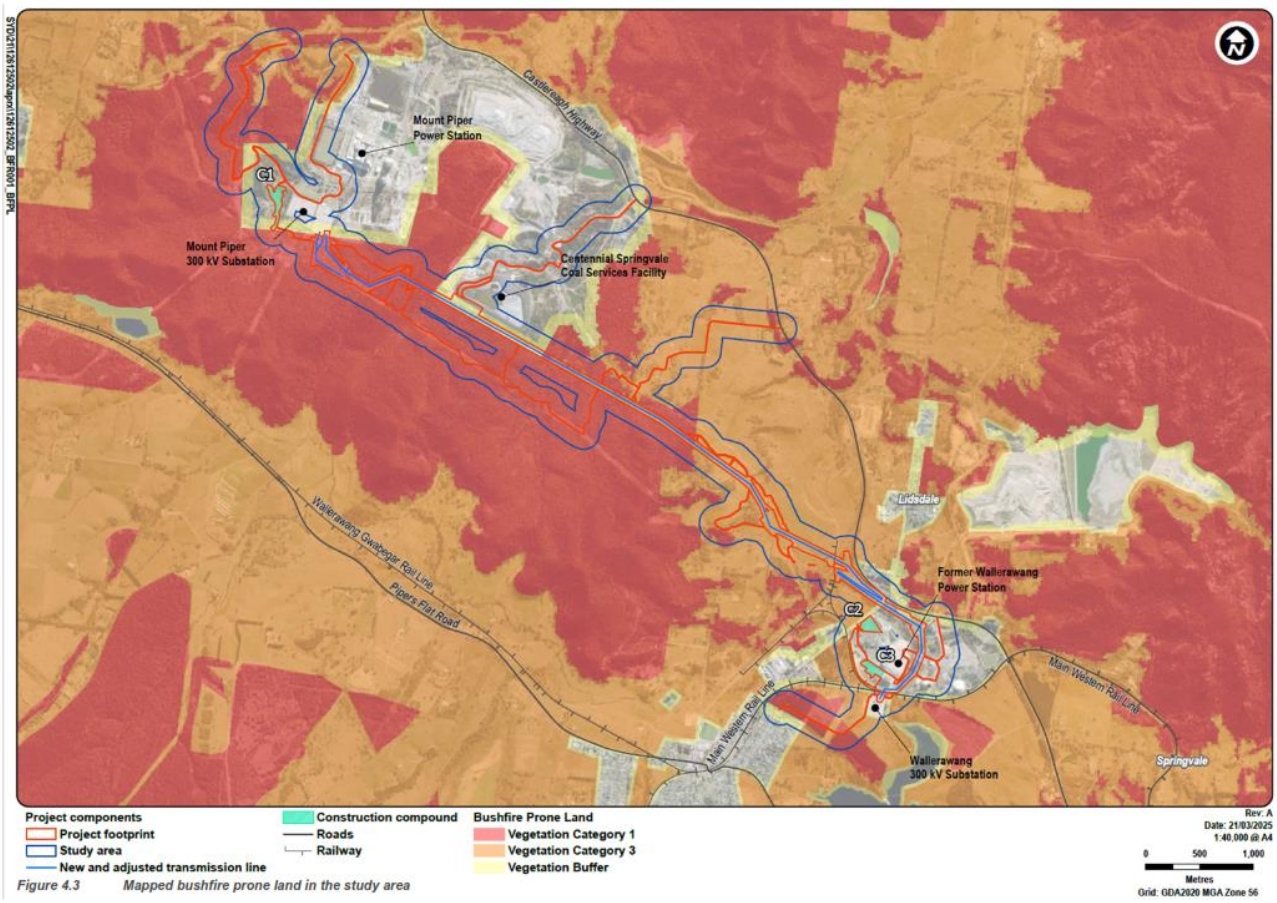


Figure 4 - Bushfire Prone Land Map – Project Footprint

Large areas of the project are characterised as Category 1 BFPL. This vegetation category has the highest combustibility and likelihood of forming fully developed fires including heavy ember production.

The remaining parts of the project area are Category 3 BFPL. This is considered to be medium bush fire risk vegetation.

Works are being undertaken in identified bushfire prone land, the fuel types present are predominantly grassy/shrub woodlands and forest with significant fuel load meaning there is a potential for rapid escalation and fire intensity under poor fire weather conditions. Areas of steep terrain may make firefighting operations and evacuation more difficult. A fire's rate of spread can increase significantly with increasing slope, including approximately doubling for each 10-degree increase in slope.

3.3 Historic Bushfire Events

Figure 5 provides the history mapping for the study area and indicates there is no recorded fire history within the project footprint with only a minor incursion into the study area to the north and east of the project footprint from the continuous forest vegetation of the SCA.

Many fires throughout this area are of undetermined cause, however, where they have been determined, the most cited cause is lightning strike.

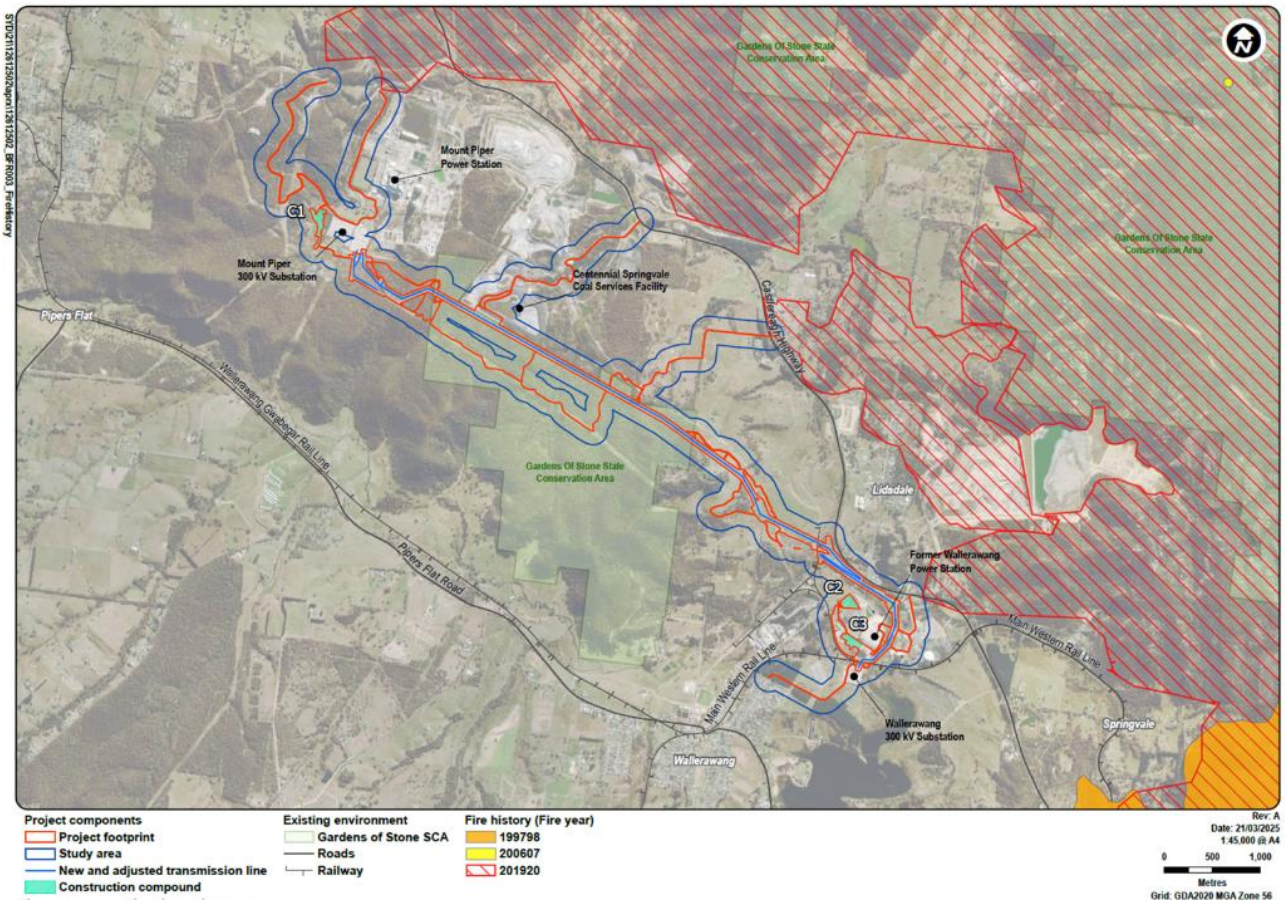


Figure 5 - Fire history in the study area

3.4 Vegetation and Bushfire Hazard

For the purpose of the bushfire risk assessment, the Plant Community Type (PCT) classifications for vegetation are categorised into their associated broader Keith (2004) vegetation formation which aligns with the PBP to assist in the assessment of fuel characteristics and potential fire behaviour.

Table 7 - PCT classification to Keith Vegetation Formation

PCT ID	PCT Name	Keith Vegetation Formation
3369	Central Tableland Ranges Peppermint-Gum Grassy Forest	Grassy Woodlands
3735	Central Tableland Peppermint Shrub-Grass Forest	Dry Sclerophyll Forests (Shrubby sub-formation)
3932	Central and Southern Tableland Swamp Meadow Comp	Freshwater Wetlands
3749	Western Blue Mountains Scribbly Gum Forest	Dry Sclerophyll Forests (Shrubby sub-formation)
3385	Southern Tableland Creekflat Swamp Woodland	Grassy Woodlands
3747	Southern Tableland Western Hills Scribbly Gum Forest	Dry Sclerophyll Forests (Shrubby sub-formation)
3376	Southern Tableland Grassy Box Woodland	Grassy Woodlands

Vegetation within the project footprint forms part of a tract of vegetation associated with the Gardens of Stone SCA. Other areas to the north and east of the Project footprint comprise agricultural land. These lands are however still considered bushfire prone land. Vegetated areas located within the footprint but not mapped as BFPL are associated with developed areas or areas managed as part of nearby mine or residential areas.

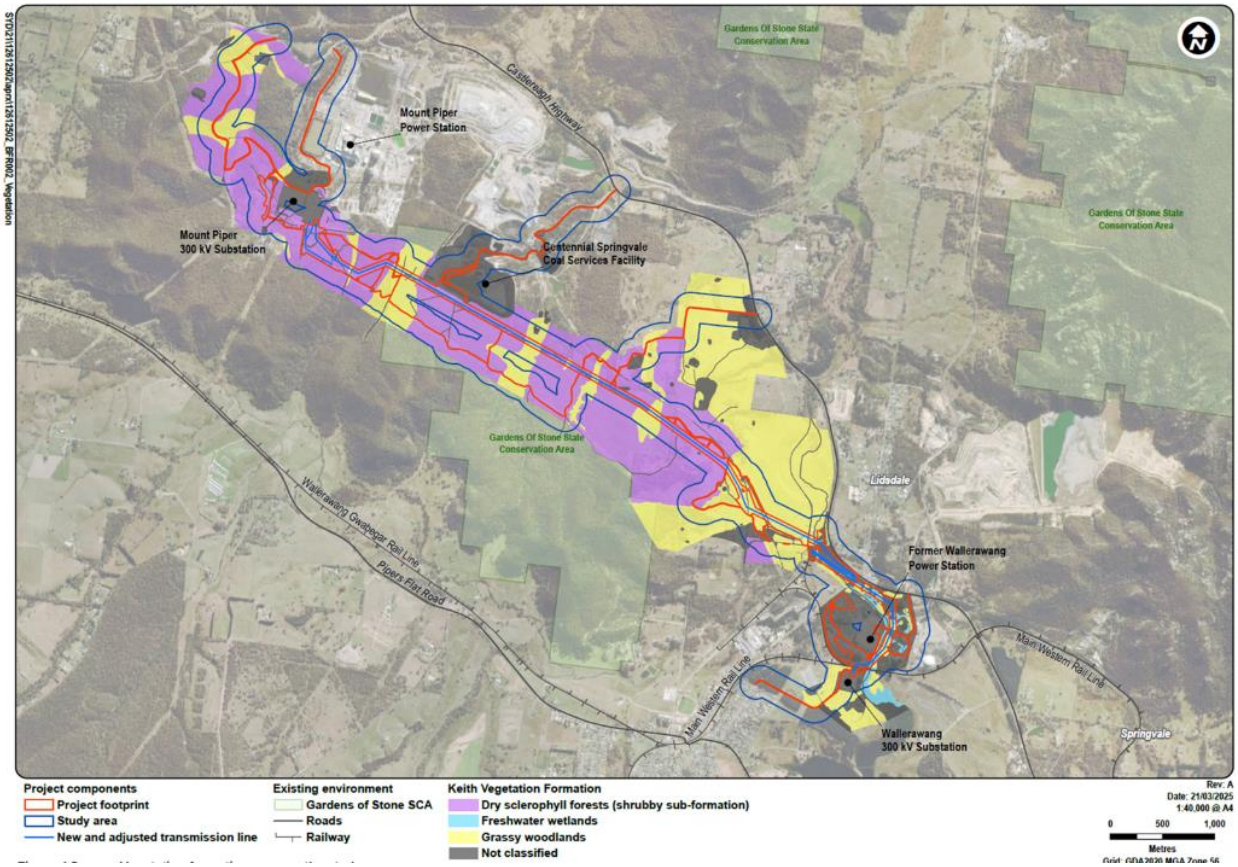


Figure 6 - Vegetation formations across the study area

Across the project footprint, there are a range of types of fuel that have been influenced by current management practices of the existing easements and other land tenure. There are four 'types' of fuel that can contribute to bushfire hazard.

- Bark fuel hazard – defined as bark on vegetation which has the potential to travel significant distances and provides the connection before the surface fuels and the forest crown / canopy.
- Elevated fuel load – defined as shrubs, heath and suspended material greater than 0.5m above the ground.
- Surface and near surface fuel load – defined as the litter bed and vegetation up to 0.5m above the ground.
- Surface fine fuels – defined as fuels such as grasses and other leaf litter or similar on the surface of the ground.

The level of bushfire hazard depends on the fuel continuity, height, amount of dead material, foliage thickness and flammability of live foliage. Vegetation flammability is generally highest where fuels are fine, contain a high proportion of dead material, are densely arranged vertically and horizontally, and have low moisture content.

The southern portion of the project footprint includes areas where the vegetation is dominated by grasses with land leased for agricultural purposes. These areas include cattle grazing or grassed areas that are part of the former Wallerawang Power Station. These grassy areas typically have fuel loads of 6 tonnes/ha. In areas where Grassy Woodlands are present, fuel loads are typically up to approximately 20 tonnes/ha. Dry Sclerophyll Forests (Shrubby sub-formation) also make up a significant proportion of nearby vegetation and have an overall fuel load of up to 36.1 tonnes/ha, including bark and canopy fuels.

Vegetation within the existing easement undergoes maintenance and management to ensure adequate clearances between conductor and vegetation are maintained in line with TransGrid procedures. For 330kV, the vegetation clearance requirement (VCR) is 3.0m plus a safety buffer of 1.5m for a total of 4.5m.

Table 8 - Vegetation formations in the Project area

Keith vegetation formation	Fuel load (tonnes/ha)	
	Surface and elevated	Overall (including bark and canopy)
Grassy Woodlands	10.5	20.2
Dry Sclerophyll Forests (Shrubby sub-formation)	22	36.1
Freshwater Wetlands	4.4	4.4

3.5 Topography, Slope and Access

The topography across the project footprint is undulating, varying from approximately 870 m to 1020 m Australian Height Datum (AHD). The project footprint also includes some steep slopes throughout the alignment reaching up to approximately 15 degrees. These slopes are traversed in places by access tracks associated with the electricity infrastructure.

Fire behaviour through the existing easement and adjoining vegetation would be most affected by the topography of the landscape and fuel moisture content in the gully areas. With consideration to the characteristics of the existing environment, it is not expected that fire behaviour would be halted by discontinuous vegetation.

The Garden of Stone SCA can be accessed via public roads or via private properties with approvals. The existing tracks in the SCA are maintained to RFS / National Parks and Wildlife Service (NPWS) standards to enable access for fire fighting vehicles. The western end can be accessed from the Castlereagh Highway via Boulder Road around the perimeter of the Mount Piper Power Station. There are other unsealed access tracks associated with the existing transmission line easement that enter the SCA further to the west along Boulder Road. The eastern end can be accessed via Brays Lane from Castlereagh Highway.

Other notable existing access restrictions relate to the limited crossings, over or under the Centennial Springvale Coal Services facility conveyor, which runs parallel to the eastern side of the project footprint from Lidsdale Siding and Centennial Springvale Coal Services facility's Angus Place mine. Under road culverts also exist, which may present limits to the weight bearing capacity for larger and heavier vehicles. The culvert would be upgraded to meet construction trafficability requirements for the project. For all firefighting appliance types, minor crossing structures are required to:

- Be able to carry a Gross Appliance Mass of 15 tonnes; and
- Have appropriate guidepost delineation for safe visibility.

Additional requirements are applied for major crossing structures including engineered culverts and bridges by appliance category for axle load (RFS, 2023). Several locked and unlocked gates occur across the accesses within the project footprint. Where gates are locked, they are locked in a 'daisy chain' manner for various landowners and asset owners.

For the duration of the project, access tracks will be installed, and existing tracks will be upgraded.

3.6 Water Supply, availability and storage

There was no identified water supply for firefighting purposes within the project footprint. While tanks and hydrant points were identified in adjoining areas, none of these are available for use for firefighting purposes. A dedicated 20,000 L firefighting water supply tank will be provided at the Mount Piper construction compound. The proposed location of the tank is shown in Figure 7 below. The tank will be fitted with a 65 mm Storz fitting and an FRNSW-compatible suction connection. Signage will be provided at the compound to clearly identify and direct emergency services to the firefighting water supply, including when the site is unattended.



Figure 7 - Location of dedicated 20,000 L firefighting water supply tank at Mt Piper construction compound

4. Construction Hazards and Risks

4.1 Bushfire Risk Resulting from Project

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 bushfire events. These sources have the potential to ignite adjacent vegetation and structures and pose risks to the safety of workers, the community and the surrounding assets. These potential sources of ignition from construction activities include:

- Hot works and Fire Risk Works
- Vehicle use
- Unapproved human activity
- Storage of combustible materials
- Machinery use
- Electrical faults in equipment

4.1.1 Hot Works and Fire Risk Works

Construction activities involving hot works that may generate sparks include, but are not limited to, grinding, cutting and welding. These sparks can land in dry, fine vegetative fuels and have a high ignition risk. Hot works will be conducted in alignment with Transgrid's Hot work and Fire Risk Work procedures.

Fire Risk works involve heat or potential spark producing activities that have the potential of creating a fire risk. This includes but is not limited to:

- Slashing, mulching, mowing and brush cutting
- Mulching
- Operation of steel track machines
- Steel attachments on plant creating friction
- Chainsaw operation and chipping

Prior to undertaking hot works and/or fire risk works, personnel must successfully complete Transgrid's Hot Work and Fire Risk Work online training to be authorised to undertake these works.

On days with an Extreme or Catastrophic Fire Danger Rating, or where a Total Fire Ban is declared, the NPWS Duty Officer is to be contacted to discuss proposed works and any applicable access restrictions.

4.1.2 Selection of Area in which to perform Hot Works.

Where practical Hot Works are to be performed within the site compound areas shown in Figure 7. These areas comprise hardstand areas where combustible materials, dry vegetation, chemicals and other potential fuel sources will be maintained at least 15 m from the hot work area, where practicable. Noting that the Transgrid's Hot Work and Fire Risk Work Procedure is also applicable to these areas.

Where use of the site compound is not practicable, hot works will be undertaken as far as practicable from combustible fuel sources, including dry vegetation, and subject to the requirements of the Transgrid Hot Work and Fire Risk Work Procedure.

4.1.3 Consideration of Controls for Hot Works.

Prior to the performance of any Hot works the Fire Danger Rating (FDR) will be considered. For all hot works the fuel sources will be removed or covered as far as practical. Fuel sources include dry vegetation.

A 1000litre fire fighting trailer will also be on site, with a minimal of 50% of water.

Other controls include spotters (Fire Water Observer) as per the Transgrid permit requirements.

4.1.4 Vehicle Use

Vehicles driven or parked off-road in long vegetation can be ignition sources if contact is made with hot engine parts such as exhaust system components. Vehicle accidents across the project footprint could result in fuel spillage and or sparks that may be an ignition source.

4.1.5 Unapproved Human Activity

These risks are associated with ignition resulting from human activities, including inappropriate disposal of cigarette butts, unauthorised use of fire and other negligent or accidental actions. Deliberate ignition, including arson, may also present a bushfire risk.

4.1.6 Storage of Combustible Materials

Combustible materials stored for use during construction can be ignited if sparks or flames are accidently introduced into the area. Inappropriate storage of combustible or flammable materials and insufficient fuel-free buffers around work areas may increase the risk of ignition and fire spread to adjacent vegetation.

4.1.7 Machinery Use

The use of specialised plant such as slashers, mulching machines, excavators and bulldozers used for clearing vegetation and or excavation can cause sparks from friction with rocks.

4.1.8 Electrical Faults in Equipment

Faults in construction electrical equipment can create a high ignition risk to the vegetation. These can be in the form of sparks being generated due to incorrect use of electrical equipment or operating equipment with faults.

4.1.9 Review of Bushfire status at Pre-start Briefing

The work crews will attend a pre-start briefing each morning at the site compound. During this briefing the current fire danger will be discussed and displayed. When the Fire Danger Rating is Extreme or Catastrophic, consideration will be given to relocating work crews away from high-risk or isolated Project areas.

Zinfra will provide the email addresses of key site personnel to the Fire Weather Advisory Network for current advice on the current fire danger levels and other information as disseminated.

4.1.10 Meeting with Emergency Services prior to performing the works.

Prior to the commencement of construction, Zinfra will facilitate a pre-construction workshop with the relevant emergency services to review the planned construction activities, site access arrangements, bushfire risks and emergency response requirements. The need for a formal Pre-Incident Plan for bushfire ignition scenarios will be determined through this workshop, having regard to the planned works and advice from the relevant emergency services.

Appendix C will be updated, where required, to incorporate relevant outcomes from this consultation.

4.2 Risks to Construction from Bushfire

Bushfires in the surrounding landscape have potential to spread into the project footprint areas and impact the project infrastructure. Ignition of bushfires in the landscape can result from the following ignition sources:

- Natural causes such as lightning activities (mainly in late spring and summer).
- Legal and illegal burning off
- Operations and machinery use external to the project including harvesting, faulting equipment and inappropriate use or hot works during inappropriate times.
- Other human activity, including accidental ignition, inappropriate disposal of smoking materials, unauthorised fires and deliberate ignition.

5. Bushfire Prevention and Mitigation Measures

5.1 Asset Protection Zones

5.1.1 Locations of Asset Protection Zones

The construction compound is required to support construction activities for this project. These include various uses including temporary storage of construction materials and equipment and workforce parking. This compound will also facilitate project / site offices, and as such buildings within the construction compound will comply with the applicable requirements of AS 3959-2018 Construction of buildings in bushfire-prone areas and Planning for Bush Fire Protection 2019.

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. The APZ dimensions have been determined to achieve a maximum radiant heat exposure of 29 kW/m² at the construction compound, consistent with BAL-29.

The bushfire assessment identified three potential construction compound locations, as summarised in Table 9 and shown in Figure 8.

Table 9 - APZ requirements for proposed construction compounds to achieve 29kW/m2

Compound ID	Aspect	Vegetation	Slope Class (Degrees)	BAL-29 APZ Requirement (m)
C1 (Mount Piper)	North	Dry Sclerophyll Forest - Shrubby	Upslope / flat	20
	East	Dry Sclerophyll Forest – Shrubby	Upslope / flat	20
	South	Dry Sclerophyll Forest – Shrubby	Upslope / flat	20
	West	Dry Sclerophyll Forest – Shrubby	Upslope / flat	20
C2 (Wallerawang)	North	Grassland	0-5 downslope	11
	East	Grassland	0-5 downslope	11
	South	Grassland	Upslope / flat	10
	West	Grassland	Upslope / flat	10
C3 (Wallerawang)	North	Grassland	Upslope / flat	10
	East	Grassland	Upslope / flat	10
	South	Grassland	Upslope / flat	10
	West	Grassland	Upslope / flat	10

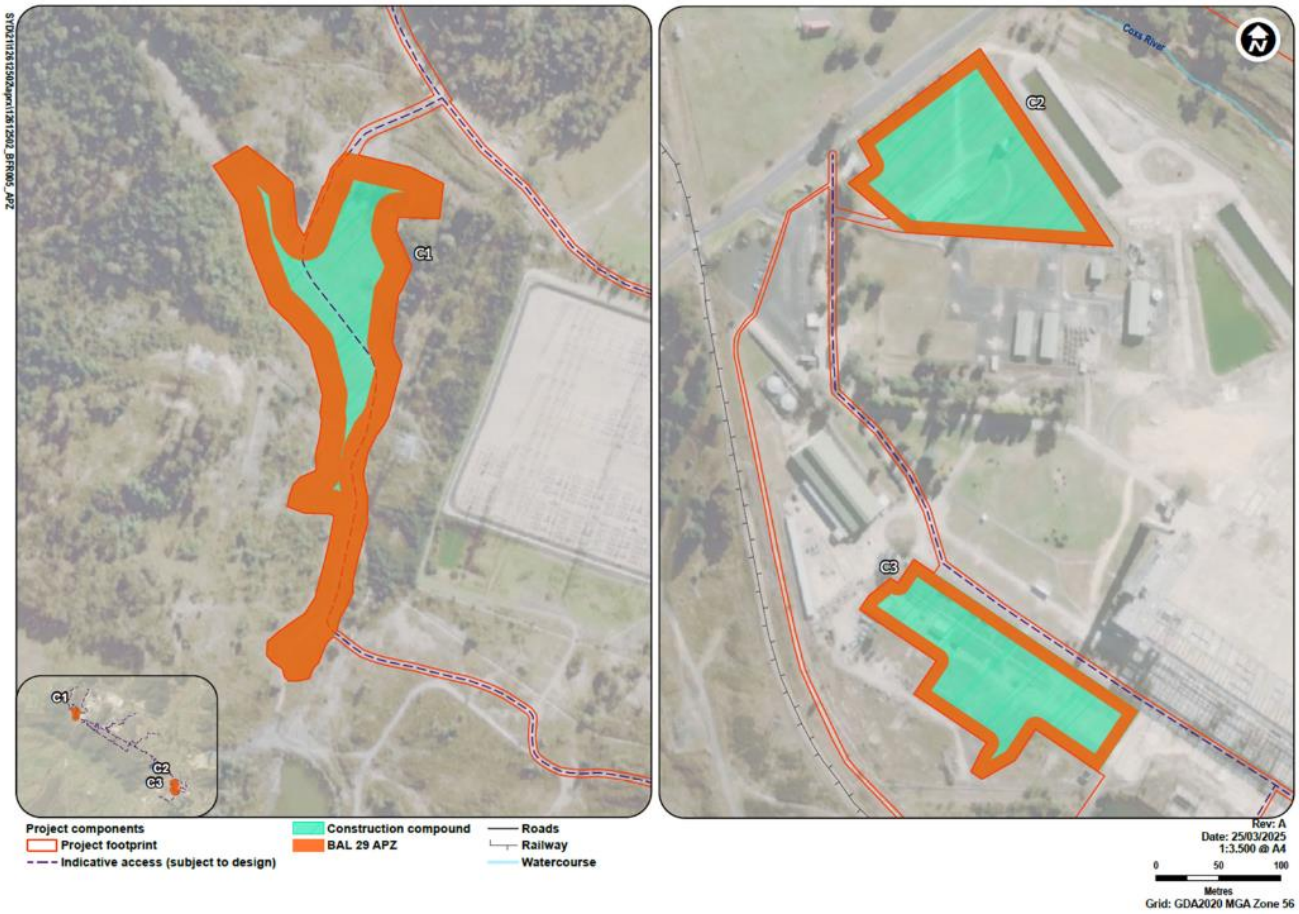


Figure 8 - Indicative APZs at construction compounds

The Project will utilise C2 (Wallerawang) as the construction compound.

5.1.2 Maintenance of Asset Protection Zones

The PBP requires that APZs around buildings and assets with potential to exacerbate fire ignition risks should be in place prior to the bush fire danger period and maintained throughout the year. The Construction Manager and Site Supervisor will ensure that the APZ vegetation management requirements are maintained throughout construction in accordance with Table 10. All fire trails or asset protection zones associated with the Project will be wholly contained to the development area and will be maintained to allow for safe and egress access during emergencies. APZs are to remain low-fuel areas and must not be used for storage of combustible or flammable materials. Non-combustible items may only be placed within an APZ where they do not reduce the required APZ width, obstruct firefighting access or create an ignition/exposure hazard. Emergency access and defendable-space areas will be shown on the compound layout and delineated by signage or ground marking where required.

Table 10 - APZ Requirements - inner protection area and outer protection area

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 2m in height. • Canopies should be separated by 2 – 5 metres.	• Tree canopy cover should be less than 30%. • Tree canopy cover should be separated by 2 – 5 metres.
Shrubs	• Shrubs should have large gaps in vegetation.	• Shrubs should not form a continuous canopy.

Vegetation Component	Inner Protection Area	Outer Protection Area
	• 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.	• 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 Bushfire Awareness

5.2.1 Site Induction and Training Requirements

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

Bushfire awareness will be communicated through the site-specific project induction for all new staff members, contractors and site users which will 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 being issued.
- Location of closest assembly areas and if required Neighbourhood Safer Places
- Site evacuation procedures
- Emergency contact systems
- Overview of Transgrid Hot Work Permits and Fire Risk Assessment and Control Measures (FRACM)

Visitors and delivery personnel entering Project work areas will be made aware of relevant bushfire and emergency requirements appropriate to the nature and duration of their visit. Visitors will remain subject to Project site access and accountability requirements as per the Project Induction which must be completed by all visitors. They must follow directions from Project personnel in the event of elevated bushfire risk, an emergency, muster or evacuation.

5.2.2 Staff Briefing and Toolbox Talks

All workers must be briefed on how to avoid fire ignition and what to do in a fire or bushfire. This will be briefed in the form of the above site inductions and toolbox talks. Toolbox talks will be conducted prior to the start of each bushfire season and/or as required.

5.2.3 Weather and Fire Danger Monitoring and Awareness

The Site Supervisor will be responsible for monitoring fire conditions during construction and communicating relevant conditions and restrictions to Project personnel:

- Fire danger rating
- Total Fire Ban (TOBAN) conditions
- Significant changes to weather conditions – wind, temperature, humidity
- Any official emergency alert issued for the site and its surrounding local government areas (LGAs).

The monitoring of fire warning for bushfire emergency alerts via the following:

- ABC Listen App or ABC Local Radio
- NSW RFS Website and or NSW Hazards Near Me App

- Monitoring fire danger weather warnings and changes via Bureau of Meteorology (BOM)

Further, NPWS estate alerts are posted via their website. The alerts will contain information about NPWS estate closure types, safety risks and timeframes. Park may be closed so there may be no access - will need to contact NPWS Duty Officer

The NSW RFS Brigade and NPWS representative will be invited annually for site familiarisation, response and evacuation drill and liaison with personnel.

This information shall be discussed at pre-start to ensure all personnel are aware of current weather conditions.

5.2.4 Emergency Drills

Emergency drills will be completed throughout the project. Key outcomes from this drill include:

- All staff and subcontractors' ability to respond and follow details outlined in this plan
- Any lessons learnt are communicated to the team.
- All potential improvements must be implemented immediately.

As per the Guide to Developing a Bush Fire Emergency Management and Evacuation Plan (RFS 2014), emergency scenario drills shall be undertaken at least annually prior to the bushfire season and will include emergency bushfire scenarios.

5.2.5 Provision of Access for 3rd parties in cases of Emergencies.

There may be times when emergency services need access to the site. This could for example be due to a nearby fire which travels onto the site.

If there are any existing gates with key access, ensure that the Zinfra lock added is done by daisy chaining. In the event that Zinfra need to add new fencing onto the area, with a padlocked entrance, ensure that emergency services (RFS, National Parks, SES) are provided with a key for access.

Any access to site should have a Zinfra Principal Contractor sign, with appropriate 24 hour contact details.

5.2.6 Provision of Access Tracks

The scope of works requires the contract to constructed access tracks, which are suitable for 4x4 vehicles in dry weather. Any modifications to the access tracks will be performed in accordance with the EIS, but taking into account minor micro siting adjustments to avoid hollows or topography if any clearing is required.

The access tracks are currently up to 20% fall. As the works are limited to the cut and fill that can be performed its not expected that the slope of the tracks will be significantly modified. To provide access suitable for construction vehicles and, where conditions permit, emergency service appliances as described in Sections 5.2.5 and 5.5 it is expected that the tracks will be widened to 4-5m and improved drainage and pavements.

During the construction the access tracks would be upgraded to allow

- Concrete agitators to most locations (some via Centennial/Ivanhoe Coal)
- 70t drill rigs.

Note it is unlikely these vehicles would be able to use the access after significant wet weather.

The suitability for emergency service vehicles would therefore be dependent upon the stage of the works, and the weather conditions at and prior to the time. Advice could be provided at the time of the event to emergency services, or if preferred inspections at critical points, e.g. commencement and at intervals in bushfire season.

5.3 Hot Work and Fire Risk Work

All personnel and contractors must work in accordance with Transgrid Hot Work and Fire Risk Work Procedures. 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

A hot work permit must be completed by an authorised officer when:

- Hot work is being completed outside a designated hot work area (DHWA)

- Approvals may be required if hot work is proposed during a TOBAN.

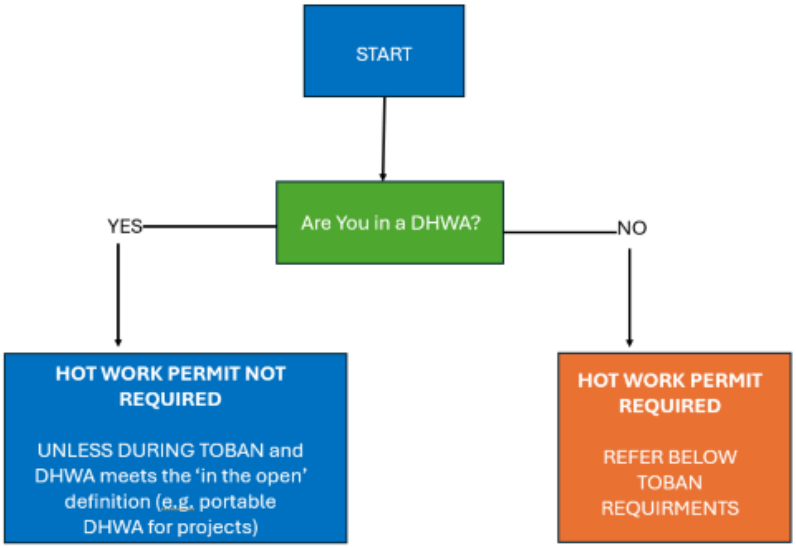


Figure 9 - Hot Work Permit Process

The duration of this hot work permit cannot exceed a period of one (1) workday.

A FRACM is required to 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
- Notification and approvals with RFS required if hot works want to be completed during TOBAN days.

During a TOBAN, the following rules will apply (without approvals):

- Cannot light, maintain or use fire in the open or carry out any activity that causes or is likely to cause a fire.
- General purpose hot works (welding, grinding, cutting – any activity that produces spark) cannot be done in the open.
- No use of machinery in open or grassy areas.

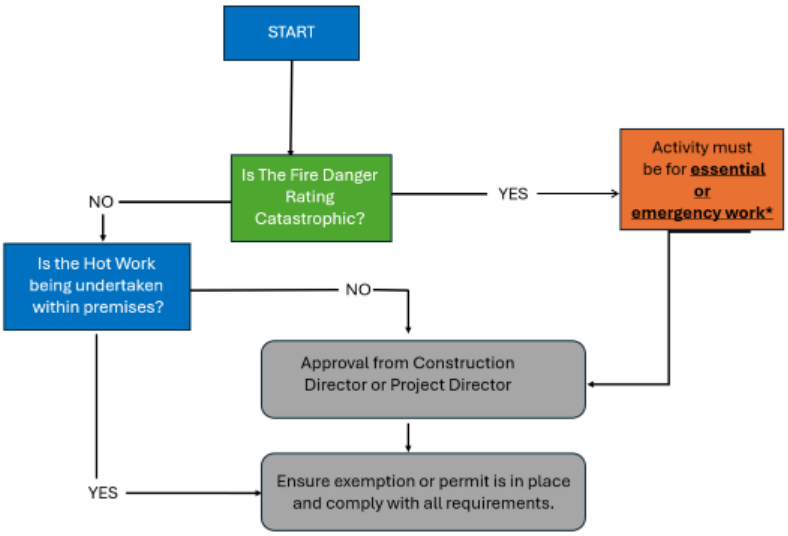


Figure 10 - TOBAN Decision Tree

5.3.1 Firefighting Supplies and Equipment

A range of firefighting equipment will be maintained at the main works project site during the life of the project. As a minimum, this equipment will include, but not be limited to, the following:

- Fire extinguishers – liquid type with a 9L minimum capacity or a dry powder type of 0.9kg minimum capacity
- Welding pads and shields (specific to activity)
- Hand tools – fire rakes and shovels
- Appropriate water supply
- Towable fire units (utility vehicle, furphy or dedicated fire trailer – pump, hose reel and 65mm Storz fitting).
- Dedicated 20,000 L water supply tank fitted with a 65 mm Storz fitting and an FRNSW-compatible suction connection at the site facilities.

5.3.2 General Site Mitigation Measures

General site mitigation measures include wide-ranging actions to further reduce risk of fire ignition. These will include but not limited to:

- Maintenance of plant and equipment to ensure good working order to reduce risk of ignition.
- All plant and equipment to be fitted with appropriate spark arrestors where practicable.
- Designated smoking areas to be defined and adequate disposal bins.
- Correct use of plant and equipment.
- Motor vehicles should not be driven along long cured (dry) vegetation.

5.3.3 Inspection and Monitoring

The Construction Manager or Site Supervisor will ensure that firefighting equipment and bushfire preparedness controls are inspected throughout construction to confirm they remain available, appropriately stocked and serviceable. Inspections will be conducted on a monthly basis and will include, as applicable, fire extinguishers, towable or vehicle-mounted firefighting units, the dedicated firefighting water supply, emergency access and relevant bushfire preparedness controls. Inspection outcomes and any identified deficiencies will be recorded through the Project inspection process. Deficiencies affecting the required level of bushfire preparedness will be rectified, replenished or repaired before undertaking activities that rely on the affected control.

5.4 Hazardous Goods Storage

Storage of flammable and combustible liquids will be in accordance with the guidelines specified in Zinfra's Hazardous Chemicals procedure and in accordance with Section 2.6 of the Emergency Plan.

Key controls are:

- SDS will be reviewed, and risk assessed with appropriate controls implemented.
- Decanting of materials or substances from their original container to another container is not permitted unless the other container is clearly labelled and fit for purpose and undertaken in an appropriate location. The area should be regularly inspected to ensure that decanting equipment is in good working order.
- A register of hazardous chemicals must be maintained for the project or workplace.
- Hazardous chemicals should be physically separated from any chemicals or other things that may be incompatible. This is achieved by distance, barriers, or a combination of both.
- Take immediate action to confine spills of environmentally hazardous liquids (transformer or reactor oil, fuel oil, chemicals, etc.) and ensure every effort is made to prevent the escape of liquids from the Site.
- Containers, pipework, attachments, and equipment containing, or associated with, dangerous goods must be protected from physical damage including impacts, imposed loads and mechanical stress.
- Gas bottles shall be secured in a well-ventilated and secure area. Care shall be taken to ensure that separation is maintained between incompatible gases.
- All storage shall be within internal bunded containers. If these are not used, bunds shall be constructed of impervious material and shall be protected from the weather. All fuels and oils to be stored in a barricaded and roofed area. The bund should be sufficient to capture at least 130% of the largest container.

All spills regardless of volume shall be reported and documented in accordance with Incident Reporting Procedure.

5.5 Fire Trails and Access

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.

New and existing access tracks are maintained periodically to facilitate access along the transmission line easement. Access tracks, in accordance with the NSW RFS Fire Trail Standards 2023, shall be maintained for Category 9 Firefighting appliances.

Access to the site compound will comply with table 5.3b of the RFS's Planning for Bushfire Protection. Access to the site compound will either be from Main Street or Castlereagh Highway which are formed public roads and the internal access roads at the Greenspot property are also formed roads.

5.6 Assembly Areas and Neighbourhood Safer Places

The assembly area has been identified for the project:

Table 11 - Site Assembly Area

Assembly Area	Location
Zinfra Site Compound – Greenspot (-33°23'58.0"S 150°04'48.7"E)	Greenspot sporting grounds off Main Street, Wallerawang.

Neighbourhood Safer Places (NSP) are designated locations to be used as last resort options during a bushfire emergency. An interactive and up-to-date map of all NSPs within NSW can be found on the RFS website: https://www.rfs.nsw.gov.au/plan-and-prepare/neighbourhood-safer-places and should be consulted during any future revisions of this plan to confirm currency.

The closest NSPs for this project are below.

Table 12 - Closest NSP to the Project

Neighbourhood Safer Place	Distance from Project	Work fronts to use this NSP
Kremer Park Cnr of Lime Street and Villiers Street, Portland (-33°21'17"S, 149°58'36"E)	Approximately 9km from the Mt Piper end entry.	Safer place when evacuating from the northwest (Mount Piper end).
Marrangarroo Rural Fire Brigade 501 Great Western Highway, Marrangarroo (-33°26'37"S, 150°6'52"E)	Approximately 13km from the Wallerawang end entry (Brays Lane).	Safer place when evacuating from the south east (Wallerawang end).

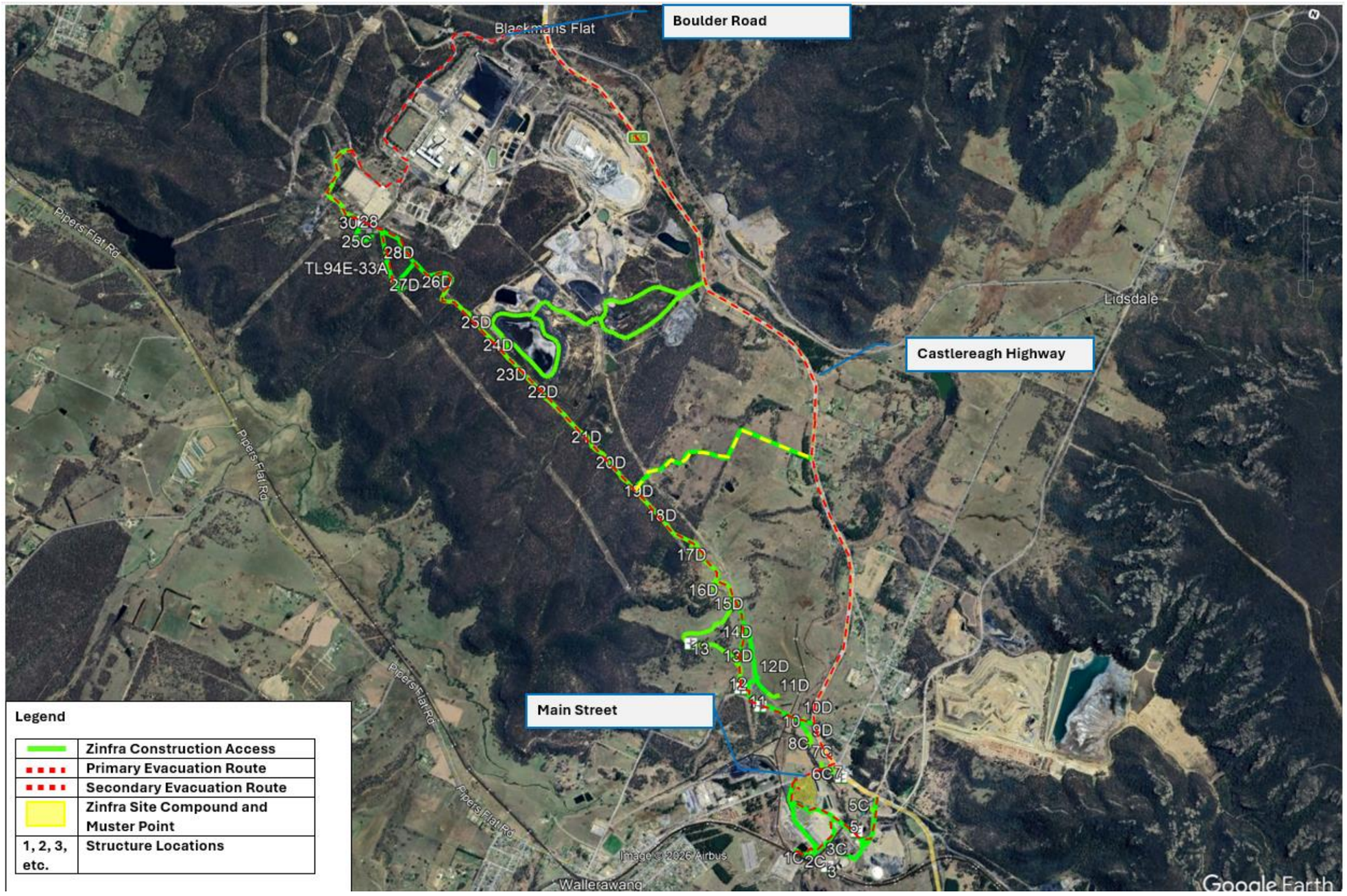


Figure 11 - Bushfire Management Plan - Evacuation Plan

Note: The primary evacuation route will depend on the location where the worker is – if they are closer to the Mount Piper access point then they will evacuate from that end and if they are closer to the Wallerawang end they will evacuate from that end. The secondary access will be used in the event that both primary access points are not safe to use.

5.7 Aerial Activities

Helicopters and drones may be used during construction of the project to capture photos and or inspections of the transmission line. It is noted that these could impact aerial firefighting operations in the event of a bushfire. Should there be a fire in the vicinity of the construction site or surrounding areas, all aerial activities will be stopped and grounded.

5.8 Isolation of Live Transmission Infrastructure

Isolation of live transmission line infrastructure will occur throughout the project through a process known as planned outages. Zinfra and Transgrid will coordinate these. It is essential to prioritise safety and adhere to established protocols and regulations throughout the isolation process.

In the event of an emergency contact the Zinfra site representative who will coordinate with Transgrid to work through the process of safely isolating the line. There is also a Transgrid emergency number provided in the Emergency Contact List. The teams will communicate with emergency services and the work crews.

6. Bushfire Emergency Response

6.1 Bushfire Alert Levels and Fire Danger Ratings

6.1.1 Bushfire Alert Levels

There are three levels of bushfire warning alert levels which may be issued by NSW RFS to advise on the potential threat from a bushfire.

Figure 12 - NSW RFS Bushfire warning alert levels



Advice
A fire has started. There is no immediate danger. Stay up to date in case the situation changes.



Watch And Act
There is a heightened level of threat. Conditions are changing and you need to start taking action now to protect you and your family.



Emergency Warning
An Emergency Warning is the highest level of Bush Fire Alert. You may be in danger and need to take action immediately. Any delay now puts your life at risk.

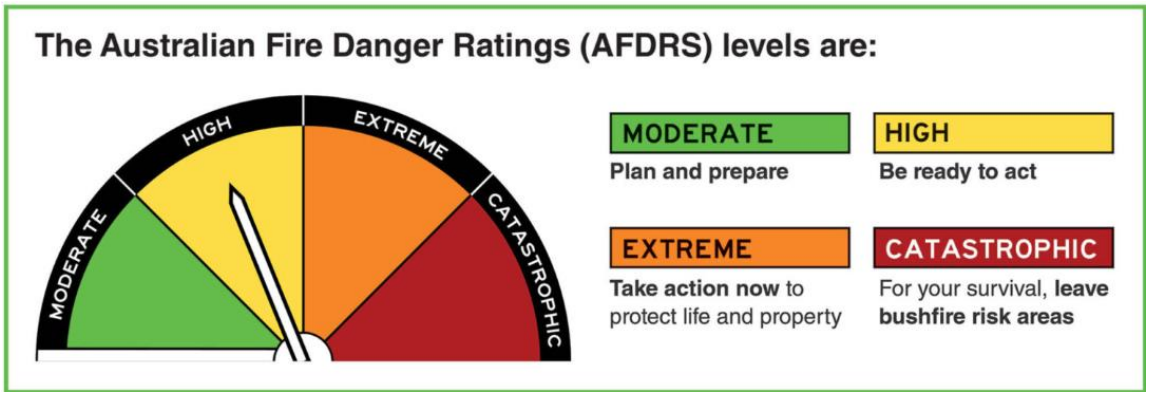
Table 13 - Site action in response to bushfire warning alert levels

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. Site management team to monitor local bush fire situation on the RFS website and local ABC radio. All personnel to follow directions of the team.
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.*	Monitor the local bush fire situation on the RFS website and local ABC radio. All personnel should return to the site compound and remain there waiting for further instructions from the site management team.
EMERGENCY WARNING	*An 'Emergency Warning' is the highest level of alert and advises you of immediate danger.* ***You are in danger and you need to take immediate action recommended by the fire service****.*	Monitor the RFS website and local ABC radio for emergency evacuation location. Proceed to evacuation location if safe and the route is clear. In the event of an evacuation the site management team are to: • Advise the local emergency services that the assembly area is being evacuated and arrange transportation. • Move persons to the assembly point for evacuation and ensure all personnel are accounted for prior to departure and on arrival at the evacuation site. • Advise local emergency services that all persons have been evacuated and accounted for.

Alert Level	Description	Site Action
		If off-site evacuation is not possible, wait within vehicles in a cleared area of vegetation. Personnel must not 'self-evacuate' in event of receiving Emergency Warnings. **Note: Flee-in-panic responses and last-minute evacuations into uncertain fire situations can be deadly. Any off-site evacuation must be controlled and authorised by the Construction Manager or Nominee.** When the bushfire threat has passed and the area has been deemed safe by emergency services, no person should re-enter any evacuated buildings until advised by emergency services. The site management team will arrange movement of personnel back to site. All personnel to be accounted upon return and emergency services will be informed that return of all persons has been completed.

6.1.2 Fire Danger Ratings

There are 4 fire ratings in NSW



The current fire level can be checked on the web site.

Fire Danger Ratings and Total Fire Bans - NSW Rural Fire Service

These fire ratings are critical and will be considered when planning works on site due to the isolated location and environment in which the works are being performed in.

Refer to other sections of this document and Transgrid Hot Work and Fire Risk Procedure for more details on how this will be implemented into the Project's processes.

6.2 Emergency Alarm Activation System

Fire response and suppression resources are required to be maintained at each compound with appropriate access and services requirements as per the PBP. All staff onsite must have knowledge on how to appropriately use or activate the fire suppression equipment.

6.2.1 Emergency Alerts

In the event of emergency warning alerts issued by NSW RFS, emergency procedures will be enacted by the site management team and will apply to all site personnel.

The site Construction Manager or Nominee shall remain in control until a responding external fire authority incident controller replaces them.

6.2.2 Bushfire Emergencies Identified by team members

The following procedure will be implemented by workers where a bushfire or smoke is observed on or in the vicinity of the Project.

Table 14 - Emergency Alarm Activation Process for Bushfires

Step 1. STOP ACTIVITIES & INITITAL NOTIFICATION
• Activities to be stopped in the area. • Personnel in the area shall be notified by calling “Emergency”, “Emergency”, “Emergency” on the site UHF channel. • The fire location, likely risks and direction of travel will be noted on the site UHF channel. • Immediately notify the site management team
Step 2. NOTIFY EMERGENCY SERVICES
• Phone **000** • Inform operator of bushfire location, risks and direction of travel
Step 3: RESPONSE
• Extinguish the fire if safe and trained to do so • If not safe to do so, evacuate to emergency muster points and then to assembly area – ensure that all employees have been accounted for (check pre-start sign in) • Meet emergency services on site for briefing. • Where possible, drones to be grounded (so as not to interfere with aerial firefighting operations), plant and equipment made safe (e.g. cranes lowered), materials/tools/equipment to be removed where possible.
Step 4. SITE EVACUATION
• Evacuate if required/recommended by fire authorities (See Section 6.4 for further detail)
Step 5. RECOVERY
• Return to work only once the fire has been extinguished and deemed safe to return by the responding emergency service Incident Controller, or by the Construction Manager or Nominee where emergency services have not assumed control and the area has been assessed as safe. • Prior to commencing works ensure that site is safe

All persons entering site will be registered on site. In the event of an emergency that requires evacuation, a roll call of personnel will be undertaken by the Construction Manager or nominee, any personnel not accounted for will be followed up by the Construction Manager or Nominee.

The management and procedure for anticipated emergencies on site are found in the Appendix C.

6.3 Emergency Authorities

The location of the nearest Fire and Rescue Station and Fire Control Centre for this project site during construction is provided below. Where possible, the Project team will assist the RFS, FRNSW and emergency services as much as possible if there is a fire in the vicinity of Site.

Table 15 - Emergency authorities near to Site

Site	Rural Fire Service Station	Fire Control Centre	Fire and Rescue Station
Wallerawang to Mount Piper Transmission Line Project	-	**Lithgow Local Government Area (Chifley/Lithgow office)** Street Address: 4 Silcock Street, Lithgow 2790 Postal Address: PO Box 1488 Bathurst, NSW, 2795 Phone Number: 1300 258 737 Fax Number: 02 6354 1854	**Wallerawang Fire Station** Address: 1 Cripps Avenue, Wallerawang NSW 2845 Phone: 02 6339 8583

6.4 Evacuation Procedures

Evacuation is the process of moving people from where they are working to another safer location away from the expected bushfire impact. The primary action for a bushfire emergency is early relocation or controlled evacuation where a safe evacuation route is available, having regard to emergency service advice and prevailing conditions. Where evacuation is not safe or practicable, personnel are to follow the shelter and survival arrangements in Section 6.5. If fire authorities advise the site management team to evacuate due to a fire in the area, evacuation procedures will be initiated. This may also be triggered at the discretion if the site management team decides on a leaving early initiative as per the Emergency Warning advice.

In the event of evacuation, the following steps will be taken, in alignment with the NSW RFS Development Planning document:

1. The Site Management Team to advise local emergency services that the area is being evacuating (including how many people and where they are going) and arrange transportation.
2. Ensure all site buildings have all doors and windows closed prior to leaving site.
3. Move all persons to the assembly point to prepare for evacuation and ensure all workers are accounted for prior to leaving and upon arrival at the evacuation site.
4. The site management team will advise the local emergency services that all persons have been accounted for, evacuated and safe at the evacuation site.
5. After all occupants are accounted for and safe at the designated evacuation site nominated staff will commence contacting families affected. Emergency contact / next-of-kin details for Project personnel will be maintained through the Project's existing personnel and emergency contact records and accessed by authorised Project personnel where notification is required following an emergency.
6. Awareness to be maintained through the radio, NSW RFS website or any other smart phone applications / resources.

When the bush fire threat has passed and the area is deemed safe by emergency services, the following steps are to be followed:

1. The site management team shall arrange movement of occupants back to the site and or their separate accommodations.
2. All occupants are to be accounted for upon their return.
3. Emergency services to be advised of the return of all persons to the premises / accommodation.

Note: No person should re-enter any evacuated buildings until advised by emergency services.

Early relocation or evacuation will be considered where bushfire conditions or emergency warnings indicate that remaining at or travelling to the Project area may expose personnel to unacceptable risk. The Construction Manager or Nominee / Site Controller, in consultation with the Construction Manager where practicable, will make this decision having regard to emergency service advice and current conditions.

6.5 Surviving a fire

The decision to stay and defend a site must not be taken without careful planning and preparation. Regardless of a decision to leave early or stay and defend, the facility should be prepared for direct flames, radiant heat and or ember attack from the bushfire. This site is better prepared (even if the decision to leave is made) and defendable if, by the start of the fire season and during, the mitigation measures detailed in this plan are undertaken.

If workers find that they are in the path of a bushfire and cannot escape, the following details the actions that will be taken in the event of them needing to survive a fire:

- Do not attempt to drive through or near a fire. Ideally find a building made from non-combustible (brick, concrete) material with limited openings that can be closed.
- Stay informed – Mobile devices – keep monitoring the RFS website and ABC local radio as this may provide information on the current conditions of the bushfire.
- Stay in touch – if your phone is working or UHF radio, ensure the site management team and authorities know your location.
- Avoid heat exposure – cover exposed skin, preferably in heavy cotton materials. Drink water as often as required.

- Protect your shelter – if possible as the fire approaches, ensure any gutters or walls are free of potential bush fire fuels such as leaves, twigs and rubbish. Close all openings (doors and windows). Block any gaps with wet towels. Secure a water supply by filling sinks, bathtubs and buckets.
- When the fire arrives stay inside the building as most fire front will pass quickly. Inside is the safest place to be but do not shelter in bathrooms. If possible, have fire extinguishers on standby should the surround 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.

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7. Review and Improvement

7.1 Continuous Improvement

As outlined in the CEMP, management plan reviews will be undertaken as part of the continual improvement process. This Plan will be reviewed and, where required, revised in accordance with Condition C3 of the Conditions of Approval and the review requirements of the CEMP. The reviews will be initiated by the Project Team and include relevant project team members and external stakeholders. Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performances against planning approval requirements, policies, objectives and targets for identifying 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 actions to address any non-conformances and other issues.
- Verify the effectiveness of the corrective and preventative actions.
- Document any changes in the procedures resulting from process improvement.

8. Management Measures

The management measures to be implemented during construction to prevent, prepare for and respond to bushfire risk are summarised in Table 16. These measures consolidate the key commitments established throughout this Plan and identify timing, responsibility, source requirements and evidence of compliance.

Table 16 - Bushfire Management Measures

ID	Measure	When to Implement	Responsibility	Sources	Evidence
BF01	Implement this Bushfire Management Plan as a supporting sub-plan to the Project Emergency Response Plan.	Prior to and throughout construction	Project Manager	CoA B45; B46; RMM HR3; HR4	Approved/current BMP; induction records
BF02	Maintain the construction compound APZ to the applicable PBP Inner Protection Area requirements and keep associated APZs within the approved development area.	Before the bushfire danger period and throughout construction	Construction Manager / Site Supervisor	CoA B45(a), B45(b)(i), B45(d); RMM HR3	photographs
BF03	Monitor bushfire conditions, Fire Danger Ratings, Total Fire Bans, emergency alerts and relevant NPWS closures, and communicate current conditions at pre-start.	Daily during construction and more frequently during elevated fire danger	Site Supervisor	CoA B46(h)(v); RMM HR3	Daily pre-start records; alerts/communications
BF04	Ensure personnel receive bushfire awareness, emergency response, evacuation and hot work/fire-risk work requirements through induction and toolbox processes.	Before commencing work and refreshed as required / before bushfire season	HSE Manager / HSE Advisor / Site Supervisor	RMM HR3	Induction records; toolbox records
BF05	Undertake hot work and fire-risk work in accordance with Transgrid procedures, including required permits, FRACMs, fire weather restrictions, approvals and fire watch controls. Hot work and fire risk work to be undertaken in compound/hardstand areas where practicable.	Before and during each hot work or fire-risk work activity	Authorised Officer / Site Supervisor / Workers	CoA B46(h)(ii), B46(h)(iii), B46(h)(v); RMM HR3	Hot Work Permits
BF06	Ensure that emergency equipment and bushfire preparedness controls, including firefighting equipment, are inspected at the frequencies scheduled in the Project Activity Planner. Inspections will confirm that the required equipment is available, appropriately stocked and serviceable. Inspection outcomes and identified deficiencies will be recorded through the Project inspection process, with corrective actions tracked to completion.	Prior to relevant works and throughout construction	Construction Manager / Site Supervisor	CoA B45(b)(iii), B46(h)(i), B46(h)(iv); RMM HR3	Project Activity Planner; completed inspection records; equipment registers; corrective-action records.
BF07	Store and manage flammable and combustible materials in accordance with Project procedures, (including separation, bunding, labelling and inspection requirements) combustible materials, dry vegetation, chemicals and fuel sources to be kept	Whenever flammable/combustible materials are stored or handled	Site Supervisor	CoA B46(g); RMM HR3	Hazardous chemical register

ID	Measure	When to Implement	Responsibility	Sources	Evidence
	at least 15 m away from where hot work and fire risk work is being undertaken where practicable; otherwise maximise separation, remove or cover fuels, provide the required firefighting unit and fire-water observer, and comply with the Transgrid procedure.				
BF08	Maintain emergency access, fire trails, gates and site access arrangements so emergency services can access Project areas as far as practicable.	Throughout construction, particularly before and during bushfire season	Construction Manager / Site Supervisor	CoA B45(b)(ii), B45(f), B46(f), B46(h)(iv); RMM HR3; HR4	Site maps
BF09	Immediately report an identified fire or ignition to 000 and implement the Project bushfire emergency response, including ceasing work, accounting for personnel and evacuation where required.	Upon identification of fire, smoke or bushfire emergency	Construction Manager or Nominee / Site Supervisor / All Personnel	CoA B45(e), B45(f), B46(h)(v); RMM HR4	Incident records
BF10	Ground drones and cease Project aerial activities where a bushfire may involve aerial firefighting operations.	During any relevant bushfire incident or when directed by emergency services	Construction Manager / Site Supervisor	CoA B46(l)	Incident records
BF11	Coordinate emergency isolation of live transmission infrastructure with Transgrid when required.	During an emergency requiring isolation	Project Manager / Construction Manager / Transgrid	CoA B46(m)	Incident records
BF12	Undertake bushfire emergency scenario drills at least annually prior to the bushfire season and implement identified improvements.	At least annually prior to bushfire season	HSE Manager / HSE Advisor / Construction Manager	RMM HR3; HR4	Drill reports or attendance records
BF13	Consult and liaise with RFS, FRNSW and NPWS on bushfire preparedness and emergency response arrangements and incorporate agreed outcomes into the Plan where required.	Plan development and throughout construction as required	Project Manager / HSE Manager or Advisor	CoA B45(e), B46(b); RMM HR3	Consultation records (See Appendix D)
BF14	Notify the relevant local emergency management committee following completion of construction and before operations commence.	Following construction and prior to operations	Project Manager	CoA B45(g)	Evidence of notification (Email, call log, minutes etc as applicable and reasonable)

9. Performance Criteria, Triggers and Required Responses

The performance triggers and required responses in Table 18 provide a practical framework for identifying when bushfire controls or emergency arrangements require escalation, corrective action or review.

Table 17 – Bushfire Performance Criteria, Triggers and Required Responses

Theme	Trigger Event	Required Response	Relevant Section
Fire weather	Fire Danger Rating reaches Extreme or Catastrophic, a Total Fire Ban is declared, or relevant NPWS access restrictions/closures apply.	Review planned activities and workforce locations before work proceeds. Apply the relevant Transgrid hot work/fire-risk restrictions and approvals. Relocate or defer work in high-risk or isolated areas where required and contact NPWS where applicable.	Sections 4.1.1, 4.1.9, 5.2.3 and 5.3; Appendix C
Hot work / ignition risk	Hot work or fire-risk work is proposed, particularly during the bushfire danger period or elevated fire conditions.	Confirm Fire Danger Rating and TOBAN status; complete required Hot Work Permit and/or FRACM; remove or protect fuel sources; provide required firefighting equipment and fire watch; do not proceed where controls or approvals cannot be satisfied.	Sections 4.1.1-4.1.3 and 5.3
Fire or smoke detected	Fire, flame or smoke is observed on-site or in the vicinity, or an emergency alert indicates a fire may affect the Project.	Stop affected activities, broadcast the emergency over site communications, call 000, notify Site Management, assess safe evacuation, account for personnel, meet emergency services and implement Appendix C. Only attempt first attack if trained and safe to do so.	Sections 6.1-6.4; Appendix C
Bushfire warning	NSW RFS issues Watch and Act or Emergency Warning affecting the Project area.	Escalate monitoring and implement the actions in Table 11. For Watch and Act, prepare workers for relocation/evacuation. For Emergency Warning, follow emergency service advice and initiate controlled evacuation where safe and directed.	Sections 6.1.1 and 6.4; Table 14
APZ / fuel management	Inspection identifies APZ vegetation, grass height, debris or fuel loads do not meet the required condition.	Arrange prompt vegetation/fuel management to restore the APZ to the required standard. Reinspect and record close-out. Where the deficiency creates an immediate risk, restrict affected activities or occupancy until controls are restored.	Section 5.1.2
Firefighting equipment / water	Required firefighting equipment, towable fire unit or dedicated water supply is unavailable, unserviceable or below required readiness.	Replace, replenish or repair the equipment before undertaking work that relies on it. Escalate to Site Management and restrict (as reasonable/practical) fire-risk activities until required capability is restored.	Section 5.3.1
Emergency access	An access track, gate, fire trail or route required for emergency response becomes inaccessible or unsuitable.	Assess alternative access and notify Site Management. Restore access where practicable, update emergency services/site information where necessary.	Sections 5.2.5, 5.2.6 and 5.5

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Theme	Trigger Event	Required Response	Relevant Section
Emergency drill / incident review	A drill, inspection or bushfire incident identifies a deficiency in the Plan, controls or response arrangements.	Record the finding, determine corrective actions and responsibilities, implement actions within an appropriate timeframe, verify effectiveness and revise the Plan or procedures where required.	Sections 5.2.4 and 7.1
Aerial firefighting	A bushfire is occurring in the vicinity, and aerial firefighting operations may be undertaken.	Immediately cease and ground Project drones and other Project aerial activities and keep them grounded until the airspace is confirmed safe or emergency services advise activities may resume.	Section 5.7; Appendix C
Live electrical infrastructure	A bushfire emergency requires isolation of energised transmission infrastructure.	Contact the Zinfra site representative. Coordinate safe isolation in accordance with network requirements and communicate the status to emergency services and affected work crews.	Section 5.8; Appendix B

Appendix A – Plan Responsibility Sign Off

Name	Title	Sign	Date
Karl Littlemore	Project Director		
Zaid Khan	Project Manager		
Gavin Jones	Construction Manager		
Hilton Peel	Construction Manager		
Edward Lindstrom	Construction Manager		
Victor Sayaxang	Senior Project Engineer		
Fred Tricks	Project Engineer		
Aadhavan J Kasthuri	Project Engineer		
Lahiru Rajasekara	Project Engineer		
Doug Giffin	Health and Safety BP		
Cassio Costa	Environmental BP		

Appendix B- Emergency Contact List

The primary and secondary Project emergency contacts nominated below provide the Project's 24-hour emergency contact arrangements, including outside normal working hours and during rostered R&R periods.

Project:	**The Central West Orana Renewable Energy Zones (CWOREZ) Project**
Customer:	**Transgrid**
Address:	**Mount Piper Substation – Blackmans Flat, 2790, NSW** **Wallerawang Substation – Greenspot, Wallerawang**

Emergency Contacts		
	Name	**Contact #**
[redacted]		
Transgrid Emergency Hotline	Transgrid Emergency Hotline	1800 027 253
External Emergency Contacts		
Ochre Medical Centre Lithgow Monday - 8.30am to 5.00pm Tuesday - 8.30am to 5.00pm Wednesday - 8.30am to 5.00pm Thursday - 8.30am to 5.00pm Friday - 8.30am to 5.00pm Saturday - CLOSED Sunday - CLOSED	136 Main St, Lithgow NSW 2790	(02) 6352 5685
Lithgow Medical Clinic Monday - 8.00am to 8.00pm Tuesday - 8.00am to 8.00pm Wednesday - 8.00am to 8.00pm	11 Bridge Street, Lithgow NSW	(02) 6352 5588

Thursday - 8.00am to 8.00pm Friday - 8.00am to 8.00pm Saturday – 9.00am – 5.00pm Sunday – 9.00am – 5.00pm		
Lithgow Hospital - 24/7	2 Col Drewe Dr, South Bowenfels	(02) 6350 2300
Online Medical Centre - 24/7	Injury Net	1300 307 418
Emergency Services	Fire / Ambulance / Police	000
Lithgow Police Station 24/7	244/270 Mort St, Lithgow	(02) 6354 2310
Rural Fire Service (Lithgow)	58 Cook Street, Lithgow NSW 2790	1800 679 737
NPWS Duty Office		02 8275 1748
NSW National Park		1300 072 757
EPA	Pollution hotline	131 555
DECCW (Department of Climate Change, Environment and Water)	General Enquiries - Office hours only	1800 920 528
DECCW (Department of Climate Change, Environment and Water)	Indigenous Cultural Heritage Hotline	1800 571 242
Lithgow Council	24hr hotline Manages Water Supply in the area.	6354 9999
Employee Assistance Provider:	ACACIA	Ph.1300 364 273 SMS 0480 087 020

Appendix C – Bushfire Emergency Response

Response	Hardware / Equipment	Equipment location	Specific Emergency Response Training
Preparation: Prior to commencing works in bush areas, the followed shall be determined: • Evacuation and muster points. • Bushfire management zones (if any). • Bushfire response. • Required fire-fighting equipment. • Fire response team members. • Communication procedure. • Hot Work requirements • Bushfire seasons – Watch Zone on Fire Nears Me App. **Total Fire Ban Days.** Remote bushland areas are considered high-risk, and access should be considered on Extreme and Catastrophic Fire Rating and TFB days. Contact the NPWS Duty Officer to discuss. Fires in the field should be reported immediately to your supervisor and emergency services RFS / Fire brigade /rescue 1800 679 737 and National Park: 1300 072 757 **Trigger:** A bushfire has been identified (e.g. flames or smoke has been spotted, emergency app has advised of emergency in area), • Any smoke on the horizon or notification of fires in the local area should be assessed for impact on construction works. **Consideration should be given to evacuating the Site.** • Smoke seen on the horizon during a total fire ban day should be reported immediately, unless the fire has already been identified on the Hazards Near Me App. Fire has started on site: • Fire should be contained immediately, if safe to do so. **Action:** <u>First Able Person</u> • Communicate emergency to Site personnel via UHF radio by announcing “emergency, emergency, emergency.” • Immediately call 000 upon identifying any fire or ignition on or in the vicinity of the	Fire extinguishers (0.9kg water or dry chemical) Spill kits Rack-hoe or shovel 16 litre waterfilled knapsack Fire trailer (min 500L water) or vehicle mounted water tank (500L)3 First Aid Kit Communication devices such as phone and radios.	Vehicles At tower site On person	HLTAID003 - Provide First Aid HLTAID001 - Provide CPR Cardiopulmonary Resuscitation

Response	Hardware / Equipment	Equipment location	Specific Emergency Response Training
Project. Only attempt first attack where trained, equipped and it is safe to do so. • All works to cease and workers to await further instructions. **Response:** If the fire is started at a tower / pole Site, all tools and fire-fighting equipment should be used to contain the fire. Extinguish or control fire (if safe to do so). Attack base of fire to extinguish using available firefighting equipment, if trained and if safe to do so. Remove persons from immediate danger. Ensure the immediate safety of anyone in the vicinity of the fire or smoke, if safe to do so. Assist any persons who require help, if safe to do so. If the fire cannot be contained, the crew should move away from the fire to a safe position and await emergency services. A Site evacuation should be considered to ensure no personnel are in danger and people are not put in any further harm's way or danger. Contact Warden and evacuate anyone in the vicinity of the fire, alert nearby persons and warden.			
Employee in Charge – **If fire is at risk of becoming uncontrolled.** • Contact Emergency Service Dial 000 • Instruct team to evacuate to site office based on advice of clear egress path from Emergency Services (if required). RFS / Fire brigade/ rescue (1800 679 737) / including National Park (1300 072 757) • Send an employee to the site entrance (nearest entry off a public road, provide details to 000). Communicate this location to the 000 receiver. Ensure person have a UHF radio on channel 5. • If more than one radio is remaining on site, switch that to channel 5, so one radio is on the normal construction communication and one on channel 5. • Contact Construction Manager to instruct other crews to evacuate. Ensure they move equipment from the access tracks to allow access for emergency services. • Join employees / contractors at assembly point. Check against the pre-start risk assessment for the location to confirm all persons on site are accounted for.			Bush fire response training

Appendix D – Consultation Outcome

D1. Advice from RFS and Updates

Advice	Section updated in Plan
Ignitions should be reported to 000 immediately to begin a coordinated response, this ensures that should an initial attack/knock down be unsuccessful by workers/contractors on site the response is not delayed.	Updated Section 6.2.2, Table 15 and Appendix C.
A site representative be made available at the access point to the site to determine the most appropriate access and provide intel to the first arriving appliance who would assume control of the incident. Information indicating the most appropriate access point should be provided to the 000 call taker when notifying of the incident/ignition.	Updated Section 6.2.2, Table 15 and Appendix C.
Evacuation of all personnel from the incident area with confirmation all personnel are accounted for provided to emergency services when possible.	Updated Sections 6.2.2 and 6.4, Table 15 and Appendix C.
Grounding of all drones and RPAS (Remotely Piloted Aircraft Systems) related equipment with any fire related incident. This ensures any aircraft automatically dispatched as part of Pre Determined Dispatch (PDD) arrangements are safe to approach.	Updated Sections 5.7 and 6.2.2, Table 15, Table 17 (BF10) and Appendix C.
Considerations that key access be made available to emergency services if appropriate to ensure timely access in the event an ignition occurs outside of work hours or with no representative available.	Updated Section 5.2.5, Table 17 (BF08) and Appendix C.
Review of access suitability for firefighting appliances, previously indicated was that the site was suitable for Category 9 (CAT 9) appliances, if deemed suitable confirmation of access for larger appliances would be appreciated to assist with initial response requirements. Noted within the management plan was reference to any access construction was to accommodate for 15t gross weight for appliances, this would cover Cat1, 7 and 9 weight requirements.	Updated Sections 3.5, 5.2.6 and 5.5, and Table 17 (BF08).
Consideration for Zinfra appliances and personnel to establish UHF 5 as a default operational channel for incidents so contact can be established if required for safety and intel.	Updated Appendix C.
Works are being undertaken in identified bushfire prone land, the fuel types present are predominantly grassy/shrub woodlands and forest with significant fuel load meaning there is a potential for rapid escalation and fire intensity under poor fire weather conditions.	These words have been added to Section 3.2 to highlight this.
Areas of steep terrain may make firefighting operations and evacuation difficult, a fires rate of spread (ROS) doubles with an incline increase of 10 degrees.	These words have been included in Sections 3.2 and 3.5 to highlight the risk. Access works required have been updated in Section 5.2.6.
Hot works and works associated with ignition risk be aligned with the regional Fire Danger Rating (FDR). Hot works, including emergency hot works are recommended not to be undertaken under Total Fire Ban declaration (FBI of 50 and above)	Added to Sections 4.1.1 to 4.1.3 and 5.3, and Table 18 (Fire weather and Hot work / ignition risk).
Updated relevant contact information will be provided by the NSW RFS for review.	Appendix B will be updated once provided.
Considerations during elevated conditions (extreme/catastrophic) that works crews are not established in high risk/isolated areas.	Added to Section 4.1.9 and Table 18 (Fire weather).
Zinfra provide contact emails for suitable staff so they can be added to the Fire Weather Advisory Network. This is established for agencies, councils and stakeholders so they are informed of Operational Readiness arrangements in place by the NSW RFS during periods of elevated fire danger with an identified Fire Behaviour Index (FBI) of 35 and above.	Added to Section 4.1.9 - Review of Bushfire Status at Pre-start Briefing.
As mentioned during the briefing, a meeting be facilitated to provide briefing information toother agency members within the LEMC as well as a meeting with the LEMO and other relevant parties.	Added to section 4.1.10 - Meeting with Emergency Services Prior to Performing the Works
A pre-construction emergency planning workshop to be undertaken closer to the commencement of construction. The workshop will review the construction program, access arrangements, bushfire risks and emergency response requirements. The	Added to section 4.1.10

Advice	Section updated in Plan
need for a formal Pre-Incident Plan will be determined through that workshop in consultation with the relevant emergency services. This requirement is addressed in Section 4.1.10.	

D.2 Advice from NPWS and Updates

Advice	Section updated in Plan
Text on page 17 has a link that is not working.	Removed link. The reference was to figure 4 in section 3.2 which is included.
A site representative be made available at the access point to the site to determine the most appropriate access and provide intel to the first arriving appliance who would assume control of the incident. Information indicating the most appropriate access point should be provided to the 000 call taker when notifying of the incident/ignition.	Updated Section 6.2.2, Table 15 and Appendix C.
Section 4.1.1 had the comments. Not on fire rating day of Catastrophic or Extreme or Total fire ban. Contact the NPWS Duty Officer on 02 8275 1748 to discuss on days of Extreme or above and TFB	Added to Section 4.1.1 and Table 18 (Fire weather). Also added contact details to emergency numbers in Appendix B
Section 5.2.3 Park may be closed so there may be no access - will need to contact NPWS Duty Officer	. Added to Section 5.2.3 and Table 18 (Fire weather).
5.7 Remove the word not from It is noted that these will not impact aerial firefighting operations in the event of a bushfire	Section 5.7 reworded. Also reflected in Table 17 (BF10) and Table 18 (Aerial firefighting).
6.1 What about Fire Danger Ratings	Section 6.1.2 has been added showing these and highlighting the need for consideration of these in the works planning
Appendix C Not sure why this is in red type (In relation to the red text)	.Appendix C updated
Appendix C I think you consider this for Extreme and Catastrophic Fire Danger Rating days also. Contact the NPWS Duty Officer to discuss.	Appendix C updated. Section 4.1.1 and Table 18 (Fire weather) also updated, as per this and advice from RFS.
Appendix C Check for fires on Hazards Near Me App first In relation to if a fire on the horizon is identified)	Section 5.2.3 and Appendix C updated.
Confirmation the access tracks to be upgraded is consistent with the EIS approvals	Confirmed this was the case and updated Section 5.2.6.