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BUSHFIRE MANAGEMENT PLAN

Tahmoor Coal



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1 Introduction

1.1 Background

Tahmoor Coal Pty Ltd (Tahmoor Coal) owns and operates Tahmoor Mine, an underground coal mine extracting coking coal which is an ingredient in the production of steel. The mine surface operations are located south of Tahmoor NSW, which is within the greater Sydney Basin - approximately 80 km southwest of Sydney. Tahmoor Mine is within the Wollondilly Shire Council (WSC) Local Government Area(LGA). Underground workings are located under the towns of Bargo, Tahmoor, and Picton with two ventilation shafts being located on the outskirts of Tahmoor. The location of Tahmoor Mine in the regional context is shown in **Figure 1**.

Tahmoor Mine surface facilities are situated in between the townships of Tahmoor and Bargo, and adjacent to Remembrance Drive on land owned by Tahmoor Coal with mining conducted under both crown and freehold property (see **Figure 1**). Surface facilities at Tahmoor Mine include administration buildings and offices, a materials store, diesel tanks, electrical workshop, mechanical workshop, bathhouse, ventilation fan, Coal Handling Preparation Plant (CHPP), storage areas, run of mine stockpileand product stockpiles. A third party owned power station is also located on-site and utilises methane from the mines' gas drainage system to produce electricity. Extracted coal is processed on site prior to transportation via rail to the Port Kembla Coal Terminal.

An Environmental Impact Statement (EIS) was exhibited in early 2019 seeking approval for the extraction of up to 48 million tonnes (Mt) of ROM coal over a 13-year mine life. Tahmoor Coal subsequently revised the proposed mine design and submitted amended development applications on two occasions (in February and August 2020). In April 2021, Tahmoor Coal received Development Consent SSD 8445 (the Consent) for the Tahmoor South Project, which involves use of the existing surface infrastructure and the extension of underground longwall mining to the south of existing workings. The approved Longwalls for the Tahmoor South Project include an A-series LWS1A-LWS7A and a B-series LWS1B-LWS6B.

LW S1A-S7A will be extracted in the Tahmoor South mining area under Development Consent SSD 8445. SSD 8445 provides the conditional planning approval framework for mining activities in the Tahmoor South Domain to be addressed within an Extraction Plan and supporting management plans.

SSD 8445 has been modified on three occasions relating to:

a) Modification 1 - Extension of time to commission the Tahmoor Coal Water Treatment Plant, approved on 19 July 2022;

b) Modification 2 - Underground brine disposal and transfer of mine water, approved on 13 June 2023; and

c) Modification 3 – Inclusion of an additional longwall panel (Longwall South 7A (LW S7A)) to the existing approved mine plan, approved on 26 May 2025.

The Project has consent to extract up to 4 Mtpa of ROM coal, with a total of up to 35 Mt of ROM coal extracted until 31 December 2033.

1.2 Purpose

The purpose of this Bushfire Management Plan (BFMP) is to:

a) is to identify risks to Tahmoor Coal assets (including property) and recommend preventative management measures to be taken to protect human life and minimise impacts to assets from the threat of a bushfire.

b) provide a framework for Tahmoor Coal (TC) personnel to ensure that compliance is achieved with relevant internal and external regulatory requirements related to bushfire management at Tahmoor Coal. The plan ensures that impacts on the community are minimised and managed

within a structured framework.

c) ensure compliance with Development Consent (SDD 8445) (the Consent) Conditions B52, B53 and B54, Schedule 1 Part B.

1.3 Scope

This BFMP applies to all land where Tahmoor Coal has a regulatory and internal policy obligation to maintain an effective fire response capability and to control fires on its landholdings. Landholders have a responsibility to prevent damage to neighbouring properties. The location of Tahmoor Coal lease boundaries and associated properties are shown in the appendices. The BFMP forms part of the Environmental Management System (EMS).

The document represents a working document to aid in decision making and

- provides:clearly defined responsibilities;
- potential causes of bushfires;
- controls including fire equipment and
- locations;emergency response;
- training requirements; and
- communication of the BFMP

Specific attention within this plan is given to protecting the following site equipment and infrastructure:

a) underground ventilation shafts and fans including underground drift entrance;

b) administration office and amenities building; workshop, bathhouse and first aid room;

c) diesel fuel/oil storage tanks;

d) coal handling and preparation plant and all coal stockpiles;

e) gas extraction plant and Envirogen co-generation plant; and electrical substations and associated infrastructure

f) heritage or historical sites (both Cultural and European heritage items); and

g) natural assets (threatened/endangered/significant flora and fauna species, communities or habitats).

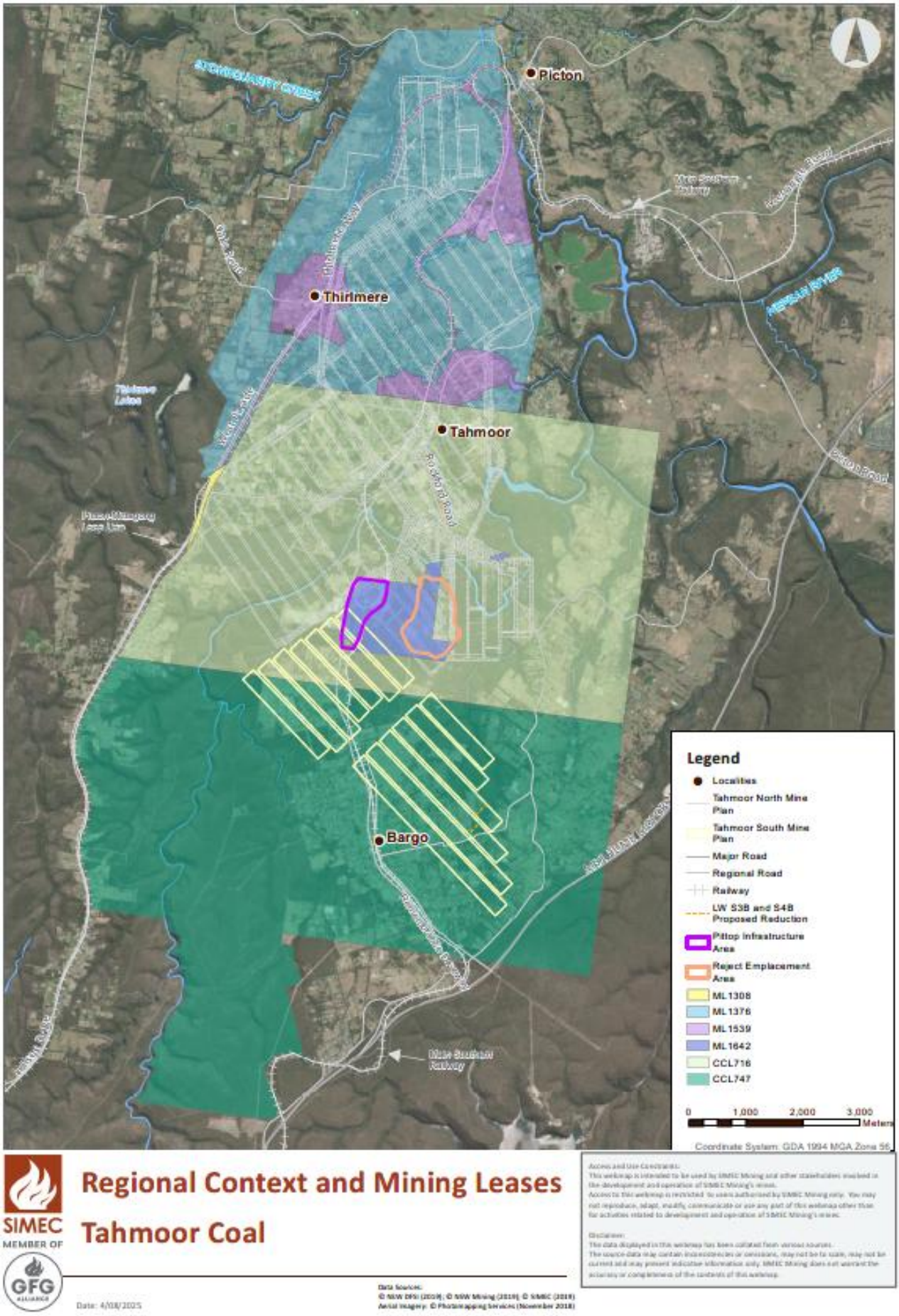


Figure 1 Tahmoor Coal Site Location

2 Planning

2.1 Statutory Requirements and Legislation

2.1.1 Development Consent Conditions

The requirement for this management plan is established by Conditions B52, B53 and B54, Schedule 1 Part B of the Consent. **Table 1** outlines the requirements under this condition and identifies where theserequirements have been addressed.

Table 1 Development Consent Conditions

Condition Reference	Condition	Where Addressed
B52	The Applicant must:	
(a)	ensure that the development:	
(i)	provides for asset protection in accordance with the relevant requirements in the Planning for Bushfire Protection (RFS, 2019) guideline; and	This Plan
(ii)	ensure that there is suitable equipment to respond to any fires on the site; and	Section 13.4
(b)	assist the RFS and emergency services to the extent practicable if there is a fire in the vicinity of the site.	Section 15, Section 13.4, Appendix C.
B53	Prior to commencing construction under this consent, the Applicant must prepare a Bushfire Management Plan for the development in consultation with RFS. This plan must include a:	
(a)	contact person and 24 hour contact phone number;	Section 15, Appendix C
(b)	schedule and description of proposed bushfire mitigation works, including:	Section 12, Section 13.
(i)	location of managed and unmanaged vegetation within the site;	Section 4, Appendix B
(ii)	location of water supply; and	Section 4, Appendix C
(iii)	internal access roads;	Section 4, Appendix B, Appendix C.
(c)	plan identifying the location and storage of bulk flammable liquids and materials;	Section 11, Section 12.3
(d)	'hot works' management plan, including:	
(i)	circumstances when 'hot works' are limited or prohibited; and	Section 12.5
(ii)	safety measures to be implemented when 'hot works' are being conducted; and	Section 12.5
(e)	emergency/evacuation plan in accordance with the *Guidelines for the Preparation of Emergency/Evacuation Plans (RFS) and Australian Standard AS3745 Planning for Emergencies in Facilities.*	Section 15
B54	The Applicant must implement the Bushfire Management Plan in consultation with RFS.	Section 16

2.1.2 Management Plan Requirements

Consent Condition E5 outlines the general requirements for all management plans. **Table 2** outlines therequirements under this condition and identifies where these requirements have been addressed.

Table 2 Management Plan Requirements

Condition Reference	Condition	Where Addressed
E5	Management plans required under this consent must be prepared in accordance with relevant guidelines, and include:	This Plan
(a)	a summary of relevant background or baseline data;	Sections 4 & 5
(b)	details of:	
(i)	the relevant statutory requirements (including any relevant approval, licence or lease conditions);	Section 2.1
(ii)	any relevant limits or performance measures and criteria; and	NA
(iii)	the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the development or any management measures;	NA
(c)	any relevant commitments or recommendations identified in the document/s listed in condition A2(c);	NA
(d)	a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria;	Section 13
(e)	a program to monitor and report on the:	
(i)	impacts and environmental performance of the development; and	Section 17
(ii)	effectiveness of the management measures set out pursuant to condition E5(d);	Section 17.2
(f)	a contingency plan to manage any unpredicted impacts and their consequences and to ensure that ongoing impacts reduce to levels below relevant impact assessment criteria as quickly as possible;	NA
(g)	a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 17.2 and 19
(h)	a protocol for managing and reporting any:	
(i)	incident, non-compliance or exceedance of any impact assessment criterion or performance criterion;	Sections 18.1, 18.2
(ii)	complaint; or	Section 18.3
(iii)	failure to comply with other statutory requirements;	Covered collectively within Section 18
(i)	public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and	Section 20.1
(j)	a protocol for periodic review of the plan.	Section 19

2.2 Limits, Performance Measures/Objectives and Criteria

Consent Condition E5 (b) (ii) outlines the requirement for management plans to provide details of any relevant limits or performance measures and criteria. No specific performance indicators are outlined inthe BFMP.

2.3 Other Leases and Licenses

All development consents, leases, licenses, and other relevant approvals are stored in the Cority Compliance Management database, which is administered by both site and Liberty GFG Corporate. A summary of the relevant mining leases is provided in **Table 3**. A summary of other approvals and licensesis provided in **Table 4**.

Table 3 Mining Leases

Lease	Title	Granted	Expires
CCL 747	Bargo Mining Lease	23/05/1990, renewed 16/05/2025	06/11/2046
CCL 716	Original Tahmoor Leases	15/06/1990, renewed 16/08/2023	13/03/2042
ML 1376	Tahmoor North Lease	28/08/1995, renewed 28/03/2023	28/08/2043
ML 1308	Small Western lease to west of CCL716	02/03/2014	02/03/2035
ML1642	Pit-top and REA surface Mining Lease	27/08/2010	27/08/2031
ML 1539	Tahmoor North Extensions Lease	16/06/2003	16/06/2034

Table 4 Approvals/Licenses

Approval Title / Description	Description	Date Granted	Expiry Date
EPL 1389	Environmental Protection Licence	01/05/1994, latest variation 28/06/2024	No Expiry
WAL 36442	Water Access Licence	6/12/2013	No Expiry
WAL 25777	Water Access Licence	27/10/2014	No Expiry
WAL 43621	Water Access Licence	08/03/2021	No expiry
WAL 43655	Water Access Licence	09/03/2021	No Expiry
WAL 43656	Water Access Licence	01/08/2022	No Expiry
WAL 43657	Water Access Licence	09/03/2021	No Expiry
WAL 43659	Water Access Licence	09/03/2021	No Expiry
WAL 45204	Water Access Licence	07/08/2024	No Expiry
SWC871469	Water Access Licence (Lease)	11/07/2025	01/07/2026
SWC868868	Water Access Licence (Lease)	01/07/2024	30/06/2025 (in process of renewal for FY26)
Dangerous Goods Licence XSTR200005	Licence to store explosives	02/02/2017	02/02/2027
5061521	Radiation Management Licence	29/10/2024	29/10/2025

2.4 EIS Commitments

There are no EIS commitments relative to the BFMP.

2.5 Tahmoor Coal NSW Policies and Procedures

Tahmoor Coal has a Health and Safety Management System (HSMS) which has been developed to consolidate and document the approach to the management of health, safety and welfare matters. The HSMS has been developed to identify hazards arising from operations, assesses risks arising from those hazards and provide processes for the development and implementation of risk controls.

This BFMP falls under the core aims of the HSMS by addressing the identification, assessment, evaluation and control of bushfire hazards, risks and environmental and community impacts associated with Tahmoor Coal's operations.

The HSMS has been developed with reference to the five principles derived from the Australian

Standard 4801: 2001: Occupational Health and Safety Management Systems.

2.6 Relevant Legislation

2.6.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the principal planning legislation forNSW. THE EP&A Act provides a framework for the overall environmental planning and assessment of development proposals and activities.

2.6.2 Environmental Protection and Biodiversity Conservation Act 1999

The *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) is a Commonwealth Act for the protection of nationally significant natural or cultural values or the regulation of certain nationallysignificant activities.

2.6.3 Rural Fire Act 1997

The Rural Fire Service (RFS) administers the *Rural Fire Act 1997* (RF Act). The objectives of the RF Act areto provide:

a) for the prevention, mitigation and suppression of bush and other fires in local government areas,

b) (or parts of areas) and other parts of the State constituted as rural fire districts

c) for the co-ordination of bush fire fighting and bush fire prevention throughout the State;

d) for the protection of persons from injury or death, and property from damage, arising from fires;

e) for the protection of the environment by requiring certain activities referred to in paragraphs (a);

f) to be carried out having regard to the principles of ecologically sustainable development; and

g) described in section 6 (2) of the Protection of the Environment.

The responsibilities of landowners to manage their land for bushfire protection and the approval of hazard reduction works is outlined in the RF Act. The RF Act also provides for the formation of fire management committees and the preparation of fire management plans.

Division 1 of Part 4 of the RF Act states the following, relevant to the duties of Tahmoor Coal:

It is the duty of a public authority to take the notified steps (if any) and any other practicable steps to prevent the occurrence of bush fires on, and to minimise the danger of the spread of a bush fire on orfrom:

a) any land vested in or under its control or management, or

b) any highway, road, street, land or thoroughfare, the maintenance of which is charged on the authority;

c) It is the duty of the owner or occupier of land to take the notified steps (if any) and any other practicable steps to prevent the occurrence of bush fires on, and to minimise the danger of the spread of bush fires on or from, that land.

2.7 Planning for Bushfire Prevention 2019

Planning for Bushfire Protection (PBP 2019) provides development standards for designing and building on bushfire prone land (BFPL) in NSW. Section 8.3.6 of PBP requires that where mining and associated activities are carried out on BFPL, consideration should be given to any hazards and risks associated withbushfire. Given the potential hazards and risks a Bushfire Emergency Management and Operations Plan should be prepared to cover and mining activities undertaken on BFPL. The NSW RFS is currently completing a review and update of PBP 2019. The updated document is scheduled for

release in November 2025.

2.8 National Parks and Wildlife Act 1974

The *National Parks and Wildlife Act 1974* (NSW) is an Act to consolidate and amend the law relating to theestablishment, preservation and management of national parks, historic sites and certain other areas and the protection of certain fauna, native plants and Aboriginal objects.

2.9 Threatened Species and Conservation Act 1995

The *Threatened Species and Conservation Act 1995* (TSC Act) protects all threatened plants and animals native to NSW (with the exception of fish and marine plants). It provides for the identification, conservation and recovery of threatened species and their populations and communities. It also aims toreduce the threats faced by those species.

If a planned development or activity will have an impact on a threatened species, population or ecological community this must be taken into account in the development approval process. If the impact is likely to be significant, a Species Impact Statement must be prepared and the Director-General of the Departmentof Planning, Industry and Environment (DPIE now DPHI) must agree to the development approval.

2.10 Native Vegetation Act 2003

The *Native Vegetation Act 2003* (NV Act) regulates the clearing of native vegetation on all land in NSWexcept for land listed in Schedule 1 of the Act. Excluded land falls into the following categories:

a) national parks and other conservation areas;

b) state forests and reserves; and,

c) urban areas.

The RF Act takes precedence over the NV Act, any vegetation clearing undertaken during the constructionof Asset Protection Zones is not restricted under NV Act.

2.11 Wollondilly Local Environmental Plan 2011

Bush fire hazard reduction work is mentioned in Section 5.11 of the LEP as follows:

Bush fire hazard reduction work authorised by the Rural Fires Act 1997 may be carried out on any landwithout development consent.

3 Stakeholder Consultation

3.1 Internal and External Stakeholder Communication

Stakeholders include employees, contractors, visitors of Tahmoor Coal, neighbours and the local / regional community, local council, state and federal government agencies and regulators, and press / media. A Stakeholder Engagement Plan (TAH-HSEC-00039) has been developed to include the following:

a) Methods of communication between stakeholders;

b) Types of information that is communicated between internal stakeholders;

c) Responsibilities for communication of information to internal stakeholders; and

d) Review of communication methods, including the consideration of feedback to / from internal stakeholders.

A key objective of ongoing stakeholder engagement is to maintain positive relationships established with the local community and other external stakeholders.

3.2 Consultation with NSW RFS

Maintaining regular consultation of the NSW RFS is an important component in ensuring the appropriatebushfire protection measures are developed and implemented. Ongoing consultation includes;

a) Wollondilly/Wingecarribee Bushfire Management Committee (BFMC). Tahmoor Coal are an active member of this committee, the monthly meeting provides the opportunity for Tahmoor Coal to provide updates on bushfire protection measures and other relevant site bushfire issues and engage with other major agencies including Crown Lands, National Parks and Wildlife and the Councils.
b) The NSW RFS Southern Highlands Team provide regular email updates to key Tahmoor Coal employees regarding bushfire mitigation programs within the Wingecarribee and Wollondilly LGA's.
c) Yearly site familiarisation tours and inspections for NSW RFS and Fire and Rescue.
d) NSW RFS Officer training activities within Tahmoor Coal properties e.g. tree clearing, 4x4 training, fire trail maintenance.
e) Ad hoc discussions with as NSW RFS and other agencies as required.

3.3 Consultation in Preparation of the Management Plan

A draft version of this management plan was distributed to the following stakeholders for review and feedback:

a) NSW RFS – Southern Highlands Team
b) Tahmoor Management

The feedback provided by stakeholders is summarised within **Table 5** below.

Table 5 Consultation to Date

Consulted Parties	Consultation Conducted	Outcomes of Consultation
NSW RFS	08/10/2021 Phone call to RFS Community safety Officer. 08/10/2021 email to RFS Community safety Officer.	Message left. Advised that Tahmoor Coal are preparing a BFMP and request for any specific requirements.
	19/10/2021 Phone call to RFS Community safety Officer. 19/10/2021 email to RFS Community safety Officer.	Message left. Request for meeting either by video conference to provide an overview and understand any specific requirements.

	25/10/2021 Phone conversation with Ross Smith	Discussed establishment and requirements of fire trails for Tahmoor Coal properties. Discussed BFMP, Ross Smith advised to submit via Southern Highlands RFS email for review and feedback.
	Tahmoor E&C representatives attend Quarterly Bushfire Management Committee meetings 2022-2025.	Regular meeting to provide update on Tahmoor site activity and obtain updates and feedback for NSW RFS.
	Copy of revised BFMP provided to NSW RFS September 2025	Awaiting feedback
Tahmoor Management	Review of revised BFMP. 2023/2025.	Feedback on risk review, amendments made to risk register and hazardous and dangerous goods.

4 Site Description

4.1 Location

Tahmoor Coal is located approximately 80 kilometres south-west of Sydney in the southern coalfields (**Figure 1**). Underground workings extend under the towns of Tahmoor, Thirlmere and Picton and Bargo as part of the newly approved Tahmoor South domain. Mining activities occur at depths of between 385 and 500 metres in the Bulli coal seam within three lease areas.

The current Tahmoor South longwall activities extend from the existing mine site south to the outskirts of the township of Bargo and surrounds. Tahmoor coal generally operates 365 days per year, 24 hours a day. Raw coal is treated in a Coal Preparation Plant before being transported off site via the rail loop for export via Port Kembla.

Tahmoor Coal operations occur within both the Wollondilly and Wingecarribee local government areas. The area is within the Hawkesbury Nepean catchment of which most of the area drains to the Bargo and Nepean Rivers.

Topography of the general area varies, ranging from gently undulating slopes to ridges and low hills and deeply dissected Hawkesbury sandstone. The majority of the land parcels are located on gentle undulating flats.

Most of Tahmoor Coal's operations occur on land owned by the colliery or is on Crown Land leased through NSW Department of Planning, Housing and Infrastructure (DPHI). The BFMP is specific to all properties owned and leased by Tahmoor Coal.

Site assets and property locations and are detailed in **Table 6**, **Figure 2** and **Figure 3**. For the purposes of this BFMP, the properties are collectively referred to as the study area.

Descriptions for each of the properties, including access and egress points are detailed in **Section 5**.

Ecological and cultural heritage values are included in **Sections 9 & 10**.

Table 6 Tahmoor Coal Property Locations

Property Name	Ownership	Address	Lot and DP
Tahmoor Colliery and Refuse Emplacement Area (REA)	Owned by Tahmoor Coal Pty Ltd	2975 Remembrance Drive, Bargo	Lot 162 DP 1054184, Lot 248 DP 751250
Tahmoor Colliery and REA	Leased through NSW Department Resources and Energy (DTIRIS)	2975 Remembrance Drive, Bargo	Lot 222, 334, 235, 236, 237, 238 DP 751250
Ventilation Shaft No. 1	Owned by Tahmoor Coal Pty Ltd	90 Stratford Road, Tahmoor	Lot 21 DP 11845
Ventilation Shaft No. 2	Owned by Tahmoor Coal Pty Ltd	Rockford Road, Tahmoor	Lot 441 DP751270
Bridge Street, Thirlmere	Owned by Tahmoor Coal Pty Ltd	145 Bridge Street, Picton	Lot 22 DP 734563
Proposed Bargo Colliery Complex	Owned by Tahmoor Coal Pty Ltd	Ashby Close, Bargo	Lot 42 DP 751250, Lot 41 DP 751250,
Proposed Bargo Colliery Complex	Leased through NSW Department Resources and Energy (DTIRIS)	Gwynn Hughes Street, Bargo	Lot 170 DP 751250, Lot 35 DP751250, Lot 7311 DP 1141025
125 Anthony Road, Bargo	Owned by Tahmoor Coal Pty Ltd	125 Anthony Road, Bargo	Lot 245 DP 751250
260-270 Rockford Road Tahmoor	Owned by Tahmoor Coal Pty Ltd	260-270 Rockford Road Tahmoor	Lot 1 and 2 DP1037712
250 Rockford Road Tahmoor	Owned by Tahmoor Coal Pty Ltd	250 Rockford Road Tahmoor	Lot 45 DP751270
7 and 7A Hodgson Grove Tahmoor	Owned by Tahmoor Coal Pty Ltd	7 Hodgson Grove Tahmoor	Lot 134 DP879762
4 Hodgson Grove Tahmoor	Owned by Tahmoor Coal Pty Ltd	4 Hodgson Grove Tahmoor	Lot 132 DP879762
115 Charlies Point Road Bargo	Owned by Tahmoor Coal Pty Ltd	115 Charlies Point Road Bargo	Lot 217 DP751250
185 Charlies Point Road Bargo	Owned by Tahmoor Coal Pty Ltd	185 Charlies Point Road Bargo	Lot 216 DP751250
215 Charlies Point Road Bargo	Owned by Tahmoor Coal Pty Ltd	215 Charlies Point Road Bargo	Lot 2231 DP787222
220 Charlies Point Road Bargo	Owned by Tahmoor Coal Pty Ltd	220 Charlies Point Road Bargo	Lot 222 DP751250
225 Charlies Point Road Bargo	Owned by Tahmoor Coal Pty Ltd	225 Charlies Point Road Bargo	Lot 2232 DP787222

Note

All properties are on Bushfire prone land.

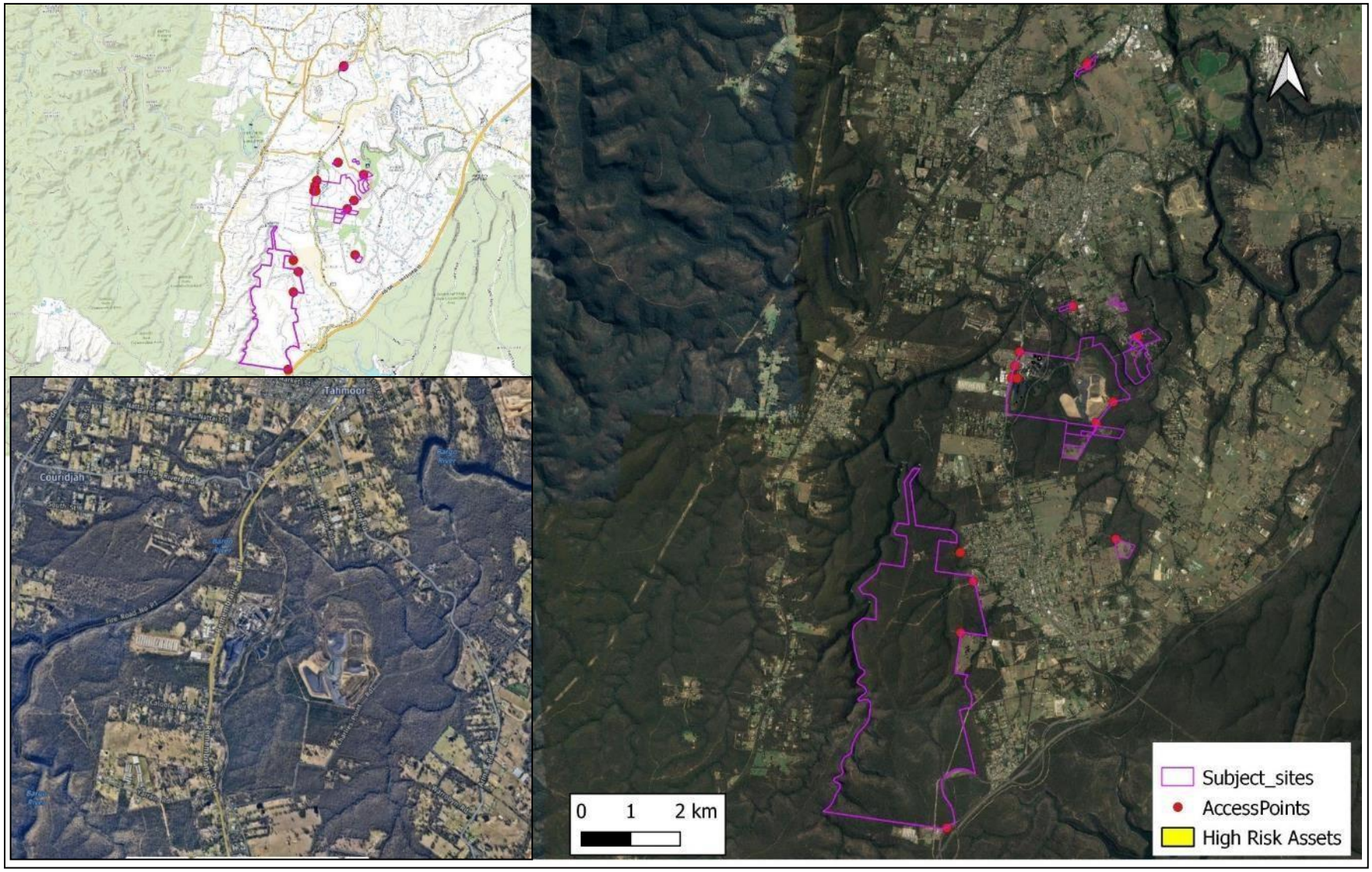


Figure 2 Tahmoor Coal site assets - general locations.

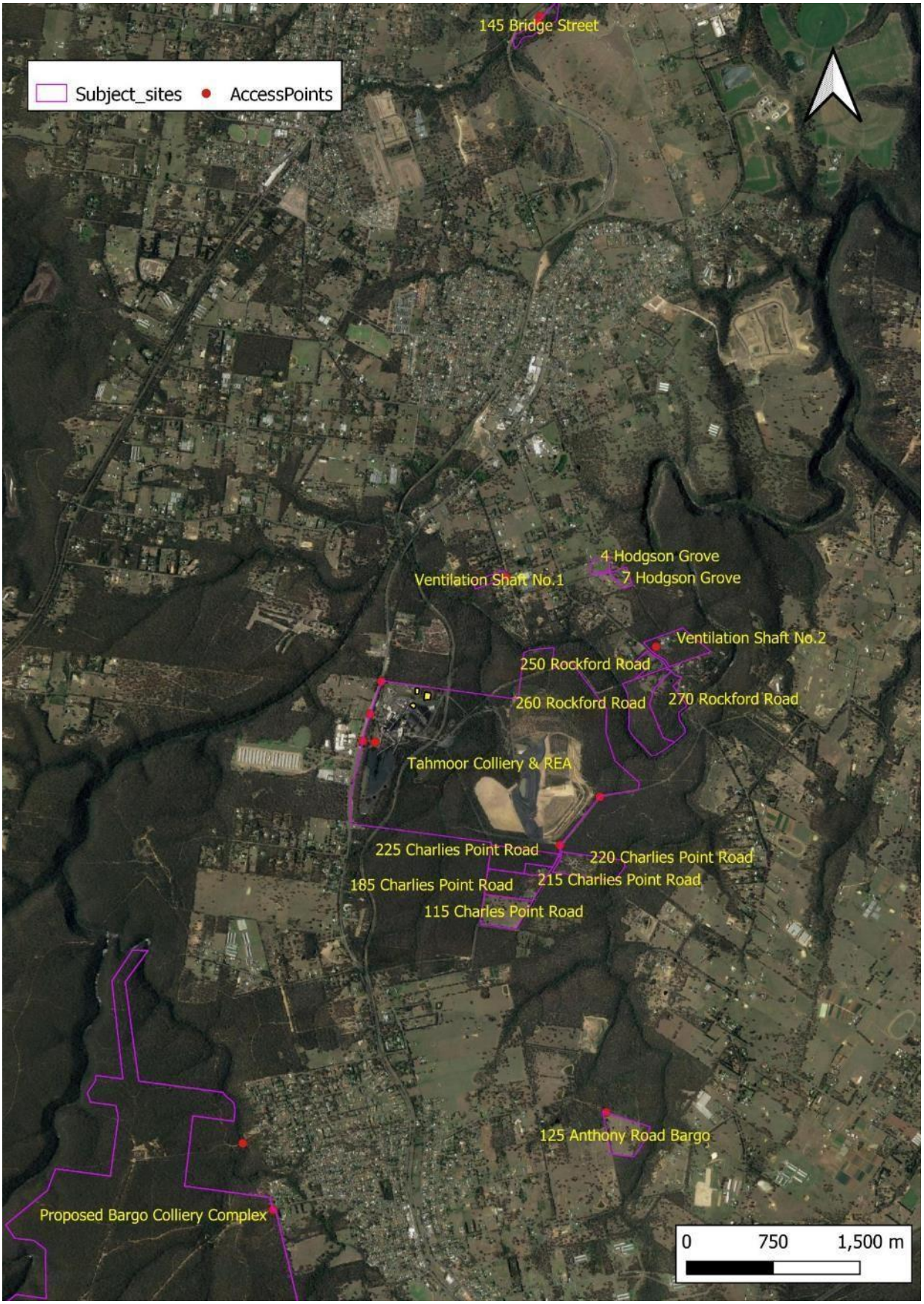


Figure 3 Tahmoor Coal property locations.

5 Property Details

5.1 Tahmoor Coal and Refuse Emplacement Area

Tahmoor Coal and associated infrastructure occur to the west of the railway line and east of Remembrance Drive. The Refuse Emplacement Area (REA) is bordered by Charlies Point Road to the east,Bargo River to the north and southern railway line to the west. Both the REA and colliery are illustrated in**Figure 3** and **Figure 10**.

The area surrounding the REA consists of bushland, whilst land to the west of Remembrance Drive is private rural land and bushland along the Bargo River. It should be noted that not all the REA site is owned by Tahmoor Coal. The western portion of the REA is leased to Tahmoor Coal by NSW Department of Planning and Environment (DPE) which has been renamed (2024) as Department of Planning, Housing and Infrastructure (DPHI).

Major infrastructure at the Tahmoor and REA site has been identified in the table below.

Table 7 Major Infrastructure

Tahmoor Colliery Site	REA Site
Washplant	Coal Stock Piles
Administration buildings and offices;	Transmission Line
Material Storage	Dams
Diesel Tanks	Water Quality Meters
Workshops	Haul Road
Bathhouses	Conveyor Belt
Stockpiles	
Power Lines	
Helipad	
Explosive Magazines	
Rail Loop and Refuelling Facility	
A co-generation plant situated on the mine pit top. The plant, which is operated by Envirogen,provides electricity to the NSW power grid.	

5.2 Access

The main access to Tahmoor Coal is via Remembrance Drive. The road within the Mine is paved and provides access to the main surface infrastructure. A number of other access points are located along the western boundary of the Mine to Remembrance Drive (refer **Figure 5** and appendices). Each gate is locked, and tracks are not paved. These tracks provide access along the fence boundaries of the property. The REA can be accessed via two main access tracks off Charlies Point Road. These access roads are predominately gravel and dirt roads.

The southern access track adjoins the southern part of the REA site to Charlies Point Road. The southern access track can be used to access the transmission lines and dams towards the south of the REA. The northern access track runs off Charlies Point Road to the north of the REA. This track connects to the northern transmission line easement, and the revegetated areas to the north west of the stockpiles.

The haul road can be accessed via the southern access track. The haul road runs immediately adjacent to the western edge of the stockpiles. A number of smaller access roads run off the haul road towards vegetated areas, and small dams. Recommended bushfire protection measures for the Tahmoor Coal

site and the REA are illustrated in **Appendix B**.

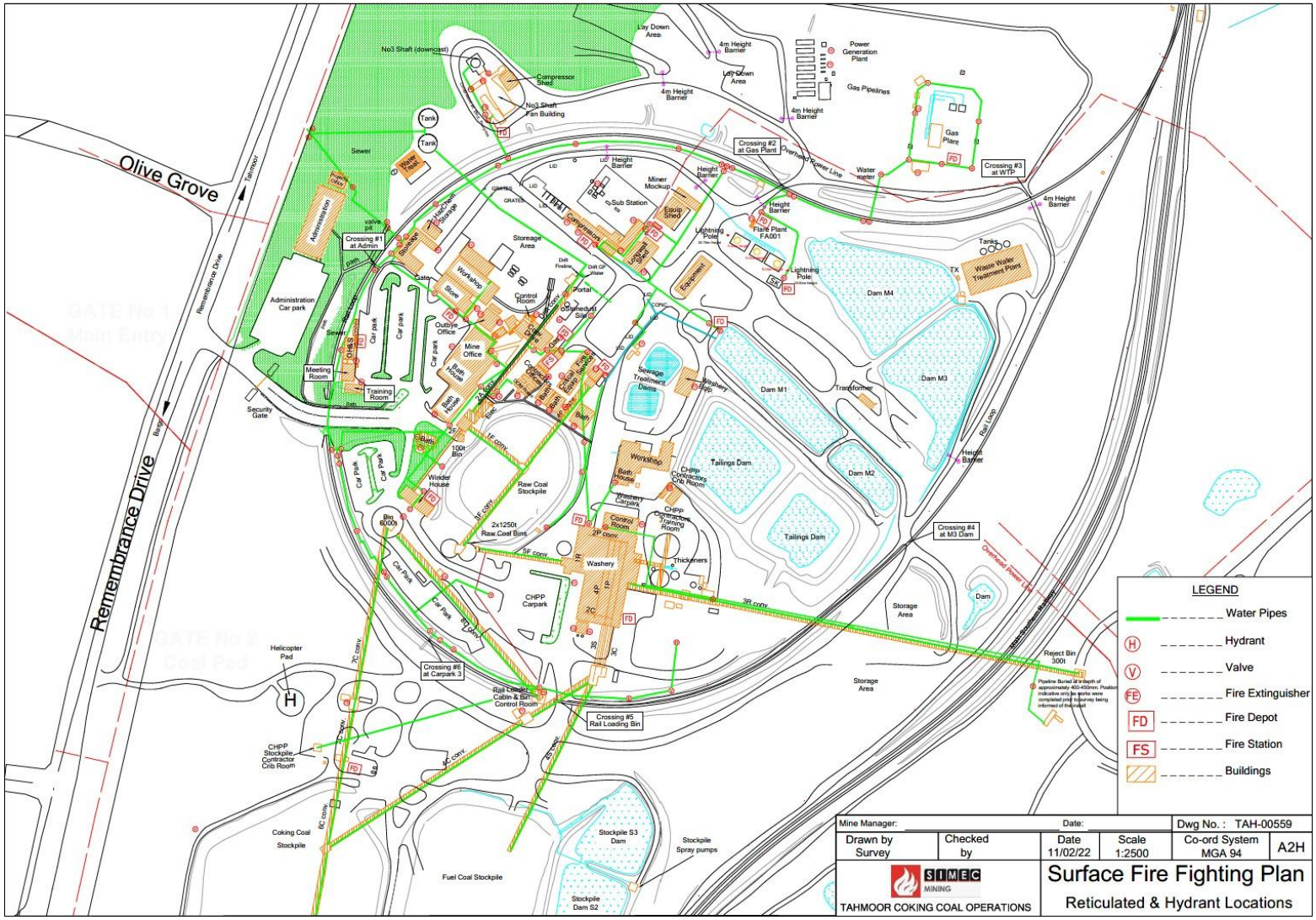


Figure 4 Tahmoor Coal site assets and surface firefighting reticulation and hydrant locations.

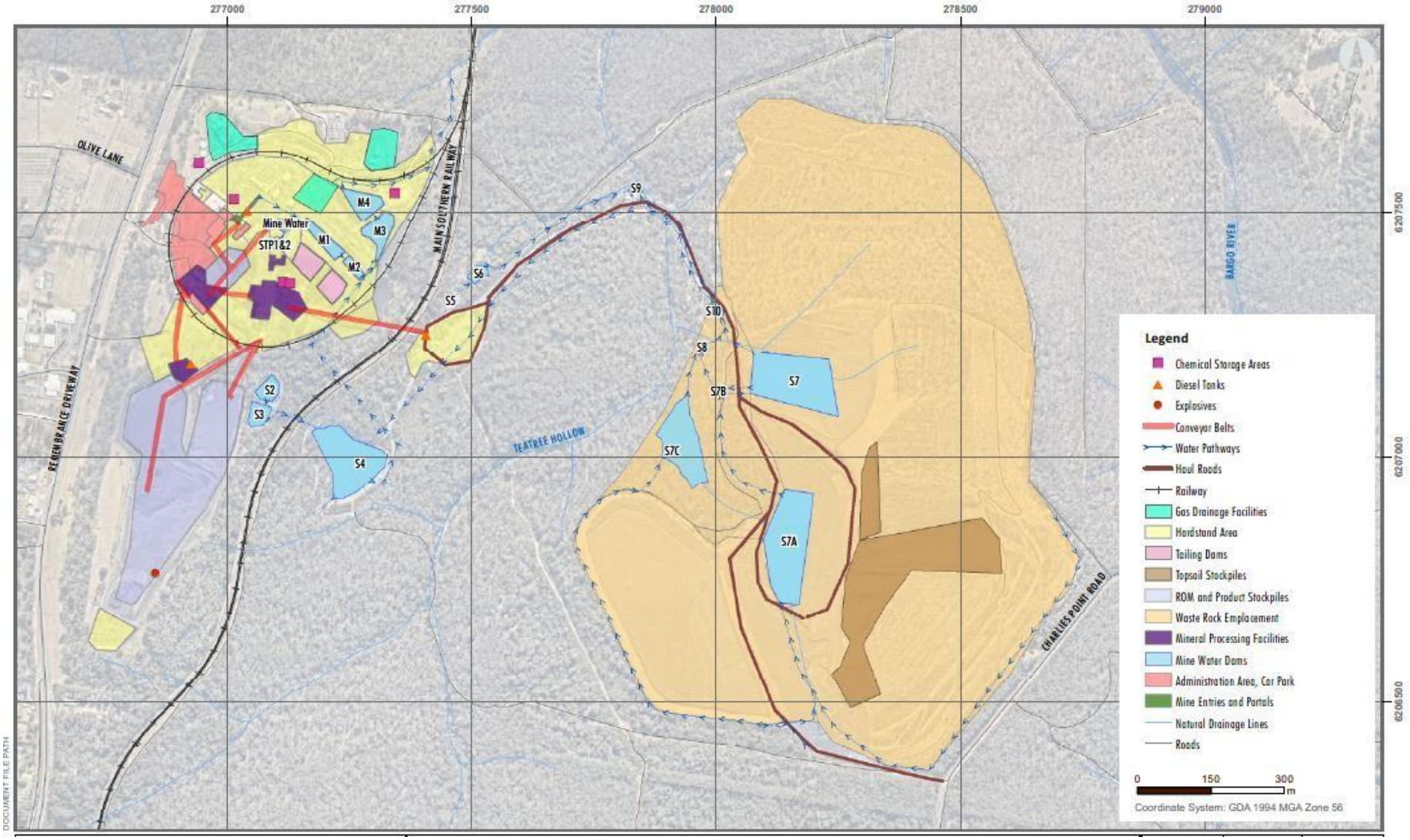


Figure 5 REA and colliery and access roads.

5.3 Ventilation Shaft No.1

Ventilation Shaft No. 1 is located at 90 Stratford Road, Tahmoor (**Figure 3** and **Appendix B**). The property is approximately 2.1 hectares. The ventilation shaft is currently disused; however the sealed vent shaft remains.

90 Stratford Road is bordered by private property, with Stratford Road occurring to the immediate east. The property is predominantly vegetated and is part of a corridor of vegetation along the Bargo River.

The No. 1 Ventilation Shaft occurs towards the centre of the property, of which is cleared with regenerating native and exotic species.

Access to the property is via a gate off Stratford Road. The access track to the disused ventilation shaft is cleared and trafficable, however requires regular maintenance to ensure it does not become overgrown.

Extensive native vegetation exists across the southern boundary extending to the Bargo River. Vegetation along the property boundaries to the north and south associated with neighbouring properties is currently well managed.

Vegetation towards the Stratford Roadside has been cleared away from the transmission line. Recommended bushfire protection measures are discussed in section 13 and illustrated in **Appendix B**.

5.4 Ventilation Shaft No.2

Ventilation Shaft No. 2 is located at 211 Rockford Road (**Figure 3** and **Appendix B**). The property is approximately 10 hectares. Most of the property contains bushland, with the No. 2 Ventilation shaft and access track located in the north-west corner of the property. The property also contains a number of material and storage sheds and dam.

Bushland occurs to the immediate east, north and south of the ventilation shaft. The ventilation shaft and associated infrastructure is separated from the bushland via an open gravelled road.

Access to the property is via a locked gate off Rockford Road. The access track to the ventilation shaft is well defined.

Vegetation occurs along the fence line of the property backing onto the neighbouring properties and Rockford Road. Vegetation to the east adjoins a corridor of vegetation along the Bargo River. Fire trails are evident and extend to fence lines, however, require regular maintenance to provide Safe Fire Access Zones (SFAZ's). Recommended bushfire protection measures are discussed in **Section 13** and illustrated in**Appendix B**.

5.5 145 Bridge Street Picton

No. 145 Bridge Street is located immediately south of Bridge Street and is approximately 4 hectares. It is bordered by Bridge Street to the north and Redbank Creek to the south. The property contains part of corridor of vegetation that occurs along Redbank Creek (**Figure 3** and **Appendix B**).

Most of this property is vegetated with some cleared patches towards the north.

No infrastructure occurs at the Bridge Street property. Access to both properties is via two metal gates off Bridge Street. A cleared area exists to north of the access gate and a well-maintained track extends along the western fence line to the rail corridor and down to Redbank Creek. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.6 Proposed Bargo Colliery Complex

A large area of vegetated land to the west of the Bargo Township is one of the proposed sites for the Bargo Colliery Complex (**Figure 3** and **Appendix B**). Tahmoor Coal owns two Lots, and leases three lots within the area. In total, the area of land consists of approximately 950 hectares, most of which is vegetated with a number of fire trails and access tracks throughout. A disused and sealed ventilation shaft

occurs to the north, and a transmission line runs along an existing Fire Road off Kadar Street. The Bargo River occurs along the western boundary of the land.

The boundary of the land is vegetated and adjoins the corridor of vegetation along the Bargo River into the Bargo Conservation Area to the immediate south.

Access to the land is via a number of locked Fire Roads. Access includes the following access locations:

a) Kader Street;

b) Tyler's Road;

c) Yanderra Road;

d) Ashby Close; and,

e) Remembrance Drive.

Tahmoor Coal only have keys to the Kader Street and Tyler's Road gates.

Access within the land is along existing Fire Roads, with a number of other dirt tracks occurring throughout. The condition of tracks ranged from gravel and smooth dirt tracks, to uneven narrow dirt trails.

Vegetation occurs immediately adjacent to the network of Fire Roads and trails throughout the land. An inspection of the fire trails during October 2021 found the roads to be suitable for use by 4WD and larger fire appliances. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.7 115 Charlies Point Road

115 Charlies Point Road is predominantly cleared with a house and sheds situated towards the southwest corner of the property (**Figure 3** and **Appendix B**). The property is bordered by Charlies Point Road to the east and south, private property to the north, and a power line easement to the west.

Access to the property is via Charlies Point Road. The access driveway leads to the house and sheds. Access around the property is through paddocks.

Scattered trees occur along all boundaries of the property. The neighbouring properties to the north, west and south contain bushland which back onto the property boundaries. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.8 125 Anthony Road, Bargo

125 Anthony Road contains a house, dam and sheds. It is predominantly cleared, containing some trees to the east of the property (**Figure 3** and **Appendix B**). An access track occurs to the north of the property, which leads to Anthony Road. The property is surrounded by bushland to the north, east and south, Paddocks with scattered trees occur to the west. Dog Trap Creek occurs approximately 150 m to the east.

Access to the property is via Anthony Road. The access driveway leads to the house and sheds. Access around the property is through paddocks.

Scattered trees occur along all boundaries of the property. The neighbouring property to the north, west and south contain open paddocks whilst land to the east consists of bushland. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.9 260 – 270 Rockford Road, Tahmoor

260-270 Rockford Road contains a house, dam and sheds. It is predominantly cleared within the north-eastern corner with the remainder of the property containing vegetated land (**Figure 3**).

Access to the property is via Rockford Road. The access driveway leads to the house and sheds. Access around the property is through paddocks.

An access track occurs along the powerline easement which runs along the north-western boundary and also beneath the powerline which traverses No. 270 Rockford Road.

The property is surrounded by bushland to the west, southwest, south and southeast, beyond the Bargo River.

The neighbouring properties to the northwest contain bushland and open paddocks. An existing rural residential allotment adjoins the eastern boundary. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.10 250 Rockford Road, Tahmoor

250 Rockford Road contains a house, a pool, tennis courts, a large storage shed and a garden shed. It is predominantly cleared with tall non-native trees along the fence line and many ornamental and other non-native trees scatted throughout the garden. The property is approximately 2.8 ha in size and access is via Rockford Road.

The access driveway leads to the house and sheds. Access around the property is through paddocks.

Large parcels of native forest exist to the north east across Rockford road and to the south west extending beyond the Bargo river.

The neighbouring properties to the north and south contain bushland and open paddocks. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.11 7 and 7a Hodgson Grove, Tahmoor

7 and 7a Hodgson Grove, contains a house, a detached granny flat and garden sheds on a 2-ha lot. The land slopes to the north with a steepish gully adjacent the northern property boundary which appears to be a natural watercourse. Large native vegetation exists to north and east of the property incised by the Bargo River. The property is mostly cleared, and the grounds are well maintained.

Access to the property is from the Hodgson Grove (no through road) which extends from Rockford Road. The access driveway leads to the house and sheds.

The neighbouring properties to the north and south are existing rural residential lots. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.12 4 Hodgson Grove, Tahmoor

4 Hodgson Grove, Tahmoor contains a house, and three large sheds. It is predominantly cleared within isolated ornamental trees on the site and a row of shrubs along the southern boundary.

Access to the property is from Hodgson Grove Road. The access driveway leads to the house and sheds. Access around the property is through paddocks.

Surrounding properties are well maintained existing rural residential allotments. A large forest exists to the east of the property approximately 240 m from the dwelling. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B.**

5.13 185 Charlies Point Road, Bargo

The structures at 185 Charlies Point Road have been recently removed and no longer contains the derelict house and shed structures.

Access is via a driveway from Charlies Point road and fire trails extend through the property and along the fence line. The property is surrounded by bushland and there is evidence of recently burned bushland to the west of the site associated with the 2019/2020 fires. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.14 215 Charlies Point Road, Bargo

215 Charlies Point Road, Tahmoor contains a house, large garage, storage shed and a swimming pool. The site has a gentle slope from west to east and a large dam is located at the front of the property. Areas around the house are essentially free of vegetation, however the native vegetation extends close to the house to the north and is included in the annual Asset Protection Zone (APZ) maintenance.

Access is via a driveway from Charlies Point road and fire trails extend through the property and along the fence line. The property is surrounded by bushland and there is evidence of recently burned bushland to the west of the site associated with the 2019/2020 fires. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B**.

5.15 220 Charlies Point Road, Bargo

220 Charlies Point Road, Bargo is 10.32 ha in size and contains partially cleared native forest. A large and small shed and a shipping contained are located in the centre of the allotment. There are two 15,000 L water tanks on site. The site is essentially flat and some clearing has been completed around the sheds.

Access to the property is via Charlies Point Road from an unsealed road. Fire trails provide access to most of the property however vegetation is much denser to the east.

The property can be best described as a continuation of the surrounding bushland and contains no effective APZ's. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B.**

5.16 225 Charlies Point Road, Bargo

225 Charlies Point Road, Bargo is approximately 10 ha in size and contains no structures. The site borders the REA and is heavily vegetated. The western boundary follows a power transmission line with fire trail and provides good access at this location. Fire trails within the property are overgrown and require maintenance.

Access to the property is via Charlies Point Road through a metal farm gate. Fire trails to the west provide access to most of the property. The property can be best described as a continuation of the surrounding bushland and contains no effective APZ's. Recommended bushfire protection measures are discussed in **Section 13** and illustrated in **Appendix B.**

6 Biodiversity and Conversation

Biodiversity and conservation areas near the study area include the following:

a) Sydney Catchment Authority (SCA) land located to the south of mining lease CCL747;

b) DPIE (now DPHI) land located to the south of mining lease CCL747;

c) Bargo Conservation Area to the south of land leased by Tahmoor Coal, occurring to the south of mining lease CCL747.

d) Australian Wildlife Sanctuary (formerly Wirrimbirra Sanctuary).

Tahmoor Coal have options in regard to offsets to satisfy the Biodiversity Offset liability associated with the Tahmoor South Project. Consideration includes payment into the Biodiversity Conservation Fund (BCF) for credits in the Hawkesbury/Nepean subregion for the vegetation type *RedBloodwood – Grey Gum woodland on the edges of the Cumberland Plain, Sydney Basin Bioregion*.

Consideration in future could be to the establishment of Biodiversity Stewardship Sites at the following locations if further credits are sought:

I) Bargo Colliery Landholdings surrounding the REA
II) Landholdings on Rockford Road.

Where stewardship sites are established, appropriate bushfire management strategies will be determined.

7 Vegetation

A large portion of vegetation of the Wollondilly and Wingecarribee local government areas have been mapped as part of the following:

a) Native Vegetation of Southeast NSW (Tozer et al. 2006); and
b) Cumberland Plain mapping project (NPWS 2002).

There are some gaps in the mapping data available, with some patches of vegetation not covered by the above projects. Furthermore, the vegetation mapping has not been ground truthed in some parts of the study area. This BFMP has relied upon the updated mapping (Niche 2011-12) where possible. Vegetation communities present in these properties along with associated Keith Classification are provide in the table below.

Table 8 Vegetation Communities

Site	Vegetation Communities Present	Keith Classification (2004)
Tahmoor Coal and Refuse Emplacement Area (REA)	Hinterland Sandstone Gully Forest	Dry Sclerophyll Forests (Shrubby subformation).
	Shale Sandstone Transition Forest	Dry Sclerophyll Forests (Shrub/grass subformation)
	Upper Georges River Sandstone Woodland	Dry Sclerophyll Forests (Shrub/grass subformation)
	Coastal Sandstone Ridgetop Woodland	Dry Sclerophyll Forests (Shrubby subformation)
	Planted vegetation	Nil
Ventilation Shaft No. 1	Sydney Hinterland Transitional Woodland	Dry Sclerophyll Forests (Shrubby subformation)
Ventilation Shaft No. 2	Sydney Hinterland Transitional Woodland	Dry Sclerophyll Forests (Shrubby subformation)
	Shale Sandstone Transition Forest	Dry Sclerophyll Forests (Shrub/grass subformation)
Bridge Street	Shale Sandstone Transition Forest	Dry Sclerophyll Forests (Shrub/grass subformation)
	Lower Blue Mountains Wet Forest	Wet Sclerophyll Forests (Shrubby subformation)
Proposed Bargo Colliery Complex	Hinterland Sandstone Gully Forest	Dry Sclerophyll Forests (Shrubby subformation)
	Coastal Sandstone Ridgetop Woodland	Dry Sclerophyll Forests (Shrubby subformation)

Site	Vegetation Communities Present	Keith Classification (2004)
115 Charlies Point Road	Sydney Hinterland Transitional Woodland	Dry Sclerophyll Forests (Shrubby subformation)
125 Anthony Road, Bargo	Not previously mapped however likely Sydney Hinterland Transition Woodland or Shale Sandstone Transition Forest	Dry Sclerophyll Forests (Shrub/grass subformation)
260-270 Rockford Road	Cumberland Shale/Sandstone Transition Forest-High sandstone Influence	Dry Sclerophyll Forests (Shrub/grass subformation)
	Nepean Gorge Moist Forest	Wet Sclerophyll Forests (Shrubby subformation)
	Sandstone Riparian Scrub	Wet Sclerophyll Forests (Shrubby subformation)

7.1 Threatened Vegetation Communities

Eight vegetation communities have been mapped in the study area. Corresponding listings under the EPBC Act and TSC Act are detailed in the table below.

Vegetation Community	Keith (2004) Classification	TSC Act Listing	EPBC Act Listing
Sydney Hinterland Transition Woodland	Dry Sclerophyll Forests (Shrubby subformation)	Not listed	Not listed
Cumberland Shale Sandstone Transition Forest	Dry Sclerophyll Forests (Shrub/grass subformation)	Endangered Ecological Community	Endangered Ecological Community
Lower Blue Mountains Wet Forest	Wet Sclerophyll Forests (Shrubby subformation)	Not Listed	Not Listed
Nepean Gorge Moist Forest	Wet Sclerophyll Forests (Shrubby subformation)	Not Listed	Not Listed
Sandstone Riparian Scrub	Wet Sclerophyll Forests (Shrubby subformation)	Not Listed	Not Listed
Hinterland Sandstone Gully Forest	Dry Sclerophyll Forests (Shrubby subformation)	Not Listed	Not Listed
Coastal Sandstone Ridgetop Woodland	Dry Sclerophyll Forests (Shrubby subformation)	Not Listed	Not Listed
Cumberland Plain Woodland	Grassy Woodlands	Critically Endangered Ecological Community	Critically Endangered Ecological Community

8 Threatened Species

8.1 Threatened Flora

All plants are susceptible to the impacts of fire, albeit to varying degrees. The most serious impact is understood to be the adverse impact of high frequency fire.

Six threatened plant species have been previously recorded within the study area and consists of: Acacia bynoeana, Grevillea parviflora subsp. parviflora, Persoonia Bargoensis, Persoonia glaucescens, Persoonia hirsuta and Pomaderris brunnea. The location of threatened flora for the Tahmoor Coal Site, REA and surrounds and the proposed Bargo Colliery Complex are shown within **Appendix E** (Niche 2011/12). Further to the six recorded species, another ten species have potential habitat within parts of the study area.

8.2 Threatened Fauna

A total of nine threatened fauna species have been recorded within the study area. These include; Bush Stone-curlew, Brown Treecreeper (eastern subspecies), Black-chinned Honeyeater (eastern subspecies), Cumberland Plain Land Snail, Diamond Firetail, Powerful Owl, Red crowned Toadlet, Scarlet Robin and Varied Sittella. The location of threatened fauna for the are shown in **Appendix E**.

Further to the nine recorded species, another 47 species have potential habitat within parts of the study area. Most have potential habitat within the proposed Bargo Colliery Land as this area contains a greater diversity of habitat features and connectivity to areas of bushland (Niche 2011/12).

9 Aboriginal Heritage

The Tahmoor South project is located within the Tharawal Local Aboriginal Land Council's boundary and extends across the Wollondilly and Wingecaribbee Local Government Areas. A search of the Aboriginal Heritage Information Management System (AHIMS) revealed a total of 24 Aboriginal archaeological or cultural sites were identified within the Subject Area. The majority of Aboriginal sites recorded in the AHIMS dataset comprised of rock shelters with art (n=15, 51%) and stone artefact sites (n=6, 20%) being the most common (Niche 2020).

An additional seven (7) Aboriginal cultural Heritage sites have been identified as a result of this search. Locations of aboriginal heritage sites relating to the Tahmoor South Project are detailed in the Tahmoor South EIS - Appendix G (Niche 2020). These sites will not be impacted by the mining activities.

10 European Heritage

No European heritage sites listed on the local heritage register occur within the properties.

11 Fire Behaviour

Fire behavior is defined as the manner in which a fire reacts to the variables of combustible fuel loadings (fuel quantity, distribution and moisture), climate/weather patterns (fire weather) and the topography or slope of the land on which the fire is burning.

Slope has a significant influence on fire behavior. Increases in slope generally increase bushfire intensity and rate of spread due to pre-heating of the combustible fuels ahead of the fire front, causing ground fires to extend into the tree crowns which are closer to the ground on steep land.

Slope is divided into four classes; flat, level, hilly and steep on the basis of slope gradients (0 degrees – Flat; 0 – 5 degrees – Level, 5 – 10 degrees – Hilly and over 15 degrees – Steep).

The Tahmoor Mine, Refuse Emplacement Area (REA) and Charlies Point Road contains or is adjoined by land which has been formed by the erosion of the land by creeks and streams, resulting in an undulating topography with steep gradients on the slopes that fall into the creek lines (**Figure 6**).

The Ventilation Shaft No. 1 & 2 sites contain a gently undulating landform with slopes of less than 5 degrees. Ventilation Shaft No. 1 is adjoined to the southwest by land which falls at 10 – 15 degrees into the Bargo River. Ventilation Shaft No. 2 is adjoined to the northeast by land which falls towards the Bargo River at 5 – 10 degrees.

The Bridge Street site features land which falls from the Railway Line southeast towards the creek line. This site is not generally affected by steep land except for the short upslope from the creek.

The land within the proposed Bargo Colliery Complex consists of a plateau complex with multiple gullies and valleys. Slopes range from gentle gradients on the broad plateau areas to steep gradients within the valley/gully systems.

The land within Rockford Road consists of a plateau which slopes towards the Bargo River corridor. Slopes range from gentle gradients on the broad plateau area to steep gradients within the river corridor.

Aspect of the land and its exposure to prevailing “bushfire winds” (normally the hot north – south-westerly winds) also influences bushfire behavior. These factors are examined in the following sections of the report and also include the fire history of the site to provide an indication of the exposure of the site to unplanned fires.

Bushfire hazard is defined as the potential severity of a fire and is usually measured in terms of intensity (kW/m). Bushfire hazard assessment identifies the relative bushfire hazard across the site, based on the likely response of fire to fuel loads (using vegetation community as a surrogate in the absence of field assessment of fuel loads), slope and aspect.

Combustible fuel loading within bushfire prone vegetation is the single element of fire behavior that can be managed. The current fuel loads within the sites vary and are dependent on the time since the vegetation was last burnt or managed.



Figure 6 Tahmoor and Surrounding Sites Topography

11.1 Fire History and Frequency

The bushfire season in the Wollondilly and Wingecarribee LGA generally runs from August to December depending on the onset of summer rainfall, however the effect of climate change appears to see the bushfire season extending well into February. Prevailing conditions associated with a bushfire season usually coincide with strong south-west to north-west winds and influenced by drought and rainfall conditions (WWBFRMP (2017)).

The Wollondilly and Wingecarribee LGAs have on average 400 bush and grass fires per year, of which 5 percent can be considered to be major fires. Most of the bushfire events have been ignited by lightning strikes or arson.

A number of major fires have started in the central inhabited area of the district and travelled in an easterly direction impacting on catchments. Other major fires have ignited in the west associated with storms and have coincided with extensive dry periods coupled with hot westerly winds.

In December 2013 and early 2014, a bushfire occurred toward the southern extent of the Bargo Colliery.

In November 2019 and early 2020, the Green wattle creek fire burnt through almost 300,000 ha of forest and property in the Wollondilly and Wingecarribee shires. The fire impacted the Tahmoor mine site on 19 December 2019, causing evacuation of the site and major disruption to production for over 2 weeks. No major infrastructure was damaged thanks to the support of the RFS, however the fire destroyed over 40 houses in the region. Bushfire history surrounding the Tahmoor Site is shown in **Figure 7** on the following page.

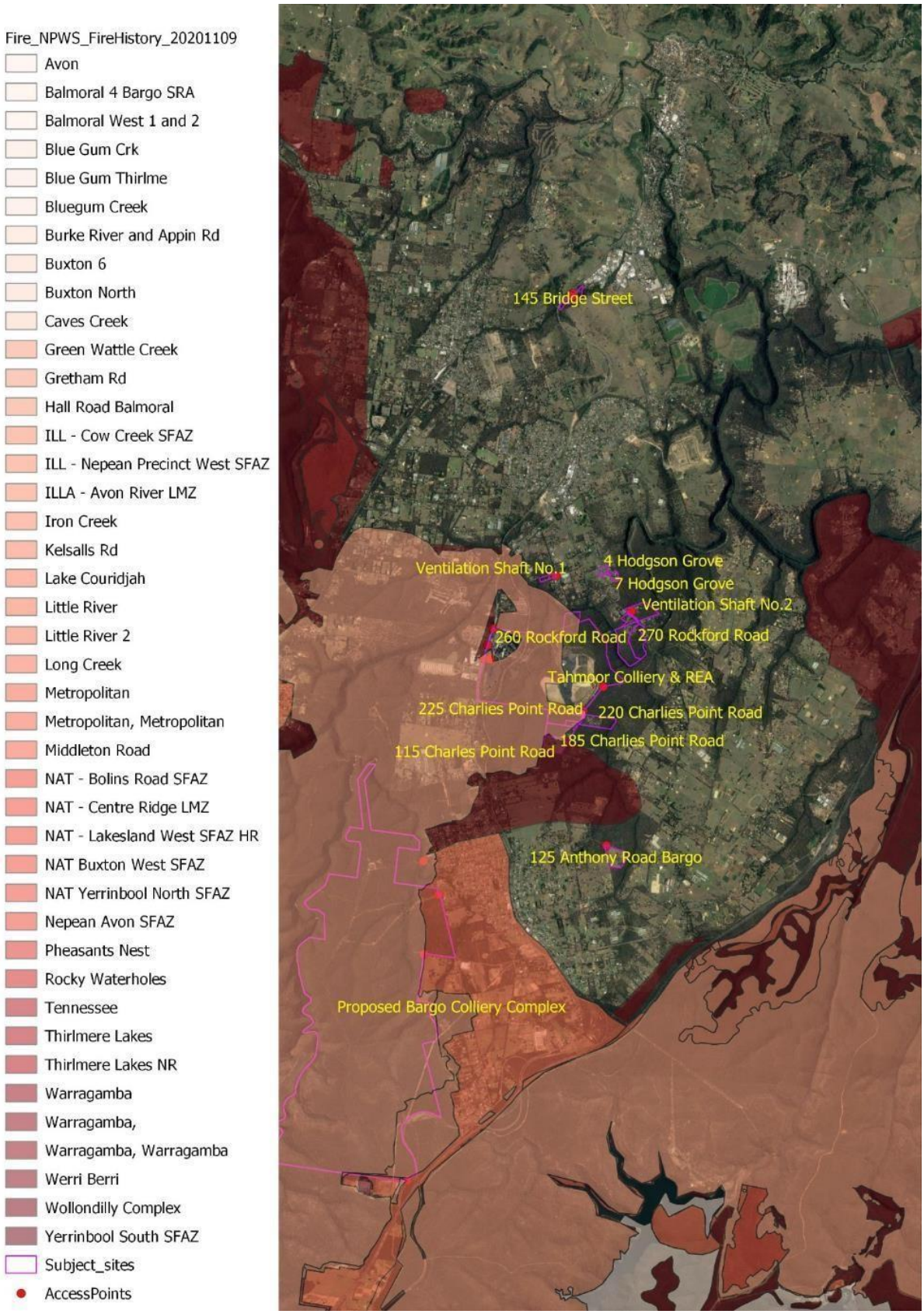


Figure 7 Bushfire History surrounding Tahmoor Properties

11.2 Sources of Ignition of Bushfires

The main sources of ignition in the Wollondilly and Wingecarribee Bush Fire Management Committee (BFMC 2017) area are:

a) Lightning strikes associated with typical summer storm weather patterns;

b) Arson including dumping of vehicles in bushland; and

c) Pile burns escaping from private residential properties.

Potential sources of ignition within the Mine are identified **Table 9** below. Sources have been identified through consultation with Tahmoor Coal and RFS.

Table 9 Sources of Ignition.

Ignition Source	Potential Area of Ignition
Exploration and borehole drilling	Limited exploration being carried out, remediation works and drilling at Redbank Creek and Myrtle creek. Some piezometers and inclinometers to be installed across a number of sites.
Cigarettes	Remembrance Drive, Rockford Road, Stratford Road, Bridge Street, Charlies Point Road, Anthony road, Rockford Road, Fire Roads, and tracks through out properties.
Lightning strike	Larger vegetated areas such as land to the west of Bargo and areas surrounding REA.
Hot works	Pit areas, Tahmoor Colliery, REA, Ventilation Shafts and at sites of the exploration works. Welding, cutting and grinding.
Vandalism [Arson]	Large vegetated areas to the west of Bargo and within neighbouring properties.
Neighbouring properties – farming activities, recreational activities [Motor Bikes/Cars]	All neighbouring properties of the Tahmoor Coal land holdings.
Car accidents	All roads and tracks within Tahmoor Coal landholdings, especially public roads.
Overheated engines/exhaust systems	Pit and REA.
Contractors	Within all Tahmoor Coal landholdings.
Overheated truck tyres	Pit and REA areas.
Railway maintenance/sparks from wheels	Railway line.
Hazard reduction burns	Neighbouring properties

12 Assets at Risk of Fire

12.1 Bushfire Risk Assessment

The Australian Standard AS/NZS 4360:2004 and the Emergency Management Australia (EMA) emergency risk management process provide the framework for establishing the context, analysis, evaluation, treatment, monitoring and communication of risk. Risk has two elements:

a) Likelihood - the chances of a bushfire occurring; and

b) Consequence - the impact of a bushfire when it occurs.

Bushfire risk is defined as the chance of a bushfire occurring that will have harmful consequences to human communities and the environment. Bushfire risk is usually assessed through consideration of the likelihood of ignition and consequences of a bushfire occurring. Risk reduction can be achieved by reducing the likelihood of a bushfire, the opportunity for a bushfire to spread or the consequence of a bushfire (on natural and built assets).

Bushfire management should have a clear objective to reduce both the likelihood of bushfires and reduce the negative impacts of bushfires. It should also consider the costs, inconvenience and dangers of measures taken to reduce the risk of bushfires.

The consequences of bushfire management activities and the failure to implement programs also need to be considered. A range of factors influence bushfire risk – these include:

a) The likelihood of human and natural fire ignitions, as influenced by time, space and demographics;

b) The potential spread and severity of a bushfire, as determined by fuel, topography and weather conditions;

c) The proximity of assets vulnerable to bushfire fuels, and likely bushfire paths; and

d) The vulnerability of assets including natural assets, or their capacity to cope with, and recover from bushfire.

For the purpose of analysing fire risks that might emerge on the Colliery lands, a dangerous and damaging fire has the potential to occur when the following conditions prevail:

a) Continuous available fuel – fuel at moisture content sufficiently low to enable rapid combustion, arising from drought effects or the maturing and drying, of vegetation;

b) Exposure of vulnerable assets. The ‘catchment’ for such fires may be within several hundred metres or many (60-70) kilometres from the asset/s;

c) A combination of weather conditions that generate a forest or grass fire danger index of Very High (24) or greater. Typically in NSW, prevailing adverse fire weather will have a strong northerly, through to south-westerly wind influence;

d) A fire in the landscape which is not effectively suppressed.

Details of the Bushfire Risk Assessment for Tahmoor Coal Assets and associated properties are described in **Appendix C** and summarised in **Table 10** below.

Table 10 Risk Assessment Summary - Key Assets

Location	Level of Risk
115 Charlies Point Road, Bargo	High
185 Charlies Point Road, Bargo	High
215 Charlies Point Road Bargo	High
220 Charlies Point Road Bargo	High
225 Charlies Point Road Bargo	High
Existing/Residential Development on land on Charlies Point Road which adjoins Tahmoor Coal land	Extreme
Residential development adjoining proposed Bargo Colliery land	Extreme
Residential development adjoining Ventilation Shaft Site 1	High
Residential development adjoining Ventilation Shaft Site 2	Extreme
260-270 Rockford Road Tahmoor	High
250 Rockford Road Tahmoor	High
7 and 7A Hodgson Grove Tahmoor	Extreme
4 Hodgson Grove Tahmoor	High
125 Anthony Road Bargo	High
145 Bridge St	High
Methane Storage/Electricity Generation Plant	Extreme
Coal Stockpile & Conveyors	Extreme
Electricity Supply Lines within the eastern portion of the Colliery	Extreme
Ventilation Shaft No. 2	Extreme
Site Infrastructure	Extreme
Damage to internal and boundary fences	High
Coal Stockpile & Conveyors	Extreme
Electricity Supply Lines within the eastern portion of the Colliery	Extreme

12.2 Site High Risk Assets

Almost all assets on the site are critical to Tahmoor Coal operations, however from a major hazard perspective, the following are considered as High-Risk Assets. The RFS are to be made aware of these assets during significant bushfire events. These include;

a) Co-Gen Plant – produces energy by utilising waste gas extracted from the underground mine workings. The Co-gen plant is located in the north-eastern corner of the site across the rail loop-line.
b) Vacuum Plant – extracts methane gas from underground workings and delivers to co-gen plant. Located toward the centre of the site adjacent water treatment ponds.
c) Flare Plant – Used to burn off excess gas not utilised within the co-gen plant. Located to the north of the site adjacent the northern boundary.
d) Explosives/Detonators – Storage of explosives and detonators for use in underground operations. Detonators and explosives are separately located approximately 130 m apart in enclosed and locked storage sheds.

The Location of these high-risk assets are shown in **Figure 8** below and on the Tahmoor Coal – Bushfire Operations Management Plan poster (**Appendix D**).

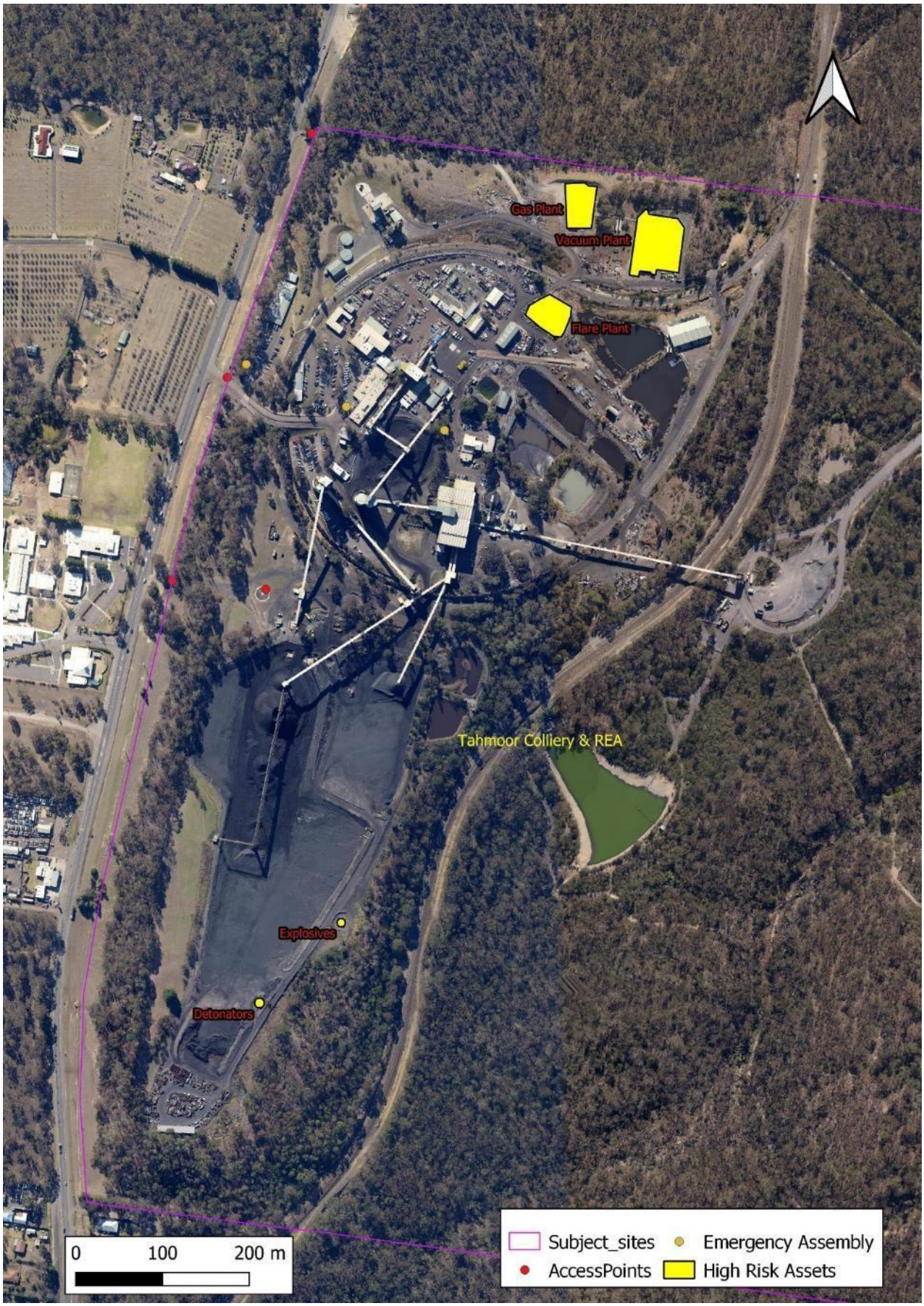


Figure 8 Tahmoor Coal site – High Risk Assets

12.3 Hazardous Substances and Dangerous Goods

Tahmoor Coal has implemented a Hazardous Substances and Dangerous Goods Management Plan (TAH-HSEC-0059) to control the risks posed from hazardous and dangerous goods to avoid damage to people, the environment and equipment.

As detailed in the Emergency Incident Manual (TAH-HSEC-00232), the manifest for hazardous and dangerous goods is located in the emergency response cabinet at the main entry to the site (**Figure 8a**).

Table 12 and **Figure 9** detail the Hazardous Substances and Dangerous Goods within the Tahmoor Coal Site Complex.

Table 11 Hazardous Substances and Dangerous Goods

Description	Location	Volume	Map Reference
Diesel Tank 1	Adjacent Diesel Workshop	30,000L	01
Diesel Tank 2	Coal Preparation Plant	15,000L	02
Diesel Tank 3	Refuse Emplacement Plant (REA)	15,000L	03
Sulphuric Acid	Storage tank – Recycled Water Treatment Plant	5,000L	04
Sodium Hypochlorite	Storage tank – Recycled Water Treatment Plant	5,000L	04
Sodium Hydroxide	Storage tank – Recycled Water Treatment Plant	5,000L	04
Explosives	Storage Magazine Shed - adjacent Coal Stockpiles	~600kg	05
Detonators *	Storage Magazine Shed - adjacent Coal Stockpiles	2000 units	06

**Detonators are stored separately approximately 130m from the explosive's magazine.*



Figure 8a: Manifest Box Emergency Information

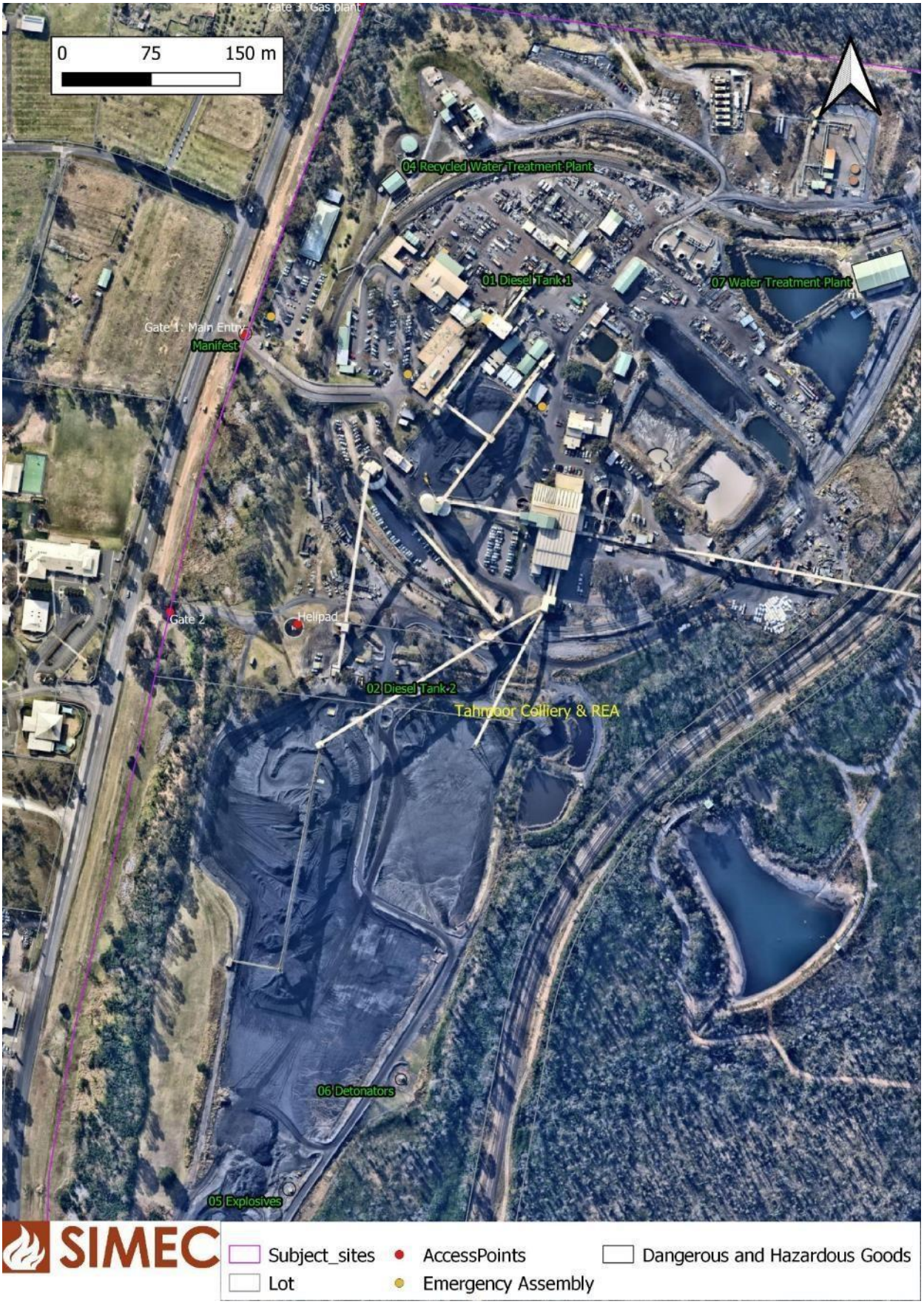


Figure 9 Tahmoor Coal site – Locations of Hazardous Substances and Dangerous Goods

13 Bushfire Protection Measures

13.1 Planning for Bushfire Protection (PBP 2019) Requirements

The Tahmoor Coal site, associated infrastructure and all currently owned properties are on Bushfire Prone Land (PFPL). PBP (2019) requires that mining companies consider hazards and risks and implement measures to manage any identified hazards and risks. The following minimum Bushfire Protection Measures (BPM's) are required.

- a minimum 10 m APZ for the structures and associated buildings/infrastructure; and
- the APZ must be maintained to the standard of an IPA for the life of the development.
- Infrastructure for the purposes of requiring APZ excludes:
- road access to the site; and
- power or other services to the site and associated fencing.

Essential equipment should be designed and housed in such a way as to minimise the impact of bush fires on the capabilities of the infrastructure during bush fire emergencies. It should also be designed and maintained so that it will not serve as a bush fire risk to surrounding bush.

This BFMP focusses on identifying all relevant bush fire risks and mitigation measures associated with the operation of the mine and owned properties. The BPM's include;

- detailed measures to prevent or mitigate fires igniting;
- work or operations that should not be carried out during total fire bans;
- availability of fire-suppression equipment, access and water;
- storage and maintenance of fuels and other flammable materials;
- notification of the local NSW RFS Fire Control Centre for any works that have the potential to ignite surrounding vegetation, proposed to be carried out during a bush-fire fire danger period toensure weather conditions are appropriate; and
- appropriate bush fire emergency management planning.

13.2 Hazard Reduction

13.2.1 Fuel management zones

Fuel Management Zones for the maintenance of the vegetated land within the site (and associatedproperties) are designed to reduce the bushfire hazards and the risk to life and property and the environment and to mitigate the chance of fires occurring on and escaping from the site.

The site has been divided into three types of Fuel Management Zones which are further described below.As far as possible, the boundaries of these management zones have been defined by fire control advantages including roads, fire trails and hand tool control lines. Details of recommended hazard management activities for Tahmoor Coal and associated properties are illustrated in **Appendix B**.

13.2.2 Asset Protection Zone (APZ)

APZ are zones adjacent to built assets (such as homes and other structures) and are designed andmanaged to:

- provide fuel reduced areas around assets or groups of assets which are adjacent to bush fire hazards
- contain highly modified vegetation to reduce the radiant heat impact during a fire
- provide a defendable space to allow residents and firefighters to operate.

The implementation of Asset Protection Zones to areas within the Tahmoor Coal sites that satisfy these requirements can be achieved through the following permissible works:

a) Mechanical work for maintenance or establishment of the APZ in accordance with the requirements of Part 4 of the Bushfire Environmental Assessment Code;

b) Pruning and tree removal in accordance with the requirements of Part 4 of the Bushfire Environmental Assessment Code;

c) Prescribed burning in accordance with the requirements of Part 5 of the Bushfire Environmental Assessment Code;

d) Construction of control lines in accordance with the requirements of Part 5 of the Bushfire Environmental Assessment Code;

e) Pile burning for disposal of vegetation removed during APZ works in accordance with Part 5 of the Bushfire Environmental Assessment Code.

13.2.3 Strategic Fire Advantage Zone (SFAZ)

Strategic Fire Advantage Zones (SFAZs) are identified and managed to:

- provide fuel reduced areas which enable the protection of assets by firefghters when asset protection zones are not in place complement APZs;
- provide strategically located fuel reduced areas and a mosaic of age classes within vegetation to reduce the potential for large bush fires to develop or spread provide areas where fire can more easily be suppressed;
- provide strategically located fuel reduced areas to reduce vulnerability of assets which are susceptible to fire.

The following management works are permissible within a SFAZ:

a) Mechanical Clearing along existing linear fire breaks or up to 6.0 metres from boundary fences and must not involve the removal of native vegetation older than ten years;

b) Prescribed burning in accordance with Part 5 of the Bushfire Environmental Assessment Code of NSW (NSW Rural Fire Service 2021);

c) Construction of Control Lines in accordance with Part 5 of the Bushfire Environmental Assessment Code of NSW (NSW Rural Fire Service 2021);

d) Pile burning for disposal of vegetation material removed during APZ or SFAZ works;

13.2.4 Land Management Zones (LMZ)

These are larger bushfire hazard reduced areas in which the management activity is prescribed burning, is undertaken in accordance with Part 5 of the Bushfire Environmental Assessment Code of NSW (NSW Rural Fire Service 2021). This work is carried out by the RFS.

13.3 Prevention of ignition

Preventative measures for each ignition source have been identified in **Table 12**.

Table 12 Preventative Ignition Measures

Ignition Source	Prevention Measures
Exploration/borehole drilling	• Awareness of risk through toolbox talks, work safety plan.
Cigarettes	• Awareness or risk through toolbox talks, work safety plan. • No smoking site. • Signage along areas of road regarding effects of disposing cigarettes from cars.
Lightning Strike	• Regularly review fire hazards. • Maintain all access roads. • Regular inspection of controls.
Hot Works	• Awareness of risk through toolbox talks, work safety plan. • Measures in place to activity and fuel source.
Vandalism (Arson)	• Secure properties (eg. Fencing, gates, patrols etc).
Neighbouring properties – farming activities, recreational activities (motor bikes / cars)	• Ensure maintained APZ boundary of study area adjacent to neighbouring properties.
Car accidents	• Ensure maintained APZ boundary of study area adjacent to roads.
Overheated engines / exhaust systems	• Ensure maintained APZ boundary of study area adjacent to roads. • Awareness of risk through toolbox talks, work safety plan. • Measures in place to activity and fuel source.
Contractors	• Awareness of risk through toolbox talks, work safety plan. • Measures in place to activity and fuel source. • Equipment is well maintained and tested.
Overheated truck tyres	• Awareness of risk through toolbox talks, work safety plan. • Measures in place to activity and fuel source. • Equipment is well maintained and tested.
Railway maintenance / sparks from wheels	• Ensure adequately maintained APZ around this source.
Hazard reduction burns	• Monitor fuel accumulation in bushland areas. • Use correct burn techniques and during correct season.

13.4 On Site Firefighting and Equipment

Tahmoor Coal has developed a Fire and Explosion Principal Hazard Management Plan (TAH0HSEC-00133) for identifying and managing the risk of fire or explosion on the site. This plan details the firefighting provisions that apply across the site including the appointment of trained fire officers and assistants throughout the site.

Fire officers require a minimum the completion of an approved course by either the NSW RFS or the Mines Rescue Services.

The following on site equipment to assist in firefighting and supressing bushfires (refer Error! Reference source not found. for general locations);

- Fire Hydrants - ring main around operations area
- Fire hose reels
- Fire Extinguishers
- Fire Blankets
- Hand Tools - rakes, shovels
- Expansion Foam and Foam Generator appliance
- Fire detection and deluge systems on conveyors
- Mobile Equipment - Rubber tyred Diesel Wheel Loader (including bucket attachment)

Full details of Fire Fighting equipment available on site (and underground) are contained in the Fire and Explosion Principal Hazard Management Plan (TAH0HSEC-00133).

13.5 Hot Works Management

Hot work is any work that has the potential to ignite nearby combustible, flammable or explosive material. The primary 'hot works' activities carried out at the Tahmoor Coal site include cutting, welding, grinding and heat treatment.

From a bushfire perspective hot work processes have the potential to ignite fires that can travel beyond site boundaries, such as grass or bush fires. Fires may also start well after the completion of any hot work activities due to residual heat.

Tahmoor Coal have developed the Hot Work Management Plan (TAH-ENG-00706) to formalise the Standards and Procedures for all Hot Work activities at Tahmoor Mine to eliminate and or minimise hazards related to health and safety of personnel and damage to operations and the environment where hot work activities are being conducted on the mine site.

Tahmoor Coal have completed an overall risk assessment to define where hot works can be conducted across the site. Where Hot Work is required in hazardous or potentially hazardous areas or in Hazardous Zones, these activities will be the subject of a separate Assessment of Risk and the application of additional task or site-specific controls. Possible Hot Work locations include, but are not limited to;

Surface Locations:

- Locations where safe hot work areas have been designated including workshops, garages, welding bays, etc
- Coal Processing Plant
- Reclaim tunnels
- Wet Areas
- Remote locations on the mine site, eg. Yards, shaft sites, reject areas, stockpiles etc
- Hazardous Areas e.g. near chemical, oil storage or other flammable materials
- Confined spaces

Underground Locations:

- Designated underground workshop or welding bay
- Designated underground splicing or vulcanising station(s)
- Non hazardous zones
- Emergency situations underground in a hazardous Zone.

This Management Plan applies to all 'Hot Work' conducted in any location within the Tahmoor Mine lease area. The Tahmoor Coal Hot Works Management Plan covers risk management, equipment standards, monitoring and testing, competencies, and general hot work operational requirements. Copies of the Hot works Management Plan are available upon request.

14 Fuel Reduction

Fuel removal is required to reduce the density of the shrub layer and fine fuels including fallen leaves, bark and spindly shrubs, particularly in asset protection zones and strategic fire advantage zones. The recent significant bushfires in 2019/20 have resulted in significant reductions in fuel levels around the site. The NSW RFS carries out prescribed burning activities annually and Tahmoor Coal are advised of any works being carried out on or nearby its properties. Figure 7 provides a summary of the most recent fire activity associated with the Tahmoor site.

To limit the speed and spread of unscheduled fire within the site, undergrowth will need to be thinned or removed, and some species managed. All exotic species of plants should be targeted when clearing to halt their proliferation and colonisation of areas particularly following prescription burns.

14.1 Smoke Management

Smoke has the potential to affect air quality for local residents, including reducing visibility for road traffic. Hazard reduction burning should be carried out during times of low fuel moisture content to minimize smoke emissions. Residents of the local area should be notified seven days in advance of prescription burns, in accordance with the notification prescriptions of the Bushfire Environmental Assessment Code and be requested to assist with removing accumulated debris adjoining their properties.

Control and underground teams should be made aware of the potential for smoke to impact on the air quality of the ventilation shafts. Ventilation shafts to be closely monitored during times of hazard reduction.

14.2 No Burn Days

Hazard reduction burning shall not be undertaken during periods when a 'No Burn Notice' has been or is likely to be issued by NSW Environment Protection Authority (EPA) unless the proposed activity qualifies for an exemption from the 'No Burn Notice'.

15 Fire trails, tracks and control lines

The implementation of the bushfire management programs recommended in this BFMP cannot be achieved without the establishment and maintenance of perimeter fire trails and control lines which contain the prescribed burns within the nominated SFAZ and LMZs.

The site currently contains a number of existing tracks, refer Table 13 below and appendices.

Control Lines are also nominated in locations as shown on the Tracks, Trails and Control Lines Plan (**Appendix B**) and form temporary, hand cleared lines to the edges of SFAZs and LMZs where existing tracks and trails do not exist. These lines are recommended to be implemented prior to the programmed hazard reduction burn and known as Hand Lines (HL).

The existing fire trail/access roads within the study area shall been maintained to provide access for heavy 4WD Category 1 Rural Fire Service Tankers.

Control Lines may also need to be located on the edge of LMZs where there are no tracks/trails or edge roads. These are recommended to be constructed by hand as part of the preparation of the programmed hazard reduction burns and identified on the Tracks, Trails & Control Lines plan as Hand Lines (HL).

Access roads into Tahmoor Coal properties have been classified as either Primary or Secondary for the purposes of the BFMP, and are included on the Bushfire Operations Management Plan Poster.

Primary roads are defined as all public roads providing access to Tahmoor Coal land/resources which are trafficable by 2XD & 4WD road going vehicles, including emergency service vehicles.

Secondary roads are roads/tracks or fire trails within the Tahmoor Coal landholdings which provide access for 4WD vehicles including NSW RFS appliances.

Table 13 Access Tracks and Fire Trail condition and works

Track Name	Type	Present Condition	Works Required	Annual Works	Comments
Tahmoor Coal and REA					
T1	Secondary	Poor to fair – overgrown & eroded	Clearing and earthworks / drainage	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection completed Sept 25. Work to be undertaken (scheduled Nov 25 subject to company operational status)
T2	Primary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection completed Sept 25. Work to be undertaken (scheduled Nov 25 subject to company operational status)
T3	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Work to be undertaken (scheduled Nov 25 subject to company operational status)
T4	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19 Work to be undertaken (scheduled Nov 25 subject to company operational status)
T5	Secondary	Fair/Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Work to be undertaken (scheduled Nov 25 subject to company operational status)
Ventilation Shaft No. 1					
NA	Secondary	New	Construction including drainage works; Security gates	Inspection in July / August – maintenance works completed by October	Inspection completed Sept 25. Work to be undertaken (scheduled Nov 25 subject to company operational status)

Track Name	Type	Present Condition	Works Required	Annual Works	Comments
Ventilation Shaft No. 2					
NA	Secondary	New	Construction including drainage works	Inspection in July / August – maintenance works completed by October	Inspection completed Sept 25. Work to be undertaken (scheduled Nov 25 subject to company operational status)
125 Anthony Road					
NA	Secondary	New	Construction including drainage works	Inspection in July / August – maintenance works completed by October	Inspection completed Sept 25. Work to be undertaken (scheduled Nov 25 subject to company operational status)
Proposed Bargo Colliery Complex					
PC2	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection of access roads required Oct 2025.
Kader Street Southarm	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection of access roads required Oct 2025.
Kader	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection of access roads required Oct 2025.
Kader Ashby Link	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection of access roads required Oct 2025.
Ashby	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection of access roads required Oct 2025.
Bargo West	Secondary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Major Bushfire around site and surrounding areas in Dec 19. Inspection of access roads required Oct 2025.
Rockford Road					
NA	Secondary	New	Maintenance	Inspection in July / August – maintenance works completed by October	Work to be undertaken (scheduled Nov 25)

Track Name	Type	Present Condition	Works Required	Annual Works	Comments
NA	Primary	Good	Maintenance	Inspection in July / August – maintenance works completed by October	Work to be undertaken (scheduled Nov 25)
NA	Secondary	Fair	Maintenance	Inspection in July / August – maintenance works completed by October	Work to be undertaken (scheduled Nov 25)
NA	Secondary	Fair	Maintenance	Inspection in July / August – maintenance works completed by October	Work to be undertaken (scheduled Nov 25)
NA	Primary	Fair	Maintenance	Inspection in July / August – maintenance works completed by October	Work to be undertaken (scheduled Nov 25)
NA	Primary	New	Maintenance	Inspection in July / August – maintenance works completed by October	Work to be undertaken (scheduled Nov 25)

16 Emergency Response

16.1 Emergency Response Procedures

In the event of a bushfire occurring the following procedure will be implemented;

- The fire will be reported to Control Room (emergency numbers 555 or CHPP CH3).
- Control Room to refer to Emergency and Incident Manual (TAH-HSEC-232), Emergency and Incident Control Plan (TAH-HSEC-235) and the Bushfire Operations Management Plan (TAH0050).
- If the fire is small, easily accessible and travelling at a slow rate of spread, trained staff may attempt suppression with water hoses, portable fire equipment or earthmoving equipment if available.
- Incident responders to refer to the Surface Bushfire Response TARP (**Appendix A**) noting that the distance of a bushfire event to the site (including No1 and No.2 Shaft) triggers a defined level of response from an initial awareness of the event to preparedness and finally evacuation of the site.
- Large fires will be reported to the RFS on '000' by the Control Room/Incident Controller and respond in accordance with the TARP and emergency control procedures.
- Control Room/Incident Controller will instruct personnel to leave the area and assemble at designated emergency evacuation locations. Sentry personnel will be organised if required. Log of personnel to be maintained.
- Control Room/Incident Controller to maintain contact with RFS.
- Environment and Community Manager or delegate to contact neighbouring properties if required.
- Contact with media to be as per Emergency and Incident Manual.
-

16.2 Supporting NSW RFS and Emergency Services during a Bushfire

The process to support the NSW RFS and Emergency Service in the event of a bushfire (including controlled backburns) is summarised as follows;

a) Provision of Site Manifest at Front Gate to inform of hazardous substances and dangerous goods and the location of firefighting resources.
b) Activation of Incident Management Team (as defined in site procedures) including senior management and trained firefighting personnel to liaise and support firefighting activities.
c) Identification of critical site assets to be protected.
d) Provide direction and assist access to fire hydrants, hoses and internal dams suitable for firefighting.
e) Coordination of the evacuation of site personnel.
f) Provide trained firefighting personnel to support firefighting activities as required.
g) Provide mobile equipment including all terrain articulated forklift and water trucks where required.

16.3 Bushfire Operations Management Plan Poster

A Bushfire Operations Management Plan Poster has been prepared to provide a summary of the bushfire site considerations and protection measures for the Tahmoor Coal site. A copy of the Bushfire Operations Management Plan Poster is located on notice boards in key locations across the site. A copy of the Bushfire Operations Management Plan Poster has been provided to the Southern Highlands RFS team. The current version (December 2023) is considered relevant to this Management plan and has been included in **Appendix C** for reference purposes. The Bushfire Operations Management Plan Poster is to be reviewed an updated at least every 3 years or when major changes to the Tahmoor Site has occurred.

16.4 Emergency Contracts

The Emergency contact details for key Tahmoor Coal are listed in **Table 14**. Refer also to Emergency and Incident Contacts Register – TAH-HSEC-00233.

Table 14: Tahmoor Coal Emergency Contacts

Contact	Internal Ext no.	Ph Number
24 Hour Contact – Mine Control Room	7111	(02) 46400 111 (02) 46400 176
Executive General Manager – Peter Vale	7110	0418 617 924
Mining Engineering Manager – Malcolm Waterfall	7023	0438 868 429
Head of Tahmoor Coal Operations – Clint Mason	7150	0409 016 853
CHPP Manager – Jason Prestwidge	7013	0408 669 416
Health & Safety Manager – Phil Jones	7026	0418 213 704
Surface Services Superintendent – Pushkin Rahman	7062	0467 727 134
Environment and Community Manager – Zina Ainsworth	7109	0438 284 106
Undermanager's Office	7166 / 7049	(02) 46 40 0166 (02) 46 40 0049

16.5 Monitoring Program

A monitoring program should be conducted to reduce the risk of bushfire occurring. The monitoring program should be updated regularly where necessary. A suggested monitoring program has been provided in **Table 15**.

The objectives of monitoring are to measure the effectiveness of management strategies in achieving the fuel management objectives of the BFMP. The following ongoing monitoring shall be undertaken:

a) Establish sites to monitor fuel loadings in all SFAZ and LMZs;

b) In August/Sept, undertake annual inspection of the APZs and the SFAZs;

c) In August/Sept, undertake annual inspection of the fire trails, access tracks and condition of vegetation and fuel loadings at all Tahmoor Coal properties;

d) Document the cause of unplanned fires and the effectiveness of the emergency response. This process of assessment will ensure that the occurrence of unplanned fires is reduced through adaptive management;

Table 15 Recommended monitoring Program

Area to inspect	Criteria	Timing	Responsibility
Fuel loads	Is a hazard reduction burn necessary?	August / September Annually	Tahmoor Coal Pty Ltd
Roads – Primary and Secondary	Condition of road, suitability for access	Prior to, and throughout bushfire season (October – April) Annually	Tahmoor Coal Pty Ltd
Fire Trails	Condition of trail, suitability for access by Fire Appliances	prior to, and throughout bushfire season (October – April) Annually	Tahmoor Coal Pty Ltd
APZ	Is a hazard reduction burn necessary?	August / September Annually	Tahmoor Coal Pty Ltd
SFAZ	Is a hazard reduction burn necessary?	August / September Annually	Tahmoor Coal Pty Ltd
Critical infrastructure	Level of fuel loads around critical infrastructure. Is a hazard reduction necessary?	August / September Annually	Tahmoor Coal Pty Ltd

16.6 Bushfire Management Plan TARP

Tahmoor Coal have developed a preliminary Surface Bushfire Response TARP (**Appendix A**). The TARP has been prepared to provide staged Alert responses subject to the location of a bushfire event relative to the Tahmoor Coal Site (including No.1 and No.2 Shafts). The TARP has three response levels;

Alert Level One	A bushfire is in the area and within 10km of the mine site.
Alert Level Two	Bushfire status has increased and is within 5km of the mine site and or prevailing winds are directing fire and embers towards the mine site.
Alert Level Three	**Emergency warning** – The fire is within 2km of the mine site.

The distance of a bushfire event to the site triggers a defined level of response from an initial awareness of the event to preparedness and finally evacuation of the site.

It should be noted that bushfires are intrinsically unpredictable, and no guarantee is able to be provided or should be assumed that the Tahmoor Coal site and associated properties will not be affected by bushfire at some time. Bushfires are an intrinsic part of Australia's environment, are often unpredictable, and have potentially extremely serious consequences.

The Bushfire Management TARP is to be used as a guide only and defined responses may vary dependent upon the location, intensity and prevailing weather conditions particularly in catastrophic bushfire events.

17 Continuous Improvement

Tahmoor Coal have adopted the "Plan-Do-Check-Act" model as shown in **Figure 10**. This model will be applied to all aspects of Tahmoor Coal's environmental management including bushfire management and is utilised to embed the continuous improvement process in all system documents. In regard to bushfire management and in the absence of set performance criteria/indicators, the continuous improvement process outlined below will be utilised to monitor the effectiveness of management measures.

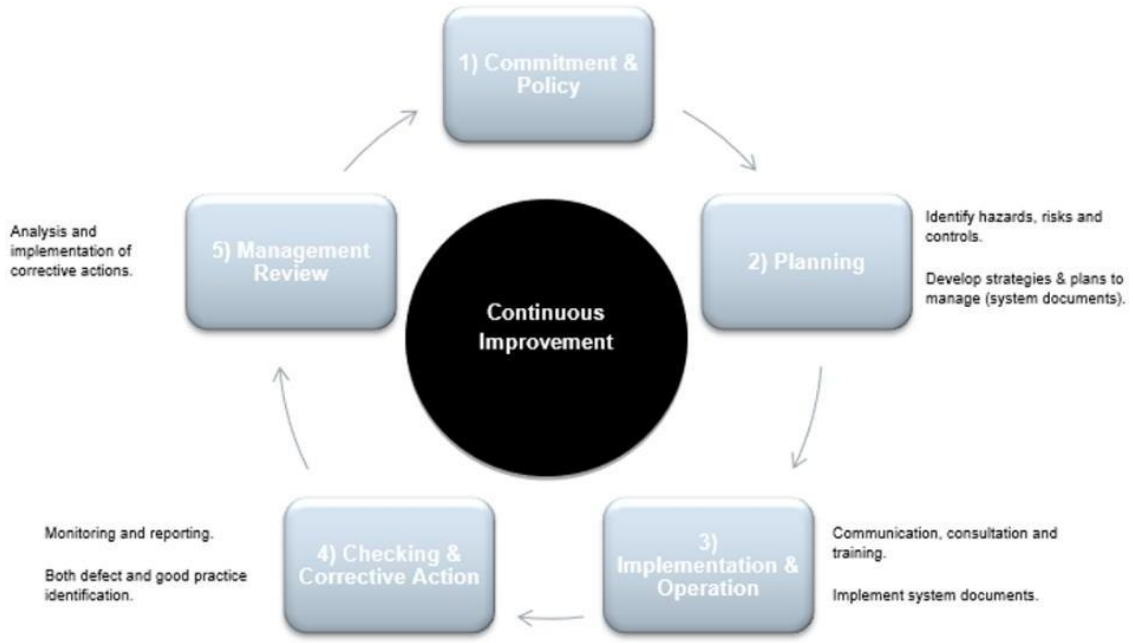


Figure 10 Continuous Improvement Model

Continuous Improvement is an ongoing process, however consideration of timing and frequency for review and improvement of the Bushfire Management Plan is defined in **Section 19.2** of the document.

18 Tahmoor Environmental Management System (EMS) Framework

The Tahmoor Environmental Management System (EMS) Framework provides the strategic context for the environmental management of Tahmoor Coal and forms part of the broader Health, Safety, Environment and Community (HSEC) management systems at Tahmoor Coal. The EMS outlines how Tahmoor Coal manages environment and community (E&C) aspects, impacts and performance. It provides a framework for the standards, plans and procedures implemented to ensure operations are managed in accordance with the ISO:14001 principles.

The objectives of the EMS are:

a) To provide an overall framework for environmental management at Tahmoor utilising the principles of ISO:14001;

b) To ensure compliance with all development consent, licences and approvals at Tahmoor Coal;

c) To detail the relationship and interactions between various operational and environmental components at Tahmoor Coal;

d) To provide effective mechanisms for external communications, maintaining a relationship with the local community; and

e) To assist Tahmoor Coal employees and contractors in administering their responsibilities regarding environmental management.

This plan will be implemented in conjunction with the EMS framework.

18.1 Incidents

The Consent defines an incident as '*an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance*'.

Material Harm is defined within the Consent as 'harm to the environment that:

- involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or results in actual or potential loss or property damage of an amount, or
- amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)

This definition excludes "harm" that is authorised under either this consent or any other statutory approval.'

Tahmoor Coal manages and responds to incidents in accordance with the following plans:

a) Emergency and Incident Manual (TAH-HSEC-00232).
b) Pollution Incident Response Management Plan (TAH-HSEC-00155)
c) Notification of Environmental Pollution Incidents (TAH-HSEC-00224)
d) Bushfire Management Plan (TAH-HSEC000187)

These plans have been developed to manage preparation, incident response and reporting requirements under the Protection of the Environment Operations Act 1997 (NSW).

The management plans provide roles and responsibilities, management strategies, action and response plans and record management protocols for incidents and emergencies.

A Written Incident Notification will be submitted to the Planning Secretary via the Major Projects website within seven days after Tahmoor Coal becomes aware of a bushfire related incident.

Written Incident Notifications will include:

a) the development and application number;
b) details of the incident (date, time, location, a brief description of what occurred and why it is classified as an incident);
c) how the incident was detected;
d) when Tahmoor Coal became aware of the incident;
e) any actual or potential non-compliance with conditions of consent;
f) describe what immediate steps were taken in relation to the incident;
g) identify further action(s) that will be taken in relation to the incident; and
h) identify a project contact for further communication regarding the incident.

Within 30 days of the date on which the incident occurred or as otherwise agreed to by the Planning Secretary, Tahmoor Coal will provide the Planning Secretary and any relevant public authorities (as determined by the Planning Secretary) with a Detailed Incident Report.

Detailed Incident Reports will include:

a) a summary of the incident;
b) outcomes of an incident investigation, including identification of the cause of the incident;
c) details of the corrective and preventative actions that have been, or will be, implemented to address the incident and prevent recurrence; and
d) details of any communication with other stakeholders regarding the incident.

18.2 Non-Compliances

The Consent defines a non-compliance as 'an occurrence, set of circumstances or development that is in breach of the consent'.

Non-compliances or system defects detected during monitoring, inspections and audits will be managed in accordance with the Tahmoor South Environmental Management Strategy Management Plan (TAH-HSEC-00375), with corrective action plans developed and implemented to rectify any issues.

The Planning Secretary will be notified in writing via the Major Projects website within seven days after Tahmoor Colliery becomes aware of any non-compliance with the Consent conditions relating to Bushfire.

If a non-compliance is detected, the following steps will be followed:

a) Identify and confirm the non-compliance (i.e. review against approval criteria or condition and confirm that a non-compliance has occurred);
b) Complete internal environmental incident reporting documentation including an investigation to capture all relevant information;
c) In accordance with the relevant approval, determine what action (i.e. external reporting) is required. Specifically, determine if immediate reporting is required and to which stakeholders, or ensure that the event is captured for future reporting;
d) Following the incident investigation, develop a corrective action plan aimed at preventing future re-occurrence; and
e) Complete all required reporting and consult with relevant agencies on the corrective action plan to be implemented.

A non-compliance notification will identify the following:

a) the development and the application number,
b) the condition of consent that the development is non-compliant with
c) the way in which it does not comply and the reasons for the non-compliance (if known); and
d) any actions which have been, or will be, undertaken to address the non-compliance.

A non-compliance which has been notified as an incident does not need to also be notified as a non-compliance.

18.3 Complaints and Disputes

Community Complaints at Tahmoor Coal are managed in accordance with TAH-HSEC-00119-Communication and Engagement and TAH-HSEC-00120- Community Complaints & Enquiry Procedure. Tahmoor Coal operates a 24-hour complaints line (1800 154 415) for receiving community complaints and other stakeholder communications.

18.4 Roles & Responsibilities - E&C management

Environmental Management, including bushfire management, is regarded as part of the responsibilities of all employees and contractors at Tahmoor Coal. Specific information pertaining to the role, responsibility, authority and accountability of key personnel involved in environmental management at Tahmoor Coal is provided in **Table 16** below.

Table 16 Responsibilities

Role	Responsibilities for this document
Operations Manager	Provide adequate environmental personnel/resources for implementation of this plan and associated plans.
Environment & Community Manager	Facilitate a process of managing overall compliance with regulatory requirements and undertake external reporting for legislative non-compliances as required. Determine adequate resources and funds are available to ensure the effectiveness of this procedure; and certify compliance and adherence to this plan. Develop, implement and maintain this plan. Liaise with relevant government authorities in relation to regulatory conditions and compliance issue.
All Managers	Activities under their control are to be undertaken in accordance with this plan and associated management plans and site procedures. Manage environmental controls within their jurisdiction are operated and maintained in a proper and efficient manner. Report all environmental incidents and complaints in a timely manner.
Environmental Specialist	Responsible for coordinating environmental compliance on-site including timely completion of monitoring and reporting in accordance with internal and external requirements. Sign off on the accuracy of reports and the suitability of recommendations. Develop, implement, review and maintain this plan and system documents. Implement process for self-assessment audits. Assign persons responsible for completion of audit actions and set a due by date. Monitor that planned actions arising out of audits are implemented. Ensure all community complaints are addressed, investigated and appropriately managed as per site procedures, and reported internally as per internal requirements.
All Coordinators	Activities under their control are to be undertaken in accordance with this plan and associated management plans and site procedures. Manage environmental controls within their jurisdiction are operated and maintained in a proper and efficient manner. Report all environmental incidents and complaints in a timely manner.
All Persons	Activities under their control are to be undertaken in accordance with this plan and associated management plans and site procedures. Manage environmental controls within their jurisdiction are operated and maintained in a proper and efficient manner. Report all environmental incidents and complaints in a timely manner.

18.5 Internal Audits & Reviews

In accordance with internal company requirements, Tahmoor Coal has implemented a system for the monitoring and review of E&C performance at the site. Tahmoor Coal is to provide ongoing monitoring and regular management review of E&C performance to:

a) Confirm the adequacy and effectiveness of management plans, procedures and standards;

b) Address any identified weaknesses;

c) Share good performance and lessons learnt with other sites; and

d) Ensure ongoing compliance with all leases, licences and approvals.

Process or area specific internal audits are also conducted periodically, generally administered by the E&C Manager.

These audits may be conducted by consultants on behalf of Tahmoor Coal, by Liberty GFG employees or may be self-assessments conducted by Tahmoor Coal personnel. Audit results and corrective actions are recorded in Cority and assigned to responsible personnel for completion within appropriate timeframes.

18.6 Employee & Contractor Environmental Training

Environmental training for Tahmoor Coal employees and contractors is conducted in accordance with the Environment & Community Training Needs Analysis, which Tahmoor Coal manages through the Scenario Training Database. General environmental awareness training is provided to all employees and contractors annually through a generic visitor induction and the SIMEC GFG Safety training session scheduled by the Tahmoor Coal Health, Safety & Training Department.

It is recommended that Fire NSW and the NSW RFS are contacted at least every 2 years to arrange a site and key property tour to enable familiarisation with site access, high risk assets, hazardous and dangerous goods and firefighting procedures.

19 Review and Improvement

19.1 Plan Audit

Audits of the BFMP be conducted in consultation with the Plan owner and nominated individuals and shall focus on the content and implementation.

Audits on the content shall consist of a determination of understanding of the BFMP by the individual's allocated responsibility under this plan.

Audits on the implementation shall consist of reviews of the safe working procedures and risk assessments developed to ensure safe operation of this BFMP, they may also involve discussions with personnel involved in the management plan to determine understanding and compliance.

Should an audit of this BFMP determine that a deficiency is evident in the content or implementation; a corrective action must be developed and implemented. Actions will be assigned to a nominated individual and tracked in Cority.

The E&C Manager is responsible to verify that the nominated corrective action has been implemented by way of a follow up audit.

Any changes BFMP are to be managed and communicated to all personnel in line with the Change Management Process.

19.2 Plan Review

This BFMP will be reviewed:

Event based: in accordance with Condition E7 (a) of the Consent, a review will be required within

3 months of any incident, event or finding that identifies an inadequacy in the BFMP, risk assessment or associated documents to continue to effectively manage the identified hazard; a change to the workplace itself or any aspect of the work environment, a change to a system of work, a process or a procedure; or

Time based: in the absence of regular event-based reviews and in accordance with Condition E7 (b-e) of the Consent, this plan will be reviewed within three months of:

a) the submission of an Annual Review under Condition E13;
b) the submission of an Independent Environmental Audit under Condition E15;
c) (the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or
d) notification of a change in development phase under Condition A19;

If deemed appropriate, external service providers may be included in the review process. All reviews are to be documented.

20 Document Information

Relevant legislation, standards and other reference information will be regularly reviewed and monitored for updates and will be included in the site management system. Related documents and reference information in this section provides the linkage and source to develop and maintain site compliance information.

20.1 Access to Information

Information pertaining to Tahmoor Coal's general environmental performance against internal targets and external approvals criteria is reported to the community via the mine website and Tahmoor Coal's Community Consultative Committee (TCCCC). Examples of reports to government agencies include:

a) Environmental Protection License Annual Return (submitted to Environment Protection Authority);
b) Annual Review (submitted to Department of Planning & Infrastructure, Council, TCCCC etc.); and
c) Independent Environmental Audit (submitted to Department of Planning, Housing & Infrastructure).

These reports are prepared in accordance with relevant guidelines and are published on Tahmoor Coal's website in accordance with *TAH-HSEC-00221- Website Management Procedure.*

20.2 Related Documents

Related documents, listed in the below table, are internal documents directly related to or referenced from this document.

Table 17 Related Documents

Number	Title
TAH-HSEC-00232	Emergency and Incident Manual
TAH-HSEC-00155	Pollution Incident Response Management Plan
TAH-HSEC-00224	Notification of Environmental Pollution Incidents
TAH-HSEC-00039	Stakeholder Engagement Plan
TAH-HSEC-00221	Website Management Procedure
TAH-HSEC-00233	Emergency and Incident Contacts Register
TAH-ENG-00706	Hot Work Management Plan
TAH-ENG-00059	Hazardous Substances and Dangerous Goods

20.3 Reference Information

Reference information, listed in the below table, is information that is directly related to the development of this document or referenced from within this document.

Table 18 Reference Information

Title
Keith D, 2006, Ocean shores to desert dunes, NSW Government, NSW Parks and Wildlife Service, Hurstville.
Niche 2020: J.Reeves, R.Regal. Aboriginal Cultural Heritage Assessment Amended Tahmoor South Project – Regulator Document, Feb 2020.
Niche 2011-12:
NSW Rural Fire Service (2019). Planning for Bush Fire Protection – A guide for Councils, Planners, Fire Authorities and Developers. Prepared by NSW Rural Fire Service in cooperation with the Department of Planning.
Niche Environment and Heritage (2011b) Innes street ventilation shaft flora and fauna assessment, Prepared for Glencore Coal.
Niche Environment and Heritage (2011c) Ventilation shaft no. 2 fence construction flora and fauna assessment, Prepared for Glencore Coal.
Niche Environment and Heritage (2011d) Bridge street bund wall flora and fauna assessment, Prepared for Glencore Coal.
Niche Environment and Heritage (2011 to current) Review of Environmental Factors: Seismic line surveys and borehole assessments for Glencore Coal.
Niche Environment and Heritage (2012) Tahmoor colliery S4 pipeline vegetation clearing, Prepared for Glencore Coal.
NSW RFS July 2021: Bushfire Environmental Assessment Code;
Tozer MG, Turner K, Keith DA, Simpson C, Beukers P, Mackenzie B, Tindall D, Pennay C, (2004) Native vegetation of southeast NSW: a revised classification and map for the coast and eastern
BFMC (2017) Wollondilly/Wingercarribee Bushfire management Committee Bushfire Risk Management Plan – NSW Bushfire Co-ordinating Committee.
BFMC (2025) Wollondilly/Wingercarribee Bushfire management Committee Bushfire Risk Management Plan (Draft), Policy 01/2023 – NSW Bushfire Co-ordinating Committee.

21 Change Information

Table 19 Full details of the document history are recorded in the document control register, by version

Version	Date Reviewed	Review team (Consultation)	Change Summary
1.0	27/10/2021	Tahmoor E&C	First draft
1.1	09/12/2021	NSW RFS (Southern Highlands Team)	Updated based on feedback from RFS.
1.2	16/02/2022	DPIE	Updated based RFI letter from DPIE dated 28/01/2022
2.0	17/06/2022	Natalie Brumby	Reviewed in accordance with Condition E7(b) of SSD 8445 following submission of the 2021 Annual Review to DPE. Reviewed in accordance with condition E7(e) of SSD 8445 following change in development phase under condition A9 (construction commencement on 16th May 2022).
3.0	19/10/2022	Natalie Brumby	Reviewed in accordance with Condition E7(c), (d) and (e) following an Independent Environmental Audit (10th August 2022), following the approval of any modification (Mod 1 approved 19th July 2022) and following the commencement of first and second workings (18th Oct 2022) of the Consent SSD 8445.
4.0	30/06/2023	Natalie Brumby	Reviewed in accordance with Condition E7(b) following the submission of an Annual Review (31st March 2023), Condition E7(c) following the submission of an Independent Environmental Audit (2nd June 2023) and Condition E7 (d) following the approval of any modification (MOD 2 - 13th June 2023) of the Consent SSD 8445.
5.0	25/06/2024	Natalie Brumby	Reviewed in accordance with Condition E7(b) following the submission of an Annual Review (28th March 2024). General review and update completed. Removed Letter of Endorsement.
6.0	03/10/2025	David Talbert	Review in accordance with Condition E7(d) following the approval of Modification 3 (on 26 May 2025) and Condition E7(b) following the submission of an annual review (on 30 September 2025).

21.1 Appendix A: Surface Bushfire TARP

Surface Bushfire Response TARP

SIMEC Tahmoor Colliery

Alert Level One	Alert Level Two	Alert Level Three
A bushfire is in the area and within 10km of the mine site.	Bushfire status has increased and is within 5km of the mine site and or prevailing winds are directing fire and embers towards the mine site.	**Emergency warning** – The fire is within 2km of the mine site.

Mine Coordinates **= -34.24981, 150.57762**
Helipad Coordinates **= -34.25211, 150.57677**
To obtain bush fire information updates:
Bush Fire Information Line - **1800 NSW RFS (1800 679 737)**
RFS Southern Highlands – Picton Office , 65 Bridge St Picton NSW 2579 **(4677 7000)** & Mittagong Office cnr Priestley and Etheridge St Mittagong NSW 2571 **(4868 5500)**
To obtain Road Information (Road Closure etc.) All Hours - **132 701**
For major Fire updates https://www.rfs.nsw.gov.au/fire-information/major-fire-updates
For daily updates on fires https://www.rfs.nsw.gov.au/fire-information/fires-near-me
Daily updates on proximity of Fire "Hot Spots" https://sentinel.ga.gov.au/#/
Weather Forecast Update https://www.weatherzone.com.au/nsw/Tahmoor
Wind Direction and Forecast https://www.windy.com/?-34.245,150.599,14,m:cH3akl6

Formation of IMT
When initiating an IMT for the purpose of assessment of Bushfire Threat the following people as a minimum **MUST** be in attendance or a delegate sent in their absence.
Mining Engineering Manager, Production Manager, Engineering Manager, CHPP Manager, Environmental Manager, Site Safety and Health rep (additional persons may be called in to assist as required)

Underground CO and Smoke
During any period where there is an active bushfire in the local area, wind direction can quickly change, and smoke and CO levels can increase and decrease on site as a result. During any trigger level being exceeded the background levels of smoke and CO should be considered during decision making by the IMT. When assessing the operations of the mine during this time the following background CO levels will apply under the sites WITHDRAWALTARP (Effects of a surface fire detected underground)

- **<8 PPM**
- **>8 <15 PPM**
- **>15 PPM >30 minutes**

***NOTE**: If persons are withdrawn from the mine they are to assemble on the surface in the muster/ lamp room a decision will be made by the Senior Mining Official regarding whether to leave site or wait until the smoke threat has cleared and / or the CO levels have dropped back below the limits and are trending down.*

Where **Hazard Reduction Works** or a **controlled back burn** is in place by RFS within the specified distances in the TARP the TARP will **automatically default to** Level 2 and communications **MUST be maintained with RFS**

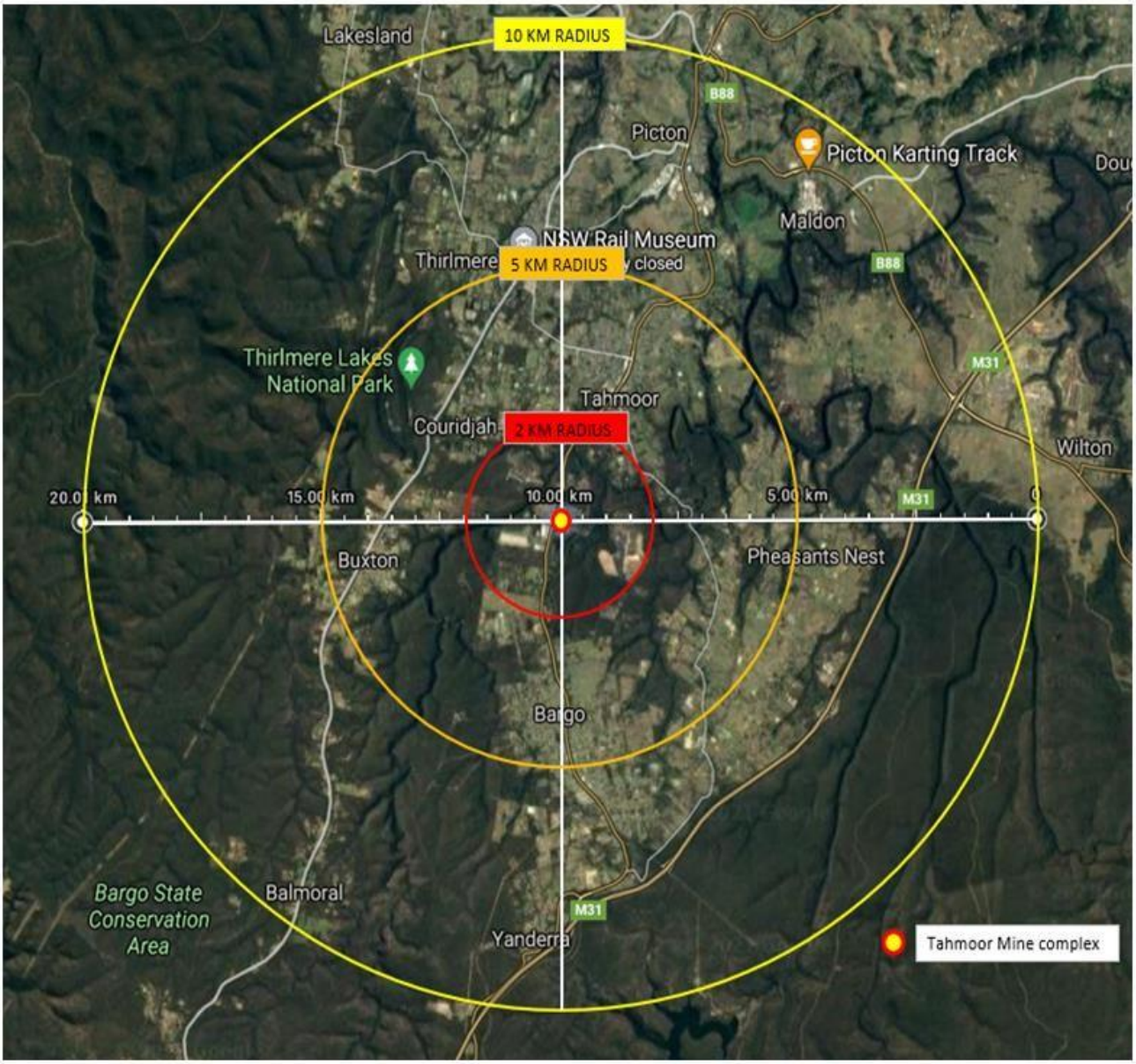
Surface Fire Fighting Strategy (Refer TAH-HSEC-00187: Bushfire Operations Management Plan)
The following strategy is to be used as a guide in the event of the bushfire triggering the response plan.

- Early contact with RFS **MUST** be established especially if approval is required to clear around critical infrastructure on site *i.e. clearing vehicle access pathways around critical mine infrastructure*
- The direction and speed of the fire will determine where the response plan will focus, e.g. a fire approaching from the North will trigger a response with external fire teams protecting site assets from the main fan site and if closer to site then the surface gas plant and then retreating toward the compressor shed into the yard.
- Consider deploying appropriately trained teams across site to check/manage possible ignitions from ember attack.
- Considering weather and fire conditions the IMT will develop the asset protection plan and ensure suitable information is provided to the NSW Fire Brigade and or RFS
- If a last resort strategy was activated for fighting a fire utilising the mines Fire team until emergency services arrived on site, then the following resources will need to be implemented:
  - Water Trucks (currently used at the washery and REA)
  - 65 and 38mm fire hoses and fittings that can be attached to the mines surface water hydrants
- Fire Team Supervisors must be allocated to each team by the Incident controller or his delegate
- A team allocated to carry out fire fighting duties must be of **3 or more** suitably trained persons
- All teams **MUST** carry communication radios which are to be set to channel that is agreed on the Incident controller through the IMT process on site
- The Manager if not acting in the IC position **MUST** appoint an **Incident Coordinator** who will be responsible for allocation of teams to specific areas and tracking teams' locations, time active and designated return times to the Control Room Area.

Level 1 One Action

Incident – Bushfire is within **10km** – No immediate danger

1. Inform Mine Manager, notify CHPP Manager
2. Establish trend of bushfire by contact with the **Bush Fire Information Line** - 1800 NSW RFS **(1800 679 737)**
3. IMT to be established and meet at least every 24 hours to update the situation (may be more frequently dependent on fire behaviour)
4. Develop and review action plan for site preparedness including back up systems in the case of power outage
5. Check all surface firefighting equipment is operational and in place for the prevention of spot fires
6. Liaise with RFS Southern highlands
7. Workforce to be formally notified regarding the location and status of the fire and the action plan

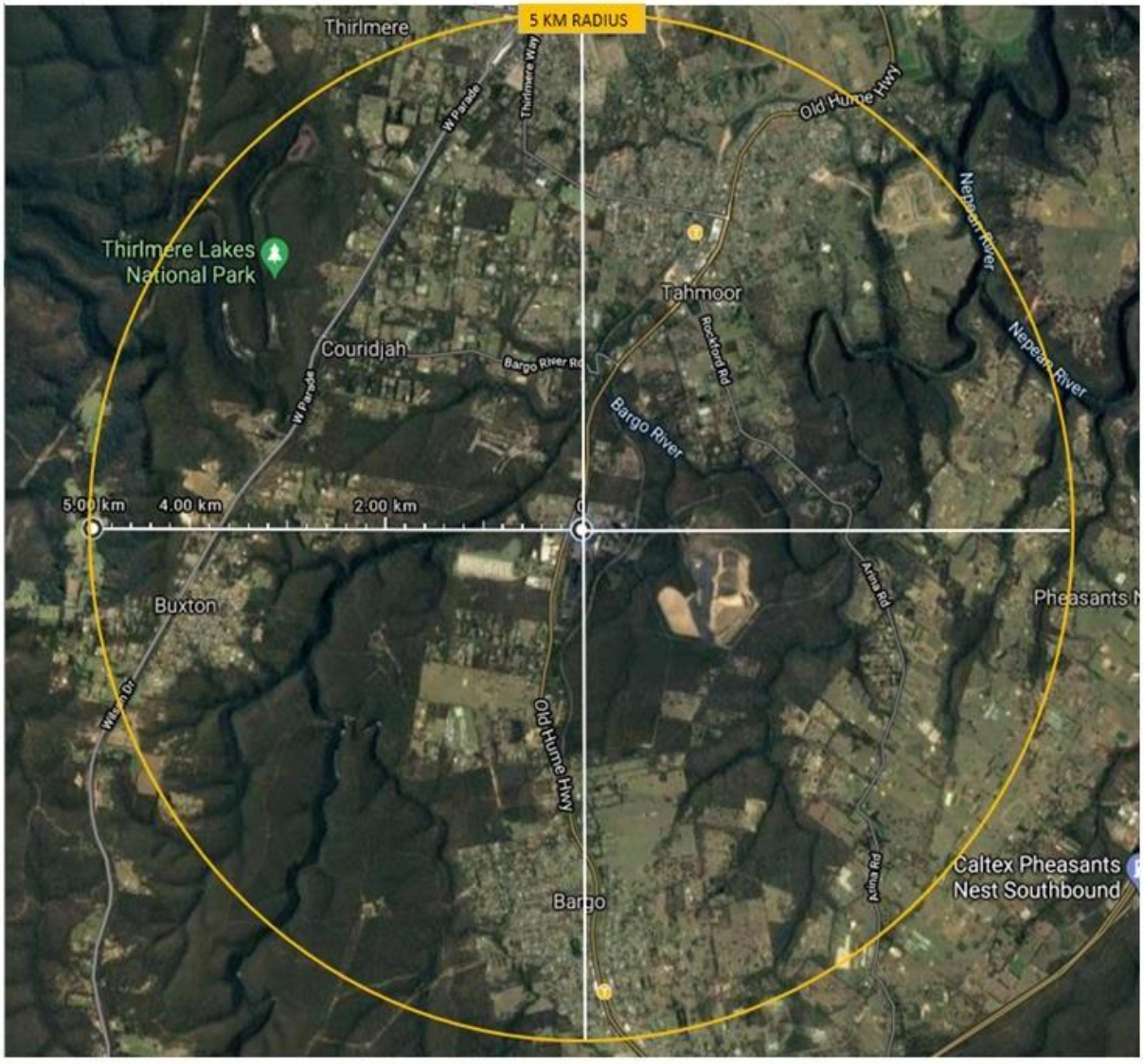


Level 2 Two Action

Incident – Bushfire within **5km** – heightened level of threat

As per Level One (1) actions and the following:

1. IMT to review fire location, weather forecast, wind direction / speed
2. If required by the Manager of mining engineering through the IMT process develop a list / roster for site coverage and availability of persons in the event of escalation to **Level 3**
3. Identify critical site assets that are required to be protected (if possible, by RFS) see back of TARP for Asset protection locations. Review if additional assets are to be included
4. Dependant on fire status / wind speed and direction consideration should be given to:
    - **Escalating to level 3** sooner if the threat is rapidly approaching the mine portals Return and or intake shafts (NO#2, NO#1, NO#3, and Drift) or if prevailing weather conditions are directing fire toward site.
    - Smoke and CO levels both UG and on surface areas of the mine site.
    - Rate of change of the surface bush fire and consider the time that is required for a full mine withdrawal.
    - Review the need to withdraw all persons based on any or all of the above points

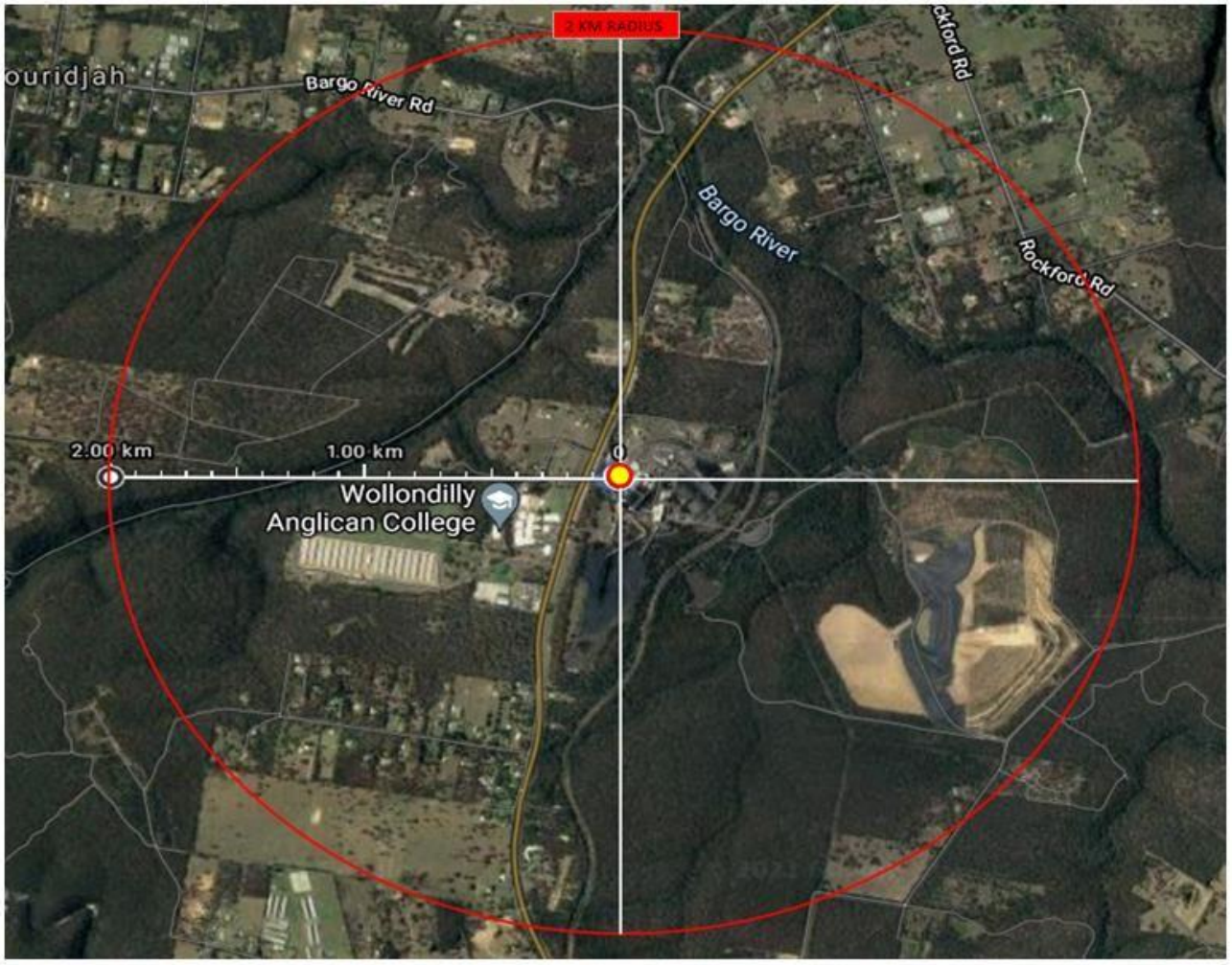


Level 3 Three Action

Incident – Bushfire within **2km** – mine and personnel; are in danger and action needs to be taken

As per Level One (1) and Level Two (2) including the following:

1. If all information indicates the mine or its personnel are at danger, then the Mine site evacuation is to be coordinated by Mining Engineering Manager or Senior Shift Official.
2. All persons on site are to assemble at the Carpark Evacuation station where a member of the SLT will capture and cross reference all people on site and leaving site and to verify all site offices have been evacuated as per the Emergency and incident control plan (TAH-HSEC-235)
3. If personnel are leaving site, ensure and advise escape routes that are open to traffic and ascertain potential and active road closures by contacting Narellan Police Station on (02) 4632 4499).
4. Mine Manager to liaise with RFS and deploy a site representative to RFS Operations Centre (65 Bridge street Picton 2571, Ph 46777000) to report status updates directly to Control room officer or a dedicated person who will be issued the duty as the control room "off-site" attendant
5. Decision for fire teams to stay and defend or evacuate site to be determined by Mine Manager and / or Senior Shift official
6. CHPP Manager to notify Rail Providers and Shipping agent of train cancellations
7. Identify critical site assets that are required to be protected (if possible, by RFS) see back of TARP for Asset protection locations. Review if additional assets are to be included
8. Follow directions of Emergency Services personnel at all times whilst on site



TAHMOOR NO#1 SHAFT

2km Radius from down cast shaft

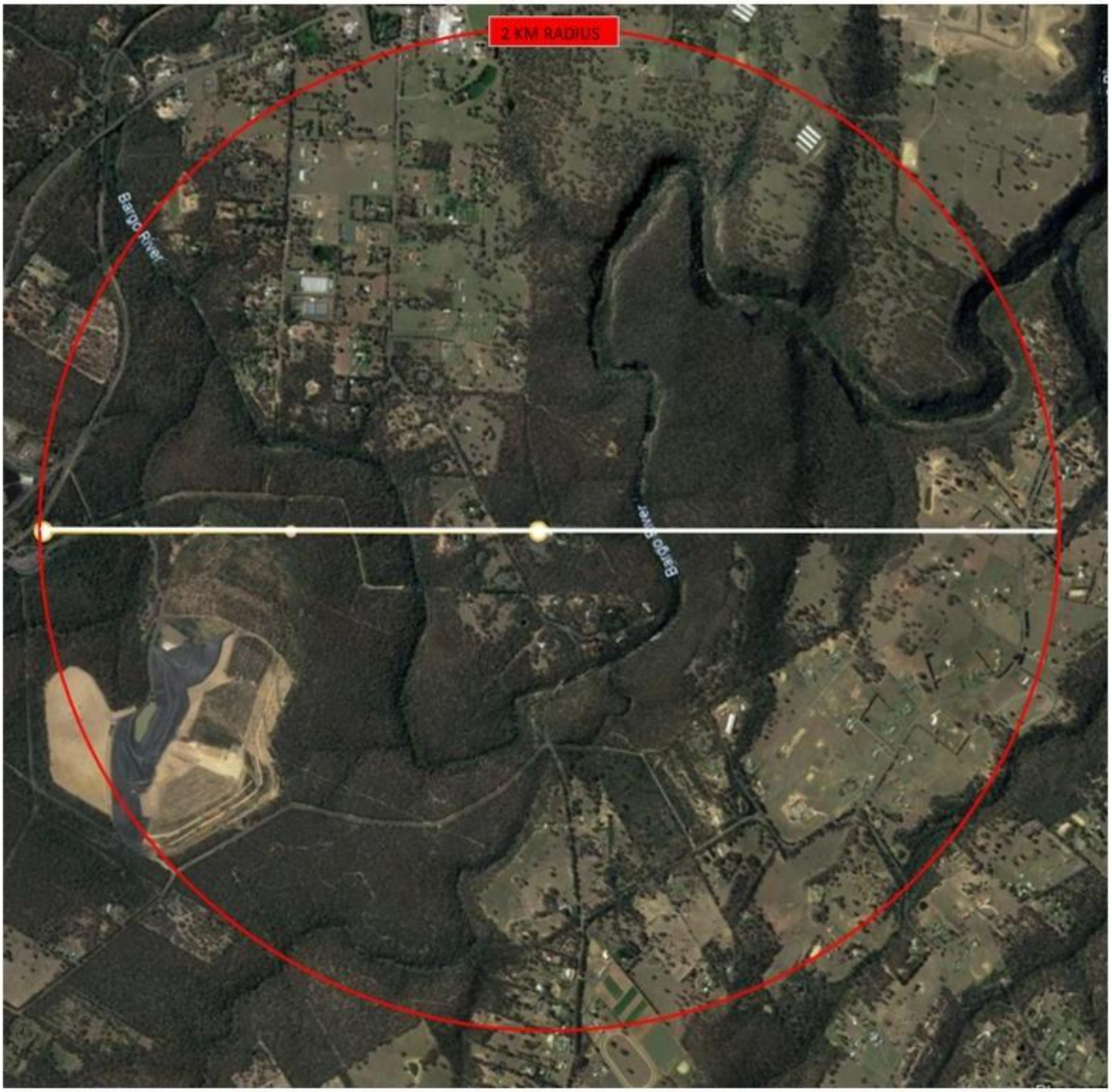
Coordinates -34.23957, 150.58810



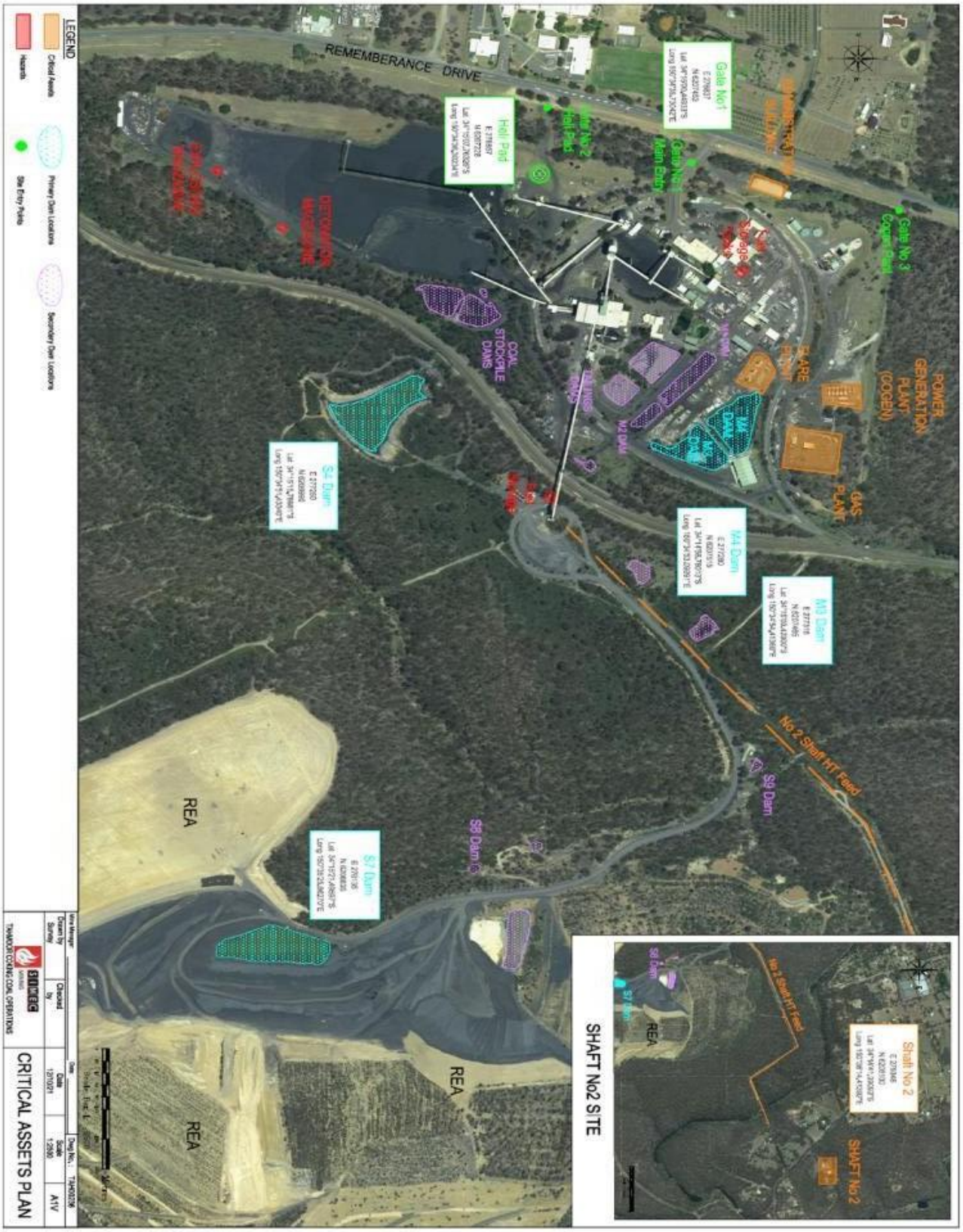
TAHMOOR NO#2 SHAFT

2km Radius from upcast shaft

Coordinates -34.24471, 150.60418



Critical Assets and Coordinates



21.2 Appendix B: Site and Property Management

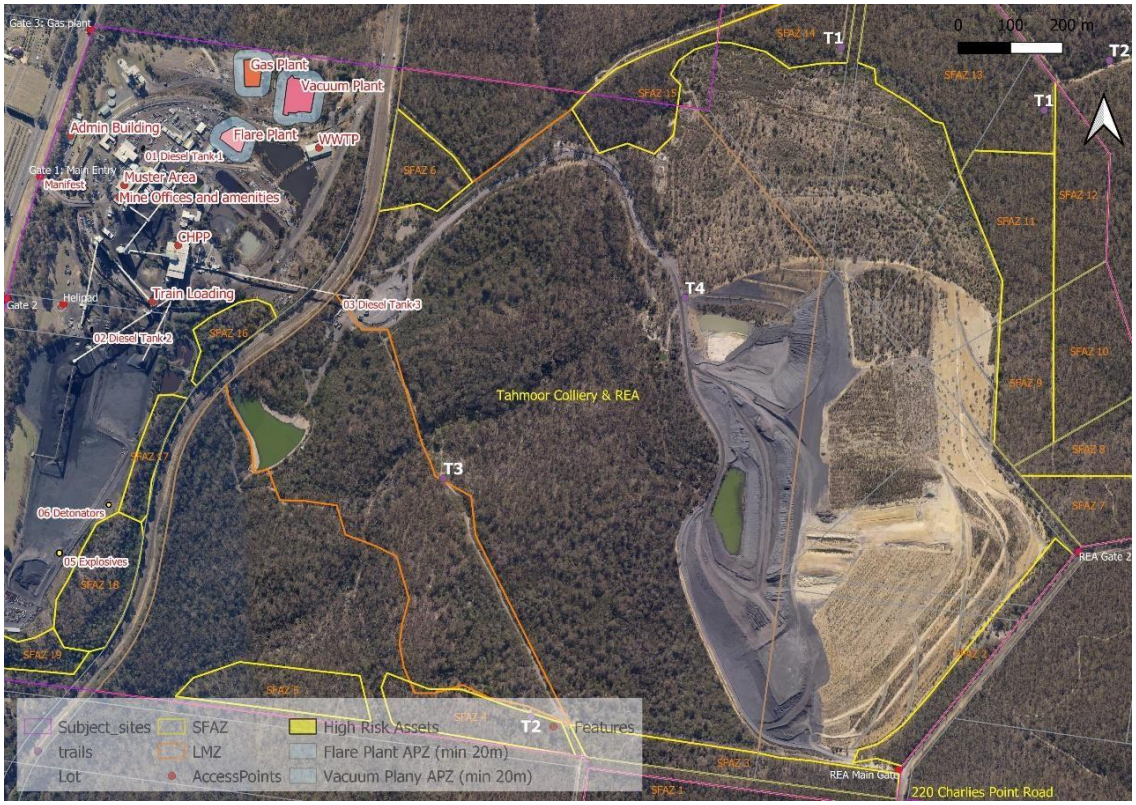


Figure A.1: Tahmoor Colliery and Surrounds – Fire Management Zones and key features

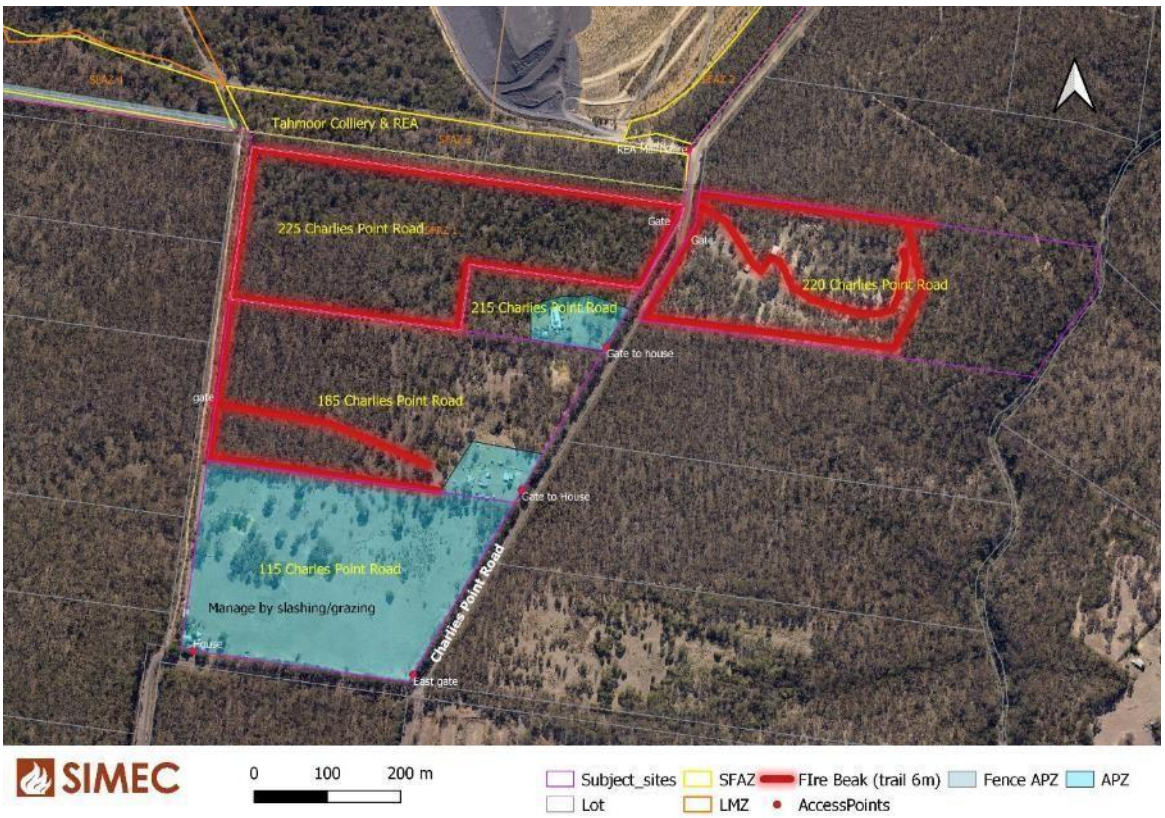


Figure A.2: Charlies Point Road Properties – Fire Management Zones and key features

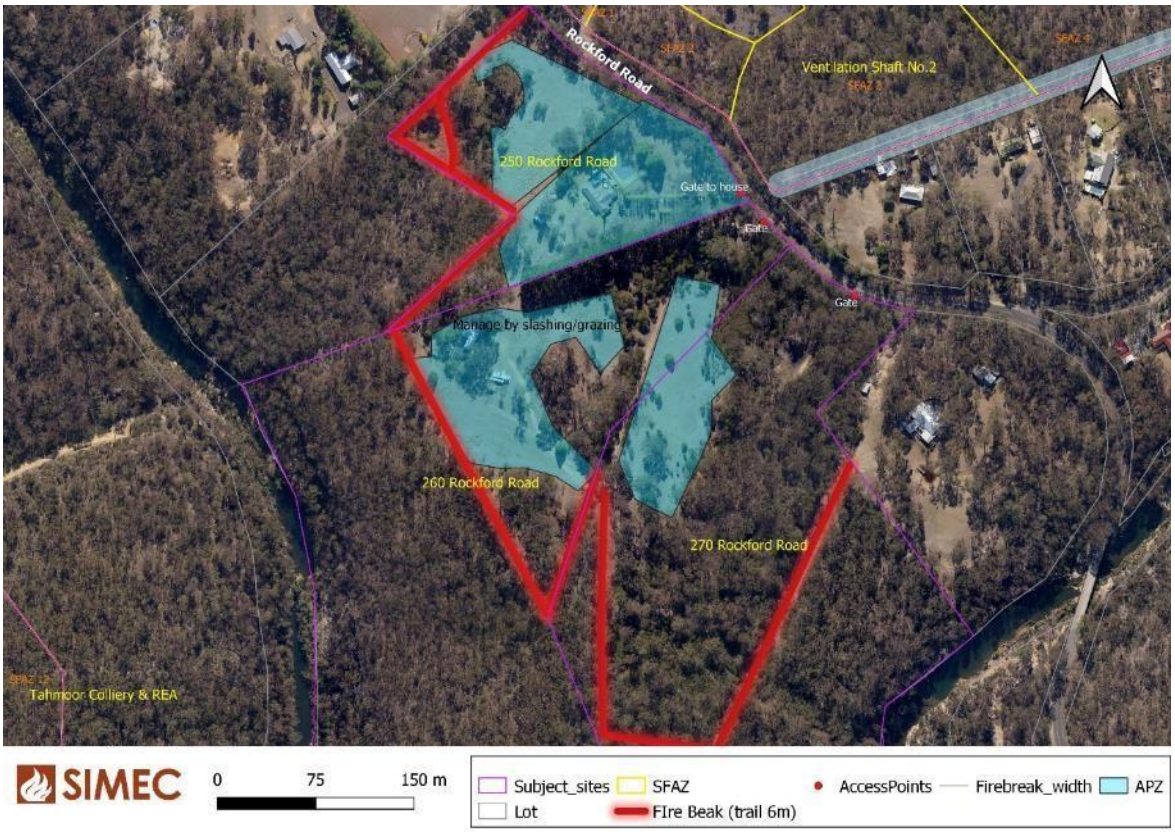


Figure A.3: Rockford Road Properties – Fire Management Zones and key features



Figure A.4: Vent Shaft 2 – Fire Management Zones and key features



Figure A.5: Hodgson Grove Properties – Fire Management Zones and key features

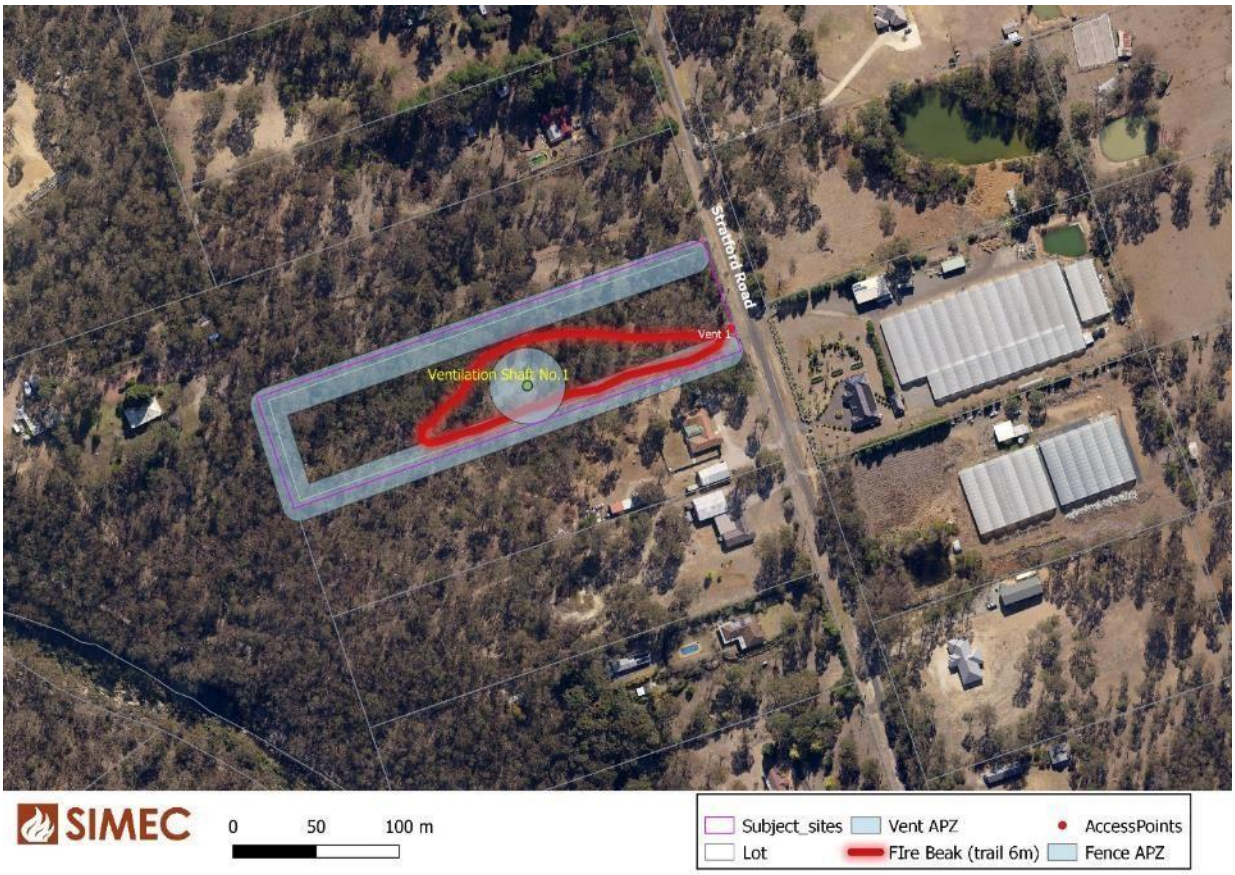


Figure A.6: Vent Shaft 1 – Fire Management Zones and key features



Figure A.7: Anthony Rd Property – Fire Management Zones and key features

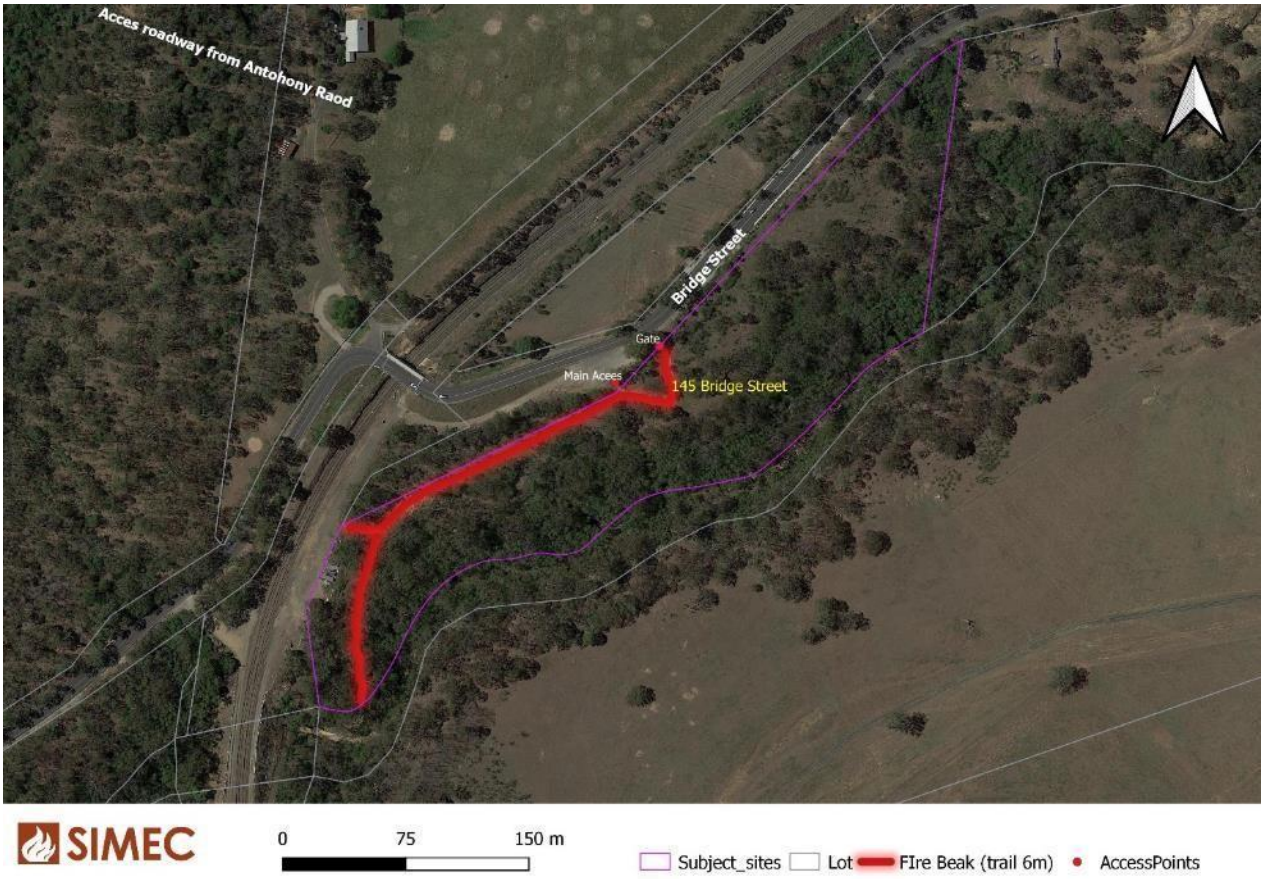


Figure A.8: Bridge St Property – Fire Management Zones and key features

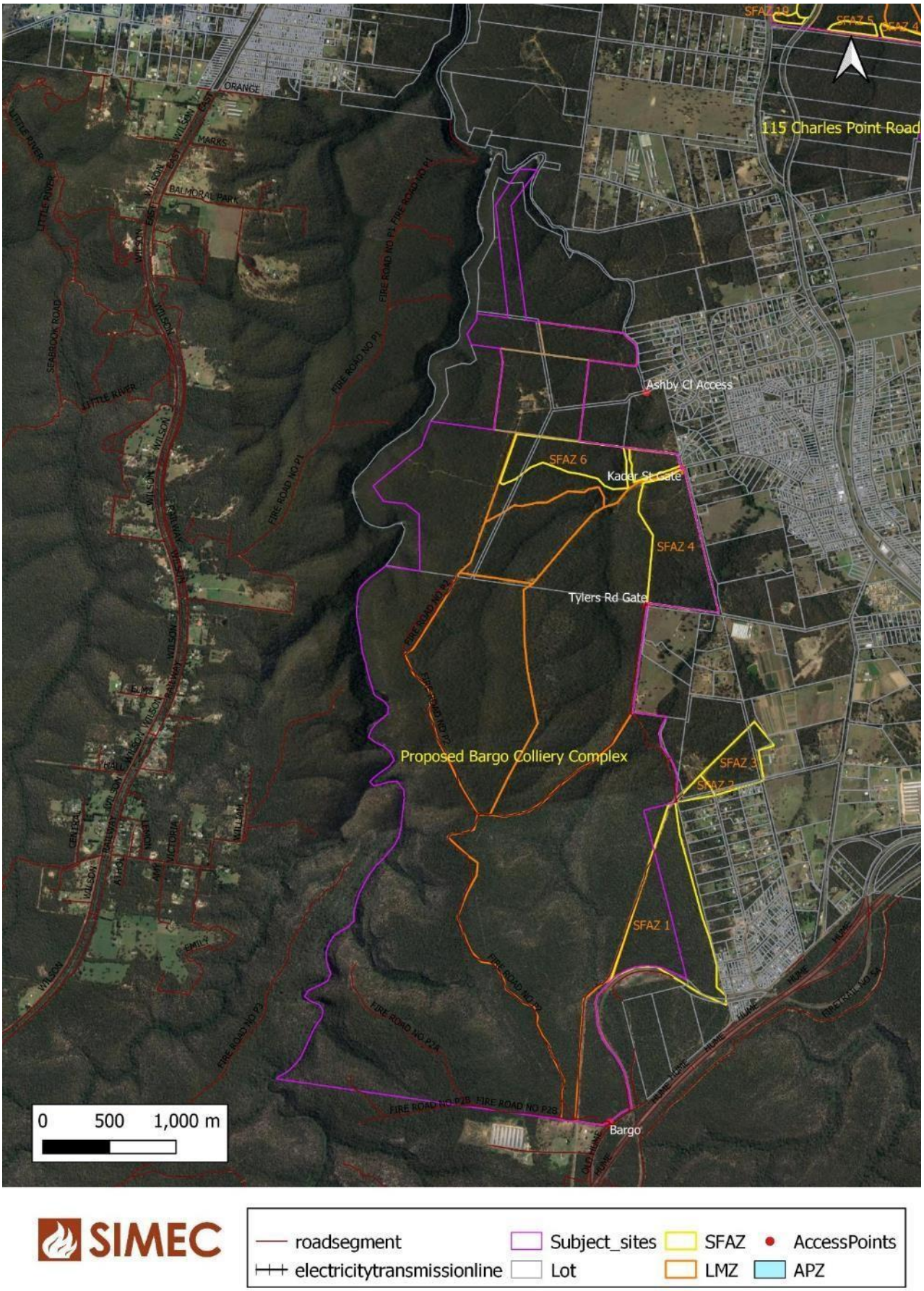


Figure A.9: Proposed Bargo Mine Complex – Fire Management Zones and key features

21.3 Appendix C: Bushfire Risk Assessment

Assets that have been identified at risk of bushfire have been identified in the following section. Aconsequence rating and a likelihood of occurrence rating has been given to each asset.

To assess the consequence of a bush fire impacting upon the assets, consequence rating has been assigned to each asset identified in the Study Area. The consequence rating has been rated as listed in thetables below:

Level	Description	Detail Description
1	Insignificant	No public safety injuries or impact to buildings.
2	Minor	No public safety injuries – minor impact to buildings.
3	Moderate	Burns and Respiratory problems – moderate damage to buildings.
4	Major	Death of people exposed to radiant heat & major property damage.
5	Catastrophic	Death of people exposed to radiant heat and total destruction of buildings.

Table B.1 - Qualitative Measures of Consequence of Impact

The likelihood of occurrence of a bushfire impacting the asset types has been rated as listed in Table 9 and is based on fire history, including ignition cause and patterns, known fire paths, access, nearby vegetation patch size and topography.

Assets identified in the study area, along with consequence and likelihood ratings has been included on the Bushfire Operations Management Plan Poster.

Level	Description	Detail Description
A	Almost Certain	Is expected to occur during severe fire danger periods.
B	Likely	Will probably occur during severe fire danger periods.
C	Possible	May occur during server fire danger periods
D	Unlikely	Unlikely to occur during severe fire danger periods
E	Rare	Will rarely occur during severe fire danger periods

Table B.2 – Qualitative Measures of Likelihood

Likelihood	Risk Rating Consequences				
	Insignificant 1	Minor 2	Moderate 3	Major 4	Catastrophic 5
A – Almost Certain	High	High	Extreme	Extreme	Extreme
B – Likely	Moderate	High	High	Extreme	Extreme
C – Possible	Low	Moderate	High	Extreme	Extreme
D – Unlikely	Low	Low	Moderate	High	Extreme
E – Rare	Low	Low	Moderate	High	High

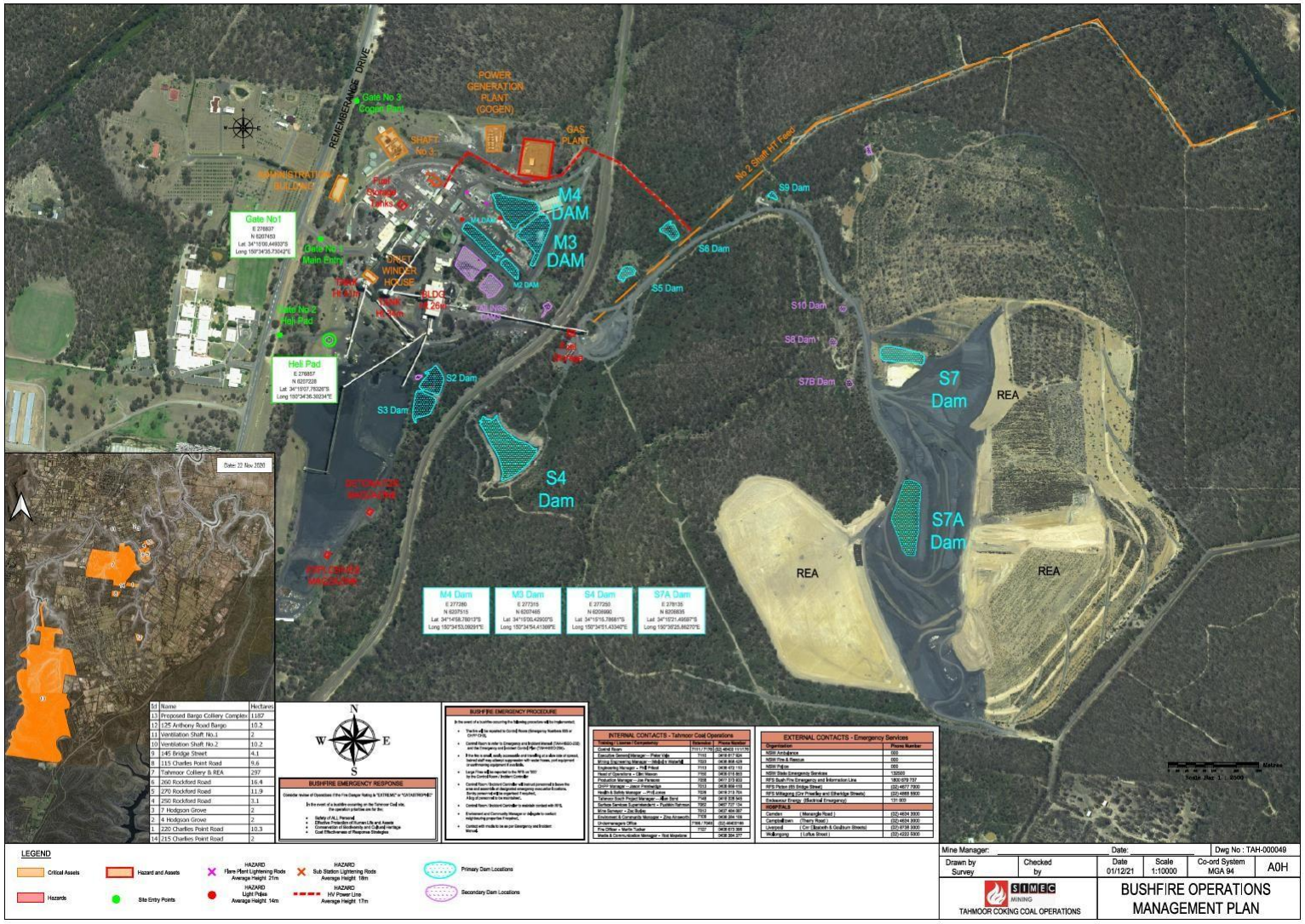
Table B.3 – Qualitative risk analysis matrix – used to determine the level of risk

Tahmoor Coal has a generic internal risk assessment matrix which is used across all its operations, and is not specific to bushfire. To provide ease of use for internal operations, the Tahmoor Coal generic risk assessment has been compared to the risk matrix above (refer summary risk assessment below).

Bushfire Risk Assessment (Oct 21):

The Risk What can happen	The Consequence and Likelihood of an event happening Consequences	Likelihood	Consequence Rating	Likelihood Rating	Level of Risk
Residential Development					
(1) Existing/Residential Development on Tahmoor Coal land on Charlies Point Road Fire burning from the northwest, west and southwest through unmanaged forest vegetation on adjoining land					
115 Charlies Point Road, Bargo (House and sheds, property mostly cleared well managed gardens)	Moderate - Burns and respiratory problems – moderate damage to buildings	Possible - may occur during major / catastrophic fire danger periods	3	C	High
185 Charlies Point Road, Bargo (Derelict house and shed to be demolished - no residents, heavily vegetated)	Minor - no public safety injuries	Likely - will probably occur during major / catastrophic fire danger periods	2	B	High
215 Charlies Point Road Bargo (House, sheds and pool, surrounded by forest)	Major - Death of persons exposed to radiant heat & major property damage	Possible - may occur during major / catastrophic fire danger periods	3	C	High
220 Charlies Point Road Bargo (No residential structures, contains sheds and water plastic tanks, surrounded by forest)	Minor - no public safety injuries	Likely - will probably occur during major / catastrophic fire danger periods	2	B	High
225 Charlies Point Road Bargo (no structures, heavily vegetated borders REA)	Minor - no public safety injuries	Likely - will probably occur during major / catastrophic fire danger periods	2	B	High
(2) Existing/Residential Development on land on Charlies Point Road which adjoins Tahmoor Coal land - Fire burning from the northwest, west and southwest through unmanaged forest vegetation on Tahmoor Coal land	Major - Death of persons exposed to radiant heat & major property damage	Likely - will probably occur during major / catastrophic fire danger period	4	B	Extreme
(3) Residential development adjoining proposed Bargo Colliery land – Fire burning through the unmanaged forest vegetation in the Bargo Colliery land and impacting the adjoining residential development.	Major - Death of persons exposed to radiant heat & major property damage	Likely - Will probably occur during severe / catastrophic fire danger periods	4	B	Extreme
(4) Residential development adjoining Ventilation Shaft Site 1 – Fire burning through the unmanaged forest vegetation on the Tahmoor Coal Shaft site under the influence of northwest winds, impacting on the development to the south & southeast	Moderate - Burns and respiratory problems – moderate damage to buildings	Possible - May occur during severe fire danger periods	3	C	High
(5) Residential development adjoining Ventilation Shaft Site 2 – Fire burning through the unmanaged forest vegetation on the Tahmoor Coal Shaft site under the influence of northwest, north and northeast winds, impacting on the development to the southeast & southwest	Major - Death of persons exposed to radiant heat & major property damage	Likely - Will probably occur during severe / catastrophic fire danger periods	4	B	Extreme
(7) Existing/Residential development on Tahmoor Coal land on Rockford Road					
260-270 Rockford Road Tahmoor (Old house, termite damage, currently tenanted, metal sheds, large APZ)	Moderate - Burns and respiratory problems – moderate damage to buildings	Possible - May occur during severe fire danger periods	3	C	High
250 Rockford Road Tahmoor (Residental house, tennis court and pool, currently tennanted, well maintained gardens)	Moderate - Burns and respiratory problems – moderate damage to buildings	Possible - May occur during severe fire danger periods	3	C	High
(8) Existing/Residential development on Tahmoor Coal land on Hodgson Grove Tahmoor Fire burning from the northwest, north and northeast through unmanaged forest vegetation on adjoining land					
7 and 7A Hodgson Grove Tahmoor (House, sheds and granny flat, currently tennanted, well maintained gardens)	Major - Death of people exposed to radiant heat & major property damage.	Likely - Will probably occur during severe / catastrophic fire danger periods	4	B	Extreme
4 Hodgson Grove Tahmoor (Residental house, sheds, well maintained gardens)	Moderate - Burns and respiratory problems – moderate damage to buildings	Possible - May occur during severe fire danger periods	3	C	High
(8) Existing/Residential development on Tahmoor Coal land on Anthony Road Bargo Fire burning from the surrounding unmanaged forest vegetation on adjoining land					
125 Anthony Road Bargo (House, sheds and granny flat, currently tennanted, well maintained gardens)	Moderate - Burns and respiratory problems – moderate damage to buildings	Possible - May occur during severe fire danger periods	3	C	High
Other Buildings					
Fire burning from the southwest through unmanaged forest vegetation on the eastern end of the Tahmoor Coal site [north and south of Bridge Street]	Moderate - Burns and respiratory problems – moderate damage to buildings	Possible - May occur during severe fire danger periods	3	C	High
Mine Infrastructure					
(1) Methane Storage/Electricity Generation Plant - Fire burning from the northwest, north and northeast through unmanaged forest vegetation on adjoining land	Catastrophic - Death of people exposed to radiant heat and total destruction of buildings, Methane Explosion	Likely - will probably occur during major / catastrophic fire danger periods	5	C	Extreme
(2) Coal Stockpile & Conveyors - Fire burning from the southeast through unmanaged forest vegetation on the land to the east of the Railway line.	Major – Coal fire, damage to Conveyors	Likely - will probably occur during major / catastrophic fire danger periods	4	B	Extreme
(3) Electricity Supply Lines within the eastern portion of the Colliery – Fire burning through the unmanaged forest vegetation under the influence of northwest, west, southwest, southeast and northeast winds	Major – Disruption to production	Likely - Will probably occur during severe / catastrophic fire danger periods	4	B	Extreme
Ventilation Shaft No. 2	Major – Disruption to production	Likely - Will probably occur during severe / catastrophic fire danger periods	4	B	Extreme
(1) Site Infrastructure Fire burning from the northwest, north and northeast through unmanaged forest vegetation on adjoining land	Major – damage to buildings & plant – disruption to operations	Likely - will probably occur during major / catastrophic fire danger periods	4	B	Extreme
Fences					
(1) Damage to internal and boundary fences - Fire burning through unmanaged vegetation, impacting on combustible fencing.	Moderate to major –potential breach of security	Likely - will probably occur during major / catastrophic fire danger periods	3	B	High
Service Infrastructure					
(1) Coal Stockpile & Conveyors - Fire burning from the southeast through unmanaged forest vegetation on the land to the east of the Railway line	Major – Coal fire, damage to Conveyors	Likely - will probably occur during major / catastrophic fire danger periods	4	B	Extreme
(3) Electricity Supply Lines within the eastern portion of the Colliery – Fire burning through the unmanaged forest vegetation under the influence of northwest, west, southwest, southeast and northeast winds.	Major – Disruption to production	Likely - Will probably occur during severe / catastrophic fire danger periods	4	B	Extreme

21.4 Appendix D: Bushfire Operations Management Plan Poster



21.5 Appendix E: Maps of Threatened Flora and Fauna

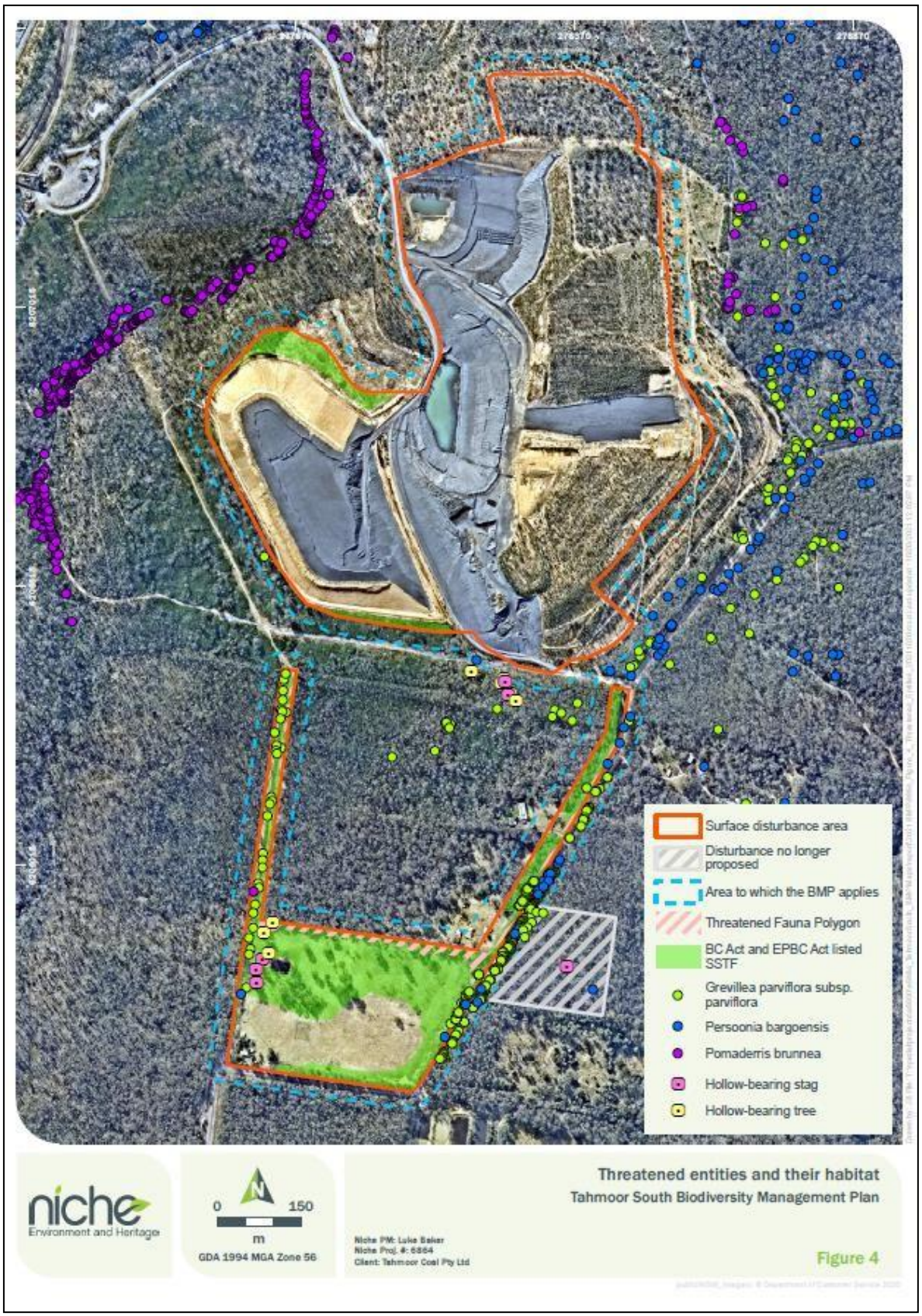


Figure D1: Tahmoor Coal Site and Refuse Emplacement Area – Threatened Flora and Fauna (Niche 2022)

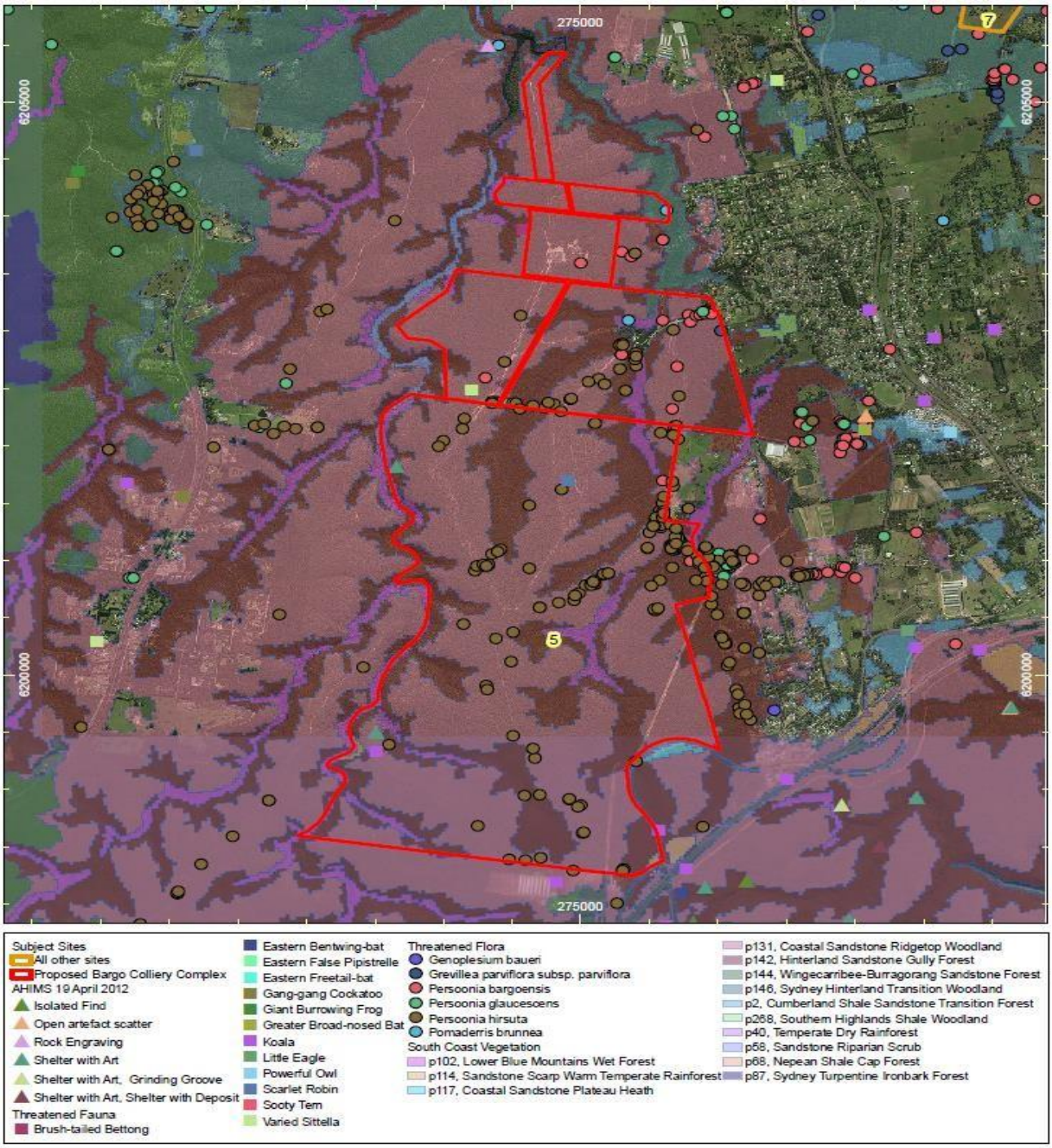


Figure D2: Proposed Bargo Colliery Complex – Threatened Flora and Fauna

(Niche 30 April 2012)

21.6 Appendix F: Approval Letter

Department of Planning, Housing and Infrastructure

Our ref: SSD-8445-PA-185

Amanda Bateman
Environmental and Community Manager
Tahmoor Coal Pty Ltd

20/08/2026

Subject: Tahmoor South Project (SSD-8445) - Bushfire Management Plan

Dear Ms Bateman

I refer to your request for review and approval of the revised Bushfire Management Plan following the approval of Modification 3 (26 May 2025) and following the submission of an annual review (30 September 2025) for the Tahmoor South Project (SSD-8445).

The Department has carefully reviewed the document and is satisfied that it generally meets the requirements of the relevant conditions of consent. Accordingly, as nominee of the Planning Secretary, I approve the Bushfire Management Plan (Rev 6.0, dated 3 October 2025) under Schedule 2, Condition B53.

You are reminded that if there are any inconsistencies between the Bushfire Management Plan and the conditions of consent, the conditions prevail. Please ensure you make the document publicly available on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Scotney Moore, on 02 9274 6342.

Yours sincerely

Jessie Evans
Director, Resource Assessments
Resource Assessments

As nominee of the Planning Secretary