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TAHMOOR SOUTH - ENVIRONMENTAL MANAGEMENT STRATEGY

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 manufacturing. 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 extend north under the town of Tahmoor and Picton with two ventilation shafts being located to the north of pit-top operations. The location of Tahmoor Mine in the regional context is shown in **Figure 2**.

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. 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 stockpile and 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 Run of Mine (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 Project has consent to extract up to 4 Mtpa of ROM coal, with a total of up to 33 Mt of ROM coal extracted over a 10-year period until 19 October 2032.

1.2 Purpose

The purpose of the Environmental Management Strategy (EMS) is to provide the strategic context for the environmental management of Tahmoor Coal and the framework from which the EMS is implemented.

The EMS forms part of the broader Health, Safety, Environment and Community (HSEC) management systems at Tahmoor Coal. This Strategy 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. In adopting the ISO:14001 principles, Tahmoor Coal has also adopted the "Plan-Do-Check-Act" model as shown in **Figure 1**. This model has been applied to all aspects of the EMS, to embed the continuous improvement process in all system documents.

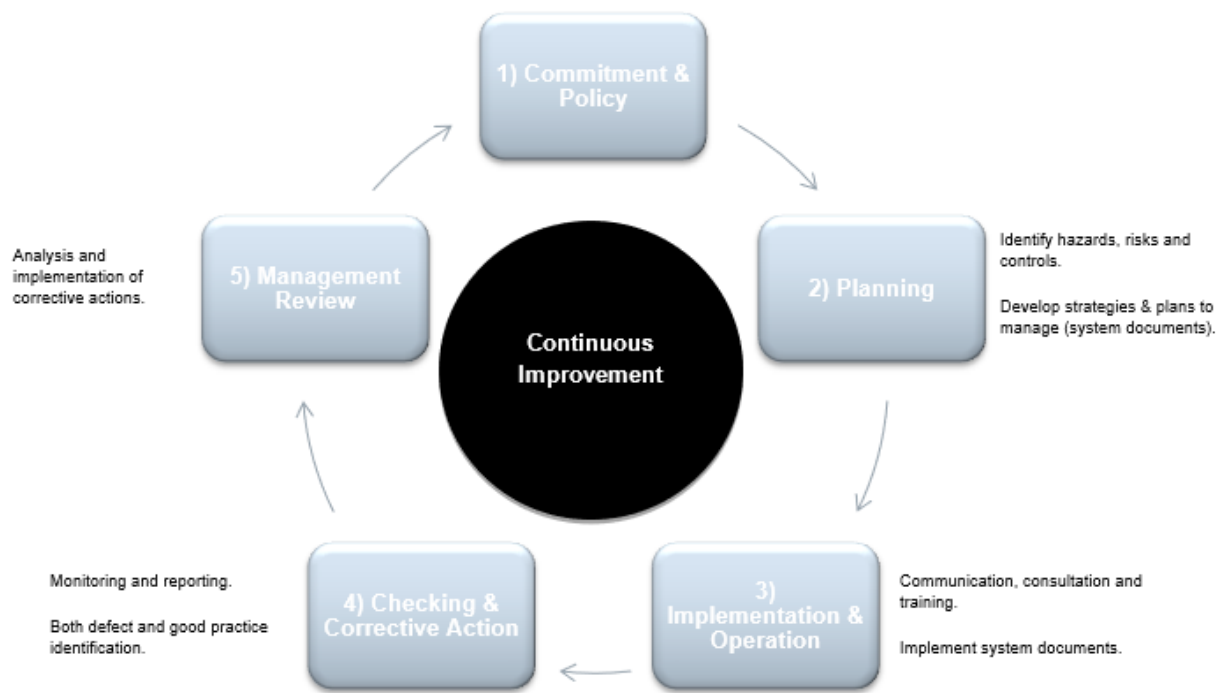


Figure 1 Plan, Do, Check, Act Process

1.3 Scope

Tahmoor Coal's EMS and associated documents apply to all aspects of Tahmoor mining operations including Projects and Tahmoor Coal owned residential properties, with focus on the surface operations where environmental management principles contained within the site's system documents are most applicable.

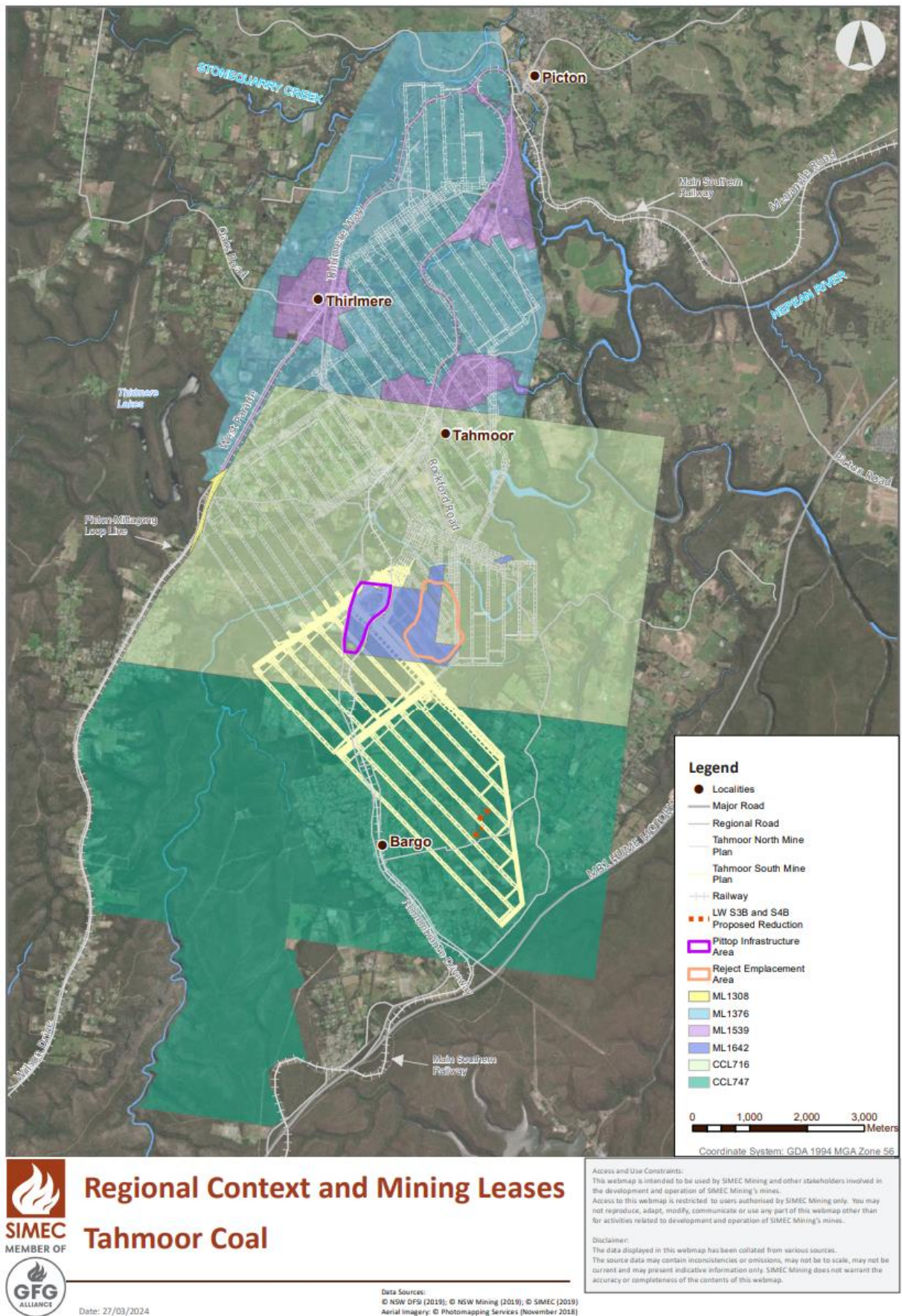


Figure 2 Tahmoor Coal Site Location and Mining Leases

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2 Planning

2.1 Statutory Requirements and Legislation

The following Environmental Planning Instruments (EPIs) were applied for the approval of the development:

- *State Environmental Planning Policy Mining, Petroleum Production and Extractive Industries) 2007*
- *SEPP (Infrastructure) 2007*
- *SEPP (State and Regional Development) 2011 (SRD SEPP)*
- *SEPP (Sydney Drinking Water Catchment) 2011*
- *SEPP No. 33 – Hazardous and Offensive Development*
- *SEPP No. 44 (Koala Habitat Protection) 2019*
- *SEPP No. 55 – Remediation of Land*
- *Wingecarribee LEP 2010*
- *Wollondilly LEP 2011*

Clause 7(1) of the *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (Mining SEPP) provided that ‘underground mining carried out on any land’ is permissible with development consent. Further, clause 8 of the Mining SEPP prevailed over any provisions of the relevant LEP’s that were a pre-requisite for or would otherwise prohibit development for the purpose of mining.

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 Project has consent to extract up to 4 Mtpa of ROM coal, with a total of up to 33 Mt of ROM coal extracted over a 10-year period until 19 October 2032.

Tahmoor Coal’s statutory approvals are outlined within **Table 1**. Tahmoor Coal maintains awareness of changes to standards, codes or legislation in the following ways:

- a) Receipt of regular updates from legal advisers;
- b) Participation in industry groups;
- c) Notification from the Liberty GFG Group and support team; and
- d) Access to legislation via the internet.

Tahmoor Coal follows a specific approvals and compliance process to ensure that all approvals required for the continuity of the operations are obtained within the required time frame and the compliance with these approvals is maintained. Tahmoor Coal has adopted the Cority Compliance Management database system to store and maintain compliance with development consents, leases, licences, and other approvals. Cority is updated regularly as triggered by actions or by the addition of new or modified approvals.

All development consents, leases, licences, and other relevant approvals are stored in the Cority Compliance Management database, which is administered by both site and Liberty GFG Corporate.

Table 1 Statutory Approvals

Approval	Title / Description	Date Granted	Expiry Date
SSD 8445	Tahmoor South Project	23/04/2021	19 October 2032
SSD 8445 (Mod 1)	Modification to date for Water Treatment Plant installation date.	19/07/2022	Same as above
DA 1975	Tahmoor Underground Mine	26/03/1975	No expiry
DA 190/85	Surface Works for Gas Extraction	16/12/1985	No expiry
DA 1979	Coal Preparation Plant Stockpiles and Refuse Emplacement Area.	23/08/1979	No expiry
DA 1979 (Mod 1)	Modification for road haulage of trial coal shipments	16/09/1985	No expiry
DA 1979 (Mod 2)	Modification for Upgrades for Longwall Mining	05/11/1986	No expiry
DA 1979 (Mod 3)	Modification for Road haulage in Wollondilly Shire and when rail unavailable.	1988	No expiry
DA 1979 (Mod 4)	Modification for Road haulage to Corrimal and Coal Cliff Coke Works.	13/12/1994	No expiry
DA 57/93	Tahmoor North Project.	07/09/1994	No expiry
DA 57/93 (Mod1)	Modification for heritage approval condition.	07/06/2007	No expiry
DA 67/98	Tahmoor North Project	25/02/1999	16/06/2024
DA 67/98 (Mod 1)	Modification for additional areas to be subsided.	26/11/2006	16/06/2024
DA 67/98 (Mod 2)	Modification for Redbank Tunnel Subsidence Management	08/04/2012	16/06/2024
DA 67/98 (Mod 3)	Modification for Redbank Tunnel Subsidence Management – Subdivision of Land	07/11/2014	16/06/2024
DA 67/98 (Mod 4)	Tahmoor North Mine Modification 4	15/10/2018	03/11/2020
DA 67/98 (Mod 5)	Tahmoor North Mine Modification 5	03/11/2020	No expiry
CCL 747	Bargo Mining Lease	23/05/1990	06/11/2025
CCL 716	Original Tahmoor Leases	15/06/1990	13/03/2042
ML 1376	Tahmoor North Lease	28/08/1995	28/08/2043
ML 1308	Small Western lease to west of CCL716	02/03/1993	02/03/2035
ML1642	Pit-top and REA surface Mining Lease	27/08/2010	27/08/2031
Mining Lease 1539	Tahmoor North Extension Lease	16/06/2003	16/06/2024, renewal submitted for assessment

Table 2 Other Licences

Approval Title / Description	Date Granted	Expiry Date
Environmental Protection Licence 1389	01/05/1994, latest variation 23/08/2022	No Expiry
WAL36442 Water Access Licence	6/12/2013	No Expiry
WAL25777 Water Access Licence	27/10/2014	No Expiry
WAL43572 Water Access Licence	08/09/2021	No Expiry
WAL43656 Water Access Licence	01/08/2022	No Expiry
WAL44608 Water Access Licence	08/02/2023	No Expiry
SWC839757 Water Access Licence (Lease)	10/07/2023	No Expiry
XSTR200005 Dangerous Goods Licence	02/02/2017	02/02/2027
5061521 Radiation Management Licence	29/10/2023	29/10/2024

2.1.1 Development Consent Conditions

The requirement for this EMS is established by Condition E1 under Part E of the Consent (SSD 8445). **Table 3** outlines the requirements under this condition and identifies where these requirements have been addressed.

Table 3 Development Consent Conditions

Condition Reference	Condition	Where Addressed
E1	The Applicant must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must:	NA
(a)	provide the strategic framework for environmental management of the development;	Section 3.1
(b)	identify the statutory approvals that apply to the development;	Section 2.1
(c)	set out the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development;	Section 3.2
(d)	set out the procedures to be implemented to: <ul style="list-style-type: none"> i. keep the local community and relevant agencies informed about the operation and environmental performance of the development; ii. receive record, handle and respond to complaints; iii. resolve any disputes that may arise during the course of the development; iv. respond to any non-compliance and any incident; v. respond to emergencies; and 	Section 3
(e)	be consistent with and incorporate: <ul style="list-style-type: none"> (i) references to all relevant strategies, plans and programs approved under the conditions of this consent; and (ii) a clear plan depicting all the monitoring to be carried out under the conditions of this consent. 	Section 3.1 Appendix A shows the monitoring plans for the Mine Area and the Mine Site
E2	The Applicant must not commence construction until the Environmental Management Strategy is approved by the Planning Secretary.	Noted –The EMS was approved before Construction. Refer to Appendix B.

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E3	The Applicant must implement the Environmental Management Strategy as approved by the Planning Secretary.	Noted – The EMS was implemented before Construction.
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2.1.2 Environment Protection and Biodiversity Conservation Act

Under Section 130(1) and 133(1) of the Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act), Tahmoor Coal received approval (EPBC 2017/8084) for the Tahmoor South Project on the 1st October 2021.

2.2 Risk and Change Management

Environmental aspects and impacts at Tahmoor Coal are considered for operational activities, legislative requirements and internal and external stakeholder views. Key environmental aspects and impacts are identified during the annual review of the Tahmoor Coal E&C Broad Brush Risk Assessment (BBRA) and the operational Life of Mine (LOM) Risk Assessment.

The purpose of the E&C BBRA is to identify significant E&C aspects and impacts across the site, the risk they pose and the controls necessary to effectively manage them. Management of impacts is prioritised according to the level of risk each aspect is assigned. Once all identified aspects, impacts, risks and management controls have been identified within the Annual E&C Risk Assessment associated plans are updated accordingly.

The LOM Risk Assessment considers aspects and impacts of business activities at a strategic level. These risk assessments cover the life of mine risks associated with each operation. The outcomes of the LOM Risk Assessment are used in conjunction with the Tahmoor Coal E&C BBRA to develop the annual capital and operational budget and the associated work schedule. Existing or proposed management controls are identified to reduce the risk of impacts on the environment and community. The need for any new (or modifications to existing) approvals is also identified during this process.

In accordance with Tahmoor Coal's Health & Safety Management System, project and activity specific risk assessments are completed as required and include assessment of E&C risks.

2.3 Annual Business Plan

Each year Tahmoor Coal develops an Annual Business Plan which incorporates HSEC. The Annual Business Plan formalises Tahmoor Coal's E&C objectives and targets for the forthcoming year, to ensure they are aligned with corporate strategies, business plans and risk management processes. The E&C Plan identifies targets, KPIs and projects, which then flows onto accountabilities and resources required to achieve the annual E&C outcomes. Objectives and targets are specific, measurable and achievement of targets will generally demonstrate continuous improvement in environment and community management. Targets and specific improvement projects are often linked to an individuals' performance review process.

3 Implementation

3.1 EMS Framework

Environmental impacts at Tahmoor Coal are managed through a combination of environmental procedures, forms and other documents. All environmental management plans have been developed generally in accordance with Liberty GFG Standards and to satisfy legislative and stakeholder requirements, refer to **Table 4** for a complete list. They have been developed to identify, analyse, evaluate and manage all significant potential and actual risks and impacts of activities and operations on the environment and the community.

Table 4 Environment Management Strategy Framework

Document	Document ID	Current Status	Author/Manager
Overarching Strategies			
Tahmoor South - Environmental Management Strategy Management Plan	TAH-HSEC-00375	Active	Environmental Specialist
Site Management Plans			
Tahmoor South Air Quality & GHG Management Plan	TAH-HSEC-379	Active	Environmental Specialist
Tahmoor South Water Management Plan	TAH-HSEC-369	Active	Environmental Specialist
Surface Water Management Plan	TAH-HSEC-371	Active	Environmental Specialist
Erosion Sediment Control Management Plan	TAH-HSEC-374	Active	Environmental Specialist
Tahmoor South Groundwater Management Plan	TAH-HSEC-373	Active	Environmental Specialist
Tahmoor South Noise Management Plan	TAH-HSEC-372	Active	Environmental Specialist
Tahmoor South Bushfire Management Plan	TAH-HSEC-377	Active	Environmental Specialist
Tahmoor South Traffic Management Plan	TAH-HSEC-370	Active	Environmental Specialist
Tahmoor South Biodiversity Management Plan	TAH-HSEC-378	Active	Environmental Specialist
Tahmoor South Spontaneous Combustion Management Plan	TAH-HSEC-380	Active	Environmental Specialist
Tahmoor South Social Impact Management Plan	TAH-HSEC-381	Active	Community Liaison Specialist
Rehabilitation Management Plan	TAH-HSEC-402	Active	Environmental Specialist
Rehabilitation Strategy	TAH-HSEC-401	Active	Environmental Specialist
Reject Emplacement Area Management Plan	TAH-HSEC-302	Active	Environmental Specialist
Pollution Incident Response Management Plan	TAH-HSEC-155	Active	Environmental Specialist
Cultural Heritage Management Plan	TAH-HSEC-011	Active	Environmental Specialist
Community Development Plan	TAH-HSEC-031	Active	Community Liaison Specialist

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Stakeholder Engagement Plan	TAH-HSEC-039	Active	Community Liaison Specialist
Waste Management Plan	TAH-HSEC-106	Active	Environmental Specialist
Conceptual Mine Closure Plan	TAH-HSEC-121	Active	Environmental Specialist
Environmental Monitoring Plan	TAH-HSEC-129	Active	Environmental Specialist
Surface Water Systems Management Plan	TAH-HSEC-321	Active	Environmental Specialist
Construction Environmental Management Plan Intersection Upgrade	TAH-HSEC-376	In-active	Environmental Specialist
Extraction Plan			
Extraction Management Plan (Main Document) LW S1A-S6A	TAH-HSEC-360	Active	Approvals Specialist
Extraction Plan LW S1A-S6A Water Management Plan	TAH-HSEC-361	Active	Approvals Specialist
Extraction Plan LW S1A-S6A Land Management Plan	TAH-HSEC-362	Active	Approvals Specialist
Extraction Plan LW S1A-S6A Biodiversity Management Plan	TAH-HSEC-363	Active	Approvals Specialist
Extraction Plan LW S1A-S6A Heritage Management Plan	TAH-HSEC-364	Active	Approvals Specialist
Extraction Plan LW S1A-S6A Public Safety Management Plan	TAH-HSEC-365	Active	Approvals Specialist
Extraction Plan LW S1A-S6A Subsidence Monitoring Plan	TAH-HSEC-367	Active	Approvals Specialist
Extraction Plan LW S1A-S6A Built Features Management Plan	TAH-HSEC-366	Active	Approvals Specialist
Tahmoor Coal – LW S1A-S6A Management Plan for Potential Impacts to Endeavour Energy Infrastructure	MSEC1193-07, 2022.	Active	Approvals Specialist
Tahmoor Coal – LW S1A-S6A Management Plan for Telstra Plant	None	Active	Approvals Specialist
Tahmoor Coal – LW S1A-S6A Management Plan for Potential impacts to NBN Infrastructure	None	Active	Approvals Specialist
Tahmoor Coal – LW S1A-S6A Management Plan for Potential impacts to TPG Infrastructure	None	Active	Approvals Specialist
Tahmoor Coal – LW S1A-S6A Management Plan for Potential Impacts to Wollondilly Shire Council Infrastructure	MSEC1193-03, 2022	Active	Approvals Specialist
Tahmoor Coal – LW S1A-S6A and LWS1B-S6B Subsidence Management Plan for Potential Impacts to Australian Wildlife Sanctuary	MSEC1074, 2022	Active	Approvals Specialist

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Tahmoor Coal - LW S1A-S6A Management Plan for Potential Impacts to Built structures	MSEC1193-09, 2022	Active	Approvals Specialist
Subsidence Principal Hazard Management Plan	TAH-HSEC-183	Active	Approvals Specialist
Procedures			
Aspects & Impacts (E&C BBRA) Procedure	TAH-HSEC-115	Active	Environmental Specialist
Communication & Engagement Procedure	TAH-HSEC-119	Active	Community Liaison Specialist
Community Complaints & Enquiry Procedure	TAH-HSEC-120	Active	Community Liaison Specialist
Sustainability Database and Reporting Procedure	TAH-HSEC-179	Active	Environmental Specialist
Weed Management Procedure	TAH-HSEC-107	Active	Environmental Specialist
Notification of Environmental Pollution Incidents	TAH-HSEC-224	Active	Environmental Specialist
Rehabilitation Monitoring Procedure	TAH-HSEC-012	Active	Environmental Specialist
Website Management Procedure	TAH-HSEC-221	Active	Environmental Specialist
Noise Alarm Procedure	TAH-HSEC-079	Active	Environmental Specialist
Rehabilitation & Topsoil Management Procedure	TAH-HSEC-053	Active	Environmental Specialist
Media and Social Media Procedure	TAH-HSEC-071	Active	Community Liaison Specialist
Tahmoor Land & Property Procedure	TAH-HSEC-076	Active	Community Liaison Specialist
Geographical Information System Management Procedure	TAH-HSEC-088	Active	Environmental Specialist
Pipeline Management Procedure	TAH-HSEC-154	Active	Environmental Specialist
Forms			
Surface Environmental Inspection Form	TAH-HSEC-033	Active	Environmental Specialist
Communication Log	TAH-HSEC-032	Active	Environmental Specialist
Trigger Action Response Plans (TARPs)			
Surface Water TARP	TAH-HSEC-033	Active	Environmental Specialist
Surface Noise TARP	TAH-HSEC-201	Active	Environmental Specialist
Air Quality TARP	TAH-HSEC-078	Active	Environmental Specialist
Surface M3 Dam Clarity TARP	TAH-HSEC-313	Active	Environmental Specialist

3.2 Roles & Responsibilities

Management of impacts to the environment or community 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 5** below.

Table 5 Roles and Responsibilities

Role	Accountabilities for this document
Head of Operations	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. Liaise with the community as required and as per the Stakeholder Engagement Strategy, including facilitation of Community Consultative Committee meetings.
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.

3.3 Internal Stakeholder Communication

Internal stakeholders include employees, contractors and visitors of Tahmoor Coal. The Communication and Engagement Procedure (TAH-HSEC-00119) has been developed to include the following:

- Methods of communication between internal stakeholders;
- Types of information that is communicated between internal stakeholders;
- Responsibilities for communication of information to internal stakeholders; and
- Review of communication methods, including the consideration of feedback to / from internal stakeholders.

3.4 External Stakeholder Communication

External stakeholders include neighbours and the local / regional community, local council, state and federal government agencies and regulators, and media representatives. External stakeholders are identified in accordance with Community Development Plan (TAH-HSEC-00031) and Stakeholder Engagement Plan (TAH-HSEC-00039). External stakeholder communication is undertaken in accordance with Stakeholder Engagement Plan (TAH-HSEC-00039). This guideline has been used as a basis for developing the Social Impact Management Plan (TAH-HSEC-00381).

Tahmoor Coal's procedure includes information on the following topics:

- Methods of communication to external stakeholders.
- Types of information that is communicated between external stakeholders.
- Responsibilities for communication of information to external stakeholders.
- Review of communication methods, including the consideration of feedback to / from external stakeholders.

A key objective of Communication and Engagement Procedure (TAH-HSEC-00119) is to maintain positive relationships with two-way communications built on honesty and trust with the local community and other external stakeholders.

Key tasks and procedures to be implemented to keep the local community and relevant agencies informed about the operation and the environmental performance of the development include:

- Identification of stakeholders.
- Development of key messages about the operation and the approval/compliance requirements.
- Raising awareness (e.g. through distributing newsletters and providing website updates to inform stakeholders about the operation and its ongoing performance).
- Provision of opportunities for stakeholders to provide feedback about the operation (24-hour complaints line (phone: 1800 154 415) for receiving community complaints and other stakeholder communications, as well as the following email Tahmoorenquiries@simecmining.com).
- Ongoing, meaningful consultation with stakeholder groups (e.g. Tahmoor Coal Community Consultative Committee).
- Access to information (e.g. information on the Tahmoor Coal website).
- Receipt and analysis of feedback (e.g. Information stored in Consultation Manager database and network W:Drive).

3.5 Complaints and Disputes

Community Complaints at Tahmoor Coal are managed in accordance with Communication and Engagement (TAH-HSEC-00119) and Community Complaints & Enquiry Procedure (TAH-HSEC-00120). Tahmoor Coal operates a 24-hour complaints line (phone: 1800 154 415) for receiving community complaints and other stakeholder communications, as well as the following email Tahmoorenquiries@simecmining.com. The general process detailed in Community Complaints & Enquiry Procedure (TAH-HSEC-00120) for responding to complaints is:

- a) Acknowledging all complaints and responding to the complainant within 24 hours where practicable;
- b) Registering all complaint details in Cority;
- c) Investigating complaints impartially considering the facts and the circumstances prevailing at the time;
- d) Implementing corrective actions if required; and
- e) Reporting to relevant stakeholders of investigation outcomes and corrective actions taken.

A record of all community complaints in relation to activities undertaken by the licensee must be kept in a legible form and be in accordance to Tahmoor Coal's Environmental Protection Licence 1389.

The following information will also be kept in the event of a community complaint; as required by Section M4 in Tahmoor Coal's EPL 1389:

- a) The date and time of the complaint;
- b) The method by which the complaint was made;
- c) Any personal details of the complainant which were provided by the complainant or a note to that effect;
- d) The nature of the complaint;
- e) The action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
- f) If no action was taken by the licensee, the reasons why no action was taken.

These records must be kept for at least 4 years after the complaint was made and be able to be produced to any authorised officer who asks to see them.

In the event of a dispute or conflict between Tahmoor Coal personnel and a member of the community, the Tahmoor Coal E&C Manager will facilitate communication between both parties to reach a resolution, which may include a meeting with the complainant to discuss the issue.

Where relevant, negotiations will be initiated in accordance with any relevant Consent conditions. This general process is documented in the Social Impact Management Plan (TAH-HSEC-00381). If a dispute cannot be resolved, the matter will be escalated to involve Tahmoor Coal's Head of Operations or Executive General Manager as required and may involve consultation with the relevant government agency to assist in reaching a determination on the matter.

3.6 Employee & Contractor Training

General environmental awareness training is provided to all employees and contractors annually through a generic visitor induction and the SafeCoal training session scheduled by the Tahmoor Coal Health, Safety & Training Department. Training on specific topics is undertaken on an as-needs basis, e.g. additional spill response training etc.

3.7 Incidents, Non-compliances and Exceedances

3.7.1 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:

- Emergency and Incident Manual (TAH-HSEC-00232).
- Pollution Incident Response Management Plan (TAH-HSEC-00155)
- Notification of Environmental Pollution Incidents (TAH-HSEC-00224)

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 an 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.

3.7.2 Non-Compliances

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

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

- 1. Identify and confirm the non-compliance (i.e. review against approval criteria or condition and confirm that a non-compliance has occurred);
- 2. Complete internal environmental incident reporting documentation including an investigation to capture all relevant information;
- 3. 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;
- 4. Following the incident investigation, develop a corrective action plan aimed at preventing future re-occurrence; and
- 5. Complete all required reporting and consult with relevant agencies on the corrective action plan to be implemented.

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.

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.

3.8 Exceedances

An exceedance is defined 'any instance where monitoring results show an exceedance of criterion outlined within the Consent or other regulatory instrument'.

In accordance with Consent Condition D6, as soon as practicable and no longer than 7 days after obtaining monitoring results showing an exceedance of any noise or air quality criterion in PART B of the Consent, Tahmoor Coal will provide the details of the exceedance to any affected landowners, tenants and the CCC.

In accordance with Consent Condition D7, for any exceedance of any air quality criterion in PART B of the Consent, Tahmoor Coal will also provide to any affected landowners and tenants a copy of the fact sheet entitled "Mine Dust and You" (NSW Health, 2017).

3.9 Emergency Response

All personnel receive emergency preparedness and response training during their site familiarisation and induction. Tahmoor Coal maintains a dedicated emergency response team who undergo regular training and operational drills. Tahmoor Coal manages and responds to emergencies in accordance with - Emergency and Incident Management Plan which includes reference to environmental and pollution events.

A specific pollution management plan Pollution Incident Response Management Plan (TAH-HSEC-00155) and procedure Notification of Environmental Pollution Incidents (TAH-HSEC-00224) have been developed to manage preparation, emergency response and reporting requirements under the Protection of the Environment Operations Act 1997 (NSW).

Both management plans document the roles and accountabilities of key personnel at Tahmoor Coal in the event of an emergency and the contact details for appropriate emergency services. The plans also provide designated evacuation points and procedures in the event of an emergency. Any changes to emergency procedures are documented and communicated to all personnel.

In the case of an environmental incident, prior to any other action, the site must contact triple zero '000' if the incident presents an immediate threat to human health or property. Fire and Rescue NSW, the NSW Police and the NSW Ambulance Service are the first responders, as they are responsible for controlling and containing incidents. The nearest hospital is Campbelltown Hospital, located on Therry Road, Campbelltown NSW (ph: 4634 3000).

If the incident does not pose any threat to human health or property, concurrently with contacting emergency services (triple zero '000'), all possible actions should be taken to control the pollution incident and minimise health, safety and environmental consequences. These actions must be employed to the maximum extent possible to:

- a) provide for the safety of people at and within the vicinity of the site; and
- b) contain the pollution incident.

The actions to be implemented at Tahmoor Coal on the occasion of an incident include the following:

- a) Secure the scene and contain the incident;
- b) Gather information (i.e. environmental monitoring);
- c) Determine the investigation level;
- d) Commence an ICAM (if required);
- e) Review and classify information and determine actions;
- f) Complete actions; and

g) Trend analysis reports.

The specific responsibilities associated with the management and implementation of environmental incidents and emergencies under the PIRMP are outlined in **Table 6** below.

Table 6 PIRMP Responsibilities

Name	Contact Details	Position	Responsibility
Peter Vale	(02) 46 400 111	General Manager	The determination of a material harm incident will be made by the General Manager in consultation with the Environment and Community Manager. Authorised to liaise with the relevant authority.
Zina Ainsworth	(02) 46400 109	Environment and Community Manager	Responsible for authorising the PIRMP and all subsequent updates. Responsible for ensuring adequate resourcing for implementation of the PIRMP. Authorised to liaise with the relevant authority. Responsible for undertaking notification as defined in this PIRMP. Responsible for managing the response to a pollution incident. Responsible for arranging testing and updating of the PIRMP. Responsible for ensuring notification and training of PIRMP.
Tom O'Brien	(02) 4640 0034	Environment Specialist	Responsible for undertaking notification as defined in this PIRMP. Responsible for coordinating the response to a pollution incident. Facilitate site personnel in implementation of the PIRMP. Communication of the PIRMP to site personnel.
Amanda Bateman	(02) 4640 0025	Community Liaison Specialist	Responsible for coordinating communications with affected community members.

4 Monitoring

The purpose of the environmental monitoring programs implemented by Tahmoor Coal is to provide a measure of the performance of the operation, which can be compared against objectives, targets and performance criteria specified in various Tahmoor Coal approval and licence conditions.

The key environmental monitoring programs for the operation include:

- a) Air quality;
- b) Noise monitoring;
- c) Surface water monitoring;
- d) Ground water monitoring; and
- e) Ecological monitoring including rehabilitation.

Monitoring data is stored in the site's Monitor Pro Database or other appropriate files and reviewed as soon as practicable after it is received, to ensure any issues or non-compliances can be immediately addressed as outlined in **Section 3.7**.

In accordance with SSD 8445 Condition E1 (e) (ii), a clear plan depicting all monitoring required to be carried out under the conditions of consent for Tahmoor Coal is provided in **Appendix A**.

4.1 Surface Environmental Inspections

Inspections of Tahmoor Coal surface facilities are arranged and conducted monthly by E&C personnel, in accordance with Tahmoor Monthly Environmental Inspection form (TAH-HSEC-00020).

Inspections include:

- a) Hazardous substance management;
- b) Waste management;
- c) Air quality - dust control systems;
- d) Water discharge management;
- e) Land management;
- f) Noise mitigation;
- g) Monitoring; and
- h) General water storage / drainage condition.

Inspection results and corrective actions are recorded in Cority and assigned to responsible personnel for completion within appropriate timeframes.

4.2 Critical Control Monitoring (Fatal Hazard Specification Sheets)

In accordance with internal requirements routine review of critical controls related to fatal hazards (also known as core hazards) must be conducted to provide assurance. Core hazards relevant to E&C performance are provided in

Table 7, and each hazard is assigned to a member of the E&C department to complete. Inspection results and corrective actions are recorded in Cority and assigned to responsible personnel for completion within appropriate timeframes.

Table 7 Core Hazards

Core Hazard	Specification Sheet ID	Frequency
13. Dam Safety	13.1 Effective Management Plans and Geotechnical Assessment and Engineering Design	Annual
	13.2 Inspection and Monitoring	Quarterly
	18.1 Effective Management	Annual
	18.2 Register of Licenses and Approvals	Annual
18. Environmental Breaches	18.3 Procedures for Preventing and Managing Breaches	Six Monthly
	18.4 Physical Environment Inspections	Six Monthly
	18.5 Evaluating Environmental, and/or Community Performance	Six Monthly
	18.6 Training and Competency	Annual

5 Reporting

5.1 General Reporting

General reporting requirements in accordance with SSD 8445 Consent Condition E13 and E14, include submitting an Annual Review by the end of March each year (or other timeframe agreed by the Planning Secretary). The Annual Review will:

- a) describe the development (including any rehabilitation) that was carried out in the previous calendar year, and the development that is proposed to be carried out over the current calendar year;
- b) include a comprehensive review of the monitoring results and complaints records of the development over the previous calendar year, including a comparison of these results against the:
 - i. relevant statutory requirements, limits or performance measures/criteria;
 - ii. (requirements of any plan or program required under this consent;
 - iii. monitoring results of previous years; and
 - iv. relevant predictions in the EIS.
- c) identify any non-compliance or incident which occurred in the previous calendar year, and describe what actions were (or are being) taken to rectify the non-compliance and avoid reoccurrence;
- d) evaluate and report on:
 - i. the effectiveness of the noise and air quality management systems; and
 - ii. compliance with the performance measures, criteria and operating conditions of this consent;
- e) identify any trends in the monitoring data over the life of the development and provide any raw monitoring data as requested by the Planning Secretary;
- f) identify any discrepancies between the predicted and actual impacts of the development, and analyse the potential cause of any significant discrepancies; and
- g) describe what measures will be implemented over the next calendar year to improve the environmental performance of the development.

Copies of the Annual Review are submitted to Council and relevant agencies and made available to the CCC and any interested person upon request. The Annual Review is also published on the Tahmoor Coal website each year.

Specific reporting related to environmental aspects are outlined within the respective management plans.

5.2 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 Manager E&C, focussing on the following areas:

- a) Air quality;
- b) Noise Management;
- c) Water Management;

- d) Erosion and sediment control; and
- e) Statutory approvals.

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.

5.3 Independent Environmental Audit

In accordance with Conditions E15 – E20 of the Consent, Tahmoor Coal will complete Independent Environmental Audits of the development at the frequencies determined within DPIHI's *Independent Audit Post Approval Requirements (2020)*, and outlined below in **Table 8**.

Tahmoor Coal will complete independent audits in accordance with the following Consent Conditions:

- a) E15: Independent Audits of the development must be conducted and carried out in accordance with the Independent Audit Post Approval Requirements (2020).
- b) E16: Proposed independent auditors must be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit.
- c) E17: Planning Secretary may require the initial and subsequent Independent Audits to be undertaken at different times to those specified in the Compliance Reporting Post Approval Requirements (2020), upon giving at least 4 weeks' notice (or timing) to Tahmoor Coal of the date upon which the audit must be commenced.
- d) E18: In accordance with the specific requirements in the Independent Audit Post Approval Requirements (2020), Tahmoor Coal will:
 - i. review and respond to each Independent Audit Report prepared under Condition C5 of the Development Consent, or Condition C6 where notice is given by the Planning Secretary;
 - ii. submit the response to the Planning Secretary; and
 - iii. make each Independent Audit Report, and response to it, publicly available within 60 days of submission to the Planning Secretary. unless otherwise agreed by the Planning Secretary.
- e) E19: Independent Audit Reports and Tahmoor Coal's response to audit findings must be submitted to the Planning Secretary within 2 months of undertaking the independent audit site inspection as outlined in the Independent Audit Post Approvals Requirements (2020) unless otherwise agreed by the Planning Secretary.

E20: Notwithstanding the requirements of the Independent Audit Post Approvals Requirements (2020), the Planning Secretary may approve a request for ongoing independent operational audits to be ceased, where it has been demonstrated to the Planning Secretary's satisfaction that independent operational audits have demonstrated operational compliance.

Table 8 Independent Audit Frequencies

Phase	Initial Independent Audit	Ongoing Independent Audit Intervals
Construction	Within 12 weeks of the commencement of construction	At intervals, no greater than 26 weeks from the date of the initial Independent Audit or as otherwise agreed by the Secretary.
Operation	Within 26 weeks of the commencement of operation	At intervals, no greater than 3 years or as otherwise agreed by the Secretary.
Closure /Rehabilitation	Within 52 weeks from notifying of suspension/ceasing of operations	At intervals no greater than 1 year or as otherwise agreed by the Secretary.

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The audit will recommend appropriate measures and corrective actions to improve environmental performance at Tahmoor Coal. Audit results and corrective actions are recorded in Cority and assigned to responsible personnel for completion within appropriate timeframes.

6 Review and Improvement

6.1 Management Plan Audits

Audits of the EMS will be conducted in consultation with the Plan owners and nominated individuals and shall focus on the content and implementation.

Audits on the content shall consist of a determination of understanding of the EMS 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 strategy, they may also involve discussions with personnel involved in the management plan to determine understanding and compliance.

Should an audit of this EMS 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 are to be managed and communicated to all personnel in line with the Change Management Process.

6.2 Plan Review

This EMS 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 EMS, 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
- In accordance with Condition E8 if necessary, to either improve the environmental performance of the development, cater for a modification or comply with a direction, the strategies, plans and programs must be revised, to the satisfaction of the Planning Secretary. Where revisions are required, the revised document must be submitted to the Planning Secretary for approval within six weeks of the review; 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:
- b) the submission of an Annual Review under Condition E13;
 - c) the submission of an Independent Environmental Audit under Condition E15;
 - d) (the approval of any modification of the conditions of this consent (unless the conditions require otherwise); or
 - e) 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.

7 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.

7.1 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 Licence 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 & Infrastructure).

These reports are prepared in accordance with relevant guidelines and Communication and Engagement (TAH-HSEC-00119) and are published on Tahmoor Coal's website in accordance with Website Management Procedure (TAH-HSEC-00221).

In accordance with Condition E23, Tahmoor Coal have made the following information and documents publicly available on its website:

- i. the EIS;
- ii. all current statutory approvals for the development;
- iii. all approved strategies, plans and programs required under the conditions of this consent;
- iv. the proposed staging plans for the development if the construction, operation or decommissioning of the development is to be staged;
- v. minutes of CCC meetings;
- vi. regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent;
- vii. a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs;
- viii. a summary of the current phase and progress of the development;
- ix. contact details to enquire about the development or to make a complaint;
- x. a complaints register, updated monthly;
- xi. a register of incident and non-compliance notifications made to the Planning Secretary, updated monthly;
- xii. the Annual Reviews of the development;
- xiii. audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report;
- xiv. annual returns made under the National Greenhouse and Energy Reporting legislation
- xv. any other matter required by the Planning Secretary; and

Tahmoor Coal will keep such information up to date, to the satisfaction of the Planning Secretary.

7.2 Related Documents

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

Table 9 Related Documents

Number	Title
TAH-HSEC-00020	Tahmoor Monthly Environmental Inspection
TAH-HSEC-00381	Social Impact Management Plan
TAH-HSEC-00120	Community Complaints & Enquiry Procedure
TAH-HSEC-00221	Website Management Procedure
TAH-HSEC-00031	Community Development Plan
TAH-HSEC-00039	Stakeholder Engagement Plan
TAH-HSEC-00232	Emergency and Incident Manual
TAH-HSEC-00155	Pollution Incident Response Management Plan
TAH-HSEC-00224	Notification of Environmental Pollution Incidents

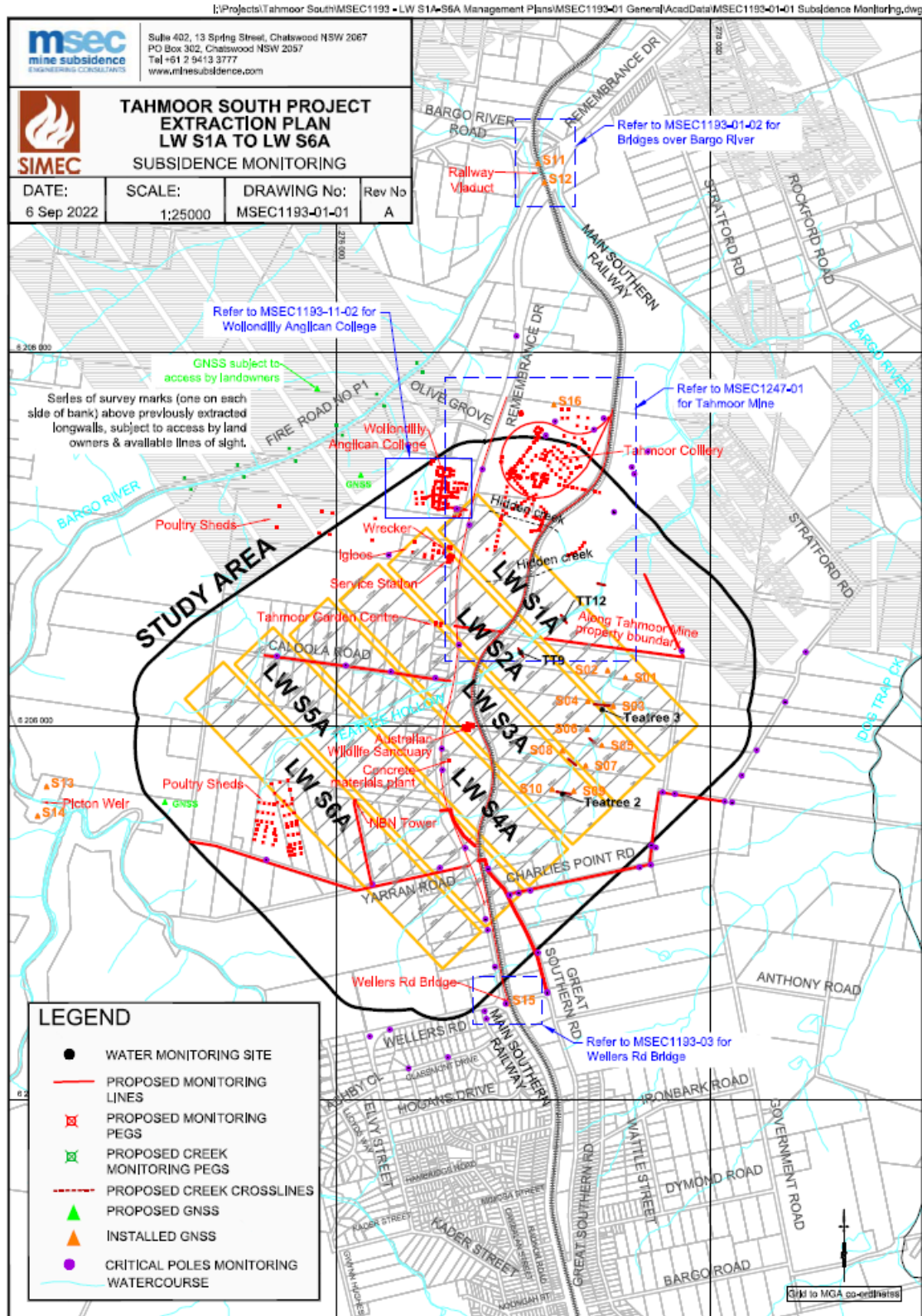
8 Change Information

Table 10 Document History

Version	Date Reviewed	Review team (Consultation)	Change Summary
0.1	25/12/2021	Zina Ainsworth	Development of Tahmoor South EMS
0.2	02/02/2022	Zina Ainsworth	DPIE comments addressed
1.0	05/05/2022	Natalie Brumby	Figure 2 updated. Reviewed in accordance with Condition 46 of DA67-98 following submission of the 2021 Annual Review to DPE.
1.1	13/05/2022	Natalie Brumby	Table 4 updated.
2.0	17/06/2022	Natalie Brumby	Reviewed in accordance with Condition 46 of DA 67/98 and 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 16 th May 2022).
3.0	19/10/2022	Natalie Brumby, Thomas O'Brien	Reviewed in accordance with Condition E7(c), (d) and (e) following an Independent Environmental Audit (10 th August 2022), following the approval of any modification (Mod 1 approved 19 th July 2022) and following the commencement of first and second workings (18 th Oct 2022) of the Consent SSD 8445. Appendix A updated.
4.0	16/06/2023	Natalie Brumby	Reviewed in accordance with Condition E7(b) following the submission of an Annual Review (31 st March 2023), Condition E7(c) following the submission of an Independent Environmental Audit (2 nd June 2023) and Condition E7 (d) following the approval of any modification (MOD 2 - 13 th June 2023) of the Consent SSD 8445.
5.0	19/06/2024	Natalie Brumby, Thomas O'Brien	Reviewed in accordance with Condition E7(b) following the submission of an Annual Review (28 th March 2024).

Appendix A – Environmental Management Strategy Monitoring Plans

Appendix A (i) Current Mining Area Subsidence Monitoring



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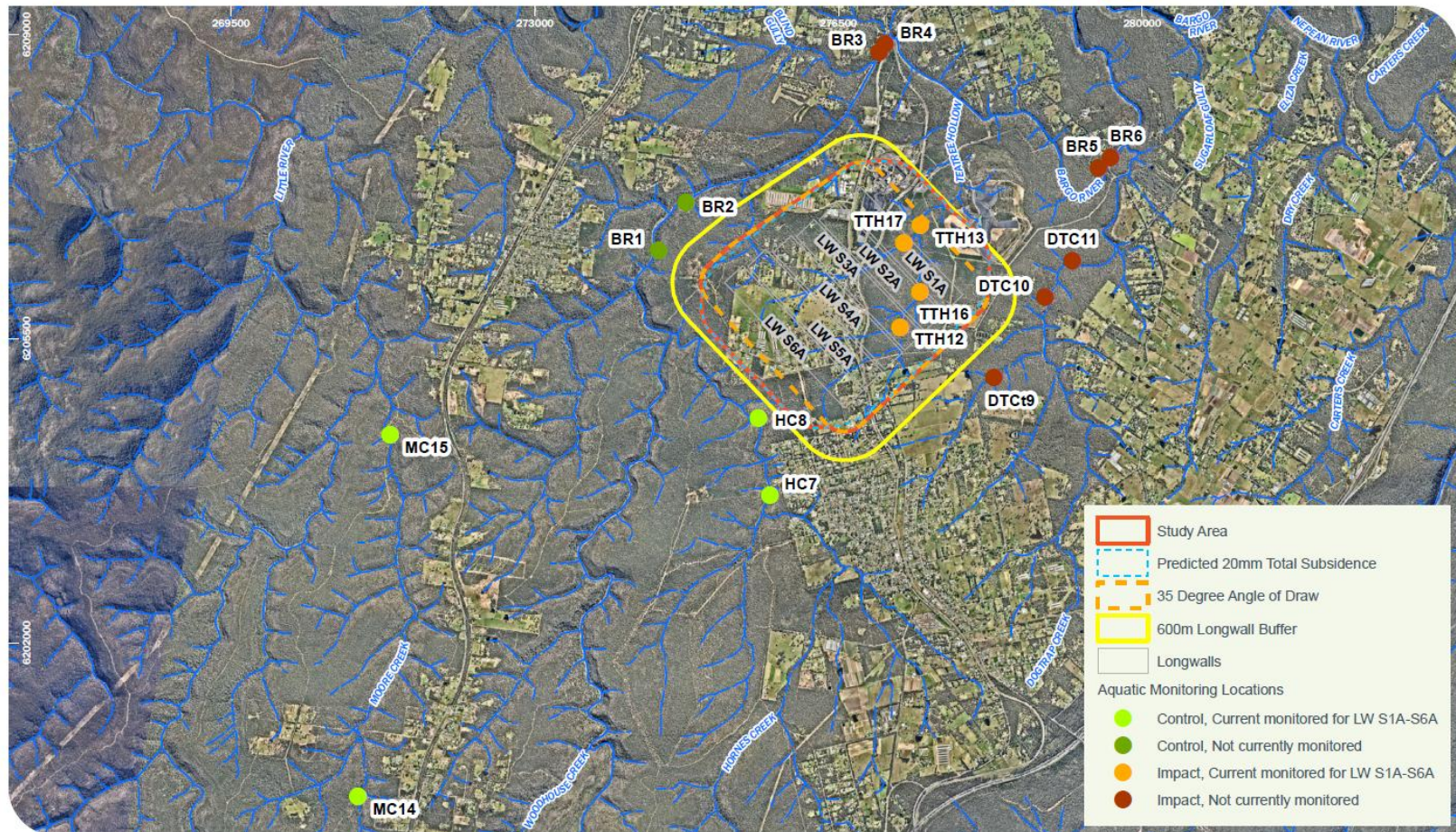
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Appendix A (ii) Current Mining Area Biodiversity Monitoring



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GDA 1994 MGA Zone 56

Niche PM: Jessie Bear
Niche Proj. #: 7027
Client: Tahmoor Coal Pty Ltd

Aquatic monitoring plan
Tahmoor South Domain Longwalls South 1A - South 6A

Figure 9

publicNSW_Base_Map: © Department of Customer Service 2020 Imagery: © Mapbox, © Australia (attribution)

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GDA 1994 MGA Zone 56

Niche PM: Jessie Bear
Niche Proj. #: 7027
Client: Tahmoor Coal Pty Ltd

Riparian and amphibian monitoring plan
Tahmoor South Domain Longwalls South 1A - South 6A

Figure 10

Imagery@nicemap Australia latest

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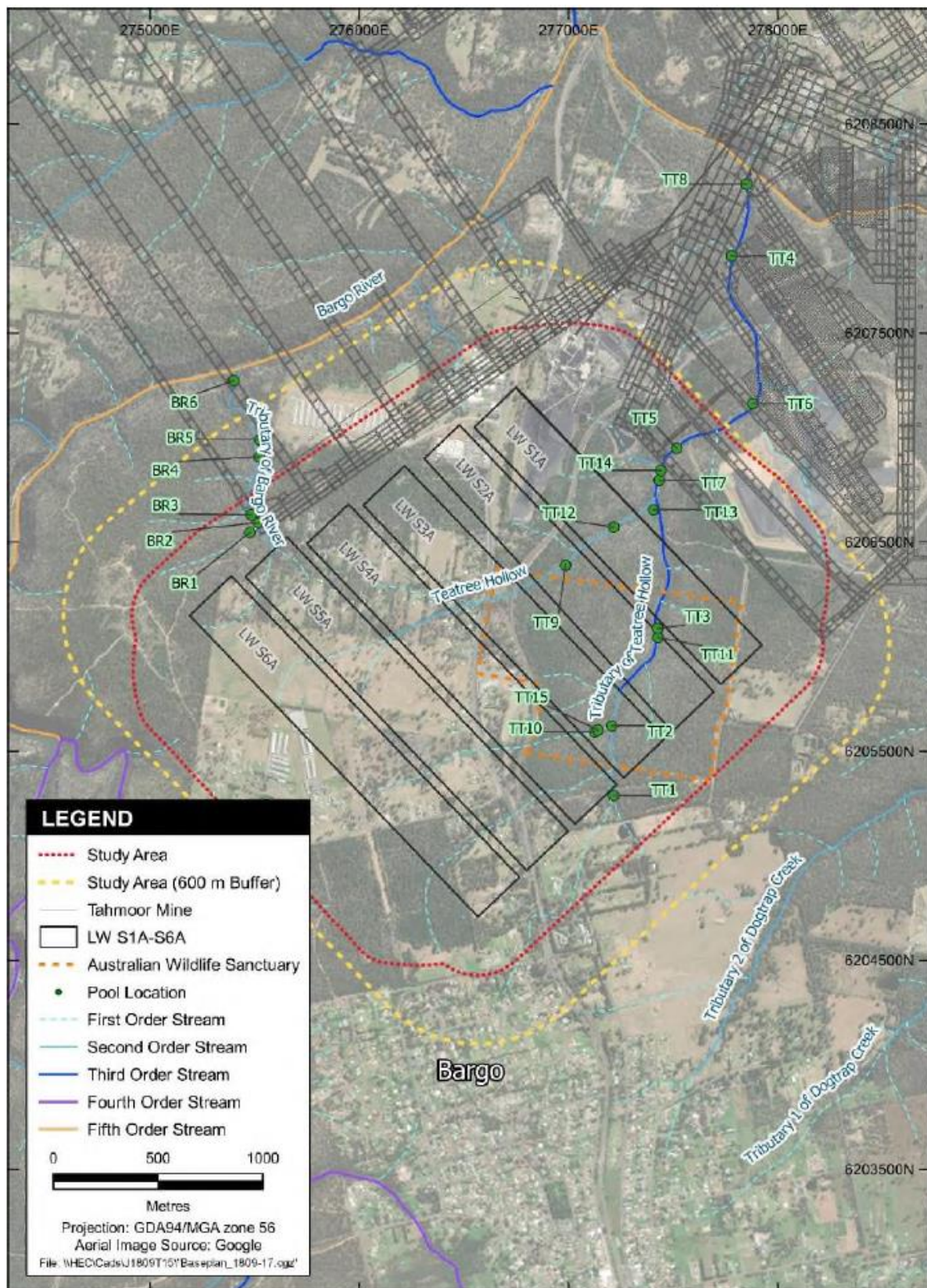
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Appendix A (iii) Current Mining Area Water Monitoring



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Appendix A (iv) Current Mining Area Heritage Monitoring

Heritage Sites / Item	Monitoring Component	Monitoring		
		Prior to Mining	During Mining	Post Mining
Teatree Hollow 2013.1: <ul style="list-style-type: none"> Open camp site (Remembrance Drive 2013.1) and Isolated find (TC14-2-19) Rockshelter with art and deposit (Teatree Hollow 2013.1) 	Visual inspection. Structural Assessment.	Visual inspection by archaeologist with RAPs (completed). Baseline recording, sampling and photogrammetry (completed). Structural geotechnical review prior to secondary workings (completed).	Fortnightly visual inspection of the rockshelter (monitoring overall rockshelter stability) during periods of active subsidence for LW S1A, S2A, S3A and S4A, to be completed from a safe distance. Monitoring of GNSS units / survey lines in proximity to the rockshelter (refer to Subsidence Monitoring Plan for more detail), reviewed on a monthly basis during periods of active subsidence for LW S1A, S2A, S3A and S4A.	Visual inspection by archaeologist with RAPs at the completion of LW S1A, S2A, S3A and S4A.
Wirrimbirra Sanctuary (Australian Wildlife Sanctuary).	Visual inspection. Survey control points. Monitoring System.	Visual assessment by a heritage consultant as part of SoHI (completed). Pre-mining condition and structural assessment as per the Australian Wildlife Sanctuary Management Plan (completed). Install monitoring system as per the Subsidence Monitoring Plan (completed).	Regular monitoring as per the Australian Wildlife Sanctuary Management Plan.	Visual inspection by a heritage consultant at the completion of LW S5A. Inspections and assessments as per the Australian Wildlife Sanctuary Management Plan.
Bargo Cemetery.	Visual inspection. Monitoring System.	Baseline recording and visual assessment by heritage consultant (completed, see Appendix D) (completed).	Regular monitoring as per the Bargo Cemetery Management Plan.	Visual inspection by a heritage consultant at the completion of Longwalls LW S6A. Inspections and assessments as per the Bargo Cemetery Management Plan.

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Heritage Sites / Item	Monitoring Component	Monitoring		
		Prior to Mining	During Mining	Post Mining
		Pre-mining assessments as per the Bargo Cemetery Management Plan (completed). Install monitoring system as per the Subsidence Monitoring Plan (completed).		
Bargo Railway Bridge North (Wellers Road Overbridge).	Visual inspection. Structural Assessment. Survey control points.	Visual assessment by a heritage consultant (completed). Pre-mining condition and structural assessment as per the Main Southern Railway Management Plan (completed). Install monitoring system as per the Subsidence Monitoring Plan (completed).	Regular monitoring as per the Main Southern Railway Management Plan.	Visual inspection by a heritage consultant at the completion of Longwalls LW S6A. Inspections and assessments as per the Main Southern Railway Management Plan.
Picton Weir.	Visual inspection. Structural Assessment. Monitoring System.	Pre-mining condition and structural assessment as per the Picton Weir Management Plan (completed). Install monitoring system as per the Subsidence Monitoring Plan (completed).	Regular monitoring as per the Picton Weir Management Plan.	Inspections and assessments as per the Picton Weir Management Plan
Tahmoor Colliery (Tahmoor Mine Site).	Visual inspection. Structural Assessment. Monitoring System.	Pre-mining condition and structural assessment as per the Tahmoor Mine Site Management Plan (completed). Install monitoring system as per the Subsidence Monitoring Plan (completed).	Regular monitoring as per the Tahmoor Mine Site Management Plan.	Inspections and assessments as per the Tahmoor Mine Site Management Plan.

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Heritage Sites / Item	Monitoring Component	Monitoring		
		Prior to Mining	During Mining	Post Mining
Bargo Railway Viaduct	Visual inspection. Structural Assessment. Monitoring System.	Visual assessment by a heritage consultant (completed). Pre-mining condition and structural assessment as per the Main Southern Railway Management Plan (completed). Install monitoring system as per the Subsidence Monitoring Plan (completed).	Regular monitoring as per the Main Southern Railway Management Plan.	Visual inspection by a heritage consultant at the completion of Longwalls LW S6A. Inspections and assessments as per the Main Southern Railway Management Plan.
Great Southern Road (partial).	Visual inspection. Structural Assessment. Monitoring System.	Pre-mining condition as per the Wollondilly Shire Council Management Plan (completed).	Regular monitoring as per the Wollondilly Shire Council Management Plan.	Inspections and assessments as per the Wollondilly Shire Council Management Plan

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Appendix A (iv) Current Mining Area Land Monitoring

Feature	Monitoring Component / Location	Monitoring		
		Prior to Mining	During Mining	Post Mining
Steep Slopes	Identified steep slopes within the Study Area.	Visual Inspection baseline one month before active subsidence period by a geotechnical engineer.	Monthly visual inspection during active subsidence period by a geotechnical engineer.	Quarterly visual inspection for 12 month following active subsidence period by a geotechnical engineer.
Agricultural Land	Identified agricultural land within the Study Area	Visual Inspection baseline one month before active subsidence period.	Monthly visual inspection during active subsidence period.	Quarterly visual inspection for 12 month following active subsidence period.

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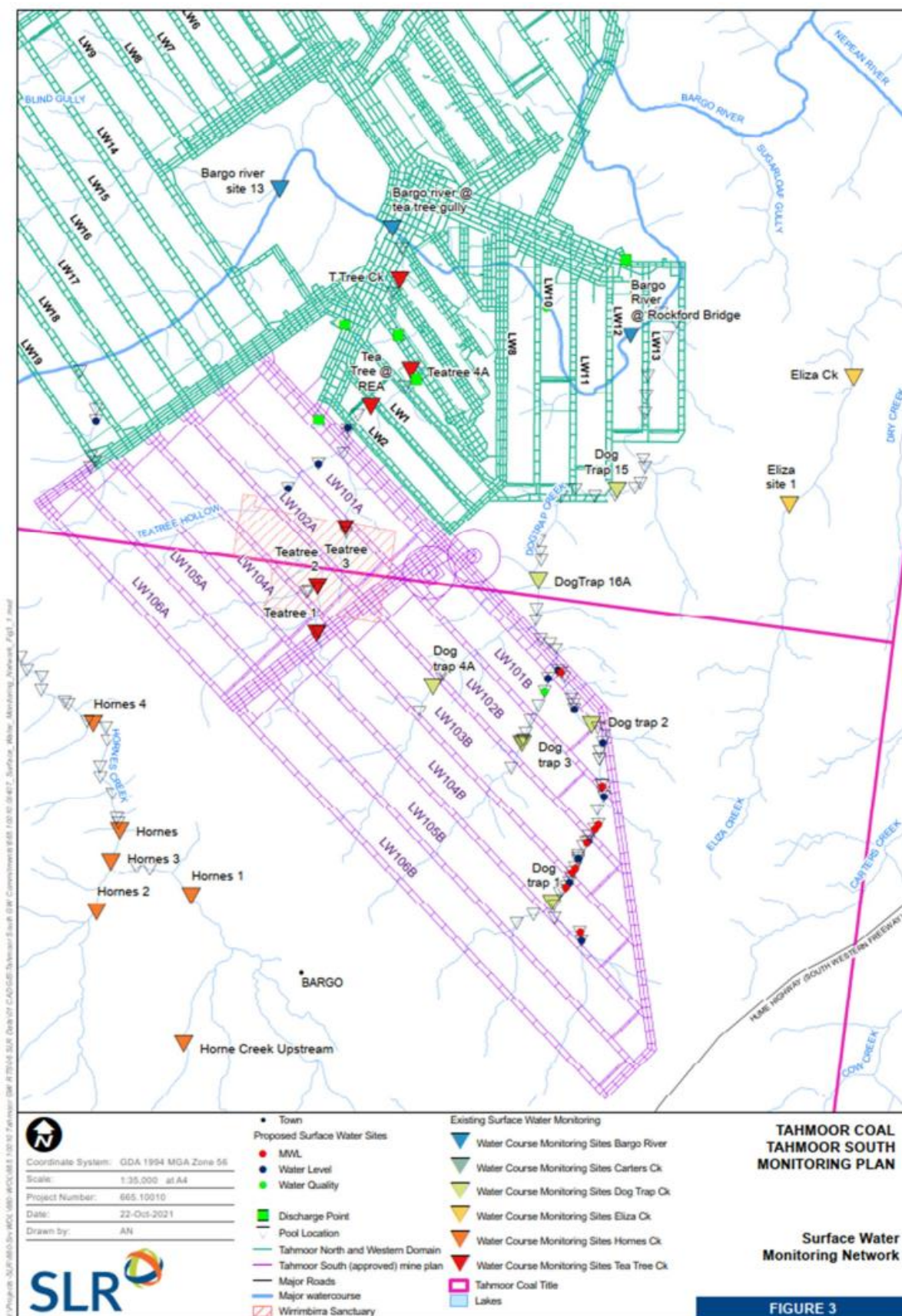
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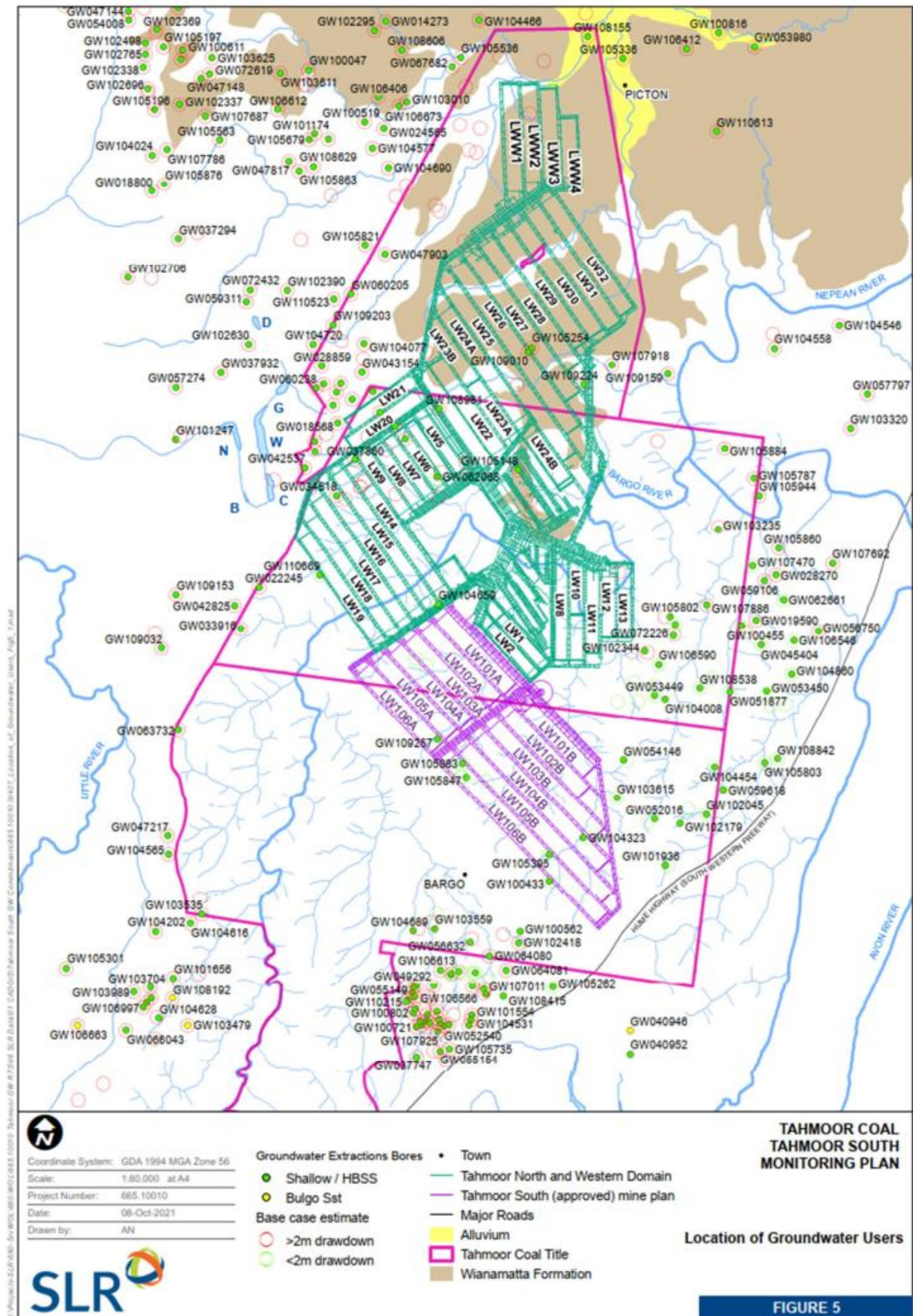
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Appendix A (v) Site Water Monitoring





Appendix A (vi) Site Biodiversity Monitoring

Management activity	Effectiveness	Performance Indicator	Monitoring proposed	Responsibility	Contingency action
Pre-construction					
Vegetation and Fauna Protection Through Design and Micro-siting Infrastructure	Effective	Infrastructure designed to utilise as little space as possible to maximise the amount of habitat retained.	Not required.	NA	NA
Demarcation of Clearing Area and Construction Area	Effective	No vegetation clearing to occur beyond clearing limits.	Pre-clearing audit to determine if fencing is installed correctly in the right locations.	Environmental Manager	Fix the fence to comply with the Biodiversity Management Plan.
Contractor Education	Effective	No evidence of encroachment by heavy plant, vehicles or personnel in retained areas	Monthly audit.	Environmental Manager	Re-educate contractors in accordance with the Biodiversity Management Plan.
Erosion and Sediment Management	Effective	No breeches of sediment fencing. No major erosion left unmitigated.	Monthly audit.	Environmental Manager	Repair sediment fencing, mitigate erosion and sedimentation in accordance with the Biodiversity Management Plan.
Pre-clearance Management Measures and Surveys - Fauna	Effective	Minimal impacts to fauna during vegetation clearing activities.	Monitoring not required. Supervision during clearing operation to be undertaken.	Project Ecologist	Implement fauna injury and entrapment procedure in the Biodiversity Management Plan.
Pre-clearance Management Measures and Surveys - Flora	Variably effective depending on species, preparation and characteristics of recipient	All threatened flora species within the disturbance area salvaged for transplantation and/or propagation.	Monitoring the translocated plants will form a part of the translocation plan to be prepared by the suitably qualified and experienced bush regenerators engaged to undertake the works.	Project Bush Regenerator	To be specified in the translocation plan.

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Management activity	Effectiveness	Performance Indicator	Monitoring proposed	Responsibility	Contingency action
	sites, bush-regenerator skill.				
Clearing of Vegetation - Maximise the salvage of resources	Effective	Salvage and subsequent relocation and/or storage for later reuse of habitat features Salvage of all suitable topsoil inhabited by native flora species.	Not required.	NA	NA
Clearing of Vegetation - Threatened Ecological Communities	Effective	Minimal impacts to Threatened Ecological Communities during vegetation clearing activities.	Monitoring not required. Supervision during clearing operation to be undertaken.	Project Ecologist	NA
Clearing of Vegetation - Vegetation Clearing Procedure	Effective	Minimal impacts to fauna during vegetation clearing activities.	Monitoring not required. Supervision during clearing operation to be undertaken.	Project Ecologist	Implement fauna injury and entrapment procedure in the Biodiversity Management Plan.
During construction					
Weed Prevention	Effective	Relevant information included in site induction and Tool Box talk.	Monthly audit.	Environmental Manager	Re-educate contractors in accordance with the Biodiversity Management Plan.
Weed Control	Generally effective	Minimal incursion of weeds into adjacent habitat Stay within a reasonable range of baseline	Annual walk over by site bush regenerator to determine extent of weed occurrence and management activity required.	Project Ecologist	Additional weeding event to control major incursions
Erosion and Sediment Control	Effective	No breeches of sediment fencing. No major erosion left unmitigated.	Monthly audit.	Environmental Manager	Repair sediment fencing, mitigate erosion and sedimentation in accordance with the Biodiversity Management Plan.
Demarcation of Clearing Area and Construction Area	Effective	No evidence of encroachment by heavy plant, vehicles or personnel	Monthly audit to determine if fencing is installed correctly / damage repaired	Environmental Manager	Fix the fence.

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Management activity	Effectiveness	Performance Indicator	Monitoring proposed	Responsibility	Contingency action
Post Construction and During Operation Management Measures					
On-going Weed Control	Generally effective	Minimal incursion of weeds into adjacent habitat Stay within a reasonable range of baseline	Annual walkover by a qualified Bush Regenerator to assess the extent of weed coverage and direct the frequency/timing of the weed control going forward.	Project Bush Regenerator	Additional weeding event to control major incursions
Regeneration and Landscaping	Effective	Any areas not regenerating naturally as expected receive supplementary planting.	Not required.	NA	NA
Erosion and Sediment Management	Effective	Any areas within and adjacent to the site that are natural or regenerating bushland and have had erosion and sedimentation measures implemented undergo stabilisation by bush regenerators and all wastes are disposed of appropriately.	Not required.	NA	NA
Feral Pest Animal Control – Group programs	Effective	Participation in LLS managed Group feral animal control programs if available.	Not required	Environmental Manager	NA
Feral Pest Animal Control – Monitoring	Somewhat effective	Grounds monitored to determine whether pest activity warrants additional measures beyond Group feral animal control programs.	Annual monitoring using camera traps in pre-determined locations to identify excessive pest activity.	Environmental Manager	If pest activity is excessive, approach LLS for guidance on additional measures that can be implemented.
Management Measures and Procedures Applicable to All Stages					
Fauna Injury and Entrapment Procedure	Effective	Ideally no incidents, or all injured fauna to receive appropriate care.	Record encounters that result in injury or entrapment:	Environmental Manager	From records determine whether there is any

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Management activity	Effectiveness	Performance Indicator	Monitoring proposed	Responsibility	Contingency action
			Species Location Outcome (i.e. fauna death, fauna received care from WIRES/Vet)		particular location causing frequent incidences. Address any identifiable causes for fauna injury and entrapment.
Bushfire Hazard Management	Effective	Vegetation in asset protection zones is maintained at a suitable height.	Monthly audit.	Safety Manager	Have APZ maintenance undertaken if APZ is deemed unsafe.
Bushfire Hazard Management	Effective	All fire safety equipment is tagged and tested as required.	Yearly audit	Safety Manager	Have equipment tagged and tested if due.

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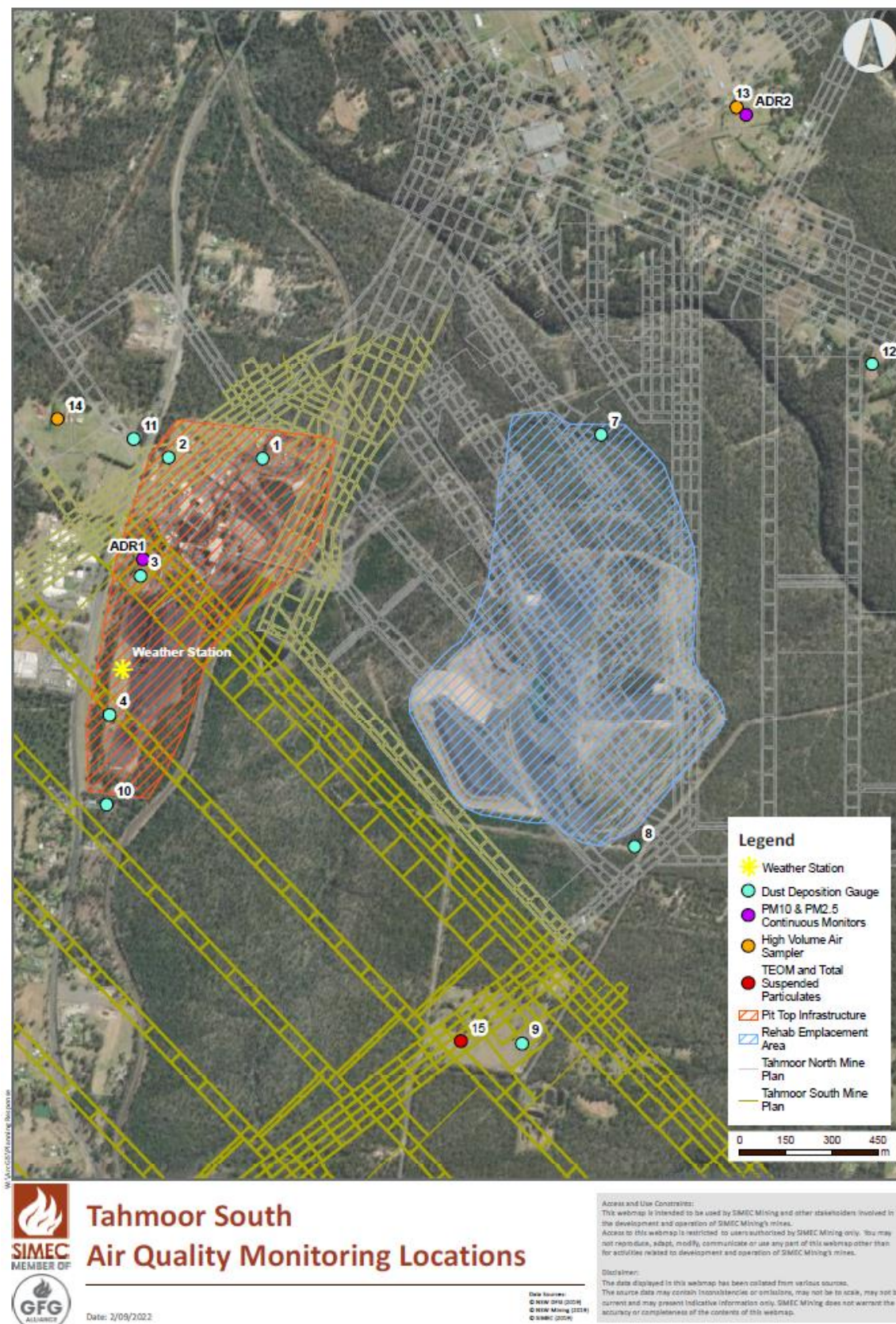
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Appendix A (vii) Site Air Quality Monitoring



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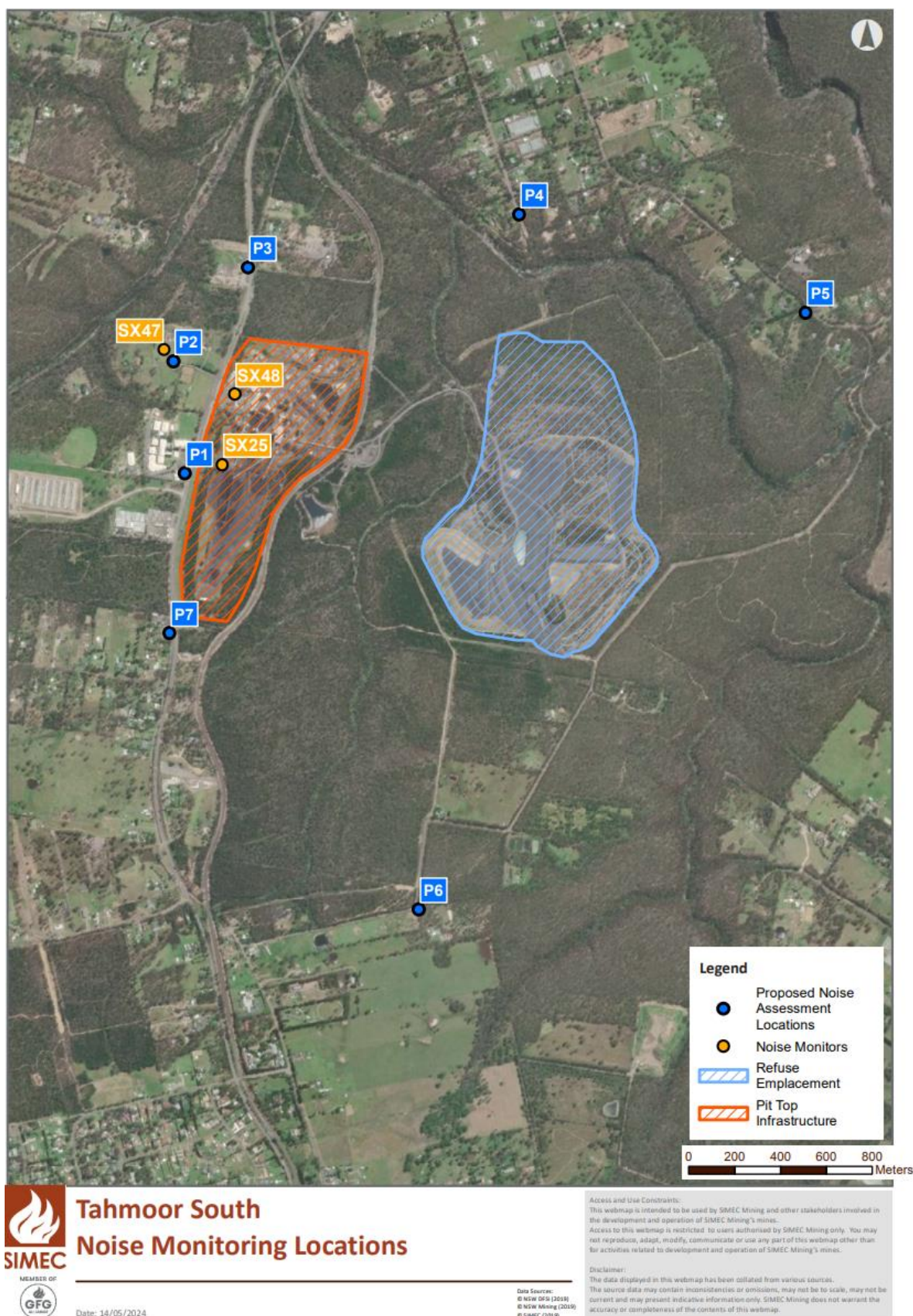
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Appendix A (viii) Site Noise Monitoring



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Appendix B Letter of Approval



Zina Ainsworth
Environment and Community Manager
Tahmoor Coal Pty Ltd
2975 Remembrance Drive
TAHMOOR New South Wales 2573

10/02/2022

Dear Ms. Ainsworth

**Tahmoor South Coal (SSD-8445)
Environment Management System**

Thank you for submitting the revised Environment Management System in accordance with Condition E1 of Schedule 2 of the consent for the Tahmoor South Coal (SSD-8445-PA-8).

The Department has carefully reviewed the document and is satisfied that it generally meets the requirements of the condition.

Accordingly, the Secretary has approved the revised Environment Management System (Revision V2, dated February 2022). Please ensure that the approved plan is placed on the project website at the earliest convenience.

If you wish to discuss the matter further, please contact Charissa Pillay on 02 99955944.

Yours sincerely

Wayne Jones
Team Leader - Post Approval

As nominee of the Secretary