TOMINGLEY
GOLD OPERATIONS PTY LTD
(A wholly owned subsidiary of Alkane Resources Ltd)

Tomingley Gold Operation

SAR Mine Stage 1a Construction Environmental Management Plan

Table 1
Table of Revisions

Revision Number	Revision Date	Prepared by	Approved by	In consultation with
Original for Agency Consultation	August 2023	TGO		BCS TfNSW NSW EPA Narromine Shire Council Dams Safety NSW NSW DPE (Water)

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1. DOCUMENT SCOPE AND PURPOSE

1.1 Introduction

Tomingley Gold Mine (TGO) is an opencut and underground mine operated by Tomingley Gold Operations Pty Ltd, a wholly owned subsidiary of Alkane Resources Ltd. TGO operates under MP 09_0155 granted on 24 July 2012. MP 09_0155 has been modified seven times with the most recent modification in December 2022. Development consent SSD 9176045 for the Tomingley Gold Extension Project (TGEP), located immediately south of TGO was granted on 21 February 2023. SSD 9176045 covers open cut and underground mining operations within both the TGO and San Antonio Roswell (SAR) Mine Sites (**Figure 1**). In accordance with condition A7 of SSD 9176045 TGO will surrender its existing approval (MP 09_0155) within 12 months of the date of physical commencement of development under consent SSD 9176045.

1.1.1 CEMP Staging and Scope

Condition A20 of the Development Consent allows for the submission of strategies, plans and programs on a staged basis, specifically:

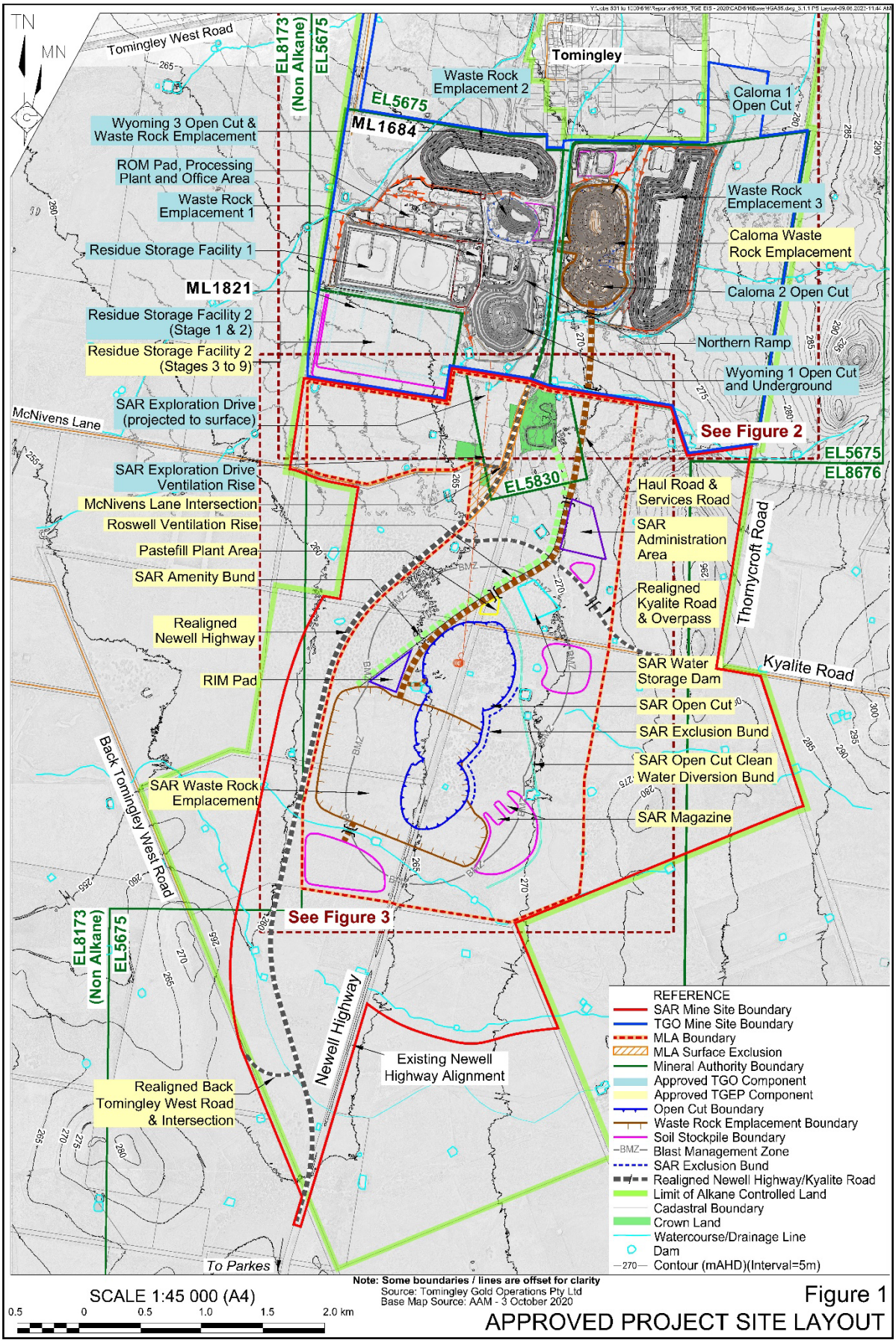
A20. With the approval of the Planning Secretary, the Applicant may:

(a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program);

(b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined);

A21. If the Planning Secretary agrees, a strategy, plan or program may be staged without addressing particular requirements of the relevant condition of this consent if those requirements are not applicable to the particular stage.

TGO has requested approval from the Planning Secretary in relation to this requirement to be able to begin construction under this CEMP for the Stage 1a construction phase of the SAR Mine. Accordingly, this CEMP relates to Stage 1a only as described in Section 1.3. The remaining construction phases and operational phase will be managed under the specific environmental conditions of individual management plans detailed in Part B of the Development Consent.


TN
MN
Tomingley West Road
EL8173 (Non Alkane)
EL5675
Tomingley
Waste Rock Emplacement 2
Caloma 1 Open Cut
EL5675
ML1684
Wyoming 3 Open Cut & Waste Rock Emplacement
ROM Pad, Processing Plant and Office Area
Waste Rock Emplacement 1
Waste Rock Emplacement 3
Caloma Waste Rock Emplacement
Residue Storage Facility 1
ML1821
Caloma 2 Open Cut
Residue Storage Facility 2 (Stage 1 & 2)
Northern Ramp
Residue Storage Facility 2 (Stages 3 to 9)
Wyoming 1 Open Cut and Underground
SAR Exploration Drive (projected to surface)
McNivens Lane
See Figure 2
EL5675
EL8676
SAR Exploration Drive Ventilation Rise
EL5830
Haul Road & Services Road
McNivens Lane Intersection
SAR Administration Area
Roswell Ventilation Rise
Thorncroft Road
Pastefill Plant Area
SAR Amenity Bund
Realigned Kyalite Road & Overpass
Realigned Newell Highway
SAR Water Storage Dam
Kyalite Road
RIM Pad
SAR Open Cut
SAR Exclusion Bund
Back Tomingley West Road
SAR Open Cut Clean Water Diversion Bund
SAR Waste Rock Emplacement
SAR Magazine
See Figure 3
EL8173 (Non Alkane)
EL5675
Newell Highway
Existing Newell Highway Alignment
Realigned Back Tomingley West Road & Intersection
To Parkes
REFERENCE
SAR Mine Site Boundary
TGO Mine Site Boundary
MLA Boundary
MLA Surface Exclusion
Mineral Authority Boundary
Approved TGO Component
Approved TGEP Component
Open Cut Boundary
Waste Rock Emplacement Boundary
Soil Stockpile Boundary
BMZ Blast Management Zone
SAR Exclusion Bund
Realigned Newell Highway/Kyalite Road
Limit of Alkane Controlled Land
Cadastral Boundary
Crown Land
Watercourse/Drainage Line
Dam
270 Contour (mAHD)(Interval=5m)
SCALE 1:45 000 (A4)
0.5 0 0.5 1.0 1.5 2.0 km
Note: Some boundaries / lines are offset for clarity
Source: Tomingley Gold Operations Pty Ltd
Base Map Source: AAM - 3 October 2020
Figure 1
APPROVED PROJECT SITE LAYOUT

1.2 Approved Activities

Activities approved under SSD 9176045 include the following (**Figure 1** and **Figure 2**).

- The realignment of the Newell Highway and Kyalite Road, including the intersections of the Newell Highway and Kyalite Road, McNivens Lane and Back Tomingley West Road.
- Surface and underground mining operations within the SAR Mine Site, including the delivery of waste rock and ore to the TGO Mine Site for stockpiling and/or processing.
- Continued operation of the previously approved TGO Mine, including construction and use of:
  - Stages 3 to 9 of Residue Storage Facility 2;
  - a grinding mill and associated modification to the crushing circuit within the TGO Processing Plant to permit up to 1.75Mtpa of ore to be processed; and
  - use of the Caloma 1 and 2 Open Cuts for in-pit placement of waste rock.
- The connection of the existing "Dappo" bore to the Applicant's existing and approved water supply pipeline that runs from Narromine to the TGO Mine Site.

Mining operations may be carried out on site, within the approved disturbance area, until 31 December 2032. With a maximum of 1.75 million tonnes of ore to be processed on site in any calendar year.

Existing TGO Environmental Management Plans will continue to operate within the TGO Mine Site and until replaced by updated Management Plans under SSD 9176045.

1.3 Stage 1a Project Scope

This CEMP has been prepared to address Stage 1a construction works only (**Figure 3**).

Construction works for Stage 1a are limited to the eastern side of the Newell Highway and comprise two major components as follows.

1. Establishment and operation of the pastefill plant in a temporary location within the footprint of the SAR North Pit. Placing this facility within the footprint of the North Pit would only be temporary until the development of the North Pit commences. The temporary location would permit more efficient transfer of pastefill to the underground workings, and once the North Pit is under development, the Pastefill Plant would be relocated to the approved location.
2. Establishment of the following approved project components.
   a. Borrow pit within the SAR South and Central Pits.
   b. Haul and Services Road, services pipeline corridor and internal access track.
   c. A temporary intersection with Kyalite Road.
   d. Amenity Bund
   e. Administration Area.
   f. Water Storage Dam.
   g. Clean Water Diversion Bund and Exclusion Bund
   h. Kyalite Road realignment (on TGO land only)
   i. Relocation of 22kV powerline.

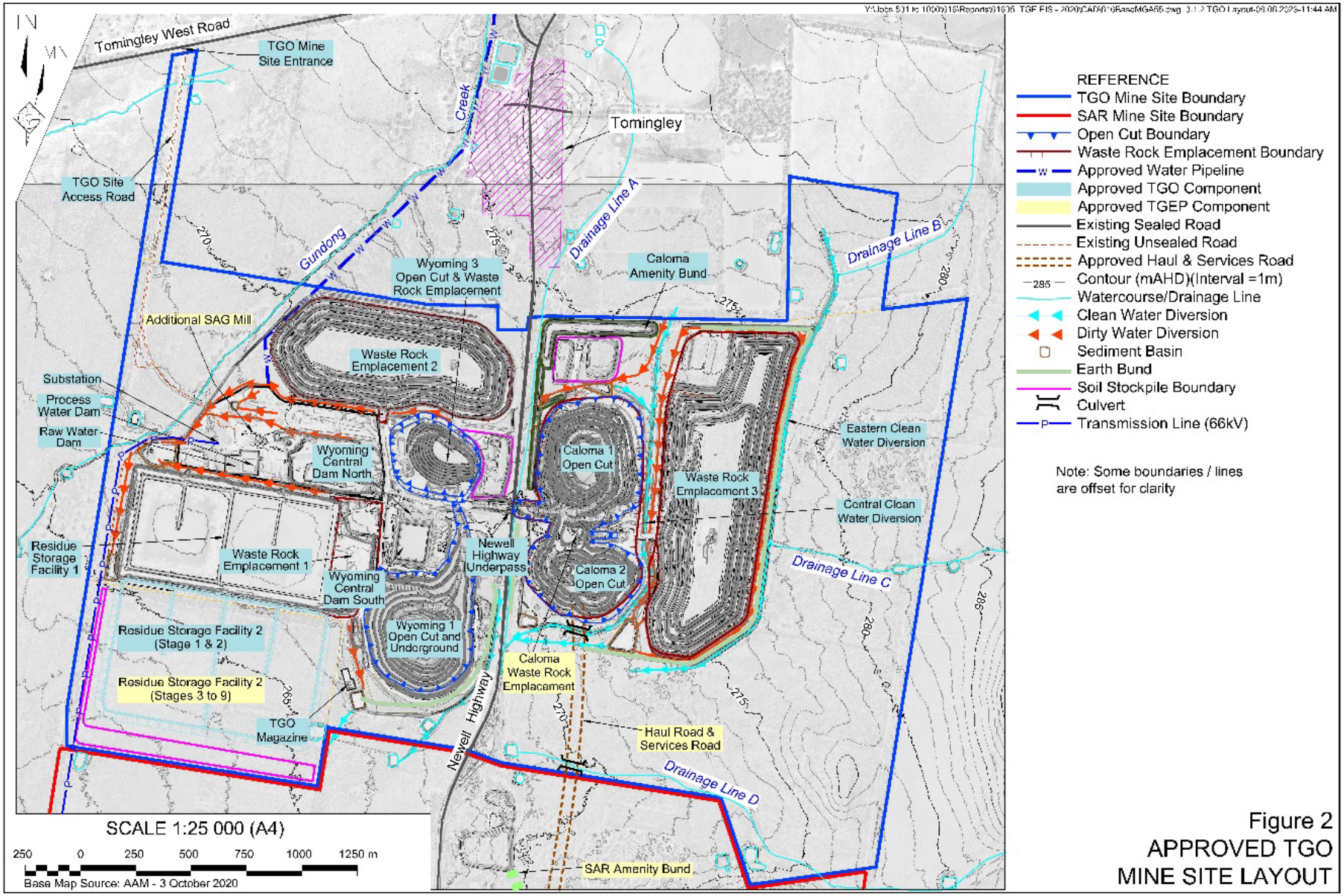


Figure 2
APPROVED TGO MINE SITE LAYOUT

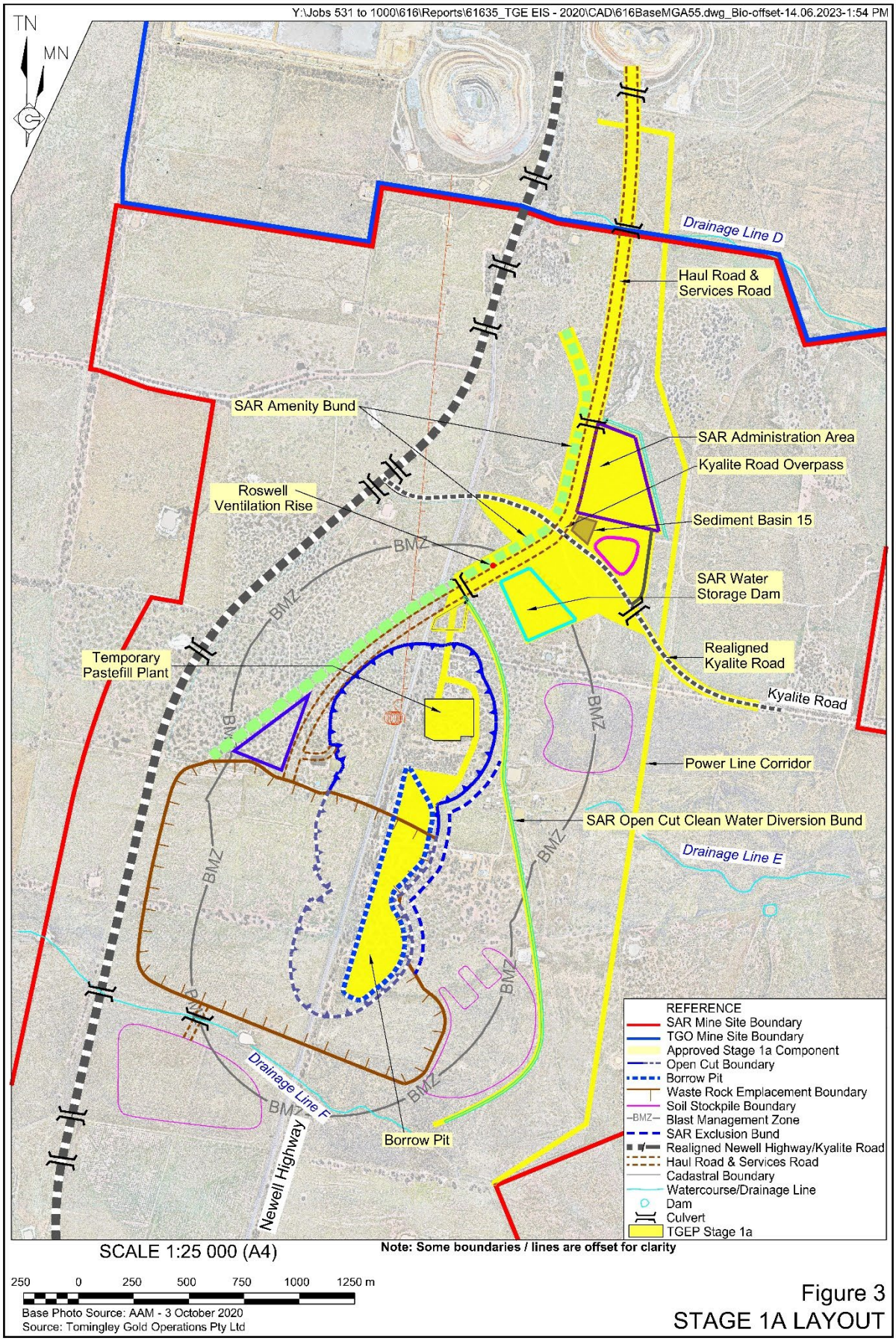


Figure 3
STAGE 1A LAYOUT

1.4 Construction Schedule

The SAR Project construction schedule has been staged to facilitate a safe working environment; reduce and control environmental impacts; and deliver required works in a timely manner. Those items intended to support the SAR Underground Mine would have the highest priority. Those items intended to support open cut mining operations would be of lower priority and would be undertaken at a later stage of development. The schedule below is indicative and will possibly be subject to change due to external or unforeseen circumstances such as unfavourable weather.

Indicative Construction Schedule

Activity	Oct 23	Nov 23	Dec 23	Jan 24	Feb 24	Mar 24	Apr 24	May 24	Jun 24	Jul 24	Aug 24	Sep 24	Oct 24
Paste Plant Civil Works	X												
Paste Fill Plant Construction		X	X	X	X	X	X	X	X	X	X	X	X
Temporary crossing on Kyalite Road	X	X	X	X	X	X	X	X	X	X	X	X	X
Borrow pit within the SAR South and Central Pits	X			X	X	X	X	X					
Clean water diversion bund and exclusion bund	X												
Haul and services road, services pipeline corridor and internal access tracks			X	X	X								
Amenity Bund						X	X	X					
Water Storage Dam									X	X	X		
Administration area					X	X	X						
Kyalite Road realignment (on TGO land only)												X	X
Relocation of 22kV powerline				X	X	X							

1.5 CEMP Purpose

This CEMP has been prepared to address the specific environmental management and monitoring measures for Stage 1a which includes the following:

- Identifying and implementing relevant environmental, legal/regulatory requirements applicable to the construction works.
- Stating objectives and targets for the environmental performance of the Project.
- Identifying the environmental management measures to minimise and manage the Project's impacts on the environment and community during construction.
- Outline how TGO will comply with the Development Consent, licences, and permits, during the stage 1a construction of the Project.
- Assigning roles and responsibilities for the implementation, management, and review process.
- Providing a consistent and uniform approach to environmental management.

- Providing all personnel working on the Project with sufficient information to undertake their works in accordance with this CEMP, the Development Consent, legal and other relevant environmental requirements.
- Enabling the commitments within the Development Consent documents to be captured and implemented.

1.6 Environmental Management Strategy

An Environmental Management Strategy (EMS) is required under Condition D1 of the development consent. The current EMS has been updated and includes environmental management plans and procedures that are used to manage key environmental issues and for the successful implementation of the environmental strategy, including aspects such as monitoring, communication (including dispute resolution, and complaints handling), environmental risk assessment and training. Procedures have also been developed to appropriately manage areas of residual risk.

1.7 Preparation of this Plan

Table 1 presents the personnel who prepared, reviewed or endorsed this plan with **Table 2** being a short summary of peer review comments.

Table 2
Plan Preparation

Name	Position and Company	Qualifications and Experience	Role (author, peer review, owner)	Relevant Section of the CEMP
Lachlan Maher	Environment Coordinator, TGO	BEnv 4 years – Environment and H&S Roles in Quarrying and Metalliferous mining	Author	Entire document
Jenna Lehmann	Casual Environment Coordinator, TGO	BEnvSc (Land&Water) 7 years – Environment Role in Metalliferous Mining	Author	Entire document
Dave Pritchard	Environment & Community Manager, TGO	MEnvMgtSust, BAppSc Env Analysis, CEnvP 25 years – Roles in NSW government, consulting and site-based environmental management of metalliferous and coal mines	Peer Review Document Owner	Entire document
Mitchell Bland	Managing Director, RW Corkery & Co Pty Limited	BSc(hons), MEconGeol, LLB(hons), FIQA, FAusIMM, MEIANZ, REAP 17 years - Environmental Consultant EIS Author	Peer review	Entire document
Dr. Martin Doyle	Director, Northstar Air Quality Pty Ltd	PhD, Bsc (Hons) Air Quality Assessment Author	Peer review	Air quality – Section 4

Name	Position and Company	Qualifications and Experience	Role (author, peer review, owner)	Relevant Section of the CEMP
Rod Linnett	Lead Acoustic Consultant, Muller Acoustic Consulting (MAC)	Mechanical Engineering - Associate Diploma Member – Australian Acoustic Society (MAAS) Member Institute of Acoustics (MIOA, UK) Noise and Blasting Assessment Author	Peer Review	Noise – Section 5
Ian Gilmore	Water Engineer, GHD	BE (Civil)(Hons) Water Engineer TGO Water Management Plan Author	Peer Review	Surface water – Section 6
Steve O'Rourke	Director, Constructive Solutions Pty Limited	BE MBA FIE Aust CPEng RPEQ NER APEC Engineer IntPE (Aus) Traffic Assessment Author	Peer Review	Traffic – Section 7
Stephanie Rusden	Senior Archaeologist, OzArk Environment and Heritage	BA, BSc Aboriginal Heritage Assessment and Historic Heritage Assessment Author	Peer Review	Heritage – Section 8
Rowan Murphy	Senior Environmental Consultant AREA Environmental & Heritage Consultants	B Env Sc., LLB, NSW Biodiversity Assessment Method (BAAS18152)	Peer Review	Biodiversity – Section 9

2. REGULATOR AND COMPLIANCE REQUIREMENTS

2.1 Approval, Licences and Permits

All licences, permits and approvals required for the construction of the SAR Mine have been obtained and maintained, as required, throughout the construction period. The status of these licences, permits and approvals along with the required timing for each is shown in **Table 3**.

Table 3
Status of Approval, Licences and Permits

Licence/approval description	Status	Approving authority	Timing	Comment
Development Consent (SSD 9176045)	Initial approval 21 February 2023	DPE as delegate for the Minister for Planning	Pre-construction	Modification 1 in progress (August 2023) for staging of biodiversity offset credits
Mining Lease (ML 1858)	Granted 19 July 2023	Minister for Mineral Resources	Pre-Construction	
Environment Protection Licence (EPL 20169)	Amended to include additional land – 22nd June 2023	NSW Environment Protection Authority (EPA)	Pre-Construction	
Section 138 Road Permit	Commenced	Narromine Shire Council	Prior to commencing works within the existing Kyalite Road road reserve	Open trench Kyalite Rd for water, residue and other services pipelines
				Temporary crossing on Kyalite Rd
Construction and occupation certificates	Application to be lodged with Council	Narromine Shire Council	Prior to commencing construction or occupation of buildings	

2.2 Conditional Requirements

SSD 9176045 identfies the matters to be addressed in Management Plans under the consent. **Appendix 3** presents those requirements that are relevant to Stage 1a and where in this plan each has been addressed.

2.3 Consultation

This CEMP has been developed in consultation with NSW government agencies as required in the Project Approval and listed in the Table of Revisions. Full copies of each agencies correspondence can be found in **Appendix 4** and a summary of comments in **Table 4**.

Neighbouring landholders and residents (including R4, R6, R60, R62, R64, R72, and R43 – see Figure 2.3 of the EIS) have been consulted in relation to the proposed staging of construction. For privacy reasons, all community consultation records are stored in TGO's Consultation Record Register and will be produced on request.

Table 4
Agency Correspondence

Government Agency	Comments	Response
BCS	CEMP lacks details regarding clearing protocols and needs more information on what these procedures are. Reference is made to elements of the TGO Biodiversity Management Plan. This plan should be appended or directly linked. Table 2 is incomplete and contains omissions which should be corrected.	Section 9.2 amended to include more information on clearing protocols. Section 9.2.1 contains a link to the Biodiversity Management Plan on the Alkane website. Table 2 omissions corrected.
Dam Safety NSW	No comments on the CEMP. Noted that an assessment will be required to determine if the Water Storage Dam is a declared dam.	Noted Prior to construction of the proposed SAR water dam the relevant notification form will be submitted to Dams Safety NSW.
DPE Water	Proponent should confirm if there will be any groundwater take as part of Stage 1a. Proponent should provide estimates of site water demand and confirm the proposed sources are sufficient to meet this requirement. Baseline information on geomorphic and riparian conditions should be recorded prior to any construction. TARP should address stream and riparian health and channel stabilty (geomorphology)	No groundwater take will occur as a part of Stage 1a. All water requirements will be sourced from existing sources at TGO and excess water will be transfered back to TGO if required. Section 6.5 identifies the baseline information on geomorphic and riparian conditions associated with Stage 1a. Appendix 2 presents TARP(s) related to geomorphic and riparian condition.
EPA	No comments.	Noted
Heritage NSW	No comments.	Noted

Government Agency	Comments	Response
Narromine Shire Council	Many responsibilities are assigned to "Contractor's Managers and Supervisors". It is suggested that as the plan includes certain 'trigger/action/responses' that are to be implemented and identified by supervisors, it is important that these key staff are involved in the preparation of management plans prior to finalisation.	Key personnel, including supervisors, have been involved in the development of the CEMP.
	Air Quality Trigger Level 2 is not consistent between the information presented in Section 5.5 and Appendix 1.	Section 4.5 has been made consistent with Appendix 1.
	Appendix 1 – Air Quality Trigger Level 2 – "and the wind is blowing from the mine towards the residences". This presents an imprecise/unclear trigger identified to be interpreted concurrently with a PM_{10} concentration. Better clarity is recommended to be provided in the CEMP.	While Tomingley village is directly North/Northeast from the mine, there are also a number of other residences located in other several directions from the mine. No specific direction is given as this may risk supervisors not identifying if dust is heading to a residence outside of the listed directions. Supervisors are aware of the residences around the mine, and would be capable of identifying if dust is blowing in those directions during high wind periods.
Transport for NSW	Traffic details are provided in Section 8, however in Table 3, they are referenced as being in Section 9.	Table 2 has been updated along with the order of the tables.
	Site related heavy vehicle traffic will be required to access Kyalite Road from the Newell Highway via a left turn only. TfNSW request a map indicating where a U-turn to allow northbound vehicles to access Kyalite Road from the north is to be located. A drivers code of conduct explaining this requirement should be provided to all drivers accessing the works.	Noted that heavy vehicle traffic coming from South of the site will proceed to Tomingley village before doing a U-turn in the truck stops to return and access Kyalite road using left turns only. Heavy vehicle drivers will be made aware of not being able to use the South Tomingley rest area to perform U -turns. A new section 7.2.1 has been included detailing the drivers Code of Conduct inclusive of a map detailing appropriate U-turn locations within Tomingley.
	Comments were included in relation to the Newell Highway re-alignment.	Works relating to the Newell Highway realignment are not included in this plan and so these comments are not applicable to this CEMP. Comments are noted for future plans.

3. ENVIRONMENTAL MANAGEMENT PRACTICES

All construction works associated with Stage 1a of the Project will be undertaken in accordance with this CEMP. The following sections provide a summary of how works are to be managed during construction of Stage 1a.

3.1 Environmental Performance Management

The TGO Environmental Management System (EMS) includes the "Plan, Control, Check, Act" model **Figure 4**. This model endorses the concept of continual improvement. An EMS is a continual cycle of planning, implementing, reviewing, and improving the processes and actions taken to meet environmental obligations. Prior to undertaking a new task or as conditions change the following process will be followed:

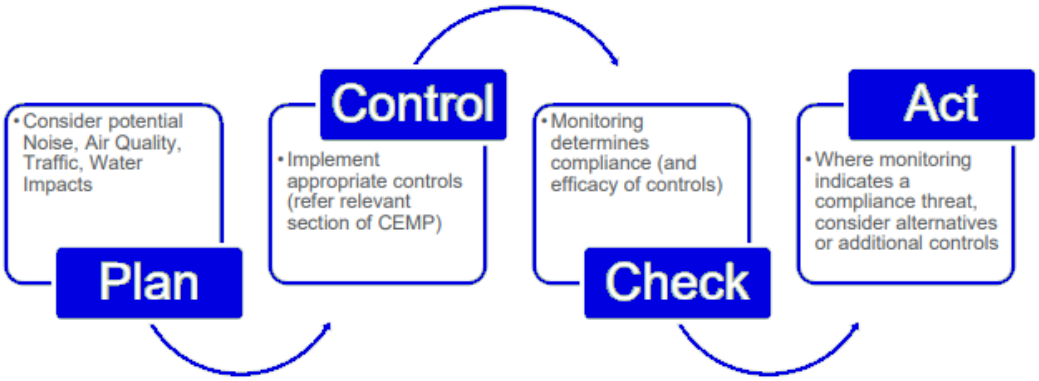


Figure 4 Performance Management Process

3.2 Works Planning

To enable relevant environmental controls to be identified and applied the following will be undertaken:

- Pre-start risk assessments to determine potential environmental impacts and apply job specific controls (considering activity, weather, location and interactions);
- Site Activity Records. A record of site activities will be kept to allow for monitoring data to be correlated with activities. This will enable the review and audit process as well as inform responses to potential complaints, enquiries and/or disputes.

Specific environmental controls for individual work areas will be developed based on the task and included in job planning documents (SWMS, pre-start) these plans will be consistent with the requirements and strategies set out in this CEMP. TGO require that all works be subject to these documented risk assessments prior to works commencing and reviewed if conditions change.

3.3 General

The following controls are applicable to all construction activities and areas:

- Work areas will be clearly defined prior to any works.
- All building materials, plant and equipment must be contained wholly within the confines of the Stage 1a boundary.

- Vehicles must remain within designated access routes and avoid disturbance to peripheral vegetation.
- All personnel must carry out their work in accordance with the responsibilities outlined in Section 12.
- All construction personnel must be made aware of this CEMP.
- Employing appropriate management and maintenance practices during the works, such as:
  - Maintaining an orderly and tidy workspace.
  - Ensuring all building materials are appropriately stored or disposed of upon cessation of use.
- Include CEMP and environmental controls awareness training specific to Stage 1a during the Site Inductions of staff.
- This CEMP should be readily available on Site and include a Site plan(s) which shows:
  - No go areas (e.g. heritage, and biodiversity offsets) and boundaries of the work area.
  - Location of environmental controls (i.e. erosion and sediment controls, fences and/or other measures to protect vegetation or fauna, spill kits).
  - Location and full extent of any vegetation disturbance.

3.4 Construction Hours

Construction activities will be undertaken in accordance with the approved hours of operation as stipulated in SSD 9176045. Conditions pertaining to construction have been reproduced in **Table 5.**

Table 5
Hours of Construction

Activity	Operating hours
Construction of the SAR Mine.	7 am to 10 pm Monday to Saturday At no time on Sundays or public holidays.
All other construction works, including the water supply pipeline.	7 am to 6 pm, Monday to Friday, 8 am to 1 pm Saturdays and at no time on Sundays or Public Holidays in accordance with the *Interim Construction Noise Guideline* (DECC, 2009) (or its latest version).

3.5 Visual Amenity

A visual impact assessment was undertaken as part of the EIS. The following management and mitigation safeguards will be implemented throughout Stage 1a to minimise visual impacts for surrounding residents and users of the Newell Highway.

3.5.1 Management and Mitigation Safeguards

To provide visual amenity to neighbours and the community, the following actions will be undertaken:

- Construction of the SAR amenity bund,
- Maintain existing screening vegetation,

- Construction of infrastructure (such as the paste fill plant) using non-reflective, neutral-coloured materials or outer coatings,
- Ensure to the extent practicable that lights with diffusing covers or visible bare lamps that emit light above the horizontal plain are not to be used on the outside of buildings or structures,
- Manage dust emissions to limit the potential for dust clouds to be visible from outside active sections of the project,
- Ensure to the extent practicable, that the light from all mobile lighting towers is directed away from surrounding residences and public roads, and
- Turn off external lighting in non-operational or non-active sections of the Project Site.

3.6 Waste and Fuels Materials Management

All waste materials will be separately stored and removed from site in accordance with TGO's current waste management practices and the EPA's waste Classification Guideline (2014). No waste will be accepted on site.

3.6.1 Fuel and Corrosive Materials Storage

Fuel will be stored and managed in accordance with AS1940 The storage and handling of flammable and combustible liquids. Corrosive substances will be managed in accordance with AS 3780 The Storage and Handling of Corrosive Substances.

3.7 Bushfire Management

TGO will ensure the following documents required under Condition B82 of SSD 9176045 are prepared prior to the commencement of construction of Stage 1a:

- a Bushfire Report, prepared in accordance with *Planning for Bushfire Protection* (RFS, 2019), in consultation with the NSW Rural Fire Services;
- an Emergency Response Plan, prepared in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 1 'Emergency Planning' guideline*, in consultation with Fire and Rescue NSW; and
- an Emergency Services Information Package, prepared in accordance with the Fire and Rescue NSW F*ire safety guideline – Emergency services information package and tactical fire plans* for the development.

The following management and mitigation measures will be implemented within the construction area to reduce the risk of a local bushfire event:

- Monitor and reduce fuel loads within the Project Site in accordance with existing programs;
- Maintain all roads and tracks within the Stage 1A Project Site to ensure safe access and egress in the event evacuation is required;
- Correct storage of all hydrocarbons;
- Ensure training is provided to selected site personnel in relation to specific firefighting tasks and procedures; and
- Controlled grazing by domestic stock to reduce vegetation fuel loads.

4. AIR QUALITY MANAGEMENT SUB-PLAN

This section describes how TGO proposes to manage and protect air quality during Stage 1a construction. This Sub-Plan includes both pro-active as well as reactive management measures to minimise the impact of dust on the surrounding environment, including surrounding properties and receivers. Location of monitoring equipment and sensitive receivers are shown in **Figure 5**.

4.1 Predicted Construction Air Quality Impacts

Within the Air Quality Impact Assessment undertaken as part of the EIS for the Tomingley Gold Extension Project, an emissions inventory was developed for a single construction year (Scenario 1), selected to assess the worst case air quality impacts by including the following activities:

- SAR site establishment activities.
- Public road construction and realignment activities, including both the Newell Highway and Kyalite Road.
- Ventilation from underground activities via a single ventilation rise.
- Continued TGO Mine Operations.

Scenario 1 as modelled includes Stage 1a activities as well as activities that would not be undertaken during Stage 1a of construction. The modelling therefore likely overstates expected air quality-related impacts.

The air quality assessment predicted incremental concentration of PM_{10} and $PM_{2.5}$ would be generally minor, with no additional exceedances of the relevant assessment criteria. It is noted that 24-hour air quality criteria for TSP, PM_{10} and $PM_{2.5}$ are at times exceeded for reasons unrelated to the TGO Mine, including dust storms, bushfires and agricultural activities. The assessment determined that the modelled Scenario 1 construction activities would not result in additional exceedances of those criteria.

4.2 Air Quality Criteria

The air quality criteria for the Project are detailed in Condition B29 of SSD 9176045 and are summarised in **Table 6**. The criteria apply to all residences on privately owned land.

Table 6
Air Quality Criteria

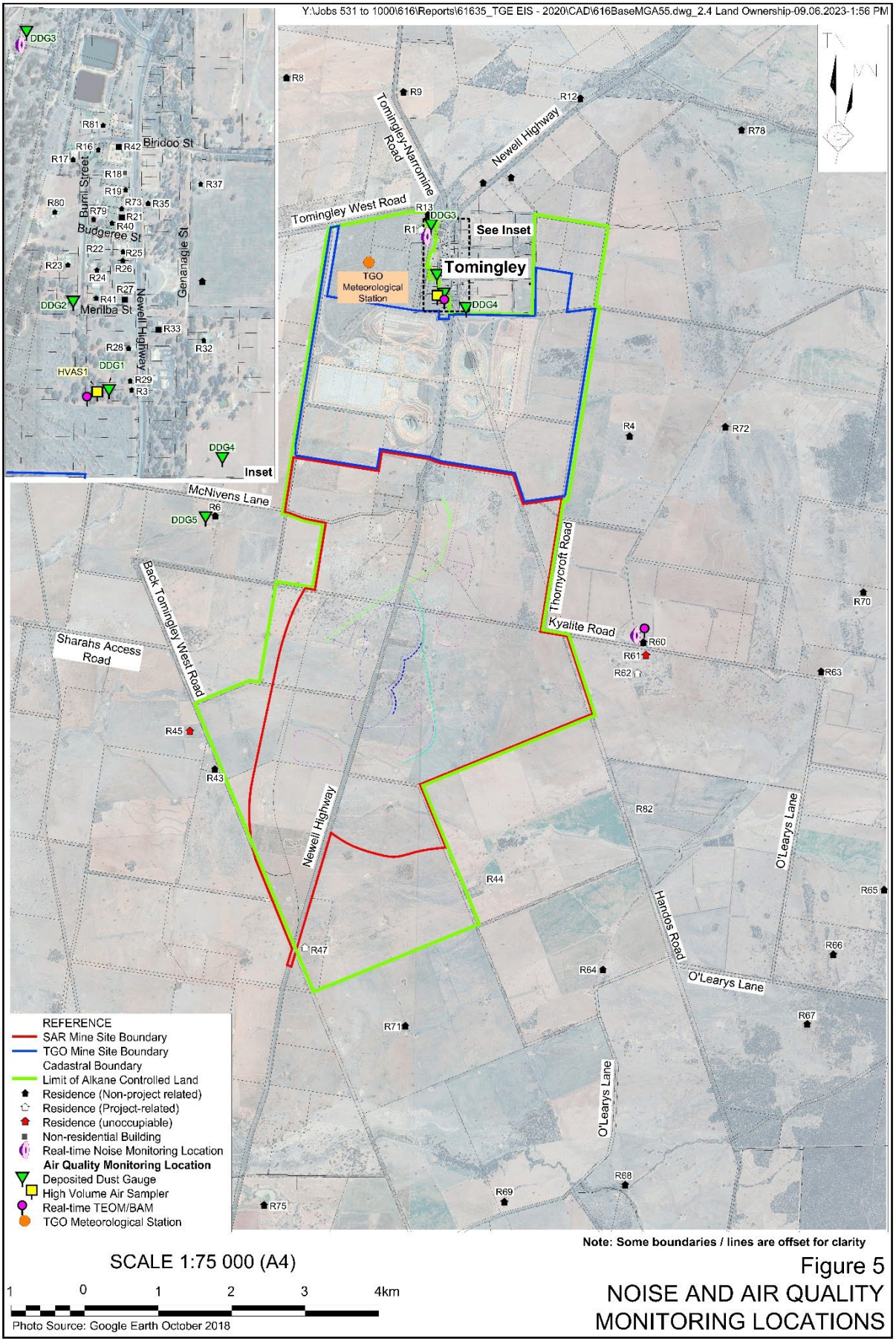
Pollutant	Averaging Period	Criterion
Particulate matter < 10 µm (PM_{10})	Annual	[a, c] 25 µg/m^3
	24 hour	[b] 50 µg/m^3
Particulate matter < 2.5 µm ($PM_{2.5}$)	Annual	[a, c] 8 µg/m^3
	24 hour	[b] 25 µg/m^3
Total suspended particulate (TSP) matter	Annual	[a, c] 90 µg/m^3

Notes:

[a] Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).

[b] Incremental impact (i.e. incremental increase in concentrations due to the development on its own).

[c] Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.


Y:\Jobs 531 to 1000\616\Reports\61635_TGE EIS - 2020\CAD\616BaseMGA55.dwg_2.4 Land Ownership-09.06.2023-1:56 PM
Tomingley
See Inset
TGO Meteorological Station
Inset
Tomingley West Road
Tomingley-Narromine Road
Newell Highway
McNivens Lane
Back Tomingley West Road
Sharahs Access Road
Thornycroft Road
Kyalite Road
O'Learys Lane
Hardos Road
Burrill Street
Budgeree St
Merilba St
Genanagle St
Biridoo St
DDG1
DDG2
DDG3
DDG4
DDG5
HVAS1
REFERENCE
SAR Mine Site Boundary
TGO Mine Site Boundary
Cadastral Boundary
Limit of Alkane Controlled Land
Residence (Non-project related)
Residence (Project-related)
Residence (unoccupiable)
Non-residential Building
Real-time Noise Monitoring Location
Air Quality Monitoring Location
Deposited Dust Gauge
High Volume Air Sampler
Real-time TEOM/BAM
TGO Meteorological Station
Note: Some boundaries / lines are offset for clarity
SCALE 1:75 000 (A4)
1 0 1 2 3 4km
Photo Source: Google Earth October 2018
Figure 5
NOISE AND AIR QUALITY MONITORING LOCATIONS

4.3 Air Quality Management and Mitigation Measures

This section describes how TGO proposes to manage and protect the surrounding environment with respect to air quality during construction of Stage 1a. Specific environmental controls for individual work areas in Stage 1a will be developed based on the task and included in job planning documents (SWMS, and pre-start) these plans will be consistent with the requirements and strategies set out in this CEMP.

The following air quality management and mitigation measures will be implemented.

- Sheet roads with low silt, durable materials to limit generation of silt-sized particles.
- Disturb only the minimum area necessary for construction.
- Clearly mark all roads and tracks and ensure that signposted speed limits are complied with.
- Avoid activities likely to generate significant dust emissions during periods of strong (<30km/h) south/southwest winds.
- Use of water/chemical suppressant sprays/sprinklers or water carts on unsealed roads and in other areas to minimise dust emissions, as required.
- In the circumstances where no water cart is available due to unplanned maintenance, water supply issues or the like, all activities that may generate dust are to be suspended immediately.
- Apply water to material stockpiles prior to loading, transportation and unloading to limit dust emissions, as required.
- Monitor meteorological conditions (including via six-day site specific forecasts are available from Weatherzone - mining zone) to identify periods of adverse weather (little or no rainfall and wind speeds above 30km/h) and implement appropriate additional mitigation measures, including:
    - Prepare for water cart spraying or sprinkler system during high winds;
    - Prepare to cease certain activities or reduce activity level; and
    - Schedule maintenance for plant and equipment to reduce dust generating activities.
- Undertake visual monitoring and mandatory reporting of visible dust emissions to site supervisors and implement measures to minimise or reduce observed dust emissions.
- Monitor real-time dust concentrations (including via automated alerts) as described below and implement measures to minimise or reduce observed dust concentrations when predefined triggers are exceeded, including the following.
    - Reduction, cessation or relocation of dust generating activities;
    - Increased watering of the operational footprint.

4.4 Air Quality Monitoring

Air quality monitoring will be undertaken in conjunction with the current TGO air quality monitoring program.

4.4.1 Monitoring Equipment and Locations

The existing TGO-related meteorological and air quality monitoring equipment will continue to operated and maintained in accordance with the proceedures described in the TGO Air Quality and Greenhouse Gas Management Plan.

The following additional monitoring equipment will be installed surrounding the SAR Mine Site (**Figure 5**).

- One Dual Purpose Beta Attenuation Monitors (BAM), for the measurement of PM_{10} and $PM_{2.5}$ in the vicinity of Residence R60. The BAM monitor is compliant with AS/NZS3580.1.1 Methods for sampling and analysis of ambient air – guide to siting air monitoring equipment.

4.4.2 Monitoring Procedures

Air quality monitoring procedures will be consistent with those described in the TGO Air Quality and Greenhouse Gas Management Plan, including the following.

- BAM monitoring.

  The BAM measures PM_{10} and $PM_{2.5}$ at 15-minute intervals. The unit is connected via telemetry and can be accessed at any location via the internet. The BAM unit will be operated in accordance with the following guidelines:

  - Located and installed by a qualified professional in accordance with AS NZS 3580.1.1 Methods for sampling and analysis of ambient air – guide to siting air monitoring equipment (Method AM-1_ (NSW EPA, 2021).
  - The BAM shall be installed and maintained in accordance with AS/NZS 3580.9.11:2016 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter– - PM10 beta attenuation monitors and AS/NZS 3580.9.12:2013 Methods for sampling and analysis of ambient air, Method 9.12: Determination of suspended particulate matter – PM2.5 beta attenuation monitors.
  - Hourly and calendar day average data shall be calculated and made available to the relevant TGO personnel (under local standard time, without daylight saving times), according to the National Environment Protection (Ambient Air Quality) Measure – Technical Paper No. 5 (NEPM, 2001).
  - An SMS alarm is sent to relevant mine personnel when pre-determined levels are breached (see below), which would in turn indicate what and when action is required.

All air quality monitoring records will be maintained consistent with existing TGO management practices.

4.5 Air Quality Trigger Action Response Plan

In the event that an SMS alarm is received by mine personnel, relevant personnel will implement the Air Quality Trigger Action Response Plan (Appendix 1) which contains the following two trigger levels.

- Trigger Level 1 – Investigation Level

  Current instantaneous PM_{10} concentrations are above 90µg/m^3 for three consecutive hours. If Trigger Level 1 is exceeded, Mine personnel will investigate prevailing winds and determine what activities are occurring within the Stage 1a area that may be contributing to elevated dust levels. Site personnel will then be informed that dust emissions are increasing and action(s) may be required.

- Trigger Level 2 – Action Level

  Rolling 24-hour average PM_{10} are above 40µg/m^3 and activities from the Stage 1a area are identified as contributing to these levels. If Trigger Level 2 is exceeded, remedial action is required and the above additional dust control measures will be implemented.

In the event that the above triggers are exceeded, records will be maintained consistent with existing TGO management practices.

4.6 Non-compliance and Corrective Action

Consistent with the TGO Air Quality and Greenhouse Gas Management Plan, when an exceedance is noted, TGO reviews the data to determine the potential cause of exceedance; suitability of existing controls; and any opportunities to improve air quality management.

In the event of a complaint, TGO will review real time data, site information and local and regional air quality data to determine the cause. If it is determined that construction activities may be contributing to the exceedance, TGO will undertake a review of those activities to confirm ongoing performance of the activity. If an exceedance of the air quality criteria listed in Table 6 occurs, TGO will comply with the notification protocols set out in Section 11 including:

As soon as practicable and no longer than 7 days after obtaining monitoring results showing:

- *an exceedance of any relevant criteria in Table 6, TGO shall notify affected landowners, in writing, of the exceedance and provide regular monitoring results to each affected landowner until the project is again complying with the relevant criteria; and*
- *TGO shall send a copy of the NSW Health fact sheet entitled "Mine Dust and You" (as may be updated from time to time) to the affected landowners and/or existing tenants of the land (including the tenants of any mine-owned land).*

5. NOISE MANAGEMENT SUB-PLAN

This Noise Management Sub-Plan describes how TGO proposes to manage noise emissions during Stage 1a construction of the SAR Project.

5.1 Predicted Construction Noise Impacts

The Noise and Blasting Assessment prepared for the EIS determined that modelled construction operations associated with the proposed realignment of the Newell Highway and the establishment of the SAR Mine Site are expected to operate within Noise Management Levels for all hours at all identified receptors and all scenarios.

Stage 1a construction activities will be located to the east of the existing Newell Highway only and will include only a subset of the modelled noise generating activities. As a result, noise levels associated with Stage 1a construction activities are likely to be lower than construction noise levels predicted in the EIS.

5.2 Noise Criteria

The noise criteria for the Stage 1a construction activities are detailed in Condition B6 of SSD 9176045 and are summarised in **Table 7**. The criteria apply to all residences on privately owned land.

Table 7
Noise Criteria

Residence[1]	Day dB LAeq(15min)	Evening dB LAeq(15min)	Night dB LAeq(15min)	Night LAMax
R06, R45, R79, R80	40	36	35	52
R26, R43	40	37	36	52
R60	40	36	36	52
R03, R16, R17, R22, R23, R24, R25, R28, R29, R32, R35, R37	40	37	37	52
R03, R29	40	39	38	52
R28	40	38	38	52
R32, R41	40	38	37	52
All other privately-owned residences	40	35	35	52
Note 1: See Figure 5				

5.3 Noise Management and Mitigation Measures

This section describes how TGO proposes to manage noise emissions during Stage 1a construction activities. Specific environmental controls for individual work areas will be developed based on the task and included in job planning documents (SWMS, and pre-start) these plans will be consistent with the requirements and strategies set out in this CEMP.

The following noise management and mitigation measures will be implemented.

- Consult with the owners of Residences R6, R60, and R43 in relation to the predicted noise levels and, if requested to do so, enter into a suitable agreement to undertake mitigation works in a manner similar to the existing mitigation at residences within Tomingley village.
- Install broadband reversing alarms on all mobile earthmoving equipment.
- Undertake land preparation operations, including vegetation clearing and soil stripping, during the daytime only.
- Ensure sound power levels of mobile plant used during Stage 1a construction activities are consistent with those presented in Table 29 and Annexure C of MAC (2021).

5.4 Noise Monitoring

5.4.1 Operator Attended Noise Monitoring

Operator attended noise monitoring in the vicinity of Stage 1a construction activities will be undertaken, subject to landholder consent, at Residence R60, during initial construction operations and on request thereafter (**Figure 5**).

Attended monitoring will be undertaken in accordance with the following guidance:

- NSW Environment Protection Authority (EPA), Noise Policy for Industry (NPI), 2017;
- Approved methods for the measurement and analysis of environmental noise in NSW (EPA), 2022;
- Australian Standard AS 1055:2018 - Acoustics - Description and measurement of environmental noise - General Procedures; and
- All acoustic instrumentation used for monitoring under the Noise Monitoring Program shall comply with the requirements of AS IEC 61672.1 – 2019 Electroacoustics - Sound level meters Specifications and will have current National Association of Testing Authorities (Australia) (NATA) or manufacturer calibration certificates.

A report will be prepared following each attended noise monitoring program addressing the following.

- Compliance or otherwise with the noise criteria presented in Table 7.
- Correlation with the real-time noise monitoring results and whether trigger values need to be amended to achieve compliance with the relevant criteria.

5.4.2 Real-time Noise Monitoring

A continuous (unattended) Noise Monitoring Terminal (NMT) has been installed at residence R60 (**Figure 5**).

Triggers (LAeq and LAmax) will be configured on the NMT at levels that indicates potential for exceedance of the noise criteria.

If a noise trigger is exceeded, the NMT will send an SMS alert to the Environment and Community Manager (or delegate) and the action plan identified in Section 5.5 will be implemented.

5.4.3 Meteorological Monitoring

TGO has a permanent weather station located within the TGO Mine Site (**Figure 5**), which uploads data to an on-line portal and is accessible to TGO staff at any time via the internet. Data from this weather station will be used to determine environmental conditions at the time of noise complaints or exceedences.

TGO has subscribed to the WeatherZone forecasting system to provide site specific weather forecasting information. This will be reviewed daily and where noise enhancing meteorological conditions are predicted, Stage 1a construction activities may be modified.

5.5 Noise Trigger Action Response Plan

In the event that a trigger is received from the NMT, relevant personnel will implement the following.

- The Environment and Community Manager (or delegate) will immediately notify the Project/ Construction Manager of the potential noise level exceedance.
- The Project/ Construction Manager will immediately investigate the source of the noise and, if related to Stage 1a operations, make necessary arrangements to alter operations to reduce noise levels.
- Project/ Construction Manager and the Environment and Community Manager (or delegate) will then monitor noise levels (via the NMT) to determine whether a sufficient reduction has been achieved by the measures implemented.
- Where further reduction is required, additional changes to operations will be implemented to achieve the required reduction.
- The Environment and Community Manager will continue to monitor noise levels (via the NMT) to ensure that mitigation measures are either still required or can be withdrawn.

If a noise complaint is received, the Project/Construction Manager will immediately investigate the source of the noise and make necessary adjustments to operations if the noise levels are excessive or in the breach of limits., In addition, a report will be produced within 48 hours to determine the following:

- if Stage 1a construction related noise levels exceed the noise criteria presented in **Table 7**;
- whether existing controls were adequate;
- if noise procedural measures can be improved and implemented to ensure further incidents do not occur; and
- the complainant will be advised of the outcome of the investigation and will be provided with a copy of the report if requested.

If operator attended noise monitoring indicates that project related noise is higher than noise limit criteria presented in **Table 7**, the following actions will occur:

- The person undertaking the monitoring will contact the Project/ Construction Manager and inform them of the noise level and location of the noise exceedance.
- The Project/ Construction Manager will immediately investigate the source of the noise and if related to Stage 1a operations, make necessary arrangements to alter operations to reduce noise levels.

- The Project/ Construction Manager will inform the person undertaking the noise monitoring (or the Environment and Community Manager) when site operations have been altered.
- The person undertaking the monitoring (or the Environment and Community Manager) will recheck and confirm noise levels with the Project/ Construction Manager.

In the event of an exceedance compliance reporting will be undertaken in accordance with conditions stipulated in SSD 9176045 and reproduced in Section 11 of this CEMP.

6. SURFACE WATER MANAGEMENT SUB-PLAN

This Surface Water Management Sub-Plan describes how TGO proposes to manage surface water during Stage 1a construction of the SAR Project. Management of groundwater is not addressed in this document as Stage 1a activities will not impact upon or be impacted by groundwater.

6.1 Existing Surface Water Environment

Background surface water conditions are described in Section 6.6.2 of the EIS (RWC, 2022a). In summary, surface water drains generally from east to west, from the higher elevations of the Herveys Range, located approximately 10km to the east of the SAR Mine Site, to the Bogan River, located approximately 8km to the west of the SAR Mine Site.

As identified in Section 6.1.2.2 of the EIS , watercourses surrounding the SAR Mine Site are typically indistinct and ephemeral, with surface water flows occurring immediately following substantial rainfall. The principal named watercourse that flows through the SAR Mine Site is Bulldog Creek (**Figure 6).** Bulldog Creek is an ephemeral watercourse comprising a network of indistinct drainage lines that flow to the west, rising in the Herveys Range, before flowing through to the south of the SAR Mine Site, passing under the existing Newell Highway, turning north and crossing Back Tomingley West Road to the west of the SAR Mine Site.

Surface water quality monitoring of Gundong Creek was undertaken when flowing and monitoring of Bulldog Creek occurred in June, November, and December 2021. Monitoring of Bulldog Creek was undertaken at three locations, namely BCE (Bulldog Creek East), BCW (Bulldog Creek West) and BCOLL (Bulldog Creek O'Learys Lane) (**Figure 6**). **Table 8** presents the results of surface water quality results for Bulldog Creek.

Table 8 shows that the existing water quality of Bulldog Creek does not meet recommended levels for water quality objectives. The upstream and downstream environment is generally of similar quality. All sites are within recommended levels for pH, electrical conductivity, selenium and the trace metals mercury, nickel, arsenic and cadmium. Molybdenum and boron were above guidelines at the upstream monitoring site. Concentrations of Total Nitrogen, Total Phosphorus, aluminium and iron were significantly higher than recommended guideline values at all sites.

Table 6.6.1 of the EIS identified that Bulldog Creek has:

- limited channel definition;
- no riparian vegetation or threatened aquatic species; and
- minor erosion potential under high-flow scenarios.

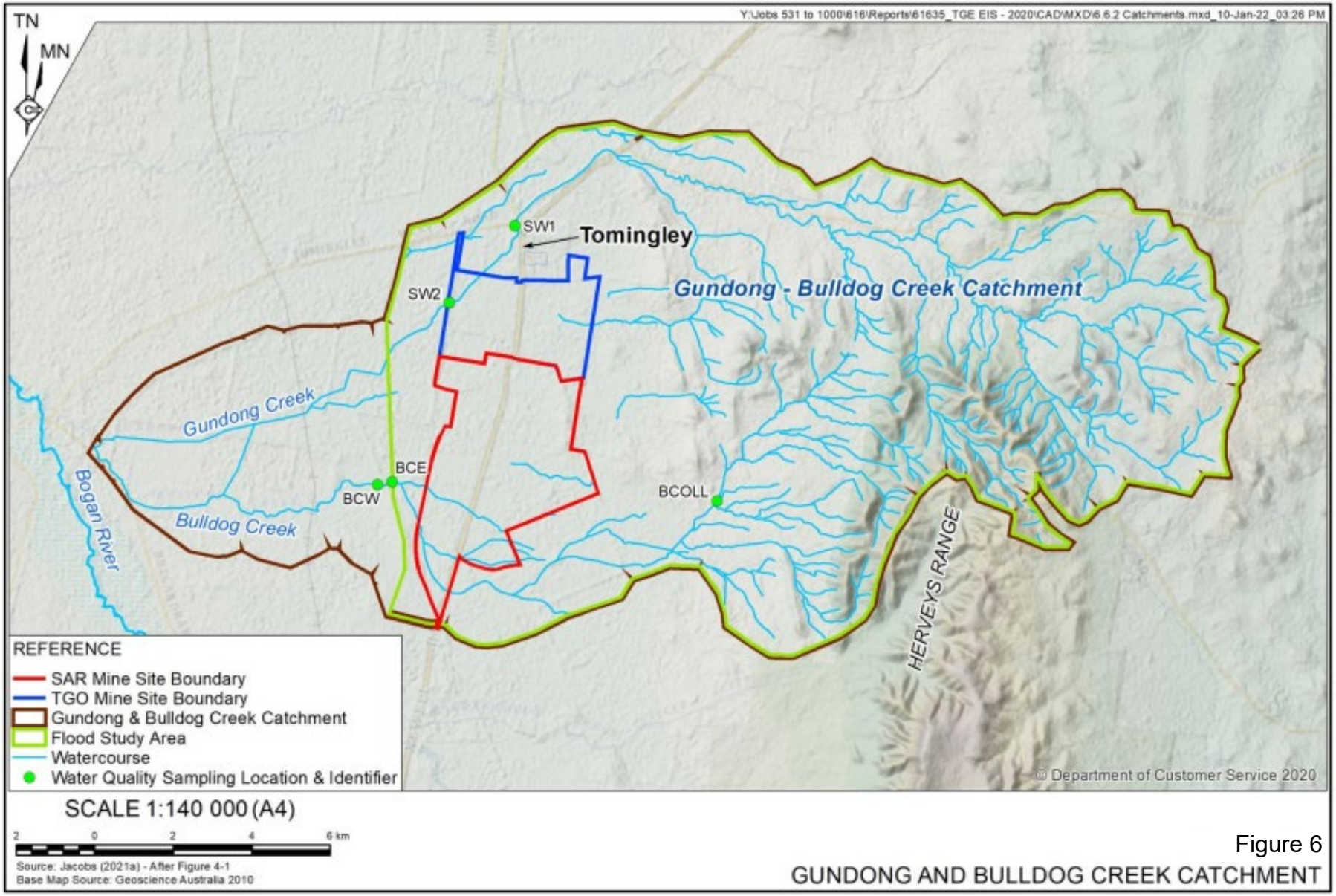


Figure 6
GUNDONG AND BULLDOG CREEK CATCHMENT

Table 8
Existing Water Quality – Bulldog Creek

Water Quality Indicator (units)	Sampling Point			Water Quality Objective (aquatic ecosystems)[1]
	Upstream – BCOLL (June, November and December 2021)	Downstream – BCE (June 2021)	Downstream – BCW June and December 2021)	
Electrical Conductivity (µS/cm)	101-152	107	107-179	<456
pH	7.17-7.36	7.09	6.92-7.12	7- 8
Total Suspended Solids (mg/L)	2.5-18	**22**	**2.5-22**	<20
Ammonia (mg/L)	0.005-0.04	<0.01	0.005-0.02	N/A
Oxidised Nitrogen (mg/L)	**0.04-1.37**	0.01	**0.01-0.04**	0.013
Total Nitrogen (mg/L)	**1.5-3.0**	**1.8**	**1.7-2.0**	0.015
Total Phosphorus (mg/L)	**0.08-0.14**	**0.22**	**0.11-0.18**	0.6
Aluminium (total) (mg/L)	**0.54-4.54**	**9.7**	**0.15-5.63**	0.035
Iron (total) (mg/L)	**0.60-4.48**	**6.7**	**0.62-5.52**	0.055
Mercury (total) (mg/L)	<0.0001	<0.0001	<0.0001	0.3
Molybdenum (total) (mg/L)	**0.0005-0.026**	<0.001	<0.001	0.00006
Nickel (total) (mg/L)	0.004-0.005	0.007	0.003-0.005	0.034
Arsenic (total) (mg/L)	0.001-0.002	0.003	0.002	0.011
Boron (total) (mg/L)	**0.0025-0.13**	<0.05	0.025-0.08	0.013
Cadmium (total) (mg/L)	<0.0001	<0.0001	<0.0001	0.94
Chromium (total) (mg/L)	**0.001-0.005**	**0.009**	**0.001-0.006**	0.0002
Copper (total) (mg/L)	**0.0005-0.003**	**0.007**	**0.005-0.006**	0.001
Zinc (total) (mg/L)	**0.0025-0.007**	**0.027**	**0.0025-0.013**	0.0014
Selenium (total) (mg/L)	<0.01	<0.01	<0.01	0.008
Lead (total) (mg/L)	**0.0005- 0.007**	**0.003**	**0.0005-0.002**	0.0005
Note 1: See Table 5-3 of Jacobs (2021a) for source of water quality objective Note: **Bold** text indicates values in exceedance of water quality objectives.				
Source: RWC (2022) – Table 6.6.3				

6.2 Surface Water Criteria

Surface water performance criteria are set out in Condition B48 of SSD 9176045. **Table 9** reproduces the identified criteria that are relevant to Stage 1a operations.

Table 9
Surface Water Performance Criteria

Feature	Performance Measure
Water management– - General	• Maintain separation between clean dirty (i.e. sediment laden) and mine water management systems • Minimise the use of clean and potable water on the site • Maximise water recycling, reuse and sharing opportunities • Minimise the need for make-up water from external supplies • Design, install, operate and maintain water management infrastructure in a proper and efficient manner • Minimise risks to the receiving environment and downstream water users
Clean water diversions and storage infrastructure	• Design, install and maintain the clean water system to capture and/or convey the 100-year ARI flood event • Maximise, as far as reasonable, the diversion of clean water around disturbed areas on the site
Erosion and sediment control works – including dams	• Design, install and maintain erosion and sediment controls in accordance with the best management practice guidance series *Managing Urban Stormwater: Soils and Construction – Volume 1 (Landcom, 2004) and 2E Mines and Quarries (DECC, 2008)* • Design, install and maintain any new infrastructure within 40 metres of watercourses in accordance with the guidance series for *Controlled Activities on Waterfront Land (DPI Water, 2012)* or latest versions and *Guideline for fish habitat conservation and management – Chapter 4 DP 2013)*, or its latest version.
Flood Mitigation	• Negligible change to off-site flood regime (including flows, levels, storage capacity or velocities) as a result of the development, beyond those predicted in the EIS • Realigned Newell Highway to be designed and constructed to achieve the same or greater flood immunity as the redundant section of highway
Chemical and hydrocarbon storage	• Chemical and hydrocarbon products to be stored in bunded areas in accordance with the relevant Australian Standard
Aquatic and riparian ecosystems (including Gundong Creek)	• Negligible environmental consequences beyond those predicted in the document/s listed in condition A2A2(c) • Maintain or improve baseline channel stability • Develop site-specific in-stream water quality objectives in accordance with the *Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC & ARMCANZ, 2000)* and *Using the ANZECC Guidelines and Water Quality Objectives in NSW* (DEC, 2006)

6.3 Water Management System

Stage 1a construction activties will include four classes of water as follows:

- Clean water - comprising surface water from areas upslope of the Stage 1a disturbance area;
- Raw water – comprising externally sourced water from the TGO Raw Water Dam which is currently supplied via the water supply pipeline from the "Woodlands" bore field. It is noted that the existing "Woodlands" bore and proposed "Dappo"can provide up to 1,400ML per annum which is sufficient to meet the needs of TGO, including Stage 1a;
- Dirty water – comprising surface runoff generated within disturbed sections of the Stage 1a disturbance area; and,
- Mine or process water – comprising water pumped to the Pastefill Plant from the TGO Processing Plant.

Figure 7 presents the water management schematic for the Stage 1a operations. In summary:

- Clean water will be diverted around the disturbance area and would be permitted to continue to flow to natural drainage;
- Raw water will be pumped or trucked from TGO initially to a storage tank for use in dust suppression. Once the SAR Water Storage Dam has been constructed, clean water would be pumped to that facility rather than the storage tank;
- Dirty water within the Stage 1a disturbance area will be captured within one or more sediment basins. That water would preferentially be used for dust suppression purposes and will be pumped to the SAR Water Storage Dam. This water will not be permitted to be discharged to natural drainage;
- Mine or process water will be pumped from the TGO Process Plant or Residue Storage Facility with the residue slurry to the Pastefill Plant where it will be seperated from the residue, and the excess water returned to the TGO Process Water Pond or Wyoming Central Dam South. A portion of the water contained within the slurry will be used to manufacture paste and would be passed to the SAR Underground Mine. This water will not be permitted to be discharged to natural drainage;

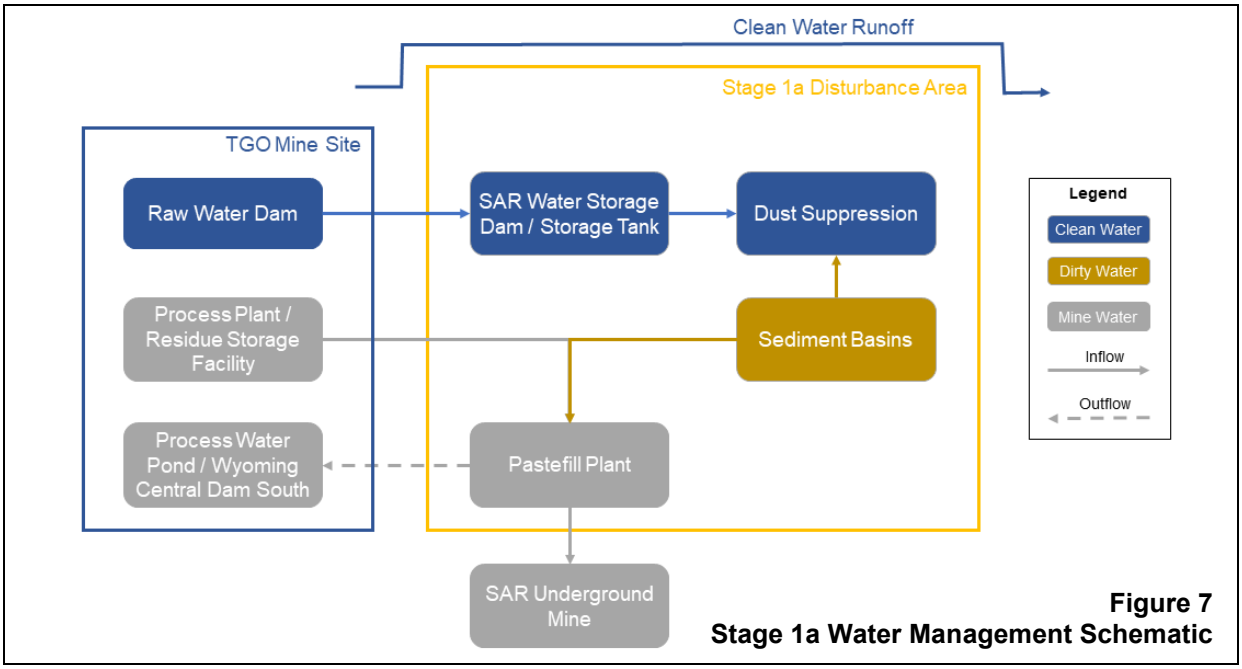


Figure 7
Stage 1a Water Management Schematic

In light of the above, the water balance for Stage 1a operations would be a closed system, with:

- water requirements met through importation of water from the TGO Mine Site and incident rainfall; and
- excess water transferred back to the TGO Mine Site.

6.4 Erosion and Sediment Control Plan

6.4.1 Introduction

This subsection describes the erosion and sediment controls that will be implemented for the Stage 1a operations.

Reference guidelines and standards that are considered for erosion and sediment control within the Stage 1a disturbance area are:

- Managing Urban Stormwater, Soils and Construction, Volume 1 (Landcom 2004).
- Managing Urban Stormwater, Soils and Construction, Installation of Services, Volume 2A (DECC 2008a).
- Managing Urban Stormwater, Soils and Construction, Unsealed Roads, Volume 2C (DECC 2008b).
- Managing Urban Stormwater, Soils and Construction, Mines and Quarries, Volume 2E (DECC 2008c).
- International Erosion Control Association, Best Practice Erosion and Sediment Control (IECA 2008).

6.4.2 Relevant Activities

The SAR Mine Site is characterised by flat to very gently sloping landforms. Topsoils are variably moderately to highly dispersive, and subsoils are invariably highly to very highly dispersive. Gilgai development is common in areas with susceptible soils. However, despite the dispersive nature of some topsoils, evidence of gullying or excessive erosion on the natural landform is limited.

Surface water drainages in the vicinity of the SAR Mine Site are widely spaced and shallow, with surface water flows, particularly following substantial rainfall, characterised by low velocity sheet flow. Section 6.6.6.2 and Figure 6.6.5 of the EIS present an overview of surface water flows under a 5% Annual Exceedance Probability (AEP) rainfall event. In summary,

- the majority of the Stage 1a disturbance area would experience overland flow that would be less than 10cm deep; and,
- between 20cm and 50cm of water would be expected within Drainage Line D (**Figure 9**).

In light of the above, the following Stage 1a activities have the potential to result in erosion and sedimentation.

- Land disturbing activities, including for hardstand and other areas;
- Stockpiling of materials, including topsoil, subsoil and alluvium;
- Construction and use of roads, including construction of the SAR Haul Road across Drainage Line D; and
- Construction of the SAR Amenity Bund.

6.4.3 Erosion and Sedimentation Mitigation Measures

The following erosion and sedimentation controls will be implemented on areas subject to soil disturbance prior to and during Stage 1a construction operations.

- Install clean water diversions and downslope dirty water catch bunds and sediment basins in accordance with Section 3.9.2.3 of the EIS and Landcom (2004), prior to commencing construction operations. In particular, construct the following erosion and sediment control structures during Stage 1a construction operations (**Figure 8**).
  - Sediment Basin 15 and associated dirty water diversions. Sediment Basin 15 would have a minimum capacity of 4.7ML.
  - A temporary sediment basin and associated dirty water diversions adjacent to the temporary location for the Pastefill Plant.
  - Ensure that the SAR Water Storage Dam and borrow pit are internally draining.

  As the Stage 1a disturbance area is intended to operate as a nil-discharge site, ensure that all erosion and sediment controls are substantially oversized.
- Install sediment fencing or similar at the toe of the SAR Amenity Bund and outer embankment of the SAR Water Storage Dam prior to commencement of construction of these items.
- Install road-side drainage in accordance with the requirements of DECC (2008b)
- Sheet all hardstand areas with suitable, fresh waste rock to prevent erosion of the underlying materials during use.
- Shape, cover with topsoil and revegetate the SAR Open Cut Clean Water Diversion Bund and SAR Amenity Bund to achieve a 70% cover within 3 months of construction. Alternatively, use soil stabilising agents or flexible ground covers to stabilise exposed soils until vegetation has become established.

6.5 Surface Water Management Infrastructure

The following subsections describe surface water management infrastructure that will be installed during Stage 1a construction operations (**Figure 8**).

6.5.1 SAR Open Cut Clean Water Diversion Bund

The performance criteria for the SAR Open Cut Clean Water Diversion Bund will be to divert all surface water flows at non-erosive velocities from east of the disturbed areas to the north and south.

The design objective for the bund will be as follows;

- Height - minimum 0.5m freeboard above the modelled 0.1% AEP flood level (see Section 6.6.6.2 of the EIS), with the height varying between 0.6m and 2.0m above natural ground level;
- Bund side slopes – maximum 1:3 (V:H);
- Surface cover – topsoiled and grassed; and,
- Discharge – via rock-lined energy dissipators.

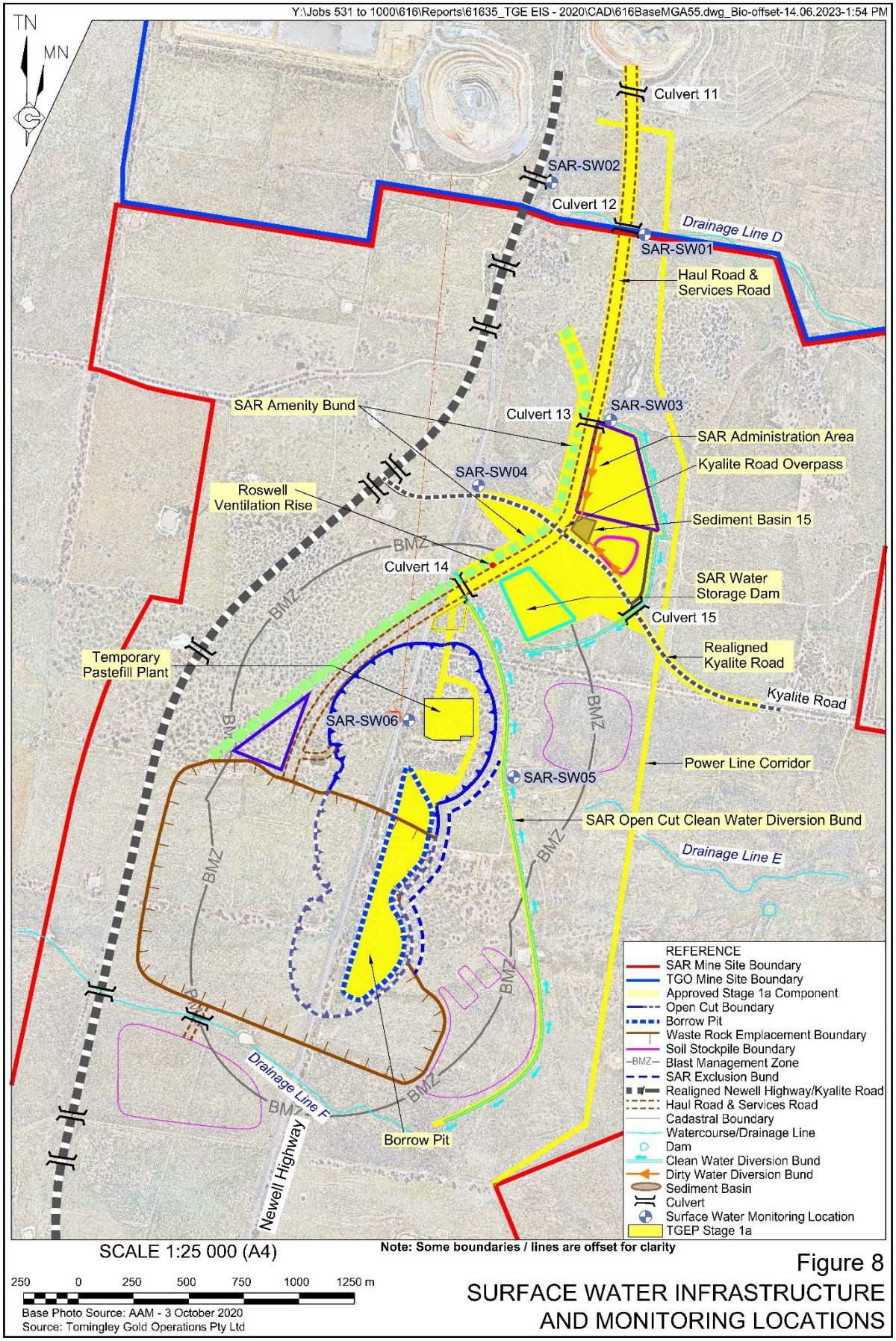


Figure 8
SURFACE WATER INFRASTRUCTURE AND MONITORING LOCATIONS

6.5.2 SAR Administration Area Clean Water Diversion Bund

The performance criteria for the SAR Administration Area Clean Water Diversion Bund will be to divert all surface water flows at non-erosive velocities from east of the disturbed areas to the north and south (**Figure 8**).

The design objectives for the bund will be as follows;

- Height – minimum 0.5m freeboard above natural ground level;
- Bund side slopes – maximum 1:3 (V:H);
- Surface cover – topsoiled and grassed; and,
- Discharge – via rock-lined energy dissipators.

6.5.3 SAR Water Storage Dam

The performance criteria for the SAR Water Storage Dam will be to safely store clean, raw and dirty water for Stage 1a construction operations and subsequent construction and mining operations (**Figure 9**). The Dam will have no catchment and would only receive water pumped from other locations.

The design objectives for the dam will be as follows;

- Crest – maximum elevation 272m AHD or between 2m and 3m above the natural land surface and 6m above the excavated floor of the dam;
- Side slopes – maximum 1:3 (V:H) with the outer face topsoiled and grassed and inner face lined to prevent erosion;
- Discharge – via pipeline only, with an emergency spillway; and,
- Minimum freeboard – 0.5m.

6.5.4 Haul Road and Kyalite Road Culverts

Three sets of culverts will be constructed under the Haul Road between the TGO Mine Site and SAR Open Cut during Stage 1a (**Figure 9**).

Performance criteria for the culverts will be to safely convey surface water from upslope or east of the Haul Road to downstream drainage west of the haul road in a manner that does not exacerbate flooding or erosion risks.

The design objectives for the culverts were determined by Jacobs (2021) and are presented in **Table 10.** The Haul Road culverts will be constructed using standard civil construction methods and will include suitable head wall protection and discharge energy dissipators.

Table 10
Haul Road Culvert Design Objectives

Culvert Identifier	Type	Size (mm)	Number
11	Box Culvert	1,800 x 900	3
12	Box Culvert	1,800 x 1,200	8
13	Pipe	375	1
14	Box Culvert	1,800 x 900	4
15	Box Culvert	1,800 x 900	2
Source: Jacobs (2021) – After Table 3-7			

6.5.5 Pipeline Management Infrastructure

A pipeline corridor will be constructed from the TGO Mine Site to the Pastefill Plant. The Corridor will include separate pipelines to transfer the following.

- Residue as a slurry from the TGO Processing Plant to the Pastefill Plant.
- Return process water from the Pastefill Plant to the TGO Process Plant.
- Raw water from the Raw Water Dam to and from a temporary storage tank or the SAR Water Storage Dam.

Performance criteria for the pipelines will be to safely convey water to and from the TGO Mine Site while minimising the potential for unplanned discharge of residue or process water.

The design objectives to achieve these performance criteria include the following.

- Pipeline materials, design and construction suitable for the material to be transferred.
- Leak detection equipment that will detect leakages in the pipelines and immediately stop pumps, close valves and depressurise the pipeline as required.
- Installation of the pipelines within a bunded area of sufficient capacity that will prevent discharge of residue and/or process water in the event of a failure of the pipeline.

In addition, the following operational objectives will be implemented.

- Regular inspection, testing and maintenance of the pipelines.

6.6 Surface Water Contamination Management

The following surface water-related management and mitigation measures will be implemented.

- Rehabilitate all disturbed areas as soon as practicable once no longer required for construction related purposes.
- Store hydrocarbons, reagents, and chemicals in accordance with the relevant Australian Standard or manufactured instructions.
- Undertake refuelling and maintenance activities in designated sections of the Project Site with spill capture and management infrastructure and protocols.
- Review emergency response procedures for spill management (PIRMP) to ensure employees are aware of management measures and that they are continuously updated for the operation of TGO.
- Securely store and regularly remove all waste oil and contaminated waste from the Project Site.
- Remediation of oil and chemical spills.

6.7 Surface Water Monitoring

The Stage 1a surface water monitoring program would comprise the following:

- Six surface water sampling locations providing up and downstream water quality analysis to determine if the Stage 1a activities are having an adverse impact on the surface water environment downstream of the Stage 1a disturbance area.
- Continuous monitoring of the volumes of water transferred to and from the TGO Mine Site.

Table 11 and **Figure 8** present the surface water monitoring locations and sampling frequency and parameters.

Surface water quality monitoring is to be undertaken by a suitably trained person. The samples collected are to be sent to a NATA accredited laboratory for testing.

Finally, Environment personnel will undertake site inspections on a weekly basis. Additional site inspections will be undertaken prior to forecast rainfall events that may exceed 25 mm in 24 hours. As part of these inspections, mine personnel review all water management structures, including pipelines, and complete an inspection checklist. This inspection checklist will include erosion to ensure that the water management structures are performing as intended and not causing erosion of the surrounding landscape.

Table 11
Stage 1a Surface Water Monitoring Program

Location	Description	Frequency	Parameters
SAR-SW01	Upstream of Culvert 12	When flowing/water present	pH, EC, TSS, As, Cd, Cn (total), Cu, P (total), Pb, Ni, N (total), Oil and Grease, Zn
SAR-SW02	Upstream of Highway Culvert		
SAR-SW03	Upstream of Culvert 13		
SAR-SW04	Upstream of Highway Culvert		
SAR-SW05	Upstream of Pastefill Plant		
SAR-SW06	Upstream of Highway Culvert		
Residue pipeline	In-line metre or at pump	Continuous	Volume (L)
Return water pipeline			
Raw Water pipeline			
SAR Water Storage Dam	Data logger within dam		Water level (to allow volume estimate)
All Surface Water Infrastructure		Weekly or prior to 25mm of rain in 24-hours	Physical Inspection

6.8 Surface Water Trigger Action Response Plan

The Trigger Action Response Plan for management of surface water is included in **Appendix 2**.

7. TRAFFIC MANAGEMENT SUB-PLAN

This Traffic Management Sub-Plan describes how TGO proposes to manage traffic-related impacts on the public road network during Stage 1a construction of the SAR Project

7.1 Approved Traffic

7.1.1 Approved Traffic Route, Vehicle Types and Traffic Levels

During Stage 1a construction and operations, traffic would access the SAR Mine Site primarily via Kyalite Road. Once the Haul Road has been established, traffic would also travel between the TGO Mine Site and the SAR Mine Site via the internal Haul Road.

During Stage 1a, vehicle movements on the public road network would primarily be required for the following.

- Personnel access to and from the Stage 1a work areas using light vehicles.
- Deliveries of consumables such as diesel for mobile plant or cement/binder for past production using semi-trailer or B-double trucks.
- Delivery of mobile plant and components of the pastefill plant using low loaders, semi-trailers or B-double trucks.
- Transportation of material from the borrow pit to construction areas on the northern side of Kyalite Road

Vehicle movements would include left and right-turns off Kyalite Road into the SAR Mine Site and traffic crossing Kyalite Road.

Table 3.10.2 of the EIS identifies anticipated vehicle movements for SAR construction operations, including construction of the realigned Newell Highway. Stage 1a construction operations will require substantially less movements than those approved. **Table 12** presents the anticipated Stage 1a construction related traffic levels.

Table 12
Anticipated Stage 1a Construction-related Traffic Levels

	Light Vehicles	Heavy Vehicles
Approved Construction Traffic Levels (Table 6.2.3 of the EIS)		
Typical Daily Movements	120	6
Estimated maximum Daily Movements	170	60
Estimated Peak Hour Movements	68	24
Pastefill Plant construction (principally right in/left out)[2]		
Typical Daily Movements	30	2
Estimated maximum Daily Movements	40	16
Estimated Peak Hour Movements	20	4
Pastefill Plant operation (principally right in/left out)[2]		
Typical Daily Movements	10	2
Estimated maximum Daily Movements	20	4
Estimated Peak Hour Movements	6	2

	Light Vehicles	Heavy Vehicles
Transportation of borrow pit material for SAR Mine Site Construction (principally crossing Kyalite Road)[2]		
Typical Daily Movements	20	Variable/campaign based
Estimated maximum Daily Movements	40	60
Estimated Peak Hour Movements	20	24
Realigned Kyalite Road construction (principally left in/right out)[2]		
Typical Daily Movements	120	6
Estimated maximum Daily Movements	170	60
Estimated Peak Hour Movements	68	24
Note 1: Two vehicle movements = one return trip Note 2: Cumulative traffic movements would not exceed the Approved Construction Traffic Levels		

It is anticipated that approximately 80% of construction traffic would approach Kyalite Road and the temporary SAM Mine Site intersection from the north (Dubbo and Narromine) and approximately 20% would originate from the south (Peak Hill and Parkes). Construction traffic travelling from the south would not be permitted to turn right into Kyalite Road or use the Tomingley South Heavy Vehicle Rest Stop Bay as a turning point. Rather, those vehicles would travel past the Kyalite Road intersection and the Tomingley South Heavy Vehicle Rest Bay, then turning around at an appropriate location in Tomingley before continuing back south and turning left into Kyalite Road. Suitable turn around locations in Tomingley Village are shown on **Figure 9**. Vehicles exiting Kyalite Road onto the Newell Highway would exit in both directions after giving way to Highway traffic.

7.1.2 Temporary Site Site Access from Kyalite Road

Access points with lockable gates will be established on the northern and southern sides of Kyalite Road to allow access for construction traffic to the Stage 1a disturbance area. Construction of these access points will require approval from Narromine Shire Council under Section 138 of the *Roads Act 1993.* The access will be constructed to comply with the design requirements of the Austroads *Guide to Road Design* and will be designed to cater for vehicles up to B-double size. The gates to the Stage 1a disturbance area will be locked when the site is not occupied to prevent unauthorised access.

As part of construction works, the residue, return water and raw water pipelines would be installed under Kyalite Road and will be completed in accordance with Narromine Shire Council requirements.

Temporary traffic controls will be implemented during construction to the satisfaction of Narromine Shire Council. Local residents affected by the construction will be notified in writing prior to works taking place. Notification will include anticipated start and completion dates and work hours.

Figure 9
HEAVY VEHICLE TURN-AROUND LOCATIONS

7.2 Traffic-related Management and Mitigation Measures

The following traffic-related management and mitigation measures will be implemented.

- The site entrances from Kyalite Road will be designed and constructed in accordance with the Austroads *Guide to Road Design* to the satisfaction of the Narromine Shire Council, including installation of signage.
- All drivers regularly accessing the Stage 1a disturbance area are to sign and abide by TGO's Driver's Code of Conduct which includes a requirement to comply with posted speed limits, approved transportation routes and implement safe driving practices. Failure to abide by the Driver's Code of Conduct will result in disciplinary action.
- Drivers exiting the SAR Mine Site onto Kyalite Road or crossing the road are to stop and give way to all traffic on Kyalite Road.
- All overweight and over size vehicles are to obtain the relevant permits prior to departing to or departing from the SAR Mine Site.
- Users of Kyalite Road are to be consulted in relation to proposed road works and measures are to be implemented to ensure that legitimate concerns and requests are appropriately addressed.
- Implement measures to ensure that all heavy vehicle operators are aware that Stage 1a-related heavy vehicles are not permitted to turn right from the Newell Highway into Kyalite Road. Such vehicles must only approach Kyalite Road from the north.
- Ensure, in consultation with users of Kyalite Road and Narromine Shire Council, that Kyalite Road in the vicinity of the entrances to the Stage 1a disturbance area is adequately maintained.
- Work in accordance with *Traffic Control at Work Sites* (RMS, 2018) for the control of traffic around construction sites.

7.2.1 Drivers Code of Conduct

All workers and routine visitors to site (requiring an induction) are informed during their induction (or refresher) of the Driver's Code of Conduct. People who have been provided this Code of Conduct will be recorded. If there is a review or changes to the Code of Conduct, all workers and routine visitors to site will be informed of any changed expectations.

The Code of Conduct sets the following expectations that must be complied with when driving to and from site:

- Drivers will obey speed limits, including signs temporary placed for road works or other reasons;
- Drivers will obey any signs or directions as required when driving (such as stop signs, give way signs, school zones, etc.);
- Drivers do not drive under the influence of drugs or alcohol;
- Drivers will maintain good road etiquette;
- Drivers follow any route directions provided by TGO as required;

- Drivers of trucks must ensure loads are covered where applicable;
- Drivers maintain road worthy vehicles and ensure vehicles are registered;
- Drivers drive to the conditions of the road while they are on it (rain, etc.); and
- Drivers access the site only through the appropriate identified site entrance.

Any complaints by members of the community in relation to vehicles travelling to or from site will be investigated, with the investigation to determine whether the drivers Code of Conduct has been breached.

If a driver is found to have breached the Code of Conduct, the driver will be reminded of their obligations and the expectations when travelling on public roads. Further appropriate action will be considered depending on the nature of the breach.

8. CULTURAL HERITAGE MANAGEMENT SUB-PLAN

This Cultural Heritage Management Sub-Plan describes how TGO proposes to manage cultural heritage items during Stage 1a construction of the SAR Project.

8.1 Management of Aboriginal Heritage

8.1.1 Management of known Aboriginal Objects

Section 6.11.5.2 and Figure 6.11.2 of the EIS present the Aboriginal heritage sites identified within the SAR Mine Site. In summary, only one Aboriginal object occurs within the Stage 1a disturbance area, namely Tomingley IF-27 (ID 35-6-0284), a single isolated find, namely IF-27, located within the southern section of the SAR Water Storage Dam. A further five sites have been identified in the general vicinity of Stage 1a (**Figure 10** and **Table 13**).

None of the identified sites would be disturbed during Stage 1a operations, including Tomingley IF-27. Construction of the SAR Water Storage Dam will avoid the site until the *Operational Aboriginal Cultural Heritage Management Plan* has been approved by DPE and the subsequent salvage has been undertaken.

In order to prevent disturbance of the identified sites, the following heritage-related management and mitigation measures will be implemented.

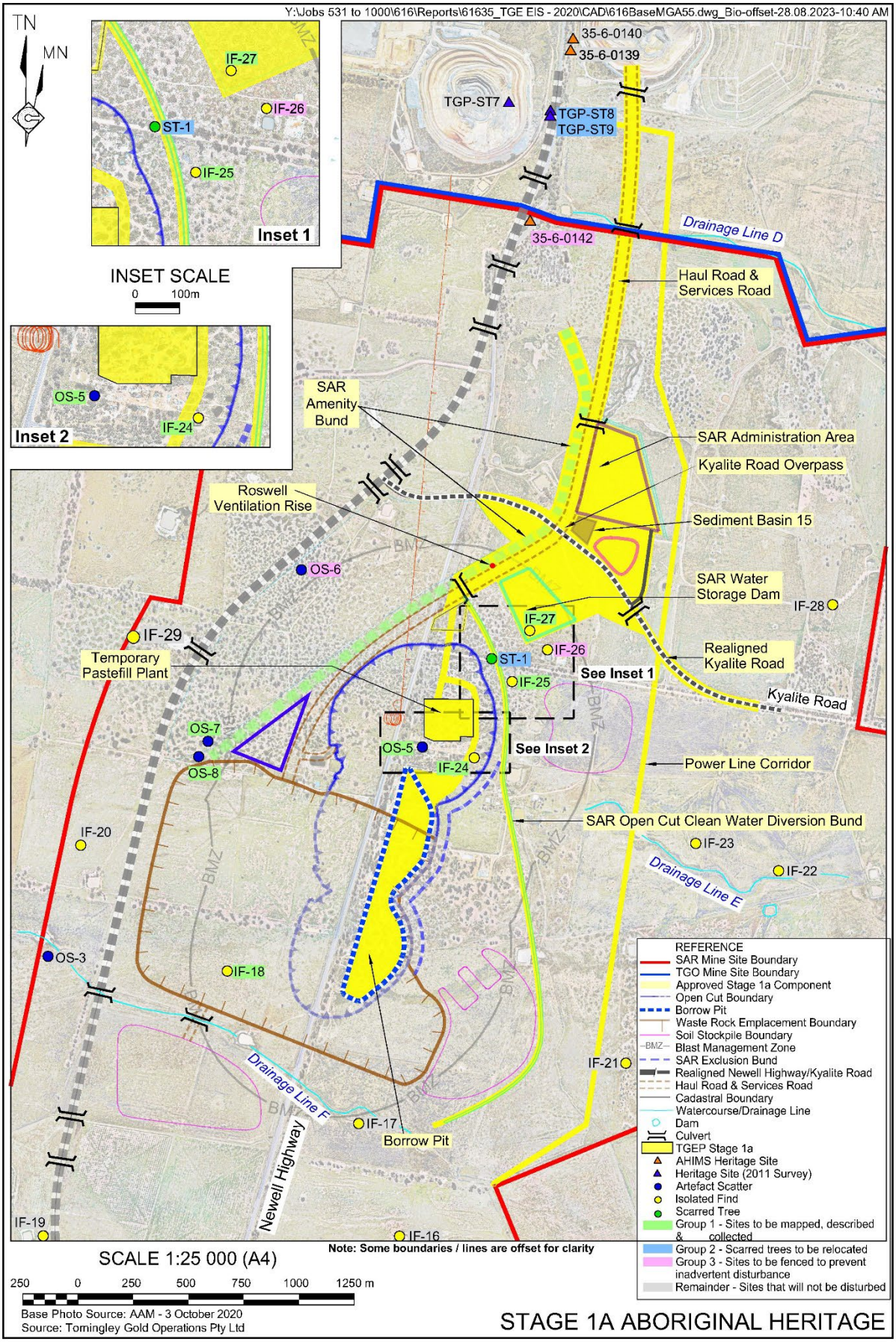
- Each of the identified sites identified on **Figure 10** and in **Table 13** will be reidentified in the field and clearly demarcated using high visibility fencing with a minimum 5m buffer. In the event the site is unable to be located, a 25m buffer around the recorded location will be established using high visibility fencing.
- All approved disturbance areas will be clearly demarcated in the field and ground disturbance outside those areas would be prohibited.
- All personnel will undergo a project induction that includes information on the known heritage items on site, what to do if unknown items are discovered and individuals' duty to protect these items.

TGO will also ensure:

- Ongoing consultation with the Registered Aboriginal Parties (RAPs), including in relation to finalising this Plan and the Operational Aboriginal Cultural Heritage Management Plan; and
- That RAPs who wish to access known Aboriginal objects are permitted to do so, subject to reasonable safety and security considerations.

Table 13
Management Strategy for Known Sites During Stage 1a

Site Name	AHIMS Id	Site Type	Within Stage 1a Disturbance Area	Degree of Harm During Stage 1A
Tomingley ST-1	35-6-0296	Scarred Tree	No	None
Tomingley IF-27	35-6-0284	Isolated Find	Yes	None
Tomingley IF-26	35-6-0283	Isolated Find	No	None
Tomingley IF-25	35-6-0282	Isolated Find	No	None
Tomingley IF-24	35-6-0281	Isolated Find	No	None
Tomingley OS-5	35-6-0291	Artefact Scatter	No	None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IF-27
IF-26
ST-1
IF-25
INSET SCALE
0 100m
Inset 2
OS-5
IF-24
35-6-0140
35-6-0139
TGP-ST7
TGP-ST8
TGP-ST9
35-6-0142
Drainage Line D
Haul Road & Services Road
SAR Amenity Bund
SAR Administration Area
Kyalite Road Overpass
Roswell Ventilation Rise
Sediment Basin 15
OS-6
SAR Water Storage Dam
IF-28
IF-29
Temporary Pastefill Plant
IF-27
IF-26
ST-1
IF-25
See Inset 1
Realigned Kyalite Road
Kyalite Road
OS-7
OS-8
OS-5
See Inset 2
IF-24
Power Line Corridor
SAR Open Cut Clean Water Diversion Bund
IF-20
IF-23
IF-22
Drainage Line E
OS-3
IF-18
IF-21
Drainage Line F
IF-17
Borrow Pit
Newell Highway
IF-19
IF-16
BMZ
Note: Some boundaries / lines are offset for clarity
SCALE 1:25 000 (A4)
250 0 250 500 750 1000 1250 m
Base Photo Source: AAM - 3 October 2020
Source: Tomingley Gold Operations Pty Ltd
REFERENCE
SAR Mine Site Boundary
TGO Mine Site Boundary
Approved Stage 1a Component
Open Cut Boundary
Borrow Pit
Waste Rock Emplacement Boundary
Soil Stockpile Boundary
Blast Management Zone
SAR Exclusion Bund
Realigned Newell Highway/Kyalite Road
Haul Road & Services Road
Cadastral Boundary
Watercourse/Drainage Line
Dam
Culvert
TGEP Stage 1a
AHIMS Heritage Site
Heritage Site (2011 Survey)
Artefact Scatter
Isolated Find
Scarred Tree
Group 1 - Sites to be mapped, described & collected
Group 2 - Scarred trees to be relocated
Group 3 - Sites to be fenced to prevent inadvertent disturbance
Remainder - Sites that will not be disturbed
STAGE 1A ABORIGINAL HERITAGE

8.1.2 Unanticipated finds protocol

In the event that a previously unknown Aboriginal site is identified within the proposed areas of disturbance TGO will:

- Cease all work in the vicinity of the site immediately.
- Temporarily fence the site to prevent further disturbance.
- Contact Heritage NSW, the Registered Aboriginal Parties and/or a qualified archaeologist to provide further advice or to assess the site.
- Should the site be determined to be an Aboriginal object, ensure that the site location is registered on the AHIMS database in a timely manner.
- Avoid disturbing the site, if practicable. If not practicable, ensure that all appropriate approvals are obtained prior to disturbance.

8.1.3 Unanticipated skeletal remains protocol

In the event that human remains are uncovered, undertake the following.

- Cease all work in the vicinity of the site immediately.
- Temporarily fence the site to prevent further disturbance.
- General Manager or Environment and Community Manager will notify the NSW Police, Heritage NSW, the Registered Aboriginal Parties and/or a qualified archaeologist.
- Should the site be determined to be Aboriginal ancestral remains, ensure that the site location is registered on the AHIMS database in a timely manner.
- Avoid disturbing the site, if practicable. If not practicable, ensure that all appropriate approvals are obtained prior to disturbance.

8.1.4 Consultation

The Draft CEMP was provided to the Registered Aboriginal Parties with a request for any comments to be provided within the 28 day notification period. This closed on the 26th July 2023 with no repsonses being received from any RAP in relation to the CEMP.

8.2 Management of Historic Heritage

Section 6.12 of the EIS identifies that there are three known areas of actual or potential local historic heritage in the vicinity of the Stage 1a disturbance area, namely the:

- McPhail Mine;
- village of McPhail; and
- "Rosewood“ Trotting Stud.

A photographic record of the “Rosewood” Trotting Stud has been completed by OzArk Environment & Heritage (22 June 2023). This archival record is currently stored at the TGO site in both physical and digital mediums. Copies of the photo record are able to be made available on request.

All of these items are outside the Stage 1a disturbance area, however, the access road between the borrow pit and the Pastefill Plant crosses the driveway access for the Rosewood Trotting Stud.

In order to prevent disturbance of the "Rosewood“ Trotting Stud and any unidentified historic items, the following heritage-related management and mitigation measures will be implemented.

- All approved disturbance areas will be clearly demarcated in the field and ground disturbance outside those areas would be prohibited.
- All personnel will undergo a project induction that will include information on the known heritage items on site, what to do if unknown items are discovered and individuals’ duty to protect these items.

9. BIODIVERSITY MANAGEMENT SUB-PLAN

This Biodiversity Management Sub-Plan describes how TGO proposes to manage potential biodiversity impacts during Stage 1a construction of the SAR Project.

9.1 Existing Biodiversity Environment

Section 6.10 of the EIS presents a summary of the *Biodiversity Development Assessment Report* (BDAR) prepared for the Project. The results may be summarised as follows.

- The following four plant community types occur in the vicinity of the SAR Mine Site.
  - PCT 55 – Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions.
  - PCT 82 – Western Grey Box - Poplar Box - White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion.
  - PCT 201 – Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion.
  - PCT 27 – Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion.

  Additional areas of non-native vegetation and Category 1 agricultural land were also identified.
- PCT201 and PCT27 are associated with threatened ecological communities listed under the *Biodiversity Conservation Act 2016*.
- Threatened fauna species were identified, including the following.
  - Glossy Black-cockatoo (*Calyptorhynchus lathami*).
  - Grey crowned Babbler (eastern subspecies) (*Climacteris picumnus victoriae*).
  - Superb Parrot (*Polytelis swainsonii*).

The BDAR identified the biodiversity offset credit requirements for the Project, including staging of those requirements (see Condition B53 of SSD 9176045). At the time of finalisation of this plan, an application to align the biodiversity offset staging with Stage 1a was in progress. **Table 14** presents an overview of the biodiversity credit requirements for Stage 1a.

Table 14
Proposed Revised Biodiversity Offset Staging Requirements

Credit Type	Credits Required				
	Stage 1a	Stage 1b	Stage 2	Stage 3	Total
PCT 55 – Belah woodland on alluvial plains and low rises in the central NSW wheatbelt to Pilliga and Liverpool Plains regions	123	225	0	192	**540**
PCT 55 – Scattered Trees	2	6	0	4	**12**
PCT 82 – Western Grey Box - Poplar Box - White Cypress Pine tall woodland on red loams mainly of the eastern Cobar Peneplain Bioregion	54	392	145	112	**703**

Credit Type	Credits Required				
	Stage 1a	Stage 1b	Stage 2	Stage 3	Total
PCT 82 – Scattered Trees	8	22	0	0	**30**
PCT 201 – Fuzzy Box Woodland on alluvial brown loam soils mainly in the NSW South Western Slopes Bioregion	99	324	0	2	**425**
PCT 201 – Scattered Trees	1	0	0	0	**1**
PCT 27 – Weeping Myall open woodland of the Darling Riverine Plains Bioregion and Brigalow Belt South Bioregion	0	13	0	0	**13**
Total	**287**	**982**	**145**	**310**	**1,724**

9.2 Biodiversity Management and Mitigation Measures

9.2.1 Management of Vegetation to be Removed

Any person intending to perform land clearing on the Tomingley Gold Operations leases shall complete the Clearing Permit form as described in the TGO Biodiversity Management Plan, located (https://alkane.com.au/projects/tomingley-gold-project/tomingley-document-hub/).

The following management and mitigation measures will be implemented to manage vegetation to be removed during Stage 1a.

- Ensure all workers are inducted in relation to Project environmental procedures, including environmental risk and emergency management.
- Survey and mark out the limits of approved disturbance and approved native vegetation clearing and ensure that surface disturbing activities are limited to approved areas.
- Avoid clearing native vegetation and hollow-bearing trees during Spring, which is the main breeding season of the majority of hollow-dwelling fauna in this area.
- Undertake pre-clearing inspections of habitat trees for hollows and bird nests and inspect immediately after felling to confirm the absence of roosting/breeding threatened species and manage any vertebrate fauna identified during inspections to minimise the risk of mortality or injury.
- Use an appropriately qualified ecologist to undertake spotter / catcher duties during clearing.
- Undertake vegetation clearance in accordance with best practice principles, including staged vegetation clearance where practicable.
- Respond to native fauna detected during vegetation clearing operations in accordance with the Fauna Handling and Rescue Procedure outlined in the TGO Biodiversity Management Plan.
- Salvage biodiversity resources, including hollow bearing trees and ensure that those resources are utilised during rehabilitation operations or for biodiversity enhancement operations elsewhere.

9.2.2 Management of Weeds and Vertebrate Pests

The following management and mitigation measures will be implemented to manage weeds and vertebrate pests during Stage 1a.

- Vehicles will enter and leave the Site via defined entry points and use constructed roads where practical.
- Personnel, vehicle and equipment hygiene procedures will be implemented to minimise the spread and/or introduction of weeds onto the Site.
- Weed species located on site will be managed in accordance with TGO's Biodiversity Management Plan and associated Weed Control Procedure.
- Vertebrate pests will be managed in consultation with neighbouring landholders in accordance with TGO's Biodiversity Management Plan and associated Vertebrate Pest Control Procedure.

9.2.3 Management of Biodiversity Offset Requirements

Biodiversity offset requirements associated with Stage 1a will be retired through payment into the Biodiversity Conservation Trust prior to disturbance of native vegetation within the Stage 1a diestubance Area

9.2.4 Management of Areas that would not be Disturbed

Areas of native vegetation that are not within the Stage 1a disturbance area would be managed in accordance with the proceedures identified in the TGO Biodiversity Management Plan.

Areas to be used for agricultural operations would continue to be managed in accordance with TGO's current agricultural management practices.

10. VERIFICATION AND CORRECTIVE ACTION

An essential component of the CEMP is verification and implementation of corrective actions as required to achieve the requirements of the Development Consent and Environment Protection Licence. This CEMP has adopted the principals of continuous improvement which is the key outcome of verification and corrective action initiatives.

10.1 Environmental Monitoring

TGO has a comprehensive environmental moniting program covering the TGO Mine Site. Where relevant, monitoring requirements have been addressed in Sections 4 to 9. These monitoring measures have been designed to compliment the existng TGO monitoring regime and would be integrated with that regime.

The following presents a consolidated summary of the monitoring required for Stage 1a.

- Continued operation of the existing TGO weather station.
- Installation and operation of one additional real-time PM_{10} and $PM_{2.5}$ monitor in the vicinity of Residence R60.
- Installation and operation of one additional real-time noise monitor in the vicinity of Residence R60.
- Incorporation of an additional attended noise monitoring location in the vicinity of Residence R60, as well as in response to substantiated noise complaints or reasonable enquiries.
- Incorporation of six additional surface water monitoring locations into the existing surface water monitoring program.
- Incorporation of additional monitoring of volumes of water transferred to and from the TGO Mine Site and stored within the SAR Water Storage Dam.
- Incorporation of additional environmental inspections of the construction site will occur on a weekly basis or following heavy rainfall events. The inspections will report on the function and operability of all pollution controls, temporary erosion and sedimentation controls. The inspections will be recorded and remedial action with responsibilities and timeframes noted.

10.2 Community Consultation

There are three main medium via which TGO communicates with the community:

- The TGO website (https://alkane.com.au/projects/tomingley-gold-project/);
- The Community Consultative Committee (CCC); and
- Direct contact (face to face or telephone) with 7 near neighbours.

10.2.1 Access to information

As stipulated in TGO's Development Consent the following information and documents will be publicly available on Alkanes website. (https://alkane.com.au/projects/tomingley-gold-project/)

- the document/s listed in condition A2(c);
- all current statutory approvals for the development;

- all approved strategies, plans and programs required under the conditions of this consent;
- minutes of CCC meetings;
- 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;
- 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;
- a summary of the current phase and progress of the development;
- contact details to enquire about the development or to make a complaint;
- a complaints register, updated monthly;
- the Annual Reviews of the development;
- audit reports prepared as part of any Independent Environmental Audit of the development and TGOs response to the recommendations in any audit report.

10.3 Community Complaints

TGO maintains a 24-hour 7 day, Community Complaints Number (02 6865 6116). The purpose of this complaints line is to recieve complaints from members of the public in relation to activities conducted at the premises or by vehicle or mobile plant.

In addition to this, complaints can also be lodged by email at tomingleygold@alkane.com.au or by visiting the site office.

Complaints are recorded and investigated in accordance with TGOs procedure detailed in the Environment Management Strategy for handling complaints. A brief summary of this is included below:

- Record the complaint in the complaints register.
- Notify the Environment and Community Manager / environmental department;
- Take immediate action to address the issue, firstly by investigating the nature and validity of the complaint. Depending on the seriousness of the issue this may include:
    - Modifying procedures
    - Installing mitigation, and/or
    - Stopping related activities

The Environment and Community Manager shall monitor the implementation of these actions until their completion and then close out the relevant item on the complaints register.

The complaints register is maintained and updated on the TGO website monthly.

10.3.1 Dispute resolution

In the event that any complainant does not consider that the response adequately address their concerns, the following procedure will be adopted.

1. A meeting will be convened with the TGO General Manager, the Environment & Community Manager and other relevant senior Alkane personnel to seek resolution of the matter. The complainant will be provided with a written response, detailing the results of investigations undertaken and the agreed actions to be taken regarding the measures to be implemented.
2. On implementation of the nominated measures, a further meeting will be convened to seek feedback from the complainant on their level of satisfaction, or otherwise, regarding the outcomes.

If, after 21 days following Steps 1 and 2, the complainant believes the matter remains unresolved and no further agreement can be reached as to additional measures to be undertaken, the matter will be referred to an Independent Dispute Facilitator for independent review.

10.4 Corrective Actions

The need for corrective action and preventative action may be initiated by:

- Site Inspections
- Environmental monitoring
- Incidents / complaints / non-compliances
- Legislative changes
- Regulator enforcements
- Change in operations
- Unexpected finds e.g. cultural heritage artefact

Generally, corrective actions will be dealt with at the time of the issue or, as soon as practical to do so.

Any items requiring corrective actions will be entered into the TGO Safety and Incident recording system (Noggin) with details of the issue, action taken and resolution of the issue. These records are maintained onsite.

11. CONTINGENCY, INCIDENT AND NON-COMPLIANCE MANAGEMENT

11.1 Contingency Management

The various management sub-plans within this CEMP attempt to identify responses to a range of predicted impacts (such as noise disturbance, water discharges, dust emissions, etc).

Any unpredicted environmental impact (regardless of severity) will be considered an environmental incident by all employees and contractors on site. Actions taken in regards to any unforseen impact will follow already established site procedures and will be treated in the same manner as any other environmental incident on site. The following sections provide further detail on how the contingencies of unplanned impacts will be managed.

11.2 Incident Response

If an environmental incident occurs, including but not limited to unauthorised clearing, disturbance of heritage items, accidental discharges to creek lines, etc, workers are required to immediately notify the Project/Construction Manager. Once notified the Project/Construction Manager will be required to undertake the following step:

- Isolate the site to prevent any interference of further damage;
- Inform the environmental department of the incident:
- Follow TGO's incident management process including collecting information around the incident and investigating the causes and impacts of the incident:
- Circulate the results of the investigation to all workers on the project and ensure workers are informed of any learnings as a result.

In addition, TGO has developed a Pollution Incident Response Management Plan (PIRMP), based on the EPA Environmental Guidelines: Preparation of pollution incident response management plans (NSW EPA 2012).

This plan describes the likelihood of pollution incidents, pre-emptive action to be taken, inventory of pollutants, safety equipment needed, communication with neighbours and the community, minimising harm to persons on the premises action to be taken immediately following a pollution incident and the training of staff.

TGO has implemented, tested and reviewed the PIRMP, as per the requirements presented in the plan.

If the PIRMP does not provide sufficient detail for a particular type of incident, there are a number of site TARPs that may also be used to guide site supervisors with regards to any incidents that could potentially occur.

If after viewing the PIRMP or TARPs site supervisors are still unclear on the best course of action to manage an unpredicted event, they should immediately contact site managers and /or the environmental department so they can help inform on the most appropriate method to manage the particular incident. The aim of this is to ensure any ongoing impacts are reduced to levels below assigned impact assessment levels as quickly as possible.

Any complaints received relating to the works will be investigated following TGO's complaint management process. Upon completion of the investigation, a copy of the findings will be provided to the person making the complaint provided they left contact details when doing so. A copy of the complaint and any actions out of it will be included in the TGO Complaints Register and is accessible on the TGO website.

Once the initial incident is managed, TGO's incident investigation procedure is to then be used to identify the root cause, and any contributing factors that may have contributed to the event. On completion of the investigation, any newly identified corrective actions will be implemented to minimise the risk of the incident reccuring. In addition, these actions will be included in the relevant management plan, TARP or other appropriate management documents.

11.3 Incident and Non-compliance Notification

11.3.1 Notification of Government Agencies

The Planning Secretary will be notified in writing via the Major Projects website immediately after TGO becomes aware of an environmental incident. The notification will identify the development and set out the location and nature of the incident. Subsequent notification requirements will be given, and reports submitted in accordance with the requirements set out in Appendix 8 of the Development Consent.

The Planning Secretary will be notified in writing via the Major Projects website within seven days of TGO becoming aware of a non-compliance. The notification will:

- identify the development;
- set out the condition of consent that TGO is non-compliant with;
- the way in which it does not comply:
- the reasons for the non-compliance (if known); and
- what actions have been, or will be, undertaken to address the non-compliance.

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

Where an incident causes or threatens to cause material harm to the environment, additional reporting requirements are to be observed. In accordance with EPL 20169, notifications will be made by telephoning the Environment Line service on 131 555.

Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.

The licensee must provide written details of the notification to the EPA within 7 days of the date on which they became aware of the incident.

11.3.2 Notification of Landowners

As soon as practicable, and no longer than 7 days after obtaining monitoring results showing an exceedance of air quality criteria, TGO will provide the details of the exceedance to any affected landowners, tenants and the CCC. Affected land owners and/or tenants will also be provided a copy of the fact sheet entitled "*Mine Dust and You*" (NSW Health, 2017).

12. ROLES AND RESPONSIBILITIES

The roles and responsibilities associated with environmental management for TGO are defined in the Environmental Management Strategy. **Table 15** outlines the roles and responsibilities associated with Stage 1a.

Table 15
Roles and Responsibilities

Role/Contact	Responsibility
General Manager	• Provide the necessary resources and systems to meet the requirements of the CEMP.
TGO Environment & Community Manager	• Prepare a CEMP and submit to DPE in accordance with Conditions of Approval • Ensure the CEMP is implemented on Site for the duration of the Project and updated to retain currency. • Ensure appropriate resources are available to implement the CEMP. • Implement measures to mitigate/minimise identified environmental risks and undertake monitoring (as required) to ensure management measures are effective. • Contact person for reporting of environmental incidents (as required) • Manages the community complaints hotline including response and investigation of complaints
Contractor's Managers and Supervisors	• Ensure all personnel working at the site implement and comply with the CEMP. • Report any environmental issues in accordance with the CEMP. • Identify environmental risks associated with construction activities undertaken at the site. • Maintain environmental records relating to implementation of the CEMP. • Ensure work site inductions are undertaken and completed.
Project/ Construction Managers	• Verify all personnel are aware that works must be carried out in accordance with this CEMP. • Verify all reports and records are prepared as detailed in this CEMP. • Verify all required permits or approvals are approved as specified in the CEMP prior to commencement of works. • Verify compliance with all permit requirements. • Ensure compliance with this CEMP is a condition of engagement for contractors and staff.
All Personnel	• Identify environmental risks associated with their activities on site and notify the Site Manager. • Follow directions and implement measures to mitigate risks associated with their activities. • Attend, complete and when required provide site induction training and maintaining records. • Reporting environmental incidents that occur on site. • Ensure all operations they are undertaking onsite are compliant with the CEMP, relevant legislation, and standards.

12.1 Competence Training And Awareness

All personnel involved in Stage 1a works, including contractors, must be informed and aware of their environmental responsibilities while undertaking work on site. This will require staff to complete an induction prior to commencing work on the site. The induction will include the following:

- The requirements of this CEMP.
- Individual's responsibilities in complying with the CEMP.
- Reporting procedures for any environmental incidents.
- Emergency reporting procedures.

After completing the induction, workers will sign a statement of attendance and these records will be retained by TGO.

Visitors to the Site will need to undertake the induction or be accompanied by an appropriately inducted staff member.

13. REPORTING AND REVIEW

13.1 Reporting and Evaluation of Compliance

13.1.1 Regular and Monthly Reporting

TGO prepares a Monthly Environmental Monitoring Report. This report includes an assessment of monitoring data against performance criteria stipulated in EPL 20169 and SSD 9176045. This report is prepared by the Environment Coordinator and made available to the public via TGO's website www.alkane.com.au

13.1.2 Annual Review

TGO's Annual Review includes a comprehensive review of the site's environmental performance for the previous financial year. This detailed review evaluates and reports on compliance and identifies trends in the monitoring data.

TGO will report on SAR's environmental performance in the TGO Annual Review. The Annual Review is prepared in accordance with the requirement of Condition D10 of SSD 9176045 and is submitted to the Department of Planning and Environment by the end of September each year. Annual Reviews are also submitted to the Narromine Shire Council and made available to the Community Consultative Committee and the general public via Alkane's website.

13.2 SAR CEMP Review

In accordance with Condition D6 of SSD 9176045, this CEMP will be reviewed and if necessary revised, within three (3) months of:

- the submission of an incident report under condition D8;
- the submission of an Annual Review under condition D10;
- the submission of an Independent Environmental Audit under condition D12 or;
- the approval of any modification of the conditions of this consent (unless the conditions require otherwise);
- notification of a change in development phase under condition A5; or
- a direction of the Secretary under condition A3,

the suitability of existing strategies, plans and programs required under this consent must be reviewed by the Applicant.

13.3 Independent Environmental Audits

As required under Condition D12 of SSD 9176045, every three years TGO commission an Independent Environmental Audit following the initial audit in June 2015. Subsequent audits were completed in 2018, and 2021. The next audit in 2024 will include a review of the SAR CEMP.

Appendix 1 Air Quality Trigger Action Response Plan

Table 1: PM_{10} Trigger Levels Applicable to TGO

Trigger Level	Criteria
1	Current instantaneous PM_{10} concentrations are above 90µg/m^3 for three consecutive hours
2	Rolling 24-hour average PM_{10} concentrations are above 40µg/m^3 and the wind is blowing from the Mine towards the residences

Trigger Level 1 – Investigation Level

Current instantaneous PM_{10} concentrations indicate that dust levels are elevated and activities from the Mine may be contributing to these elevated levels. If Trigger Level 1 is exceeded, Mine personnel will investigate prevailing winds, determine what activities are occurring on site that may be contributing to elevated dust levels. Site personnel will then be informed that dust emissions are increasing and action(s) may be required.

Trigger Level 2 – Action Level

Rolling 24-hour average PM_{10} concentrations continue to be elevated and activities from the Mine are identified as contributing to these levels. If Trigger Levels 2 are breached, remedial action is required and additional dust control measures will be implemented.

Interim trigger values are presented below. It is proposed that trigger levels would be reviewed regularly to ensure they are working appropriately i.e. they are ensuring that dust levels remain below ambient air quality goals.

Trigger Level 1: current instantaneous PM_{10} concentrations are above 90µg/m^3 for three consecutive hours. Under Trigger Level 1, the Mine personnel will determine which way the wind is blowing for the same three-hour period and determine what Mine activities are most likely contributing to the elevated PM_{10} levels. The Mining and Processing Manager will ensure that control measures and actions outlined in Section's 5 and 7 of the Air Quality and Greenhouse Gas Management Plan are being implemented. Additional dust control measures to be implemented will depend on the activities occurring on site at the time but may involve:

- Increasing the frequency of watering for exposed areas and stockpiles;
- Increasing the frequency of watering on unsealed roads; and
- Modifying site activities depending on the sources contributing to the elevated levels.

Trigger Level 2: Rolling 24-hour average PM_{10} concentrations are above 40µg/m^3 and the wind is blowing from the Mine towards the residences. In the event Trigger level 2 is exceeded at the monitoring location, the Mining Manager and Processing Manager will identify those activities capable of generating dust and instruct that the activity be curtailed until 24-hour average PM_{10} concentrations drop below 40 µg/m^3.

In the event that air quality monitoring identifies an exceedance of the air quality criteria identified in Condition B29 of the approval, the exceedance will be investigated to determine the likely cause(s). All corrective and preventative actions are entered into the Online Reporting Database. An investigation will then follow to determine:

- what immediate action(s) need to be taken to fix the problem in the short term, if applicable;
- the root causes of the problem (e.g. management system, equipment design / performance, human factors/behaviour, work environment or training);
- corrective actions required to eliminate the root cause(s); and
- action(s) taken to verify effectiveness of corrective action(s) (i.e. what measures and checks are taken to ensure the corrective actions that are in place are effective to prevent any further exceedance); and

In accordance with TGO procedures, if an event or activity occurs that has caused, is causing, or is likely to cause harm to the environment, whether the harm occurs on or off the premises, TGO will notify the EPA (on telephone: 131 555) after it becomes known to any employee or contractor. The notification to EPA will be given as soon as practicable after the incident and a report will be prepared and submitted to the EPA within 7 days of the date on which TGO became aware of the incident.

Visual Inspection and Corrective Action

Table 2 below lists timing/triggers which are primarily in response to visual inspection, however corrective measures will also apply when alerts are triggered by the trigger levels identified for the Project.

Table 2: Dust Emissions – Triggers and Corrective Measures

Timing/Trigger	Measure	Responsibility
Visible dust from unsealed roads.	Relocate water cart operations to control road dust. Modify operations as required.	Contractor's Managers and Supervisors
High winds	Suspend tipping operations on elevated areas if required. Increase watering where practical.	Contractor's Managers and Supervisors
Dust emissions are above the truck cabin roof during tipping.	Where practical, increase material moisture by water sprays on material being loaded.	Contractor's Managers and Supervisors
Excessive dust generation from exposed material emplacement areas or other exposed areas.	Increase watering where practical and safe to do so. Temporarily rehabilitate (if practical) exposed material that is not being utilised for extended periods of time.	Contractor's Managers and Supervisors

Appendix 2 Water Trigger Action Response Plan

Surface Water Quality

	Trigger	Action	Response
Normal		-	Continue to monitor in accordance with a frequency specified in Table 5-2.
Surface water quality			
Stage 1	Surface quality parameters exceed triggers (Section 7.2)	1. Alert site manager.	1. Investigate if change in surface water quality is due to any spill, seepage or leachate.
	Upward trend in any of the water quality parameters for three consecutive months.	1. Alert site manager.	1. Investigate if change in surface water quality is due to any spill, seepage or leachate.
Stage 2	Investigation results show that site operations are resulting in adverse surface water impacts	1. Alert site manager.	1. Design and construct appropriate engineering controls to mitigate impacts. 2. If recommended by investigation, conduct geochemical testing to assess risk of acid rock or saline drainage. If assessed as higher risk, prepare an acid mine drainage strategy
Complaints			
Stage 1	Complaint from a surrounding landholder	1. Alert site manager. 2. Investigate if change in surface water quality is due to mining related activities.	1. Document results and outcomes of investigation.

Sediment Basins

Level	Trigger	Action	Response
Normal	-	1. Dewater sediment basins to Wyoming Three, as required.	-
Stage 1	7 day rainfall forecast includes >50 % chance of at least 25 mm in 24 hours	1. Inspect sediment basins. 2. Dewater sediment basins to provide minimum freeboard. 3. Flocculate storage (TSS < 50 mg/L). 4. Prepare for discharges from LDPs.	-
Stage 2	Minor flood warning issued	1. Alert person in charge (PIC). 2. Monitor BOM radar and warnings.	-
Stage 3	Storage volume is greater than 30 % of capacity	1. Dewater sediment basins to Wyoming Three.	-
Stage 4	Storage volume is greater than 90% of capacity	1. Alert site manager. 2. Increase pump rate or add additional pumps. 3. Flocculate storage (TSS < 50 mg/L). 4. Prepare for discharges from LDPs.	
Stage 5	Overflows to receiving environment occur from one or more Sediment Basins	1. Alert site manager.	1. Notify EPA. 2. Undertake water quality sampling of both the storage and downstream environment.

Water Security

	Trigger	Action	Response
Dust suppression			
Normal		-	-
Stage 1	WCD - North volume < 25 % of capacity	1. Supply raw water to WCD - North from borefield. 2. Review annual allocations and record transfer.	-
Stage 2	Allocation from bore is exhausted	1. Alert mine and operations manager. 2. Arrange for external transfers to be trucked in.	-

Appendix 3 Conditional Requirements

Table A3
Conditional Requirements for this CEMP

Condition	Requirement	Section where addressed
A19	EVIDENCE OF CONSULTATION Where conditions of this consent require consultation with an identified party, the Applicant must: (a) consult with the relevant party prior to submitting the subject document for approval; and (b) provide details of the consultation undertaken to the Planning Secretary, including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved	2.3
A20	STAGING, COMBINING AND UPDATING STRATEGIES, PLANS OR PROGRAMS With the approval of the Planning Secretary, the Applicant may: (a) prepare and submit any strategy, plan or program required by this consent on a staged basis (if a clear description is provided as to the specific stage and scope of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program); (b) combine any strategy, plan or program required by this consent (if a clear relationship is demonstrated between the strategies, plans or programs that are proposed to be combined); (c) update any strategy, plan or program required by this consent (to ensure the strategies, plans and programs required under this consent are updated on a regular basis and incorporate additional measures or amendments to improve the environmental performance of the development); and (d) combine any strategy, plan or program required by this consent with any similar strategy, plan or program required by a consent or approval for any adjoining mine subject to common, shared or related ownership or management.	Approval to stage and combine management plans provided. Application Lodged with DPE on 31 - 05-2023. Ref No. SSD-9176045-PA-3
A23	Prior to the approval of management plans under this consent, the Applicant must continue to implement any equivalent or similar management plan/s required under the existing project approval listed under condition A7, to the satisfaction of the Planning Secretary.	1.2
B10	**Noise Management Plan** The Applicant must prepare a Noise Management Plan for the mine development to the satisfaction of the Planning Secretary. This plan must: (a) be prepared by a suitably qualified and experienced person/s; (b) be prepared in consultation with the EPA; (c) describe the measures to be implemented to ensure: (i) compliance with the noise criteria and operating conditions in this consent; (ii) best practice management is being employed;	1.7 2.3 5.3 and 5.4 5.3 and 5.5 5.4.3

Condition	Requirement	Section where addressed
	(iii) noise impacts are minimised during noise-enhancing meteorological conditions; (d) include a monitoring program that: (i) is capable of evaluating the performance of the development against the noise criteria; (ii) includes a program to undertake attended noise compliance monitoring and to calibrate and validate the real-time noise monitoring results with the attended monitoring results over time; (iii) monitors noise at the nearest and/or most affected residences; and (iv) includes a protocol for identifying any noise-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of any such event.	5.4 5.4.1 5.4.1 and 5.4.2
B33	**Air Quality and Greenhouse Gas Management Plan** The Applicant must prepare an Air Quality and Greenhouse Gas Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: (a) be prepared by a suitably qualified and experienced person/s and in consultation with the EPA; (b) describe the measures to be implemented to ensure: (i) compliance with the air quality criteria and operating conditions in this consent; (ii) best practice management is being employed to: • minimise the development's air quality impacts; • minimise the development's Scope 1 and 2 greenhouse gas emissions; and • improve the development's energy efficiency; and (iii) the air quality impacts of the development are minimised during adverse meteorological conditions and extraordinary events; (c) describe the air quality management system in detail; (d) include an air quality monitoring program, undertaken in accordance with the Approved Methods for Sampling and Analysis of Air Pollutants in NSW (EPA, 2022) and Ambient Air Monitoring Guidance Note (EPA, 2022), or its latest version, that: (i) uses monitors with consideration of AS/NZS3580.1.1 Methods for sampling and analysis of ambient air – guide to siting air monitoring equipment to evaluate the performance of the development against the air quality criteria in this consent and to guide day to day planning of operations; (ii) adequately supports the air quality management system, including record keeping and a trigger action response plan; (iii) includes a protocol for distinguishing the dust emissions of the development from any neighbouring developments; and (iv) includes a sampling protocol in accordance with AS 3580.9.8 Methods for sampling and analysis of ambient air – Determination of suspended particulate matter – PM10 continuous direct mass method using a tapered element oscillating microbalance analyser or equivalent; (e) includes a process to annually review the reactive mitigation and management measures implemented and assess whether additional measures are required to ensure no exceedances of the criteria in Table 4; and	1.7 and 2.3 4.3 4.3 N/A N/A 4.3 4 generally 4.4 4.4 and 4.5 4.5 4.4

Condition	Requirement	Section where addressed
	(f) includes a protocol for identifying any air quality-related exceedance, incident or non-compliance and for notifying the Department and relevant stakeholders of these events.	
B37	**METEOROLOGICAL MONITORING** For the life of the development, the Applicant must ensure that there is a suitable meteorological station operating in the vicinity of the site that: (a) complies with the requirements in the Approved Methods for Sampling and Analysis of Air Pollutants in NSW (EPA, 2022) and Ambient Air Monitoring Guidance Note (EPA, 2022) or their latest versions; and (b) is capable of measuring meteorological conditions in accordance with the NSW Noise Policy for Industry (EPA, 2017) or its latest version, unless a suitable alternative is approved by the Planning Secretary following consultation with the EPA.	4.4.1 and 5.4.3
B49	**Water Management Plan** The Applicant must prepare a Water Management Plan for the mine development to the satisfaction of the Planning Secretary. This plan must: (a) be prepared by a suitably qualified and experienced person/s and in consultation with DPE Water, EPA, and Dams Safety NSW; (b) describe the measures to be implemented to ensure that the Applicant complies with the water management performance measures; (c) include a: (i) **Site Water Balance** that includes details of: • predicted annual inflows to and outflows from the site; • sources and security of water supply for the life of the mine (including authorised entitlements and licences); • prioritisation strategy for water sources; • water storage capacity; • water use and management on the site, including opportunities to improve the efficiency of site water use and minimise the use of clean water on the site; • licensed discharge points and limits; and • reporting procedures, including annual revision of the site water balance; (ii) Erosion and Sediment Control Plan, that: • is consistent with the requirements of the Managing Urban Stormwater: Soils and Construction Manual (Landcom 2004, or its latest version); • identifies activities that could cause soil erosion or generate sediment; • includes a program to review the adequacy of flood protection works, and ensure they comply with the relevant performance measures listed in Table 5 [of SSD 9176045]; • describes measures to minimise soil erosion; • describes the location, function, and capacity of erosion and sediment control structures; and • describes what measures would be implemented to maintain (and if necessary decommission) the structures over time;	6.3 6.4.1 6.4.2 6.4.3 6.4.3 N/A

Condition	Requirement	Section where addressed
	(iii) **Surface Water Management Plan**, that includes:	
	• detailed baseline data on surface water flows, quality of watercourses and/or waterbodies potentially impacted by the development, including:	6.1
	○ stream and riparian health; and	
	○ channel stability (geomorphology);	
	• a detailed description of the surface water management system;	6.3 to 6.5
	• detailed plans, design objectives and performance criteria for water management infrastructure, including:	
	○ water run-off diversions and catch drains, including the clean water and dirty water separation levee;	6.5.1 and 6.5.2
	○ clean water storages, mine water storages and sediment dams;	6.5.3
	○ emplacement areas, including monitoring and management protocol for emplacement of potentially acid or sulfate generating materials;	N/A
	○ residue storage facilities (RSF1 and RSF2) and decant ponds;	N/A
	○ the final voids;	N/A
	○ control of any potential water pollution from the rehabilitated areas of the site;	N/A
	• detailed objectives and performance criteria, including trigger levels for investigating any potentially adverse impacts (or trends) associated with the mine development for:	
	○ downstream surface water flows and quality;	
	○ stream and riparian health and channel stability (geomorphology);	
	○ post-mining water pollution from rehabilitated areas of the site;	
	• a program to monitor and evaluate:	
	○ compliance with the relevant performance measures in Table 5 [of SSD 9176045] and the performance criteria in this plan;	6.7
	○ potential leakage or spillage from pipelines;	6.7
	○ potential acid and metalliferous drainage;	N/A
	○ controlled and uncontrolled discharges and seepage/leachate from the site;	N/A
	○ surface water inflows, outflows and storage volumes, to inform the Site Water Balance;	6.7
	○ the effectiveness of the surface water management system, including contingency measures to be implemented during a potential failure of the water management system infrastructure;	6.7
	○ the effectiveness of the Erosion and Sediment Control Plan;	6.7
	• reporting procedures for the results of the monitoring program; and	6.7
	• a trigger action response plan to respond to any exceedances of the performance measures or performance criteria, and repair, mitigate and/or offset any adverse surface water impacts of the development,	Appendix 2
	• a program to periodically upgrade and validate the surface water model for the mine development, including an independent review of the model every 3 years, and at	N/A

Condition	Requirement	Section where addressed
	least annual comparison of monitoring results with modelled predictions;	
	(iv) **Groundwater Management Plan**,	N/A
B62	**Biodiversity Management Plan** The Applicant must prepare a Biodiversity Management Plan for the mine development to the satisfaction of the Planning Secretary. This plan must:	
	(a) be prepared by a suitably qualified and experienced person/s and in consultation with BCS;	1.7 and 2.3
	(b) describe how biodiversity management would be integrated with similar measures within other management plans, including the Rehabilitation Strategy referred to in condition B84;	N/A
	(c) describe the short, medium, and long term measures that would be implemented to:	9.2. 1 and 9.2.2
	(i) manage the remnant vegetation and fauna habitat on the site; and	9.2.3
	(ii) implement the biodiversity offset strategy (referred to in condition B58), including detailed measurable and quantifiable performance and completion criteria, and triggers for remedial action;	
	(d) describe the measures to be implemented within the approved disturbance areas to:	9.2.1
	(i) minimise the amount of clearing;	9.2.1
	(ii) minimise impacts on fauna, including undertaking pre-clearance surveys;	9.2.1
	(iii) maximise the salvage of resources, including tree hollows, vegetation and soil resources, for beneficial reuse, including fauna habitat enhancement.	
	(e) describe the measures to be implemented on the site to:	9.2.4
	(i) enhance the quality of existing vegetation and fauna habitat;	9.2.4
	(ii) restore native vegetation and fauna habitat, including assisted natural regeneration, targeted vegetation establishment and the introduction of naturally scarce fauna habitat features (where necessary);	N/A
	(iii) manage any potential conflicts with Aboriginal heritage values;	9.2.1 and 9.2.4
	(iv) protect vegetation and fauna habitat outside of the approved disturbance area;	N/A
	(v) manage the collecting and propagating seed;	9.2.1
	(vi) minimising the impacts on fauna on site, including pre-clearance surveys and minimising the potential exposure to tailings;	9.2.2
	(vii) control weeds and feral pests;	6.3
	(viii) control erosion;	9.2.4
	(ix) managing grazing and agriculture on site;	9.2
	(x) control access to vegetated and revegetated areas; and	3.7
	(xi) manage bushfire hazards;	
	(f) include a seasonally-based program to monitor and report on:	
	(i) the effectiveness of the above measures;	N/A

Condition	Requirement	Section where addressed
	(ii) progress against detailed performance indicators and completion criteria, and identify improvements that could be implemented to improve biodiversity outcomes; and (g) include details of who would be responsible for monitoring, reviewing, and implementing the plan.	N/A
B68	**Traffic Management Plan** The Applicant must prepare a Traffic Management Plan for the mine development to the satisfaction of the Planning Secretary. This plan must: (a) be prepared by a suitably qualified and experienced person/s in consultation with TfNSW and Council; (b) include details of all transport routes and traffic types to be used for development-related traffic; (c) include details of the measures to be implemented to: (i) minimise traffic safety issues and disruption to local road users, including: • minimising potential for conflict with school buses; • a traffic management system for managing over-dimensional vehicles; and • implementation of temporary traffic controls, including detours and signage; (ii) notify the local community about development-related traffic impacts; (iii) respond to any emergency repair requirements or maintenance of public roads affected by construction and/or decommissioning; and (d) include a Drivers' Code of Conduct that includes procedures to ensure that drivers: (i) adhere to posted speed limits or other required travelling speeds; (ii) adhere to the designated transport routes; and (iii) implement safe driving practices, including during hazardous weather conditions.	1.7 and 2.3 7.1 7.2 7.2 7.2 7.2
B73	Aboriginal Cultural Heritage Management Plan The Applicant must prepare an Aboriginal Cultural Heritage Management Plan for the mine development to the satisfaction of the Planning Secretary. The plan must: (a) be prepared by suitably qualified and experienced persons in consultation with Heritage NSW and Registered Aboriginal Parties; (b) describe the measures to be implemented on the site and within any offset area to: (i) comply with the heritage-related operating conditions of this consent; (ii) ensure all workers receive suitable Aboriginal cultural heritage training/inductions prior to carrying out any activities which may cause impacts to Aboriginal objects, and that suitable records are kept of these inductions; (iii) protect, monitor and manage identified Aboriginal objects (including any proposed archaeological investigations of potential subsurface objects and salvage of objects within the approved disturbance area) in accordance with the commitments made in the document/s listed in condition A2(c);	1.7 and 2.3 8.1 8.1.1 8.1.1

Condition	Requirement	Section where addressed
	(iv) protect Aboriginal objects located outside the approved disturbance area from impacts of the development; (v) manage the discovery of suspected human remains and any new Aboriginal objects, including provisions for burials, over the life of the development; (vi) maintain and manage reasonable access for relevant Aboriginal stakeholders to visit Aboriginal objects (outside of the approved disturbance area); and (vii) facilitate ongoing consultation and involvement of Registered Aboriginal Parties in the conservation and management of Aboriginal cultural heritage on the site; (c) include a strategy for the care, control and storage of Aboriginal objects salvaged on the site, both during the life of the development and in the long term.	8.1.1 8.1.2 and 8.1.3 8.1.1 8.1.1 N/A
B76	**Historic Heritage Management Plan** The Applicant must prepare a Historic Heritage Management Plan for the mine development to the satisfaction of the Planning Secretary, in respect of all non-Aboriginal cultural heritage items. This plan must: (a) be prepared in consultation with the Council; (b) be submitted to the Planning Secretary prior to the commencement of construction of mine development; (c) describe the measures to be implemented on the site to: (i) undertake photographic/archival recording of any items of heritage significance predicted to be impacted by the development, prior to disturbance; (ii) manage any new heritage items discovered during the life of the development; and (d) include a strategy for the care, control and storage of heritage relics salvaged from the site.	2.3 Noted 8.2 8.2 N/A
D5	**Management Plan Requirements** Management plans required under this consent must be prepared in accordance with relevant guidelines, and include where relevant: (a) summary of relevant background or baseline data; (b) details of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures and criteria; and (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; (c) any relevant commitments or recommendations identified in the document/s listed in condition A2(c); (d) a description of the measures to be implemented to comply with the relevant statutory requirements, limits, or performance measures and criteria; (e) a program to monitor and report on the: (i) impacts and environmental performance of the development; and	Various 2 Various Various Various Various 10.1 and 13.1

Condition	Requirement	Section where addressed
	(ii) effectiveness of the management measures set out pursuant to paragraph (d);	10.1 and 13.1
	(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;	
	(g) a program to investigate and implement ways to improve the environmental performance of the development over time;	N/A
	(h) a protocol for managing and reporting any:	
	(i) incident, non-compliance or exceedance of any impact assessment criterion or performance measure;	11
	(ii) complaint; or	10.3
	(iii) failure to comply with other statutory requirements;	
	(i) public sources of information and data to assist stakeholders in understanding environmental impacts of the development; and	Various
	(j) a protocol for periodic review of the plan.	13.2

Appendix 4 Government Consultation

DOC23/536293-4

Alkane Resources Ltd
Tomingley Gold Operations Pty Ltd
PO Box 59 Peak Hill NSW 2869

By email at: dpritchard@alkane.com.au

Attention: Mr David Pritchard

05 July 2023

Dear Mr Pritchard

Tomingley Gold Extension Project – San Antonio Roswell SAR mine Stage 1a Construction Environmental Management Plan (CEMP) - Post Approval Consultation PAE- 59391961

I refer to your email to the Environment Protection Authority (EPA) dated 20 June 2023 seeking the EPA's consultation in relation to the post approved of the SAR mine Stage 1a – CEMP.

As part of the regulatory process, the EPA encourage the preparation of strategies, programs and plans, as useful tools for industry to ensure they meet their statutory obligations. As regulatory authority the EPA does not review or comment on these plans in terms of adequacy unless there is a specific reason to do so. The EPA does not endorse the details of these plans. These strategies, programs and plans are for the benefit of the Company.

Accordingly, the EPA will not be providing further comment to this request.

If you have any questions about this request, please contact Abner Vega on (02) 6881 4656 or by e-mail to info@epa.nsw.gov.au.

Yours sincerely

Simon Lund
A/Unit Head
Regulatory Operations Regional West
NSW Environmental Protection Authority

Department of Planning and Environment

Our ref: DOC23/567097
Your ref: CEMP_202306

David Pritchard
Environment & Community Manager
Tomingley Gold Operations
DPritchard@alkane.com.au

Dear David

Tomingley Gold Operations – Stage 1a Construction Environmental Management Plan

Thank you for your request via the NSW Planning Portal I dated 20 June 2023 to the Biodiversity, Conservation and Science Directorate (BCS) of the Department of Planning and Environment (DPE) inviting comments on the Construction Environmental Management Plan (CEMP) for Stage 1a of the Tomingley Gold Extension Project.

BCS has reviewed the matters relating to biodiversity and flooding.

The CEMP lacks detail regarding clearing protocols. While the CEMP states that "*Clearing of native vegetation and hollow-bearing trees is to be avoided during the breeding season (Spring)*" this has not been clearly defined. Breeding of many fauna species occurs outside the spring months of September to November. It is, however, noted that pre-clearing inspections of hollow-bearing trees to confirm the absence of roosting/breeding threatened species will be undertaken. This should be extended to other signs of breeding such as the obvious nests potentially used by Grey-crowned Babblers and raptors.

The CEMP further states that vegetation clearance will be undertaken in accordance with best practice principles, including staged vegetation clearance where practicable. This needs to be more specific, with these protocols clearly articulated in the CEMP.

Reference is also made to elements of the TGO Biodiversity Management Plan. This plan should be appended to the CEMP, or a direct link provided.

We also note that Table 2 is incomplete, for example "*Granted xx date*". These omissions must be corrected.

If you have any questions about this advice, please do not hesitate to contact David Geering, Senior Conservation Planning Officer, via david.geering@environment.nsw.gov.au or (02) 6883 5335.

Yours sincerely

Liz Mazzer
A/Senior Team Leader Planning North West
Biodiversity, Conservation and Science Directorate

27 June 2023

NSW GOVERNMENT | Dams Safety

David Pritchard
Environment and Community Manager
Tomingley Gold Operations Pty Ltd
David.Pritchard@alkane.com.aus

8/01/2023

Our ref: SSD-9176045

Dear David,

Re:Tomingley Gold Mine (SSD-9176045) CEMP Stage 1a
Comments on proposed Water Management Plan

Thank you for consulting with Dams Safety NSW and providing the opportunity for us to comment on the CEMP for Stage 1a of SSD-9176045. Dams Safety NSW have reviewed the CEMP for Stage 1a of SSD-9176045 including the framework for the proposed Water Management Plan for Stage 1a. Dams Safety NSWs interest in the CEMP and proposed Water Management Plan is restricted specifically to any existing or proposed dams impacted.

A new water storage dam is proposed as part of the Water Management Plan. Following consultation it seems that the dam will be relatively small and isolated from an at risk population and therefore is unlikely to be declared. However, this assessment will need to be made formally prior to commencement of the dams construction. Assessment of whether the dam is to be declared is undertaken by Dams Safety NSW. Prior to the dams construction register the new structure with Dams Safety NSW on our website by filling out thse new dams form and email it to info@damsafety.nsw.gov.au. The form is found at the following link. https://www.damsafety.nsw.gov.au/publications/dam-information-form

Include with the submission any relevant formal assessments that have been made on the dam for example a dam consequent category assessment if one exists or an assessment by a dams specialist.

If you have any queries, please don't hesitate to contact me on 0428288391 or heather.middleton@damsafety.nsw.gov.au.

Yours faithfully,

Heather Middleton
Manager Mining Impacts – Dams Safety NSW

4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150 www.damsafety.nsw.gov.au
Locked Bag 5022, Parramatta NSW 2124

NSW GOVERNMENT

David Pritchard
Environment & Community Manager
Alkane Resources Ltd
Email: DPritchard@alkane.com.au

Your reference: SSD-9176045-PA-4
Our reference: DOC23/534136

Dear David,

Construction Environmental Management Plan – State Significant Development – Tomingley Gold Operation: SAR Mine Stage 1a – SSD-9176045-PA-4

Thank you for your referral seeking advice on the Construction Environmental Management Plan (CEMP) for the above State Significant Development (SSD) project. Thank you for the continued opportunity to comment on the project.

It is understood that the CEMP encompasses Stage 1a of the Tomingley Gold Operation SAR Mine, covered by approved SSD-9176045. Heritage NSW has no further comments on the ACHMP and supports the recommendations and management strategies outlined in the ACHMP.

Please note that the above comments relate only to Aboriginal cultural heritage regulation matters. If you have any questions regarding these comments, please contact Corey O'Driscoll, Senior Assessments Officer, at Heritage NSW on 6229 7079 and corey.odriscoll@environment.nsw.gov.au.

Yours sincerely

Corey O'Driscoll
Senior Assessments Officer
Heritage NSW
Department of Planning and Environment
(As Delegate under *National Parks and Wildlife Act 1974*)
Date: 18 July 2023

Locked Bag 5020 Parramatta NSW 2124 ■
P: 02 9873 8500 ■ E: heritagemailbox@environment.nsw.gov.au

Narromine
SHIRE COUNCIL

Monday, 17 July 2023

Tomingley Gold Operations Pty Ltd
C/- Major Projects Portal

Dear Sir/Madam

RE: SSD-9176045- TOMINGLEY GOLD EXTENSION PROJECT, NARROMINE SHIRE COUNCIL – PAE-59391962 POST APPROVAL CONSULTATION

Reference is made to the above-mentioned project and the Tomingley Gold Operation SAR Mine Stage 1a Construction Environmental Management Plan submitted for consultation. The following comments are provided:

Council is supportive of TGO Environmental Management Plans being prepared by the company and peer reviewed by qualified persons. It is noted that many of the responsibilities are assigned to "Contractor's Managers and Supervisors". It is suggested that as the Plan includes certain 'trigger/action/responses' that are to be implemented and identified by supervisors, it is important that these key staff are involved in the preparation of management plans prior to finalisation. Key personnel are important to implementation phase and review of the CEMP.

Air Quality Trigger level 2 is not consistent between the information presented in section 5.5 and Appendix 1. The CEMP should clarify and update for consistency of implementation. Appendix 1 is not referenced in the main document.

Appendix 1 - Air Quality Trigger Level 2 – "and the wind is blowing from the mine towards the residences". This presents as an imprecise/unclear trigger identifier, to be interpreted concurrently with a PM_{10} concentration. Better clarity is recommended to be provided in the CEMP for the supervisors to identify wind triggers.

Please contact the undersigned on 6889 9999 if you have any queries or would like to discuss the proposal further.

Yours faithfully

Emma Yule
Manager Planning

Please address all correspondence to the General Manager, P O Box 115 Narromine NSW 2821
T: 02 6889 9999 F: 02 6889 9998 E: mail@narromine.nsw.gov.au W: www.narromine.nsw.gov.au
Office Address: 124 Dandaloo Street Narromine NSW 2821
ABN 99 352 328 405

Department of Planning and Environment

Our ref: OUT23/11060

Mr David Pritchard

Email: DPritchard@alkane.com.au

18 July 2023

Subject: **Tomingley Gold Extension Project -SAR Mine Draft CEMP (SSD-9176045-PA-4)**

Dear Mr Pritchard

I refer to your request for advice sent on 22 June 2023 to the Department of Planning and Environment (DPE) Water about the above matter.

DPE Water has reviewed the Draft Construction Environmental Management Plan (CEMP) and has provided recommendations in **Attachment A**.

Should you have any further questions in relation to this submission please do not hesitate to contact DPE Water Assessments at water.assessments@dpie.nsw.gov.au

Yours sincerely,

Rose-Anne Hawkeswood

A/ Manager Assessments, Knowledge Division
Department of Planning and Environment: Water

4 Parramatta Square, 12 Darcy Street, Parramatta NSW 2150
Locked Bag 5022, Parramatta NSW 2124
www.dpie.nsw.gov.au

Attachment A

Detailed advice regarding the Tomingley Gold Extension Project - SAR Mine Draft CEMP (SSD-9176045-PA-4)

1.0 Water take and licensing

1.1 Recommendation – Prior to approval

The proponent should confirm if there will be any groundwater take as a part of Stage 1a.

Explanation

The Environmental Impact Statement (EIS) noted there would be groundwater impacts as a part of the project, but it is unclear if this will occur in Stage 1a or at a later stage. Should there be groundwater take as a part of this stage, estimates of maximum potential take and reference numbers for water access licences that will be used to account for this take should be provided.

If there is no groundwater take, the proponent should include a statement in the CEMP confirming this.

1.2 Recommendation – Prior to approval

The proponent should provide estimates of site water demand and confirm the proposed sources are sufficient to meet this requirement.

Explanation

Water requirements are noted in section 7.3 of the CEMP, however, it is unclear what volumes of water are required. The EIS site water balance noted a significant volume of water would be required for dust suppression (388 ML/year in 2026) and it is unclear how much would be required during the Stage 1a construction phase. Confirmation that these volumes can be sourced from the TGO mine site and rainfall on disturbed areas is requested.

2.0 Geomorphic impacts - monitoring and management

2.1 Recommendation – Prior to approval

Baseline information on geomorphic and riparian conditions should be recorded prior to any construction. This should include:

(A) inspection and photographic record of the geomorphic stability and riparian condition of any watercourse or drainage line downstream of an altered flow path. This should include any area where flow will be concentrated due to a diversion or culvert, and also cover the area below discharge energy dissipators to ensure the design is effective.

(B) inspection and photographic record prior to construction and for at least four flow events (where rainfall is greater than 25 mm in 24 hours leading to stream flows) or two years (whichever is longer) after works have been completed to confirm the design of diversion, culvert or discharge energy dissipators is adequate.

Explanation

The CEMP does not include geomorphic monitoring as part of the surface water monitoring program to ensure water management performance measures (B48) are met.

Water management – General

- *Design, install, operate and maintain water management infrastructure in a proper and efficient manner*
- *Minimise risks to the receiving environment and downstream water users, Aquatic and riparian ecosystems (including Gundong Creek)*

- *Maintain or improve baseline channel stability*

2.2 Recommendation – Post determination

The Trigger Action Response Plan (TARP) should address stream and riparian health and channel stability (geomorphology).

Triggers for remedial action should be specified and provided to the department for review. Justification for design of the monitoring program and TARPs should include explanation of objectives, timing, frequency and duration of any monitoring program and how the TARPs response triggers will be followed and reported.

Explanation

The TARP does not consider stream and riparian health and channel stability (geomorphology). This should be included to ensure the water management performance measures are met.

2.3 Recommendation – Post determination

Any remedial actions or stream rehabilitation should be guided by the Rehabilitation Manual for Australian Streams (Rutherford et al. 2000).

End Attachment A

Transport for NSW

17 August 2023

TfNSW reference: WST09/00087/20

Mr David Pritchard
Alkane Resources
Via Email DPritchard@alkane.com.au

Dear Mr Pritchard

SSD-9176045 – TOMINGLEY GOLD EXTENSION PROJECT – POST CONSENT APPROVALS

Transport for NSW (TfNSW) is responding to a referral via the NSW Major Projects Portal on 28 June 2023. I note the referral seeks TfNSW input into a draft *SAR Mine Stage 1a Construction Environmental Management Plan (CEMP).* I apologise for the delay in my reply.

TfNSW has reviewed the draft plan and provides the following comments:

- Traffic details are provided in section 8, however in Table 3, they are referenced as being in section 9.
- Traffic operations included in this plan for Stage 1a involve traffic entering Kyalite Road from the Newell Highway. The CEMP projects a maximum of 170 light vehicles and 60 heavy vehicles will perform this movement each day, of which 20% will arrive from the south. Given there is not a right turn treatment to provide a high level of safety for vehicles turning right, vehicles accessing Stage 1a works from the south will need to continue north and perform a U-turn movement in the village of Tomingley before returning to access Kyalite Road by way of a left turn. TfNSW is willing to agree to this arrangement for Stage 1a only, subject to the CEMP including a plan and map indicating where the U-turn will occur and a driver code of conduct outlining to all drivers accessing Stage 1a works how and where to perform this movement safely.
- As part of the project, specifically the Newell Highway realignment, TfNSW is party to a Works Authorisation Deed (WAD) with Alkane Resources. As part of the WAD, storm water management and sediment control will be assessed and determined where it relates to/impacts on TfNSW assets.

If you have any questions, please contact the undersigned on 1300 019 680 or email development.west@transport.nsw.gov.au.

Yours faithfully

Andrew McIntyre
Manager, Development Services
West Region