



**TRITTON RESOURCES PTY LTD**

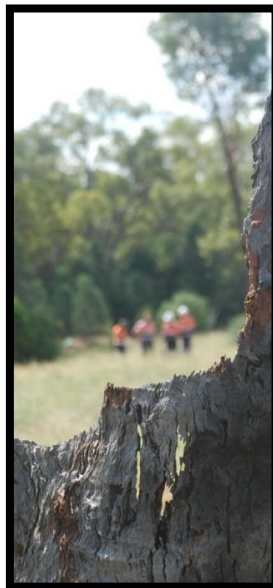
ABN 88 100 095 494

# **First Annual Review**

for the

# **Avoca Tank Project**

**January 2023 – December 2023**



*Prepared by:*



**RWCorkery&co**

August 2024



## ACKNOWLEDGEMENT

*R.W. Corkery & Co. acknowledge and pay our respects to the Traditional Custodians of the lands in NSW and Australia on which our projects are located.*

*We value the knowledge, advice and involvement of the Elders and extended Aboriginal community that contribute to our Projects and extend our respect to all Aboriginal and Torres Strait Islander peoples.*





# TRITTON RESOURCES PTY LTD

ABN 88 100 095 494

## First Annual Review

for the

## Avoca Tank Project

Period: January 2023 to December 2023

---

**Prepared for:**

Tritton Resources Pty Ltd  
ABN: 88 100 095 494

Yarrandale Road  
HERMIDALE NSW 2831

Telephone: (02) 6838 1100  
Email: info@aeris.com.au

---

**Prepared by:**

**R.W. Corkery & Co. Pty Limited**  
Geological & Environmental Consultants  
ABN: 31 002 033 712

Telephone: (02) 9985 8511  
Email: admin@rwcorkery.com  
Postal: PO Box 1796  
CHATSWOOD NSW 2057

**Sydney | Orange | Townsville**

**Sydney**  
Suite 12.01, 1-5 Railway Street  
CHATSWOOD NSW 2067

**Orange**  
62 Hill Street  
ORANGE NSW 2800


---

Ref No. 859/09

August 2024

---

### Title Block

<b>Name of operation</b>	Avoca Tank Project
<b>Name of operator</b>	Aeris Resources Limited
<b>Development consent / project approval #</b>	DA 10/2015/004/001
<b>Mining lease #</b>	ML 1818
<b>Name of holder of mining lease</b>	Tritton Resources Limited
<b>Annual Review start date</b>	1 January 2023
<b>Annual Review end date</b>	31 December 2023
<p><b>I, Dirk McNicoll, certify that this audit report is a true and accurate record of the compliance status of the Avoca Tank Project for the 2023 period, and that I am authorised to make this statement on behalf of Aeris Resources.</b></p> <p><i>Note.</i></p> <p>a) <i>The Annual Review is an 'environmental audit' for the purposes of section 122B(2) of the Environmental Planning and Assessment Act 1979. Section 122E provides that a person must not include false or misleading information (or provide information for inclusion in) an audit report produced to the Minister in connection with an environmental audit if the person knows that the information is false or misleading in a material respect. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000.</i></p> <p>b) <i>The Crimes Act 1900 contains other offences relating to false and misleading information: section 192G (Intention to defraud by false or misleading statement—maximum penalty 5 years imprisonment); sections 307A, 307B and 307C (False or misleading applications/information/documents—maximum penalty 2 years imprisonment or \$22,000, or both).</i></p>	
<b>Name of authorised reporting officer</b>	Dirk McNicoll
<b>Title of authorised reporting officer</b>	Environmental Superintendent
<b>Signature of authorised reporting officer</b>	
<b>Date</b>	1/08/2024

**This Copyright is included for the protection of this document**

<p style="text-align: center;"><b>COPYRIGHT</b></p> <p style="text-align: center;">© R.W. Corkery &amp; Co. Pty Limited 2024 and © Tritton Resources Pty Ltd 2024</p> <p style="text-align: center;">All intellectual property and copyright reserved.</p> <p>Apart from any fair dealing for the purpose of private study, research, criticism or review, as permitted under the Copyright Act, 1968, no part of this report may be reproduced, transmitted, stored in a retrieval system or adapted in any form or by any means (electronic, mechanical, photocopying, recording or otherwise) without written permission. Enquiries should be addressed to R.W. Corkery &amp; Co. Pty Limited.</p>
---

# Contents

	Page
<b>1. INTRODUCTION.....</b>	<b>1</b>
1.1 ANNUAL REVIEW STRUCTURE .....	1
1.2 LOCATION AND DESCRIPTION.....	1
1.3 CONSENTS, LEASES AND LICENCES .....	4
<b>2. OPERATIONS SUMMARY .....</b>	<b>5</b>
2.1 EXPLORATION.....	7
2.2 LAND PREPARATION / SURFACE DISTURBANCE.....	7
2.3 CONSTRUCTION .....	7
2.4 MINING .....	7
2.5 MINERAL PROCESSING .....	8
2.6 WASTE ROCK MANAGEMENT .....	8
2.7 ORE AND PRODUCT STOCKPILES .....	8
2.8 WATER MANAGEMENT .....	8
2.9 HAZARDOUS MATERIAL AND WASTE MANAGEMENT .....	9
2.10 REGISTER OF SITE INFRASTRUCTURE.....	9
<b>3. ENVIRONMENTAL PERFORMANCE.....</b>	<b>11</b>
3.1 AIR QUALITY .....	11
3.1.1 Existing Environment .....	11
3.1.2 Environmental Management.....	11
3.1.3 Environmental Performance .....	13
3.1.4 Reportable Incidents .....	14
3.1.5 Further Improvements.....	14
3.2 OPERATIONAL NOISE .....	14
3.2.1 Environmental Management.....	14
3.2.2 Environmental Performance .....	14
3.2.3 Reportable Incidents .....	15
3.2.4 Further Improvements.....	15
3.3 SURFACE WATER / EROSION AND SEDIMENT CONTROL .....	15
3.3.1 Environmental Management.....	15
3.3.2 Environmental Performance .....	16
3.3.3 Reportable Incidents .....	16
3.3.4 Further Improvements.....	16
3.4 GROUNDWATER .....	16
3.4.1 Environmental Management.....	16
3.4.2 Environmental Performance .....	18
3.4.3 Reportable Incidents .....	19
3.4.4 Further Improvements.....	19
3.5 HAZARDOUS MATERIALS AND CONTAMINATED LAND .....	20
3.5.1 Environmental Management.....	20
3.5.2 Environmental Performance .....	20

# Contents

	Page
3.5.3 Reportable Incidents .....	20
3.5.4 Further Improvements .....	21
3.6 FLORA, FAUNA AND WEEDS .....	21
3.6.1 Environmental Management .....	21
3.6.2 Environmental Performance .....	21
3.6.3 Reportable Incidents .....	21
3.6.4 Further Improvements .....	21
3.7 BUSHFIRE .....	22
3.7.1 Environmental Management .....	22
3.7.2 Environmental Performance .....	23
3.7.3 Reportable Incidents .....	23
3.7.4 Further Improvements .....	23
3.8 ABORIGINAL HERITAGE .....	23
3.8.1 Environmental Management .....	23
3.8.2 Environmental Performance .....	24
3.8.3 Reportable Incidents .....	24
3.8.4 Further Improvements .....	24
3.9 PUBLIC SAFETY .....	24
3.9.1 Environmental Management .....	24
3.9.2 Environmental Performance .....	24
3.9.3 Reportable Incidents .....	25
3.9.4 Further Improvements .....	25
3.10 OTHER ISSUES AND RISKS .....	25
<b>4. REHABILITATION .....</b>	<b>26</b>
4.1 REHABILITATION WORKS .....	26
4.2 REHABILITATION TRIALS AND RESEARCH .....	26
4.3 REHABILITATION REPORTING .....	26
<b>5. COMMUNITY .....</b>	<b>28</b>
5.1 ENVIRONMENTAL COMPLAINTS .....	28
5.2 COMMUNITY LIAISON .....	28
<b>6. INCIDENTS AND NON-COMPLIANCES DURING THE REPORTING PERIOD .....</b>	<b>30</b>
<b>7. ACTIVITIES PROPOSED IN NEXT ANNUAL REVIEW PERIOD .....</b>	<b>31</b>

## APPENDICES

Appendix 1 Dust Monitoring – Insoluble Solids and Metals Analysis .....	32
Appendix 2 Groundwater Monitoring Data .....	35

# Contents

	Page
<b>FIGURES</b>	
Figure 1	Locality Plan and Mineral Authorities..... 2
Figure 2	Site Layout ..... 3
Figure 3	Operational Mine Site Layout..... 6
Figure 4	Deposited Dust Gauge Locations ..... 12
Figure 5	Annual Average Deposited Dust Analysis ..... 13
Figure 6	Groundwater Monitoring Locations ..... 17
<b>TABLES</b>	
Table 1	Current Development Consents, Leases, and Licences ..... 4
Table 2	Operations Timeline ..... 5
Table 3	Avoca Tank Mine and NECM Production Summary..... 8
Table 4	Dust Monitoring Program ..... 13
Table 5	Noise Monitoring Results ..... 15
Table 6	Groundwater Monitoring Results ..... 16
Table 7	2023 Average Groundwater Standing Water Levels ..... 18
Table 8	Water Usage ..... 19
Table 9	Disturbance and Rehabilitation Statistics for Mine and the NECM..... 26
Table 10	Rehabilitation Planning Schedule ..... 27

# 1. Introduction

This Annual Review has been prepared by R.W. Corkery & Co. Pty. Limited (RWC) on behalf of Tritton Resources Pty Ltd (the “Company”), a wholly owned subsidiary of Aeris Resources Limited (Aeris), for the Avoca Tank Project (the “Mine”). This Annual Review is required under Condition C4 of Development Application (DA) 10/2015/004/001.

## 1.1 Annual Review Structure

This Annual Review provides a summary of operations undertaken under DA10/2015/004/001 during the first Reporting Period for the Mine (i.e. 1 January 2023 to 31 December 2023). In addition, a summary of all activities that have occurred since commencement of the development is provided. Given the length of time since commencement, reporting is split into financial year segments where relevant. For example, 2021/2022 refers to the period from October 2021 to the end of June 2022. Environmental monitoring data are presented for the Reporting Period with commentary on performance, compliance, and long-term monitoring trends including comparison with predicted/modelled environmental impacts. An overview of relevant consultation undertaken with stakeholders and a summary of any complaints received during the Reporting Period are also provided.

In addition to the above, this Annual Review presents a summary of activities that have occurred from commencement of the development up until the commencement of mining within the Mine.

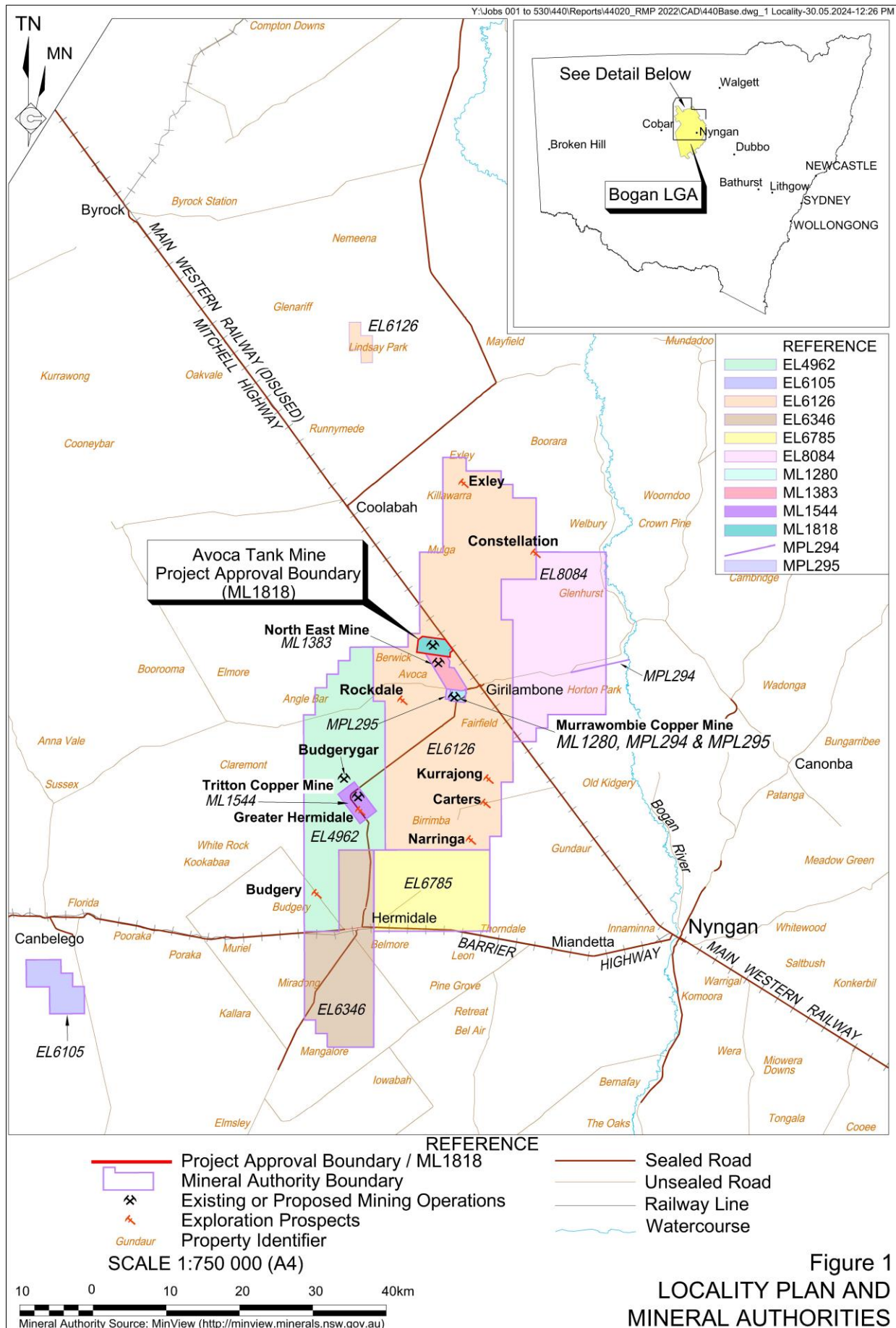
Lastly, this Annual Review presents a summary of forecast activities for the next Reporting Period (i.e. 1 January 2024 to 31 December 2024), as well as long-term forecasts for mining and rehabilitation operations, where relevant.

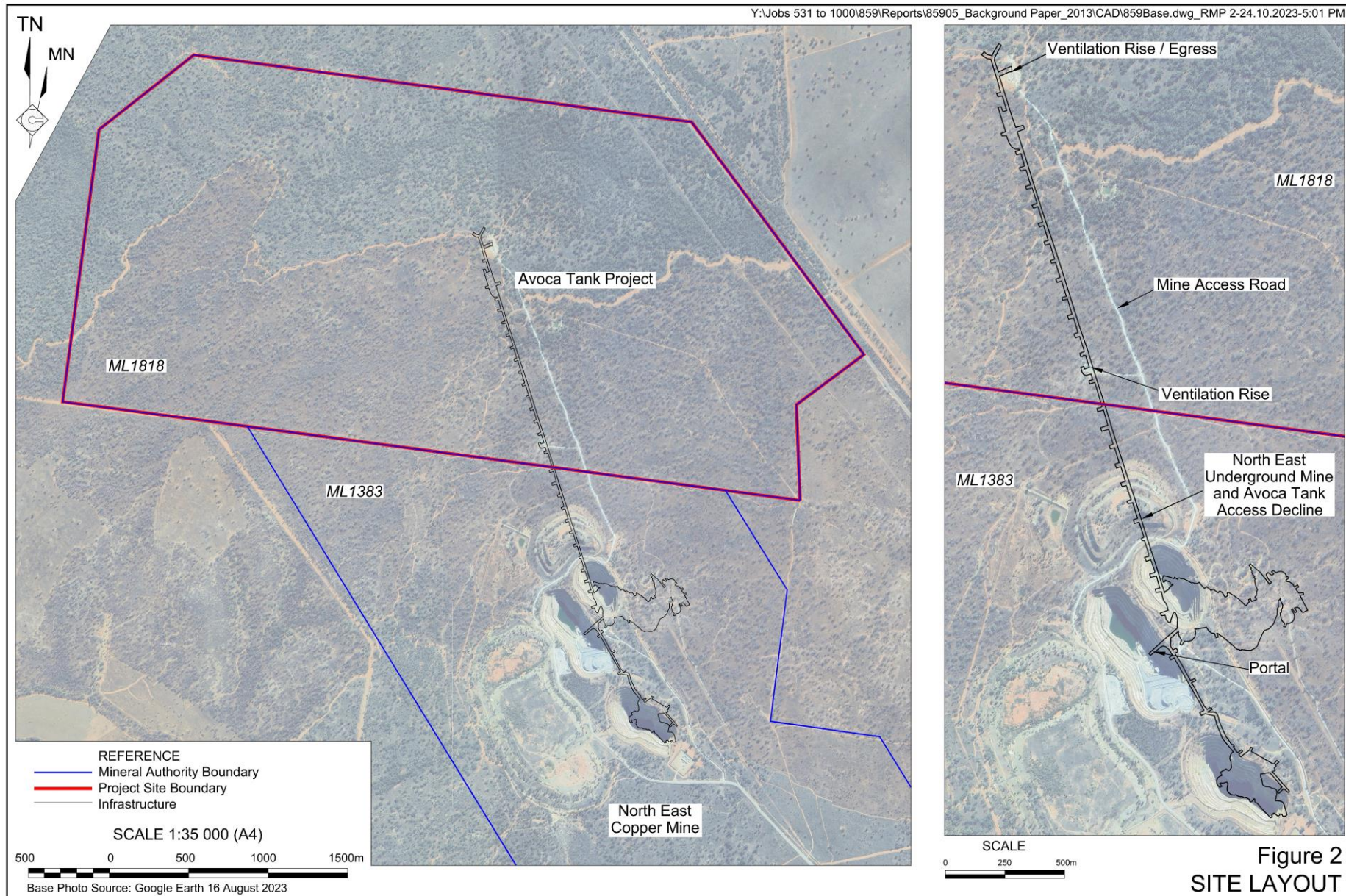
## 1.2 Location and Description

The Mine is located approximately 5km northwest of the village of Girilambone, and approximately 50km northwest of the town Nyngan (**Figure 1**). The principal mineral authority for the Mine is Mining Lease (ML) 1818 (**Figure 1**). For the purpose of this document, the area covered by ML1818 is referred to as the “Mine Site” (see **Figures 1 and 2**).

The Mine is one of four mining operations within the vicinity of Girilambone that are owned and operated by the Company (**Figure 1**). For the purposes of this Annual Review, these mines are referred to collectively as the Tritton Copper Operations and consist of the following.

- Tritton Copper Mine (ML1544);
- Murrawombie Copper Mine (formerly Girilambone Copper Mine) (ML1280);
- North East Copper Mine (NECM) (ML 1383) (formerly Girilambone North); and
- Avoca Tank Project (ML1818) (the Mine).





Although operating under various separate development consents, each mine within the Tritton Copper Operations is intrinsically linked. Environmental and operational management are generally shared between all four sites, with the exception of site-specific environmental management plans where relevant.

Underground workings at the Mine are accessed via a portal and decline within the Hartman's Pit at the NECM.

## 1.3 Consents, Leases and Licences

**Table 1** displays the current development consents, leases, and licences held at the Mine.

An application to vary Environmental Protection Licence (EPL) 4501 was submitted during the reporting period to update the following administrative changes.

- Reference to Mining Lease Application (MLA) 540 was updated to refer to ML1818.
- Reference to ML295 (not associated with the Mine) was updated to refer to Mining Purpose Lease (MPL) 295 (principally associated with the Murrawombie Copper Mine).

The application is currently under assessment.

**Table 1**  
**Current Development Consents, Leases, and Licences**

Authorisation	Reference	Grant Date	Expiry Date	Purpose
Development Application (DA)	DA 10/2015/004/001	10/10/2016	N/A	Original Development Application for the Mine
	DA 19/2015/004/002	07/10/2021	07/10/2026	Modified under DA 2015/004 to alter mine infrastructure for the Mine
Mining Lease (ML)	1818	05/11/2021	05/11/2042	Mining at the Mine
Environment Protection Licence (EPL)	4501	12/12/1999	N/A	Mining for minerals. EPL covers ML1280 Murrawombie Copper Mine, ML1383 (North East Copper Mine) as well as ML295 and MLA540.

## 2. Operations Summary

Access to the Mine is via an underground decline accessed via the Harmans pit at the NECM. Existing infrastructure on the adjacent NECM is used for the Mine, including the existing run-of-mine (ROM) pad and waste rock emplacement (WRE). Other surface infrastructure associated with the Mine includes ventilation fans and an emergency egress. Ore extracted from the Mine is transported to and processed at the nearby Tritton Copper Mine (TCM).

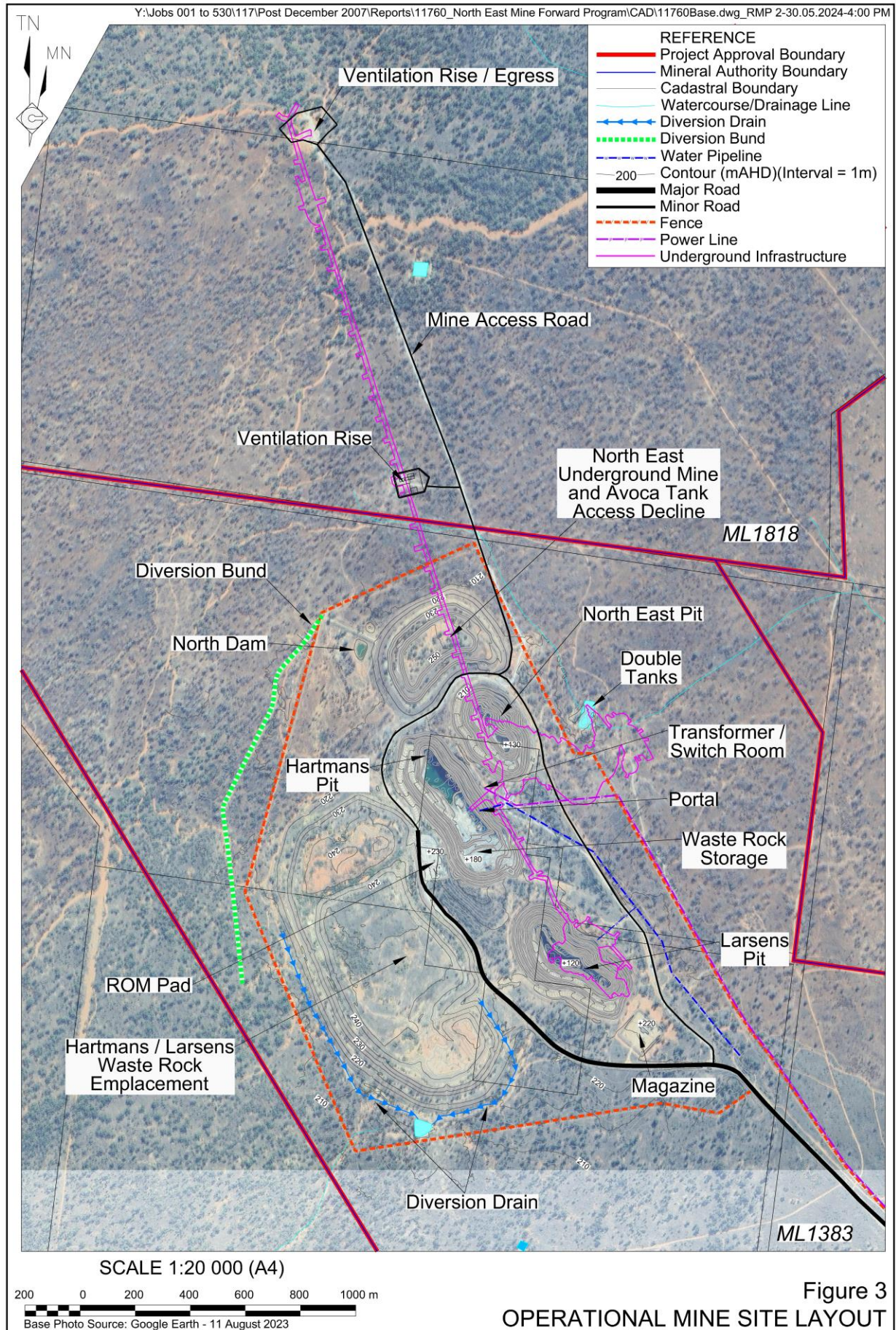
In summary, approved activities at the Mine include the following (**Figure 3**).

- Use of a portal (within Hartman's Pit), construction of a decline, underground workings and three vent rises (one equipped as an emergency egress and the others with a ventilation fan at surface).
- Extraction of the economically recoverable copper-gold-silver resources to a depth of approximately 500m below surface using bench stoping and long hole open stope mining techniques.
- Transportation of ore material to the TCM for processing using registered road trains via a combination of a private haul road and Booramugga and Yarrandale Roads.
- Establishment of a surface waste rock emplacement within Hartman's Pit for storage of waste rock extracted during the construction of access drives and mine development. Waste rock is being used to stabilise a landslip on the southern rim of the Hartman's Pit.
- Extension of infrastructure from the NECM Open Cut, including a site access road, water pipeline and transmission line.

**Table 2** provides a timeline of completed and planned operations at the Mine.

**Table 2**  
**Operations Timeline**

Year	Operations
2021	October – Commencement of Mine decline from NECM decline. October – First development ore despatched to Tritton Processing Plant.
2022	January – Site clearance activities. January – Construction of Site Access Road January – Construction of Southern Ventilation Shaft (see section 2.3). June – Establishment of services and Northern Ventilation Shaft. December – Access decline intersected the Mine orebody.
2023	May – Completion of Mine decline. May – Development of stoping levels. June – First production ore despatched to Tritton Processing Plant (see section 2.4)
2024	Ongoing Operations
2025 onwards	Continuation of underground mining and transportation of ore to the Tritton Processing Plant



## 2.1 Exploration

No exploration activities were undertaken within ML1818 during 2023. Rehabilitation activities are yet to be signed off.

## 2.2 Land Preparation / Surface Disturbance

All site surface disturbance activities require the completion of a Surface Disturbance Permit.

The Mine access road was constructed in 2022. The width of the access road was minimised where possible and avoided the removal of any hollow bearing trees generally in accordance with the BDAR (Ecoplanning, 2021).

The following drill pads were developed during previous reporting periods.

- Drill pad for Geotech hole (FAR1) – 2022
- Drill pad for Geotech hole (FAR1) – 2022

## 2.3 Construction

During 2021, the following construction works were undertaken.

- Establishment of a laydown area in the NECM Hartman's Pit to facilitate works.
- Commencement of a development drive to the Avoca Tank ore deposit from the existing NECM underground workings.

A 180m ventilation shaft was sunk and a 315kW fan was installed for the Mine development ventilation requirements in 2022.

No additional construction work was undertaken during 2023.

## 2.4 Mining

Development commenced in October 2021 from the NECM Decline towards the Mine orebody and a total of 567.2m of waste development was undertaken. Of the 37,583t of waste rock produced from this development, all was placed in the Hartman's open pit adjacent to the decline portal. The deepest part of the mine was at 4,650mRL which places it approximately 530m below the surface.

Development of the Mine decline continued throughout 2022/2023. A total of 3,240m of Capital Development was undertaken producing 347,148 tonnes of waste rock and 2,684 tonnes of copper ore. All waste rock produced was placed in the Hartmans Open pit adjacent to the decline portal. Copper ore was placed on the Mine ROM which was hauled to the TCM for processing. The deepest part of the Mine at the end of December 2022 was at 4,880m RL, which places it approximately 280m below the surface at the portal (325m at surface of pit).

Development of the stoping levels commenced during 2023/2024. Mining is undertaken using traditional long-hole open stope methods.

The production summary for the Mine and the NECM since commencement of the Mine decline is shown below in **Table 3**.

**Table 3**  
**Avoca Tank Mine and NECM Production Summary**

<b>Material</b>	<b>2021/2022 (actual)</b>	<b>2022/2023 (actual)</b>	<b>2023/2024 (actual)</b>	<b>Total to date</b>
Waste Rock / Overburden	37,583t	347,148t	195,871m <sup>3</sup>	580,602m <sup>3</sup>
ROM Ore (t)	0t	2,684t	77,294t	79,978t
Product (t)	0t	178t	5125t	5303t

## 2.5 Mineral Processing

Mineral processing is undertaken at the process plant located at the TCM. The ore material is transported by trucks utilising an internal haul road to Murrawombie Copper Mine and from there to the TCM via the public Yarrandale Road.

## 2.6 Waste Rock Management

A total of 347,148t of waste rock was produced during 2022/2023. Waste rock produced from development and mining of the underground mine is hauled via the Mine decline to the portal located within the Hartman's open pit. Waste rock is stockpiled on existing waste rock dumps within the Hartman's open pit. Waste rock material is also used for backfilling underground stope voids.

## 2.7 Ore and Product Stockpiles

79,978t of copper ore was produced during the reporting period. The ore material was stockpiled on the Mine ROM above the Hartman's open pit, and then hauled to the Tritton Mine for processing.

## 2.8 Water Management

The primary source of water for the Mine operation is the rainfall water captured within the Hartman's Pit (GSW06) and the groundwater intercepted by the mining operation which is also stored in GSW06. The North Dam (GSW09) is a sediment dam which captures runoff from the North East and Hartman's Waste Rock Emplacement. Water captured in this dam is allowed to settle out any sediments and the water is allowed to evaporate over time. The location of the Mine's water storages is shown in **Figure 3**.

The Company are currently licensed for the extraction of 304ML (WAL 31041) from the Lachlan Fold Belt Groundwater Source to account for the take of groundwater inflow to the underground workings at the Mine.

WALs held by the Company cumulatively permit the annual extraction of 931 ML of water from Gunningbar Creek via the Macquarie River, providing water supply for the Tritton Copper Operations. An existing pumping station located on Gunningbar Creek (approx. 24 km to the east of Murrawombie Copper Mine) pumps water under this licence, to the Murrawombie Copper Mine, where it is stored in a raw water dam (GSW03). An existing water pipeline then delivers this water to NECM as required. The Mine uses the existing pump and pipeline infrastructure servicing the NECM. Water extracted under the WALs is primarily used for surface dust suppression and pumped underground for underground mine uses (primarily drilling and dust suppression).

## 2.9 Hazardous Material and Waste Management

In accordance with the License to Store (under license number: XMNF20001) issued by Workcover, the Company is permitted to store hazardous materials (explosives and related products).

Control measures required for the storage and use of hazardous materials include the requirement to provide Safety Data Sheets (SDS) for all hazardous materials on site. The SDSs are accessed using a database or sourced direct from the supplier. SDSs are displayed on/near the product or in a manifest within the area.

Explosives for the Mine are stored in a registered magazine bundled in accordance with *AS2187.1 1998 Explosives – Storage, transport and use, Part 1: Storage*. The magazine at for the Mine is located at the NECM; the magazine is fenced and access is restricted.

## 2.10 Register of Site Infrastructure

A range of other infrastructure is utilised on site as part of the Mine and NECM operations. This infrastructure is described below.

### Power Supply

Electrical power enters Girilambone via a 66kV line and using a transformer is stepped down to 11kV to feed the NECM mining area.

The Mine is supplied by 3 gensets which supply 11kV to the mining area.

### Ventilation Fans

The North East pit has a 315kW surface ventilation fan that is used to ventilate the underground mine in association with other auxiliary fans.

A single 315kW primary fan has been installed on a ventilation shaft at Mine. The Mine operates a single 375kW secondary fan underground.

### **Explosives Magazine**

Explosives for the Mine are stored in a registered magazine bunded in accordance with AS2187. The magazine at for the Mine is located at the NECM; the magazine is fenced and access is restricted.

## 3. Environmental Performance

### 3.1 Air Quality

#### 3.1.1 Existing Environment

The Mine is situated in a semi-arid environment where yearly evaporation rates generally exceed annual rainfall by an approximate factor of five. High evaporation rates cause bare, disturbed ground to be susceptible to wind erosion and the associated formation of dust. The primary activity that contributes to soil dispersal/dust is vehicle use on unsealed roads and tracks. As the Mine is an underground mining operation, dust generated from blasting and loading of ore is not expected at the surface. However, ventilation fans are a source of particulates.

#### 3.1.2 Environmental Management

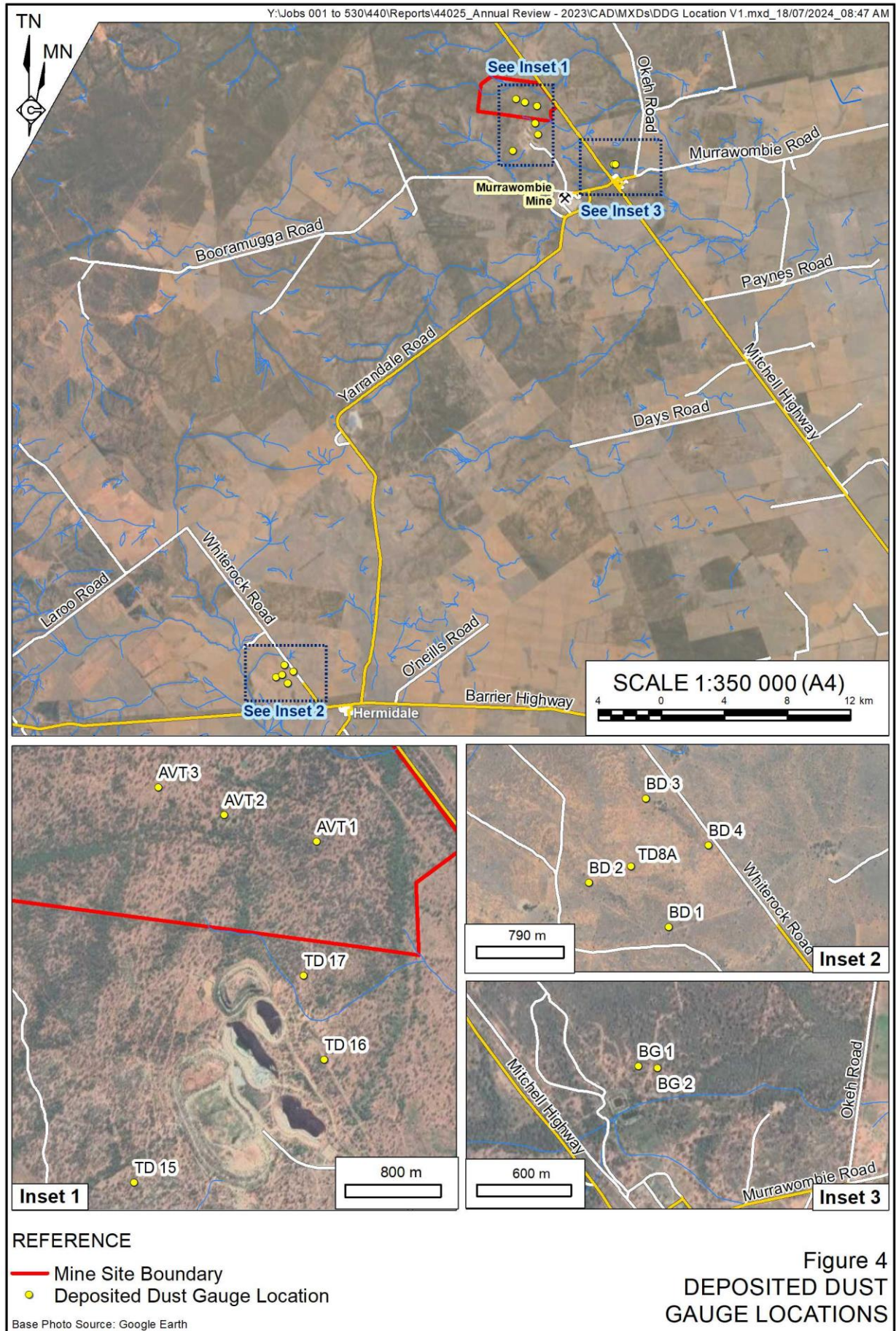
The following management and mitigation measures are employed to minimise operational impacts from roads and ventilation shafts.

- Minimise the area of surface disturbance and rehabilitate areas surrounding the vent rises once constructed and operating.
- Undertake underground ventilation at the minimum rate required for safe operation of the mining activities.
- Ensure water trucks equipped with spray and sprinkler systems are utilised on roads as required to suppress dust.

Development activities, such as the establishment of exploration drilling sites, can also increase exposed soil and dust dispersion through the clearing of vegetation. If clearing of vegetation is required, the area to be cleared is demarcated and only the minimum amount of clearing required is permitted to occur. To further limit the impact of development clearing on dust emission, where possible, prompt rehabilitation of disturbed areas is undertaken.

In order to track the effectiveness of these strategies, deposited dust gauges are located around the Mine Site to monitor the effects of dust dispersion (**Figure 4**). Background air quality sampling is also undertaken to enable comparison of dust generated from the operation from that of the external or existing setting. **Table 4** outlines the dust monitoring program at the Mine, with monitoring activities carried out in accordance with *Australian Standard 3580.10.1-2003 Methods for sampling and analysis of ambient air: Method 10.1: Determination of particulate matter—Deposited matter—Gravimetric method*.

Dust monitoring is routinely sampled on a monthly basis with all dust gauges replaced every 30 days (+/- 2 days). Dust monitoring is undertaken in accordance with the NSW government guideline, *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2022). This document stipulates a maximum annual average deposited dust (insoluble solids) level of 4g/m<sup>2</sup>/month and a maximum increase in annual average deposited dust levels of 2 g/m<sup>2</sup>/month (EPA, 2022, p27).

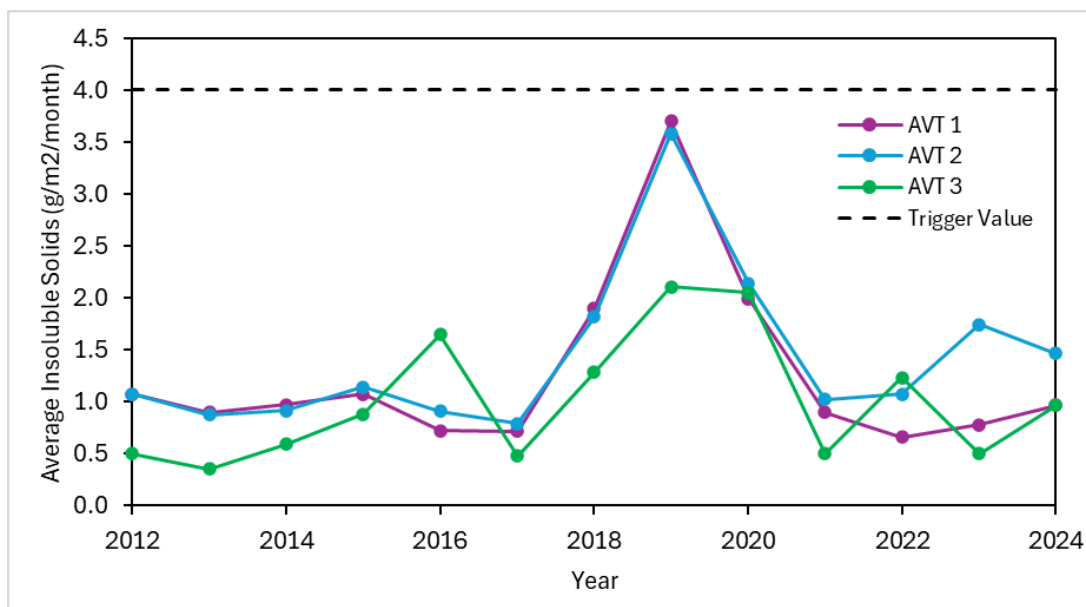


**Table 4**  
**Dust Monitoring Program**

Parameter	Trigger Value	Location	Monitoring Point Identification*	Frequency	Reference / Criteria
Deposited Dust	4g/m <sup>2</sup> / month	Background	BD1, BD2, BD3, BD4, TD8A, BG1, BG2	Monthly	Results are compared with those of background monitoring.
		Avoca Tank Mine	AVT1, AVT2, AVT3		Insoluble solids are compared to the NSW government guideline, <i>Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales</i> (EPA 2022).
* Refer to <b>Figure 4</b> for monitoring identification point locations.					

### 3.1.3 Environmental Performance

**Figure 5** presents the annual average deposited dust measurements since monitoring commenced in 2012. A summary of all available deposited dust is presented as **Appendix 1**, and includes the annual average insoluble solids and Cu, Fe, Pb and Zn concentrations recorded at the three dust monitoring locations for the Mine.



**Figure 5** Annual Average Deposited Dust Analysis

There are no compliance trigger levels for heavy metals or insoluble solids at the Mine. Nonetheless, average insoluble solids measurements remained below the adopted trigger value of 4g/m<sup>2</sup>/month as outlined within the *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC, 2005).

Dust gauge metal results continue to identify the presence of heavy metal concentrations generally in line with background data retrieved at the Budgery and the Girilambone gauges (**Appendix 1**).

No complaints from surrounding neighbours were received in relation to dust emanating from the Mine operation.

### 3.1.4 Reportable Incidents

No reportable incidents occurred during the reporting period.

### 3.1.5 Further Improvements

The Company will continue to monitor and manage air quality issues during the next reporting period.

## 3.2 Operational Noise

Operational noise which may impact surrounding neighbours is primarily generated by surface light vehicles used to access site infrastructure to conduct maintenance activities.

### 3.2.1 Environmental Management

To minimise unnecessary noise all equipment is maintained regularly in accordance with the manufacturer's specifications. To further ensure the operation is not generating noise which impacts on any surrounding residents, both noise monitoring and a complaints process is in place. In the event of a noise complaint from any surrounding residences, site personnel will investigate the complaint and implement appropriate mitigation measures and, if required, undertake noise monitoring.

The possibility of surrounding residences being impacted by Mine operations is considered to be low due to minimal vehicle or machinery use and as a result of the significant distances between residences and the mine site.

### 3.2.2 Environmental Performance

Muller Acoustic Consulting Ltd (MAC) completed Noise Monitoring Assessment on behalf of Tritton Resources for the Mine on 13 October 2022 and 19 October 2023. Attended noise monitoring was conducted at the three closest residences to the Mine Site: R3, R4 (2023 only) and R6 (2023 only).

**Table 5** outlines the results of the attended noise monitoring conducted during 2022 and 2023. In summary, MAC stated that noise associated with the Mine was within noise criteria for all monitoring periods. Noise emissions from the Mine were only barely audible at NM1 (R3) during the evening period during 2023, with noise attributed an exhaust fan. At all monitoring points, extraneous noise sources were attributed to rural noise including wind, insects, birds and intermittent passing traffic.

**Table 5**  
**Noise Monitoring Results**

Location	Date	Time	L <sub>Aeq</sub> Reading [dB(A)]	L <sub>A10</sub> Reading [dB(A)]	L <sub>Aeq(15min)</sub> Reading [dB(A)]	L <sub>Aeq(15min)</sub> Noise Level (DA 10/2015/001/001) [dB(A)]
<b>2022</b>						
NM1 (R3) 'Avondale Residence'	13/10/2022	4:56 PM	53	42	<35	35
	13/10/2022	9:31 PM	55	46	<35	35
	13/10/2022	10:14 PM	49	46	<35	35
<b>2023</b>						
NM1 (R3) 'Avondale Residence'	19/10/2023	11:49 AM	45	44	<35	35
	19/10/2023	9:19 PM	48	48	<35	35
	20/10/2023	12:02 AM	20	22	<35	35
NM2 (R4)	19/10/2023	11:26 AM	50	50	<35	35
	19/10/2023	20:55 PM	57	49	<35	35
	19/10/2023	23:40 PM	53	33	<35	35
NM3 (R6)	19/10/2023	10:36 AM	39	43	<35	35
	19/10/2023	20:06 PM	32	34	<35	35
	19/10/2023	22:52 PM	24	28	<35	35

### 3.2.3 Reportable Incidents

No complaints were received during this reporting period.

### 3.2.4 Further Improvements

The Company will continue to manage noise in order to restrict its impact on nearby neighbours and sensitive receptors during the next reporting period.

## 3.3 Surface Water / Erosion and Sediment Control

### 3.3.1 Environmental Management

There are no mining related water management infrastructure located within the Mine Site. Pre-existing farm dams on the Mine Site will remain undisturbed by mining operations. There are limited locations within the Mine Site that are susceptible to erosion with areas susceptible to erosion primarily limited to the access road and associated drains.

### 3.3.2 Environmental Performance

No erosion monitoring is currently conducted at the Mine Site. Visual inspection of access roads and drains indicates no erosion of concern or that require remediation.

### 3.3.3 Reportable Incidents

No incidents were recorded during the reporting period.

### 3.3.4 Further Improvements

The Company will continue to adopt an adaptive management approach to surface water and erosion management, with ongoing site inspections to monitor for erosion.

## 3.4 Groundwater

Mining operations have the potential to impact upon the regional groundwater. These potential impacts can be from extraction of groundwater to enable safe and efficient underground mining activities or via seepage of contaminated surface waters to underground aquifers. To ensure that any impact on groundwater resources is identified and managed, regular monitoring is undertaken.

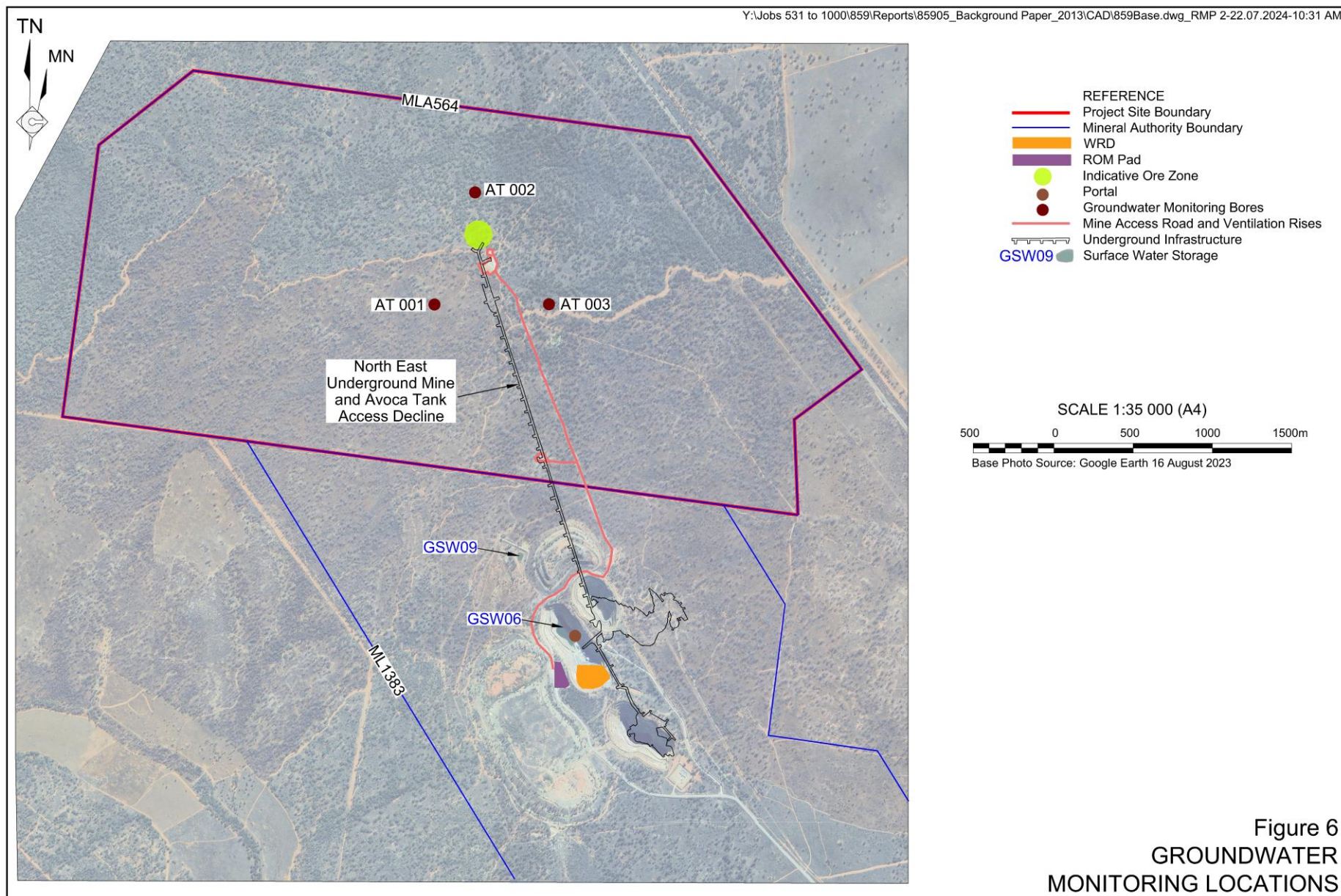
### 3.4.1 Environmental Management

To determine the potential impact on groundwater from operational activities, groundwater monitoring is undertaken. Monitoring of groundwater is currently conducted monthly in accordance with conditional requirements of EPL 4501.

**Figure 6** identifies the locations of groundwater monitoring bores for the Mine. **Table 6** defines the frequency of sampling and the type of analysis undertaken. Groundwater sampling is undertaken in accordance with the *AS/NZS 5667.1:1998 – Water Quality Sampling Standard*, utilising low flow purging techniques, equipment decontamination, prevention of cross-contamination and chilling of samples for storage and transportation.

**Table 6**  
**Groundwater Monitoring Results**

Groundwater Monitoring Point*	Analysis Requirements	Frequency	Purpose
AT001, AT002, AT003	Standing Water Level	Monthly	Required by EPL 4501
AT001, AT002, AT003	Arsenic, Barium, Beryllium, Cadmium, Chloride, Chromium, Cobalt, Electrical Conductivity, Copper, Iron, Lead, Manganese, Mercury, Standing Water Level, Sulphate, Vanadium, Zinc, pH	Quarterly	
* Refer to <b>Figure 6</b>			



### 3.4.2 Environmental Performance

The following section provides summary of the groundwater monitoring program against applicable criteria. Groundwater results were compared to the ANZECC guidelines for stock watering and irrigation. However, it should be noted that all background groundwater exceeds the guidelines for electrical conductivity, sulphate and total dissolved solids and there is no beneficial use currently for groundwater at or near the Mine Site.

#### Water Quality

Groundwater analytical results have been summarised in **Appendix 2**. Groundwater results are compared to ANZECC (stock) and ANZECC (irrigation) guideline definitions. However, in line with background groundwater results the water has a high salinity level and therefore is unsuitable for domestic or agricultural purposes. Any significant deviations from previous results are a trigger for an investigation and action plan to be implemented.

Water quality was recorded on a quarterly basis at all the monitoring locations. Throughout the reporting period the pH was stable ranging between 7.2 – 8.0 pH units. EC was shown to have a stable trend at each of the monitoring locations.

The concentrations of all the metals parameters also remained consistent throughout the reporting period at each location. Groundwater quality is also generally consistent between monitoring locations for each of the measured parameters. This indicates that the impact of the mining operation on the surrounding groundwater regime is minimal.

#### Standing Water Level

Average groundwater Standing Water Level results from the 2023 reporting period are summarised in **Table 7**. Groundwater levels at all monitoring locations have remained stable throughout the reporting period.

**Table 7**  
**2023 Average Groundwater Standing Water Levels**

Monitoring Bore	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
AT001	n/a	39.6	39.7	39.7	41.7	41.8	41.8	41.9	42.0	42.0	42.8	42.8
AT002	n/a	36.0	36.0	36.0	36.4	36.4	36.5	36.5	36.6	36.6	37.0	37.1
AT003	n/a	32.2	32.2	32.3	34.8	35.4	44.8	44.9	36.0	36.0	36.2	36.3

#### Water Usage

Groundwater that is dewatered from underground workings is stored within Hartmans Pit (GSW06) at the NECM. **Table 8** presents the water usage at the NECM and the Mine from underground dewatering November 2021 to December 2023. During the reporting period, the water meter used for monitoring water transferred from GSW06 to Girilambone was damaged during a bushfire (refer to Section 3.7). As a result, the total volume of groundwater dewatered from the Mine during the reporting period is unavailable.

**Table 8**  
**Water Usage**

Date	Water Usage (ML)	Notes
2/11/2021	71.26	
2/12/2021	45.00	
4/01/2022	34.09	
1/02/2022	8.70	
2/03/2022	16.55	
1/04/2022	13.42	
2/05/2022	12.25	
1/06/2022	39.54	
4/07/2022	35.62	
2/08/2022	-4.00	
2/09/2022	24.53	
4/10/2022	15.58	
1/11/2022	8.89	
1/12/2022	2.78	
3/01/2023	0.00	
1/02/2023	5.69	
1/03/2023	N/A	Meter damaged during the bushfire incident
1/04/2023	N/A	
1/05/2023	N/A	
1/06/2023	N/A	
1/07/2023	N/A	
1/08/2023	N/A	
1/09/2023	N/A	
1/10/2023	N/A	
1/11/2023	N/A	
1/12/2023	N/A	

### 3.4.3 Reportable Incidents

No reportable incidents occurred during the reporting period

### 3.4.4 Further Improvements

The Company acknowledges that this Annual Review does not include an accurate report on total water take for the 2023 reporting period. During the next reporting period, The Company intend to investigate the current water monitoring system to identify measures to improve monitoring and performance. This will include replacement and calibration of a new meter to replace the one lost to the bushfire during the reporting period.

The Company will continue to adopt an adaptive management approach to groundwater management, with ongoing inspections and monitoring of groundwater results to ensure that the monitoring program is efficient and meets the needs of legislation and operational requirements.

## **3.5 Hazardous Materials and Contaminated Land**

Mining activities have the potential to impact on the intrinsic values of the surrounding landscape. These impacts may be caused by chemical, hydrocarbon or material spills, the release of contaminated water or structural failure of infrastructure.

The Company endeavours to manage existing contaminated areas and prevent and/or minimise further contamination by ensuring infrastructure and piping arrangements are suitable for their given purpose and that chemical, hydrocarbon and any other potential contamination materials are handled, stored and disposed of appropriately.

### **3.5.1 Environmental Management**

Contaminated land at the Mine is generally associated with liquid spillage. All spills require clean up irrespective of volume and size. All spills in excess of 20L require reporting via the Company incident reporting system and entry into the onsite database.

### **3.5.2 Environmental Performance**

The Mine onsite incident management system recorded three spills during the 2023 reporting period.

- Diesel fuel spill – approximately 3L of fuel spilt during transportation of a fuel pod across the haul road for refuelling purposes.
- Diesel fuel spill – large diesel spill due to incomplete installation of the high level cut off sensor on the fuel tank for the Mine Power Plant. All spillage (approximately 2,000kL) was contained within the concrete bunding.
- Diesel fuel spill – fuel spill on the Mine Shaft 2 surface site due to overflow of fuel during refuelling of the generator.

All spills were reported and recorded within the incident management system and appropriate clean-up procedures were implemented.

### **3.5.3 Reportable Incidents**

No reportable incidents occurred during the reporting period.

### 3.5.4 Further Improvements

Contaminated land management at the Mine Site during 2024 will continue to be undertaken as per the existing *Contaminated Land Management Plan*. The Company will continue to adopt an adaptive management approach to contaminated land management, with ongoing inspections and monitoring of contaminated land to ensure that the monitoring program is efficient and meets the needs of legislation and operational requirements.

## 3.6 Flora, Fauna and Weeds

### 3.6.1 Environmental Management

Management of flora and fauna at the Mine is undertaken in accordance with the Tritton Copper Operations' *Flora and Fauna Management Plan*.

In order to minimise/eliminate harm to flora and fauna species, all personnel complete a land surface disturbance permit for any proposed land disturbance. As part of the permit a pre-clearance survey is undertaken to establish the likelihood of listed species being present within the proposed clearance area prior to the removal, clearance or destruction of any vegetation (including work associated with exploration). The pre-clearance survey is carried out by the site Environmental Advisor.

Periodically, flora and fauna surveys are conducted by external consultants prior to major disturbance and/ or for the Company to gather more comprehensive data.

Management of weeds at the Mine is undertaken in accordance with the Tritton Copper Operations' *Weed Management Plan*.

### 3.6.2 Environmental Performance

No flora or fauna surveys were conducted during the reporting period.

Weed monitoring and control operations were undertaken on a regular basis as part of wider environmental management programs across the Tritton Copper Operations. No targeted control actions (i.e. in response to specific target species) occurred during the reporting period.

### 3.6.3 Reportable Incidents

No incidents were recorded during the reporting period.

### 3.6.4 Further Improvements

Pre-clearance surveys will continue to be undertaken prior to any surface disturbance. No large-scale clearing is proposed during 2024.

Weed monitoring and control operations will continue to be undertaken on a regular basis in accordance with the *Weed Management Plan*.

## 3.7 Bushfire

Bushfire poses a serious threat to both the Mine operation and the surrounding properties. The following are recognised as the principal potential causes of bushfire within the operational area.

- Fires on equipment and/or occurring as a consequence of maintenance activities on that equipment;
- Personnel actions for example smoking or undertaking activities in inappropriate areas or without adequate controls; or
- Natural incidents such as lightning strikes.

### 3.7.1 Environmental Management

To protect the mining operation and minimise the potential for the operation to cause a bushfire the following controls are in place:

- All workshops and offices will be installed within an approved fire extinguisher. Their location will be indicated by an appropriate sign.
- All fuel and oil storage will be located and constructed in accordance with the requirements the applicable legislation and will be fitted with suitable fire extinguishers.
- The ground around fuel and oil storage areas will be kept free of combustible vegetation for at least 3m.
- Designated No Smoking Areas will be clearly marked. These areas include:
  - Within 10m of fuel and oil storage areas;
  - Within 10m of explosive magazines;
  - When transporting explosives, or within 20m of a vehicle transporting explosives;
  - Within workshops;
  - All buildings and offices; and
  - Any areas containing gas cylinders.
- Equipment / vehicles will not be stored / parked on uncleared ground.
- Vehicular access areas will be maintained free of combustible vegetation and windblown litter around all areas of mining-related activities.
- Fire extinguishers are kept on all mobile equipment.
- All fire extinguishers will comply with AS/NZS 1841.11:1997.
- All fire equipment and extinguishers are to be kept in a serviceable condition.

- All fire equipment, where appropriate, will be compatible with that of the Rural Fire Service.
- A fully equipped fire tender will be maintained to provide immediate response to a bushfire.
- Water for firefighting purposes will be sourced from various water storages within the management area.
- A suitable fire break will be established and maintained around the perimeter of the mine. Fire breaks should be a minimum of 6 m wide and kept free of flammable material as far as practicable. Additional fire breaks will be maintained around explosive magazines and flammable material storage areas where necessary.
- Fire breaks are inspected at 6 monthly intervals by the Environmental Officer.

### 3.7.2 Environmental Performance

A bushfire occurred on 4 March 2023 within and in the vicinity of the Mine. The fire impacted areas within ML1280, ML 1383 and ML1818 and impacted a large portion of the NECM waste rock emplacement area. The fire affected area was inspected by the NSW Rural Fire Service and is still currently under investigation.

### 3.7.3 Reportable Incidents

One reportable bushfire incident occurred during the reporting period on 4 March 2023 causing loss of vegetation (estimated 400ha) and suspected damage to Aboriginal heritage sites. A subsequent Heritage Assessment by Heritage Now found that no cultural heritage was damaged by the fire.

### 3.7.4 Further Improvements

The bushfire management procedures will continue to be adhered to during 2024.

## 3.8 Aboriginal Heritage

Aboriginal Heritage was assessed during the initial approval stage for the Mine. No new archaeological sites were identified within the Mine Site during the reporting period.

### 3.8.1 Environmental Management

To ensure Aboriginal Heritage is not affected, surface disturbance permits are used to assess areas that are required to be cleared. A component of the surface disturbance permit requires a pre-clearance survey to be undertaken which involves an Environmental Officer inspecting the area

to be disturbed for archaeological and heritage items or places of interest. If an item/site of possible aboriginal heritage is discovered either during the pre-clearance survey or during exploration activities, the unexpected finds protocol within the *Historic Heritage Management Plan* will be followed.

### 3.8.2 Environmental Performance

No surveys or other previously unidentified items or sites were found during this reporting period.

### 3.8.3 Reportable Incidents

No incidents were recorded during the reporting period.

### 3.8.4 Further Improvements

The current Aboriginal heritage management procedures will continue to be adhered to during 2024.

## 3.9 Public Safety

### 3.9.1 Environmental Management

Any operating mine can be a potential safety hazard to persons who have not been properly trained or authorised to enter the site. It is therefore imperative that any threat to public safety is eliminated and/or managed appropriately.

### 3.9.2 Environmental Performance

A number of management measures have been developed to maintain public safety. These include the following:

- Fencing around the perimeter of the operation.
- Procedural site entry is via induction and sign-in/out registers through the main gate access points.
- Signage has been installed around the site boundary advising the public that unauthorised entry into active mining areas is not permitted.
- Routine inspections of boundary fences are conducted to ensure no access can be gained to site other than through the access gates.
- To ensure road safety all haul trucks are required to have a flashing beacon and are to remain under the speed limits of the relevant road rules.

### **3.9.3 Reportable Incidents**

Boundary fences were inspected regularly throughout 2023 and repaired. No evidence of unauthorised entry was identified during the reporting period.

### **3.9.4 Further Improvements**

No further improvements have been planned.

## **3.10 Other Issues and Risks**

All issues and risks have been identified within this report.

## 4. Rehabilitation

### 4.1 Rehabilitation Works

No surface disturbance or rehabilitation works were undertaken during the reporting period.

### 4.2 Rehabilitation Trials and Research

No rehabilitation trials were conducted within the Mine Site during the reporting period. Rehabilitation trials do occur within other TCO sites and are presented in their respective Annual Rehabilitation Reports (ARR). Where relevant, information may be used to improve rehabilitation outcomes at the Mine Site.

Six analogue sites have been established in the vicinity of all TCO mines, comprising of three grassland and three woodland sites. Analogue sites will be used to inform rehabilitation progress at all TCO mines.

### 4.3 Rehabilitation Reporting

Condition B34 of DA 2015/004/002 requires preparation of a *Rehabilitation Management Plan* (RMP) for the Mine Site. During the reporting period the RMP was updated in accordance with the new standard conditions for mining leases under Schedule 8A of the *Mining Amendment (Standard Conditions of Mining Leases – Rehabilitation Regulation 2021)*. For reporting purposes, the RMP covers both the Mine and the NECM.

Annual rehabilitation reporting is presented in the Annual Rehabilitation Report (ARR) and Forward Program (FWD) for the Mine Site. For reporting purposes, it is combined with the NECM's ARR and FWD. The ARR summarises rehabilitation undertaken during the "Annual Reporting Period" which includes the period from 1 July 2022 to 30 June 2023. The FWD describes the planned rehabilitation activities during the "Forward Program Period" which includes the period from 1 June 2023 to 31 July 2026. **Table 9** presents the status of rehabilitation works during the ARR reporting period.

**Table 9**  
**Disturbance and Rehabilitation Statistics for Mine and the NECM**

Element	Unit	Area (during ARR reporting period)
<b>Current disturbance and rehabilitation progression</b>		
Total surface disturbance footprint	ha	150.67
Total active disturbance	ha	49.41
Land prepared for rehabilitation	ha	0.00
Ecosystem and land use establishment	ha	0.00
Ecosystem and land use development	ha	101.26
Rehabilitation Completion	ha	0.00

**Table 10** summarises the rehabilitation research and works scheduled across the TCO mines that is intended to be completed during the Forward Program Period.

**Table 10**  
**Rehabilitation Planning Schedule**

Year	Studies
2023/2024	<ul style="list-style-type: none"> <li>• Detailed biennial rehabilitation monitoring campaign (completed Year 1)</li> <li>• Seed Balance and Procurement Strategy (completed Year 1)</li> <li>• Waste Rock Characterisation – geochemical analysis of emplaced waste rock for rehabilitation planning (completed Year 1)</li> <li>• Waste Rock Emplacement Revegetation Works – review of vegetation condition and additional or supplementary planting (ongoing)</li> <li>• Hydromulching Study – research program on hydromulching application on waste rock emplacements (completed Year 2)</li> <li>• Post Closure Water Management Strategy – site-wide water balance study (completed Year 3)</li> </ul>
2024/2025	<ul style="list-style-type: none"> <li>• Landform Evolution Modelling - covering high risk landforms at all mine sites (completed Year 2)</li> <li>• Hydromulching Study – research program on hydromulching application on waste rock emplacements (completed Year 2)</li> <li>• Waste Rock Emplacement Revegetation Works – review of vegetation condition and additional or supplementary planting (ongoing)</li> <li>• Post Closure Water Management Strategy – post-mining surface water management (completed Year 3)</li> </ul>
2025/2026	<ul style="list-style-type: none"> <li>• Detailed biennial rehabilitation monitoring campaign (completed Year 3)</li> <li>• Waste Rock Emplacement Revegetation Works – review of vegetation condition and additional or supplementary planting (ongoing)</li> <li>• Post Closure Water Management Strategy – groundwater modelling (completed Year 3)</li> </ul>

## 5. Community

### 5.1 Environmental Complaints

No complaints were received during the reporting period.

### 5.2 Community Liaison

As a major employer to the local community, Tritton Resources has continued to provide employment to the local community either directly, via engagement of local sub-contractors from Nyngan, Hermidale and Girilambone townships or by prioritising sourcing of required materials from local businesses.

Statistical information gathered by Tritton Resources recorded a total workforce of 404 staff at year end 2023. Of the 404 staff, 76% are residential and contribute to the community of Nyngan whilst 24% are staff that travel from elsewhere and reside locally during their rostered working period. Tritton Mines has been actively working towards increasing “local region” employment and believes this is one of the best ways the business can contribute to the community. Employment within the local region has increased from 50% in 2012 to 76% currently and Tritton Mines is now contributing more than \$49 Million annually in salary and wages to the local regions of Nyngan, Hermidale and Girilambone.

Tritton Resources is dedicated to supporting the local community by working with local business and Australian owned suppliers where possible. Currently 99% of Tritton Resources suppliers are Australian businesses, and 50% of them are based in NSW. This equates to Tritton Resources spending \$10.1 Million with local and regional suppliers and \$77.9 Million with NSW suppliers.

During the reporting period, a total of \$15,000 was allocated by Tritton Resources to the following community groups and causes.

- Outback Science and Engineering – Outback and Engineering Challenge Sponsorship
- Australia Day 2023 – Funding for the Australia Day kid's colouring in competition prizes
- Nyngan Jockey Club – Funding for the annual Cup meeting on Anzac Day
- Nyngan Netball – Funding for Club Shirts and Socks with Aeris Logo
- Girilambone Community Association – Playground Upgrades for the Girilambone primary school
- Nyngan Show Society – Gold sponsorship for the Nyngan Show
- Nyngan Tigers Senior Rugby League – Major Sponsorship package for the Nyngan Tigers Senior rugby league
- Bogan City Council – Seniors week

- Hermidale Gymkhana – Tritton to sponsor three gumboot throwing competitions
- Nyngan Ag Show - Bronze Sponsor/Event Partner

The Tritton Community Consultative Committee (CCC) was established with the local Council, Land Councils and local community representatives to provide updates and information on the Tritton Copper Operations (including the Mine).

Tritton CCC meetings were held in March, June and September during 2023 and were attended by Tritton's General Manager and Environmental Superintendent. Meeting minutes for the CCC meetings are available on the Company website.

## 6. Incidents and Non-compliances during the Reporting Period

### Water Approvals and Licences

The water metering device located at GSW06 was damaged by fire during the reporting period (see Section 3.4.2). This water meter was not replaced in a timely manner and therefore has resulted in a non-compliance with the relevant water licences.

The Works Approvals (80WA716055 and 80WA716044) associated with WAL 31041 require that *“Under section 101A of the Water Management Act 2000, metering equipment must be installed, used and properly maintained in connection with all water supply works, except those works to which an exemption applies as described in clauses 230, 231, 232 or 233 of the Water Management (General) Regulation 2018”*.

The Company has commenced a review of all relevant water monitoring infrastructure in conjunction with site-wide water balance modelling program. This will include replacement and calibration of a new meter to replace the damaged meter.

## 7. Activities Proposed in Next Annual Review Period

The following mining activities are proposed to occur during the next reporting period:

- Continuation of underground mining and ore processing activities;
- Continued monitoring of surface water, groundwater, noise and air quality;
- Progressive rehabilitation of minor Mine and exploration disturbance areas not required for future activities.
- Rehabilitation planning as described in the Forward Program.
- Review of all water monitoring infrastructure to ensure compliance with relevant approvals and licences.

# **Appendix 1**

## **Dust Monitoring – Insoluble Solids and Metals Analysis**

**Table A1-1**  
**Dust Monitoring – Insoluble Solids and Metals Analysis**

Page 1 of 2

Year	Count	Locations								
		AVT 1			AVT 2			AVT 3		
		Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Insoluble Solids (g/m <sup>2</sup> /month)										
2012	4	0.7	1.1	1.5	0.3	1.1	1.5	0.2	0.5	0.6
2013	13	0.1	0.9	2.5	0.2	0.9	2.4	0.1	0.4	0.6
2014	12	0.3	1.0	1.8	0.5	0.9	1.6	0.2	0.6	1.2
2015	12	0.3	1.1	1.6	0.2	1.1	1.7	0.2	0.9	3.5
2016	12	0.1	0.7	1.5	0.1	0.9	2.2	0.4	1.7	5.9
2017	11	0.3	0.7	1.8	0.2	0.8	1.9	0.2	0.5	1.6
2018	12	0.4	1.9	5.0	0.4	1.8	4.1	0.2	1.3	4.6
2019	12	0.5	3.7	16.9	0.6	3.6	18.2	0.4	2.1	12.6
2020	12	0.3	2.0	7.1	0.2	2.1	8.3	0.1	2.1	7.7
2021	12	0.3	0.9	1.8	0.3	1.0	2.2	<0.10	0.5	1.2
2022	12	0.1	0.7	1.3	0.1	1.1	1.8	<0.10	1.2	5.3
2023	11	0.3	0.8	2.0	0.2	1.7	5.7	0.2	0.5	1.8
2024	3	0.2	1.0	1.8	0.3	1.5	2.6	0.2	1.0	2.1
Copper (ug/m <sup>2</sup> /month)										
2012	4	310.0	1982.5	4750.0	212.0	370.0	747.0	301.0	1887.8	4710.0
2013	13	346.0	3036.4	10800.0	137.0	2239.1	6200.0	163.0	1543.9	3020.0
2014	12	581.0	1523.2	4800.0	293.0	1016.8	2670.0	535.0	2050.8	4750.0
2015	12	617.0	3246.6	18700.0	241.0	5422.1	29400.0	421.0	2322.9	4650.0
2016	12	255.0	1559.4	4720.0	636.0	3703.7	8140.0	585.0	2572.3	9930.0
2017	11	219.0	2949.2	8770.0	894.0	3546.4	7260.0	103.0	1940.5	3800.0
2018	12	3.5	2267.4	9910.0	3.9	2870.3	10000.0	4.8	1523.1	6640.0
2019	12	161.0	2910.5	13600.0	213.0	5321.8	36400.0	166.0	2563.8	12300.0
2020	12	164.0	3723.3	23200.0	143.0	8053.2	47400.0	36.8	4522.5	17900.0
2021	12	585.0	2477.3	5140.0	477.0	12093.1	61800.0	<0.5	2463.5	5570.0
2022	12	<0.5	1666.0	4990.0	<0.5	2241.5	10900.0	<0.5	2263.3	7900.0
2023	11	143.0	1406.0	11100.0	<0.5	691.2	2060.0	<0.5	576.9	1940.0
2024	3	56.7	322.6	534.0	88.7	346.6	489.0	85.8	228.9	383.0
Iron (ug/m <sup>2</sup> /month)										
2012	4	3900.0	7507.5	11100.0	183.0	3074.8	6110.0	53.0	785.8	2720.0
2013	13	974.0	7275.9	29600.0	71.0	1430.1	5800.0	6.0	626.2	5760.0
2014	12	747.0	4172.3	10300.0	113.0	2039.8	12800.0	56.0	1655.8	7480.0
2015	12	594.0	2046.3	4400.0	470.0	2268.0	7040.0	389.0	3622.4	17500.0
2016	12	932.0	4261.8	14800.0	479.0	4799.1	16900.0	987.0	9193.1	29400.0
2017	11	248.0	3335.9	6400.0	288.0	4755.7	13200.0	258.0	3086.0	9010.0
2018	12	9.2	8993.9	22900.0	12.3	14326.0	48000.0	10.5	12333.1	39600.0
2019	12	1080.0	32990.0	103000.0	876.0	31724.7	89400.0	519.0	22406.6	90800.0
2020	12	905.0	15212.9	59800.0	1200.0	20375.8	109000.0	69.2	23277.9	110000.0
2021	12	1870.0	6300.8	15400.0	3450.0	11424.2	36300.0	<0.5	5737.7	11400.0
2022	11	<0.5	8741.0	30600.0	<0.5	11058.2	25200.0	728.0	7950.7	43000.0
2023	11	2320.0	7885.5	24200.0	2440.0	20770.0	74100.0	<0.5	4910.0	9330.0
2024	3	894.0	11198.0	21800.0	1880.0	17260.0	32300.0	1100.0	9860.0	21000.0

**Table A1-1 (Cont'd)**  
**Dust Monitoring – Insoluble Solids and Metals Analysis**

Page 2 of 2

Year	Count	AVT 1			AVT 2			AVT 3		
		Min	Mean	Max	Min	Mean	Max	Min	Mean	Max
Lead (ug/m²/month)										
2012	4	<0.5	48.8	114.0	33.0	107.7	185.0	60.2	209.6	496.0
2013	13	<0.5	31.5	196.0	<0.5	13.5	49.0	<0.5	71.3	358.0
2014	12	<0.5	34.0	175.0	<0.5	6.0	29.0	<0.5	61.2	313.0
2015	12	<0.5	11.0	69.0	<0.5	1.9	12.0	<0.5	45.3	180.0
2016	12	<0.5	47.0	146.0	<0.5	4.0	42.0	32.0	146.1	374.0
2017	11	<0.5	70.2	328.0	<0.5	3.3	28.0	<0.5	173.2	810.0
2018	12	<0.5	284.8	2520.0	<0.5	249.1	2690.0	<0.5	411.7	2170.0
2019	12	<0.5	78.2	251.0	<0.5	48.7	147.0	<0.5	164.8	1050.0
2020	12	<0.5	39.2	178.0	<0.5	24.4	124.0	<0.5	114.3	644.0
2021	12	<0.5	22.1	98.2	<0.5	2.9	28.8	<0.5	35.1	244.0
2022	12	<0.5	37.7	304.0	<0.5	41.8	327.0	<0.5	29.1	94.4
2023	11	<0.5	56.6	336.0	<0.5	26.7	121.0	<0.5	12.6	92.0
2024	3	16.6	230.5	565.0	<0.5	34.2	66.5	<0.5	46.7	107.0
Zinc (mg/m²/month)										
2012	4	26.0	266.8	617.0	26.0	93.3	143.0	<0.5	518.4	1090.0
2013	13	17.0	305.5	1690.0	17.0	258.1	1250.0	<0.5	498.5	2020.0
2014	12	39.0	250.5	726.0	45.0	149.8	467.0	88.0	662.9	1420.0
2015	12	22.0	176.3	420.0	21.0	358.9	1590.0	<0.5	534.8	2340.0
2016	12	117.0	512.8	1450.0	101.0	489.8	1110.0	98.0	1998.6	13700.0
2017	11	32.0	431.4	1310.0	<0.5	438.2	1810.0	<0.5	526.0	1850.0
2018	12	<0.5	522.4	3190.0	<0.5	870.0	2850.0	<0.5	1276.0	3910.0
2019	12	25.4	851.9	2960.0	<0.5	1157.6	4670.0	<0.5	1208.5	5970.0
2020	12	15.2	107.9	266.0	22.2	147.6	424.0	<0.5	334.7	1090.0
2021	12	52.5	120.4	353.0	70.0	551.8	4230.0	<0.5	397.5	2040.0
2022	12	<0.5	227.9	791.0	<0.5	256.3	920.0	<0.5	471.4	3610.0
2023	11	<0.5	141.4	385.0	<0.5	274.0	1430.0	<0.5	97.1	199.0
2024	3	32.7	472.2	940.0	34.8	316.9	460.0	48.4	586.8	1190.0

# Appendix 2

## Groundwater Monitoring Data

Table A2-1  
Groundwater Monitoring Data - 2023

Date	Arsenic	Barium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Sulfate as SO <sub>4</sub>	Vanadium	Zinc	pH	Conductivity	Total Dissolved Solids @180°C
Stock Watering Trigger *	0.5	-	0.01	1000	-	1	1	1	N/A	0.1	-	N/A	0.002	1	-	-	1000	-	20	6 - 9	6000	4000
Irrigation Triggers #	2	-	0.05	-	350	1	0.1	5	10	5	-	10	0.002	2	-	230	-	0.5	5	6 - 9	6000	-
<b>AT001</b>																						
12/02/2023	<0.001	0.063	0.0007	252	6190	<0.001	0.006	0.016	0.32	<0.001	672	0.460	<0.0001	0.004	38	3240	1350	<0.01	0.067	7.83	17500	14100
21/02/2023	<0.001	0.063	0.0005	253	6260	<0.001	0.005	0.012	0.28	<0.001	666	0.454	<0.0001	0.004	37	3220	1340	<0.01	0.064	7.84	17200	14000
27/03/2023	<0.001	0.069	0.0009	266	6560	<0.001	0.009	0.046	0.48	<0.001	659	0.464	<0.0001	0.005	40	3230	1560	<0.01	0.105	7.58	21100	16000
19/04/2023	<0.001	0.066	0.0008	287	6280	<0.001	0.007	0.039	0.20	<0.001	677	0.426	<0.0001	0.006	37	3240	1270	<0.01	0.076	7.6	19900	13200
10/05/2023	<0.001	0.064	0.0022	285	6300	<0.001	0.016	0.032	<0.05	<0.001	704	0.486	<0.0001	0.009	39	3420	1090	<0.01	0.119	7.44	20300	13600
9/06/2023	<0.001	0.061	0.0007	284	5770	<0.001	0.008	0.03	0.12	<0.001	679	0.359	<0.0001	0.007	37	3240	1370	<0.01	0.092	7.51	20700	12200
16/06/2023	<0.001	0.057	0.0006	259	5860	<0.001	0.006	0.027	0.15	<0.001	592	0.314	<0.0001	0.006	32	2700	1220	<0.01	0.079	7.63	20200	13500
13/07/2023	<0.001	0.059	0.0006	268	6120	<0.001	0.01	0.036	0.08	<0.001	720	0.332	<0.0001	0.008	36	3440	1480	<0.01	0.084	7.82	20100	13600
18/08/2023	<0.001	0.064	0.0012	327	6770	<0.001	0.023	0.08	0.17	<0.001	718	0.395	<0.0001	0.013	38	3300	1300	<0.01	0.156	7.57	18800	13200
19/09/2023	<0.001	0.058	0.0005	284	6350	<0.001	0.007	0.034	0.57	<0.001	696	0.294	<0.0001	0.006	37	3180	1550	<0.01	0.070	7.67	19300	14000
13/10/2023	<0.001	0.053	0.0004	262	6510	0.003	0.010	0.05	1.35	<0.001	655	0.315	<0.0001	0.007	36	3030	1290	<0.01	0.070	7.72	18900	14900
8/11/2023	<0.001	0.055	0.0005	285	5670	<0.001	0.002	0.019	0.07	<0.001	673	0.169	<0.0001	0.006	36	3050	1410	<0.01	0.077	7.57	19800	13300
8/12/2023	<0.001	0.061	0.0005	296	5510	<0.001	0.002	0.02	0.14	<0.001	712	0.126	<0.0001	0.006	37	3230	1280	<0.01	0.065	7.84	19400	13800
Average	<0.001	0.061	0.001	278	6165	0.003	0.009	0.034	0.328	<0.001	678.692	0.353	<0.0001	0.007	36.923	3194	1347	<0.01	0.086	7.66	19477	13800
<b>AT002</b>																						
12/02/2023	<0.001	0.046	0.0006	468	7710	<0.001	<0.001	0.004	<0.05	<0.001	763	0.05	<0.0001	0.006	64	3880	1680	<0.01	0.015	7.24	21000	19200
21/02/2023	<0.001	0.046	0.0006	473	7720	<0.001	<0.001	0.003	<0.05	<0.001	768	0.044	<0.0001	0.005	65	3920	1630	<0.01	0.009	7.2	21400	19100
27/03/2023	<0.001	0.047	0.0006	466	6920	<0.001	<0.001	0.003	<0.05	<0.001	775	0.045	<0.0001	0.006	67	3940	1680	<0.01	0.012	7.36	22700	18200
19/04/2023	<0.001	0.048	0.0005	520	8130	<0.001	<0.001	0.002	<0.05	<0.001	759	0.046	<0.0001	0.005	62	3820	1680	<0.01	0.009	7.31	24200	16900
10/05/2023	<0.001	0.052	0.0012	494	8120	<0.001	0.007	0.010	<0.05	<0.001	842	0.092	<0.0001	0.007	70	4260	2020	<0.01	0.071	7.2	23700	17000
9/06/2023	<0.001	0.047	0.0006	497	7440	<0.001	<0.001	0.003	<0.05	<0.001	770	0.05	<0.0001	0.005	64	3860	1740	<0.01	0.025	7.36	24200	15300
16/06/2023	<0.001	0.047	0.0004	473	7390	<0.001	<0.001	0.002	<0.05	<0.001	718	0.044	<0.0001	0.005	59	3360	1590	<0.01	0.048	7.38	25000	17700
13/07/2023	<0.001	0.047	0.0005	468	7770	<0.001	0.002	0.008	<0.05	<0.001	813	0.05	<0.0001	0.005	65	4120	1880	<0.01	0.025	7.61	23800	17000
18/08/2023	<0.001	0.049	0.0005	545	8580	<0.001	<0.001	0.003	<0.05	<0.001	794	0.038	<0.0001	0.005	67	3950	1640	<0.01	0.02	7.32	23200	17800
19/09/2023	<0.001	0.049	0.0005	501	8080	<0.001	<0.001	<0.001	<0.05	<0.001	804	0.059	<0.0001	0.004	67	3890	1980	<0.01	0.012	7.42	24200	18600
13/10/2023	<0.001	0.042	0.0004	455	8170	<0.001	<0.001	<0.001	<0.05	<0.001	740	0.043	<0.0001	0.004	62	3660	1640	<0.01	0.012	7.46	23700	16900
8/11/2023	<0.001	0.048	0.0004	462	7270	<0.001	<0.001	<0.001	<0.05	<0.001	778	0.039	<0.0001	0.004	65	3740	1780	<0.01	0.037	7.38	23400	17200
8/12/2023	<0.001	0.054	0.0005	500	7300	<0.001	<0.001	0.013	<0.05	<0.001	789	0.041	<0.0001	0.004	67	3880	1700	<0.01	0.018	7.69	24100	19400
Average	<0.001	0.048	0.0006	486	7738	<0.001	0.005	0.005	<0.05	<0.001	778	0.049	<0.0001	0.005	65	3868	1742	<0.01	0.024	7.38	23431	17715
<b>AT003</b>																						
12/02/2023	0.019	0.002	<0.0001	99	6330	<0.001	<0.001	0.007	0.120	<0.001	379	0.012	<0.0001	0.005	42	4220	1560	0.03	0.007	7.57	19400	13800
21/02/2023	0.019	0.002	<0.0001	102	5520	<0.001	<0.001	0.008	0.140	<0.001	388	0.015	<0.0001	0.005	42	4260	1240	0.04	0.008	7.54	19600	13100
27/03/2023	0.021	0.002	<0.0001	107	5850	<0.001	<0.001	0.007	0.090	<0.001	383	0.013	<0.0001	0.006	44	4260	1380	0.03	0.008	7.66	20200	13300
19/04/2023	0.022	0.002	<0.0001	118	6570	<0.001	<0.001	0.008	0.120	<0.001	400	0.011	<0.0001	0.006	42	4310	1340	0.04	<0.005	7.6	21200	13600
10/05/2023	0.019	0.005	0.0005	116	6600	<0.001	0.005	0.013	<0.05	<0.001	418	0.045	<0.0001	0.007	46	4590	1410	0.04	0.046	7.54	21100	14000
9/06/2023	0.020	0.002	<0.0001	110	6060	<0.001	0.002	0.007	0.060	<0.001	381	0.011	<0.0001	0.005	40	4180	1410	0.03	0.012	7.6	21300	12700
16/06/2023	0.018	0.002	<0.0001	96	6120	<0.001	<0.001	0.004	<0.05	<0.001	331	0.009	<0.0001	0.005	35	3470	1240	0.03	0.012	7.98	21800	13200
13/07/2023	0.019	0.002	<0.0001	98	6450	<0.001	0.002	0.008	0.120	<0.001	376	0.019	<0.0001	0.006	40	3980	1510	0.04	0.015	7.92	20600	13200
18/08/2023	0.021	0.002	<0.0001	120	7140	<0.001	<0.001	0.003	<0.05	<0.001	395	0.008	<0.0001	0.006	43	4330	1350	0.04	0.009	7.63	20400	13600
19/09/2023	0.020	0.003	<0.0001	111	6540	<0.001	0.002	0.012	0.200	<0.001	400	0.014	<0.0001	0.006	42	4190	1600	0.04	0.142	7.77	21100	13600
13/10/2023	0.020	0.002	<0.0001	106	6650	<0.001	0.002	0.008	0.060	<0.001	384	0.017	<0.0001	0.006	44	4080	1330	0.04	0.017	7.76	20500	13100
8/11/2023	0.020	0.002	<0.0001	114	6110	<0.001	<0.001	0.003	0.160	<0.001	390	0.011	<0.0001	0.006	43	4120	1500	0.04	0.013	7.7	20600	14100
8/12/2023	0.020	0.020	<0.0001	119	6130	<0.001	0.003	0.012	0.100	0.002	392	0.018	<0.0001	0.008	42	4180	1400	0.04	0.028	7.99	21100	14200
Average	0.020	0.004	<0.0001	109	6313	<0.001	0.003	0.008	0.117	<0.001	386	0.016	<0.0001	0.006	42	4167	1405	0.04	0.026	7.71	20685	13500