Aeris
TRITTON OPERATIONS

Annual Review - Tritton
Reporting year ending: 31 December 2023






ACKNOWLEDGEMENT

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

2023 Annual Review

for the

Tritton Copper Mine

Period: 1 January 2023 to 31 December 2023

Prepared for:

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Ref No. 440/25 August 2024

Table 1
Title Block

Name of operation	Tritton Mines
Name of operator	Aeris
Development consent / project approval #	DA41/98
Mining lease #	ML 1544
Name of holder of mining lease	Tritton Resources Limited
Water Licence #	80AL702814
Name of holder of water licence	Tritton Resources Limited
Annual Review start date	1 January 2023
Annual Review end date	31 December 2023
I, Dirk McNicoll, certify that this audit report is a true and accurate record of the compliance status of Tritton Mines for the 2023 period, and that I am authorised to make this statement on behalf of Aeris Resources. *Note.* *a) 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.* *b) 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).*	
Name of authorised reporting officer	Dirk McNicoll
Title of authorised reporting officer	Environmental Superintendent
Signature of authorised reporting officer	
Date	1/08/2024

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Statement of Compliance

Were all conditions of the relevant approval(s) complied with?	
DC# DA41/98	No
ML# ML 1544	No

Table 3
Non-compliances

Relevant Approval	Cond. No.	Condition Description	Compliance Status	Comment	Where Addressed in Annual Review
DA41/98	2(a)	Requires the Company comply with all other approvals and licences required for the operation of the Mine	Non-compliant	Tritton acknowledge that non-compliances under ML1544 were identified during the reporting period. Potential non-compliances with various water approvals and licences were identified during preparation of this Annual Review. Tritton are currently undertaking a review of relevant water management infrastructure to confirm the status of the non-compliance.	Sections 7.4 (generally) 11
	7a	Requires the Company to notify to Department withing seven days of becoming area of a non-compliance.	Non-compliant	No notifications were made to the Department during the reporting period for any of the non-compliances identified in this Section (i.e. Conditions 2(a), 7a, 8A, and 13D).	Section 11
	8A	Requires the Company to make available all documents listed in the Condition, including but not limited to environmental management plans.	Non-compliant	Tritton acknowledges that not all the documents required under DA41/98 are currently publicly available. Tritton is in the process of reviewing the majority of the environmental management plans for the Mine and intends to submit the revised plans to the Department for approval during the next reporting period.	Section 11
	13D	Requires the Company to report on all water extracted from the development, including water taken under each water licence.	Non-compliant	Tritton acknowledges that this Annual Review does not include an accurate report on total water take for the 2023 reporting period. Tritton staff have identified that there may be issues with water meter calibration that may be impacting on their ability to accurately record water take. It should be noted that Tritton contend that the water allocations have not been exceeded, based on the most recent site water balance model prepared by Metso during 2020. During the next reporting period, Tritton intend to investigate the current water monitoring system to identify potential causes and suitable measures to improve monitoring and performance. In addition, a site-side water balance model supported by accurate flowmeters will be undertaken to confirm the findings of the Metso (2020) report.	Sections 7.1 (generally) 11

Table 3 (Cont'd)
Non-compliances

Relevant Approval	Cond. No.	Condition Description	Compliance Status	Comment	Where Addressed in Annual Review
ML1544		Requires the Company to submit a Forward Program by 28 February 2023.	Non-compliant	Tritton acknowledge that the Forward Program (FWP0001174)was submitted after the due date. Tritton has and continues to undertake extensive works to improve rehabilitation reporting and planning, and systems have been put in place to align reporting requirements and processes for all Tritton mines.	Section 11
		Requires the Company to make the Rehabilitation Management Plan publicly available.	Compliant	The Rehabilitation Management Plan is now available via the website.	Sections 8 (generally), 11
		Requires the Company to nominate a Nominated Contact Person.	Compliant	Tritton has nominated the Environmental Superintendent as the Nominated Contact Person.	Section 11

2. Introduction

This Annual Review has been compiled by R.W. Corkery & Co. Pty Limited (RWC) on behalf of Tritton Resources Pty Ltd (Tritton Resources), a wholly owned subsidiary of Aeris Resources Limited (Aeris Resources) for the Tritton Copper Mine (the "Mine"). The Annual Review summarises site activities and monitoring for the 12-month period covering the 2023 calendar year and has been prepared in accordance with the then NSW Department of Planning and Environment "Annual Review Guidelines" October 2015.

The Mine is located approximately 22km southwest of the village of Girilambone and approximately 45km northeast of the town of Nyngan (**Figure 1**). The principal mineral authority for the Mine is Mining Lease (ML) 1544. For the purpose of this document, the area covered by ML1544 is referred to as the "Mine Site" (**see Figures 1** and **2**).

Tritton Resources operates three other mines in the nearby vicinity; ML 1280 (Murrawombie Copper Mine), ML 1383 (North East Mine), and ML 1818 (Avoca Tank Mine) (**Figure 1**).

This Annual Review covers the following aspects of the Tritton operation:

- Mining activities undertaken on Tritton Mining Lease - ML1544; and
- Exploration activities undertaken on:
  - Tritton ML 1544;
  - Exploration License (EL) 6126;
  - EL 4962
  - EL 6346; and
  - EL 6785
  - EL 8084

2.1 Mine Contacts

Table 4 provides a list of the site personnel responsible for the activities described in this Annual Review.

Table 4
Contacts

Position	Name	Site Phone Number
General Manager	Geoffrey Atkinson	(02) 6838 1103
Regional Exploration Manager	Chris Raymond	(02) 6838 1130
Health, Safety, Environment Superintendent	Shae Martin	(02) 6838 1146
Environmental Superintendent	Dirk McNicoll	(02) 6838 1028

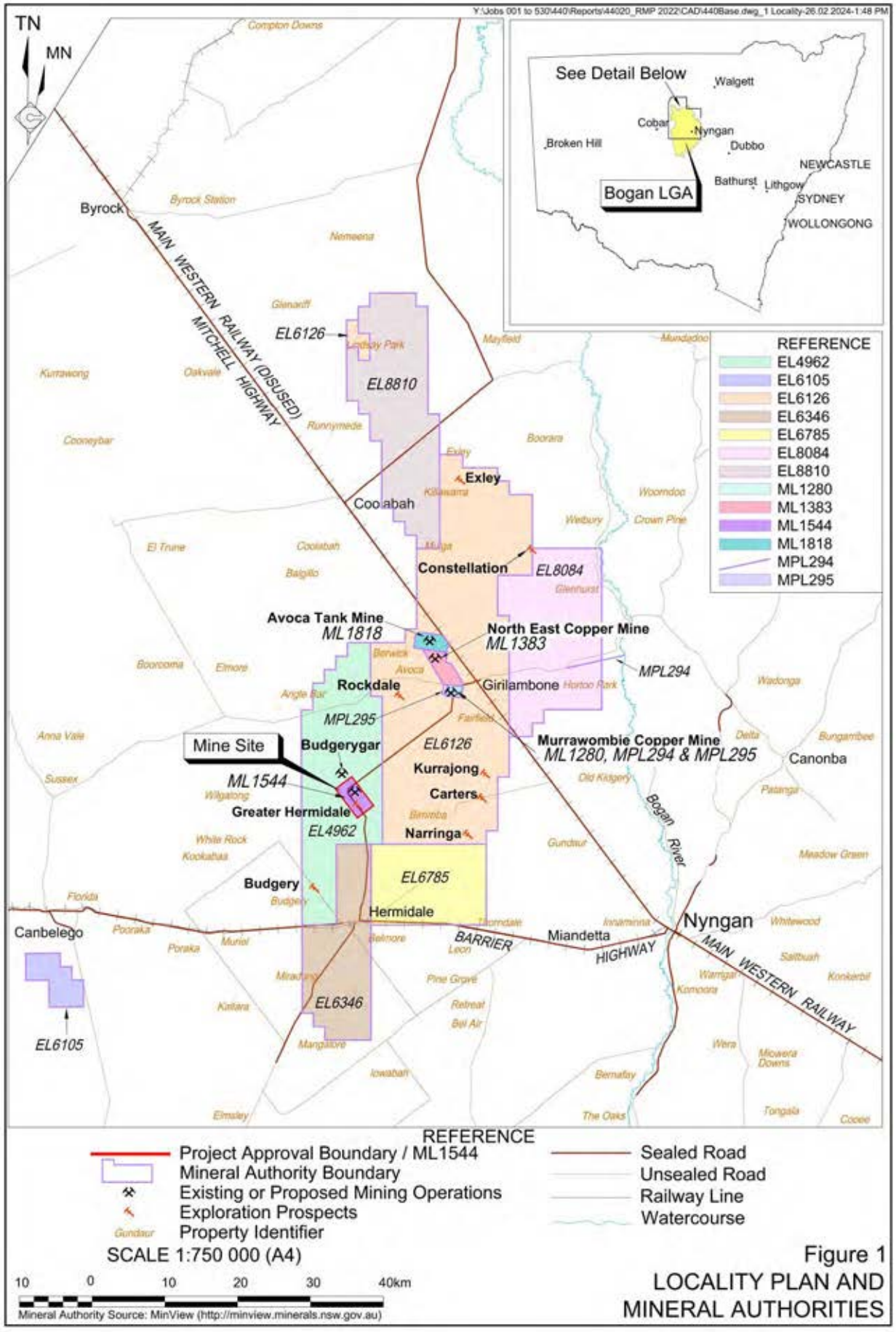


Figure 1
LOCALITY PLAN AND MINERAL AUTHORITIES

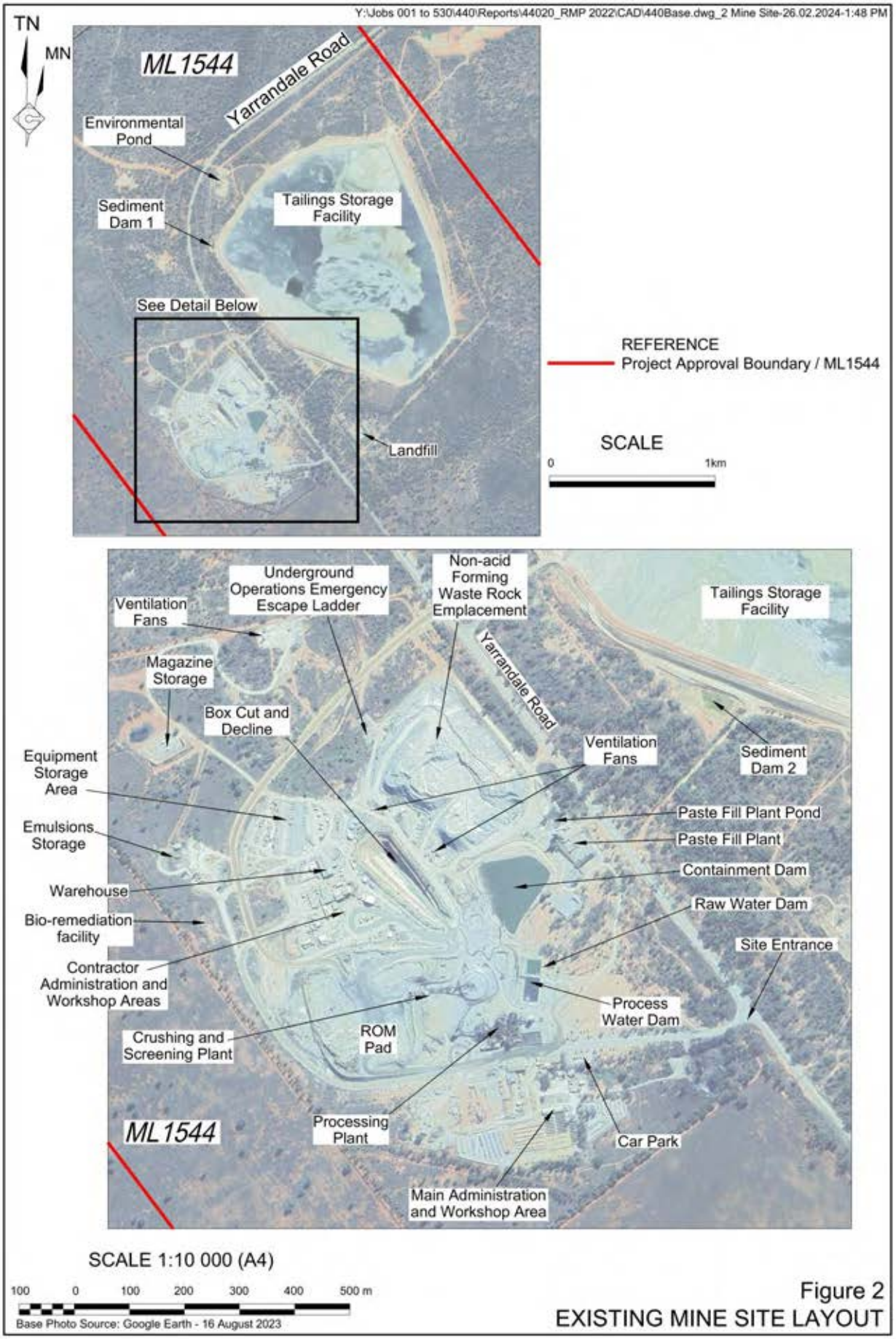


Figure 2
EXISTING MINE SITE LAYOUT

3. Approvals

A range of consents, leases and licences have been applied for and granted to enable mining operations to occur and continue at the Mine Site. These are listed in **Table 5**.

It is noted that DA 41/98 has been modified eight times as follows. Approved dates are identified in parenthesis.

- MOD 1 (26 August 2004) – various minor amendments.
- MOD 2 (22 September 2005) – to permit modifications to concentrate transport operations between the Mine Site and the Hermidale rail siding.
- MOD 3 (12 June 2007) – to permit construction of the existing Non-acid Forming Waste Rock Emplacement and ancillary infrastructure.
- MOD 4 (19 December 2007) – to permit an increase in the throughput for the processing plant from 0.4Mtpa to 1.4Mtpa, as well as an enlarged Tailings Storage Facility and ancillary infrastructure.
- MOD 5 (7 April 2015) – to permit an increase in the height of the Waste Rock Emplacement, importation of ore material, and exportation of waste rock.
- MOD 6 (30 January 2019) – to permit the excavation and export of tailings from the Tailings Storage Facility (TSF) for use in the Paste Fill Plant at the Applicant's Murrawombie Copper Mine
- MOD 7 (12 October 2021) – to permit the construction of two ventilation rises to support underground exploration activities.
- MOD 8 (8 June 2022) – to permit underground mining of 2.6 million tonnes of copper from the Budgerygar deposit, installation of surface infrastructure, increase the Waste Rock Emplacement height by 10m, additional disposal of drill cuttings within the Tailings Storage Facility (TSF), and an extension of the mine life to 22 December 2028.

Table 5
Consents, Lease and Licences

Page 1 of 4

Act	Instrument	Instrument Number	Date of Approval	Date of Expiry	Site	Purpose
Protection of the Environment Operations Act 1997	Environmental Protection Licence	11254	19/10/12	On-going	Tritton	Mining (Other than coal)
Environmental Planning and Assessment Act 1979	Development Consent	029/2007	25/05/07	24/05/12	Tritton	Tritton new office block and bath house
Environmental Planning and Assessment Act 1979	Development Consent	30/2004	20/12/04	29/12/09	Tritton	Rail Loading Hardstand
Environmental Planning and Assessment Act 1979	Construction Certificate	52/2004	01/02/05	N/A	Tritton	Rail Loading Hardstand

Table 5 (Cont'd)
Consents, Lease and Licences

Act	Instrument	Instrument Number	Date of Approval	Date of Expiry	Site	Purpose
Environmental Planning and Assessment Act 1979	Development Consent	2010/028	04/11/10	4/11/15	Tritton	Communication Tower
Environmental Planning and Assessment Act 1979	Construction Certificate	2010/016	04/11/10	N/A	Tritton	Communication Tower (DC 2010/028)
Environmental Planning and Assessment Act 1979	Development Consent	2010/006	25/05/10	25/05/15	Tritton	Paste fill Plant
Environmental Planning and Assessment Act 1979	Development Consent	10/2019/021/001	15/01/19	15/01/25	Tritton and Hermidale	Water Pipeline
Water Management Act 2000	Water Access Licence	WAL009374	24/02/05	Ongoing	Tritton and Murrawombie	High Security Water Licence (705ML)
Water Management Act 2000	Water Access Licence	WAL009375	24/02/05	Ongoing	Tritton and Murrawombie	General Security Water Licence (210ML)
Water Management Act 2000	Water Access Licence	WAL009940	01/07/04	Ongoing	Tritton and Murrawombie	Supplementary Water Licence (16ML)
Water Management Act 2000	Water Use and Works Approval	80WA702816	24/02/05	23/02/30	Tritton and Murrawombie	Gunningbar Creek and Bogan River Pumps
Water Management Act 2000	Water Use and Works Approval	80WA704315	20/05/09	30/06/27	Tritton and Murrawombie	Water supply via Nyngan-Cobar pipeline
Water Management Act 2000	Authority for Joint Supply Scheme	80SA010630	24/02/10	03/10/25	Tritton and Murrawombie	Joint Supply Works Pumps on Bogan River
Water Management Act 2000	Water Supply Works	80WA716044	16/01/12	28/05/27	Tritton	Dewatering Tritton U/G Mine
Water Act 1912	Water Bore Licence	80BL239188	04/01/01	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH001D
Water Act 1912	Water Bore Licence	80BL239189	04/01/01	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH001S
Water Act 1912	Water Bore Licence	80BL239190	04/01/01	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH002D
Water Act 1912	Water Bore Licence	80BL239191	04/01/01	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH002S
Water Act 1912	Water Bore Licence	80BL239192	04/01/01	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH003D
Water Act 1912	Water Bore Licence	80BL239193	04/01/01	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH003S

Table 5 (Cont'd)
Consents, Lease and Licences

Act	Instrument	Instrument Number	Date of Approval	Date of Expiry	Site	Purpose
Water Act 1912	Water Bore Licence	80BL245086	12/09/08	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH12
Water Act 1912	Water Bore Licence	80BL239194	04/01/01	Perpetuity	Tritton	Tritton TSF Monitoring Bore. PZH004
Water Act 1912	Water Bore Licence	80BL245969	25/06/10	Perpetuity	Tritton	Tritton TSF Monitoring Bores. PZH013, PZH014, PZH015, TIP001, TIP002.
Water Act 1912	Water Bore Licence	80BL245250	20/03/09	Perpetuity	Tritton	Tritton TSF Pumping Bore. PB001
Water Act 1912	Weir	80SL050393	05/12/06	05/12/26	'Marlow'	Gunningbar Creek Off Take Weir
Mining Act 1992	Mining Lease	1544	22/12/03	22/12/24	Tritton	Tritton Mine
Mining Act 1992	Mining Purpose Lease	294	01/07/97	05/08/34	Tritton and Girilambone	Water pipeline route access
Mining Act 1992	Exploration Licence	4962	19/03/96	19/03/28	Regional	Tritton regional 123 units
Mining Act 1992	Exploration Licence	6346	07/05/07	23/11/27	Regional	Hermidale 78 units
Mining Act 1992	Exploration Licence	6126	15/09/03	14/09/26	Regional	Girilambone
Mining Act 1992	Exploration Licence	6785	31/05/10	22/05/26	Regional	Miandetta 80 units
Mining Act 1992	Exploration License	8084	14/07/23 10/05/13	10/05/28	Regional	Girilambone East
Radiation Control Act 1990	Licence to Sell / Possess / Store or give away regulated material	5061178	26/02/15	26/02/25	Tritton	Possess radiation gauges
Explosives Act 2003 & Regulation 2013	Work Cover License	XMNF200001	05/01/14	05/01/27	Tritton	License to Manufacture
Radio Communications Act 1992	Registration certificate	11899408/1	4/01/23	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295222/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295223/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295224/1	30/01/24	27/08/24	Tritton	Land mobile radio licence

Table 5 (Cont'd)
Consents, Lease and Licences

Act	Instrument	Instrument Number	Date of Approval	Date of Expiry	Site	Purpose
Radio Communications Act 1992	Registration certificate	12295225/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295226/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295227/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295229/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295230/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295231/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295232/1	30/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295675/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295676/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295677/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295678/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295679/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295680/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295681/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12295682/1	31/01/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12310120/1	21/02/24	27/08/24	Tritton	Land mobile radio licence
Radio Communications Act 1992	Registration certificate	12310121/1	21/02/24	27/08/24	Tritton	Land mobile radio licence

4. Summary

4.1 Exploration

No exploration activities were undertaken within ML1544 during the 2023 reporting period.

The location of all mineral authorities maintained by Tritton are displayed on **Figure 1**.

General exploration activities during 2023 focused on completion of shallow auger drilling within EL4962 (83 samples) and EL6126 (1854 samples). This was completed utilising a small auger drill mounted on a Landcruiser operated by Tritton Resources. Samples of the bedrock were taken nominally 1.5-3m depth below surface. A total of 1936 samples were collected during 2023.

Exploration diamond drilling was completed within EL 6126, targeting the Exley and Rockdale prospects; a total depth of 1,411.2m was drilled.

Expenditure on the Tritton leases and licences for the 2023 period is listed in **Table 6**.

Table 6
Exploration Expenditure 2022

Tritton - ML1544	$	68,439
Murrawombie - ML1280	$	235,946
North East - ML1383	$	16,019
Avoca Tank – ML1818	$	12,267
EL4962	$	276,625
EL6126	$	3,224,725
EL6346	$	14,764
EL6785	$	3,550
EL8084	$	2,184,648
EL8987	$	991,916
EL8810	$	101,161
EL9285	$	30,360
Total	**$**	**7,160,420**

The rehabilitation status of the 2023 and prior years' exploration programs is as follows.

- All previous exploration activities have been fully rehabilitated to the satisfaction of Tritton Resources.
- Auger drilling within EL6346 and EL4962 has been signed off by the department, with reference numbers REH001828 and REH001822 respectively.
- No drilling mud was disposed of within the Tritton TSF during 2023.

4.2 Land Preparation

All site surface disturbance activities require the completion of a Surface Disturbance Permit. No disturbances occurred in the 2023 reporting period.

4.3 Construction

During the 2023 reporting period the following construction work was completed.

4.3.1 TSF

Stage 7 construction of the TSF commenced in April 2022, comprising a 2m embankment lift. Construction was completed during of 2023.

4.3.2 Processing Plant

Installation of a Jameson Cell into the processing plant. A Jameson Cell is a high-intensity floc flotation cell used in the processing of copper ore which provides greater energy efficiencies compared to other methods.

4.3.3 Budgerygar RAR

A ventilation rise and associated surface infrastructure for the Budgerigar underground was completed during the reporting period.

4.4 Mining Operations

In 2023 the underground mine at Tritton (inclusive of its Budgerygar Deposit) produced 851,478t of ore with an average grade of 1.51% copper. The primary mining method employed at Tritton during 2023 was sub level open stoping in conjunction with a cemented paste backfill.

A summary of mining-related production statistics is provided in **Table 7**.

Table 7
Production Summary

Material	Approved Limit (Specify Source)	Previous Reporting Period (Actual)	This Reporting Period (Actual)	Next Reporting Period (Forecast)
Waste Rock Mined	-	202,345t	228,532t	216,765
Waste Rock Exported	30ktpa	20,287t	15,059t	18,425t
Waste Rock Balance	-	182,058t	213,473t	198,340t
Ore Mined	2Mt	838,500t	851,478t	725,187t
Ore Imported	1Mtpa	532,810t	435,459t	728,581t
Total Ore	-	1,371,310t	1,286,937t	1,453,768t

The current underground mine layout is shown in **Figure 3**.

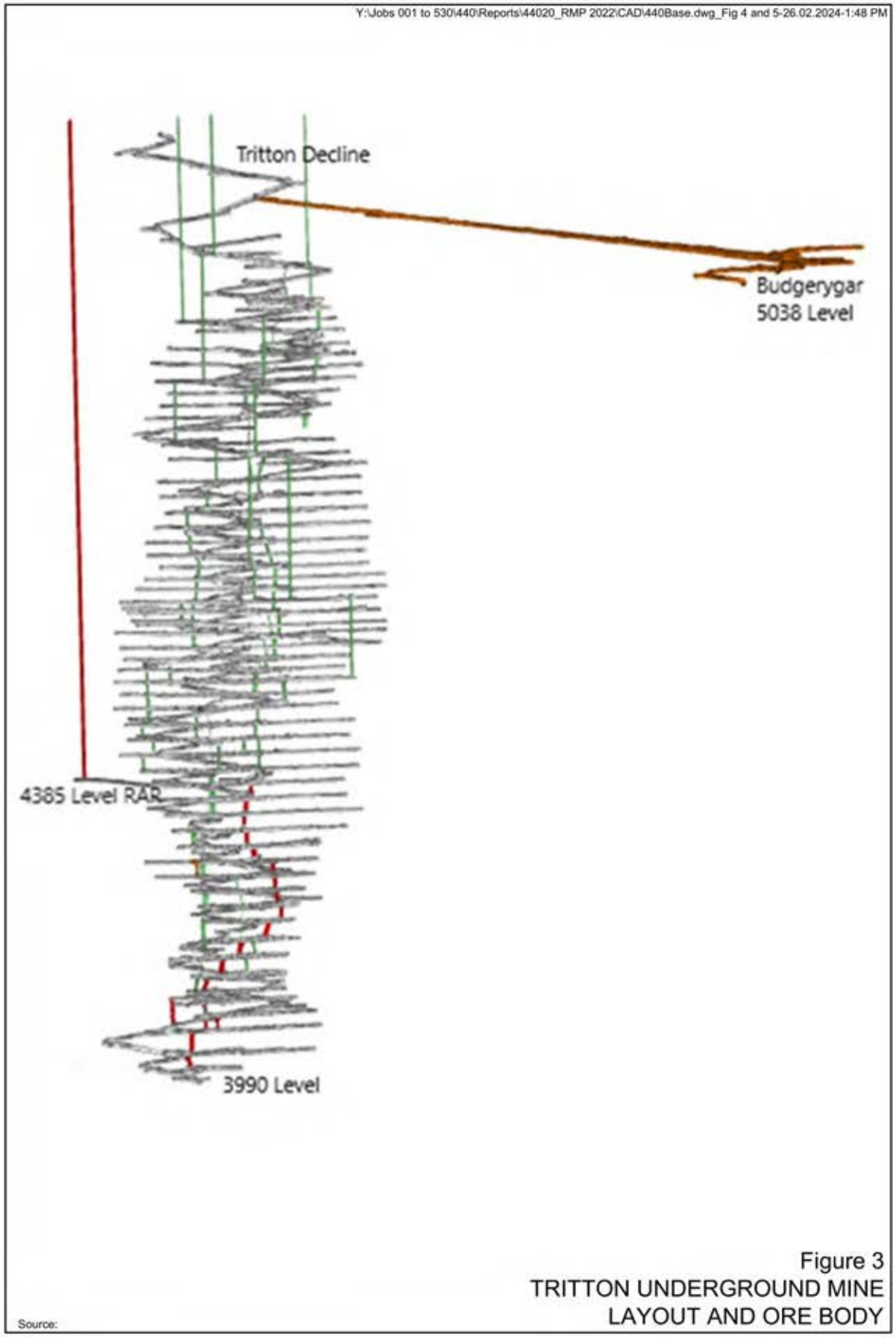


Figure 3
TRITTON UNDERGROUND MINE
LAYOUT AND ORE BODY

Source:

During this reporting period there was 3,567m of development undertaken in the Tritton underground mine (including Budgerygar). This development was in the form of 2,368m of capital development and 1,150m of operating development (ore, waste, paste and stripping inclusive). In addition, 382m of vertical development was completed. Of the 228,532t of waste rock produced from this development, 12,380t was used underground as backfill and the remainder (216,152t) trucked to the surface waste rock emplacement. At the end of December 2023, the deepest part of the mine was RL 3945m, which places it approximately 1,325m below the surface.

The major mining equipment items in use at Tritton are shown below in **Table 8**.

Table 8
Major Mining Equipment used at Tritton

Equipment	Make	Model	Quantity
Dump Truck	Caterpillar	AD55B	1
Dump Truck	Sandvik	Th663	9
Loaders	Sandvik	LH621	6
Jumbo	Sandvick	DD421 DD420 DS420	1 1 1
Cable Bolter	Sandvick	DS420	1
Integrated Tool Carrier	Volvo CAT	L120, L50E 950M, IT28G	3 3
Grader	Caterpillar	140H	1
Charge Up	Maclean Normet	AC3-80 1610B	1 1
Store Truck	Hino Isuzu	GT1322 FVZ1400, FTS800	1 2
Agitator	Atlas Utimec	TM5010 1600	1 1

4.5 Mineral Processing

The mineral processing circuit is described in the following sections and a flow diagram of the process is depicted in **Figure 4**.

4.5.1 Crushing and Stockpiling Ore

Ore from the underground mines is delivered to the Run-of-Mine (ROM) pad. Stockpiled ore is fed by front end loader into the ROM bin at the head of the crushing circuit.

The crushing circuit consist of a fixed grizzly at the top of the ROM bin, with an aperture of 800 mm, which limits the size of ore fed into the circuit. From the ROM bin ore is discharged onto a vibrating feeder which in turn feeds a single toggle jaw crusher. The crushed ore, with a diameter of approximately 100mm, is conveyed to the crushed ore stockpile. A tramp iron magnet is strategically located after the crusher for the recovery of tramp steel.

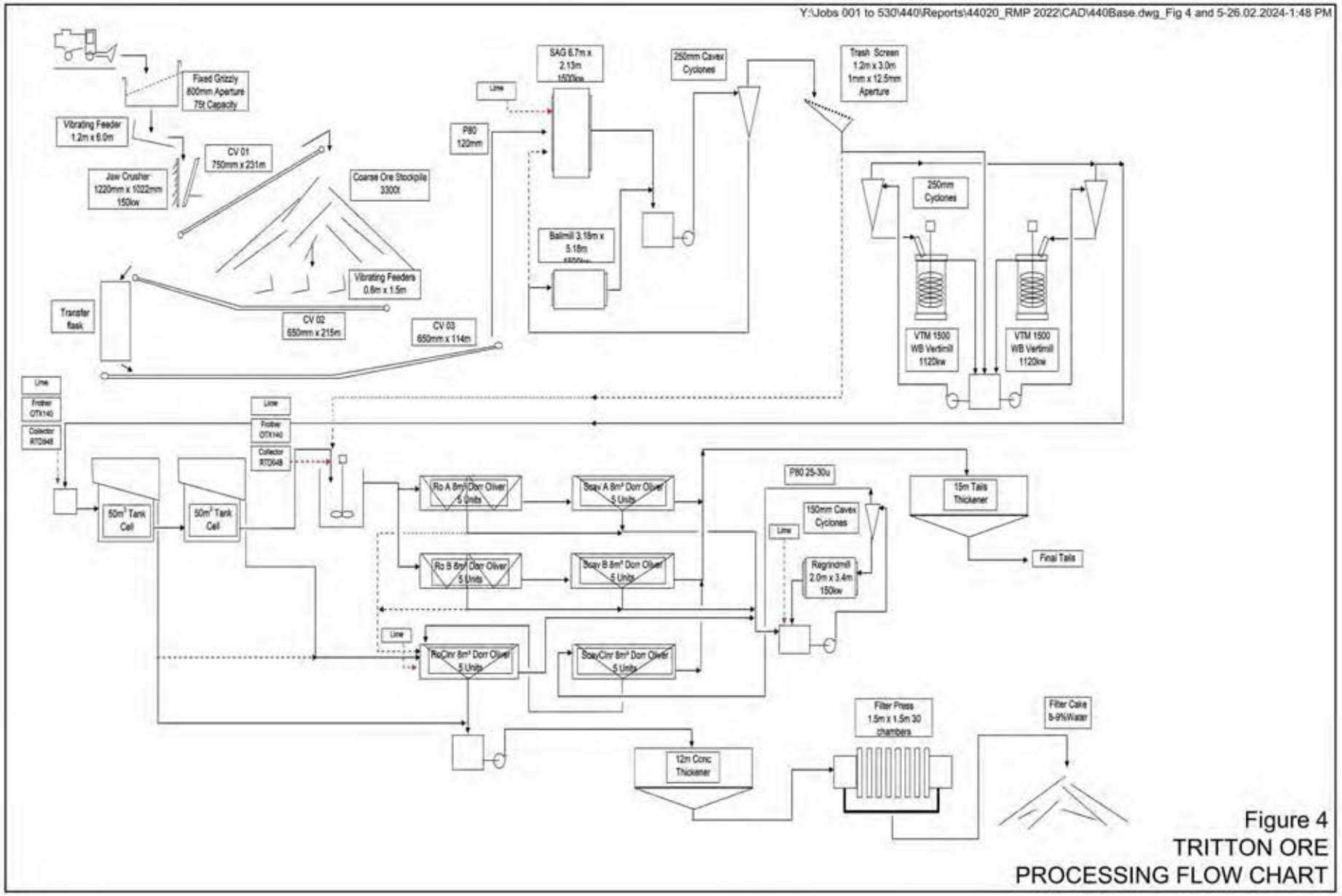


Figure 4
TRITTON ORE
PROCESSING FLOW CHART

From the crushed ore stockpile, ore is reclaimed via three vibrating feeders underneath the stockpile which discharge onto a reclaim conveyor. The reclaim conveyor transports the crushed ore to the Semi-Autogenous Grinding (SAG) mill.

4.5.2 Grinding

Primary, secondary and tertiary grinding is utilised to liberate valuable chalcopyrite (copper pyrite) from the ore to facilitate efficient concentrate flotation within the floatation circuit. The reclaim conveyor discharges into the primary grinding circuit which consist of an open circuit SAG mill. Lime slurry is also added to the SAG mill for pyrite depression to a target pH of 10.5. The SAG mill discharges to a trommel screen to remove oversize materials. Material passing through the trommel reports to the secondary grinding circuit.

The secondary circuit consists of an overflow ball mill operating in closed circuit with a cluster of hydrocyclones fed by a horizontal centrifugal pump. As with the SAG mill, the ball mill discharges to a trommel screen to remove oversize particles and worn media from within the mill. This oversize material discharges to a collecting drum ready for disposal.

The secondary circuit hydrocyclones discharge onto a trash screen which feeds the tertiary grinding circuit. The tertiary circuit is comprised of 2 parallel Metso Vertimills. Each Vertimill is in closed circuit with a cluster of hydrocyclones. Following the tertiary hydrocyclones, ground material reports to a second trash screen which feeds the appropriately sized material to the floatation circuit.

The grinding circuit is designed to produce product with an 80% particle size distribution (P80) of 75 microns at 30-35% w/w solids density.

4.5.3 Flotation

The tertiary cyclone overflow feeds into two tank cells in series for primary rougher flotation. Flotation collector solution, lime and frother solution are also added to the first primary rougher tank to clump the concentrate. Concentrate from the first primary rougher tank is then directed to the thickener and the dewatering circuit. The primary roughing circuit can recover up to 70% of the total copper in the feed.

The primary rougher tailings are pumped to a rougher feed conditioning tank before being fed to two parallel banks of rougher/scavengers. Each bank consists of Dorr Oliver cells (5 roughers and 5 scavengers). The concentrate recovered from the tailings materials at the roughing stages is sent directly to the rougher cleaner while the concentrate from the scavenger stages is sent to a regrind circuit for further size reduction.

The regrind circuit consists of a ball mill in a closed circuit with a cluster of Cavex hydrocyclones. The feed to the cyclones is generated from the scavenger concentrate and rougher cleaner tailings. The underflow reports to the regrind mill and the overflow (P80 of 38 microns) to a scavenger cleaner. The scavenger cleaner concentrate reports to the rougher cleaner which produces a final concentrate. The scavenger tailings are recycled back to the rougher feeder conditioning tank.

Floatation collection solution is added to the head of each rougher and scavenger bank as well as to the scavenger cleaner. The pH in the roughing circuit remains around 9.5 with lime addition to the scavenger cleaner used to increase the pH to 10.8 to assist in liberated pyrite depression.

The combined primary rougher concentrate and rougher cleaner concentrate report to the concentrate thickener, while the tailings from the scavenger flotation tanks reports to the final tailing thickener.

The Tritton flotation circuit produces a copper concentrate with minor concentrations of gold and silver and recovers 94% copper, 50% gold and 80% silver from a typical ROM feed (1.4% Cu, 0.21ppm Au and 5.0ppm Ag).

4.5.4 Flotation Product Dewatering

Floatation product dewatering is required to:

- remove water from the final copper concentrate product; and
- remove excess water from the tailings material for use back through the process plant.

Copper Concentrate Dewatering

The processing plant consists of two main dewatering mechanisms for copper concentrate, these are the thickeners and a plate pressure filter. The final copper concentrate is pumped from the flotation circuit to a thickener. Flocculent is added to the thickener to enhance the solids settling rate. The thickener overflow water is recycled through the grinding circuit or directed to the process water dam. The underflow, containing the copper concentrate, is pumped via a surge tank to a horizontal plate pressure filter which squeezes the water out producing a cake with moisture of 8-10% ready for transportation.

Tailings Thickening

The flotation tailings are also pumped from the flotation circuit to a thickener where flocculent is also added. The thickener overflow water gravitates to the process water dam and the underflow is pumped to the tailings dam. Water is reclaimed from the tailings dam decant pond and pumped back into the process water dam for recycling back through the process plant. A seepage reclaim pump recovers water from the tailings dam underdrainage system via a seepage trench which is returned back to the tailings dam.

4.5.5 Concentrate Handling and Transport

The copper concentrate is loaded by front-end loader into purpose-built containers with sealable lids. Two such containers are loaded onto a single road train for transport to Hermidale, where they are temporarily stored and then loaded onto trains for transport to Newcastle. The concentrate is then stored and loaded onto ships at Newcastle's Carrington Con Ports Pty Ltd ship loader facility, for transportation for further processing.

4.5.6 Paste Plant

Paste fill provides a product comprised of tailings and cement to Tritton's underground mining operation to fill voids left after mining. Filling of these voids with paste provides the required geotechnical stability to allow adjacent ore blocks to be extracted. Paste is made by filtering

thickened tailings through a horizontal belt filter and then mixing in cement and tailings slurry. Once thoroughly mixed the paste fill is delivered to the required section of the underground mine via a bore line reticulation system.

4.5.7 Summary of Processing Operations in 2023

Table 9 presents a summary of processing-related statistics for the 2023 reporting period.

Table 9
Processing-related Statistics

Material	Approved Limit	Previous Reporting Period	Current Reporting Period	Next Reporting Period (Forecast)
Ore Milled	1.4Mtpa	1,370,758t	1,354,854t	1,400,000t
Copper Concentrate Produced (Saleable Product)	-	87,308t	88,091t	100,000t
Total Tailings Produced	-	1,517,958t	1,257,578t	1,300,000t
Portion of Tailings to Tailings Storage Facility	-	1,283,451t	969,765t	1,000,000t
Portion of Tailings to Tritton Paste Plant	-	234,507t	287,813t	300,000t
Tritton Paste Plant – Bulk Cement Used		9,989t	7,999t	8,000t
Tritton Paste Plant – Total Paste Produced	-	173,860t	287,813y	300,000t

4.6 Waste Rock Management

Waste rock from the underground mine is placed in a Waste Rock Emplacement (WRE) on the surface, which is located to the east of the underground entry. Where practicable waste rock is also returned underground as backfill or used as road base. Approximately 228,532t of waste rock was produced at Tritton (see **Table 7**) with 12,382t returned underground as backfill and the remainder (216,152t) trucked to the WRE. Approximately 10,772t of waste rock was exported from the Mine Site for general use in roads, hardstands, and other permitted uses.

Potentially acid forming (PAF) waste rock can occur at Tritton and therefore appropriate management is required. Based on an industry standard produced by Environment Australia and site expertise, rock samples are retrieved while in-situ in order to continuously build a database of compositional rock samples to enable effective management of the waste rock stream. The sampling and characterisation process is based on four overarching steps - Plan, Sample, Model and Check. Each of these steps is explained below.

- Plan for sampling – ensure that drill holes are drilled at least 20m beyond the footwall contact, to provide information on the typically mined waste rock expected after extraction.
- Routinely sample drill holes for PAF rock material using the Net Acid Producing Potential (NAPP) and Net Acid Generation (NAG) tests.

- Model potential waste rock zones by extending the geology ore block model and using Sulphate content (S%) within the waste rock as a comparable replacement to PAF testing. A "sulphur domain" is then created and incorporated into all operational level plans.
- Check to ensure that the correlation between S% and PAF is correct by regularly reviewing the results of PAF testing and checking the statistics for the break point where S% equals PAF. Also spot checks are regularly undertaken by wall sampling the underground waste rock zones and submitting for PAF testing.

During the last reporting period the PAF material was sent to the underground waste tip. Oversize material reporting to the Run of Mine Pad classified as PAF are taken back underground to use as backfill.

Table 10 provides a breakdown of the quantities of waste rock (including tailings) produced at Tritton over the life of the development.

Table 10
Life of Mine Waste Rock Summary

Parameter	Start of Reporting Period	At End of Reporting Period	End of Next Reporting (Estimated)
Waste Rock to the WRE (t)	1,583,266	1,784,359	1,982,699
Waste Rock to TSF (t)	16,373,091	17,342,856	18,342,856
Waste Rock (as tailings) to Paste fill (t)	5,047,408	5,335,221	5,635,221

4.7 Ore and Product Stockpiles

ROM and product stockpiling is an important component of the beginning of the processing operation. Section 4.5.1 describes the role that the ROM pad has in processing. The Tritton ROM and product stockpiles have remained consistent with expectations throughout the reporting period. No significant changes to the stockpile footprint or capacity are planned at this stage. Stockpile levels at the end of each month are detailed in **Table 11**.

Table 11
Ore and Product Balances

Date	Surveyed Closing Balances (t)		Copper Concentrate Produced (t)
	Tritton ROM	Crushed Ore	
January	1,334t	119,691	6,374
February	982t	101,573	5,294
March	190t	113,280	7,673
April	158t	110,596	7,373
May	1,018t	117,522	9,050
June	13,334t	144,506	13,327
July	85t	138,016	11,702
August	9,256t	95,745	5,963
September	408t	98,329	7,626
October	279t	92,289	6,259
November	242t	114,007	7,450
December	140t	109,310	9,276

4.8 Hazardous and Waste Material Management

Hazardous Materials

In accordance with the License to Manufacture (under license number: XMNF200001) issued by Workcover, Tritton Resources 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 (SDSs) 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 are stored in a registered magazine bunded in accordance with AS2187. The magazine is fenced and access is restricted.

Diesel fuel is stored in self-bunded tanks with the delivery and refuelling areas bunded to contain spills. Oils and lubricants are stored in designated and bunded areas. Processing chemicals are stored in designated areas with bunds as required.

General and Recyclable Waste

As an active mine site, Tritton Resources generates quantities of recyclable and general waste. Tritton Resources employs a contractor to manage the service of general waste and recycling skips. The process involves collecting general waste located in the skip bins with the garbage truck where it undergoes compaction and then is disposed of at the Cobar landfill. Any oversized items that don't fit into the skip bins are disposed of in the Tritton landfill. All recyclables are collected and taken to Dubbo for processing. The collection is carried out on a fortnightly basis or as otherwise required.

During the 2023 reporting period the collective operations of the Tritton, Murrawombie, and North East mines recycled a total of approximately 13.25t of waste and a total of approximately 70.20t general waste was taken to an offsite landfill facility for disposal.

Table 12 presents the approximate volume of each waste stream generated during the reporting period, together with the proportion of waste recycled.

Table 12
Waste Management Summary

Waste Class	Waste Stream	Total	
		(kg)	(t)
Non-Hazardous (Recycled)	Mixed Recycling	25380	25.38
	% of Total Waste	8.88	
Non-Hazardous (Disposal)	Mixed Solid Waste	260171	260.17
	% of Total Waste	91.11	

Drill Cutting Disposal

Disposal of exploration drill cuttings within the TSF is approved to occur, with no more than 50 truckloads of drill cuttings to be received at site per year. During the reporting period no drill cuttings were disposed of within the TSF, and no loads where received at site.

4.9 Other Infrastructure Management

A range of other infrastructure is utilised on site as part of the Tritton operation. This infrastructure is described below.

Power Supply

Electrical power enters Tritton via a 66kV line and using a transformer is stepped down to 11kV to feed the site's electrical facilities.

Ventilation Fans

Tritton and Budgerygar underground are ventilated using twin centrifugal 1.3MW fans in association with other auxiliary fans. The location of all ventilation fans are shown on **Figure 2**.

Explosives Magazine and Emulsion Plant

The explosives magazine and emulsion plant are appropriately designed and are located at Tritton to not be a hazard to personnel or infrastructure in the event of an explosion.

Bioremediation Facility

The Bioremediation Facility is located to the west of the site. Hydrocarbon contaminated soil is placed within this facility and treated with micro-organisms which break down the hydrocarbons. The area is sprayed with water and the soil is turned to assist with the breakdown of hydrocarbons. The cells have a combined capacity of 20m^3. The soil within the facility is tested on a quarterly basis and is compared NEPC (NEPM) 1999 guidelines. Once the soil has been successfully treated the soil will then be removed and used in rehabilitation or stockpiled for future use.

5. Actions Required at Previous Annual Review

DPE identified the following actions were required following the previous Annual Review.

- *Ensure a copy of the 2022 Annual Review is publicly available on the company website and ensure the website is up to date with all the required documents in accordance with Condition 8A of the approval.*

The 2022 Annual Review is available via the Aeris website. The remainder of the documents required under Condition 8A have not yet been made available. Tritton notes this as an administrative non-compliance.

- *Include detail around requirements of Conditions 33A and 33B of the approval*.

Waste rock export and ore import statistics are now presented in **Table 7**. Information on drill cutting disposal statistics are now presented in Section 4.8.

- *Due to the modification to the approval in June 2022, in accordance with Condition 6B of the approval please ensure that a review, and if necessary, revision of the strategies, plans, and programs has occurred, and submitted for Planning Secretary's approval.*

All relevant management plans were reviewed following approval of MOD8. The following plans are currently being updated or have been submitted for approval.

- *Flora and Fauna Management Plan*
- *Noise and Vibration Management Plan*
- *Dust Management Plan*
- *Cultural Heritage Management Plan*
- *Disposal Management Plan*
- *Waste Rock Characterisation and Management Plan*
- *Water Management Plan*
- *Pollution Incident Response Management Plan*

6. Environmental Performance

6.1 Air Quality

Tritton 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. Activities that contribute to soil dispersal/dust include haulage of ore, crushing of ore and vehicle use on unsealed roads and tracks. As the Tritton Mine is an underground mining operation, dust generated from blasting and loading of ore is not expected at the surface. Ventilation fans are a source of particulates.

6.1.1 Environmental Management

Vehicle movement on unsealed roads is considered the major contributor to dust dispersion at Tritton. To combat this source, water trucks equipped with spray systems are utilised on roads to suppress dust.

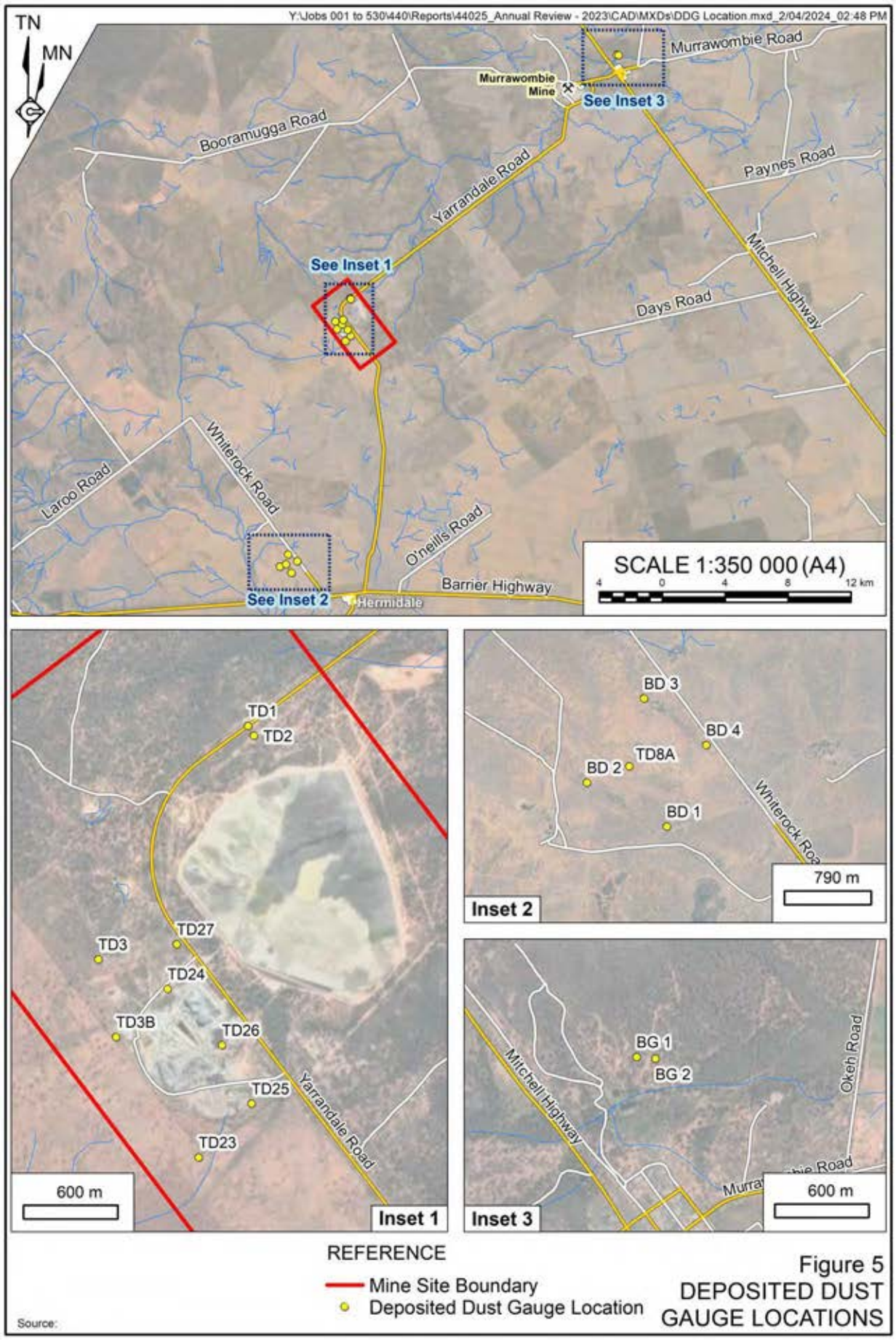
Development activities, such as the establishment of exploration drilling sites, can also increase exposed soil and dust dispersion through the clearing of vegetation. If clearing of vegetation is required, the area to be cleared is demarcated and only the minimum amount of clearing required is permitted 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, dust fallout gauges are located around the Tritton Mining Lease area to monitor the effects of dust dispersion. Dust monitoring activities are carried out in accordance with Australian Standard 3580.10.1-1991. Dust monitoring is routinely sampled on a monthly basis with all dust gauges replaced every 30 days (+/- 2 days). Insoluble solids are measured in a laboratory and compared to the NSW government guideline, *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (DEC 2005). In addition, samples are tested for heavy metal content.

6.1.2 Environmental Performance

Depositional dust gauges are located around the Tritton Mining Lease area at suitable locations with respect to the locations of sensitive receptors and prevailing wind direction (**Figure 5**). Background air quality sampling is also undertaken to separate dust generated from the operation from that of the background.

A review of the dust gauge metal results continues to identify the presence of heavy metal concentrations above the background data retrieved at the Budgery and the Girilambone gauges (**Table 13**). Tritton Resources monitors heavy metal concentration to understand the site and the environment, but there are no compliance triggers set out in either DA 41/98 or the Dust Management Plan.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TD8A
BD 2
BD 1
Whiterock Road
790 m
Inset 2
BG 1
BG 2
Mitchell Highway
Okeh Road
600 m
Inset 3
REFERENCE
Mine Site Boundary
Deposited Dust Gauge Location
Source:
Figure 5
DEPOSITED DUST GAUGE LOCATIONS

Table 13
Air Quality Metals Analysis

Site	Dust Gauge Identification	Average Analyte Concentrations (µg/m²)			
		Copper	Iron	Lead	Zinc
Background					
Budgery	B01	1,026.6	39,237.3	43.8	916.5
Budgery	B02	3,039.0	5,023.6	37.5	88.2
Budgery	B03	696.9	12,004.5	95.8	133.8
Budgery	B04	426.0	6,454.6	29.2	91.0
Budgery	TD8A	502.5	15,431.0	31.5	261.4
Girilambone	BG1	769.4	6,591.9	49.5	124.4
Girilambone	BG2	821.0	7,556.4	48.8	111.4
Tritton					
Yarrandale Rd	TD1	2,352.8	12,551.8	96.8	404.8
Rail Load Out	TD11	1,918.4	37,690.9	296.7	773.7
Yarrandale Rd	TD2	2,323.6	18,093.6	55.1	515.1
Tritton	TD23	4,650.5	16,811.8	74.7	799.2
Tritton	TD24	3,308.9	33,775.5	141.5	788.5
Tritton	TD25	10,720.9	37,990.0	172.0	1766.3
Tritton	TD26	37,419.1	104,863.6	194.4	5687.7
Tritton	TD27	9,429.2	39,887.3	89.0	1444.7
Tritton	TD3	2,109.0	17,200.0	35.9	591.1
Tritton	TD3B	2,997.8	27,455.5	49.1	886.5

Generally, dust monitoring locations showed elevated metal concentrations. Dust gauges with high elevations of metal concentrations are located in the middle of operations, therefore are expected to have abnormally high results. For example, **Figure 5** shows locations of gauge TD26 is in the middle of the site, amongst operations.

Table 14 presents the data from the analysis of insoluble solids in the air at a range of dust gauges.

Table 14
Insoluble Solids

Page 1 of 2

Site	Compliance Criteria	Dust Gauge Identification	Insoluble Solids (g/m² month)			Seasonal Averages Insoluble Solids (g/m² month)			
			Average	Min	Max	Autumn	Winter	Spring	Summer
Background									
Budgery	N/A	B01	3.5	0.1	19.7	1.2	1.8	9.9	3.2
Budgery	N/A	B02	0.6	0.1	1.1	0.5	0.3	1	0.9
Budgery	N/A	B03	1.7	0.9	3.0	1.5	2.5	1.5	1.5
Budgery	N/A	B04	0.9	0.2	3.5	0.5	0.4	0.9	1.8
Budgery	N/A	TD8A	2.0	0.3	8.0	1.7	3.4	0.9	1.6
Girilambone	N/A	BG1	0.8	0.3	2.9	0.5	0.3	1.0	1.4
Girilambone	N/A	BG2	0.7	0.2	2.4	0.5	0.2	1.0	1.3

Table 14 (Cont'd)
Insoluble Solids

Site	Compliance Criteria	Dust Gauge Identification	Insoluble Solids (g/m² month)			Seasonal Averages Insoluble Solids (g/m² month)			
			Average	Min	Max	Autumn	Winter	Spring	Summer
Tritton									
Yarrandale Rd	>4g/m²month	TD1	0.8	0.4	1.4	0.6	0.5	0.9	1.3
Rail Load Out	N/A	TD11	3.4	2.0	4.6	3.6	2.9	3.6	3.5
Yarrandale Rd	>4g/m²month	TD2	1.1	0.2	2.4	0.8	0.6	1.6	1.6
Tritton	>4g/m²month	TD23	0.9	0.3	2.5	0.7	0.4	1.2	1.5
Tritton	N/A	TD24	1.9	0.9	3.1	1.4	1.5	2.7	2.1
Tritton	>4g/m²month	TD25	1.1	0.4	2.2	0.7	0.8	1.6	1.7
Tritton	N/A	TD26	3.0	0.8	6.3	3.0	1.5	4.4	3.7
Tritton	N/A	TD27	1.9	0.7	7.0	1.4	1.1	1.6	3.3
Tritton	>4g/m²month	TD3	0.9	0.4	2.4	0.6	0.5	1.5	1.2
Tritton	N/A	TD3B	1.4	0.3	3.3	1.0	0.6	1.5	2.3

A Dust Monitoring Plan was developed in line with the requirements from the DA 41/98, which sets out dust trigger levels. The trigger value for insoluble solids is > 4g/m^2/month at the gauges TD1, TD2, TD3, TD23, and TD25. Each of the required monitoring location dust gauges are compliant.

No complaints from neighbouring properties were received throughout the reporting period in regard to dust being generated from the Tritton operation.

6.1.3 Reportable Incidents

No reportable incidents occurred during this reporting period.

6.1.4 Further Improvements

Air quality management at the Mine Site during 2024 will continue to be undertaken as per the existing management procedures.

Tritton Resources will continue to adopt an adaptive management approach to air quality management, with ongoing inspections and monitoring of depositional dust results to ensure that the monitoring program is efficient and meets the needs of legislation and operational requirements.

6.2 Contaminated Land

Mining activities at Tritton 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.

Tritton endeavours to manage existing contaminated areas and prevent and/or minimise further contamination by ensure 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.

Sites of existing land contamination recorded on the Tritton Contaminated Sites Register include the ROM and coarse ore stockpiles, waste rock emplacements, the tailings storage facility, the ore processing areas and landfill sites. These areas are identified on Figure 2.

6.2.1 Environmental Management

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

All hydrocarbon spills are remediated at the Tritton bioremediation facility whilst process slurry spills are either returned to the plant for reprocessing or disposed at the tailings storage facility. Impacted areas are generally cleaned up immediately however larger, long-term impacted sites are listed on the Tritton Contaminated Sites Register and are managed and rehabilitated accordingly at mine closure or sooner where possible.

Management and rehabilitation of the registered contaminated sites will primarily be undertaken at mine closure as these areas are still active components of the operation, such as the stockpiles, processing areas, waste rock emplacement and the tailings storage facility. Tritton is also the custodian of an active landfill located to the east of Yarrandale Road near the tailings storage facility and two closed and rehabilitated landfills. The closed landfills are located within the current tailings storage facility footprint and the other is near the existing operational landfill.

The active landfill is licensed under EPL11254 and allows for the disposal of *Inert waste – Class 1 and 2;* and *Solid Waste – Class 1.* Waste is managed by Tritton. Designated waste bins are used to segregate waste streams and increase recycling and reduce landfill waste (General waste). The landfill is fenced and employees are educated on landfill disposal requirements. Two groundwater piezometers are in place near the active landfill to assess any potential landfill leachate to groundwater.

6.2.2 Environmental Performance

Tritton onsite incident management system recorded four spills during the 2023 reporting period.

- Hydraulic oil spill – failure of head traverse hydraulic line on a drill rig resulting in spillage of approximately 30L of hydraulic oil.
- Emulsion spill – emulsion tank overfilled by operator (>20L).
- Wash-up liquid soap spill – spillage of wash-up liquid soap (ALLPRO) from a storage IBC onto the ground (>20L).
- Minor fuel spill – minor diesel fuel leak from a light vehicle due to a loose fuel cap on fuel inlet (2-3L).

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

6.2.3 Reportable Incidents

No reportable incidents occurred during the reporting period.

6.2.4 Further Improvements

Contaminated land management at the Mine Site during 2023 will continue to be undertaken as per the existing management procedures. Tritton Resources 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. Progressive rehabilitation of contaminated sites will also be undertaken where possible. The rehabilitation of these sites at mine closure is discussed further in Section 5.

6.3 Threatened Flora

The presence of mining and associated activities can impact flora (including "threatened" species). No species of flora listed in either Schedule 1 or 2 of the Threatened Species Conservation Act 1995 (NSW) or in Schedule 13 of the National Parks and Wildlife Act 1974 (NSW) have been identified within the Tritton mining lease area. However, two species, the Cobar Green Orchid and the Pine Donkey Orchid were identified as potentially/likely to occur within the Tritton site.

6.3.1 Environmental Management

In order to minimise/eliminate harm to flora 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 Tritton to gather more comprehensive data.

6.3.2 Environmental Performance

In 2011 a flora and fauna survey was undertaken at the tailings storage facility in preparation for the expansion of the facility during this reporting period. No threatened flora species were observed by either EnviroKey (the external consultant) who undertook the flora and fauna survey of the area or when Tritton staff conducted pre-clearance surveys. No small or large scale pre-clearance surveys were undertaken during the reporting period.

6.3.3 Reportable Incidents

No incidents were recorded during the reporting period.

6.3.4 Further Improvements

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

6.4 Threatened Fauna

Mining and its associated activities can impact fauna species, including "threatened" species, either directly (road kills) or indirectly through habitat removal. Of particular importance are the 18 threatened fauna species which have been recorded within the Tritton area since 1998. These species include:

- Kultarr (*Antechinomys laniger*);
- Pink cockatoo (*Cacatua leadbeateri*;)
- Inland forest bat (*Vespadelus baverstocki*);
- Little pied bat (*Chalinolobus picatus*);
- South-eastern long-eared bat (*Nytophilus sp*);
- Yellow-bellied sheath-tail bat (*Saccolamus flaviventris*);
- Grey crowned babbler (*Pomatostomus temporalis temporalis*);
- Superb parrot (*Polyteslis swainsonii*);
- Pied honeyeater (*Certhionyx variegatus*);
- Varied sittella (*Daphoenositta chrysoptera*);
- Chestnut quail-thrush (*Cinclosoma castanotus*);
- Hooded robin (*Melanodryas cucullata*);
- Malleefowl (*Leipoa ocellata*);
- Grey falcon (*Falco hypoleucos*)**;**
- White-browed wood swallow (*Artamus superciliosus*);
- White-fronted chat (*Epthianura albifrons*);
- Turquoise parrot (*Neophema pulchella*); and
- Squatter pigeon (*Geophaps scripta*).

6.4.1 Environmental Management

The key threatening process at Tritton is land clearance activities. As discussed above in regards to threatened flora, a land surface disturbance permit is required prior to any land disturbance activities taking place. This permit also includes a pre-clearance survey of the proposed disturbance area. The pre-clearance survey in regards to fauna aims to identify potential habitat features such as hollow logs and trees with nests or hollows as well as any fauna persisting in the area. Vertebrate fauna species found during pre-clearing surveys are relocated to areas of rehabilitation or to adjacent vegetation where possible. Hollow logs are also relocated to rehabilitation areas or to nearby undisturbed vegetation to continue to provide animal habitat.

Other risks to fauna at Tritton include potential interaction or collision with mobile machinery and the consumption of mine affected water. These risks are mitigated on site by the use of fences around the Mine Site perimeter and around dams and the provision of alternative water sources such as the environmental dam located north of the tailings storage facility.

6.4.2 Environmental Performance

During the reporting period no fauna surveys were conducted. To ensure interactions with wildlife are minimised and undertaken with due care and safety for both the fauna and site personnel, a number of staff members have been trained to handle and remove snakes from site.

6.4.3 Reportable Incidents

No reportable incidents occurred during the reporting period.

6.4.4 Further Improvements

Pre-clearance surveys will continue to be carried out prior to any habitat disturbance during 2024.

6.5 Weeds

Tritton is committed to the continual improvement of all land owned as part of the Tritton operations. The management of priority weeds plays an integral role in achieving this commitment and in maintaining successful land management practices. Priority weeds declared for the Bogan Shire Council that have been identified on Tritton include:

- Bathurst Burr;
- Noogoora Burr;
- African Box Thorn; and
- Galvanised Burr.

6.5.1 Environmental Management

Tritton has in place a Weed Management Plan. This plan calls for all priority weeds to be managed and controlled in accordance with the requirements within the *Biosecurity Act 2015* and any control works to be undertaken in consultation with the Bogan Shire Council, Livestock Health and Pest Authority (LHPA) and any relevant Weeds Advisory Committee where appropriate.

Management strategies employed at Tritton to control weeds include:

- Consultation with interested parties including environmental staff, local Councils, neighbouring landholders, the Central West Catchment Management Authority, and other identified stakeholders;
- Document the priority weed species that occur within the mining lease area;
- Ensure that topsoil stockpiles are regularly checked for weeds. If any are located, these are to be removed;
- Restrict vehicular access to areas of heavy weed infestation;
- Rehabilitate disturbed areas as soon as practicable; and
- The status of weeds will be regularly monitored especially within rehabilitation areas or areas of high disturbance.

6.5.2 Environmental Performance

Tritton utilise Bogan Shire Council for weed control across the site. The personnel monitored, documented weed type and population for eradication and removed/sprayed. Approximately 250m^2 in the vicinity of the magazine was sprayed during the reporting period.

6.5.3 Reportable Incidents

No incidents were recorded during the reporting period.

6.5.4 Further Improvements

Weed management at the Tritton Copper Mine during 2024 will continue to be undertaken as per the existing management procedures. Tritton will continue to adopt an adaptive management approach to weed management, with ongoing inspections and monitoring of the site to ensure that the monitoring/control program is efficient and meets the needs of legislation and operational requirements.

6.6 Blasting

Development and stoping activities utilise explosives in the mining process. All blasting activities undertaken on site were associated with underground mining. No surface production blasting was undertaken during the reporting period.

6.6.1 Environmental Management

Blasting is primarily confined to underground mining activities and therefore the effects of blasting are effectively contained within the mining lease area. During the reporting period blasting was undertaken within the Tritton underground operation (including Budgerygar). Explosives used were licensed (**Table 1**) and stored appropriately within the site explosives magazine.

6.6.2 Environmental Performance

The nearest sensitive receptors/neighbours reside 4.7km north and 4.8km south of the Tritton mine site. No complaints were received during the reporting period and therefore no monitoring for blasting was undertaken.

6.6.3 Reportable Incidents

No complaints were received during the reporting period.

6.6.4 Further Improvements

Tritton will continue to manage blasting in order to restrict its impact on nearby neighbours and sensitive receptors throughout 2024.

6.7 Operational Noise

Operational noise which may impact surrounding neighbours is primarily generated by surface vehicles, including trucks containing ore, travelling to and from Tritton and activities associated with ore processing such as operation of the plant, underground vehicles moving on the surface and earth moving equipment.

6.7.1 Environmental Management

To minimise unnecessary noise all equipment is maintained regularly to reduce noise and work efficiently. To further ensure Tritton 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 noise monitoring where appropriate.

The possibility of surrounding residences being impacted by Mine operations is considered to be low due to the distances between residences and the Mine Site.

6.7.2 Environmental Performance

Muller Acoustic Consulting Ltd (MAC) completed a Noise Monitoring Assessment on behalf of Tritton Resources on 19 October 2023. Attended noise monitoring was conducted at the closest residence to the Mine Site, approximately 4km south east of the Mine Site at the boundary of 2865 Yarrandale Road, Girilambone, NSW.

Table 15 outlines the results of the attended noise monitoring conducted during 2023. In summary, MAC stated that noise associated with the Mine was inaudible throughout the measurements, and all daytime, evening and night exceedance of noise criteria guidelines was attributed to rural noise including wind, insects, birds and intermittent passing traffic.

Table 15
Noise Monitoring Results

Location	Date	Time	L_{Aeq} Reading [dB(A)]	Tritton Contribution [dB(A)]	L_{Aeq} Noise Emission Criteria as per EPL guidelines [dB(A)]
Wilga Downs Boundary	19/10/2023	9:50	53	<35	35
Wilga Downs Boundary	19/10/2023	19.21	59	<35	35
Wilga Downs Boundary	19/10/2023	22:10	38	<33	33

6.7.3 Reportable Incidents

No complaints were received during this reporting period.

6.7.4 Further Improvements

Tritton Resources will continue to manage noise in order to restrict its impact on nearby neighbours and sensitive receptors throughout 2024.

6.8 Visual, Stray Light

The Tritton operation is situated within a predominantly rural setting across a gently undulating to flat landscape. Within this landscape, possible sensitive light receptors are restricted to neighbouring residences (the nearest is over 4.5 km away) and vehicles using the Yarrandale Road. Yarrandale Road is not a major connecting path between towns and is mainly used by local properties and vehicles accessing the mining operations. The impact of the operation on local visual amenity and the lighting environment is low.

6.8.1 Environmental Management

Site infrastructure is generally shielded by intervening vegetation and gentle topography. Lights are pointed downwards towards site infrastructure to reduce the impact of stray light at night.

6.8.2 Environmental Performance

Lights from the Mine Site can be seen from Yarrandale Road. An additional tree screen was planted between Yarrandale Road and the Mine Site during 2016, however due to ongoing dry weather conditions a number of trees did not mature. Further plantings of trees were undertaken in 2018 with a lack of success due to drought. Tritton planted additional tubestock trees along the fenceline in front of the WRE in March 2021 to ensure the site tree screens are complete.

6.8.3 Reportable Incidents

No complaints from surrounding residents in regards to visual amenity or lighting were recorded during the reporting period.

6.8.4 Further Improvements

Tritton Resources will continue to assess, and manage where necessary, the visual amenity of the project throughout the next reporting period.

6.9 Aboriginal Heritage

Aboriginal Heritage was assessed during the initial approval stage for the Mine Site. No new archaeological sites were identified within the high potential impact areas of the operation during the reporting period (**Figure 6**). However, as exploration within the exploration leases and the expansion of the tailings facility progresses a number of sites, determined to be of low significance, have been discovered.

6.9.1 Environmental Management

To ensure Aboriginal Heritage is not affected, particularly during on-going exploration activities, 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 following procedure is followed:

1. Cease work immediately.
2. Construct a barrier with flagging tape (or similar) around the potential item.
3. Notify the Environmental Officer for identification of the site.
4. Should work activity require continuing in the vicinity of the item the General Manger will be notified.
5. The General Manger will:
    a) Request a suitably qualified archaeologist to attend the site and assess the significance; and/or

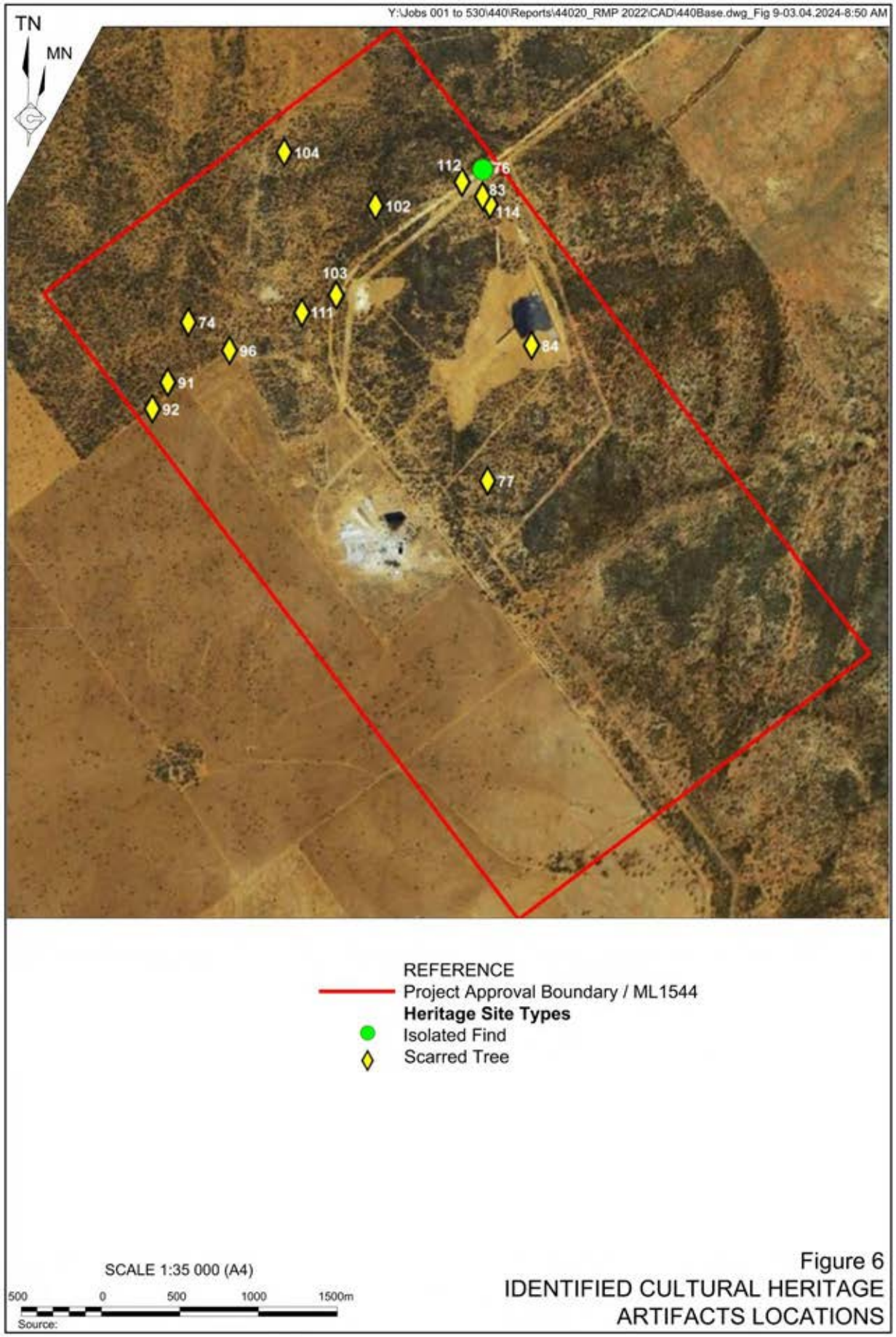


Figure 6
IDENTIFIED CULTURAL HERITAGE ARTIFACTS LOCATIONS

b) Request members from the Nyngan Local Aboriginal Land Council (NLALC) to also assess the significance of the item.

6. A Site Register Card will be forward to the Office of Environment and Heritage (OEH) for inclusion on the Aboriginal Heritage Information Management System (AHIMS) database if required.
7. Subject to the recommendations from the archaeologist and/or NLALC, the appropriate permit to transfer will need to be sought prior to further work being undertaken in the vicinity of the site. Any such action to disturb or transfer items may also require the development of a salvage strategy in consultation with OEH.
8. The General Manager will implement any other procedures or recommendations issued by the OEH.

In the event that skeletal remains are uncovered, the following procedure is undertaken.

1. Cease work immediately within the area of discovery.
2. The area is cordoned off with flagging tape and marked "No Entry'.
3. The General Manager notifies the Nyngan Police.
4. No handling of the remains is permitted without the above-mentioned parties present.
5. Where the remains are determined to be Aboriginal, determination of procedures to be followed will be undertaken through consultation between NLALC and/or suitably qualified archaeologist and OEH and only under the authority of an appropriate permit.
6. No activity will be allowed in the vicinity of the find until such time as the relevant party(ies) provide formal advice to proceed.

6.9.2 Environmental Performance

No Aboriginal heritage surveys were undertaken during 2023 within the Tritton mining area. No previously unidentified items or sites were found during the reporting period.

6.9.3 Reportable Incidents

One reportable bushfire incident occurred during the reporting period on 8 December causing loss of vegetation (estimated 621 ha) and inadvertent damage to Aboriginal heritage sites. The fire did not directly impact the development area, however it did impact an area within ML 1544. The fire affected area was inspected 11 and 12 December and damage to Aboriginal heritage items (scarred trees) was identified. The fire affected area was inspected by the NSW Rural Fire Service and is suspected to be caused by a lightning strike.

Following the incident, Tritton engaged a suitably qualified consultant to complete a condition assessment of the affected Aboriginal heritage sites. The condition assessment is currently underway, and any outcomes will be reported on in the next Annual Review.

6.9.4 Further Improvements

The current Aboriginal heritage management procedures will continue to be adhered to during 2024. Furthermore, any external contractors or members of the public who are given permission to undertake any activities on Mine Site land are to be availed the importance of and due diligence required when working around registered Aboriginal sites.

6.10 Natural Heritage

No natural or non-Aboriginal heritage sites or artefacts have been discovered within the Tritton or exploration areas during the reporting period.

6.10.1 Environmental Management

To ensure natural and non-Aboriginal Heritage is not affected, particularly during on-going exploration activities, 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 Advisor inspecting the area to be disturbed for archaeological and heritage items or places of interest. However, it is unlikely that sites or artefacts of significance are present within the area.

6.10.2 Environmental Performance

No natural or non-Aboriginal heritage artefacts or sites were identified during this reporting period.

6.10.3 Reportable Incidents

No incidents regarding natural or non-Aboriginal heritage occurred during the reporting period.

6.10.4 Further Improvements

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

6.11 Bushfire

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

- Fires on plant and equipment and/or occurring as a consequence of maintenance activities on that plant or equipment;

- Personnel actions for example smoking or undertaking activities in inappropriate areas or without adequate controls; or
- Natural incidents such as lightning strikes.

6.11.1 Environmental Management

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

- Activities requiring an open flame or spark (such as welding or cutting) are conducted within workshop areas where practicable, if these duties are to be undertaken outside of the workshop areas a permit is required. In the event that welding or cutting is to be conducted outside of the workshop areas, the following safeguards will be considered:
  - All flammable material will be removed from within a 20m radius;
  - All flammable liquid will be cleared from the work area;
  - Fire extinguishers will be positioned within 10m of the work area; and/or
  - All controls identified under a hot work permit must be put 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.

6.11.2 Environmental Performance

A bushfire occurred on 8 December within and in the vicinity of the Mine. The fire did not directly impact the development area, however it did impact an area within ML 1544. The fire affected area was inspected by the NSW Rural Fire Service and is suspected to be caused by a lightning strike.

6.11.3 Reportable Incidents

One reportable bushfire incident occurred during the reporting period on 8 December causing loss of vegetation (estimated 621ha) and inadvertent damage to Aboriginal heritage sites (refer to Section 6.9.3).

6.11.4 Further Improvements

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

6.12 Hydrocarbon Contamination

Active mining at Tritton Resources involves the use of hydrocarbon-fuelled machinery including diesel heavy machinery and processing plant equipment, which in turn utilises a variety of hydrocarbon products and volumes. The storage, transfer and use of hydrocarbon products, creates potential for hydrocarbon contamination events.

6.12.1 Environmental Management

Tritton has a Hydrocarbon Management Plan in place to assist it in meeting Australian Standards and statutory obligations for hydrocarbon management. As part of the management plan, employees and contractors at Tritton are educated about hydrocarbon contamination management during the induction phase prior to commencing work on the mine site. This includes "The three C's" (Control, Contain, Clean-up). Spill response kits are located in areas where a risk of hydrocarbon contamination can exist, these areas include:

- Fuel bays;
- Workshops;
- Processing plant; and
- Stores.

All spills require clean up irrespective of volume and size. However, spills in excess of 20L requires clean up and reporting via the Tritton incident reporting system and entry into the onsite database. Soil that has been contaminated by hydrocarbons is removed and placed in the bioremediation facility for treatment and rehabilitation.

6.12.2 Environmental Performance

Tritton Resources onsite incident management system recorded one spill in excess of 20 L during the 2023 reporting period.

The failure of a head traverse hydraulic line on a drill rig resulted in spillage of approximately 30L of hydraulic oil. The spill was recorded within the incident management system and appropriate clean-up procedures were implemented. An estimated 90 to 95% of the oil was recovered through mop up operations and the use of a catch tray.

All hydrocarbon waste was removed from site during the reporting period by an approved contractor for recycling. Tritton Resources utilises the contractor on a monthly basis throughout the year to prevent a large build-up of hydrocarbon waste on site.

The bioremediation facility was treated and tested once during the reporting period, with the results of the testing sown in **Table 16**.

Table 16
Bioremediation Facility Testing Results

	Total Petroleum Hydrocarbons					Total Recoverable Hydrocarbon - NEPM 2013 Fractions					
Date	C6-C9	C10-C14	C15-C28	C29-C36	C10-C36 Fraction (sum)	C6-C10	C6-C10 Fraction minus BTEX (F1)	>C10-C16	>C16-C34	>C34-C40	>C10-C40
Cell 1											
21/06/2023	<10	<50	300	320	620	<10	<10	<50	510	190	700
Cell 2											
21/06/2023	<10	<50	2,760	3,770	6,530	<10	<10	70	5,420	2,380	7,870

6.12.3 Reportable Incidents

No externally reportable incidents were recorded during the reporting period for hydrocarbon contamination.

6.12.4 Further Improvements

Hydrocarbon management procedures will continue to be adhered to throughout 2024.

6.13 Methane Drainage/Ventilation

Methane gas is generated from carbonaceous soil types. Evidence of carbonaceous material within the Tritton underground operation has not been identified during the reporting period and therefore no methane has been detected or released.

6.13.1 Environmental Management

Gas detectors are used on site on diamond drill rigs as a frontline safety/environmental identification tool. If methane is identified, work is to stop and the risk is assessed.

6.13.2 Environmental Performance

No methane has been detected during the reporting period.

6.13.3 Reportable Incidents

No incidents were recorded during the reporting period.

6.13.4 Further Improvements

No further environmental improvements are anticipated for the next reporting period as the likelihood of methane being present is low.

6.14 Public Safety

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.

6.14.1 Environmental Management

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

- Fencing around the perimeter of the operation;
- Procedural site entry is via induction and sign-in/out registers through the main gate access points. Vehicle entry is via approved use of electronic swipe cards at boom gates.
- Signage has been installed around the site boundary advising the public that unauthorised entry into active mining areas is not permitted.
- Inspections of boundary fences are conducted in-line with routine groundwater sampling to ensure no access can be gained to site other than through the access gates.

Also to ensure public road safety all haul trucks are required to have a flashing beacon and are to abide by speed limits.

6.14.2 Environmental Performance

Security cameras were installed around the main boom gate entry in 2015 and boundary fences were inspected regularly throughout 2023, to minimise and reduce unauthorised entry. No breaches of the site access procedures occurred during the reporting period.

6.14.3 Reportable Incidents

No incidents were recorded during the reporting period.

6.14.4 Further Improvements

No further improvements have been planned.

7. Water Management

7.1 Introduction

The primary source of water for the Tritton operation is the surface water allocation from Burrendong Dam. Tritton Resources extracts water from a metered off take point at a small weir at the confluence of Gunningbar Creek. Gunningbar Creek and Burrendong Dam are connected via the Macquarie River. Water is pumped to the Girilambone Raw Water Dam (located at the Murrawombie Copper Mine) by an electric pump station incorporating two booster pumps along the pipeline. The pumps are able to be operated remotely from the Tritton site and have the capacity to pump water at 130 m3 per hour. Water is pumped from the Girilambone Raw Water dam to the Tritton Raw Water dam via a buried pipeline where it is distributed across the Mine Site.

As a result of the drought conditions experienced in 2018 and 2019, DPIE Water approved the closure of the Gunningbar Weir and flows ceased from 1 December 2019. The closure of the Gunningbar Weir resulted in TRL's inability to access its water allocation for a portion of the reporting period. In response TRL constructed a pipeline from the Mine to an off-take point on the Nyngan-Cobar pipeline near the village of Hermidale to allow TRL to access its water allocation. The pipeline is approximately 18km in length extending from Hermidale to the Tritton Mine Site.

Table 17 shows the details of the three Water Access Licences (WALs) Tritton Resources holds to obtain water from the Macquarie and Cudgegong Regulated Rivers Water Source of the Water Sharing Plan of the same name. There is also a single WAL to obtain water from the Lower Bogan Unregulated River Water Source of the Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Sources 2012. The details of these licences are as follows.

1. High Security Licence, licence number 9374 (705 Unit Shares).
2. General Security Licence, licence number 9375 (210 Unit Shares).
3. Supplementary Licence, licence number 9940 (16 Unit Shares).

Table 17
Water Take

Water Licence #	Water Sharing Plan, Source and Management Zone (as applicable)	Entitlement (FYI)	Passive Take/Inflows	Total Pumping
9374	Macquarie and Cudgegong Regulated Rivers Water Source	705 Unit Shares	-	214.1ML
9375	Macquarie and Cudgegong Regulated Rivers Water Source	210 Unit Shares	-	
9940	Macquarie and Cudgegong Regulated Rivers Water Source	16 Unit Shares	-	

The total combined allocation (for Tritton, Girilambone and North East operations) is 931ML. It should be noted that the total allocation doesn't reflect the reduction in access imposed by drought restrictions, or the addition of temporary water purchased throughout the year. It should also be noted that the licence allocation season is 1 July to 30 June and therefore does not align with the reporting period. Approximately 623.5ML of raw water from these licences was utilised between Tritton, Girilambone and North East during the reporting period.

Other sources of water supply include:

- pit dewatering;
- Tritton surface water catchment;
- Nyngan town water supply (trucked to site for potable and ablutions);
- bottled water provided for drinking purposes (15L bottles);
- reclaimed water from the tailings storage facility; and
- reticulated underground water from the underground operations.

Tritton are currently licensed for the groundwater extraction of 30ML (WAL31090) and 304ML (WAL31041). During 2023, monitoring data indicate approximately 59ML of water was dewatered from Tritton underground workings and approximately 18.7ML of surface water was pumped for use underground, resulting in a total approximate take of 40.2ML during the reporting period. A total of 173.9ML was dewatered from Hartman's Pit at North East Mine Site, and the volume from the Murrawombie pit is unknown.

Under each WAL, Tritton is required to maintain accurate records of any water taken under licence. However, during the preparation of this Annual Review, recording errors were identified in the reported data from on-site flow meters which resulted in inaccurate recording of the water take under WAL31090 and WAL31041 for the reporting period. As such, this has been recorded as a non-compliance and relevant notification have been made to DPIE and NRAR. Tritton has commenced an investigation to identify the cause and establish/estimate total take. Potential remedies may include calibration and or replacement of metering and/or other infrastructure.

Water infrastructure at Tritton is displayed on **Figures 2** and **6**.

A number of water storages are directly used for operational purposes and are therefore maintained at specific levels. These storages include:

- TSW08 – Environmental Pond
- TWS04 – Tritton Raw water dam
- TWS09 – Process Water Pond
- GSW03 – Girilambone Raw Water Dam

Tritton also has a number of fluctuating water storage structures which are not direct operational structures and are therefore particularly influenced by natural occurrences such as rainfall, catchment runoff and evaporation. These storages include:

- TSW01 – Tritton Containment Dam
- TSW02 – Decant Water Pond
- TSW03 - Seepage Trench

7.2 Erosion and Sediment Control

Mining activities can generate exposed soil formations such as stockpiles, waste rock emplacements, drains, and roads. Interaction with water in the form of rain or runoff and wind can lead to sediment loss and erosion. Locations at Tritton that are susceptible to erosion include the topsoil and subsoil stockpiles, dam walls and drains.

An Erosion and Sediment Control Plan was prepared in 2015 which establishes a number of best management practices that have been implemented at the Mine Site. The plan addresses construction, rehab, monitoring, and self-auditing.

7.2.1 Environmental Management

Soil resources need to be managed to ensure soils are not eroded in their natural or stockpiled state so it is available for rehabilitation of disturbed mining areas. The objectives of good erosion and sediment control practices are:

- To minimise the impact of construction and operational activities on erosion and the sedimentation of disturbed land, watercourses and water bodies;
- To minimise the loss of topsoil from areas disturbed by mining activities;
- Disturbance is restricted to those areas identified in the Rehabilitation Management Plan or Forward Program;
- Surface water discharges from disturbed areas are captured by sediment control systems;
- There is no increase in erosion / sediment deposition in downstream watercourses; and
- The water quality in downstream watercourses and water bodies is not negatively impacted by Tritton's operations.

To meet the above objectives, on-going erosion and sediment control activities include:

- Inspection and replacement of sediment fencing and straw bales as required;
- Inspection and re-shaping/reinstatement/upgrading of temporary sediment control structures;
- Replanting of underperforming revegetation areas;
- Fauna and pest control;
- Track maintenance; and
- Rehabilitation trial areas.

Monitoring of erosion is undertaken annually. The method involves taking handheld GPS geo-reference information and photos with relevant photo-scaling and/or transect dimension information (depending on the extent of erosion), to gather data, assess condition and identify areas of maintenance improvements. It also involves measuring the distance from a fixed metal

band extended between two pegs to the surface of a rill or erosion feature to establish an erosion profile of risk areas. If observed erosion within rehabilitation monitoring sites is more than 30% greater than at analogue monitoring sites, remediation works will commence. The location of each monitoring point is shown in **Figure 7**.

7.2.2 Environmental Performance

Erosion and sediment control monitoring conducted during 2023 was primarily concerned with the TSF embankment wall rehabilitation areas. Tritton have established three transect dimension monitoring points, two on the TSF embankment wall and one on an analogue site within the mine lease. Cross sections of each of the monitoring points are provided in Cross Section Graphs 1-3.

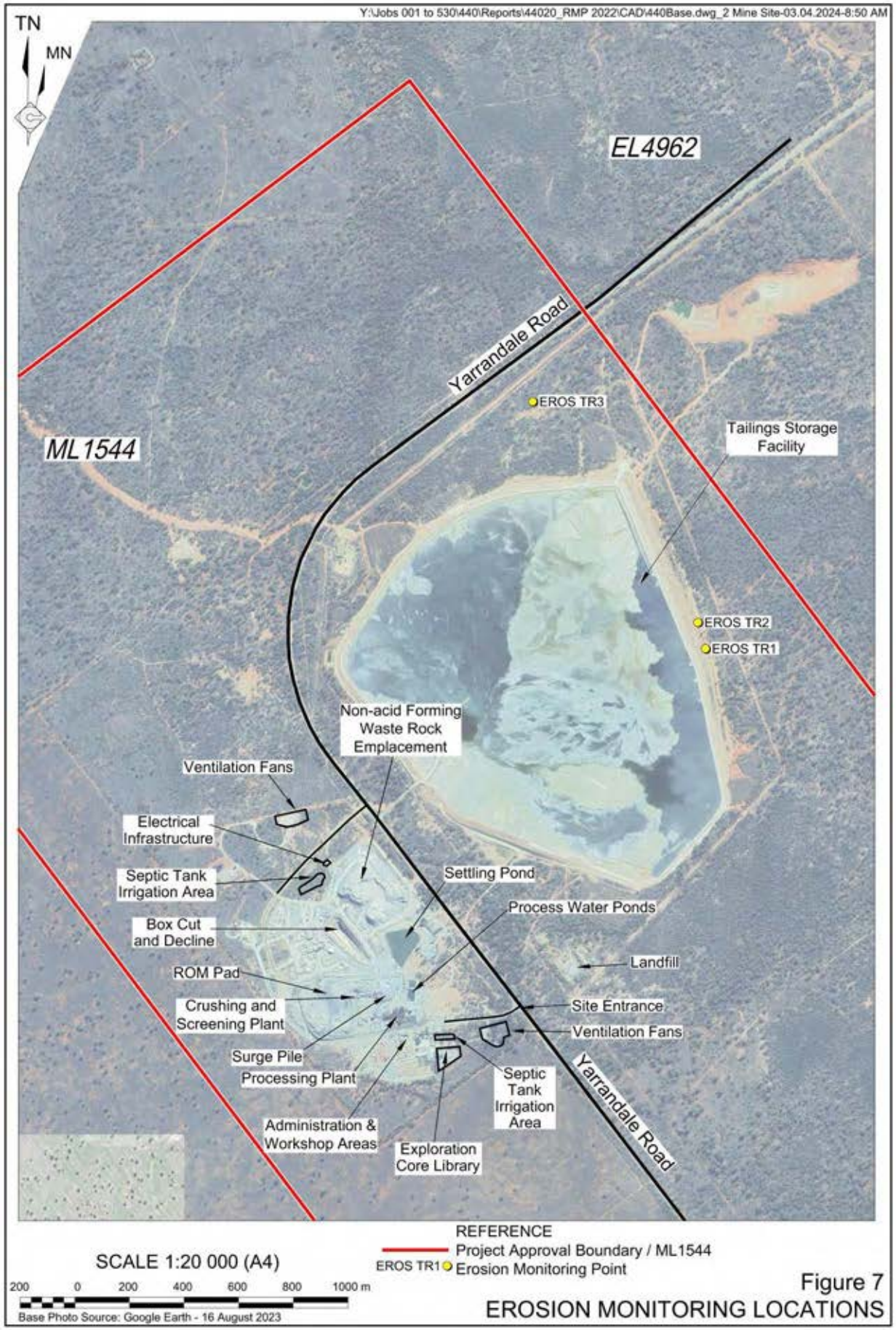


Figure 7
EROSION MONITORING LOCATIONS

The erosion and deposition depth data for the TSF embankment wall monitoring sites, EROSTR001 and EROSTR002, are generally consistent with the previous reporting period. The analogue site results are relatively stable, the most significant change being increased deposition along the middle of the profile (decrease in depth of up to 40mm). Erosion was observed along the EROSTR001 monitoring profile, with a maximum increase in depth of 25mm since the 2022 reporting period. Both erosion and deposition were observed at the EROSTR002 profile, with the change in depth ranging from -5mm to 30mm. All results are in line with the expectations of less than 30% change compared to the analogue site.

7.2.3 Reportable Incidents

No incidents were recorded during the reporting period.

7.2.4 Further Improvements

Erosion and Sediment controls at the Tritton Copper Mine during 2024 will continue to be undertaken as per the existing management procedures.

7.3 Surface Water

Mining operations have the potential to impact upon surrounding surface water catchments. A range of geological and process substances are utilised by the operation which can lead to surface water contamination. However, as a site with no off site water discharge capability this potential is limited to water storage failure or overtopping. Water collected in water storages across the site is therefore monitored to enable effective management of both water resources and the surrounding landscape in case of an incident.

7.3.1 Environmental Management

Tritton aims to reduce the level of impact associated with mining operations on the surrounding surface water by putting in place the following controls:

- Implementation of the Tritton Water Management Plan;
- Implementation of the Erosion and Sediment Control Plan;
- Diversion channels to deflect unnecessary rainfall runoff from surrounding undisturbed catchments entering mine affected areas;
- Management and separation of contaminated and dirty water;
- Site-wide management and bunding of chemicals and hydrocarbons to reduce/eliminate secondary sources of potential water contamination;
- Surface water sampling to assess water quality and identify areas of improvement.

Surface water monitoring is conducted regularly in order to comply with conditions set in the site development approvals and to continuously determine the effectiveness of the Water Management Plan, associated mitigation measures and suitability to Australia and New Zealand Environment Conservation Council (ANZECC) criteria.

Table 18 identifies the surface monitoring locations, water storage classifications and associated sampling schedule.

Surface water samples are sent via courier under Chain of Custody to Australian Laboratory Services (ALS Environmental) in Sydney for analysis. The ALS lab uses National Association of Testing Authorities (NATA) accredited methods to carry out analysis of all water samples collected. All results are compared to the following criteria/guidelines:

- ANZECC - Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) Volume 1 Chapter 4 Primary Industries Livestock Drinking Water Guidelines; and
- ANZECC - Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) Volume 1 Chapter 4 Primary Industries Irrigation and General Use Water Guidelines.

These guidelines will be referenced in the remainder of the document as “selected criteria” ANZECC (stock) and/or ANZECC (irrigation).

7.3.2 Environmental Performance

Tritton Surface water analytical results have been summarised in **Appendix Table 1**. The following presents a description of the relevant trigger values used for analysis of the results, as well as a summary of the environmental performance by water storage.

Relevant Trigger Levels

Tritton Resources notes that clean water storages surrounding the Tritton Copper Mine, namely TSW08 – Environmental Pond, may on occasion be used by travelling stock or wildlife. As a result, it has selected the ANZECC Livestock Drinking Water trigger values for cattle (the most likely stock to drink the water) as relevant criteria for these storages. However, as livestock access to contaminated storages is restricted and as these storages offer poor habitat for wildlife, no criteria have been selected for these storages. Rather, significant deviations from previous results are investigated.

Clean Water Storages

TSW04 Raw Water Pond

Results indicate copper levels were within relevant trigger levels throughout the reporting period, with the exception of January (1.5mg/L Cu). Elevated copper concentrations were frequently observed during the previous 2022 reporting period and are expected due to the deliberate mixing of raw water with pit water from the Murrawombie operation.

Table 18
Surface Water Monitoring Schedule

Water Facility Classification*1	Monitoring Identification	Function and Description	Sampling Frequency	Analytical Suite	Beneficial Use*2
Clean	TSW04	Tritton Raw Water Pond is the main receptacle for river water via the Girilambone Raw Water Dam (GSW03). It is located next to the processing pond, on the northern side of the processing plant. It has no surrounding catchment; it is lined with High-Density Polyethylene (HDPE) liner and regulated with pumps. The intended final land use for the site is agricultural and this water is utilised for dust suppression. The analytes in the water have the potential to build up in the soil, therefore a conservative approach is used by comparing this water quality to that of the irrigation guidelines.	Monthly	• pH • Electrical Conductivity • Total Dissolved Solids • **Anions:** Bicarbonate, Chloride, Nitrate, Nitrite, Sulphate • **Cations:** Calcium, Magnesium, Potassium, Sodium • **Metals:** Antimony, Arsenic, Cadmium, Chromium, Copper, Iron, Manganese, Mercury, Nickel, Lead, Vanadium	Stock & Irrigation
	TSW08	Environmental Pond is a requirement of Tritton's DA 41/98 as an alternative water source to that of the tailings dam for fauna. It is situated on the Travelling Stock Reserve and is utilised as a watering dam for any stock on this route. For these reasons it was compared against the stock drinking guidelines. The water is primarily rain water and when the levels drop site operating conditions require it be filled with water which is sourced from the Tritton raw water line.			Stock & Irrigation
Contaminated	TSW01	Tritton Containment Dam is located down topographic gradient to the east of major mining activity. It is designed to catch all contaminated water from the Mine Site. This includes the run of mine (ROM) pad, the coarse ore stockpile (COS), copper concentrate load out area and the processing plant all of which contain ore. Elevated Total Dissolved Solid (TDS) and Sulphate (SO_4) levels along with cadmium and copper are expected to be a direct result of contamination collected by surface water runoff within the catchment area. TSW01 is lined to contain seepage and was designed to capture all runoff from areas disturbed by mining and possibly contaminated.			None – Industrial
	TSW02	Decant Water collects all the water which is separated from the tailings. This area replaces the former decant trench which was backfilled and compacted in 2008 due to likely groundwater impact via seepage.			None – Industrial
	TSW03	Seepage trench is designed to collect any seepage that may occur from the TSF main embankment.			None – Industrial
	TSW09	Process Water Pond collects discharge water from the processing plant and return water from the Tailings decant (TSW02) and is lined with a HDPE liner. The process water pond is located next to the TSW04 (Raw water pond). It receives water which is pumped directly out of the processing plant and TSW02 (decant water). This water storage has no surrounding catchment.			None – Industrial
	TSW10	Return water from Underground. Groundwater intercepted by underground operations is pumped to the surface and stored in TSW10 as part of the reticulation system. In the event of potential overflow, pipework enables water to be sent to either the TSF or drainage channels enable waters to flow into TSW01 Tritton containment dam.			None – Industrial

*1 As per I&I NSW classification EDG03 – Guidelines to the Mining, Rehabilitation and Environmental Management Process, NSW DPI, January 2006.

*2 As per ANZECC (stock) and ANZECC (irrigation) guideline definitions.

TSW08 Environmental Pond

Water within the Environmental Pond was within the relevant trigger values. This pond receives water from the raw water pipeline from the Bogan River, with limited potential for mining-related contamination.

Contaminated Water Storages

Waters within contaminated water storages at Tritton are used for processing ore only and are collected and recycled through the process plant. Though these waters are not suitable for stock watering or irrigation, they are of a quality which is acceptable for use within mine processing. Water from contaminated water storages is not discharged off site and is therefore not a threat to the surrounding environment.

Selected assessment criteria is not necessarily required for the following water storage facilities as the contained water is either evaporated or returned to the processing circuit and not discharged from the Mine. However, selected criteria have been applied with the intention of defining environmental risk and the degree of harm associated with a potential spill.

TSW01 Containment Dam 1

A review of the results against the selected criteria shows concentrations of a range of parameters to be of a level not suitable for either stock or irrigation purposes. However, this water is used for ore processing only and is not released from site for either stock watering or irrigation. pH, cadmium, copper, and sulphate all exceeded guideline values during the year at this location.

TSW02 Decant Water

A review of the results against the selected criteria shows concentrations of a range of parameters to be of a level not suitable for either stock or irrigation purposes. However, this water is used for ore processing only and is not released from site for either stock watering or irrigation. Water within the Tailings Storage Facility typically had a low pH, elevated levels of cadmium, cobalt, copper, conductivity, sulphate, and total dissolved solids. December recorded a high level of lead at 0.202mg/L, exceeding the guideline level of 0.1mg/L.

TSW03 Seepage Trench

One sample was taken from this location during the reporting period. Water within the seepage trench had an acidic pH (2.95), elevated electrical conductivity, and elevated levels of sulphate, and total dissolved solids.

TSW09 Process Water Pond

This pond collects discharge water from the processing plant and tailings storage facility and is therefore expected to be of a similar poor quality to the tailings facility. This storage recorded low pH levels, elevated conductivity and total dissolved solid levels, and elevated concentrations of sulphate, cadmium and copper throughout the reporting period.

TSW10 Return Water from Underground

Groundwater that is intercepted by underground operations and used by the underground operations is either pumped to the surface and used for processing, sent to the Tailings Storage Facility for evaporation and/or is stored in the Containment Dam (TSW01), or utilised by the mill for processing. Return water recorded elevated electrical conductivity and total dissolved solids levels and elevated concentrations of copper, lead and sulphate during the 2023 reporting period.

TSW11 Tritton Paste Plant Pond

This pond is located adjacent to the Paste Plant and is designed to capture water runoff from the WRE and immediate operating area of the Paste Fill Plant. One sample was collected from this location during the reporting period and recorded an acidic pH (3.3) and elevated concentrations of copper (1.82ppm) and sulphate (1020ppm). These results are generally consistent with the previous reporting period, during which pH was between 3.1 and 6.9, and copper and sulphate concentrations ranged from approximately 0.1ppm to 6.7ppm and 634m to 1590ppm, respectively. The water is therefore not suitable for either stock or irrigation purposes. This water is pumped into the containment dam and then used for processing purposes only and is not released from the Mine Site.

7.3.3 Reportable Incidents

No reportable surface water quality incidents occurred during the reporting period.

7.3.4 Further Improvements

Surface water management at the Tritton Copper Mine during 2024 will continue to be undertaken as per the existing management procedures. In 2019 Tritton engaged an Environmental Consult to conduct a site wide water monitoring data and procedure review. Recommendations were made to reduce monitoring frequency at a number of locations. These recommendations have not yet been implemented; however, it is anticipated monitoring frequencies will change following approval of a revised Water Management Plan.

Tritton will continue to adopt an adaptive management approach to surface water management, with ongoing inspections and monitoring of surface water results to ensure that the monitoring program is efficient and meets the needs of legislation and operational requirements. The results of these inspections and monitoring will be reviewed on receipt and, in the event anomalous results are observed or received, the reason for those results will be investigated and measures implemented to ensure the potential for adverse surface water impacts are minimised.

7.4 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 surfaces waters to underground aquifers. To ensure that any impact on groundwater resources is identified and managed, regular monitoring is undertaken. This section describes the results of that monitoring for 2023.

7.4.1 Environmental Management

To determine the potential impact on groundwater from operational activities, groundwater monitoring is undertaken. **Table 19** defines the frequency of sampling, the type of analysis undertaken and any associated conditional requirements. **Figure 8** identifies the monitoring locations.

Table 19
Monthly Groundwater Monitoring Schedule

Groundwater Monitoring Point	Analysis requirements	Purpose
PZH001-PZH012, PZH014 – PZH015 and PZH017-PZH023	Arsenic, Barium, Beryllium, Cadmium, Chloride, Chromium, Cobalt, Conductivity, Copper, Iron, Lead, Manganese, Mercury, Nickel, Standing water level, Sulphate, Vanadium, Zinc, pH.	Potential impacts associated with TSF leachate.
PB001	No analysis is required however SWL's are recorded when access is available. A pump & float trigger regulate water levels at this pump. This pump has now been removed as per the RAP recommendations.	
PZH001S , 2S, 3S, 5S, 6S, 7S,	No data collected for 2023 as bores were dry.	
Tip 1 - 2	Bores were dry throughout 2023	Potential landfill leachate.

Groundwater sampling is undertaken in accordance with Groundwater Sampling Guidelines, EPA June 2000 utilising low flow purging and bailing techniques. All equipment is decontaminated to prevent of cross-contamination and samples are chilled for storage and transportation.

7.4.2 Environmental Performance

An investigation was commenced in 2012 to clarify potential groundwater impacts underlying the tailings storage facility. This investigation was initiated by the Environmental Protection Authority (EPA) and was required as a Remedial Action Plan "RAP" under the Tritton Environmental Protection Licence. During 2013 the RAP was developed and submitted to the EPA. The objective of the RAP was to assess possible groundwater contamination with the aim of ensuring that the Mine Site is suitable for ongoing mining land use and the historical Mine Site activities do not pose an unacceptable risk to human health or the environment in accordance with the Contaminated Land Management Act 1997.

The RAP concluded that whilst there have been changes in standing water levels within the groundwater monitoring bores, there was no evidence of groundwater contamination identified on the site. It also concluded that these changes are attributable to the pressure of the TSF contents compressing the aquifer and do not represent leakage of the TSF to the groundwater system.

On 14 July 2014 the EPA concurred with the findings of the Tailings Storage Facility RAP. Following this, the dewatering of PB001 has ceased and the closure of bores PZH011 Deep and Short, PZH012 and PB002 were undertaken as per the RAP recommendations.

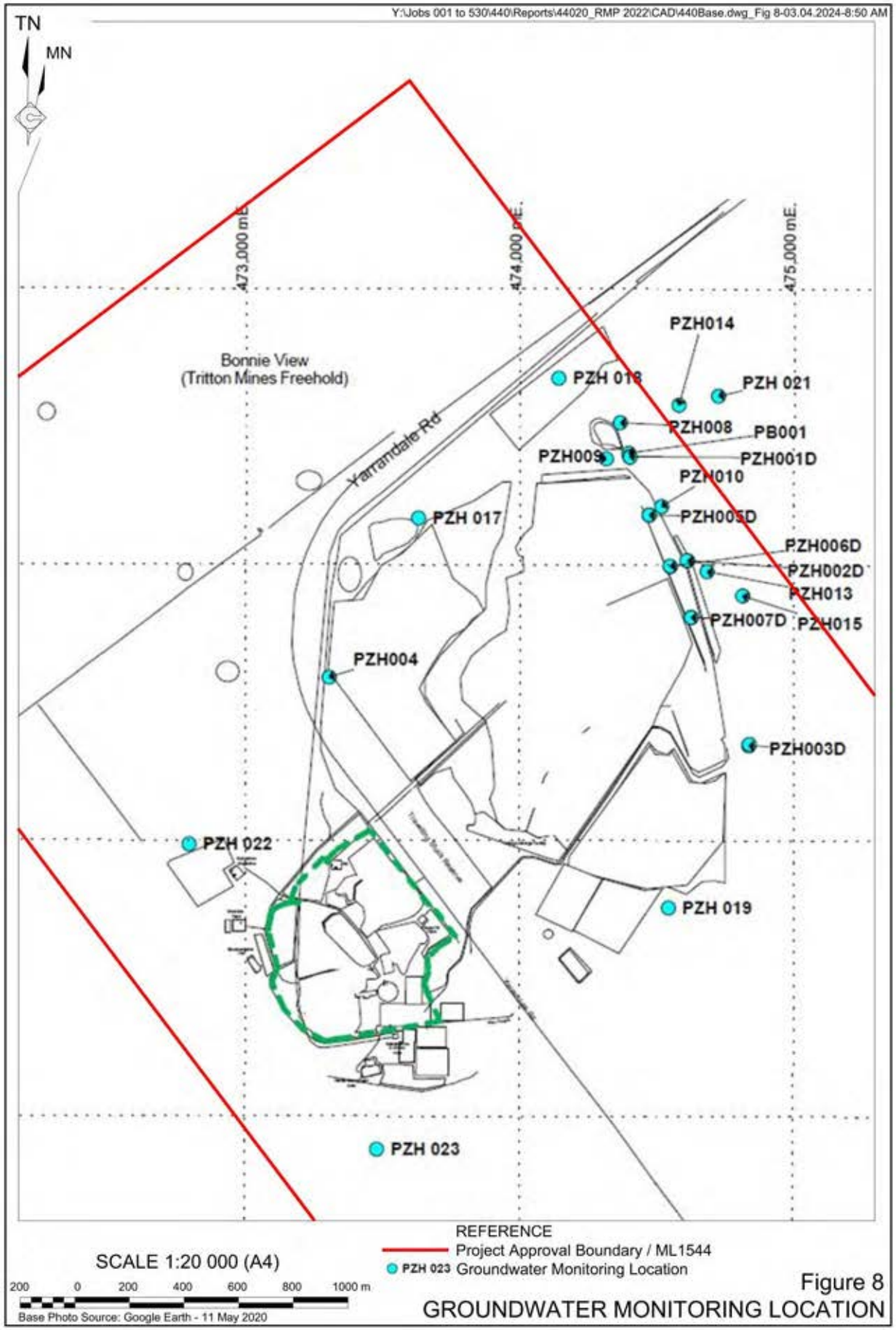


Figure 8
GROUNDWATER MONITORING LOCATION

Groundwater analytical results have been summarised in **Appendix Table 2**. The following is a summary of the groundwater monitoring program against applicable criteria. Monitoring locations are depicted on **Figure 8**. Groundwater results were also compared to the ANZECC guidelines for stock watering and irrigation.

It should be noted that all background groundwater exceeds the guidelines for conductivity, Sulphate and Total Dissolved Solids and there is no beneficial use currently for groundwater at or near the Mine Site.

Water Quality

The results of routine water quality sampling undertaken throughout the reporting period are summarised below.

pH remained stable for all of the monitoring bores throughout Tritton (pH 6.90 – 8.39), however one pH outlier was observed during March at bore PZH021 with a pH of 3.42. Elevated concentrations of cadmium, cobalt, copper, nickel and zinc were also recorded in March for bore PZH021, however testing results for June, September, and December all showed levels that were below trigger levels Metal concentrations were below stock watering trigger values for all other groundwater bore samples throughout the reporting period.

Electrical conductivity, total dissolved solids and sulphate levels remained consistently elevated above stock watering trigger values throughout the reporting period at all monitoring locations. Groundwater quality results are expected and are consistent with groundwater quality within the region.

The landfill monitoring piezometers (Tip 1 and Tip 2) were installed to detect and assess potential landfill leachate. These bores have remained dry since installation. The dry conditions suggest the absence of leachate.

Standing Water Levels

Surface water levels remained relatively stable throughout the reporting period within all Tritton piezometers (**Table 20**).

Table 20
Groundwater Average Standing Water Levels (mRL)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
PZH001	7.91			7.83		7.83	7.89	7.92	7.95	7.55	8.03	
PZH002	25.41			25.53		25.66	25.69	25.73	25.77	25.98	25.83	
PZH003	58.61			55.38		55.47	55.61	55.65	55.66	55.05	55.71	
PZH005	8.47			8.62			9.06	9.11	9.13	9.12	9.17	
PZH006	31.45		31.88	31.96			31.85	31.86	32.09	31.89	31.92	32.45
PZH007	35.02					35.02	35.12	35.19	35.09	35.21	36.25	
PZH008	14.87				14.62	14.58	14.63	14.51	14.63	14.65	14.08	
PZH009	10.68				10.67	10.84	10.91	10.54	10.93	10.93	9.92	
PZH010			29.67			29.92	29.97	29.95	29.98	29.98	29.99	29.99
PZH014	42.51				42.71		42.78	42.64	42.82	42.85	42.91	
PZH015	48.57				48.91		48.97	48.84	48.98	49.03	49.09	
PZH017	39.89				38.15		38.22	38.25	38.25	38.29	37.51	
PZH018	13.68				13.03	12.98	13.02	12.88	13.05	13.11	12.35	
PZH019	92.02		91.88			91.97	91.92	91.95	91.98	91.98	92.03	91.81
PZH020	70.91		70.92			70.97	71.05	71.12	71.12	71.15	71.19	
PZH021	44.88		44.87			44.04	44.15	44.18	44.09	44.22	44.26	43.63

* An excel spread sheet of the 2023 data is available upon request

7.4.3 Reportable Incidents

No reportable incidents occurred during the reporting period.

7.4.4 Further Improvements

During a previous reporting period Tritton engaged an Environmental Consultant to conduct a monitoring data and procedure review. The report indicated many of the monitoring locations were stable and the monitoring frequency could be significantly reduced. An updated monitoring program will be presented in the revised Water Management Plan following approval.

Tritton 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.

8. Rehabilitation

8.1 Buildings

No rehabilitation of existing building areas occurred during 2023. The existing buildings will be rehabilitated as part of mine closure.

8.2 Rehabilitation of Disturbed Land

A summary of the disturbed areas is provided in **Table 21**.

Table 21
Rehabilitation Summary

Area	To Date (ha)	2023 (ha)	2024 (estimate) (ha)
Mine Lease Area			
ML 1544	1400		
Disturbed Areas			
Infrastructure	21.5	0	0
Active Mining Area	1.6	0	0
Waste Emplacements (Active)	6	0	0
Tailings Emplacements	152.7	0	0
Shaped Waste Emplacements	N/A	0	0
All Disturbed Areas (includes diversion drains)	216.2	0	0
Rehabilitation Progress			
Total Rehabilitation Area	2.8	0	
Rehabilitation on Slopes			
10 to 18 degrees	0	0	0
Greater than 18 degrees	3.8	0.0	0.4
Surface of Rehabilitated Land			
Pasture and grasses	3.8	0.0	0.0
Native Forest/Ecosystem	0	0	0
Plantations and crops	0	0	0

All areas of the Mine Site are still being actively used as part of the operation.

Areas listed on the Tritton Contaminated Lands Register, such as the Tailings Storage Facility (TSF), Waste Rock Emplacement and processing hardstand, will be rehabilitated progressively where available and/or at mine closure.

Tritton modified it's hydroseeding approach to that completed in 2018 based on advice from its restoration ecologist in 2020. The modifications included maintaining dozer rip lines following soil amelioration (addition of gypsum) and trial the addition of biological resources. It is anticipated that maintaining the rip lines and the addition of retained timber logs will accelerate ecological function and stability.

During the reporting period Tritton prepared approximately 15,000m^2 of the northern TSF embankment for seeding. This included reshaping of the embankment and the placement of topsoil and 100mm waste rock from the WRE.

Table 22 provides a summary of the maintenance activities undertaken on rehabilitated land during the reporting period.

Table 22
Maintenance Activities on Rehabilitated Land

Nature of Treatment	Area Treated (ha)		Comment /Control Strategies/Treatment Details
	Report Period	Next Period	
Additional erosion control works	>0.1	To be determined	
Re-covering	0.0	0.0	
Soil treatment	0.0	To be determined	Tritton will continue to treat contaminated soil within the bioremediation facility
Treatment/Management	15	0	
Re-seeding/Replanting	1	8	A trial occurred in the reporting period, and will expand in the 2023 reporting period.
Adversely affected by weeds	>0.01	To be determined	Areas of weed infestation are sprayed with herbicide or physically removed.
Feral animal control	N/A	0	Aerial shooting on Tritton owned properties adjacent to the mining lease

8.3 Other Infrastructure

Rehabilitation of any currently existing infrastructure was not undertaken during the reporting period. All current infrastructures are in use and at this time are expected to remain in use until mine closure.

8.4 Rehabilitation Trials and Research

8.4.1 TSF Feasibility Assessment

In 2020 a feasibility assessment for future tailings storage at the Tritton site was conducted. The study examined the feasibility of further raising of the TSF embankments above the current approved design level. The results of the feasibility assessment indicated that with strict water management procedures additional embankment lifts are possible.

Further work in future phases of the design review will involve:

- Prior to raising TD1 from RL272 m to RL278 m, additional CPT investigations to confirm the tailings strength parameters in key sections of the facility.
- Further detailed hydraulic analyses for the dam break study to examine flow paths towards the plant in particular.

- A detailed design for raising of the TSF in accordance with the new NSW Dam Safety act.

8.5 Rehabilitation Forward Program

The Forward Program describes the planned rehabilitation activities during the "Forward Program Period" which includes the period from 1 June 2023 to 31 July 2025.

Table 23 summarises the rehabilitation research that is intended to be completed during the Forward Program Period.

Table 23
Rehabilitation Planning Schedule

Year	Studies
2023	Undertake Rehabilitation Ecological Monitoring. Commence preparation of a concept design of TSF cover and final landform. Other studies to assist in preparation for mine closure will commence including the Seed Balance and Procurement Strategy (completed by end 2024) and Post Closure Water Management Strategy (completed by end 2025).
2024	Continue to undertake studies to inform closure plans including preparation of a Post Closure Water Management Strategy (completed by end 2025) and concept design of TSF cover and landform (completed by end 2024).
2025	Commence Landform Evolution Modelling once the final TSF cover has been designed. Continue to undertake studies to inform closure plans including the Post Closure Water Management Strategy.

8.6 Rehabilitation Risk Assessment

In accordance with Clause 7 of Schedule 8A the *Mining Regulations 2016*, a Rehabilitation Risk Assessment for the Mine was prepared during December 2021. Further information on the outcomes of the Rehabilitation Risk Assessment are presented as part of the *Rehabilitation Management Plan* (RWC, 2023).

The current version of the Rehabilitation Risk Assessment is Version 4.0.

No hazards or incidences were identified or occurred within the Mine Site during the reporting period that required further review of the Rehabilitation Risk Assessment.

9. Community

9.1 Environmental Complaints

No complaints were received during this reporting period.

9.2 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 whist 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 dollars 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 Tritton Mines operation.

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 Tritton website.

10. Independent Audit

The previous independent audit of the Mine Site was undertaken in 2021 in accordance with Condition 8 of Schedule 2 of DA41/98 and covered the period from 1 December 2018 to 9 December 2021. The audit identified a total of 11 non-compliances and 4 administrative non-compliances.

Table 24 provides a summary of the non-compliances identified.

Table 24
Summary of Statutory Compliance from Independent Environment Audit

Approval / Licence	Compliant	Non-Compliant	Administrative Non-compliance	Not Verified	Observation	Noted	Not Applicable or Not Triggered
Consolidated Consent (DA 41/98)	51	9	3	1	3	7	25
EPL No. 11254	33	2	0	0	3	8	11
Mining Lease 1544	19	0	1	0	3	12	15
Total	102	11	4	1	9	27	52

Table 25 provides a summary of the matters identified and the status of Tritton Resources response to the identified issue.

The next Independent Environmental Audit will occur in late 2024.

Table 25
Summary of Non-Compliances and Corrective Actions

NC Identifier	Condition	Non-Compliance	Corrective Action	Response	Status
1	DA 48 EPL O3.1	Dust release was observed during site inspection from heavy vehicle movement in the mine operational area. Dust management measures (water cart) was not observed on site.	Operate water cart during truck movements around site. If the truck is under maintenance, have adequate back up plan implemented.	Whilst unplanned maintenance limited water cart availability during the site inspection a water cart was in operation during the audit period despite not being sighted by the auditors. Tritton will develop a Trigger Action Response Plan (TARP) to ensure appropriate dust management measures are implemented in the event of a breakdown and unplanned maintenance	Trigger Action Response Plan completed
2	ML 28	Mine Closure Plan has not been revised/updated as per gap analysis. Previous IEA (2018) had raised an observation to update MCP to refer to the correct Strategic Framework for MCP as required.	Update the Mine Closure Plan referring to the correct requirements and addressing the gap analysis by Okane.	The Mine Closure Plan (MCP) gap analysis was completed March 2021. Following completion of the MCP gap analysis an action plan and schedule was completed May 2021.	As of 2022, the amended standard conditions for mines means that the Aeris Resources Mining Leases no longer require preparation of a Mining Closure Plan. This has been replaced with a Rehabilitation Management Plan and Forward Program.
3	DA 1(ii) DA 8	A number of non-compliances were raised in the 2018 IEA and in this report. This NC will be closed out when other NCs are closed out.	Include a clear timeline and measures of progress for all responses to audit recommendations to review at subsequent IEA. In the Tritton response document, discuss progress made in implementing the Action Plan developed as an outcome of the most recent Independent Audit. Discuss progress made in implementing the Action Plan in section 10 of future Annual Review.	Noted.	Clear timeline has been prepared. Tritton Resources are currently continuing to work through previous non-compliances. • A spreadsheet register of management plans is to be developed. The Environmental Management Plan has been updated and is currently undergoing review. Correspondence log for past consultation is being looked into. The draft Environmental Management Plan includes the following sub-plans: Flora and Fauna Management Plan (Contingency Strategy); Traffic Management Plan; Noise and Vibration management Plan (including blasting protocol); Dust Management Plan. • Waste Management Plan has been reviewed and revised. • The TSF Manual is still pending revision. • Pre-start procedure has been completed. • As aforementioned, Waste Management Plan has been reviewed and revised. • A Rehabilitation Management Plan has been prepared and is currently under revision. • The Environmental Management Plan addresses the Preliminary Hazard Analysis. The outcomes from the Final Hazard Analysis will be considered in future. • The revised Landscape Management Plan has been issued to council. • Tritton Resources sought advice from OEH Nyngan Catchment Advisory Officer. • The Aeris Resources / Tritton Mine website clearly indicates the public complaints number. • The Resource Regulator advised they no longer make endorsements such as the condition requests.
4	DA 5 (v)	The authority and independence required in this condition is not clearly stated in the EMP (section 2) or the Position Description of Environmental Coordinator. EMP is not clear about stop work authorities.	Review and update the Framework EMP to reflect current position titles and position descriptions. Review and update Framework EMP to make sure the nominated personnel have adequate authority.	Tritton will implement this recommendation.	Text has been amended in most recent management plan updates.
5	DA 6(iii)	Consultation with RMS on updated Traffic Management Plan not sighted.	Provide evidence of consultation with RMS for Traffic Management Plan update.	Tritton will implement this recommendation.	Tritton has sought consultation with Transport for NSW (previously RMS) and a revised draft is currently in preparation.

Table 25 (Cont'd)
Summary of Non-Compliances and Corrective Actions

NC Identifier	Condition	Non-Compliance	Corrective Action	Response	Status
6	DA 6(v)	Consultation with EPA on 2015 Dust Management Plan not sighted. This plan is overdue for review (biennially)	Provide evidence of consultation with EPA in preparing the DMP. Review and update DMP as required, in consultation with EPA.	Tritton will review and update the DMP in consultation with the EPA.	Draft DMP is in process of being prepared.
7	DA 6(ix)	No specific reference to the Preliminary Hazard Analysis was found in the Framework EMP and sub-plans. The 2018 IEA had raised an observation to address this in next revision of the plans.	Review all strategies, plans and programs within 3 months of this audit report.	Tritton will implement this recommendation.	The current draft Environmental Management Plan includes the Preliminary Hazard Analysis.
	DA 6B	The EMP has not been reviewed within 3 months of submission of previous audit report or after modification of DA.	Ensure Preliminary Hazard Analysis recommendations are addressed in the next revision of the Framework EMP and sub-plans.	Tritton will implement this recommendation.	All environmental management plans have been recently reviewed and are currently at various stages of consultation and approval by DPHI.
8	DA 23	TSF OMM: Specific requirements on chemicals and reagents are not addressed in the updated version. Evidence of consultation in this regard with RR and EPA not sighted.	Update Tailings Dam1 OMM Manual to address requirements of condition 23 including consultation with regulators.	Tritton will update the TSF OMM to reflect the recommendation and seek consultation with the EPA and RR.	Tailings Dam 1 OMM Manual is being reviewed.
9	DA 37A	Evidence of consultation with Council not sighted in preparing Drivers' code of conduct.	Provide evidence of consultation with Council in preparing the Drivers' Code of Conduct.	Tritton will provide Council with the Drivers' Code of Conduct and seek feedback.	Tritton Resources provided Council with the Drivers' Code of Conduct.
10	DA 52	Final hazard analysis was not available to verify.	Prepare a final hazard analysis as per HIPAP No 6.	Tritton will use the frameworks outlined in HIPAP No.6, site operational data and experience to prepare a hazard analysis as per HIPAP No 6. The following components would apply; 1. Hazard Identification as per Section 4 2. Consequence Analysis as per Section 5 and Appendix 2 3.The Hazard Analysis Report as per Section 9.	Final Hazard Analysis has been drafted.
11	DA 53 (a)	Emergency Management Plan does not specifically refer to the HIPAP No1 or the preliminary hazard analysis as required in this condition.	Update Emergency Plan as per HIPAP No 1 and Preliminary Hazard Analysis.	Tritton will conduct a gap analysis using the current Emergency Plan and HIPAP No.1. Following the gap analysis an action plan and schedule will be developed and implemented to satisfy this condition.	Update of the Emergency Management Plan is ongoing.
12	DA 53 (b)	Safety Management System documentation does not specifically refer to the HIPAP No9 or the preliminary hazard analysis as required in this condition.	Update HSEMS policies and SMS/HS&EMS as per the HIPAP No9 and Preliminary Hazard Analysis	Tritton will review the SMS and identify links to elements listed in HIPAP No. 9. A gap analysis will then be conducted and a subsequent action plan and schedule developed and implemented.	Update of the Safety Management System documentation is ongoing.
13 14 15	EPL O4.4	This audit found some containers to be placed without proper bunding or labelling (see Appendix D of this report). The drainage pit and pump in a bunded area near the maintenance yard was found to be inoperable. Ground contamination was noted in storage yard that appeared to be from contaminated water. A diesel tank was spotted near TSF for stormwater dewatering pump, without bunds or trays.	Store all chemical and fuel drums within bunds and ensure the bunds have adequate containment volume. Ensure containers are correctly labelled. Store waste materials with hydrocarbons in accordance with AS 1940. And ensure they are classified and disposed of in accordance with EPA Waste Classification Guidelines.	An environmental inspection program is in place to routinely inspect areas for issues such as those identified in the audit.	An Environmental Inspection Program has been prepared and is in place.

11. Incidents and Non-compliances during the Reporting Period

Development Consents

Four non-compliances under DA41/98 were identified during the 2023 reporting period, as follows.

Condition 2(a)

Condition 2(a) requires that the Company comply with all other approvals and licences required for the operation of the Mine. Non-compliances with ML 1544 were identified during the reporting period.

Condition 7A

Condition 7A requires that the Department is notified within seven days of becoming aware of a non-compliance.

Tritton did not notify the Department within 7 days of becoming aware of any non-compliance during the reporting period.

Condition 8A(a)(iii)

Condition 8A(a)(iii) requires all approved strategies, plans and programs required under DA41/98 to be made publicly available on the website by 2 September 2022.

Tritton acknowledges that not all the documents required under DA41/98 are currently publicly available. Notwithstanding the above, Tritton is in the process of reviewing the majority of the environmental management plans for the Mine and intends to submit the revised plans to the Department for approval during the next reporting period.

Condition 13D

Condition 13D requires the Company to report on all water extracted from the development, including water taken under each licence.

Tritton acknowledges that this Annual Review does not include an accurate report on total water take for the 2023 reporting period. Tritton staff have identified that there may be issues with water meter calibration that may be impacting on their ability to accurately record water take.

It should be noted that Tritton contend that the water allocations have not been exceeded, based on the most recent site water balance model prepared by Metso during 2020.

During the next reporting period, Tritton intend to investigate the current water monitoring system to identify potential causes and suitable measures to improve monitoring and performance. In addition, a site-side water balance model supported by accurate flowmeters will be undertaken to confirm the findings of the Metso (2020) report.

Mineral Authorities

Tritton received notice of a commencement of investigation from the NSW Resources Regulator during the reporting period (LETT0008309) for alleged non-compliance with ML 1544 (see Section 1). The notice identified three non-compliance matters as follows.

- Clause 13(4) in Schedule 8A of the Mining Regulation 2016 requires the lease holder to submit to the Secretary, a forward program prepared in accordance with Clause 13(1). The due date was 2 August 2022 with a grace period until 28 February 2023. The FWP was received 10 May 2023.
- Clause 16 of Schedule 8A requires the lease holder to make the Rehabilitation Management Plan (RMP) publicly available in a prominent position of the lease holder's website. Following a review or search for the applicable mine website it appears a RMP has not been published.
- Clause 19 in Schedule 8A requires the lease holder to nominate a contact person with whom we can communicate with in relation to the mining lease for the purposes of the Mining Act 1992. The Regulator does not have a record of this having been done for the Tritton Copper Mine.

As a result of the investigation, Tritton received an Official Caution (NCG0005616).

Since the completion of the investigation all non-compliance matters have been resolved to the satisfaction of the Resources Regulator.

Water Approvals and Licences

Recently identified issues with water monitoring equipment at the Mine may result in non-compliances with any relevant water approvals and/or licences. Tritton has commenced a review of all relevant water management infrastructure to identify/confirm the status of any non-compliances.

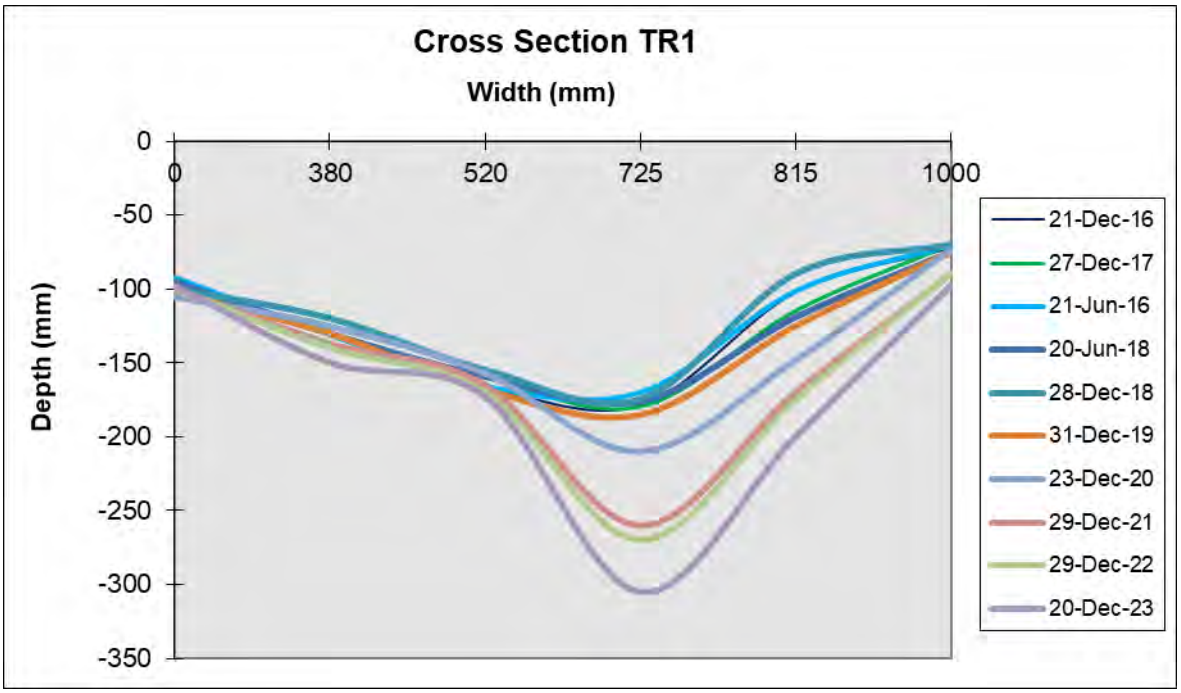
12. Activities Proposed in the Next Annual Review Period

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

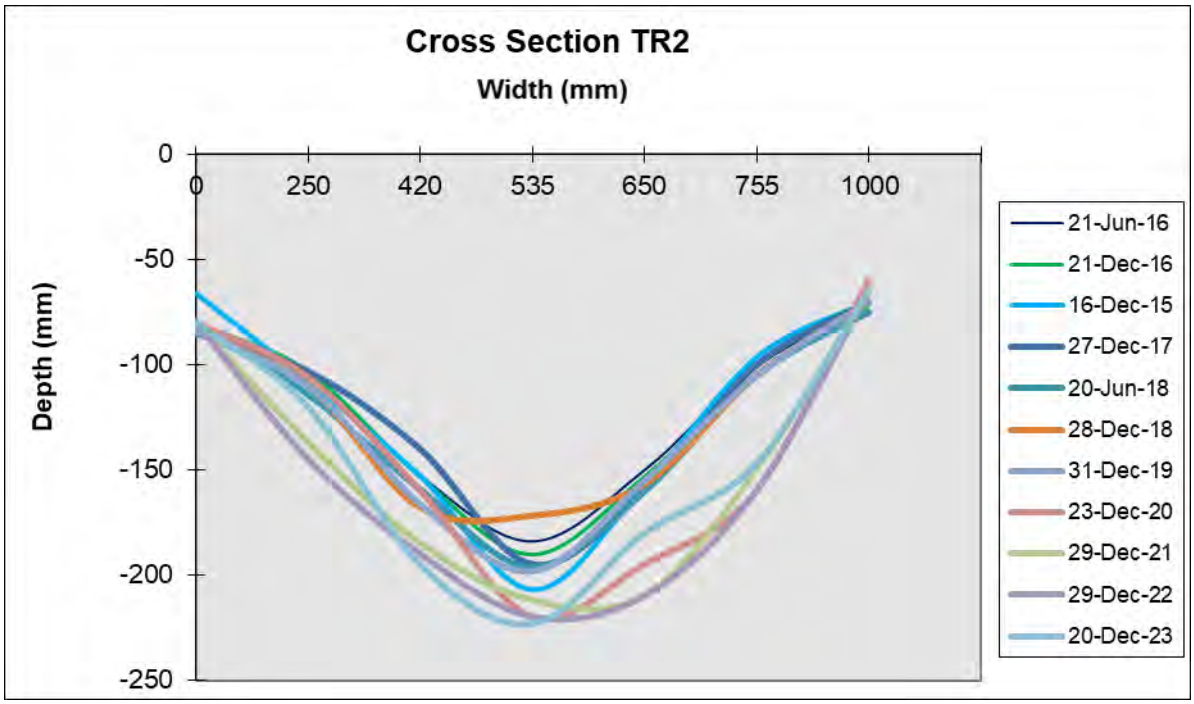
- Continuation of underground mining and ore processing activities;
- Continued monitoring of surface water, groundwater, air quality and noise emissions;
- Rehabilitation planning as described in the Forward Program.
- Revegetation of sections of the TSF Main embankment.
- Review of all water monitoring infrastructure to ensure compliance with relevant approvals and licences.

Erosion Cross-Section Graphs

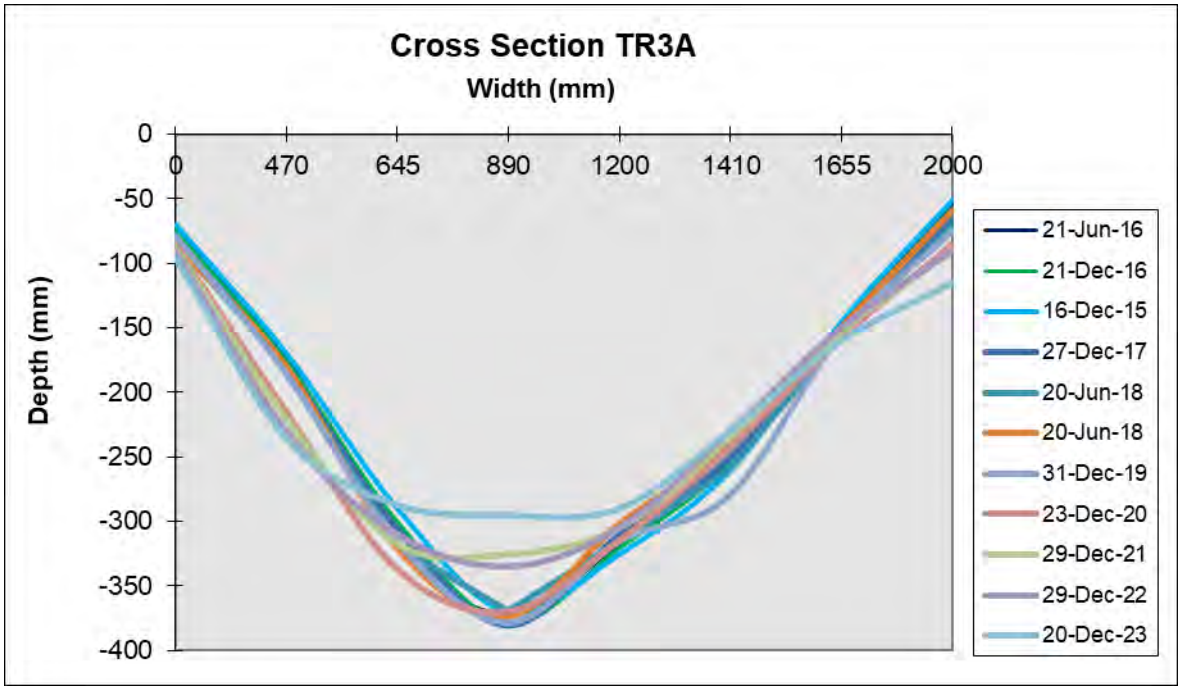
Graph 1 EROSTR001



Graph 2 EROSTR002



Graph 3 EROSTR003A



Appendix Tables

Appendix Table 1 2023 Surface Water Quality Results (mg/L)

Date	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Sulfate as SO4	Vanadium	Zinc	pH	Conductivity	Total Dissolved Solids @180°C
Stock Watering Triggers *	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	-	0.5	0.05	-	350	1	0.1	5	10	5	-	10	0.002	2	-	230	-	0.5	5	6 - 9	6000	-
TSW01																							
5/01/2023	0.003	0.073	0.001	**0.014**	623.000	984.000	0.003	0.240	**3.040**	5.930	0.012	86.000	1.320	0.000	0.044	42.000	600.000	**1880.000**	0.010	2.800	**3.290**	5670.000	**4720.000**
15/02/2023	0.003	0.070	0.001	0.003	380.000	734.000	0.001	0.085	0.636	4.290	0.004	73.000	0.695	0.000	0.017	30.000	412.000	**1280.000**	0.010	0.431	**4.410**	3530.000	3360.000
6/03/2023	0.004	0.054	0.001	**0.016**	399.000	648.000	0.004	0.316	**4.940**	11.600	0.009	89.000	1.840	0.000	0.052	30.000	334.000	**1590.000**	0.010	3.220	**3.420**	3950.000	3760.000
1/06/2023	0.004	0.085	0.001	0.003	541.000	915.000	0.001	0.046	0.234	1.480	0.004	68.000	0.316	0.000	0.012	34.000	568.000	**1860.000**	0.010	0.323	**4.860**	5090.000	3670.000
7/07/2023	0.003	0.071	0.001	0.005	424.000	950.000	0.001	0.085	**2.680**	0.600	0.003	85.000	0.501	0.000	0.018	27.000	582.000	**1630.000**	0.010	1.080	6.560	5130.000	3710.000
4/09/2023	0.003	0.068	0.001	**0.035**	440.000	1000.000	0.001	0.507	**1.920**	1.580	0.003	160.000	5.820	0.000	0.164	29.000	658.000	**1840.000**	0.010	2.710	**5.570**	5290.000	3800.000
5/12/2023	0.001	0.076	0.001	**0.015**	252.000	452.000	0.001	0.221	**4.310**	0.880	0.003	74.000	1.160	0.000	0.045	17.000	292.000	884.000	0.010	3.210	**3.670**	2720.000	2090.000
Average	**0.003**	**0.071**	**0.001**	**0.013**	**437.000**	**811.857**	**0.002**	**0.214**	**2.537**	**3.766**	**0.005**	**90.714**	**1.665**	**0.000**	**0.050**	**29.857**	**492.286**	**1566.286**	**0.010**	**1.968**	**4.540**	**4482.857**	**3587.143**
TSW02																							
5/01/2023	0.010	0.030	0.003	**0.067**	794.000	906.000	0.129	**2.240**	**9.530**	58.800	**0.280**	408.000	9.190	0.000	0.293	44.000	605.000	**3590.000**	0.010	13.000	**2.930**	**7220.000**	**7790.000**
15/02/2023	0.021	0.056	0.002	**0.046**	833.000	1500.000	0.109	**1.760**	**6.040**	83.800	**0.187**	340.000	7.730	0.000	0.211	79.000	1010.000	**4130.000**	0.010	9.460	**2.830**	**10200.000**	**8320.000**
7/03/2023	0.011	0.048	0.001	**0.085**	701.000	1090.000	0.138	**2.470**	**8.500**	116.000	**0.177**	594.000	12.800	0.000	0.359	53.000	669.000	**5340.000**	0.010	16.100	**3.150**	**9580.000**	**10600.000**
4/04/2023	0.018	0.004	0.008	**0.171**	632.000	1430.000	0.176	**5.520**	**20.900**	49.700	0.025	1360.000	23.700	0.000	0.793	71.000	1120.000	**8120.000**	0.010	**35.400**	**3.020**	**14100.000**	**15300.000**
2/05/2023	0.003	0.048	0.001	0.004	714.000	1300.000	0.009	0.142	0.100	12.400	0.017	98.000	1.060	0.000	0.026	46.000	891.000	**2510.000**	0.010	0.752	**3.490**	**7760.000**	**5580.000**
1/06/2023	0.003	0.089	0.001	0.001	810.000	1500.000	0.001	0.042	0.003	2.780	0.004	43.000	0.356	0.000	0.010	50.000	766.000	**2470.000**	0.010	0.160	**4.680**	**7620.000**	**5560.000**
7/07/2023	0.009	0.032	0.001	0.003	592.000	788.000	0.029	0.075	0.713	16.200	**0.171**	38.000	0.888	0.000	0.018	39.000	499.000	**2020.000**	0.010	0.613	**2.990**	5600.000	3910.000
7/08/2023	0.006	0.038	0.001	0.006	745.000	1410.000	0.027	0.238	**1.250**	27.600	0.056	103.000	2.180	0.000	0.040	52.000	955.000	**2530.000**	0.010	1.390	**2.900**	**8310.000**	**6290.000**
4/09/2023	0.029	0.011	0.001	**0.015**	807.000	2290.000	0.112	0.539	**4.600**	38.700	0.045	184.000	3.960	0.000	0.095	87.000	1620.000	**3680.000**	0.010	3.660	**2.880**	**11600.000**	**8520.000**
6/11/2023	0.005	0.020	0.001	**0.038**	767.000	1940.000	0.012	**1.060**	**5.960**	34.000	0.003	356.000	6.250	0.000	0.159	46.000	1080.000	**1940.000**	0.010	8.580	**3.470**	**10200.000**	**8020.000**
5/12/2023	0.007	0.010	0.006	**0.142**	541.000	457.000	0.155	**4.080**	**28.500**	52.700	0.033	1000.000	18.900	0.000	0.648	14.000	308.000	**5760.000**	0.010	**35.900**	**2.990**	**7990.000**	**9780.000**
Average	**0.011**	**0.035**	**0.002**	**0.053**	**721.455**	**1328.273**	**0.082**	**1.651**	**7.827**	**44.789**	**0.091**	**411.273**	**7.910**	**0.000**	**0.241**	**52.818**	**865.727**	**3826.364**	**0.010**	**11.365**	**3.212**	**9107.273**	**8151.818**
TSW03																							
7/03/2023	0.003	0.048	0.001	0.0006	539	1,200	0.002	0.233	0.117	613	0.012	2,020	26.3	0.0001	0.059	77	620	**10,600**	0.01	0.198	**2.95**	**14,800**	**18,700**
Average	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
TSW04																							
5/01/2023	0.002	0.109	0.001	**0.022**	379.000	971.000	0.002	0.286	**1.500**	3.390	0.004	148.000	1.810	0.000	0.070	30.000	644.000	**1580.000**	0.010	2.380	**2.970**	5430.000	**4340.000**
15/02/2023	0.001	0.090	0.001	0.000	46.000	97.000	0.001	0.005	0.037	0.310	0.001	28.000	0.127	0.000	0.003	6.000	68.000	82.000	0.010	0.022	7.830	693.000	468.000
6/03/2023	0.001	0.085	0.001	0.001	50.000	107.000	0.001	0.009	0.109	0.050	0.001	26.000	0.078	0.000	0.002	6.000	65.000	105.000	0.010	0.069	7.580	761.000	425.000
1/06/2023	0.004	0.092	0.001	0.001	224.000	432.000	0.001	0.021	0.112	0.580	0.001	49.000	0.150	0.000	0.006	15.000	263.000	806.000	0.010	0.144	6.730	2410.000	1620.000
7/07/2023	0.001	0.090	0.001	0.000	43.000	139.000	0.001	0.001	0.037	0.120	0.001	29.000	0.020	0.000	0.002	3.000	67.000	36.000	0.010	0.017	7.900	690.000	400.000
4/09/2023	0.001	0.094	0.001	0.000	49.000	148.000	0.001	0.001	0.025	0.260	0.001	33.000	0.029	0.000	0.002	4.000	79.000	38.000	0.010	0.016	7.800	830.000	464.000
5/12/2023	0.001	0.102	0.001	0.000	32.000	67.000	0.002	0.003	0.041	1.310	0.001	23.000	0.065	0.000	0.004	6.000	52.000	46.000	0.010	0.030	7.470	540.000	332.000
Average	**0.002**	**0.095**	**0.001**	**0.003**	**117.571**	**280.143**	**0.001**	**0.047**	**0.266**	**0.860**	**0.001**	**48.000**	**0.326**	**0.000**	**0.013**	**10.000**	**176.857**	**384.714**	**0.010**	**0.383**	**6.897**	**1622.000**	**1149.857**

Appendix Table 1 2023 Surface Water Quality Results (mg/L) (Cont'd)

Date	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Sulfate as SO4	Vanadium	Zinc	pH	Conductivity	Total Dissolved Solids @180°C
Stock Watering Triggers *	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	-	0.5	0.05	-	350	1	0.1	5	10	5	-	10	0.002	2	-	230	-	0.5	5	6 - 9	6000	-
TSW08																							
5/01/2023	0.002	0.139	0.001	0.001	42.000	154.000	0.001	0.014	0.033	1.480	0.001	38.000	0.274	0.000	0.005	13.000	96.000	76.000	0.010	0.022	7.770	887.000	530.000
15/02/2023	0.002	0.147	0.001	0.001	45.000	140.000	0.001	0.013	0.012	1.660	0.001	38.000	0.259	0.000	0.003	10.000	89.000	59.000	0.010	0.015	8.020	845.000	552.000
7/03/2023	0.001	0.132	0.001	0.000	40.000	143.000	0.001	0.001	0.013	0.100	0.001	33.000	0.001	0.000	0.002	11.000	80.000	56.000	0.010	0.005	7.650	846.000	504.000
4/04/2023	0.001	0.027	0.001	0.000	5.000	9.000	0.001	0.002	0.022	2.180	0.001	4.000	0.389	0.000	0.001	10.000	4.000	33.000	0.010	0.024	6.150	161.000	113.000
2/05/2023	0.001	0.126	0.001	0.000	50.000	143.000	0.001	0.001	0.016	0.130	0.001	33.000	0.022	0.000	0.002	7.000	81.000	35.000	0.010	0.006	7.860	843.000	449.000
1/06/2023	0.001	0.124	0.001	0.000	45.000	142.000	0.001	0.002	0.023	0.340	0.001	30.000	0.047	0.000	0.002	5.000	70.000	42.000	0.010	0.005	7.390	813.000	446.000
7/07/2023	0.001	0.093	0.001	0.000	38.000	94.000	0.001	0.001	0.021	0.160	0.001	23.000	0.016	0.000	0.001	6.000	51.000	33.000	0.010	0.014	7.810	603.000	316.000
7/08/2023	0.001	0.107	0.001	0.000	54.000	190.000	0.001	0.001	0.011	0.050	0.001	38.000	0.007	0.000	0.001	4.000	90.000	51.000	0.010	0.007	7.740	996.000	530.000
4/09/2023	0.001	0.104	0.001	0.000	48.000	151.000	0.001	0.001	0.014	0.130	0.001	35.000	0.013	0.000	0.001	5.000	80.000	40.000	0.010	0.005	7.930	834.000	472.000
9/10/2023	0.001	0.108	0.001	0.000	47.000	162.000	0.001	0.001	0.013	0.170	0.001	37.000	0.027	0.000	0.002	8.000	84.000	42.000	0.010	0.008	7.880	886.000	525.000
6/11/2023	0.001	0.106	0.001	0.000	78.000	502.000	0.001	0.002	0.018	0.310	0.001	103.000	0.025	0.000	0.001	16.000	346.000	431.000	0.010	0.014	7.450	2630.000	1680.000
5/12/2023	0.004	0.049	0.001	0.000	3.000	14.000	0.001	0.003	0.019	0.850	0.001	8.000	0.093	0.000	0.002	4.000	20.000	12.000	0.010	0.007	7.360	166.000	110.000
Average	**0.001**	**0.105**	**0.001**	**0.000**	**41.250**	**153.667**	**0.001**	**0.004**	**0.018**	**0.630**	**0.001**	**35.000**	**0.098**	**0.000**	**0.002**	**8.250**	**90.917**	**75.833**	**0.010**	**0.011**	**7.584**	**875.833**	**518.917**
TSW09																							
5/01/2023	0.005	0.088	0.001	0.000	**1010.000**	1600.000	0.004	0.006	0.003	1.120	0.004	38.000	0.084	0.000	0.002	70.000	901.000	**2150.000**	0.010	0.029	6.550	**7090.000**	**5610.000**
15/02/2023	0.004	0.074	0.001	0.003	814.000	1660.000	0.004	0.104	0.005	4.160	0.007	53.000	0.537	0.000	0.014	57.000	647.000	**2120.000**	0.010	0.513	**5.450**	5870.000	3960.000
6/03/2023	0.002	0.065	0.001	**0.014**	610.000	857.000	0.001	0.278	**3.930**	5.330	0.001	80.000	1.480	0.000	0.044	41.000	442.000	**1900.000**	0.010	2.490	**4.890**	5300.000	**4490.000**
4/04/2023	0.005	0.059	0.001	**0.015**	888.000	1670.000	0.015	0.439	**1.540**	4.690	0.005	148.000	2.170	0.000	0.063	56.000	775.000	**3010.000**	0.010	2.770	6.170	**7990.000**	**6500.000**
2/05/2023	0.006	0.110	0.001	0.001	**1040.000**	2720.000	0.003	0.014	0.003	0.650	0.004	64.000	0.100	0.000	0.005	65.000	1550.000	**3170.000**	0.010	0.082	**9.040**	**11300.000**	**8520.000**
1/06/2023	0.007	0.099	0.001	0.001	856.000	1470.000	0.002	0.016	0.006	1.340	0.006	42.000	0.156	0.000	0.005	50.000	816.000	**2500.000**	0.010	0.059	**5.470**	**7260.000**	**5430.000**
7/07/2023	0.005	0.075	0.001	0.000	771.000	1560.000	0.004	0.002	0.015	0.990	0.010	29.000	0.044	0.000	0.002	34.000	709.000	**1990.000**	0.010	0.018	6.560	3450.000	**4630.000**
7/08/2023	0.003	0.067	0.001	0.000	545.000	1150.000	0.004	0.007	0.023	0.770	0.002	37.000	0.072	0.000	0.003	29.000	524.000	**1360.000**	0.010	0.061	6.550	5070.000	3740.000
4/09/2023	0.005	0.058	0.001	0.000	714.000	1280.000	0.002	0.004	0.008	0.700	0.006	36.000	0.064	0.000	0.002	47.000	628.000	**2110.000**	0.010	0.046	6.540	5900.000	**4340.000**
9/10/2023	0.004	0.093	0.001	0.002	796.000	1660.000	0.005	0.039	**1.430**	2.260	0.020	48.000	0.203	0.000	0.008	80.000	732.000	**1880.000**	0.010	0.390	6.360	**7010.000**	**5290.000**
6/11/2023	0.004	0.062	0.001	0.001	659.000	1330.000	0.007	0.026	0.084	3.810	0.010	67.000	0.190	0.000	0.006	36.000	757.000	**2000.000**	0.010	0.261	**5.380**	**6570.000**	**4780.000**
5/12/2023	0.003	0.090	0.001	0.000	684.000	900.000	0.003	0.008	0.003	0.880	0.003	31.000	0.071	0.000	0.003	45.000	529.000	**1700.000**	0.010	0.086	6.340	5280.000	**4090.000**
Average	**0.004**	**0.078**	**0.001**	**0.003**	**782.250**	**1488.083**	**0.005**	**0.079**	**0.588**	**2.225**	**0.007**	**56.083**	**0.431**	**0.000**	**0.013**	**50.833**	**750.833**	**2157.500**	**0.010**	**0.567**	**6.275**	**6507.500**	**5115.000**

Appendix Table 1 2023 Surface Water Quality Results (mg/L) (Cont'd)

Date	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Sulfate as SO4	Vanadium	Zinc	pH	Conductivity	Total Dissolved Solids @180°C
Stock Watering Triggers *	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	-	0.5	0.05	-	350	1	0.1	5	10	5	-	10	0.002	2	-	230	-	0.5	5	6 - 9	6000	-
TSW10																							
15/02/2023	0.002	0.061	0.001	0.001	428.000	498.000	0.001	0.015	0.005	5.760	0.035	19.000	0.548	0.000	0.006	34.000	255.000	**1150.000**	0.010	0.198	**4.030**	3020.000	2660.000
31/03/2023	0.004	0.068	0.001	0.007	349.000	1940.000	0.006	0.101	0.260	3.790	0.015	324.000	1.050	0.000	0.020	33.000	1340.000	**2000.000**	0.010	0.528	7.780	**9330.000**	**6960.000**
1/06/2023	0.002	0.048	0.001	0.005	164.000	914.000	0.001	0.087	0.051	0.050	0.001	138.000	0.991	0.000	0.015	22.000	595.000	**1130.000**	0.010	0.281	7.140	3770.000	2810.000
19/09/2023	0.026	0.067	0.001	0.008	423.000	2710.000	0.048	0.144	**2.520**	37.500	**0.138**	367.000	1.640	0.000	0.049	39.000	1510.000	**2360.000**	0.030	1.640	7.920	**10500.000**	**7380.000**
5/12/2023	0.027	0.074	0.001	0.005	163.000	1100.000	0.047	0.097	**1.680**	40.800	**0.111**	190.000	0.983	0.000	0.046	24.000	759.000	929.000	0.030	1.320	7.820	5590.000	3630.000
Average	**0.012**	**0.064**	**0.001**	**0.005**	**305.400**	**1432.400**	**0.021**	**0.089**	**0.903**	**17.580**	**0.060**	**207.600**	**1.042**	**0.000**	**0.027**	**30.400**	**891.800**	**1513.800**	**0.018**	**0.793**	**6.938**	**6442.000**	**4688.000**
TSW11																							
7/07/2023	0.001	0.015	0.001	0.002	338.000	352.000	0.001	0.100	**1.820**	0.810	0.001	28.000	0.401	0.000	0.027	10.000	206.000	**1020.000**	0.010	0.665	**3.300**	2470.000	1910.000
Average	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**

* ANSECC Stock water guidelines for cattle (Primary)

ANZECC Irrigation and general use guidelines for wheat (Secondary)

N/A – Not sufficiently toxic to stock

Appendix Table 2 2023 Groundwater Quality Result (mg/L)

Date	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Sulfate as SO4	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	-	0.5	0.05	-	350	1	0.1	5	10	5	-	10	0.002	2	-	230	-	0.5	5	6 - 9	6000	-
PZH001																							
20/04/2023	0.001	0.011	0.001	0.000	143.000	4050.000	0.001	0.001	0.019	0.100	0.001	504.000	0.005	0.000	0.006	8.000	2530.000	2250.000	0.010	0.045	7.710	14700.000	9730.000
27/06/2023	0.001	0.027	0.001	0.001	92.000	2520.000	0.001	0.004	0.062	0.670	0.003	299.000	0.259	0.000	0.008	17.000	1410.000	896.000	0.010	0.212	8.390	9730.000	6300.000
18/07/2023	0.002	0.018	0.001	0.000	166.000	3890.000	0.001	0.004	0.088	0.160	0.002	625.000	0.136	0.000	0.024	15.000	2570.000	1560.000	0.010	0.175	7.450	14300.000	9390.000
16/10/2023	0.001	0.010	0.001	0.000	132.000	3600.000	0.001	0.001	0.019	0.100	0.001	496.000	0.002	0.000	0.004	8.000	2380.000	2280.000	0.010	0.102	8.050	15100.000	9920.000
Average	**0.001**	**0.017**	**0.001**	**0.000**	**133.250**	**3515.000**	**0.001**	**0.003**	**0.047**	**0.258**	**0.002**	**481.000**	**0.101**	**0.000**	**0.011**	**12.000**	**2222.500**	**1746.500**	**0.010**	**0.134**	**7.900**	**13457.500**	**8835.000**
PZH002																							
20/04/2023	0.001	0.016	0.001	0.000	168.000	3400.000	0.001	0.001	0.002	0.050	0.001	392.000	0.022	0.000	0.002	11.000	2320.000	1860.000	0.010	0.007	7.520	13100.000	8350.000
14/06/2023	0.001	0.014	0.001	0.000	148.000	3110.000	0.001	0.001	0.002	0.050	0.001	354.000	0.019	0.000	0.001	11.000	2020.000	1590.000	0.010	0.011	7.760	13100.000	8710.000
18/07/2023	0.001	0.017	0.001	0.000	180.000	3230.000	0.001	0.001	0.003	0.050	0.001	433.000	0.020	0.000	0.004	14.000	2500.000	2060.000	0.010	0.048	7.440	12900.000	8550.000
16/10/2023	0.001	0.016	0.001	0.000	153.000	2940.000	0.001	0.001	0.005	0.080	0.001	373.000	0.018	0.000	0.003	12.000	2140.000	1880.000	0.010	0.039	7.990	13200.000	8740.000
Average	**0.001**	**0.016**	**0.001**	**0.000**	**162.250**	**3170.000**	**0.001**	**0.001**	**0.003**	**0.058**	**0.001**	**388.000**	**0.020**	**0.000**	**0.003**	**12.000**	**2245.000**	**1847.500**	**0.010**	**0.026**	**7.678**	**13075.000**	**8587.500**
PZH003																							
20/04/2023	0.001	0.020	0.001	0.000	262.000	5770.000	0.001	0.006	0.017	0.190	0.001	682.000	0.222	0.000	0.008	30.000	3140.000	2240.000	0.010	0.065	7.480	18800.000	12400.000
14/06/2023	0.001	0.012	0.001	0.000	238.000	5300.000	0.001	0.013	0.004	0.580	0.001	642.000	0.079	0.000	0.020	25.000	2750.000	2270.000	0.010	0.144	7.610	19100.000	13300.000
18/07/2023	0.001	0.022	0.001	0.000	246.000	4100.000	0.001	0.003	0.029	0.280	0.001	574.000	0.070	0.000	0.018	30.000	2520.000	1870.000	0.010	0.338	7.500	15200.000	10500.000
16/10/2023	0.001	0.019	0.001	0.000	248.000	4930.000	0.001	0.003	0.029	0.370	0.001	662.000	0.070	0.000	0.019	31.000	2960.000	2220.000	0.010	0.375	8.000	19600.000	12900.000
Average	**0.001**	**0.018**	**0.001**	**0.000**	**248.500**	**5025.000**	**0.001**	**0.006**	**0.020**	**0.355**	**0.001**	**640.000**	**0.110**	**0.000**	**0.016**	**29.000**	**2842.500**	**2150.000**	**0.010**	**0.231**	**7.648**	**18175.000**	**12275.000**
PZH005																							
20/04/2023	0.001	0.020	0.001	0.001	219.000	4620.000	0.001	0.007	0.046	0.330	0.001	594.000	0.173	0.000	0.008	22.000	2880.000	2120.000	0.010	0.062	7.770	16400.000	11400.000
18/07/2023	0.003	0.013	0.001	0.000	160.000	4270.000	0.001	0.003	0.006	0.120	0.003	672.000	0.150	0.000	0.025	12.000	2550.000	1130.000	0.010	0.030	7.240	15200.000	9940.000
16/10/2023	0.002	0.024	0.001	0.002	188.000	4270.000	0.002	0.024	0.121	0.840	0.002	541.000	0.220	0.000	0.018	50.000	2640.000	2200.000	0.010	0.342	8.140	16800.000	11100.000
Average	**0.002**	**0.019**	**0.001**	**0.001**	**189.000**	**4386.667**	**0.001**	**0.011**	**0.058**	**0.430**	**0.002**	**602.333**	**0.181**	**0.000**	**0.017**	**28.000**	**2690.000**	**1816.667**	**0.010**	**0.145**	**7.717**	**16133.333**	**10813.333**
PZH006																							
27/03/2023	0.001	0.023	0.001	0.000	140.000	2540.000	0.001	0.008	0.016	0.060	0.001	460.000	0.230	0.000	0.006	7.000	1710.000	2120.000	0.010	0.058	6.900	11300.000	7870.000
20/04/2023	0.001	0.019	0.001	0.001	115.000	1900.000	0.001	0.005	0.081	0.230	0.001	469.000	0.067	0.000	0.007	11.000	2500.000	1190.000	0.010	0.067	8.120	8120.000	5150.000
19/09/2023	0.003	0.024	0.001	0.000	150.000	2810.000	0.001	0.009	0.021	1.070	0.009	493.000	0.243	0.000	0.006	8.000	1720.000	2480.000	0.010	0.067	7.380	11000.000	7310.000
6/12/2023	0.003	0.027	0.001	0.000	140.000	2810.000	0.001	0.010	0.015	1.260	0.006	513.000	0.297	0.000	0.008	7.000	1810.000	1920.000	0.010	0.125	7.620	11600.000	7960.000
Average	**0.002**	**0.023**	**0.001**	**0.000**	**136.250**	**2515.000**	**0.001**	**0.008**	**0.033**	**0.655**	**0.004**	**483.750**	**0.209**	**0.000**	**0.007**	**8.250**	**1935.000**	**1927.500**	**0.010**	**0.079**	**7.505**	**10505.000**	**7072.500**
PZH007																							
31/03/2023	0.001	0.026	0.001	0.000	304.000	7330.000	0.001	0.001	0.012	0.050	0.001	844.000	0.004	0.000	0.001	33.000	4610.000	2480.000	0.010	0.026	7.900	25200.000	18500.000
16/06/2023	0.002	0.097	0.001	0.000	120.000	2560.000	0.001	0.004	0.003	0.960	0.002	310.000	1.970	0.000	0.008	21.000	1840.000	1550.000	0.010	0.030	7.840	11300.000	7280.000
19/09/2023	0.002	0.113	0.001	0.000	148.000	2710.000	0.002	0.004	0.001	1.190	0.003	389.000	1.940	0.000	0.009	29.000	2370.000	1980.000	0.010	0.056	7.900	11000.000	7010.000
21/11/2023	0.003	0.197	0.001	0.000	156.000	2980.000	0.002	0.008	0.009	0.810	0.005	377.000	2.050	0.000	0.014	25.000	2010.000	1770.000	0.010	0.064	7.850	11800.000	9530.000
Average	**0.002**	**0.108**	**0.001**	**0.000**	**182.000**	**3895.000**	**0.002**	**0.004**	**0.006**	**0.753**	**0.003**	**480.000**	**1.491**	**0.000**	**0.008**	**27.000**	**2707.500**	**1945.000**	**0.010**	**0.044**	**7.873**	**14825.000**	**10580.000**

Appendix Table 2 2023 Groundwater Quality Result (mg/L) (Cont'd)

Date	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Sulfate as SO4	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	-	0.5	0.05	-	350	1	0.1	5	10	5	-	10	0.002	2	-	230	-	0.5	5	6 - 9	6000	-
PZH008																							
18/05/2023	0.008	0.018	0.001	0.000	140.000	3960.000	0.001	0.001	0.007	0.060	0.001	483.000	0.023	0.000	0.002	8.000	2390.000	1810.000	0.010	0.052	7.410	13600.000	9270.000
14/06/2023	0.007	0.017	0.001	0.000	144.000	3640.000	0.001	0.001	0.005	0.070	0.001	444.000	0.013	0.000	0.002	8.000	2030.000	1600.000	0.010	0.049	7.690	14300.000	9380.000
23/08/2023	0.008	0.019	0.001	0.000	169.000	4300.000	0.001	0.001	0.004	0.100	0.001	508.000	0.011	0.000	0.001	10.000	2390.000	1720.000	0.010	0.034	7.560	13500.000	9400.000
21/11/2023	0.009	0.019	0.001	0.000	165.000	3700.000	0.001	0.002	0.005	0.050	0.001	515.000	0.002	0.000	0.005	10.000	2400.000	1920.000	0.010	0.047	7.560	13500.000	10500.000
Average	**0.008**	**0.018**	**0.001**	**0.000**	**154.500**	**3900.000**	**0.001**	**0.001**	**0.005**	**0.070**	**0.001**	**487.500**	**0.012**	**0.000**	**0.003**	**9.000**	**2302.500**	**1762.500**	**0.010**	**0.046**	**7.555**	**13725.000**	**9637.500**
PZH009																							
18/05/2023	0.001	0.046	0.001	0.001	162.000	5280.000	0.001	0.001	0.065	0.050	0.001	579.000	0.003	0.000	0.014	15.000	3210.000	2320.000	0.010	0.087	7.640	18100.000	12000.000
14/06/2023	0.001	0.042	0.001	0.001	170.000	4920.000	0.001	0.001	0.061	0.050	0.001	542.000	0.003	0.000	0.012	14.000	2740.000	2070.000	0.010	0.078	7.850	17800.000	12400.000
23/08/2023	0.001	0.048	0.001	0.001	205.000	5750.000	0.001	0.001	0.069	0.050	0.001	608.000	0.003	0.000	0.014	17.000	3240.000	2170.000	0.010	0.097	7.710	17500.000	12400.000
21/11/2023	0.001	0.046	0.001	0.001	196.000	4840.000	0.001	0.002	0.064	0.050	0.001	634.000	0.015	0.000	0.017	17.000	3320.000	2340.000	0.010	0.123	7.830	17500.000	13700.000
Average	**0.001**	**0.046**	**0.001**	**0.001**	**183.250**	**5197.500**	**0.001**	**0.001**	**0.065**	**0.050**	**0.001**	**590.750**	**0.006**	**0.000**	**0.014**	**15.750**	**3127.500**	**2225.000**	**0.010**	**0.096**	**7.758**	**17725.000**	**12625.000**
PZH014																							
18/05/2023	0.001	0.035	0.001	0.001	133.000	4430.000	0.001	0.001	0.038	0.050	0.001	456.000	0.013	0.000	0.008	14.000	2810.000	1720.000	0.010	0.059	7.750	15100.000	9970.000
23/08/2023	0.001	0.003	0.001	0.000	213.000	4620.000	0.001	0.001	0.002	0.200	0.001	575.000	0.012	0.000	0.002	14.000	2580.000	1880.000	0.010	0.014	7.290	14700.000	10200.000
21/11/2023	0.002	0.033	0.001	0.001	208.000	5110.000	0.001	0.009	0.052	0.070	0.001	628.000	0.085	0.000	0.011	22.000	3340.000	2170.000	0.010	0.156	8.110	17800.000	14400.000
Average	**0.001**	**0.024**	**0.001**	**0.001**	**184.667**	**4720.000**	**0.001**	**0.004**	**0.031**	**0.107**	**0.001**	**553.000**	**0.037**	**0.000**	**0.007**	**16.667**	**2910.000**	**1923.333**	**0.010**	**0.076**	**7.717**	**15866.667**	**11523.333**
PZH015																							
18/05/2023	0.002	0.024	0.001	0.000	288.000	7410.000	0.001	0.003	0.026	0.050	0.001	766.000	0.030	0.000	0.003	28.000	4150.000	2350.000	0.010	0.071	8.090	23200.000	16700.000
23/08/2023	0.003	0.024	0.001	0.001	239.000	5960.000	0.001	0.008	0.046	0.150	0.001	650.000	0.088	0.000	0.010	18.000	3270.000	2100.000	0.010	0.153	7.800	17700.000	12500.000
21/11/2023	0.001	0.027	0.001	0.001	282.000	7060.000	0.001	0.005	0.038	0.130	0.001	850.000	0.043	0.000	0.006	31.000	4460.000	2640.000	0.010	0.188	8.040	24300.000	21700.000
Average	**0.002**	**0.025**	**0.001**	**0.001**	**269.667**	**6810.000**	**0.001**	**0.005**	**0.037**	**0.110**	**0.001**	**755.333**	**0.054**	**0.000**	**0.006**	**25.667**	**3960.000**	**2363.333**	**0.010**	**0.137**	**7.977**	**21733.333**	**16966.667**
PZH017																							
18/05/2023	0.001	0.025	0.001	0.000	100.000	3550.000	0.001	0.001	0.001	0.050	0.001	298.000	0.021	0.000	0.001	13.000	2290.000	926.000	0.010	0.009	7.730	12100.000	7340.000
23/08/2023	0.001	0.027	0.001	0.000	181.000	4920.000	0.001	0.001	0.002	0.050	0.001	501.000	0.018	0.000	0.003	18.000	2830.000	1520.000	0.010	0.046	7.890	15100.000	10100.000
21/11/2023	0.001	0.026	0.001	0.000	118.000	3380.000	0.001	0.002	0.005	0.050	0.001	309.000	0.024	0.000	0.002	14.000	2280.000	987.000	0.010	0.020	7.910	12000.000	8820.000
Average	**0.001**	**0.026**	**0.001**	**0.000**	**133.000**	**3950.000**	**0.001**	**0.001**	**0.003**	**0.050**	**0.001**	**369.333**	**0.021**	**0.000**	**0.002**	**15.000**	**2466.667**	**1144.333**	**0.010**	**0.025**	**7.843**	**13066.667**	**8753.333**
PZH018																							
18/05/2023	0.001	0.024	0.001	0.000	324.000	8440.000	0.001	0.001	0.008	0.050	0.001	843.000	0.001	0.000	0.002	30.000	4690.000	2660.000	0.010	0.029	7.960	25500.000	18900.000
14/06/2023	0.001	0.023	0.001	0.000	295.000	7580.000	0.001	0.001	0.010	0.050	0.001	779.000	0.002	0.000	0.001	27.000	3940.000	2370.000	0.010	0.056	8.100	25700.000	18500.000
23/08/2023	0.001	0.026	0.001	0.000	366.000	9060.000	0.001	0.001	0.010	0.050	0.001	904.000	0.002	0.000	0.002	33.000	4790.000	2480.000	0.010	0.070	7.970	25300.000	18300.000
21/11/2023	0.001	0.024	0.001	0.000	307.000	7590.000	0.001	0.001	0.009	0.050	0.001	915.000	0.011	0.000	0.002	32.000	4780.000	2940.000	0.010	0.108	7.990	25200.000	22300.000
Average	**0.001**	**0.024**	**0.001**	**0.000**	**323.000**	**8167.500**	**0.001**	**0.001**	**0.009**	**0.050**	**0.001**	**860.250**	**0.004**	**0.000**	**0.002**	**30.500**	**4550.000**	**2612.500**	**0.010**	**0.066**	**8.005**	**25425.000**	**19500.000**

Appendix Table 3 2023 Groundwater Quality Result (mg/L) (Cont'd)

Date	Arsenic	Barium	Beryllium	Cadmium	Calcium	Chloride	Chromium	Cobalt	Copper	Iron	Lead	Magnesium	Manganese	Mercury	Nickel	Potassium	Sodium	Sulfate as SO4	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	-	0.5	0.05	-	350	1	0.1	5	10	5	-	10	0.002	2	-	230	-	0.5	5	6 - 9	6000	-
PZH019																							
27/03/2023	0.003	0.038	0.001	0.007	158.000	3020.000	0.004	0.129	0.490	0.590	0.007	463.000	1.510	0.000	0.054	17.000	2020.000	1880.000	0.010	0.727	8.060	12000.000	8700.000
14/06/2023	0.001	0.016	0.001	0.000	221.000	5100.000	0.001	0.010	0.017	0.160	0.001	596.000	0.054	0.000	0.016	23.000	2670.000	2480.000	0.010	0.250	7.950	18600.000	13000.000
19/09/2023	0.002	0.027	0.001	0.001	152.000	3430.000	0.001	0.010	0.052	0.500	0.002	483.000	0.300	0.000	0.008	12.000	2020.000	2140.000	0.010	0.204	7.970	12200.000	8030.000
6/12/2023	0.001	0.031	0.001	0.004	169.000	3800.000	0.001	0.055	0.181	1.760	0.001	502.000	0.973	0.000	0.019	20.000	2380.000	1480.000	0.010	0.356	7.990	13900.000	8360.000
Average	**0.002**	**0.028**	**0.001**	**0.003**	**175.000**	**3837.500**	**0.002**	**0.051**	**0.185**	**0.753**	**0.003**	**511.000**	**0.709**	**0.000**	**0.024**	**18.000**	**2272.500**	1995.000	**0.010**	**0.384**	**7.993**	14175.000	9522.500
PZH020																							
14/06/2023	0.002	0.028	0.001	0.001	200.000	5050.000	0.001	0.004	0.037	0.230	0.001	555.000	0.053	0.000	0.007	21.000	2720.000	2000.000	0.010	0.158	8.130	18500.000	12900.000
Average	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**	**n/a**
PZH021																							
27/03/2023	0.003	0.043	0.008	0.314	194.000	1540.000	0.027	5.500	27.400	23.300	0.018	649.000	15.700	0.000	1.610	19.000	802.000	6580.000	0.010	38.600	3.420	12100.000	13300.000
16/06/2023	0.001	0.060	0.001	0.000	220.000	4540.000	0.001	0.001	0.001	6.310	0.001	511.000	1.260	0.000	0.001	14.000	2240.000	1360.000	0.010	0.023	7.850	16200.000	11000.000
19/09/2023	0.001	0.019	0.001	0.000	173.000	3500.000	0.001	0.002	0.019	0.330	0.002	399.000	0.049	0.000	0.007	14.000	2310.000	2350.000	0.010	0.136	7.930	13000.000	8570.000
6/12/2023	0.001	0.074	0.001	0.000	255.000	4290.000	0.001	0.001	0.007	8.250	0.001	606.000	1.340	0.000	0.001	16.000	2660.000	1480.000	0.010	0.040	7.810	16000.000	11000.000
Average	**0.002**	**0.049**	**0.003**	0.079	**210.500**	**3467.500**	**0.008**	1.376	6.857	**9.548**	**0.006**	**541.250**	**4.587**	**0.000**	**0.405**	**15.750**	**2003.000**	2942.500	**0.010**	**9.700**	**6.753**	14325.000	10967.500

* ANSECC Stock water guidelines for cattle (Primary)

\# ANZECC Irrigation and general use guidelines for wheat (Secondary)

N/A – Not sufficiently toxic to stock