LARVOTTO RESOURCES
HILLGROVE MINES

Report:

Annual Environmental Management (AEMR)

2023-24

Document Title		Report: Annual Environmental Management (AEMR) 2023-24			
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Approver Role	**Approver Name**	**Approver Signature**		**Doc. Owner**	**Owner Name**
Managing Director	R.Heeks			HSEC Sup't	K.Bryant

A review of this document will be conducted within the review timeframe, or if any of the following occur:

- Annually

Document History

Version No.	Revision Date	Change Notes
1	March 2024	Annual report created

COMPLIANCE REPORT DECLARATION FORM

Project Name:	Hillgrove Mine
Project Application Number:	DA/98/35
Description of Project:	
Project Address:	130 Bracken Street, Hillgrove NSW 2350
Proponent:	Hillgrove Mines Pty Ltd, a wholly owned subsidiary of Larvotto Resources Limited
Title of Compliance Report:	**Annual Environmental Management Report 2023-24**
Date:	27 March 2024

I declare that I have reviewed the contents of the attached Compliance Report and to the best of my knowledge:

i. The Compliance Report has been prepared in accordance with all relevant conditions of consent.
ii. The Compliance Report has been prepared in accordance with the Compliance Reporting Requirements.
iii. The findings of the Compliance Report are reported truthfully, accurately and completely.
iv. Due diligence and professional judgement have been exercised in preparing the Compliance Report.
v. The Compliance Report is an accurate summary of the compliance status of the development.

Notes:

- Under section 10.6 of the Environmental Planning and Assessment Act 1979 a person must not include false or misleading information (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect.

  The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit.

  The maximum penalty is, in the case of a corporation, $1 million and for an individual, $250,000;
- The Crimes Act 1900 contains other offences relating to false and misleading information: section 307B (giving false or misleading information – maximum penalty 2 years' imprisonment or 200 penalty units, or both).

Name of Authorised Reporting Officer:	Ron Heeks
Title:	Managing Director
Signature:	
Qualification:	B.App.Sc
Company:	Larvotto Resources Limited
Company Address:	Suite 1, 88 Broadway, Nedlands WA 6009 PO Box 496, Claremont WA 6910

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1. STATEMENT OF COMPLIANCE

Table 1 below provides the compliance status of the operation against all relevant approval documents, as at the end of the reporting period.

During the 2023-24 reporting year Hillgrove Mines Pty Ltd had Administrators Appointed from the commencement of the year until 15 December 2023, when Hillgrove Mines was acquired out of Administration by Larvotto Resources Limited.

Whilst under Administration, Hillgrove Mines did not have an active website, so the 2022-23 AEMR was unable to be made available for public review by that means. In the absence of a website, a copy of the report was available at all times, in the event a copy was requested by a member of the public (no such request was made).

On completion, a copy of the 2023-24 AEMR will be posted to be available on the Larvotto Resources website.

Table 1: Statement of Compliance

Were all the conditions of the relevant approvals complied with?	Yes / No
Development Consent (DC) S98/00802 Development Approval (DA) 98/35	No
Rehabilitation Management Plan	Yes
Mining Leases # (as per Table 3)	Yes
Water Access Licence (WAL) 40217, WAL39495, WAL39497, WAL39500, WAL39498	Yes
Environment Protection Licence (EPL) 921	Yes

Table 2 shows 12 Non-Compliance items, identified from the 2023 Independent Environmental Audit and confirmed by breach notice from DPHI. A summary of each NC is detailed along with current status and Hillgrove Mine's response.

Of the 12 NC's, 3 have been compliant for the 2023-24 reporting year and 1 became compliant early in this reporting year. 8 items remain Non-Compliant at the time of reporting.

Table 2: Details of Non-Compliances

Relevant Approval	Cond. #	Source	Condition Desc. (Summary)	Compliance Status	Comment	Where addressed in AEMR
DA98/35	6	Feb23 IEA	The Applicant shall employ an Environmental Officer whose qualifications are acceptable to the Secretary.	Non-compliant from 29 Jan to 3 Mar 2024. Compliant since 4 Mar 2024.	Compliance achieved on 4 Mar 2024 when Katie Bryant was approved as EO by the Secretary.	11.3 - Non-Compliances
DA98/35	8	Feb23 IEA	The Applicant shall prepare and submit and Annual Environmental Management Plan Report.	Non-compliant from 2019-20, 2020-21, 2021-22 (prior reporting years). Compliant for 2023-24 reporting year.	Compliance was achieved by submitting 2022-23 AEMR to DPHI, ARC before 31 Mar 2023.	11.3 - Non-Compliances

Relevant Approval	Cond. #	Source	Condition Desc. (Summary)	Compliance Status	Comment	Where addressed in AEMR
DA98/35	13	Feb23 IEA	The TSF shall be designed, constructed, operated, monitored and maintained such that all water received in the facility is evaporated, retained or reused and there is no discharge of tailings water to the environment. The Applicant shall comply with all requirements of the EPA, DRG, and the NSW Dam Safety Committee to ensure that there is no seepage, leakage or overflow from the TSF.	Not Compliant	Identified as a non-compliance as not all recommendations from Knight Piesold 2021 surveillance report have been implemented. Whilst a number of recommendations have been addressed, some remain outstanding.	11.3 - Non-Compliances
DA98/35	31A	Feb23 IEA	By end of Dec-2020, the Applicant shall commission an independent road safety audit of the intersection of Waterfall Way and Stockton Road	Not Compliant	Planned for 2024-25 reporting year.	11.3 - Non-Compliances
DA98/35	32	Feb23 IEA	Applicant shall prepare a Noise and Vibration Management Plan in consultation with and approval of EPA. Plan shall define noise management procedures, monitoring protocols and measures for mitigating impacts.	Not Compliant	Noise & Vibration Management Plan is drafted, pending approval. EPA advised they will not review or approve management plans.	11.3 - Non-Compliances
DA98/35	34	Feb23 IEA	Applicant shall ensure that the $LA_{10(15\ min)}$ noise levels due to the normal operation of the mine, when measured or computed at any residence (other than Applicant owned), shall not exceed a noise level of 35 dB(A) or 30 dB(A) where the noise source is tonal.	Non-compliant from Jan-Oct 2021 and Mar-Sep 2022 (prior reporting years). Compliant for 2023-24 reporting year.	Hillgrove Mine was in Care & Maintenance for entirety of 2023-24 year, not in normal operation. Routine noise monitoring was established which confirmed noise levels were within condition limits.	6.2 - Noise and Blasting 11.3 - Non-Compliances

Relevant Approval	Cond. #	Source	Condition Desc. (Summary)	Compliance Status	Comment	Where addressed in AEMR
DA98/35	35	Feb23 IEA	Noise measurement shall be undertaken under prevailing weather conditions, in absence of temperature inversions and over a period of time sufficient to be representative of the noise levels being emitted from the mine.	Non-compliant from Jan-Oct 2021 and Mar-Sep 2022 (prior reporting years). Compliant for 2023-24 reporting year.	Hillgrove Mine was in Care & Maintenance for entirety of 2023-24 year, not in normal operation. Routine noise monitoring was established which confirmed noise levels were within condition limits.	6.2 - Noise and Blasting 11.3 - Non-Compliances
DA98/35	41	Feb23 IEA	Applicant shall implement, in consultation with EPA, dust control measures aimed at achieving relevant EPA dust deposition standards.	Not Compliant	Dust Management Plan is drafted, pending approval. EPA advised they will not review or approve management plans.	6.3 - Air Quality 11.3 - Non-Compliances
DA98/35	43	Feb23 IEA	Applicant shall prepare a Dust Management Plan which is to have particular regard to the tailings dams, ore stockpiles, internal haul roads and processing facilities.	Not Compliant	Dust Management Plan is drafted, pending approval.	11.3 - Non-Compliances
DA98/35	47	Feb23 IEA	12 months after commencement of operations applicant shall carry out a comprehensive hazard audit and within one month of the audit submit a report to the Secretary. Further audits shall be carried out every three years.	Not Compliant	Hazard Audit has not been carried out.	11.3 - Non-Compliances
DA98/35	50	Feb23 IEA	Applicant shall carry out rehabilitation of the site progressively, that is, as soon as reasonably practicable following disturbance.	Not Compliant	Bakers Creek Waste Dump has had first attempt at rehabilitation completed, but it regrowth has not been successful on steep slopes. A second round of rehab work is planned for the coming year. TSF1 is estimated to contain 1.4 Mt at 1.6 g/t gold and 0.6% antimony, and during 2023-24 assessment	8.1 - Rehabilitation Performance 11.3 - Non-Compliances

Relevant Approval	Cond. #	Source	Condition Desc. (Summary)	Compliance Status	Comment	Where addressed in AEMR
					for re-treatment commenced with collection of samples and commencement of metallurgical test work. Re-treatment is considered likely, which means the facility is not yet available for rehabilitation.	
DA98/35	53	Feb23 IEA	Within 3 months of: (a) an AEMR under condition 8; (b) an audit under condition 10; or (c) Modification to the conditions of this consent; Applicant shall review, and if necessary revise plans required under this consent to the satisfaction of the Secretary. Where revisions are required, within 4 weeks of the review, revised document must be submitted to Secretary for approval.	Not Compliant	The Environmental Management Plan, including Control Standards for each impact are drafted. These will be reviewed following submission of this AEMR and submitted to the Secretary for approval.	11.3 - Non-Compliances

2. INTRODUCTION

This Annual Report has been developed in accordance with the NSW Department of Planning and Environment's (DPE) Integrated Mining Policy – Compliance Reporting – Post Approval Requirements May 2020.

This document has been prepared to satisfy the following requirements:

- The Annual Environmental Management Plan requirements under Condition 8 of DA (Development Approval) 98/35
- Routine reporting requirements of DPI associated with WALs (Water Access Licence)
- Environmental Management Report requirements of the Division of Resources and Energy.

The report is based on the EPL (Environment Protection Licence) 921 reporting period from 28 January 2023 to 27 January 2024. The reporting period will be referred to as 2023 in this report.

2.1 Project Background

Mining at Hillgrove commenced in Bakers Creek in 1877.

The Hillgrove mineral field was one of the major goldfields in the state with a long history of mining activities. Mining commenced in Bakers Creek gorge in 1877 and hosts over 200 deposits by underground methods. At its peak in 1898, the population of Hillgrove was approximately 4,000 persons.

During the early phase of mining until a suspension in the 1920's mining activities caused significant impacts to the environment with processing facilities constructed adjacent to the creek at the base of the gorge:

- An estimated 7 Mt of contaminated waste rock and tailings were deposited into and adjacent to Bakers Creek (Ashley and Graham 2001, Ashley *et al.* 2003, Ashley *et al.* 2007); and
- Vegetation was almost entirely cleared from the gorge for use as boiler fuel and underground support.

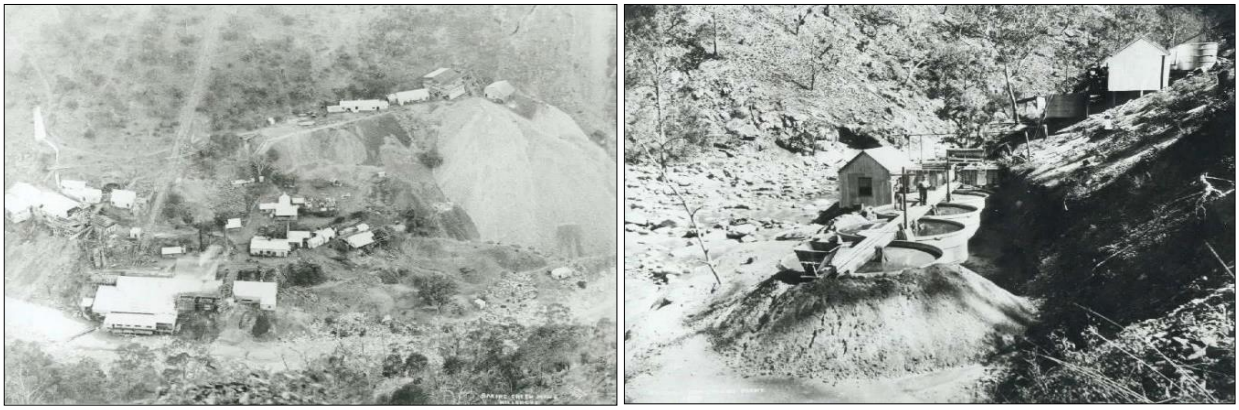

Figure 1: Bakers Creek Mine above Bakers Ck in 1905 (left) and processing adjacent to Bakers Creek (right)

Since that time, there have been three four broad phases of operation:

- In 1969 an antimony and gold concentrator were built atop the Hillgrove side of the gorge and nine mining areas were extracted from underground, plus two small open pits.
- In 1998 the current operating permit (DA98/35) was approved for New England Antimony Mines (NEAM) to continue operations and construct a pressure oxidation (POX) plant to produce gold ore from the concentrate. NEAM was placed in receivership in 2002 and the operations were suspended.

- Straits Resources purchased the project in 2004 and in 2007 commenced construction of a new processing plant, antimony leaching and smelting facilities, and tailings storage facility (TSF2) but operations were suspended in 2009 due to under-performance of the antimony circuit.
- Hillgrove Mines Pty Ltd (wholly owned subsidiary of Bracken Resources), purchased the project in 2013, upgraded the plant to produce both gold and antimony concentrates, then recommenced operations in April 2014. The site was again suspended in 2016 due to low antimony prices.
- Red River Resources purchased Hillgrove Mines in August 2019. Exploration drilling was carried out and processing restarted in December 2020 treating remnant stockpiles from the early (c.1900) workings at Bakers Creek, and leach residues from the Straits Resources era. Processing was suspended in September 2022 and in November 2022, Red River and its subsidiaries entered Administration.
- Larvotto Resources Limited are the current owners of Hillgrove Mines Pty Ltd, acquiring the project out of Administration in December 2023. Under Larvotto ownership, the site has moved from full Care & Maintenance to Exploration & Assessment.

2.2 Location

The Hillgrove Mine is located 23 km east of Armidale in the New England region of New South Wales (**Error! R eference source not found.**). The project area is approximately 8x6 km and is topographically dominated by the Bakers Creek gorge. The gorge dissects the surrounding plateau with a drop-in elevation of approximately 450 meters. Processing and surface facilities are located on the eastern plateau near Hillgrove village.

2.3 Contacts for Key Personnel at Hillgrove Mine:

Mr Matthew Varvari	Mine Engineering Manager	0427 579 896 (mvarvari@larvottoresources.com)
Ms Katie Bryant	Environmental Officer	0488 204 160 (kbryant@larvottoresources.com)

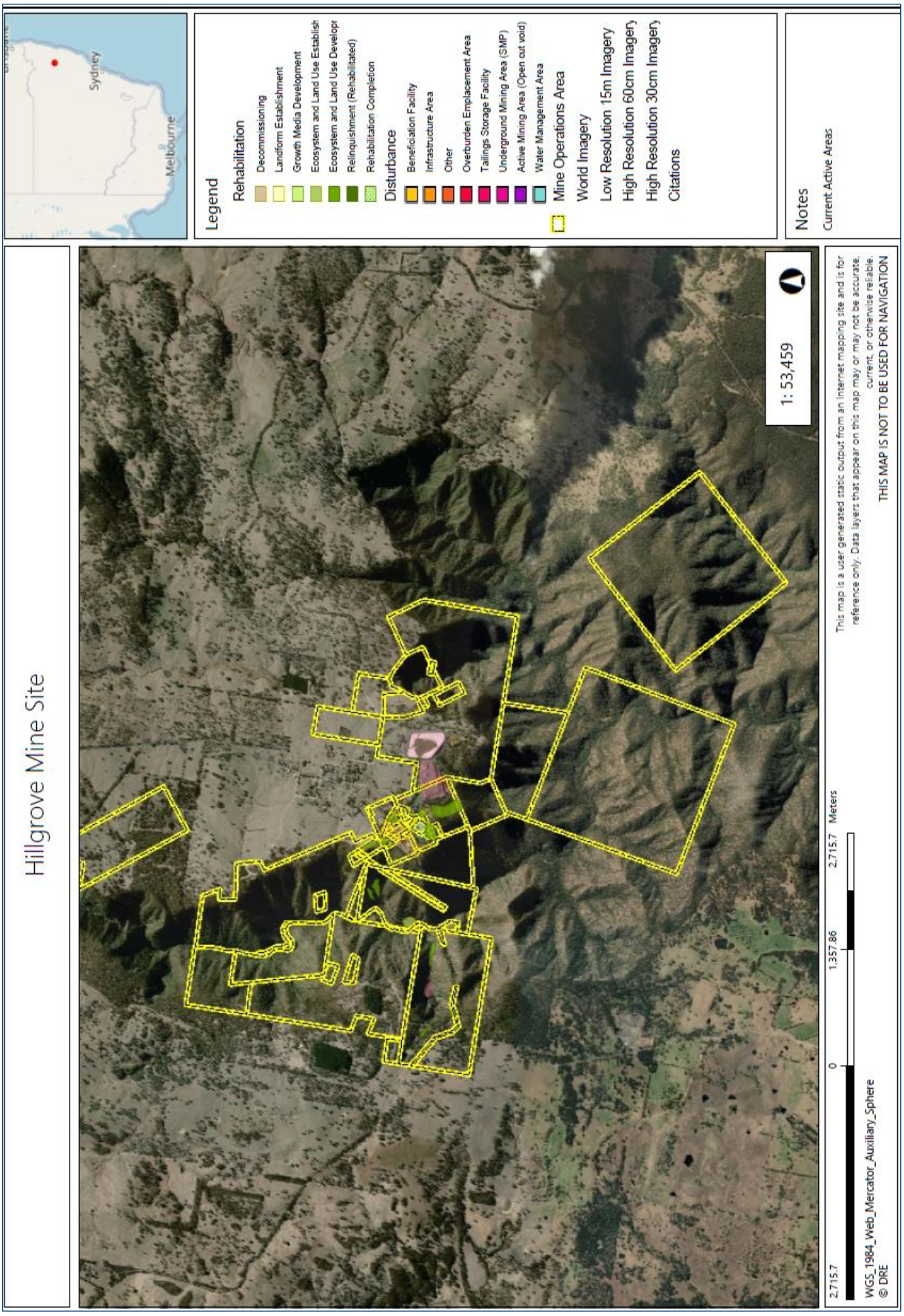

Figure 2: Hillgrove Mine Location Plan and Tenements

3. APPROVALS

Table 3 provides a summary of the key approvals for the Hillgrove Mine.

During 2023, the last of the remaining renewals expired mining tenements (GL, ML, MPL, PLL) were issued by the Aged Dealings team at the Mining, Exploration and Geoscience group in the Department of Regional NSW. This process is now complete.

Table 3: Development Consents and Licences

Authority	Approval Type	Number	Issued	Expires	Comment
DPHI	Development Consent	DA-98/35, DC S98/ Mod.4	18 Nov 1998	Continuing	Consent for Mine Expansion, POX plant, Brackins Spur and Lower Cooney Haul Roads, TSF2 and Brackins Spur mining area. Production permission expires 31 Dec-23 but all other conditions continue.
EPA	Environment Protection Licence	EPL 921	8 May 2001	No expiry	EPL for Hillgrove Mine
	Radiation Licence to Sell/Possess	5060782	2007	21 Jan 2025	For processing plant density gauges. Annual licence.
DPI	Water Access Licence	WAL 39495	12 Aug 2023	Continuing	Bakers Creek
	Water Access Licence	WAL 39497	20 Oct 2016	Continuing	Hillgrove Station
	Water Access Licence	WAL 39498	28 Mar 2013	Continuing	Town Reservoir, Industrial Use
	Water Access Licence	WAL 39500	27 Feb 2005	Specific Purpose	Town Reservoir, Domestic Use
	Water Access Licence	WAL 40217	18 Mar 2015	Continuing	Mine Adits, Groundwater Capture
	Water Supply Works	30WA 308489	1 Jul 2016	30 Jun 2029	Baker Creek, Bywash Dam
	Bore Water Supply Works	30WA 314503	1 Jul 2016	17 Mar 2030	Mine Adits, Groundwater (permitted as bores)
ARC, including antecedents	Development Consent	22/81	23 Jun 1981	Perpetuity	Building Approval for Surface Workshop
	Development Consent	DA-19-2000/C	29 Mar 2001	Perpetuity	Processing plant
	Construction Certificate for Modified DA DA-19-200/C	CC-75-2020	9 Nov 2020	Continuing	Modification to Processing plant
	Development Consent	42/82	22 Jul 1982	Perpetuity	Mining in Metz/Sunlight Gorge
	Development Consent	95/26	8 Mar 2004	Perpetuity	Consent under SEPP37 for continuing use of pre-1979 Mining Leases.
	Development Consent	26/2005/A	21 Sep 2006	Perpetuity	Sunlight haul road from Metz 7L to Bakers Creek.
	Conditional Deferred Commencement Consent	DA-174-2015/A	18 Feb 2020	Lapsed	Clarks Gully underground Mine

Table 4: Mineral Tenements

Authority	Approval Type	Number	Issued	Expires
	Exploration Licence	EL 3326	23 Aug 1989	23 Aug 2026
	Exploration Licence	EL 5973	19 Aug 2002	19 Aug 2025
	Exploration Licence	EL 5997	27 Sep 2002	27 Sep 2025
	Exploration Licence	EL 6419	17 May 2005	17 May 2024
	Gold Lease	GL 3959	8 Feb 1933	8 Feb 2043
	Gold Lease	GL 3980	29 Mar 1933	29 Mar 2041
	Gold Lease	GL 5845	16 Feb 1968	16 Feb 2030
	Mining Lease	ML 205	21 May 1976	21 Mar 2042
	Mining Lease	ML 219	16 Jun 1976	16 Jun 2042
	Mining Lease	ML 231	21 Jul 1976	21 Jul 2042
	Mining Lease	ML 391	16 Feb 1977	16 Feb 2043
	Mining Lease	ML 392	16 Feb 1977	16 Feb 2043
	Mining Lease	ML 592	3 May 1978	3 May 2042
	Mining Lease	ML 600	10 May 1978	10 May 2042
	Mining Lease	ML 649	4 Oct 1978	4 Oct 2042
	Mining Lease	ML 655	4 Oct 1978	4 Oct 2042
DRNSW	Mining Lease	ML 714	21 Mar 1979	21 Mar 2043
	Mining Lease	ML 749	4 Jul 1979	4 Jul 2042
	Mining Lease	ML 772	5 Sep 1979	5 Sep 2042
	Mining Lease	ML 810	5 Mar 1980	5 Mar 2043
	Mining Lease	ML 945	8 Jul 1981	8 Jul 2042
	Mining Lease	ML 961	9 Dec 1981	9 Dec 2042
	Mining Lease	ML 972	6 Jan 1982	6 Jan 2043
	Mining Lease	ML 1020	3 Nov 1982	11 Feb 2041
	Mining Lease	ML 1026	8 Dec 1982	8 Dec 2042
	Mining Lease	ML 1100	9 Nov 1983	9 Nov 2042
	Mining Lease	ML 1101	9 Nov 1983	9 Nov 2042
	Mining Lease	ML 1332	7 Oct 1993	11 Feb 2041
	Mining Lease	ML 1440	12 Feb 1999	12 Feb 2043
	Mining Lease	ML 1441	12 Feb 1999	12 Feb 2043
	Mining Lease	ML 1442	12 Feb 1999	12 Feb 2043
	Mining Lease	ML 1598	4 Dec 2007	4 Dec 2043
	Mining Lease	ML 1599	4 Dec 2007	4 Dec 2043
DRNSW	Mining Lease	ML 1600	4 Dec 2007	4 Dec 2043

Authority	Approval Type	Number	Issued	Expires
	Mining Lease	ML 1601	4 Dec 2007	4 Dec 2043
	Mining Lease	ML 1602	4 Dec 2007	4 Dec 2043
	Mining Lease	ML 1603	4 Dec 2007	4 Dec 2043
	Mining Lease	ML 1604	4 Dec 2007	4 Dec 2043
	Mining Lease	ML 5643	4 Nov 1958	14 Nov 2042
	Mining Lease	ML 6282	12 Mar 1971	12 Mar 2042
	Mining Purpose Lease	MPL 146	9 Aug 1978	9 Aug 2024
	Mining Purpose Lease	MPL 220	7 Dec 1983	7 Dec 2042
	Mining Purpose Lease	MPL 745	29 Mar 1933	11 Feb 2040
	Mining Purpose Lease	MPL 919	31 Aug 1938	11 Feb 2041
	Mining Purpose Lease	MPL 1427	6 Jul 1973	6 Jul 2043
	Private Lands Lease	PLL 350	28 May 1932	28 May 2043
	Private Lands Lease	PLL 416	20 Dec 1935	20 Dec 2042
	Private Lands Lease	PLL 661	27 Jul 1943	27 Jul 2042
	Private Lands Lease	PLL 804	22 Jul 1949	22 Jul 2032
	Private Lands Lease	PLL 1252	23 Dec 1969	23 Dec 2043
	Private Lands Lease	PLL 3827	21 Jul 1973	21 Aug 2041

4. OPERATIONS SUMMARY

4.1 Mining Operations

There have been no mining operations in the 2023-24 reporting period. Hillgrove Mines operating status has been Care and Maintenance from the commencement of the reporting year.

The operating status changes to Exploration and Assessment on 25 Jan 2024, when exploration diamond drilling commenced.

4.2 Next Reporting Period

Activity at Hillgrove Mine in the coming reporting period will focus on two main areas:

- **Assessment & Permitting:**

  New planning consent applications are being assessed and prepared currently but no applications are yet submitted. A planning advisor (Onward Consulting) has been engaged and meetings to discuss the applications have been held with both DPHI and ARC.

  Broadly, the consenting strategy will include modification of one or more existing consents, plus application for a new consent, to support the following activities:

  - Carrying out operations for 5-8 years;
  - Increasing processing capacity to c.600 ktpa;
  - Mining from Metz UG, Eleanora-Garibaldi OP and UG, Clarks Gully OP and UG and Brackins Spur UG;
  - Re-treatment of TSF1 and placement of tails from that facility into one built to modern standards;
  - Increasing tailings capacity of TSF2 at Hillgrove;
  - Constructing tailings capacity in a new facility at Clarks Gully; and
  - Access and infrastructure corridor between Hillgrove and Clarks Gully.

  It is anticipated that all consenting applications will be finalised and submitted in the coming year.

- **Exploration:**

  Exploration activities expected include:

  - Diamond Drilling at Bakers Creek, Garibaldi and Becks Point;
  - Reverse Circulation drilling at Clarks Gully;
  - Soil sampling on Hillgrove Station and Kiama East.

5. ACTIONS REQUIRED FROM THE PREVIOUS REPORT

A number of actions were required from the previous AEMR.

Table 5: Actions from Previous Report

Actions required from previous report	Requested By	Action Taken by operator	Where discussed in Annual Report
Add a complete table of all requirements under the current development consent.	DPHI	Table added to the end of the 2023-24 report	14 - Complete Consent Table for DA98/35
The Department requests that all future AEMRs adequately address this condition, and in doing so, include a summary of environmental monitoring results for all relevant environmental topics.	DPHI	Monitoring tables included in 202-23 report have been reviewed and improved for 2023-24. 2023-24 report adds table showing monitoring sample compliance, plus all results for EPL921 Annual Return as appendix.	6.1 - Environmental Monitoring
The Department requests that all future AEMRs: a) Clearly identify the complaint and action taken in response; and b) Provide a section specifically addressing this condition, and name it “Complaints”.	DPHI	Section will be added to the 2023-24 report.	11.2 - Complaints
Please make publicly available a copy of the 2022 AEMR on the company website.	DPHI	Due to Hillgrove Mines being under Administration during 2022-23, Hillgrove Mine, nor the Administrators had a website active during the period. A copy of the report was available on the premises at all times, in the event a member of the public requested such (this did not occur). The 2023-24 report will be uploaded to the Larvotto Resources website once the report is complete.	1 - Statement of Compliance

Table 6: Actions from Previous Report – Feb 2023 IEA, not detailed in 'Non-Compliances'.

Actions required from previous report	Requested By	Action Taken by operator	Where discussed in Annual Report
Storage of Surface Waters in Metz UG, not included in licencing or consent.	Feb23 IEA	Requested to add Metz UG to form part of Recycled Water Storage System (RWSS) in Mar 2024 review of EPL 921	7 - Water Management
Build-up of stored waste materials on site (eg: tyres, waste oil)	Feb23 IEA	Waste oil removed by licenced contractor. Tyres remain – were not addressed as Hillgrove Mines was under Administration until end of reporting year.	-
Response to 2022 Dam Safety NSW Audit was submitted but confirmation of receipt acceptance was not received.	Feb23 IEA	Confirmation of receipt received from DSNSW on 20 April 2023.	-

6. ENVIROMENTAL PERFORMANCE

During the 2023-24 reporting year the Environmental Management Plan was reviewed along with the control standards that sit within the EMP. These were updated with improvement actions identified from the Independent Environmental Audit.

The Environmental Monitoring Procedure was reviewed against the updated EMP and staff carrying out monitoring work were re-trained in the updated procedures.

All monitoring requirements defined by the Environmental Protection Licence have been met. EPL-921 Annual Return was submitted to EPA on 27 Mar 2023

Monitoring results have been consistent with the previous year, as the project has remained Care and Maintenance. A number of dust samples were identified to be not-related to activity by Hillgrove Mine (tampering with gauge and building construction next to HD04 gauge).

Table 7: Environmental Performance

Impact	Approval Criteria / EIS Pred.	Performance during reporting period	Trend / Key Management Implications	Implemented /Proposed Management Actions
Noise & Blasting	None in EIS Adopted in EMP Refer 6.2	No complaints received. Routine ambient noise monitoring was conducted confirming noise emissions were within limits. Approval criteria has been met.	Noise generation was low with the project on Care & Maintenance.	Addition of noise to the routine monitoring program is an improvement to the EMP.
Air Quality	None in EIS Adopted in EMP Refer 6.3	Sampling results averaged 0.6 vs guideline of 4.0 g/m2/mth. No complaints received. Approval criteria has been met.	Results slightly higher than prior year (0.4 in 2022-23) but still well below guideline.	Installation of water sprinklers/drippers on exposed beaches at TSF2 and Eleanora Dam reduced high dust levels recorded in Feb/Mar-23. Dust management actions resulted in low dust levels being maintained during dry period from Apr-Oct23. Modification of EMP to
Biodiversity	EIS predicted direct losses in footprint. Refer 6.4	No additional losses in addition to predictions in EIS have been identified as no clearing was carried out during the reporting year. Approval criteria has been met.	None identified	None implemented. None proposed.
Heritage	EIS predicts no impact on indigenous heritage and no impact on European heritage. Refer 6.5	Approval criteria has been met.	None identified	None implemented. None proposed.

6.1 Environmental Monitoring

The environmental monitoring program carried out during the reporting yet met the requirements of all conditions in the consent, with the exception of routine noise monitoring, which was not being carried out at the start of the year, but was implemented and compliant for the second half of the year.

Table 8: Environmental Monitoring Summary

Station	EPL ID No.	Type	Location	Number of Samples		Missed Samples		Req'd No. Taken	Comment
				Req'd	Taken	Valid	Invalid		
QW06	1	Water, Ground	Hopetoun Adit	4	4	-	-	Yes	-
QW05	2	Water, Ground	Cosmopolitan Adit	4	1	3	-	Yes	Dry for 3x missed samples
QW03	3	Water, Ground	Eleanora Adit, Lvl 9	4	4	-	-	Yes	-
QW04	4	Water, Ground	Golden Gate Adit, Lvl 6	4	-	4	-	Yes	Dry for 4x missed samples
QW02	5	Water, Ground	Lower Cooney Tunnel Adit	4	4	-	-	Yes	-
QW01	6	Water, Ground	Sunlight Adit, Lvl 5	4	-	4	-	Yes	Adit collapsed, unable to access safely
QW09	7	Water, Ground	Blacklode Adit, Lvl 5	4	-	4	-	Yes	Dry for 4x missed samples
QW010	8	Water, Ground	Blacklode Adit, Lvl 6	4	-	4	-	Yes	Dry for 4x missed samples
QW011	9	Water, Ground	Blacklode Adit, Lvl 7	4	4	-	-	Yes	-
-	10	Water, Ground	Freehold Adit, Lvl 10	4	-	4	-	Yes	Road access failed, unable to access safely
-	11	Water, Ground	Smiths Mine, Lvl 4	4	-	4	-	Yes	Road access failed, unable to access safely
HD01	12	Dust	150m north of Essential Energy sub-station	12	12	-	-	Yes	-
HD02	13	Dust	Paddock north of Core Yard	12	12	-	-	Yes	-
HD03	14	Dust	Between Core Yard & Car Park	12	12	-	-	Yes	-
HD04	15	Dust	Embankment between Eleanora & Fresh Water Dams	12	12	-	-	Yes	-
HD05	16	Dust	Between Eleanora & Sunlight Dams	12	12	-	-	Yes	-

Station	EPL ID No.	Type	Location	Number of Samples		Missed Samples		Req'd No. Taken	Comment
				Req'd	Taken	Valid	Invalid		
HD06	17	Dust	SE of Processing Plant	12	12	-	-	Yes	-
HD07	18	Dust	Top of Metz Gully Area	12	12	-	-	Yes	-
HD10	19	Dust	Hillgrove Village South, Brackin St near Brereton St	12	11	1	-	Yes	Dust gauge tampered with for 1x missed sample (Apr23)
HD11	20	Dust	Hillgrove Village North, Brackin St at north town limit	12	12	-	-	Yes	-
HD12	21	Dust	North of TSF1	12	12	-	-	Yes	-
HD13	22	Dust	North of TSF2	12	12	-	-	Yes	-
DW01	23	Water, Surface	ES3 Spillway Discharge	-	-	-	-	Yes	Sampling only required when discharging
PW01	24	Water, Surface	Tailings Water to TSF2	4	4	-	-	Yes	Sampling only required when discharging
MW01	25	Water, Surface	Eleanora Dam	12	12	-	-	Yes	-
MW02	26	Water, Surface	ES3	12	12	-	-	Yes	-
MW03	27	Water, Surface	Upper Bakers Creek	12	12	-	-	Yes	-
MW04	28	Water, Surface	Downstream Bakers Creek	12	12	-	-	Yes	-
MW05	29	Water, Surface	Point in Creek Downstream of TSF1	12	10	2	-	Yes	Not flowing for 2x missed samples (Feb23 & Oct23)
QW07	30	Water, Surface	4 Mile Creek, Upstream of Swamp Creek	4	3	1	-	Yes	Not flowing for 1x missed sample (Sep23)
QW08	31	Water, Surface	4 Mile Creek, Downstream of Swamp Creek	4	2	2	-	Yes	Not flowing for 2x missed samples (Sep23 & Dec23)
BH01	32	Water, Ground	TSF2 Monitoring Bore 1	4	3	1	-	Yes	Dry for 1x missed sample (Dec23)
BH02	33	Water, Ground	TSF2 Monitoring Bore 2	4	-	4	-	Yes	Dry for 4x missed samples.
BH03	34	Water, Ground	TSF2 Monitoring Bore 3	4	2	2	-	Yes	Dry for 2x missed samples (Sep23 & Dec23)

Station	EPL ID No.	Type	Location	Number of Samples		Missed Samples		Req'd No. Taken	Comment
				Req'd	Taken	Valid	Invalid		
FW Bypass Up	35	Water, Surface	Fresh Water Bypass, Upstream	1	1	-	-	**Yes**	Sampling only required when flowing
FW Bypass Down	36	Water, Surface	Fresh Water Bypass, Upstream	1	1	-	-	**Yes**	Sampling only required when flowing
Lower Cooney Pump	43	Water, Surface	Lower Cooney Pump	-	-	-	-	**Yes**	No water pumped during year.
RO Perm.	44	Water, Surface	RO Permeate Discharging	2	2	-	-	**Yes**	Only 2wk discharging. RO decommissioned end-Mar 2023.

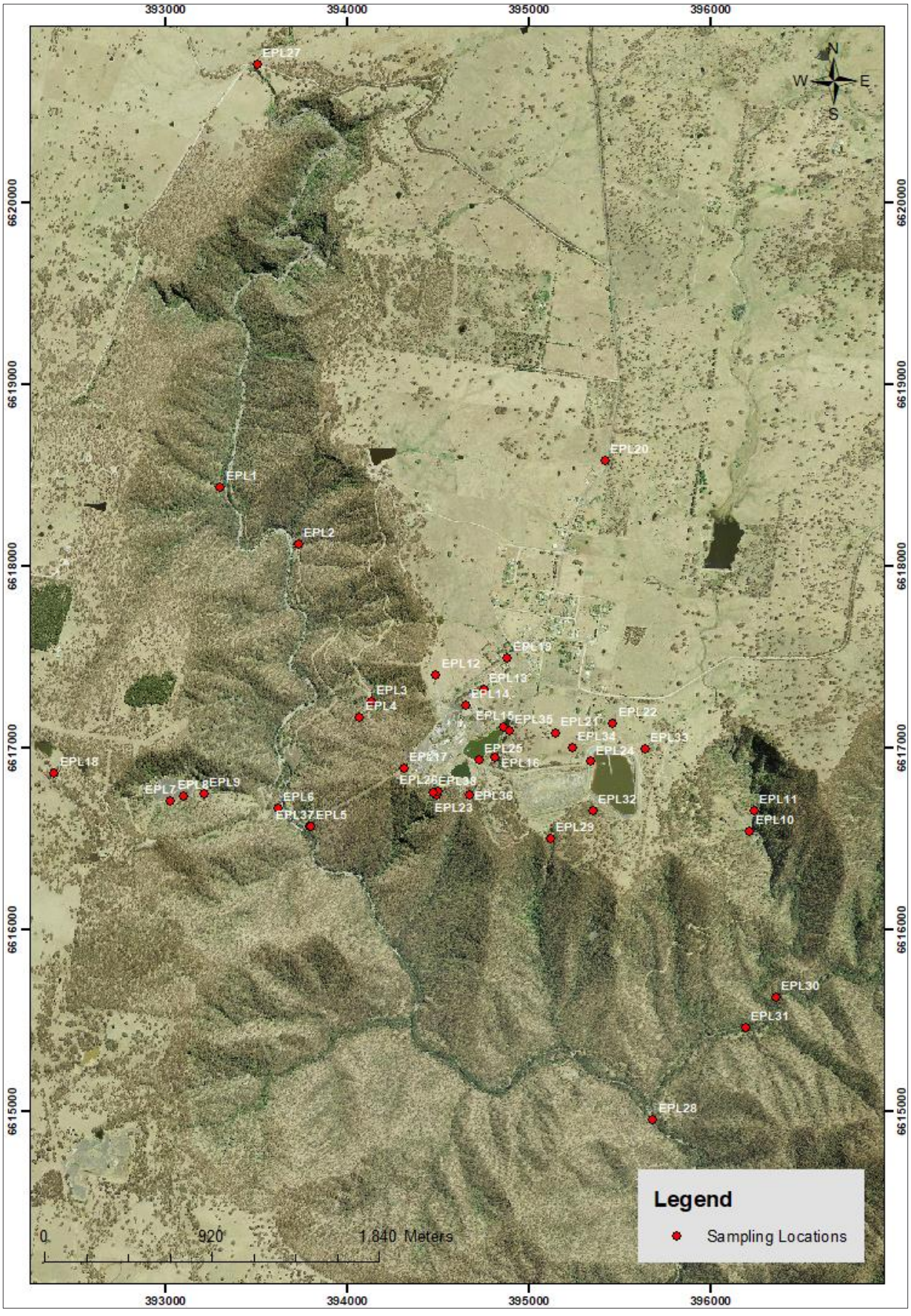

Figure 3: Monitoring locations (north orientated)

6.2 Noise and Blasting

Noise monitoring occurred during the reporting period as per the site EMP under the Control Standard Noise and Vibration Impact. There were no Noise complaints that were received during this period.

No blasting occurred during the reporting period. When surface blasting occurs, monitoring is conducted to measure blast overpressure and/or ground vibration.

6.2.1 Issues

The commencement of routine noise monitoring during the year highlighted that background noise levels in Hillgrove Village are close to, or at, the noise limits set in the consent conditions.

In Dec-2023 a noise survey was conducted whilst no noise generating activity was occurring at the mine, which presented a $L_{eq(15\ avg)}$ of 35.7 dB(A) and exceeds the condition limit of 35 dB(A). A follow-up survey was able to be conducted which proved compliance, but the test did show that background noise levels at certain times present difficulty for achieving the condition defined noise levels.

6.2.2 Implementation of Controls

During the reporting year, routine noise monitoring waste established in the third quarter of the year and is now compliant with consent conditions.

6.2.3 Proposed Improvements

Hillgrove Mine are in communication with EPA to request review of the noise levels applied to the project.

6.3 Air Quality

Air quality impacts at are largely related to generation of dust from site activity and facilities. In accordance with Condition P1 and M2 of EPL 921, Hillgrove Mine operates a depositional dust monitoring network to monitor dust (refer to Table 9 and Figure 3 for locations). This monitoring continued throughout the period in accordance with the requirements of EPL 921.

Dust generation is mostly associated with heavy vehicle movement and large exposed areas, specifically TSF's. A range of control measures are deployed to reduce the volume of dust generated on site, including:

- Vehicle speed limits in exposed areas (eg: on the plateau);
- Water spraying of roads and laydown areas with water cart;
- Capping of TSF1 with sheeting material to cover tailings; and
- Sprays and water circulation on TSF2 to moisten exposed tailings.

6.3.1 Issues

There were four issues identified with dust monitoring during the year:

- Assaying of metal concentrations – particularly for locations with very low metal concentrations. The laboratory (ALS) reported the presence of mould in the dust samples was preventing accurate measures of heavy metals. This was resolved during the year, by use of a different assay bottle with an anti-microbial coating. This is shown in the reports HMPL received from ALS.

- Tampering of dust monitoring gauge at HD10 (Hillgrove Village, South) in April 2023 – unknown to Hillgrove Mine, construction was commenced on the property next to the HD10 location, during which the dust collection bottle was moved and broken, so no samples could be collected.
- Elevated dust levels in HD10 in July and August 2023 – construction activity was occurring on the neighbouring block, which has been identified as the cause for this increase. Dust levels returned to normal on completion of the construction activity.

  For HD10, Arsenic, Lead and to a lesser extent Antimony were elevated in the reporting levels during July and August 2023, which corresponds to the construction occurring on the neighbouring block and is not related to mining activity.
- HD04 (Eleanora Dam) and HD13 (TSF2) – both showed increased dust levels in March and April 2023. This was identified to have been caused by the low stored water levels in both dams, combining with the onset of dry conditions to result in dust generation from wind on the dam beaches. Actions were taken to install dust management systems (hoses and sprinklers at TSF2, pipe and drippers at Eleanora) and these had a positive effect, with dust levels returned to normal after their installation.

  For HD04, Antimony levels were elevated in February, April and November 2023. The high levels of heavy metals are consistent with the previous use of Eleanora Dam for depositing tailings.

6.3.2 Implementation of Controls

Dust monitoring results during the year show a mild increase from the prior year although consistent with the longer term average. Re-training occurred for employees carrying out the monitoring sample collection.

Table 9: Dust Deposition Monitoring Locations

Station	EPL ID No.	Location
HD1	12	300 m NNW of mill
HD2	13	NNE of mill (just south of Hillgrove Village in core shed paddock)
HD3	14	NNE of mill
HD4	15	NE of mill between Eleanora Dam and fresh water dam
HD5	16	E of mill (between Eleanora and Sunlight Dam)
HD6	17	SSW of mill near old winder shed
HD7	18	West of mill located at Metz Mining Area
HD10	19	Southern Hillgrove Village
HD11	20	Northern Hillgrove Village
HD12	21	North of TSF1
HD13	22	North of TSF2

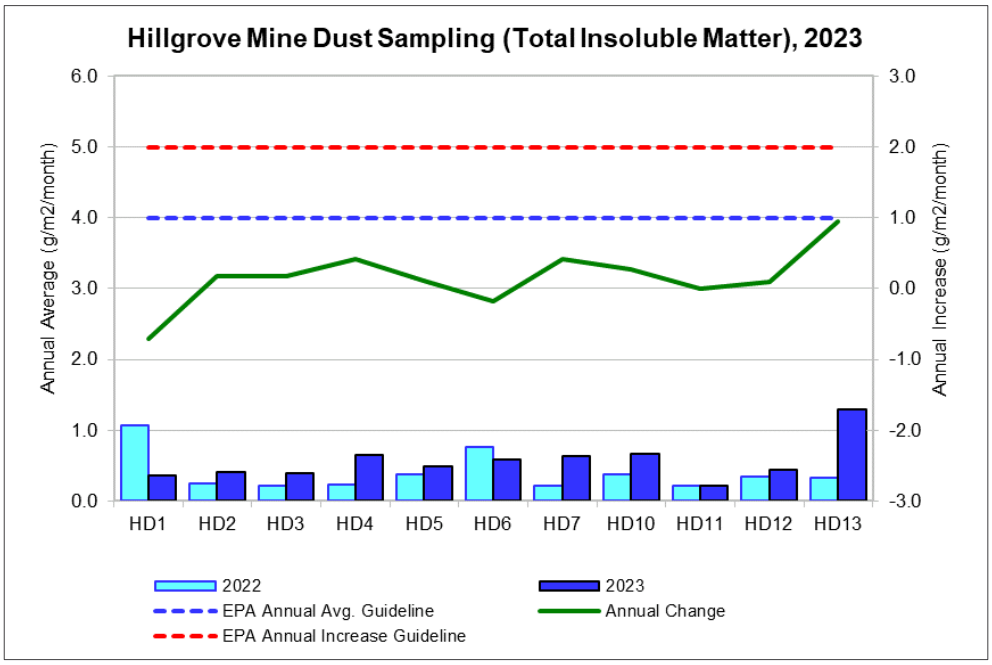

Figure 4: Dust Monitoring, Deposition – Annual average and increase

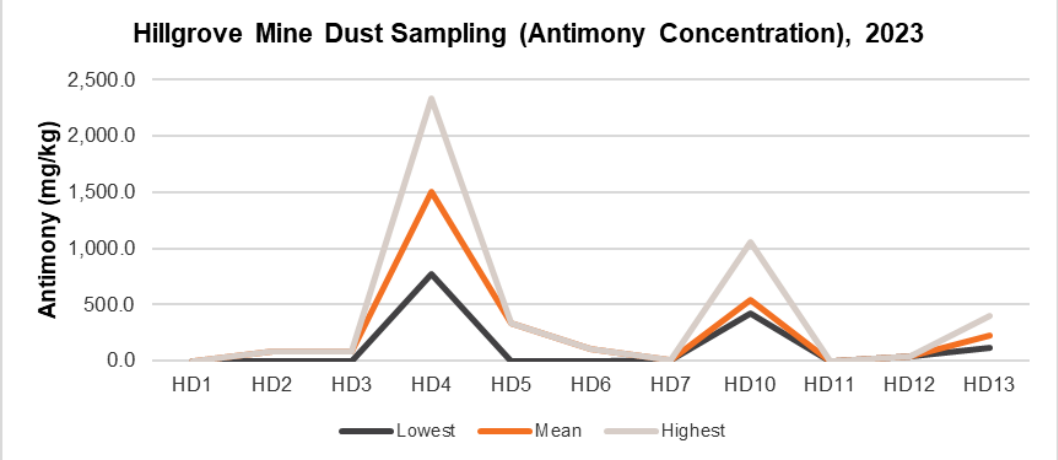

Figure 5: Dust Monitoring, Concentration – Antimony

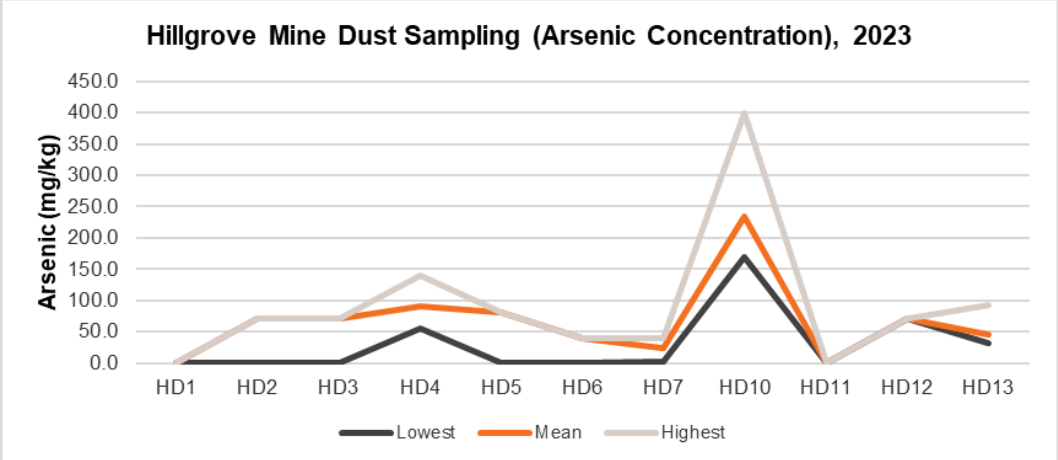

Figure 6: Dust Monitoring, Concentration – Arsenic

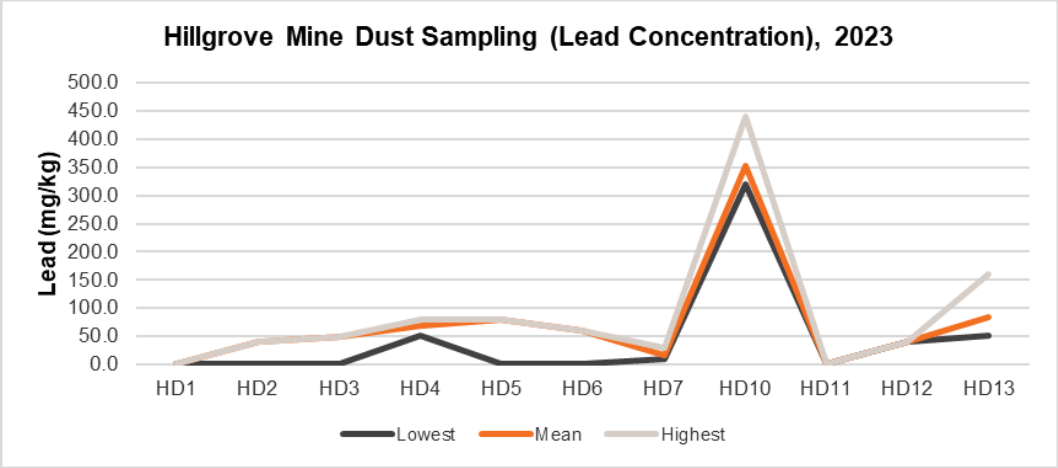

Figure 7: Dust Monitoring, Concentration – Lead

6.3.3 Proposed Improvements

Moving into the 2024/25 reporting year, dust management improvements will focus on:

- Updating EMP to embed positive practices (e.g.: administrative tracking of dust mitigation works, proactive training for key roles);
- Ongoing effort to ensure the exposed beach on Eleanora Dam is effectively dust-suppressed, and investigation of potential rectification works to remove or apply a more effective dust suppression technique (eg: binder or thatch).
- Should activities increase, dust mitigation is ramped-up accordingly.

6.4 Biodiversity

Hillgrove Mine is not required to have any biodiversity offsets and as such management of biodiversity relates mainly to impacts from operations and specific management criteria in DC S98/00802.

A clearance permit system is used to authorise impacts on biodiversity (e.g. removal of dangerous trees directly affecting operations) as a control to ensure certain aspects are not impacted (e.g. hollow bearing trees or listed species).

Weeds inspections are done as required to target noxious weeds that have an historical presence on site. These include Tiger Pear, Bathurst Burr, and Blackberry. Weed control activities are undertaken as weed occurrences are identified.

Monitoring of biodiversity is undertaken annually at Hillgrove Mine and is primarily focused on rehabilitation management and progress to fulfil the requirements of Condition 49 of DC S98/00802. The 2024 inspection is arranged to occur in April 2024 and proposes a more detailed look into the soils of the rehabilitation sites.

6.4.1 Issues

A site weed spraying program was conducted during the reporting period, refer to Figure 5 below.

An annual comprehensive weed spraying program was carried out in Autumn 2023 around the RRWS, TSF1 and TSF2, as well as a smaller follow up spraying program during Summer 2023/24. The results from the Summer inspection will provide the basis for planning a more rigorous spray program for the coming year.

Blackberry and African Boxthorn were the primary weeds targeted during the reporting period with some smaller areas of Bathurst Burr and Milk Thistle around the site.

6.4.2 Implementation of Controls

Sprayed weed areas for 2023-24 are shown in Figure 8:

- Blue areas were sprayed for Blackberry (woody weed);
- Yellow are were sprayed for other leafy weeds (Glyphosate 450).

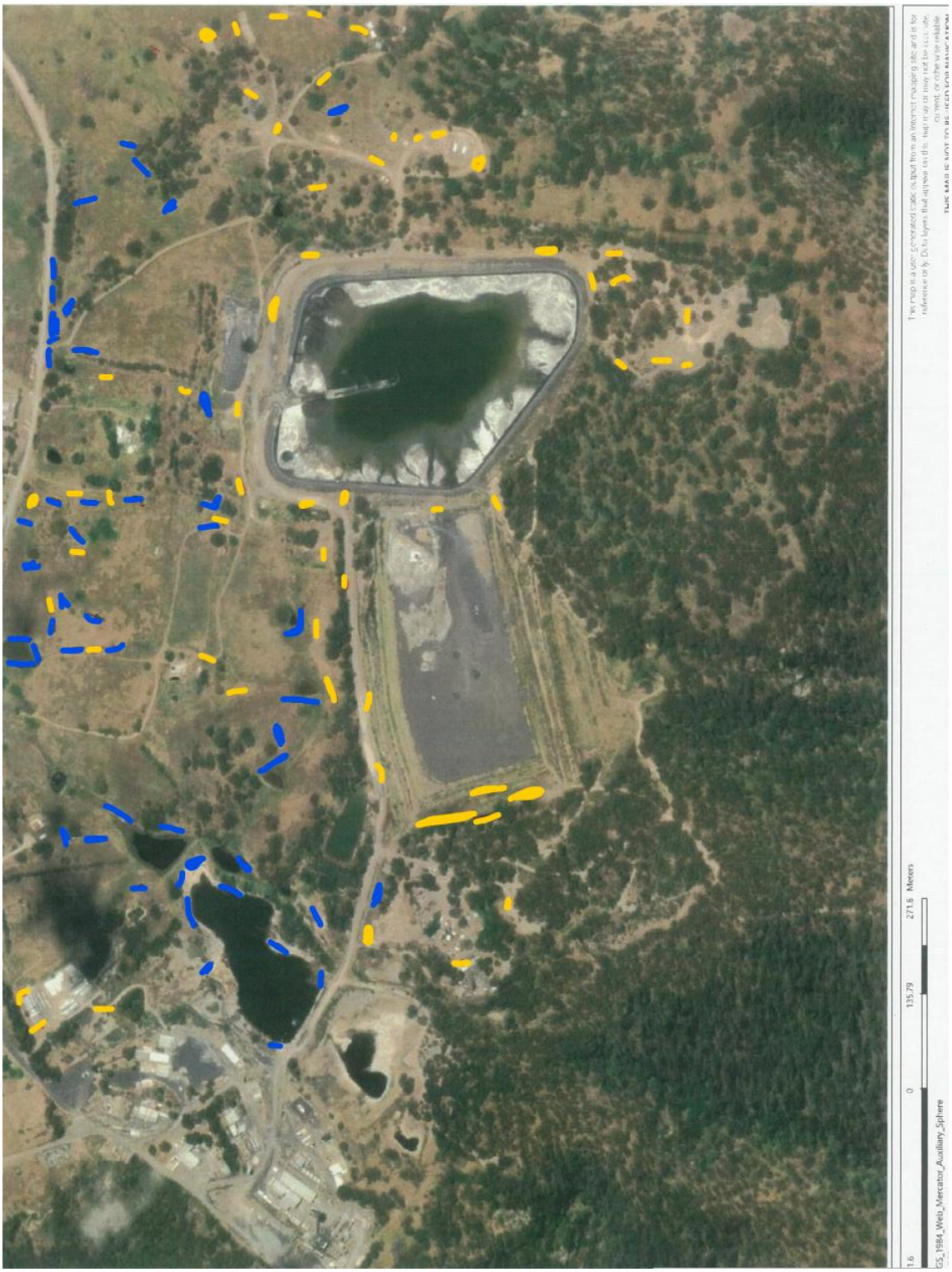

Figure 8: Map of Weed spraying undertaken during reporting year

6.4.3 Proposed Improvements

Follow up spraying will occur throughout 2024, based on the results from the April 2024 inspection.

6.5 Heritage

Archaeological studies undertaken on the Hillgrove Mine site have concluded that due to extensive disturbance from previous mining operations and steep terrain, the indigenous archaeological potential of the area is low.

There are no registered sites within current operational footprint.

There has been a long history of mining in the Hillgrove area. Five European heritage items remain have been listed under the Armidale Dumaresq Local Environmental Plan. The items include:

- Garibaldi chimney;
- Eleanora chimney;
- Bakers Creek chimney;
- Bakers Creek winder; and
- Bakers Creek surface buildings (Figure 9).

A clearance permit system remains in place as a control for potential impacts to heritage items (artefacts), vegetation (scar trees) and European heritage (vibration, collision).

Figure 9: Heritage Item – Bakers Creek Mine steam boiler and tramway winder

6.5.1 Issues

There were no issues relating to heritage that occurred during the reporting period.

6.5.2 Implementation of Controls

Existing controls adequately managed heritage during the period.

6.5.3 Proposed Improvements

There are no further proposed improvements for the next period.

7. WATER MANAGEMENT

7.1 Water Take

Table 10 shows entitlement and water take for the reporting year.

Note: no meter readings were recorded for WAL39500 therefore, an estimate has been given based on usage from previous years.

Water was take for use in exploration drilling under WAL 39495 (from Bakers Creek at Bakers Creek gorge). All water collected was recorded and logged as required by the water licence, with photographic evidence collected for each event to confirm the required creek flow conditions were in place. The process worked effectively, as water take by the drilling contractor was suspended when they identified the flow conditions to permit taking water had stopped (later recommenced after rainfall which returned the required flow to the creek).

Table 10: Hillgrove Water Licences, Entitlements and Take

Water Licence Number	Water Sharing Plan	Water Source	Entitlement (Ml)	Passive Take / Inflows (Ml)	Active Pumping (Ml)	Total (Ml)
WAL39495	Macleay River Unregulated and Alluvial Water Sources 2016	Bakers Creek Water Source (Bakers Creek)	10	N/A	0.09	0.09
WAL39497	Macleay River Unregulated and Alluvial Water Sources 2016	Bakers Creek Water Source (Bakers Creek on Hillgrove Station)	10	N/A	nil	nil
WAL39500	Macleay River Unregulated and Alluvial Water Sources 2016	Bakers Creek Water Source (Town Res Domestic)	5	N/A	0	~1.2
WAL39498	Macleay River Unregulated and Alluvial Water Sources 2016	Bakers Creek Water Source (Town Res Industrial)	740	N/A	nil	nil
WAL40217	Macleay River Unregulated and Alluvial Water Sources 2016	New England Fold Belt Coast Groundwater Source (Adit water)	250	N/A	nil	nil

7.2 Adit Water

7.2.1 Adits

Historic mining activity at Hillgrove has left large numbers of old adits and shafts in the Bakers Creek gorge. A survey undertaken in 1999 identified 194 workings (including adits and other types) in the Hillgrove area that may contribute antimony and arsenic to the Bakers Creek system. Most of these are historical and pre-date modern (post 1970) operations on the site.

Natural groundwater seeps into these workings, percolates through and discharges via adits into the Bakers Creek catchment. Water discharging from these adits generally contains dissolved antimony and arsenic. Natural seepage through mineralised fault systems also has the potential to contribute these analytes to catchment.

During the reporting period, a number of the adits were dry and not able to be tested. The ones that met the criteria for testing were taken (refer to Table 8 for samples which were missed due to 'no flow').

7.2.2 Performance

All adit water sampling for discharge to waters, discharge quality monitoring and volume monitoring required by Condition P1.3 of EPL 921 was undertaken (refer to Figure 3 & Table 10 for locations) during the reporting period.

Table 11: Adit Water Monitoring Locations (Condition P1.3 of EPL 921)

EPL Identification No.	Monitoring Point	Coordinates (AMG Zone 56)	
		E	N
1	Hopetoun 5 Level	393,200	6,618,247
2	Cosmopolitan 6 Level	Not monitored due to adit collapse	
3	Eleanora Mine 9 Level	394,032	661,7064
4	Golden Gate Mine 6 Level	393,967	6,616,980
5	Lower Cooney Tunnel	393,500	6,616,500
6	Sunlight 5 Level	Not monitored due to adit collapse	
7	Blacklode 5 Level	392,990	6,616,491
8	Blacklode 6 Level	393,000	6,616,525
9	Blacklode 7 Level	393,117	6,616,552
10	Freehold 10 Level	Not monitored due to limited and unsafe access	
11	Smiths Mine 4 Level		

7.2.2.1 Water Discharge

Condition L3.1 of EPL 921 limits discharge to 50,000 l/day from each of the monitored adits. All monitored adits remained below this limit during the reporting period (Figure 10).

Eleanora 1745/Lv9 recorded the highest flowrate of 5,000 l/day (1.58 Ml/yr).

- Adits which are dry as reported as zero flow.
- Adits at Sunlight (EPL06) and Cosmopolitan (EPL02) are no longer monitored as the adits have collapsed and there is no safe access to the sampling points. It is proposed in the next year to review these points to potentially identify an effective monitoring point.
- Adits at Freehold (EPL10) and Smith Mine (EPL11) have not been monitored as the road to these locations has collapsed and they are no longer accessible. A request has been made to remove these points from EPL-921 in March 2024.

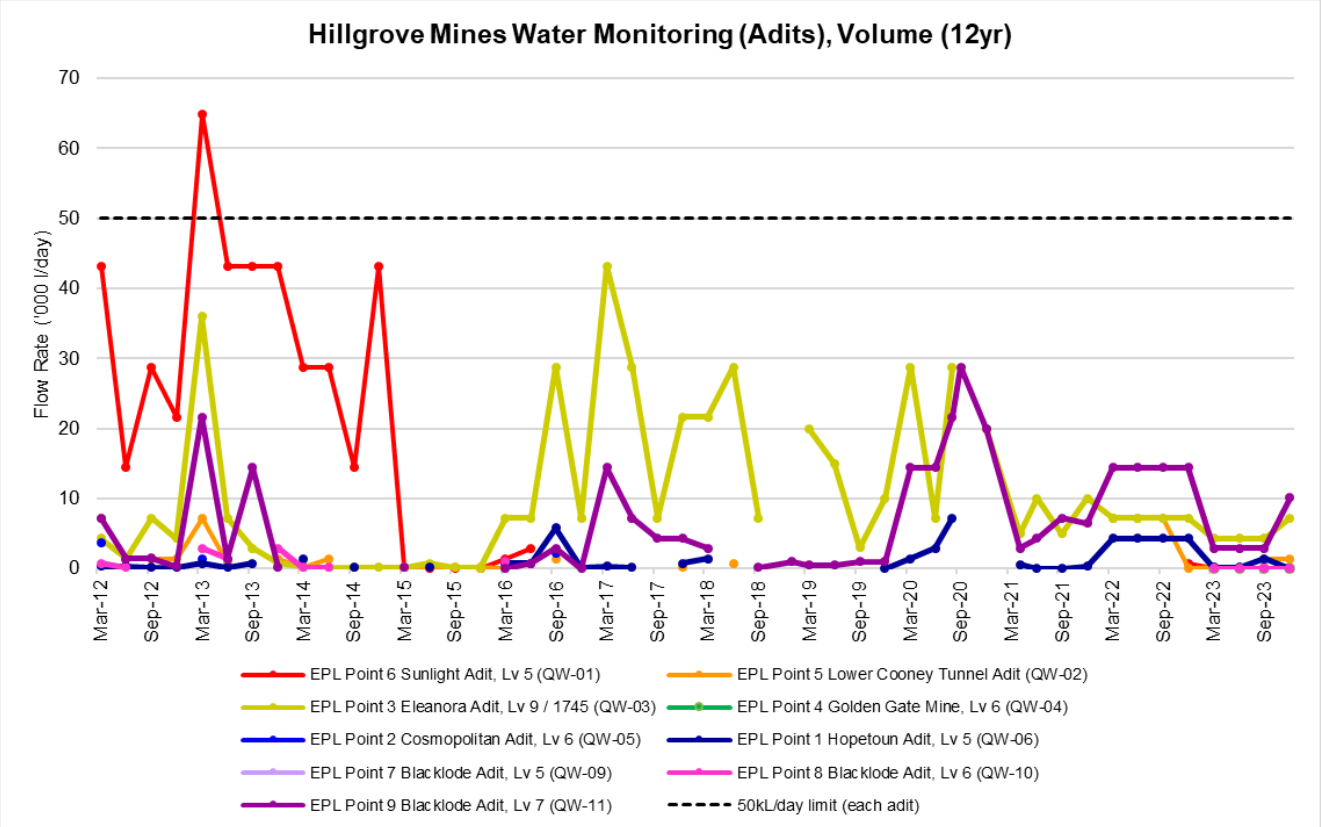

Figure 10: Groundwater monitoring, Adits – Discharge volumes

7.2.2.2 Water Quality

7.2.2.2.1 Antimony:

The trends across all adits were consistent with those of previous monitoring periods.

- EPL09/QW11 (Blacklode Lv7) shows elevated antimony concentration which has been consistent since late 2020.
- The slight increases at Eleanora 1745 (EPL03) in the prior year, has reverted to previous norms and is well below levels recorded a decade earlier.
- Elevated concentrations at Hopetoun (EPL01) in the prior year have remained consistent in 2023-24. The reason for this increase is not understood but is not related to any recent activities, as Hopetoun is not connected to, and is quite remote from all recent activity areas.

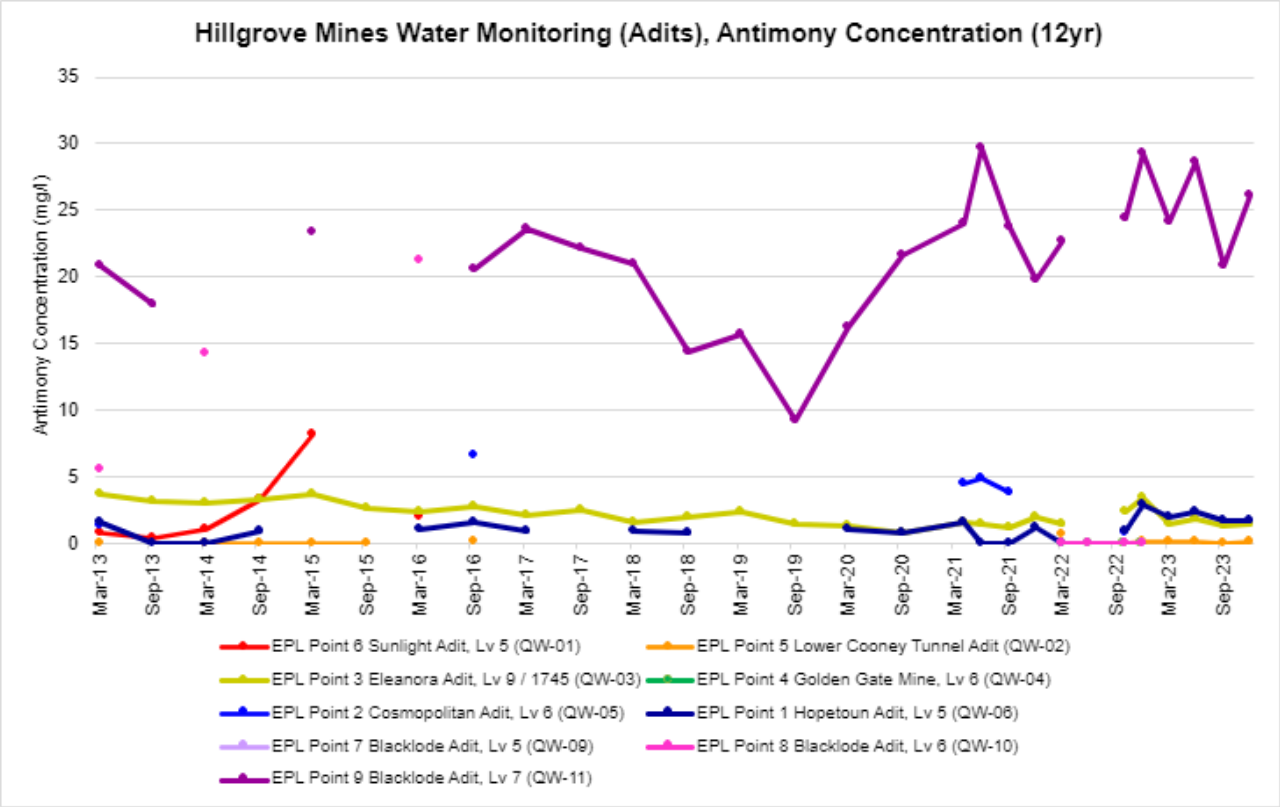

Figure 11: Groundwater monitoring, Adits – Antimony concentration

7.2.2.2.2 Arsenic:

Arsenic concentrations are somewhat erratic, but present the following trends:

- EPL09/QW11 (Blacklode Lv7) shows elevated arsenic concentration which has been consistent since late 2020 and is consistent with the antimony results.
- The slight increases at Eleanora 1745 (EPL03) in the prior year, have continued with the exception of a low measure in March 2023. This emerging trend will continue to be monitored during 2024-25.
- Sporadic elevated concentrations at Hopetoun (EPL01) in the prior year are more consistent in 2023-24. As detailed above, the reason for this increase is not understood but is not related to any recent activities, as Hopetoun is not connected to, and is quite remote from all recent activity areas.

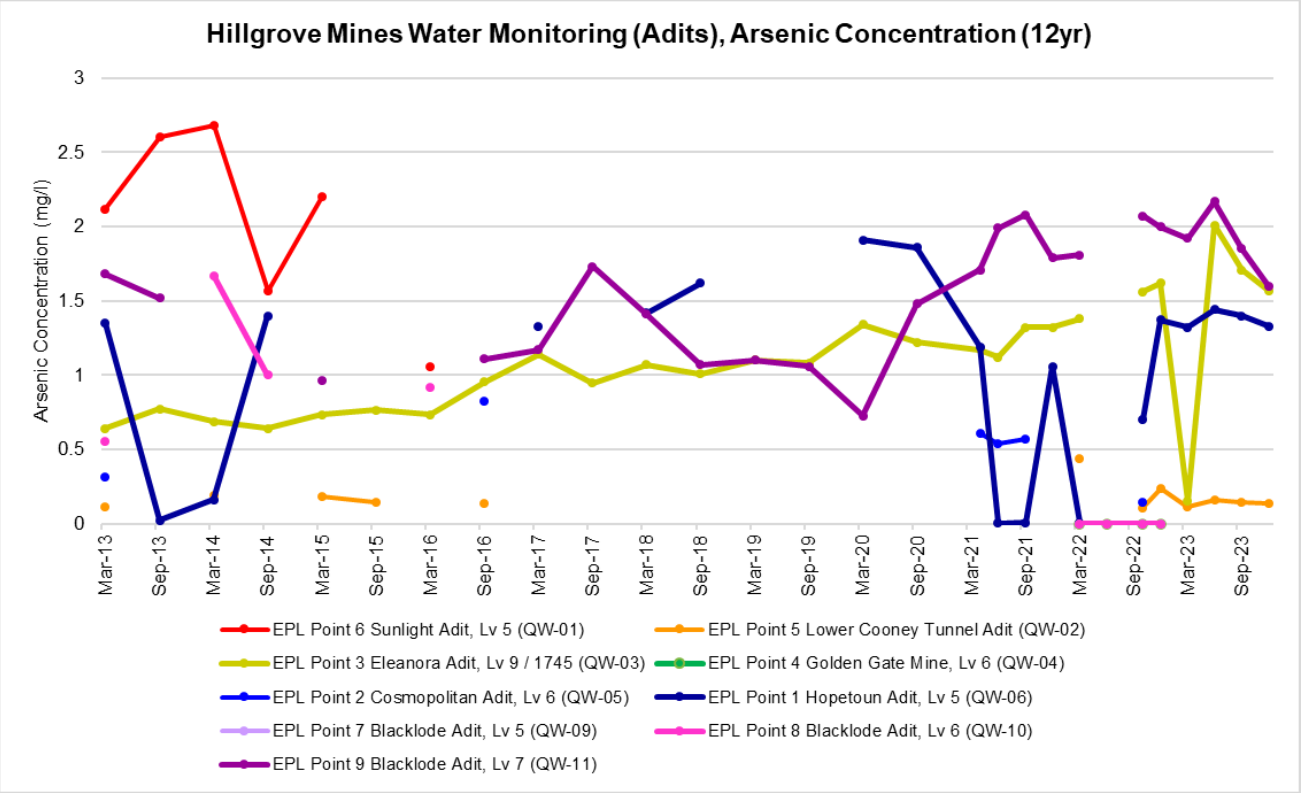

Figure 12: Groundwater monitoring, Adits – Arsenic concentration

7.3 Surface Water

Bakers Creek drops from the New England escarpment at Baker's Creek Falls approximately 2.5 km NNW of Hillgrove village. The creek intersects the mining leases as it meanders its way through the gorge. Four Mile Creek (a smaller catchment) flows from the north-east and confluences with Bakers Creek at the southern end of the project area. 17km south from this point, Bakers Creek joins the Macleay River. All of the drainage lines in the Bakers Creek catchment are intermittent.

Sediment and water quality in Bakers Creek have been affected by historic mining activities resulting in, sediment and waters which demonstrate elevated levels of antimony and arsenic at all times. This is also contributed to by the natural geology and the minerals present.

7.3.1 Volume Management

Hillgrove Mine manages water and aims to mitigate any additional impacts by operating a system to segregate clean and contaminated water which utilises the Recycled Water Storage System (RWSS) which comprises several dams around the processing and infrastructure area with a combined capacity in excess of 104 ML, namely:

- Eleanora Dam;
- Emergency Storages 1, 2 and 3; and
- Sunlight and Sunlight Transfer.

Surface water storages at Hillgrove Mine are managed to a compliance level of having capacity to store a 1:100 ARI 72hr duration event (1% AEP, 72 hr event). At Hillgrove, this is a 256 mm rainfall event.

Following the previous reporting year (2022-23), where high volumes of water were stored and the required storage capacity was not maintained, in 2023-24, water volumes in TSF2 and the RWSS were maintained in compliance with the required storage capacity at all times.

- TSF2: started the year with 376 mm rainfall capacity and ended the year with 317 m capacity.
- RWSS: started the year with 653 mm rainfall capacity and ended the year with 714 mm capacity.

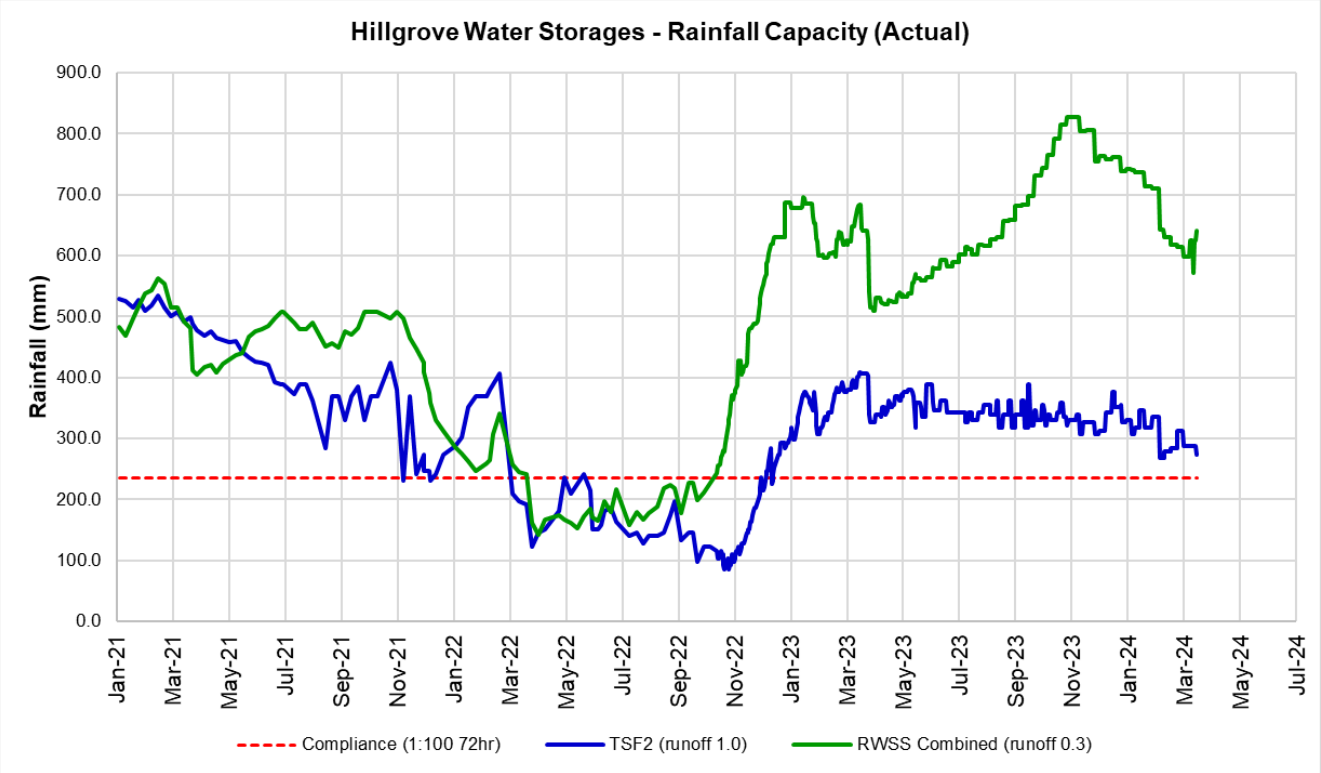

Figure 13: Hillgrove Mine Water Storages – Rainfall Capacity

Water was removed from the site storages by:

- Water Treatment (MF/RO): 4.26 Ml treated and discharged in Mar-23 prior to decommissioning and off-hire of the WTP that month.
- Evaporation:
  - Natural evaporation from the ponds and catchments.
  - Mechanical evaporators ('spinners') – one at Eleanora and two at TSF2.
  - Transfer of water to TSF2 from Eleanora – for three purposes:
    - In summer, shallow pond volume on TSF2 realised high evaporation efficiency.
    - Moving water from Eleanora to TSF2 for evaporation so that the evaporation residue would be contained in TSF2, rather than Eleanora, thereby preventing increasing contaminant concentration in Eleanora.
    - Maintain a water pond on TSF2, to use for dust suppression on tailings beach.

Low rainfall during the winter and spring seasons reduced inflows to the catchments. During this period the predictive water balance was updated and monitored to assess whether water treatment was required to be brought back online, but the extended low rainfall during winter/spring, resulted that returning water treatment continues to be deferred.

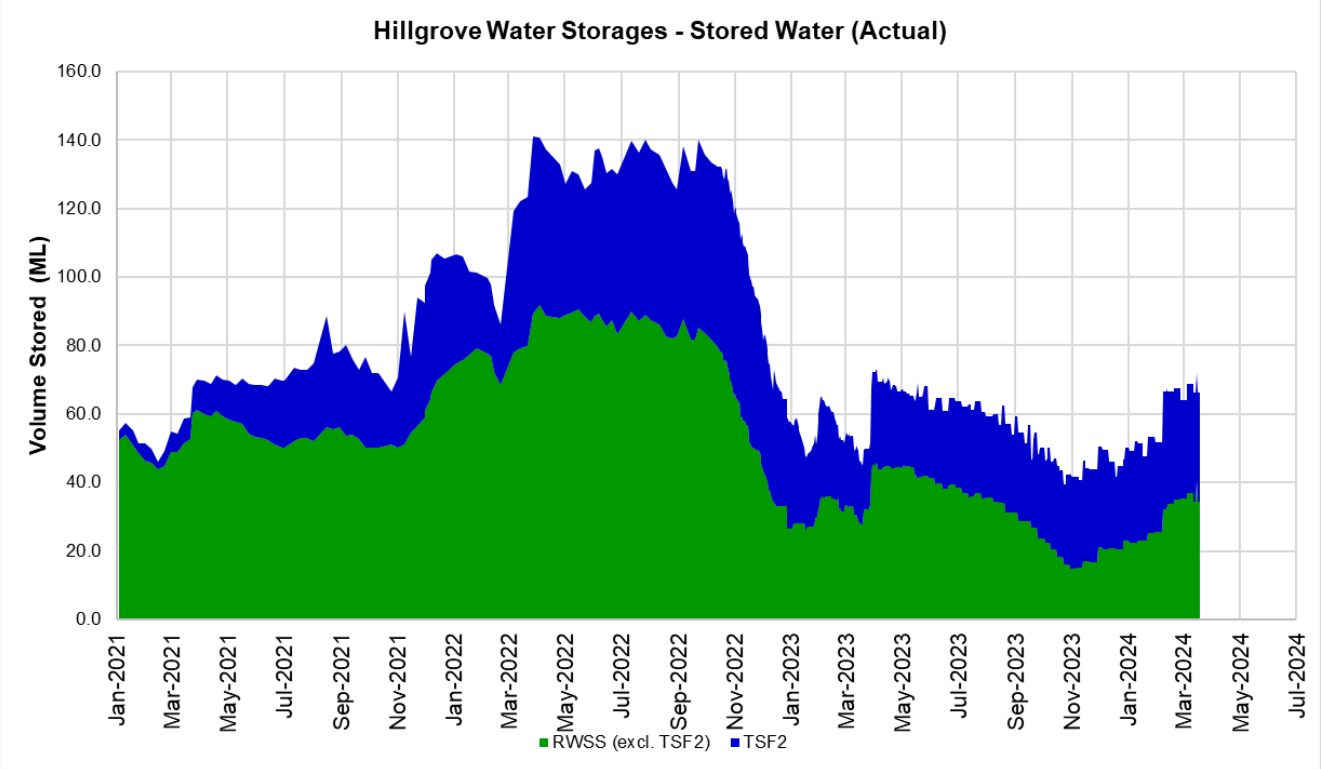

Figure 14: Hillgrove Mine Water Storages – Stored Water Volume

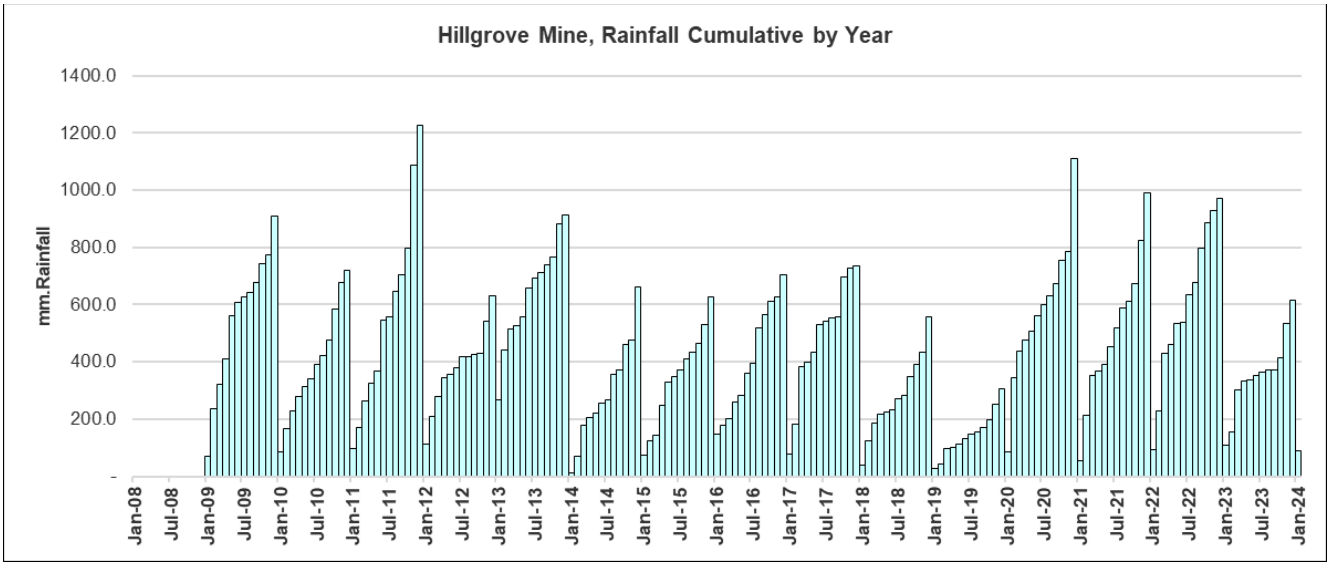

Figure 15: Hillgrove Mine Rainfall – Cumulative by Year

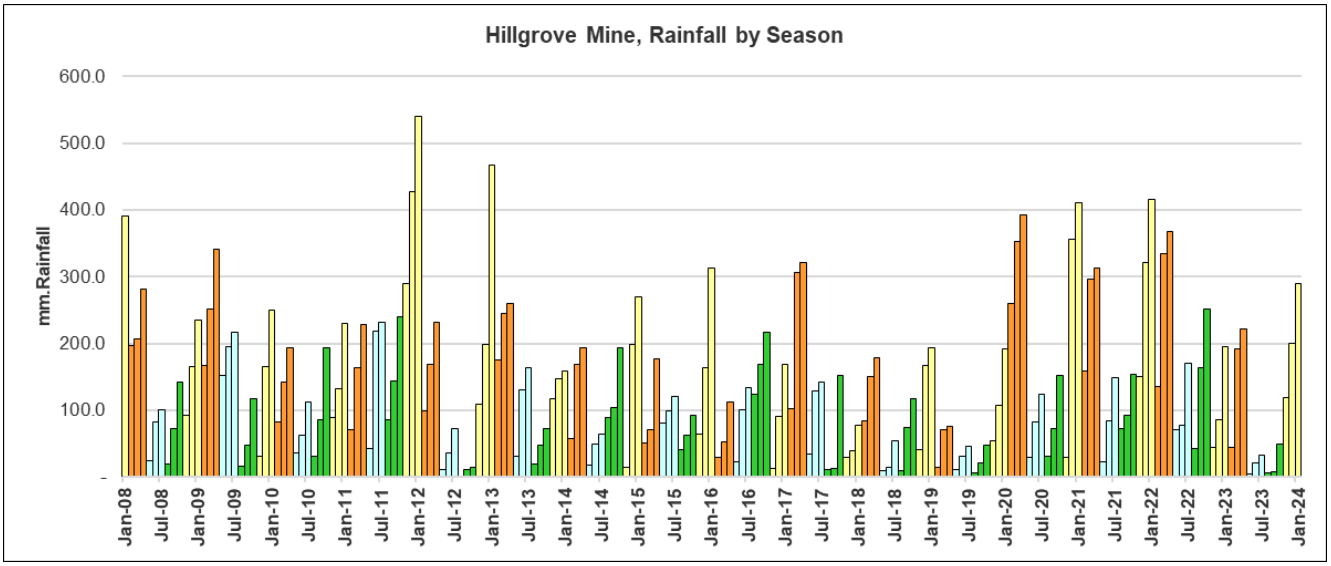

Figure 16: Hillgrove Mine Rainfall – Cumulative by Season

7.3.2 Issues

Issues during the year have been:

- Water transferred to Metz UG in 2022 has not been returned to the surface RWSS during 2023-24, due to failure of the site main transformer in January 2023. No power has meant no pumping can occur from Metz UG to the Hillgrove side and the RWSS.

  Keeping the water in Metz UG has not caused any risk for water emissions, as all water has been retained in the Metz UG at levels well below where there is potential for overflow to be released.

7.3.3 Implementation of Controls

The improved controls implemented in the prior reporting year continued and were enhanced during 2023-24.

- Water Balance Model: was updated quarterly and monthly during the higher rainfall summer period. Calibration of the model against actual rainfall and storage levels identified the model was previously overly conservative. Runoff and evaporation coefficients were updated to make the model predictions more accurate to realised actuals.
- Water Storage Tracker: continued use without issue.

7.3.4 Proposed Improvements

Water volume management is proposed to be improved by:

- Progress permitting to make water storage at Metz UG part of the RWSS.
  - Management continue to liaise to have Metz UG permitted.
    - Requested to be included in RWSS in March 2024 review if EPL-921
    - Including Metz UG makes water management system more robust and resilient to overspill:
    - Doubles water storage capacity by 118 ML;
    - Does not increase site catchment, so water additions with rain events are not materially increased.

7.3.5 Contaminant Monitoring and Management

Surface waters are sampled as per the EMP and as presented in Table 12 and Figure 3. Seven of these locations are in addition to the EPL requirements. Antimony and Arsenic are the most abundant metals that are tested for.

Table 12: Surface Water Monitoring Locations

Monitoring Point	EPL Identification No.	Station	E	N	Frequency
Process water discharge to TSF2	24	EPL24	TSF2		Monthly / weekly during discharge
Eleanora Dam	25	MW01	394,626	6,616,742	Monthly
3rd emergency storage of the RWSS	26	MW02	394,405	6,616,547	Monthly
Bakers Creek upstream of the mining area	27	MW03	393,404	6,620,572	Monthly
Bakers Creek downstream of the mining area	28	MW04	395,610	6,614,729	Monthly
Gully below TSF1	29	MW05	395,031	6,616,315	Monthly
Four Mile Creek upstream of Swamp Ck confluence	30	QW07	396,200	6,615,250	Quarterly
Four Mile Creek downstream of Swamp Ck confluence	31	QW08	396,100	6,615,200	Quarterly
Downstream Lower Cooney Road	NA	MW06	393,544	6,616,470	Monthly
Metz Gully	NA	MW07	393,538	6,616,624	Monthly
Cosmopolitan Causeway Upstream	NA	MW08	393,348	6,617,912	Monthly

7.3.5.1 Eleanora Dam

Contaminant concentrations in Eleanora Dam were:

- Antimony levels decreased after a significant spike in January 2023, decreased to be low through the low rainfall period from April to September 2023, the spiked again in November 2023 and are now declining over the summer period..
    - Variability of antimony concentration appears to be linked to rainfall.
    - Antimony concentration decreasing whilst water volumes are decreasing is counter-intuitive – levels should either be consistent (due to water being removed to TSF2), or increasing (due to evaporation which was occurring in Eleanora). This suggests Antimony levels are not simply a function of evaporation and concentration.
    - Data indicates antimony levels are potentially related to water interactions with soils and possibly disturbance/aeration of antimony contaminated soil and runoff water.
- Consistent levels of Arsenic through the year, with a reduction in arsenic concentration through summer period (2023-24).
    - Arsenic levels are consistent with a fixed As quantity with concentration varying depending on water volume – consistent for most of year (whilst water volume being moved to TSF2) and decreasing from Nov-23 when increased rainfall starts, which dilutes the As concentration.

Similar to analysis noted in the 2022-23 AEMR, the behaviour of the antimony and arsenic are quite different with the arsenic concentration generally being more predictable than the antimony when compared to activity.

The strategy of moving water from Eleanora to TSF2 for evaporation, to contain residues at TSF2 seems to be effective and this practice will continue in the coming year.

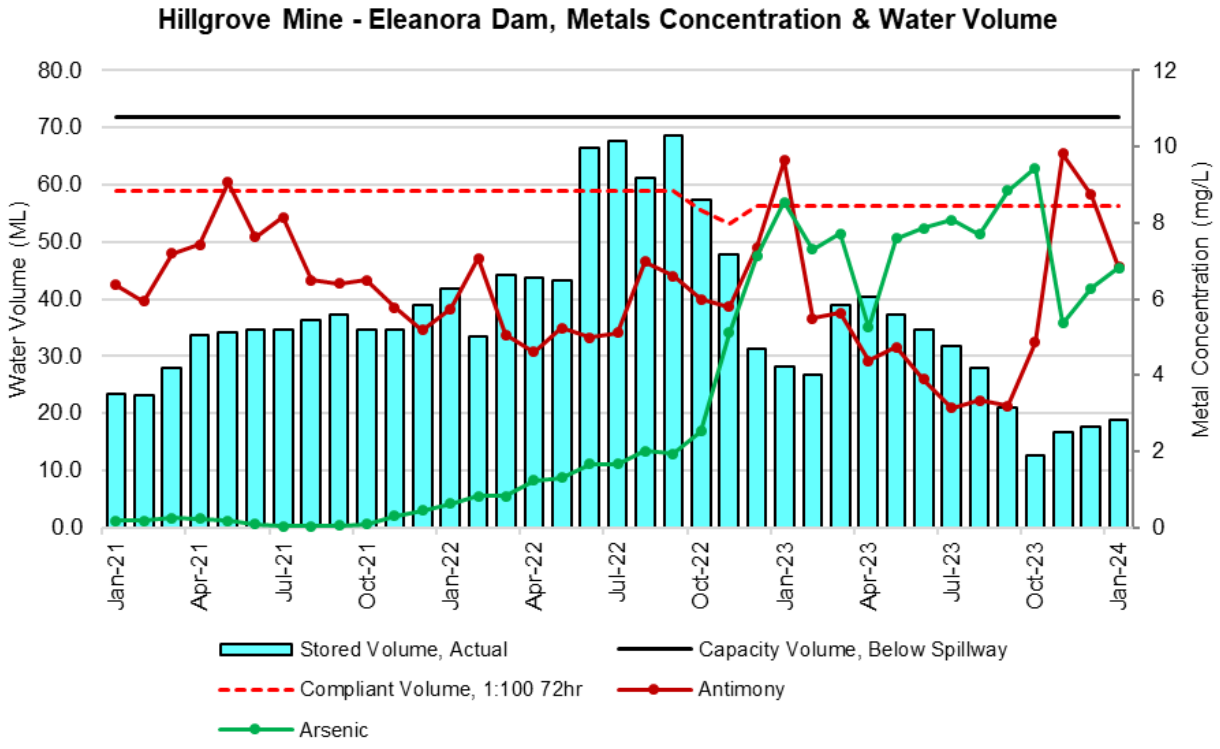

Figure 17: Eleanora Dam, Stored water volume and Contaminant concentration

7.3.5.2 Water Treatment (MF/RO)

A commencement of the reporting year, the water treatment plant (WTP) which used microfiltration (MF) and reverse osmosis (RO), was not operating as RO permeate was not meeting discharge specification and permeate was being diverted to ES2, rather then EPL44.

WTP operation re-commenced on 20 February 2023 with RO permeate being diverted to ES2, as specification was still not within limits. Discharge from EPL44 commenced on 4 March 2023, once permeate was being produced within specification.

The WTP operated until 18 March 2023, when the system was decommissioned off-hired on the basis that the water storages had sufficient capacity that the WTP was not required.

During the reporting year:

- Water Treated (feed): 12.28 ML
- Permeate Discharged (pt44): 4.26 ML
- Permeate Diverted (ES2): 3.58 ML
- Brine Returned (Sunlight): 4.44 ML

Whilst in operation, the process streams were monitored continuously as well as weekly sampling and monitoring of the various streams on a nominally weekly basis.

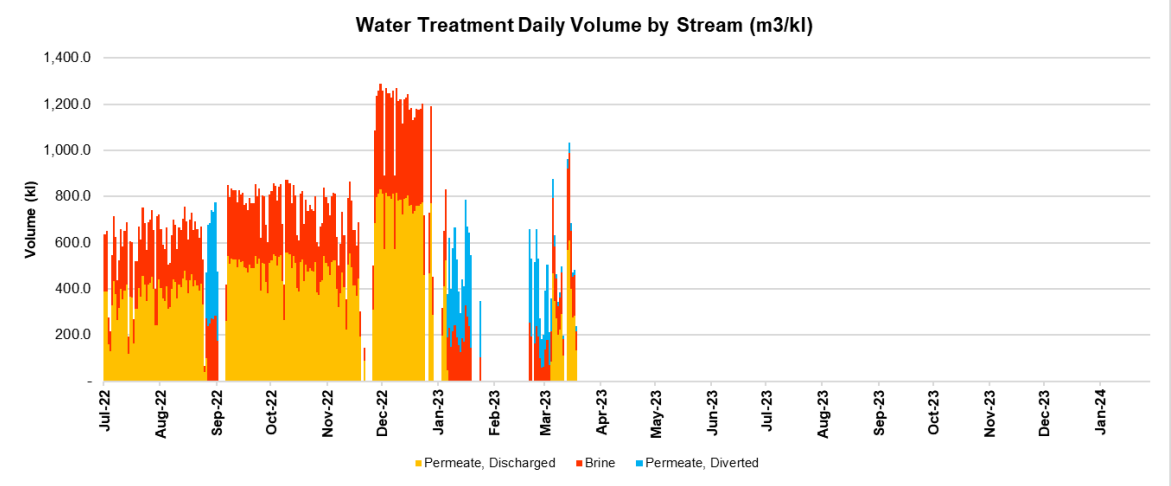

Figure 18: Water Treatment – Daily volume, past 18 months

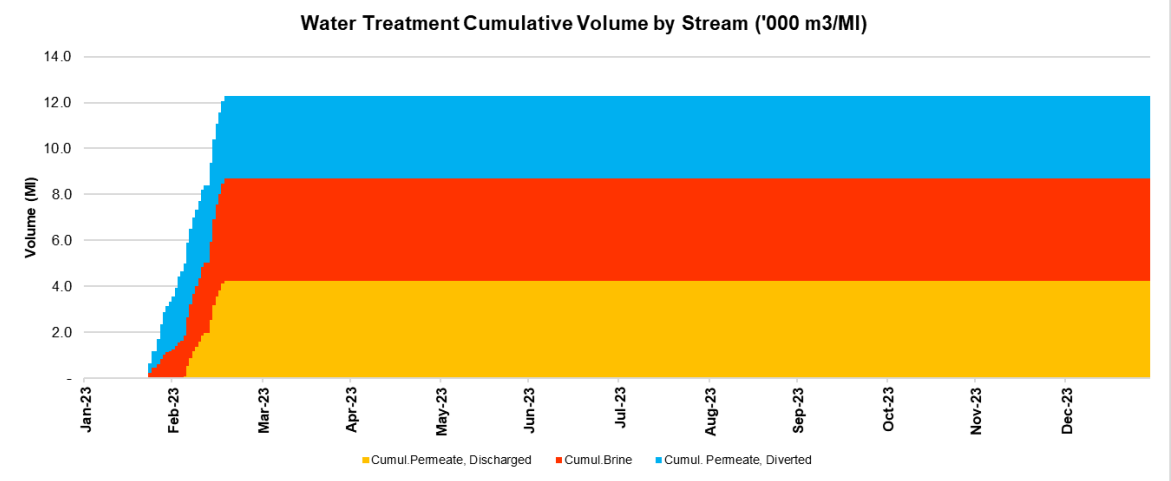

Figure 19: Water Treatment – Cumulative volume by Stream, reporting year 2023-24

7.3.5.2.1 Issues

From January 2023, the RO permeate being produced from the WTP was not meeting specifications to permit discharge at EPL44. RO Permeate showed high electrical conductivity and the following actions were taken:

- Discharge from EPL44 was immediately suspended, and would not be permitted until the WTP was able to produce permeate with the licenced limits (This was in Jan-2023 in prior reporting year). Permeate during this period was diverted to ES2.
- Plant was operated during Jan-2023 with multiple changes being made to the system (maintenance, calibration of instruments, adjustments), as well as troubleshooting to identify any major system faults, with advice from the WTP owner (Water Rentals).

  This period lasted for two weeks and the decision was made to suspend WTP operation in late Jan-2023
- From 20 Feb-23, the WTP recommenced operations, still diverting permeate to ES2. During the shutdown period, changes were made to the RO membrane network to produce a higher quality permeate, at the expense of recovering less volume to permeate (ie: higher proportion in brine stream).

  Additionally, WTP feed was adjusted to incorporate a blend of Eleanora Dam (high contaminant loading) and the previously treated permeate in ES2 (low contaminant loading), to produce a feed water with low enough contaminant loading that permeate could be produced within specification.

  One of the key issues identified was that with the WTP feed water being sourced from Eleanora Dam, which was receiving the RO brine as return, the contaminant loading in Eleanora Dam had increased to a point that the RO plant had reached the limit where it could not remove sufficient contaminants to meet discharge limits.

  The result of the plant modifications and feed water blending, resulted that a feed could be produced within the limits required for discharge at EPL44.
- After 24 hours of operating and meeting EPL44 discharge requirements, diversion to ES2 ceased and discharge recommenced at EPL44 on 4 Mar 2023.
- Operation continued with discharge to EPL44 until 18 March 2023, when the system was decommissioned off-hired.

7.3.5.2.2 Implementation Controls

Learnings after the incident in 2022-23 where RO permeate was discharged outside the contaminant concentration limits specified in EPL-921, resulted in better management and outcomes of the issues during Jan-Feb 2023.

- Discharge was immediately suspended when high-EC was identified during daily plant checks, rather than waiting for weekly sampling and return of results. This prevented discharge of off-spec permeate.
- Plant was operated on diversion to ES2 for a long period, whilst solutions were developed and implemented to achieve permeate quality which permitted discharge.

  The importance of this is evidenced in Figure 23 which shows the permeate being produced whilst diverting was reporting antimony levels well above the limit permitted for discharge.
- After the issues were resolved, the final two weeks of discharging permeate were all within the limits for discharge at EPL44 (Figure 20 to Figure 25).

These outcomes are all evidence that the improved management controls and interventions delivered a much improved result compared to the incident of June 2022.

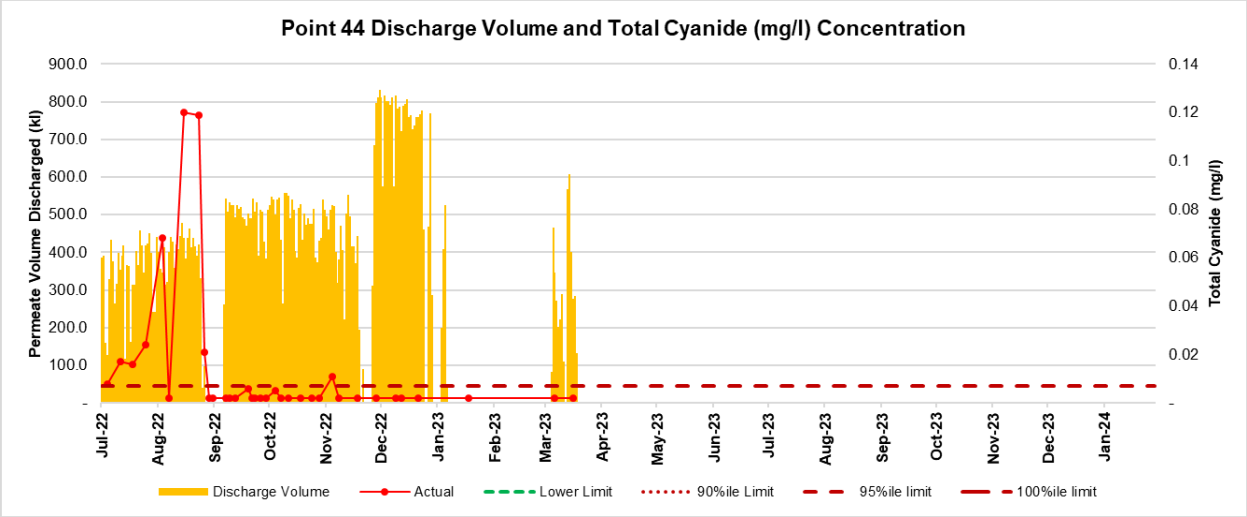

Figure 20: Water Treatment – Discharge volume and Cyanide Concentration, past 18 months

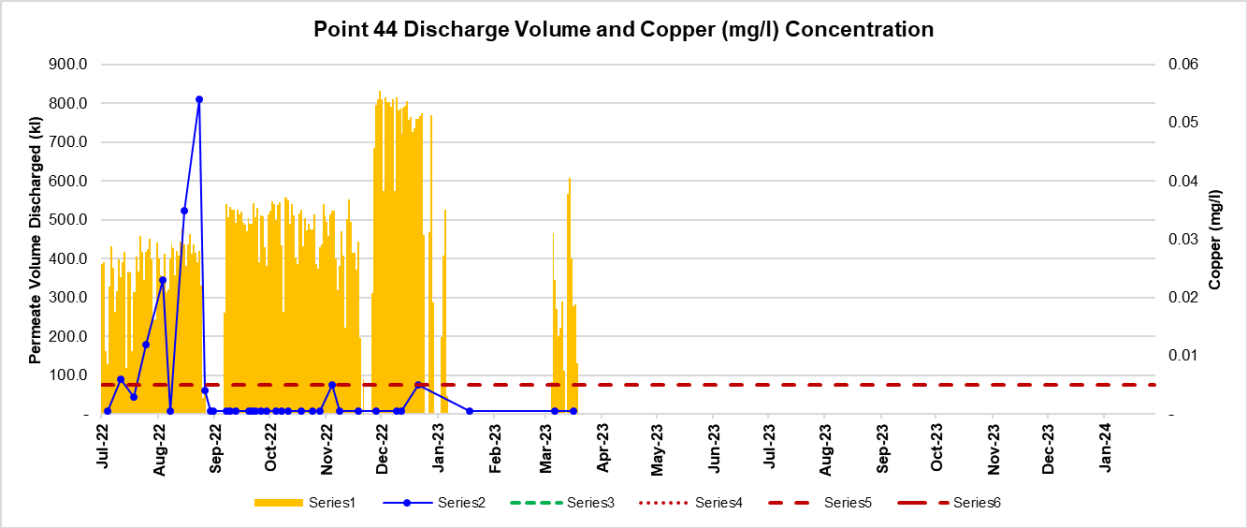

Figure 21: Water Treatment – Discharge volume and Copper Concentration, past 18 months

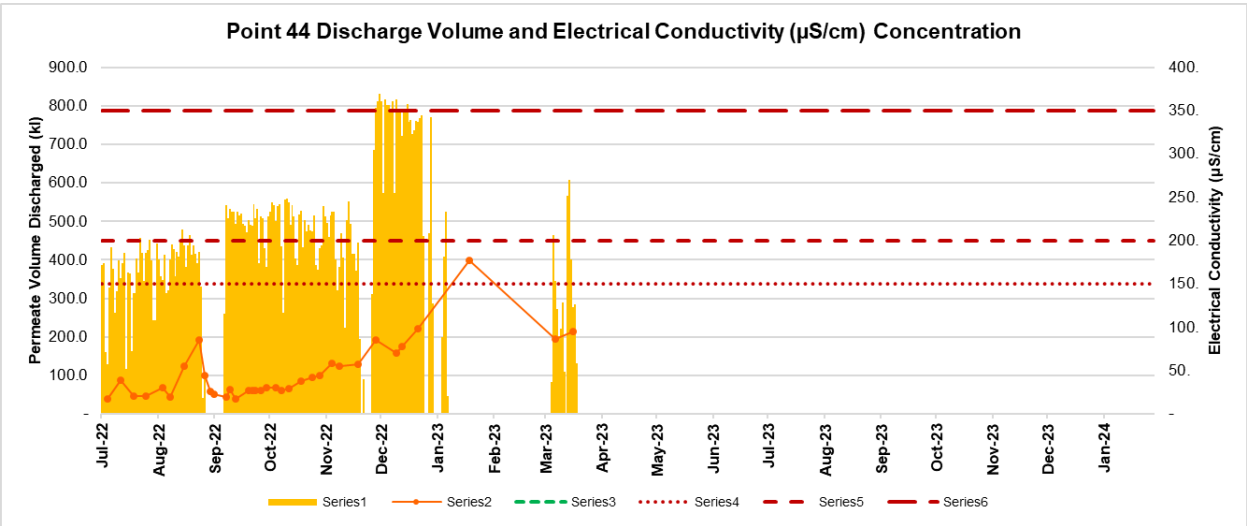

Figure 22: Water Treatment – Discharge volume and Electrical Conductivity, past 18 months

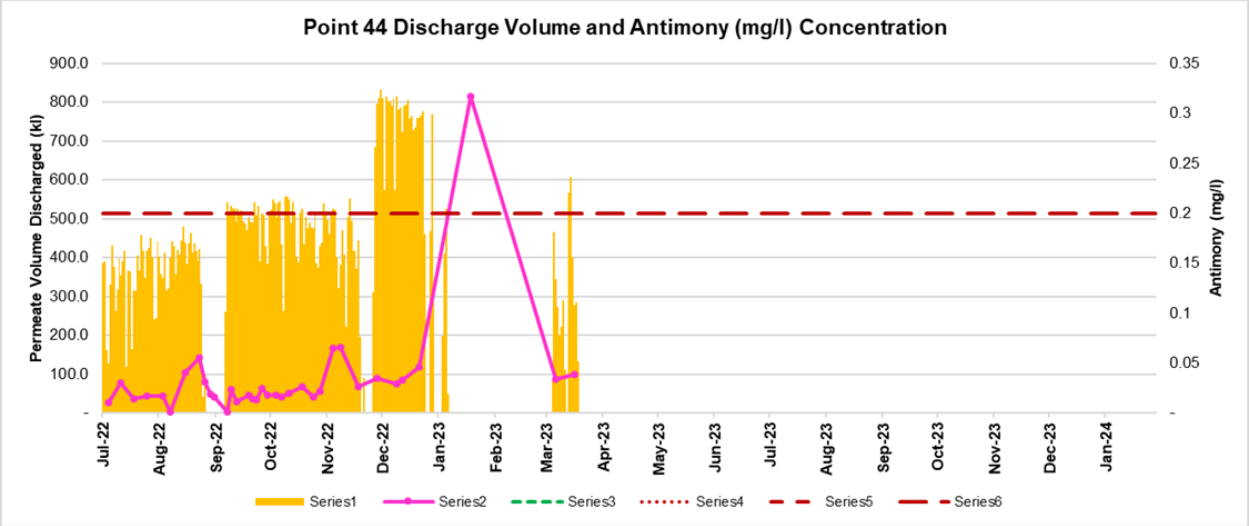

Figure 23: Water Treatment – Discharge volume and Antimony Concentration, past 18 months

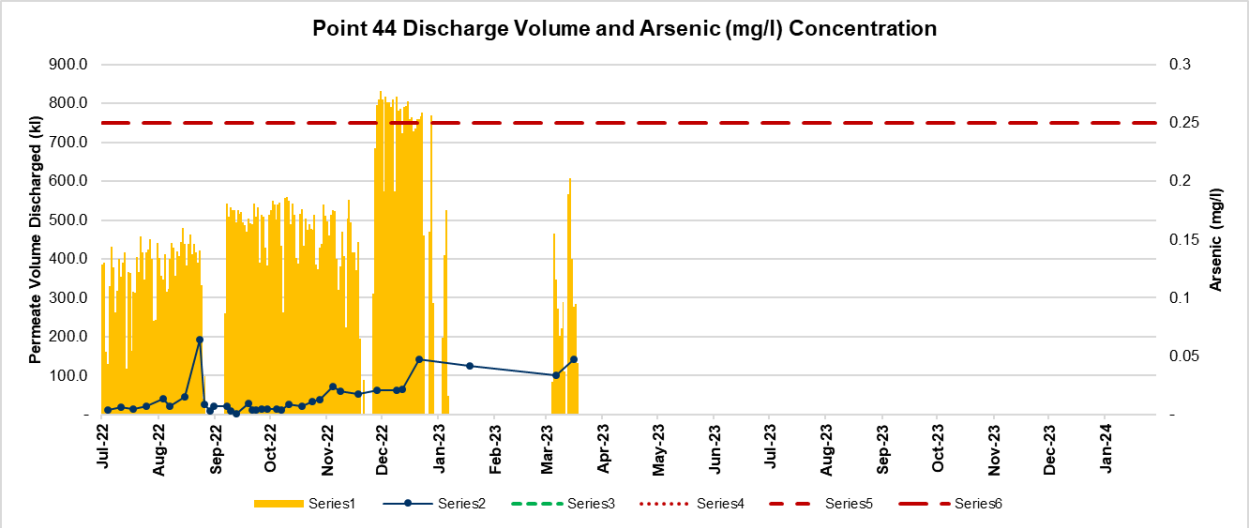

Figure 24: Water Treatment – Discharge volume and Arsenic Concentration, past 18 months

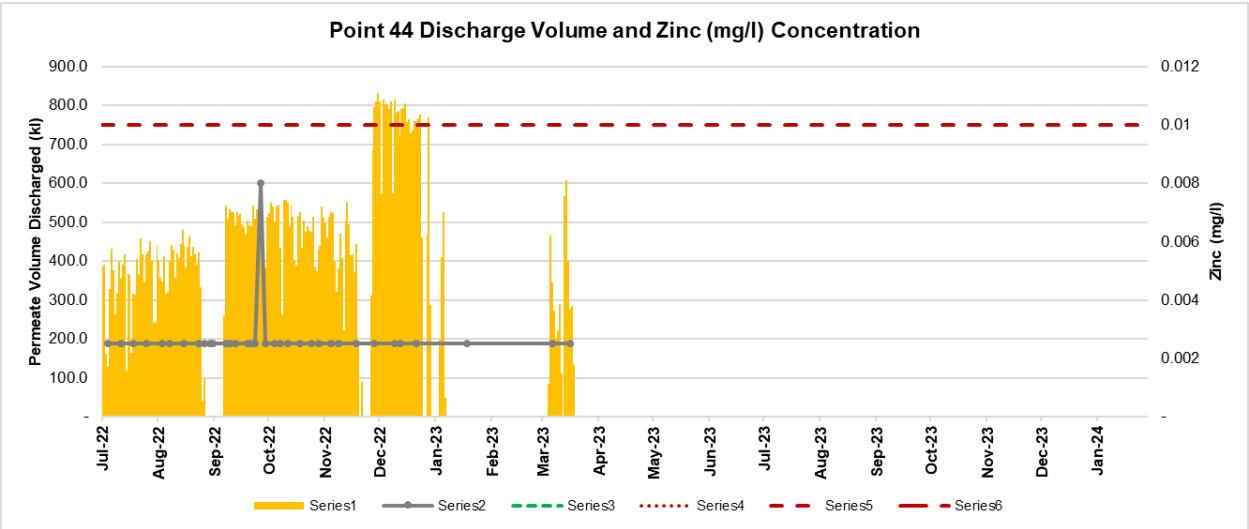

Figure 25: Water Treatment – Discharge volume and Zinc Concentration, past 18 months

7.3.5.2.3 Proposed Improvements

Improvements proposed for water treatment quality management during the coming year are:

- Review substance limits for discharge at EPL44:
    - Current Point 44 concentration limits are lower than Australian drinking water guidelines for many substances.
    - Review of limits has been requested in review of EPL-921 in March 2024.
- Return HMPL owned water treatment plant (MF/RO) to service – this did not occur during 2023-24 as Hillgrove Mine remained under Administration for the majority of the year.
    - Experience operating the hired plant identified a number of items which would improve ability of the plant to reliably produce on-spec permeate. Options under consideration are:
        - Modifying system so that individual membrane can be isolated from the system in the event that one membrane may be operating outside specification and bypassing contaminants into otherwise quality permeate.
        - Improved control systems with online data-logging, connected to site's plant control system.

7.3.5.3 Surrounding waterways

Monitoring of surface waters is carried out for Bakers Creek:

- Upstream (EPL27/ME03): atop the plateau and approximately 300 metres north of Bakers Creek Falls, to provide water quality data prior to entering the area.
- Downstream (EPL28/MW04): below the confluence of Four Mile Creek and Bakers Creek, below all active and historic disturbances from the Hillgrove Mine area.

Results from these sites indicate the following:

- Antimony concentration (Figure 26 and Figure 27Figure 33):
    - Increases in Bakers Creek from upstream to downstream (1-2 mg/l downstream versus negligible upstream) – but increased levels are consistent with all previous monitoring data.
    - Increased slightly in ES3 for the year during the dry winter period, likely due to levels concentrating as water evaporated, before returning to similar levels to prior years later in the year. Notable that ES3 did not discharge so does not impacts Bakers Creek concentrations.

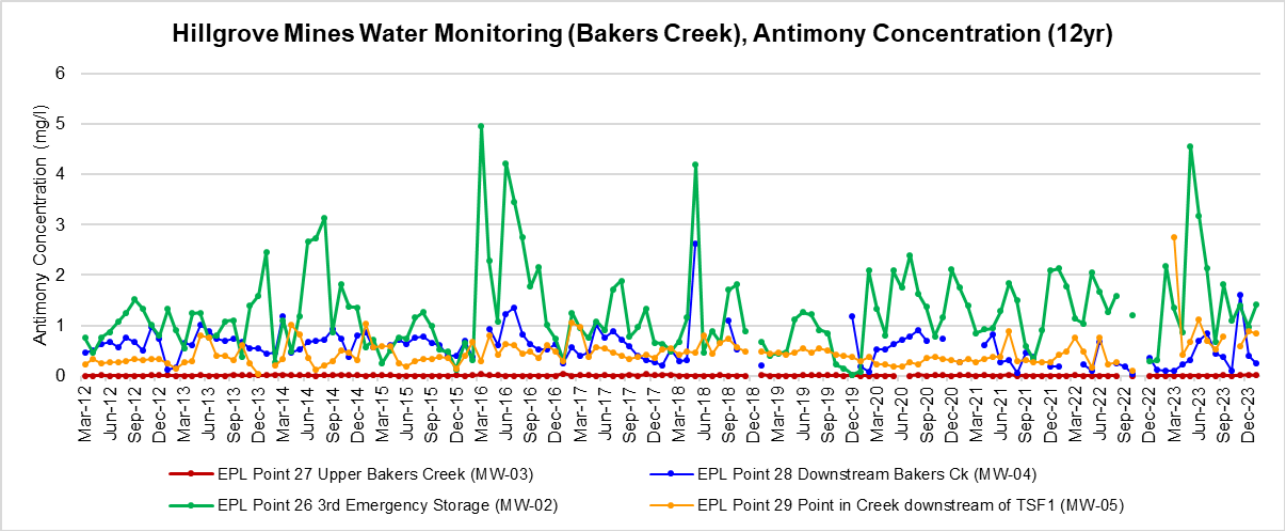

Figure 26: Antimony Concentration in RWSS and Bakers Creek

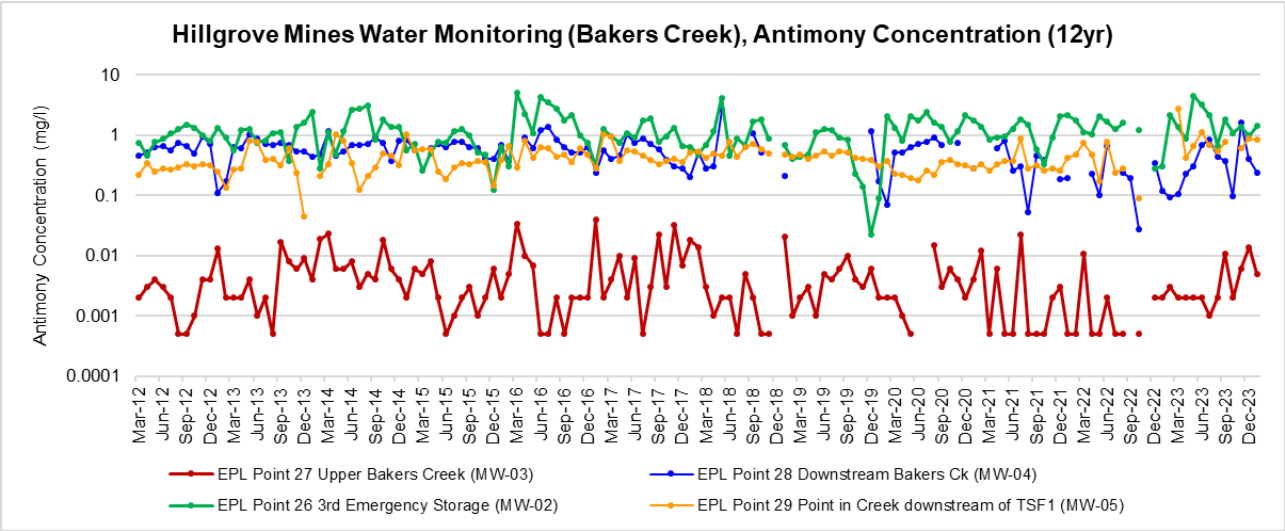

Figure 27: Antimony Concentration in RWSS and Bakers Creek (log Y-axis)

- Arsenic concentration (Figure 28 and Figure 29Figure 33):
    - Increases slightly in Bakers Creek from upstream to downstream but is consistent with all previous monitoring data.
    - Elevated concentrations in EPL29/MW05 (below TSF1 Toe Dam), with a potential trend that these are increasing.

      Review of the increasing arsenic concentrations shows that the samples with elevated concentration were all collected in periods where the stream had very low volume flow (1 or 2 l/min, where 1 is the minimum measurable flow rate).

      The low flow conditions suggest the increased concentrations are a result of low volumes resulting in concentrated arsenic in the stream, with the low volume presenting low potential for downstream impact, which is supported by the arsenic concentrations at EPL28/MW04 remaining consistent through the reporting year, compared to previous years.
- Concentrations for Total Dissolved Solids (TDS), Cyanide and Zinc (Figure 30 to Figure 33) show results for the 2023-24 reporting year are consistent with previous years.

A single high result for suspended solids at Upper Bakers Creek (EPL27) is reported in Jan-2024 and is likely due to construction to replace the Bakers Creek bridge and is not related to Hillgrove Mine activity.

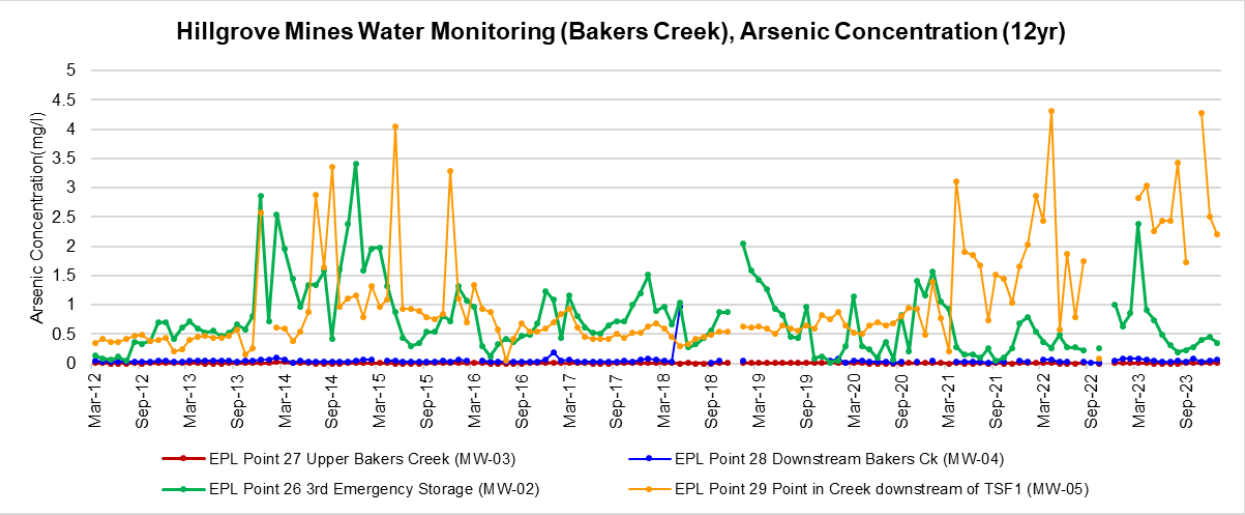

Figure 28: Arsenic Concentration in RWSS and Bakers Creek

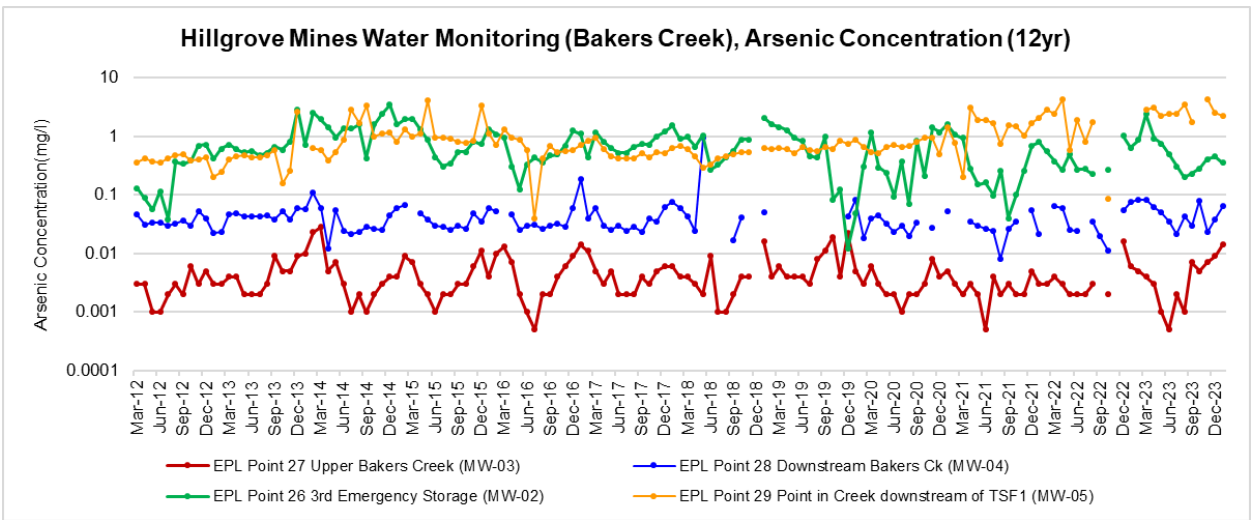

Figure 29: Arsenic Concentration in RWSS and Bakers Creek (log Y-axis)

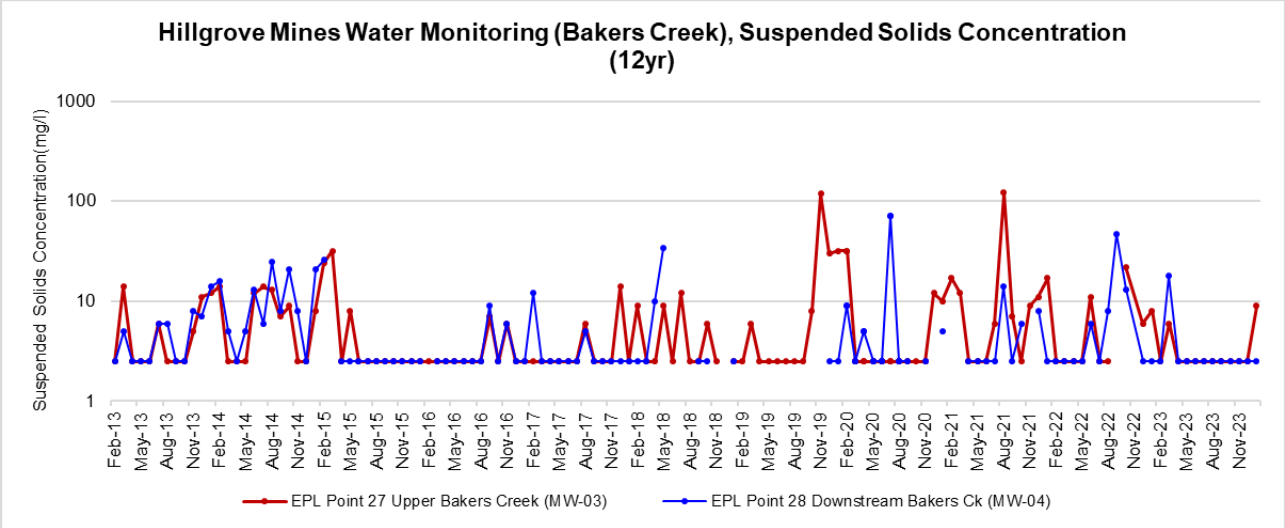

Figure 30: Suspended Solids Concentration in Bakers Creek, Upstream and Downstream

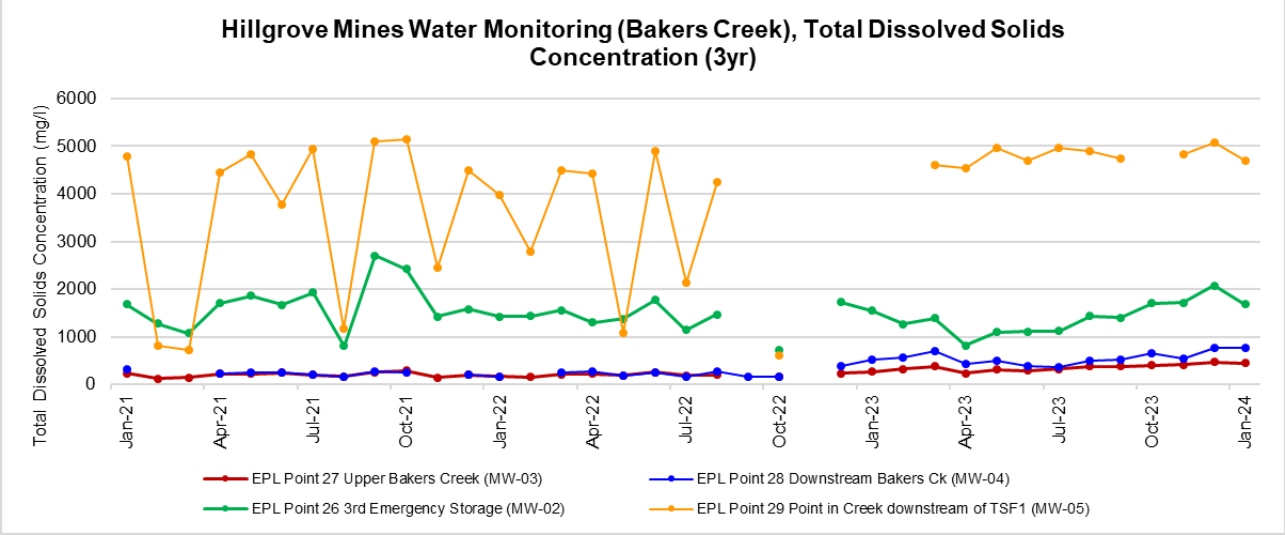

Figure 31: Total Dissolved Solids (TDS) in RWSS and Bakers Creek (log Y-axis)

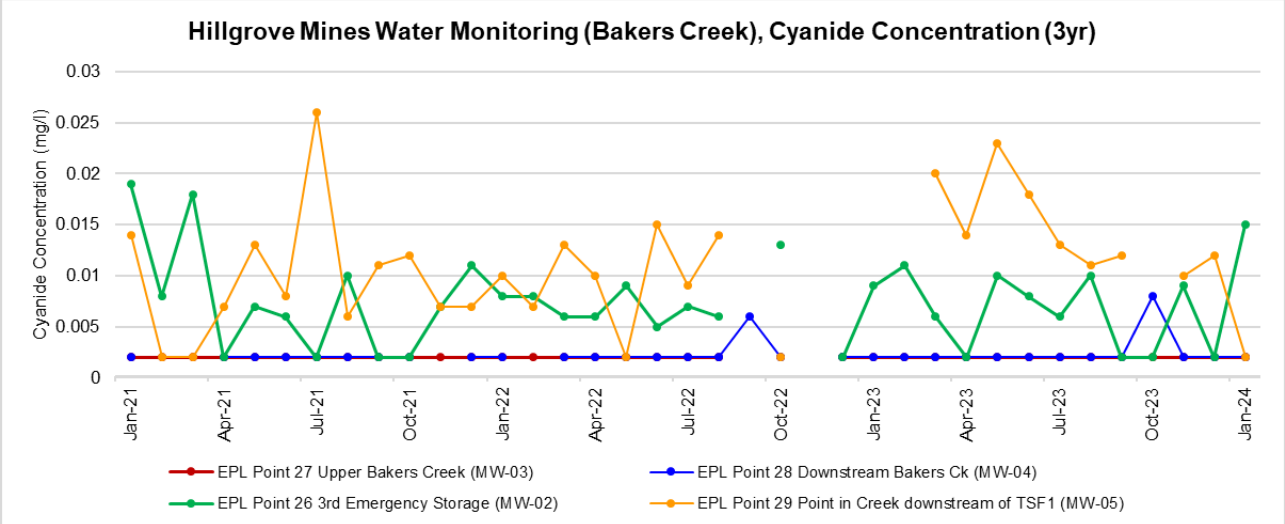

Figure 32: Cyanide Concentration in RWSS and Bakers Creek

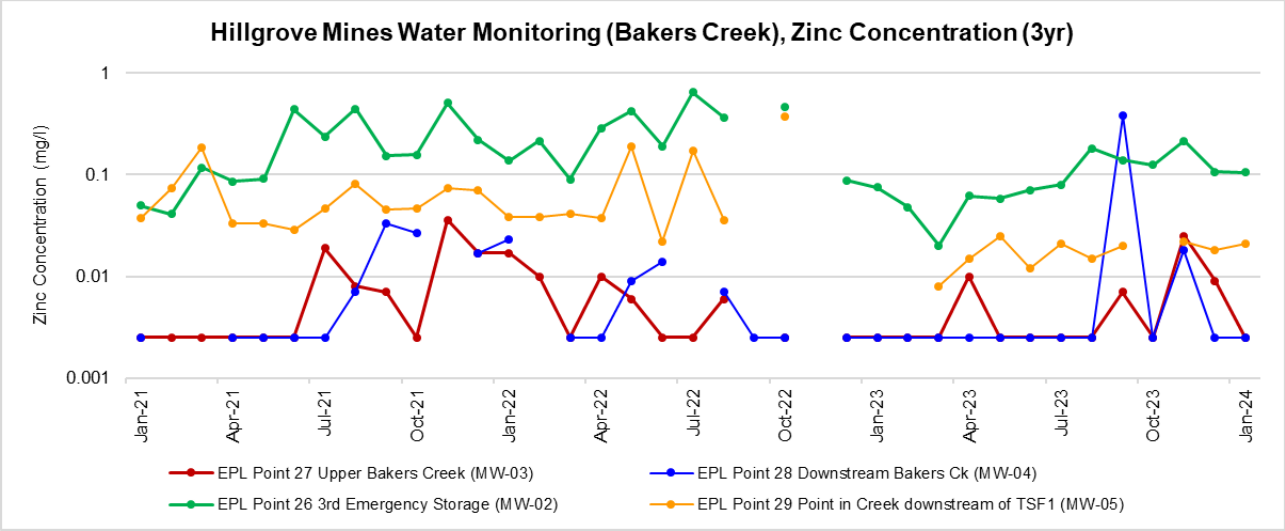

Figure 33: Zinc Concentration in RWSS and Bakers Creek

Monitoring of surface waters is carried out on 4 Mile Creek, either side of Swamp Creek. Swamp Creek gorge contains the historic and Freehold and Smiths mines which were operated in the 1970's and 1980's.

- Upstream (EPL31/QW08): upstream of Swamp Creek confluence.
- Downstream (EPL28/MW04): upstream of Swamp Creek confluence.

Results from these sites indicates the following:

- Concentrations of antimony, arsenic and TSDS (Figure 34 to Figure 36Figure 33) show no noticeable difference between the upstream and downstream concentrations for the 2023-24 reporting year.

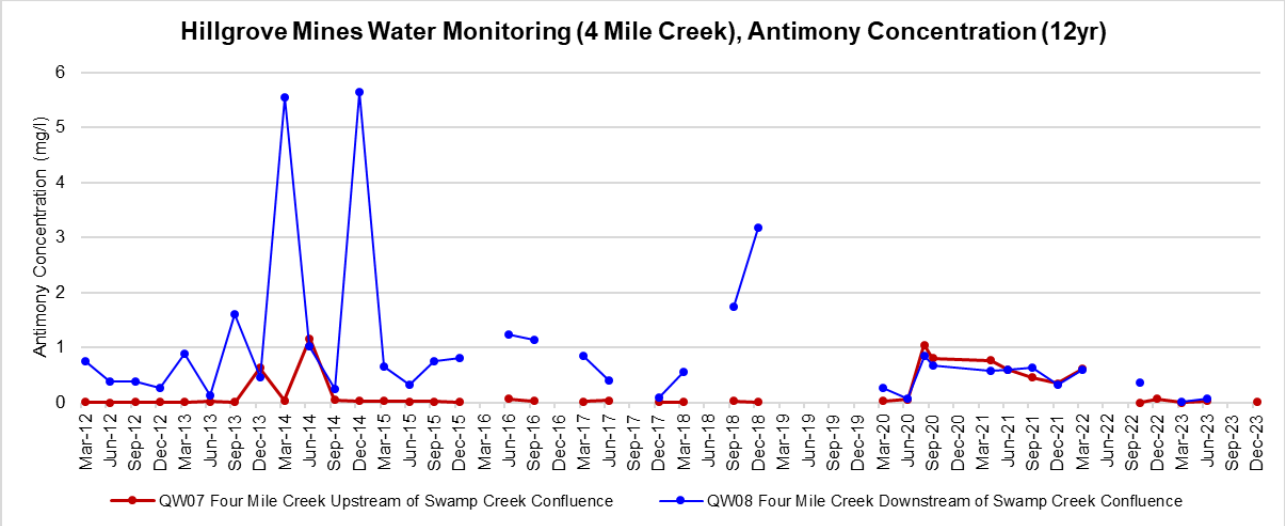

Figure 34: Antimony Concentration in 4 Mile Creek, above and below Swamp Creek Junction

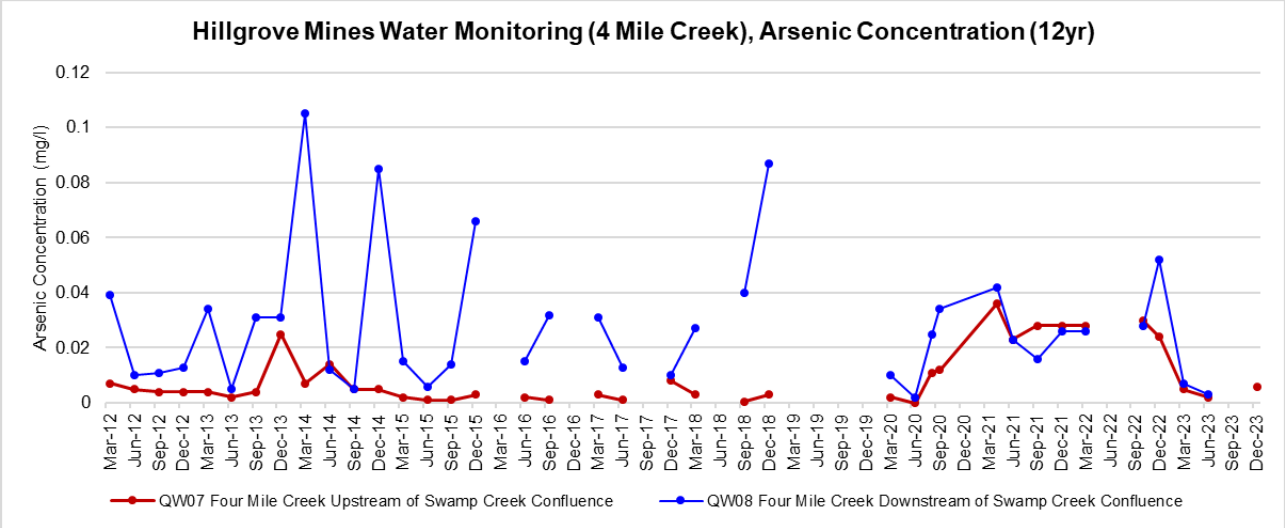

Figure 35: Arsenic Concentration in 4 Mile Creek, above and below Swamp Creek Junction

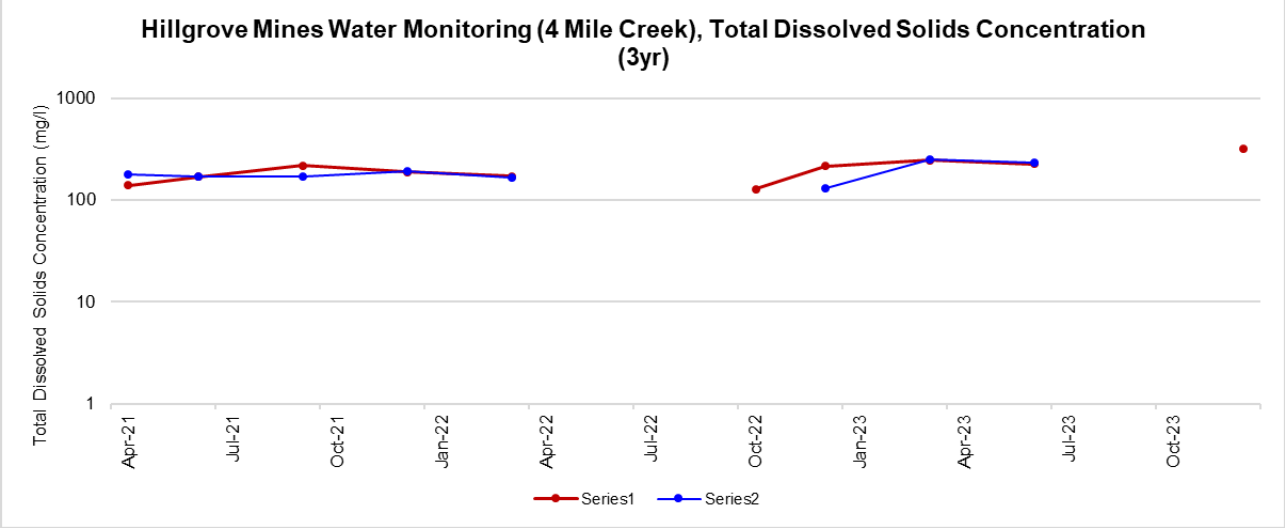

Figure 36: Total Dissolved Solids (TDS) in 4 Mile Creek, above and below Swamp Creek Junction

An intermittent drainage line flows through Metz Gully (Metz mining area) and into Bakers Creek south of the Lower Cooney Road crossing. Monthly samples are collected from this stream as it enters Bakers Creek, at MW07 (not a registered monitoring point in EPL 921):

Results from this site indicates the following:

- Concentrations of antimony and arsenic (Figure 37Figure 33) show the elevated arsenic concentration from the end of 2022 reduced down to levels consistent with prior years by Jun-2023, after which no samples were collected as the stream had no flow. Antimony concentrations were consistent with the prior year results.

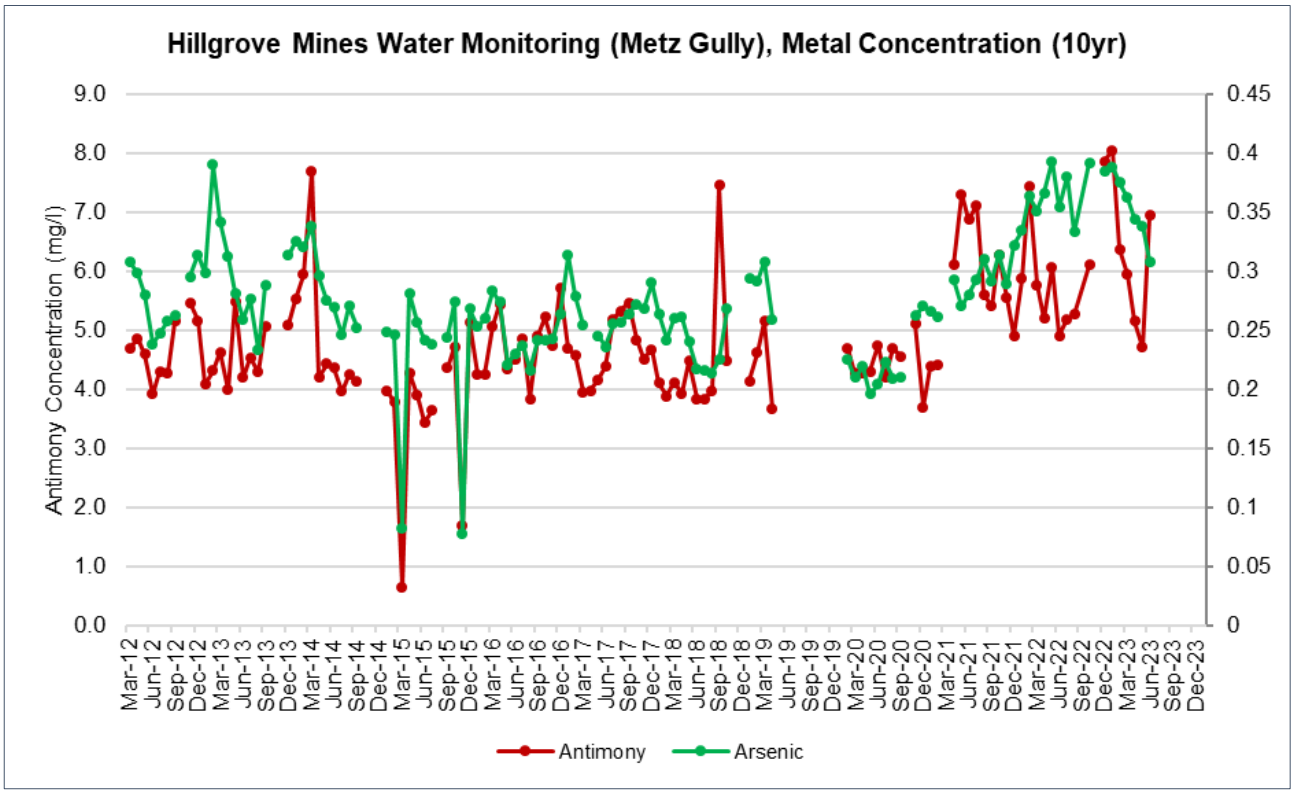

Figure 37: Antimony and Arsenic Concentrations in Metz Gully (MW07)

8. REHABILTATION

The requirements and objectives for rehabilitation and closure are outlined in Section 4 of the Rehabilitation Management Plan and summarised in Table 13 below.

Table 13: Rehabilitation Objectives (Condition 49, Table 1 DA 98/35)

Feature	Objective
Mine site (as a whole)	• Safe, stable and non-polluting. • Final land use compatible with surrounding land uses. • Site to be revegetated with suitable plant species.
Surface Infrastructure	• To be decommissioned and removed, unless DRG agrees otherwise.
Community	• Ensure public safety and minimise the adverse socio-economic effects associated with mine closure.

Hillgrove Mine proposes a post mining land use that provides a beneficial future of rehabilitated land, which can be sustained in view of a range of limiting factors. Therefore, to meet the rehabilitation objectives the final closure design will maintain and integrate the mining history and natural beauty of the area into the final land use. This will be done by developing the closure plan around allowing safe access to the remaining historical and natural features as a tourism feature for Hillgrove. This will:

- Ensure that the socio-economic impacts of mine closure on the township of Hillgrove will be minimised by providing a post-mining tourist destination to keep the village 'on the map'; and will
- Integrate within the overarching tourism theme of the Waterfall Way by providing safe access to Brereton Falls, normally not accessible to the public.

It is planned that any tourist facility developed will involve safe walking access to various features including:

- Eleanora and Garibaldi historic chimneys
- Eleanora winder
- Smith tramway headframe
- Brereton Falls (not visible to the public but fits with Waterfall Way tourist attraction)
- Bakers Creek historic winder and steam engine.

A walking trail would include story boards providing an insight into the history or the area and specific features. These would be consistent with those that already erected in Hillgrove Village, Metz Lookout and Bakers Creek Falls.

Any land not affected by the tourist facility will include a combination of pasture, woodland and water management areas. The composition of these rehabilitated areas will be consistent with local needs and adjacent vegetation communities.

DRE, EPA and Armidale Regional Council have all be consulted in determining the overarching post land use units. The Hillgrove Progress Association (community representative group) were also consulted and support the approach.

Specific rehabilitation objectives by domains are shown in Table 14.

Table 14: Domain Rehabilitation Objectives

Primary Domain	Secondary Domain	Rehabilitation Objective
1 - Infrastructure	1A	• Infrastructure removed that is not identified to remain as part of final land use • Vegetation appropriate • Domain safe and free from hazardous materials • Free draining, stable landform established • Non-polluting • Compatible with surrounding land use
	1E	• Infrastructure removed that is not identified to remain as part of final land use • Vegetation appropriate • Domain safe and free from hazardous materials • Free draining, stable landform established • Non-polluting • Compatible with surrounding land use
2 - Tailings Storage Facility	2D	• Infrastructure removed and domain made safe • Vegetation appropriate (shallow rooted pasture species) • Free draining, stable landform established • Non-polluting
3 - Water Management Area	3B	• Stable and non-polluting • Infrastructure removed (ES1-3 and pumps etc.)) • Safe and stable landform
	3E	• Stable and non-polluting • Infrastructure removed (ES1-3 and pumps etc.)) • Vegetation appropriate • Safe and stable landform
4 - UG mining area	8F	• Infrastructure removed (TBD which roads to remain if any) and domain made safe • Vegetation appropriate e.g. Forest consistent with surrounding gorge ecosystem • Free draining, stable landform established • Non-polluting • Compatible with surrounding land use
	8(N/A) (Bakers Creek Waste Dump)	• Waste rock removed and returned to original landform • Domain made stable with erosion and sediment control measures in place • Vegetation appropriate and consistent with surrounding gorge ecosystem

8.1 Rehabilitation Performance

8.1.1 Studies

The RMP notes that, DA 98/35 does not contain detailed completion/relinquishment criteria or a requirement to undertake rehabilitation monitoring.

However, a commitment is provided within the RMP to undertake additional studies to develop performance indicators and completion criteria/relinquishment criteria. Consultants Eco Logical Australia (ELA) were engaged to complete vegetation surveys to development ecosystem metrics and to establish analogue sites for each post mining vegetation community. This is an annual study that is undertaken, to allow us to have a consistent and evolving rehabilitation plan while the mine is still active.

The Annual Floristic Survey conducted by ELA was delayed during this reporting period due to the site going into Care and Maintenance then into new Ownership it will be undertaken at the end of April 2024. The results of the analogue monitoring will be used to determine performance indicators and completion criteria for rehabilitation areas. Table 14 summarises the analysis methods that will be used.

Table 15: Summary of rehabilitation survey methods completed by Eco Logical Australia

Site	Method	Easting	Northing	Comments
Metz Timber Laydown	Full floristic plot Soil survey	392769	6616551	
Metz Gully Scree Slope	Photo point	393409	6616697	Rehabilitation undertaken on a very steep slope (c. 40°) and area was inaccessible due to safety concerns. Permanent photo point established along a bearing of 10°.
Passing Bay 3 Scree Slopes (two areas)	Photo point	394060	6617345	Rehabilitation undertaken on a very steep slope (c. 45°) and area was inaccessible due to safety concerns. Permanent photo point established along a bearing of 180°. Photo point covers two rehabilitation areas (HMR3 and HMR4) and in consultation with HML, it was decided to combine the areas into a single site for monitoring purposes.
Waste Disposal Area ROM2	Full floristic plot Soil survey	394467	6617330	
Historic Laydown Yard	Photo point	394496	6617200	Rehabilitation undertaken on a moderately steep slope and area was inaccessible due to safety concerns. Permanent photo point established along a bearing of 310°.
Arsenic Ponds	Full floristic plot Soil survey	394764	6617120	
Halls Peak Ore Stockpile	Photo point	394769	6616878	Rehabilitation consists mainly of bare earth. Permanent photo point established along a bearing of 150°. Plans discussed for additional rehabilitation works at this site.
Historic Eleonora Plant	Full floristic plot Soil survey	394636	6616800	
Garibaldi Pit	Full floristic plot Soil survey	394825	6616503	

8.1.2 Activities

The Hillgrove Mine site has a number of rehabilitation areas. Each of these areas are at different stages of rehabilitation (Table 15).

Table 16: Rehabilitation areas and rehabilitation stage.

Rehabilitation areas 2019-2000	Rehabilitation Stage
Arsenic Ponds	Ecosystem and land use establishment
Passing Bay 3 Scree Slopes (two areas)	Ecosystem and land use establishment
Historic Laydown Yard	Ecosystem and land use establishment
Metz Gully Scree Slope	Ecosystem and land use establishment
Waste Disposal Area ROM 2	Ecosystem and land use establishment
Halls Peak Ore Stockpile	Growth Media Development
Metz Timber Laydown	Ecosystem and land use establishment
Garibaldi pit	Ecosystem and land use establishment
Historic Eleonora Plant	Ecosystem and land use establishment
ROM 3	Ecosystem and land use establishment
Garibaldi/TSF1 Road	Ecosystem and land use establishment

Clean up around the site continued during the reporting period, other sites that are marked for rehab will be included for the next reporting period.

Table 17: Rehabilitation Status

Mine Area Type[1]	Previous Reporting Period 2022 (Actual)	This Reporting Period 2023 (Actual)	Next Reporting Period 2023 (F/C)
	(ha)	(ha)	(ha)
A. Total mine footprint	71.96	71.96	67.65
B. Total active disturbance	63.69	46.44	57.35
C. Land being prepared for rehabilitation	2.03	0	0
D. Land under active rehabilitation	10.03	8.88	9.08
E. Completed rehabilitation	0	0	0

Note: due to the reporting changes that are required through the NSW Resource Regulator Rehab portal the numbers shown for 2024 are calculated from the spatial data submitted in the Rehab portal.

No areas have been requested for relinquishment signoff from the Resources Regulator during the reporting period.

8.1.2.1 Bakers Creek Waste Dump

First pass rehabilitation occurred in the Bakers Creek dump in January 2022 when approximately 1,000 seed bombs were made and distributed over the area. Bunding and signage was placed across the site to prevent access over the rehabilitated areas. The site is included in the Rehabilitation reporting undertaken yearly as well as in the quarterly rehabilitation site monitoring program.

Over the previous reporting period the NSW Resource Regulator Rehab inspected the Bakers Creek rehab area, suggestions were made of how to address the steeper areas of the rehab area, as the rehabilitation objectives are broadly not being met for the Bakers Creek dump due to the steep slopes which are not permitting vegetation to take hold.

The Bakers Creek dump rehabilitation has been identified as a Non-Compliance from the 2023 IEA.

Financial constraint (Administration) prevented extensive rehabilitation and reassessment of the area during the 2023-24 reporting period.

This area is going to take more than one round of rehabilitation and will take more than 18mths to correct.

Figure 38: The Bakers Creek Waste Dump prior to the removal of waste materials for reprocessing.

Figure 39: The Bakers Creek Waste Dump at the final stage, with the permanent road in place - January 2022.

Figure 40: The Bakers Creek Waste Dump upper area, fair vegetation take-up on flatter slopes - March 2023.

Figure 41: The Bakers Creek Waste Dump lower area, very poor vegetation take-up on steeper slopes - March 2023

8.1.2.2 Lower Core Yard Area

An area between the administration buildings and the core yard (formerly used for ore stockpiling) was poor in vegetation cover and developing deep erosion rills on the slope (Figure 24). The area was initially cleared of scattered pieces of scrap wire and poly pipe. During October 2021, the ground was deep ripped with a D6 dozer and small contours formed across slope. A silt mesh fence was erected to prevent further erosion until vegetation was established. The area was seeded with a native grass and wildflower seed mix.

At the time of writing this report vegetation is well established and considerable progress is noticeable in the two years since the site was rehabilitated. During the annual rehab audit, if results are promising we will potentially be seeking from the NSW resource regulator for this area to be signed off during 2024.

Figure 42: Lower Core Yard area in October 2021, with poor vegetation cover and deep erosion rills.

Figure 43: Lower Core Yard area in January 2022, after being ripped and vegetation beginning to establish.

Figure 44: Lower Core Yard area in March 2023, with vegetation well established.

8.2 Actions for Next Reporting Period

- The existing rehabilitation areas will be monitored on a quarterly basis during the reporting period.
- The Annual report will also include the requirements needed for sign off with the NSW Resource Regulator.
- The weeding program will continue with close attention being paid to the areas Hillgrove Mine wishes to achieve sign off during the next reporting year.
- Rehabilitation of Bakers Creek Waste Dump will be progress, likely with re-seeding on the flatter slopes and development of earthworks plans to facilitate revegetation on the steeper slopes.

8.3 Key Issues to Achieving Successful Rehabilitation

Longer term growth media, or the lack of suitable growth media is a key issue that impacts upon successful rehabilitation moving forward.

The current stocks of topsoil (growth media) fall short of the required amount to achieve full coverage of the mines disturbed footprint. The most practical solution to overcome this shortfall is to source topsoil/subsoil material from within the Hillgrove Mine site.

To increase stock of growth media and improve recycling at HMPL, a growth media pit was installed during the reporting period. A load of timber mulch was sourced and delivered from an uncontaminated site in the Thora area to begin the mulch pile. A program has been implemented to collect all paper, cardboard and uncontaminated organic material from around the mine site and deposited into the growth media pit. Further efforts will be invested in sourcing clean growth media from external sources in the coming years.

Weed infestations are a continuous obstruction to successful rehabilitation of sites. The quarterly inspections and the management of weeds will continue in identifying invasive species and eradication through a regular spraying program. Several African Boxthorn plants were identified toward the end of the last reporting period, which were eradicated during this reporting period.

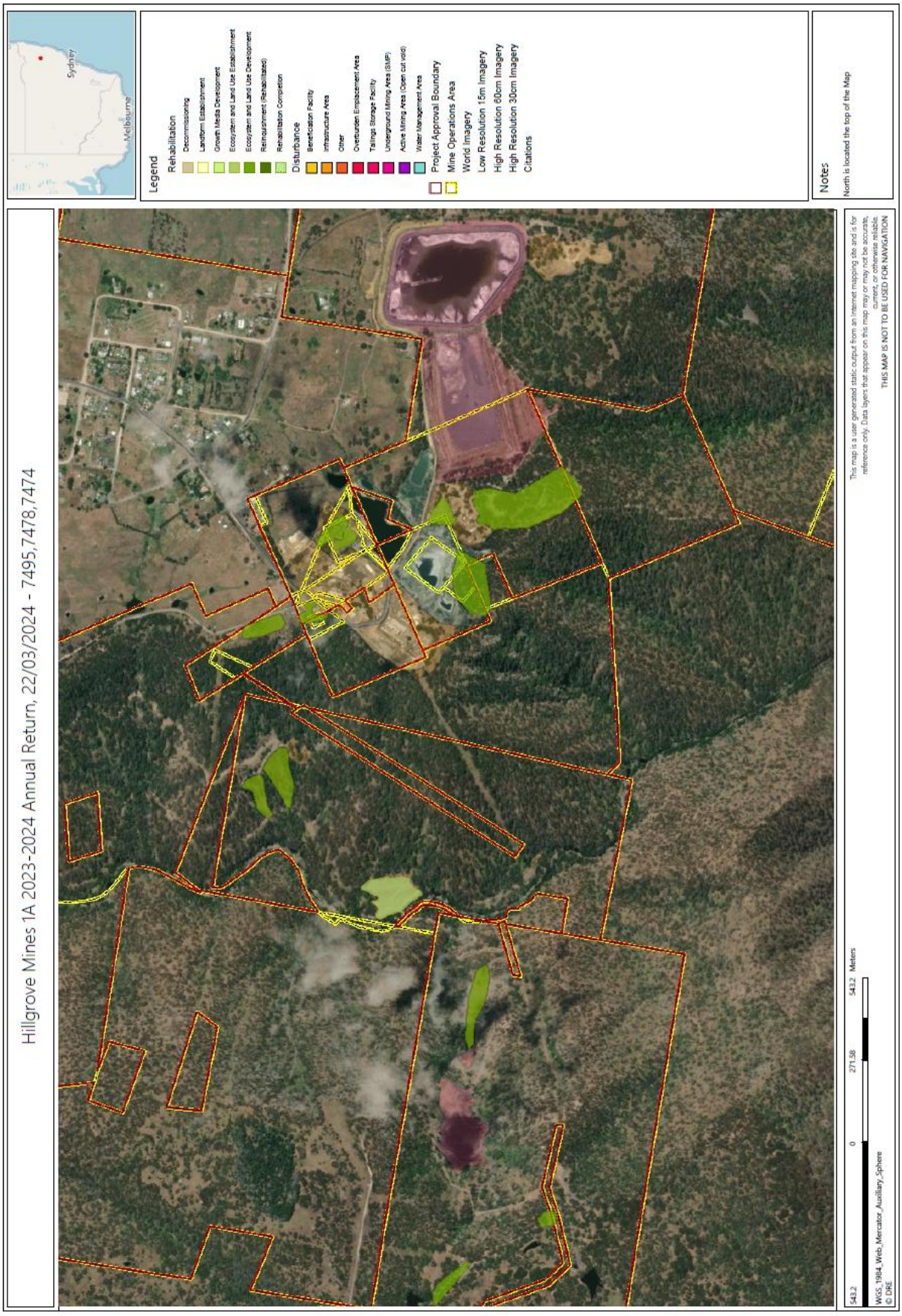

Figure 45: Hillgrove Mine Rehabilitation and Disturbed areas. 2024

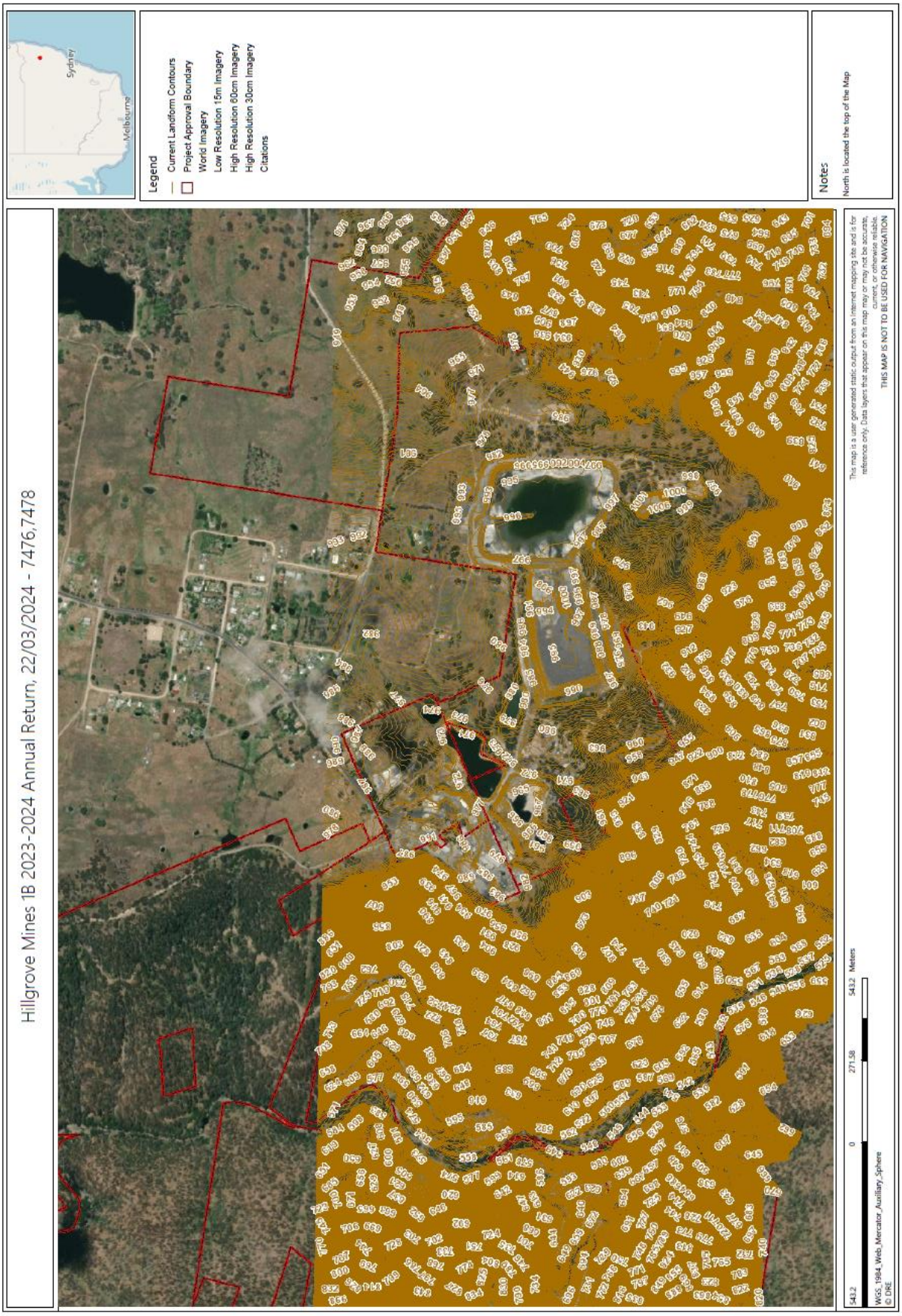

Figure 46: Hillgrove Mine current contours. 2024

9. COMMUNITY

HMPL undertook the following community consultation activities during the reporting period:

- Provided support to Cooney Creek Wild Dog Association and local landowners with conducting baiting programs targeting wild dogs and foxes.
- Communication with the nearest residents to Hillgrove Mines during Care and Maintenance at the mine and provided the opportunity for residents to discuss any concerns.
- Attended several Hillgrove Progress Association Meetings
- Assisted Rural Fire Service and local landowners during a series of bushfires north of Hillgrove near Bakers Creek Falls, during November 2023. Assistance consisted of water hauling and earthworks to push trees and build tracks.
- Working in conjunction with UNE for study purposes.
- There were no community complaints.

10. INDEPENDENT AUDIT

The Independent Audit was undertaken in March 2023 and undertaken by 3E Environmental. Against the 58 consent conditions, the audit assessed:

- 14 Compliant;
- 14 Not Compliant; and
- 30 Not Triggered.

Review of the audit by DPHI recognised 12 non-compliances, which are detailed in Sections 1 and 11.3.

The next independent audit is due before 24 February 2026.

11. INCIDENTS AND NON-COMPLIANCES DURING REPORTING PERIOD

11.1 Incidents

There have been no incidents that occurred onsite during the reporting period.

11.2 Complaints

Table 18 shows the summary of complaints received during the reporting year.

No complaints were received during the 2023-24 reporting year.

Table 18: Complaints received during 2023-24 Reporting Year

Total Number of Complaints Received:	nil
Number of Complainants:	nil
Location of Complainants:	n/a
Nature of Complainants:	n/a

11.3 Non-Compliances

The IEA from February 2023 assessed 14 matters as non-compliances, however with review completed by the DPHI it was found to only be 12 matters as non-compliances which are outlined in Section 1 (Statement of Compliance).

Causal factors, proposed actions and status are outlined below. In addition, there are four matters assessed as non-compliant in the audit which HMPL disagree with and are described in Section 1.

Although some of the below were completed during the reporting year they have been left as Non-Compliant for the purpose of this summary table. It should be noted that it is mentioned in the evidence and comments section if this has been completed/compliant, started, not started.

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
6	Schedule 2, Condition 6 (MOD 3) “6. The Applicant shall employ an Environmental Officer whose qualifications are acceptable to the Secretary in consultation with Council and the Department of Mineral Resources. The Environmental Officer shall be responsible for ensuring that all environmental safeguards proposed for the development and as required by this consent and other statutory approvals are monitored and enforced from the commencement of construction.”	All Times	Whilst there are administrative gaps in record-keeping of nominated EO's, apart from short transition periods between individuals an EO has been nominated (either employee, or contractor) at all times during the audit period. At the time of the audit, the current EO (Katie Bryant) had submitted the application for nomination which has since been approved. HGM will continue to resource the EO role as appropriate to meet the demands of the operation's scale and in the interests of ensuring HGM employees are treated in an environment which promotes diversity and is free from discrimination. On the 3/03/2023 Katie Bryant Received confirmation of her acceptance as the EO. Hillgrove Mine considers this consent completed and compliant	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
8	ENVIRONMENTAL MANAGEMENT PLAN REPORT The Applicant shall prepare and submit to the Secretary an Annual Environmental Management Plan (AEMP) Report. The first report shall be prepared and submitted within twelve (12) months of the substantial commencement of construction. A copy of the EMP Report should also be submitted to the Council and EPA. The report shall generally include: (a) a review of the effectiveness of environmental management for the subject land, including all control, mitigation and management measures required in the conditions of this consent; (b) a review of performance in terms of the conditions of development consent; (c) results of environmental monitoring in respect of air quality, water quality, and noise and vibration; and (d) a record of any complaints received in relation to the environmental performance of the mine and actions taken in response to complaints. (Note: Provided all requirements of this condition are met, the Applicant may prepare the above AEMP Report in conjunction with any other annual environmental report required by another regulatory authority).	Annually	HGM developed an Annual Review report to satisfy the AEMR requirements of this condition as well as requirement of the NSW RR and DPE Water. The report is based on the EPL reporting period of 28 January to 27 January the following year. This report is to be forewarned to the Council and the EPA on the 28th March 2024. All previous reports were submitted in October 2023 Hillgrove Mine considers this consent completed and compliant	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
13	The tailings storage facility shall be designed, constructed, operated, monitored and maintained such that all water received in the facility is evaporated, retained or reused and that there is no discharge of tailings water to the environment. The Applicant shall comply with all requirements of the EPA, DRG, and the NSW Dam Safety Committee to ensure that there is no seepage, leakage or overflow from the tailings storage facility. Notes: • This condition applies to the management of water associated with rainfall events of up to 72 hours duration with a 1 in 100 year Average Return Interval; and • The permeability target for the lining of tailings storage facility is a clay liner of 450 mm minimum thickness of 1x10-9 metres/sec permeability, or equivalent.	All the time	Evidence: The Knight Piesold 2021 Surveillance report included recommendations (amongst others) to: • Urgently conduct a stability review of TSF1; • Conduct a beach survey of TSF1 to determine if the required environmental containment is met; and • Buttress the toe of Eleanora Dam and reconfigure the spillway to provide adequate capacity to safely pass flows up to a 1 in 10,000 AEP rainfall event. Comment: Non-compliance No. 5 – No evidence was provided to verify that the recommendations based on the December 2020 inspection by Knight Piesold of the Declared Dams have been undertaken to ensure there is no seepage, leakage or overflow from the tailings storage facilities.	Non-Compliant
31A	By the end of December 2020, unless otherwise agreed with the Secretary, the Applicant shall commission an independent road safety audit of the intersection of Waterfall Way and Stockton Road. This audit must: (a) be prepared by a suitably qualified person whose appointment has been approved by the secretary; and (b) recommend measures to reduce or mitigate any adverse (or potentially adverse) impacts to ensure that the intersection and its approaches comply with any relevant road safety requirements and are providing a satisfactory level of service.	Construction phase	Comment: No Action has been taken to this date. A previous Road Safety Audit report was completed in 2016. The audit required by this condition was updated during Modification 4 (2018). The Department's 2018 Assessment Report for MOD4 stated "the Department considers that regular audits will ensure that the intersection and its approaches continue to operate at a sufficient level of service and in accordance with relevant road safety requirements. Consequently, the Department has recommended that this audit be repeated in 2020." • Department's 2018 Assessment Report for MOD4	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
32	NOISE The applicant shall prepare a Noise and Vibration Management Plan in consultation with and to the approval of the EPA. The plan shall define the noise management procedures, monitoring protocols and measures for mitigating impacts including potential cumulative impacts, that can be implemented where necessary throughout the life of the Project under normal meteorological conditions.	Annually	Comment and Evidence: A view of the Noise and Vibration Plan as supplied to the EPA. And received a reply on the 12/10/2023 they no longer review or approve Management plans, and we are to write plans that fit our EPL 921 Hillgrove Mine considers this consent completed and compliant	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
34	NOISE The Applicant shall ensure that the LA10(15 minute) noise levels due to the normal operation of the mine, when measured or computed at any residence (other than one owned by the Applicant), shall not exceed a noise level of 35 dB(A) or 30 dB(A) where the noise source is tonal in nature and shall comply with the requirements of the Environmental Noise Control Manual and the Noise Control Act 1975. Should a noise complaint be received from any nearby residence, the Applicant shall investigate the complaint and implement appropriate mitigation measures as required. Any such complaints and subsequent actions undertaken by the Applicant shall be addressed in the Annual Environmental Management Plan Report (Condition 8).	Annually	Comments: Monitoring Manual has corrected. Monitoring has taken place over the 2023 reporting period quarterly. Hillgrove Mine considers this consent completed and compliant	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
35	Schedule 2, Condition 35 “Noise measurement shall be undertaken under prevailing weather conditions, in the absence of temperature inversions and over a period of time sufficient to be representative of the noise levels being emitted from the mine.”	At all times	Comments: Monitoring Manual has corrected. Monitoring has taken place over the 2023 reporting period quarterly. Hillgrove Mine considers this consent completed and compliant	Non-Compliant
41	AIR QUALITY The Applicant shall implement, in consultation with the EPA, dust control measures aimed at achieving relevant EPA dust deposition standards.	At all times	HGM has Air and vibration control management plans and reporting triggers in place for this section. Hillgrove Mine received a reply on the 12/10/2023 they no longer review or approve Management plans, and we are to write plans that fit our EPL 921 which has been done throughout the reporting period. Hillgrove Mine considers this consent completed and compliant.	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
43	As part of the EMP/s referred to in Condition 7, the Applicant shall prepare a Dust Management Plan which is to have particular regard to the tailings dams, ore stockpiles, internal haul roads and processing facilities.	Annually	Dust Management Plan is written and waiting approval	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
47	HAZARD AUDIT Twelve (12) months after the commencement of operations of the proposed development or within such further period as the Secretary may agree, the applicant shall carry out a comprehensive hazard audit of the proposed development and within one (1) month of the audit submit a report to the Secretary. The audit shall be carried out at the applicant's expense by a duly qualified independent person or team approved by the Secretary prior to commencement of the audit. Further audits shall be carried out every three (3) years or as determined by the Secretary and a report of each audit shall within one (1) month of the audit be submitted to the Secretary. Hazard audits shall be carried out in accordance with the Department's Hazardous Industry Planning Advisory Paper No. 5, "Hazard Audit Guidelines". The audit shall include a review of the site safety management system and a review of all entries made in the incident register since the previous audit.	When Required	Comment: Hillgrove Mine has not actioned this at this point Non-compliance No. 13 – HGM was not able to provide evidence that the required three (3) yearly hazard audits have been carried out as required by condition 47 or as determined by the Secretary.	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
50	The Applicant shall carry out the rehabilitation of the site progressively, that is, as soon as reasonably practicable following disturbance.	When Required	Bakers Creek Waste Dump has had first attempt at rehabilitation completed, but it regrowth has not been successful on steep slopes. A second round of rehab work is planned for the coming year. TSF1 is estimated to contain 1.4 Mt at 1.6 g/t gold and 0.6% antimony, and during 2023-24 assessment for re-treatment commenced with collection of samples and commencement of metallurgical test work. Re-treatment is considered likely, which means the facility is not yet available for rehabilitation.	Non-Compliant

Condition of Consent number	Compliance Requirement	Development Phase	Evidence and comments	Compliance Status
53	Within 3 months of: (a) an annual environmental management plan report under condition 8; (b) an audit under condition 10; or (c) any modification to the conditions of this consent (except Modification 3); the Applicant shall review, and if necessary revise the plans required under this consent to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review, the revised document must be submitted to the Secretary for approval. Note: This is to ensure the plans are updated on a regular basis and incorporate any recommended measures to improve the environmental performance of the development.	Annually	The Environmental Management Plan, including Control Standards for each impact are drafted. These will be reviewed following submission of this AEMR and submitted to the Secretary for approval.	Non-Compliant

12. ACTIVITIES TO BE COMPLETED THE NEXT REPORTING PERIOD

HMPL has had positive resolution from Administration and are now with Larvotto Resources, the expectation of current management is that the key activities in 2024/25 will be:

- Completing actions arising from IEA non-compliances. Resolution actions will be reported in the response required from Hillgrove Mine, due on 20 April 2024 to DPHI, but are expected to include:
    - Review of environmental management plans with appropriate approval by DPHI;
    - Remove build-up of remaining legacy wastes on site;
    - Complete Road Safety Audit for intersection of Waterfall Way and Stockton Road; and
    - Review of EPL-921 to include Metz UG as part of RWSS for surface water management.
    - Clarify compliance position regarding RO Brine returning to Sunlight Dam and TSF1 rehabilitation.
- Initiate and submit applications to provide ongoing consent following expiry of DA98/35 (Mod.4) at the end of December 2023.
    - Hillgrove Mine has engaged a planning consultant (Onward consulting) and had discussions with consenting authorities (DPHI and ARC) to understand and identify the consenting strategy going forward, which is likely to include:
    - Apply to DPHI for Modification 5 of DA98/35 to include:
        - Time extension such that current scope of operations can be recommenced with consent coverage until a New DA can be proposed, submitted, reviewed and approved.
        - Some additional disturbances which fall within the scope of the current DA and are required to facilitate continuing DA98/35 (eg: rock supply to construct the approved tailings capacity in TSF2s3).
        - Removal and/or modification of out of date/expired conditions (the IEA identified 30 conditions Not Triggered, some because they relate to construction works which are long completed).
    - Apply to ARC for modification of consents:
        - DA19/2000 – Metals Processing Facility
        - DA95/26 – Continuing Operations
    - Apply for a New DA to facilitate operations at Clarks Gully:
        - Open Pit and Underground mining operations;
        - Construction and use of a TSF at Clarks Gully; and
        - Infrastructure corridor to connect Clarks Gully to Hillgrove Mine.

      It is currently thought hat the new DA will be assessed by ARC as it will not meet the capital expenditure criteria threshold for a State Significant Development.

13. DEFINITIONS

ARC	Armidale Regional Council
Relevant Approval	Relevant Approval includes the following approvals where they are material to the conduct of the operation: a development consent, project approval, mining lease or water access licence.
WAL	Water Access Licence
DPE	Department of Planning and Environment
DPI	Department of Primary Industry - Water
DRE	Planning and Environment – Division of Resources and Energy
HMPL	Hillgrove Mines Pty Ltd
RO	Reverse Osmosis
WTP	Water Treatment Plant
IEA	Independent Environmental Audit
EO	Environmental Officer

14. COMPLETE CONSENT TABLE FOR DA98/35

Condition of Consent	Consent Requirement	Compliance status
1	**GENERAL** The Applicant shall carry out the development generally in accordance with the: development application DA 98/35, dated 30 June 1998, lodged with Dumaresq Shire Council and the accompanying Environmental Impact Statement (EIS), dated June 1998, and prepared by Martin and Associates Pty Ltd; modification application DIA No. 08/99, dated 17 August 1999, and accompanying Statement of Environmental Effects (SEE), dated August 1999, and prepared by Martin and Associates Pty Ltd; modification application DA 98/35 M2, dated 10 November 2000 and accompanying SEE, dated November 2000, and prepared by E.A. Systems Pty Limited; Environmental Assessment titled Hillgrove Environmental Assessment, dated 28 November 2014; Environmental Assessment titled Hillgrove Mines Environmental Assessment, dated 11 January 2018, and Hillgrove Mines Pty Ltd.'s letter to the Department, dated 4 April 2018; and conditions of this consent. if there is any inconsistency between the above, the conditions of this consent, or then the most recent document, shall prevail to the extent of any inconsistency.	Compliant
2	**STATUTORY AND OTHER REQUIREMENTS** The Applicant shall meet the statutory requirements of all public authorities having responsibilities for environmental protection, pollution control, and land and water conservation approvals and licences in respect of the mine extension and associated works encompassed by DA No. 98/35 and the re-alignment of the haul road to Brackins Spur and associated works encompassed in DIA No. 08/99.	Compliant
3	The Applicant shall comply with all reasonable requirements of the Secretary in respect of the implementation of any measures arising from reports submitted in accordance with the conditions of this consent, within such time as the Secretary may agree.	Compliant
4	**DURATION AND SCOPE OF CONSENT** The Applicant may carry out mining operations and process up to 250,000 tonnes of ore per annum to produce Antimony and Gold concentrates on site until the end of December 2023. *Note: This consent will continue to apply to all other aspects – other than the right to conduct mining operations – until the rehabilitation of the site and any additional undertakings have been carried out satisfactorily.*	Compliant
5.	This consent does not apply to the construction and operation of the Antimony Trioxide Plant or the construction and operation of a water supply pipeline to the mine from the Gara River. These works require a separate development consent.	Not Triggered
6.	**ENVIRONMENTAL OFFICER** The Applicant shall employ an Environmental Officer whose qualifications are acceptable to the Secretary in consultation with Council and the Department of Mineral Resources. The Environmental Officer shall be responsible for ensuring that all environmental safeguards proposed for the development and as required by this consent and other statutory approvals are monitored and enforced from the commencement of construction.	Non-Compliant
7.	**ENVIRONMENTAL MANAGEMENT PLAN**	Not Triggered

	The Applicant shall prepare an Environmental Management Plan/s (EMP/s) covering both the construction and operation phases of the development. The Plan/s shall include, but not be limited to: details of the mine infrastructure and facilities to be developed; erosion and sediment control measures (Condition 16); noise and vibration management procedures (Condition 32); results of investigations into potentially acid producing waste rock (Condition 20); where relevant, monitoring procedures relating to water quality, air quality, noise and vibration, and the tailings storage facility; management measures for any fauna and flora species listed under the Threatened Species Conservation Act 1995 that occur on the site. The EMP/s shall be prepared to the satisfaction of the Secretary, Council, DRG, EPA, OEH and NOW. The construction EMP (or that part of the EMP covering the construction phase) shall be submitted prior to the commencement of construction works. The operation EMP (or that part of the EMP covering the operation phase) shall be submitted before the commencement of operations on the site.	
8.	**ENVIRONMENTAL MANAGEMENT PLAN REPORT** The Applicant shall prepare and submit to the Secretary an Annual Environmental Management Plan (AEMP) Report. The first report shall be prepared and submitted within twelve (12) months of the substantial commencement of construction. A copy of the EMP Report should also be submitted to the Council and EPA. The report shall generally include: a review of the effectiveness of environmental management for the subject land, including all control, mitigation and management measures required in the conditions of this consent; a review of performance in terms of the conditions of development consent; results of environmental monitoring in respect of air quality, water quality, and noise and vibration; and a record of any complaints received in relation to the environmental performance of the mine and actions taken in response to complaints. (Note: Provided all requirements of this condition are met, the Applicant may prepare the above AEMP Report in conjunction with any other annual environmental report required by another regulatory authority).	Non-Compliant
9.	**COMPLIANCE REPORTS** At least 2 (two) weeks prior to the commencement of substantial construction (or within such period as otherwise agreed to by the Secretary), the Applicant shall submit for the approval of the Secretary a compliance report detailing compliance with all the relevant conditions that apply at this stage. At least 2 (two) weeks prior to the commencement of operations associated with the development (or within such period as otherwise agreed to by the Secretary), the Applicant shall submit for the approval of the Secretary a compliance report detailing compliance with all the relevant conditions that apply at this stage. The compliance reports shall include: the dates of submissions of the various studies and/or requirements of various relevant conditions, and of their approvals and terms of approvals; action taken or proposed to implement the recommendations made in the terms of approvals and/or studies.	Not Triggered
10.	**INDEPENDENT ENVIRONMENTAL AUDITING** 12 (twelve) months after the commencement of operations, an independent environmental audit report shall be submitted to the Secretary, Council, the DRG and the EPA. The audit shall be carried out at the Applicant's expense and shall be undertaken in accordance with the requirements of the Secretary in consultation with the EPA. The audit shall cover all aspects of monitoring and environmental performance, and	Not Triggered

	compliance with reporting requirements, conditions of this consent and all relevant approvals and licences. The audit report shall be made available to the Secretary and Council. Further independent audits shall be conducted as directed by the Secretary. The audit shall be carried out by a suitably qualified person as approved by the Secretary. The Applicant shall comply with all reasonable requirements of the Secretary in respect of any measures arising from or recommended by the audit and within such time as agreed to by the Secretary.	
10A.	By the end of 2015 or within 3 months of receiving the EPA's environmental audit (whichever comes first), the Applicant shall commission an independent environmental audit of all aspects of the mine covered by this consent. Further independent environmental audits will be conducted every 3 years thereafter.	Compliant
10B.	Within 1 month of receiving the environmental audit report, or as otherwise agreed with the Secretary, the Applicant shall submit a copy of the report to the Secretary, with a detailed response to any of the recommendations contained in the report, including a timetable for the implementation of any measures proposed to address the recommendations in the report. Any works recommended in the audit must be undertaken in accordance with this timetable to the satisfaction of the relevant agencies, unless otherwise agreed with the Secretary.	Compliant
11.	**CONSTRUCTION HOURS** Any construction activity resulting in noise emission levels greater than 5 dB(A) above background, or resulting in tonal noise or impact noise likely to cause annoyance at any residence, shall be limited to the following hours: 7:00 am to 6:00 pm – Monday to Friday 7:00 am to 1:00 pm – Saturday No construction activity on Sundays or public holidays.	Compliant
12.	**TAILINGS STORAGE FACILITY** The Applicant shall obtain approval from the NSW Dam Safety Committee for the construction of the tailings storage facility. All construction and operation works and monitoring and maintenance procedures shall be in accordance with the requirements of the NSW Dam Safety Committee. Copies of all relevant approvals from the NSW Dam Safety Committee shall be forwarded to the Secretary prior to the commencement of construction of the tailings storage facility.	Compliant
13.	The tailings storage facility shall be designed, constructed, operated, monitored and maintained such that all water received in the facility is evaporated, retained or reused and that there is no discharge of tailings water to the environment. The Applicant shall comply with all requirements of the EPA, DRG, and the NSW Dam Safety Committee to ensure that there is no seepage, leakage or overflow from the tailings storage facility. *Notes:* *This condition applies to the management of water associated with rainfall events of up to 72 hours duration with a 1 in 100 year Average Return Interval; and* *The permeability target for the lining of tailings storage facility is a clay liner of 450 mm minimum thickness of 1x10-9 metres/sec permeability, or equivalent.*	Non-Compliant
14.	Construction of the tailings storage facility shall be supervised at all times and certified by the Applicant's dam design engineer.	Not Triggered
15.	**WATER QUALITY** Any new effluent disposal system shall be subject to relevant approvals from the EPA and Council.	Not Triggered
16.	Prior to the commencement of construction, the Applicant shall prepare an Erosion and Sediment Control Plan to the satisfaction of NOW, DRG and the EPA. The Plan shall provide details on all control measures to be implemented during	Not Triggered

	construction works, including haul road construction and upgrading, and include contingency measures for dealing with high rainfall events during construction. The Plan shall also cover erosion and sediment control during the operational phase of the development. The Plan shall form part of the EMPs referred to in Condition 7.	
17.	In order to prevent dust and sediment trapped in vehicle wheels from entering Bakers Creek, all vehicle crossings over Bakers Creek shall be constructed such that under normal flow conditions vehicles do not enter the water.	Compliant
18.	The Applicant shall, in accordance with the requirements of the EPA, DRG and NOW and the Secretary: monitor and report on groundwater discharges from the existing and new mine adits; and implement appropriate measures to control contaminated water discharges from existing and new adits.	Compliant
19.	Waste rock materials shall be stockpiled in controlled discharge areas such that there is no discharge of leachate to the environment.	Compliant
20.	Prior to the construction of any new adits and the commencement of mining operations at Brackins Spur, the Applicant shall conduct investigations to determine whether potentially acid producing waste rock will be extracted during construction and mining. Should these investigations reveal the existence of potentially acid producing waste rock, management measures for this material shall be included in the EMP referred to in Condition 7.	Not Triggered
21.	**FLORA AND FAUNA** Prior to the commencement of construction, the Applicant shall consult with the OEH in relation to the possible occurrence of new eucalyptus species in the *Eucalyptus cypellocarpa* group on the subject land.	Not Triggered
22.	During construction of haul roads, all practical measures shall be implemented to reduce impacts on individuals and stands of *Eucalyptus michaeliana* and *Acacia ingramii* and *Allocasuarina torulosa*. These measures shall include, but not be limited to, the fencing and flagging of individuals and stands and, where practicable, the avoidance of blasting in the vicinity of these species.	Not Triggered
23.	The Applicant shall implement all appropriate measures to avoid disturbance of all mature hollow-bearing trees on the subject land. Should disturbance of mature hollow-bearing trees be unavoidable, a suitably qualified person shall, prior to disturbance, inspect the relevant tree/s for the presence of the Black Cockatoo *Calyptorhynchus lathami,* the Red-tailed Black Cockatoo *Calyptorhynchus magnificus* and the Greater Broad-nosed *Bat Scoteanax rueppellii*. Should any these species be detected, the Applicant shall immediately contact OEH with regard to the implementation of appropriate measures to minimise impacts on these species.	Compliant
24.	Prior to the disturbance of any tunnels, adits or mine shafts on the subject land, the Applicant shall conduct an inspection for the presence of the Large Bent- wing Bat *Miniopterus schreibersii*. Should this species be detected, the Applicant shall contact OEH with regard to the implementation of appropriate measures to minimise impacts on the species.	Not Triggered
25.	Prior to the commencing the development, the Applicant must undertake consultation with Aboriginal stakeholders, in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (DECCW, 2010), or its latest version.	Not Triggered
26.	**VEGETATION MANAGEMENT AND LANDSCAPE PLAN** The Applicant shall submit a detailed Vegetation Management and Landscape Plan with the Building Application lodged with Council, or at another date as agreed to by Council. The Plan shall be prepared by a suitably qualified person and shall address, but not be limited to, the following matters: details of likely vegetation loss, means to minimise such loss and additional tree planting to offset this loss;	Not Triggered

	details on screen planting around the new tailings storage facility, with particular attention to minimising the visibility of the facility from residences to the north; and details on the proposed landscaping treatment of the mine processing area and the new office area on the Bakers Creek Flat.	
27.	All landscaping and tree planting works shall be completed to the satisfaction of Council within 12 (twelve) months of the commissioning of the development.	Not Triggered
28.	**EXTERNAL APPEARANCE OF BUILDINGS AND STRUCTURES** All buildings and structures shall be constructed using suitably coloured, non-reflective materials to the satisfaction of Council. Details shall be submitted with the Building Application lodged with Council.	Compliant
29.	**TRAFFIC AND PARKING** All heavy vehicle movements associated with the subject development shall use the Stockton Road and Waterfall Way route for site ingress and egress.	Compliant
30.	Prior to the commencement of operations, the Applicant shall consult the RMS and Council on the funding and timing for the provision of a right hand turning lane (slip lane) for eastbound traffic on Waterfall Way at its intersection with Stockton Road. The turning lane shall be provided at the Applicant's expense.	Not Triggered
31.	On-site parking arrangements shall be to the satisfaction of Council.	Not Triggered
31A.	By the end of December 2020, unless otherwise agreed with the Secretary, the Applicant shall commission an independent road safety audit of the intersection of Waterfall Way and Stockton Road. This audit must: be prepared by a suitably qualified person whose appointment has been approved by the secretary; and recommend measures to reduce or mitigate any adverse (or potentially adverse) impacts to ensure that the intersection and its approaches comply with any relevant road safety requirements and are providing a satisfactory level of service.	Non-Compliant
31B.	Within 1 month of receiving the road safety audit report, or as otherwise agreed with the Secretary, the Applicant shall submit a copy of the report to the Secretary with a detailed response to any of the recommendations contained in the report, including a timetable for the implementation of any measures proposed to address the recommendations in the report. Any road works recommended in the audit must be undertaken in accordance with this timetable to the satisfaction of the relevant road authority, unless otherwise agreed with the Secretary.	Not Triggered
31C.	The Applicant shall prepare and implement a code of conduct for all drivers transporting materials to and from the site on public roads. This code of conduct must be prepared in consultation with RMS and Council and be submitted to the Secretary for approval by the end of September 2015, unless otherwise agreed with the Secretary.	Not Triggered
32.	**NOISE** The applicant shall prepare a Noise and Vibration Management Plan in consultation with and to the approval of the EPA. The plan shall define the noise management procedures, monitoring protocols and measures for mitigating impacts including potential cumulative impacts, that can be implemented where necessary throughout the life of the Project under normal meteorological conditions.	Non-Compliant
33.	The two 175kW air compressors within the Pressure Oxidation Plant shall be enclosed in insulated cabinets and shall meet the noise level requirements referred to in Condition 34. The insulated cabinets are to be installed prior to the operation of the compressors.	Not Triggered
34.	The Applicant shall ensure that the $L_{A10(15\ minute)}$ noise levels due to the normal operation of the mine, when measured or computed at any residence (other than one owned by the Applicant), shall not exceed a noise level of 35 dB(A) or 30 dB(A) where	Non-Compliant

	the noise source is tonal in nature and shall comply with the requirements of the Environmental Noise Control Manual and the Noise Control Act 1975. Should a noise complaint be received from any nearby residence, the Applicant shall investigate the complaint and implement appropriate mitigation measures as required. Any such complaints and subsequent actions undertaken by the Applicant shall be addressed in the Annual Environmental Management Plan Report (Condition 8).	
35.	Noise measurement shall be undertaken under prevailing weather conditions, in the absence of temperature inversions and over a period of time sufficient to be representative of the noise levels being emitted from the mine.	Non-Compliant
36.	All above-ground blasting shall only be carried out between 9:00am and 3:00pm Monday to Friday. Blasting shall not be allowed on public holidays unless the Council in special circumstances and in consultation with the EPA, approves other times.	Not Triggered
37.	The Applicant shall give notice of proposed above-ground blasting times to residents within two (2) kilometres of the blasting site if requested by residents	Not Triggered
38.	**HERITAGE** A "Consent to Destroy" application under section 90 of the National Parks and Wildlife Act 1974 must be submitted and issued by OEH for any Aboriginal archaeological sites that are to be damaged or destroyed as a result of any development. The Applicant shall consult with the relevant local Aboriginal groups and to the satisfaction of the OEH prior to a "Consent to Destroy" application being submitted.	Not Triggered
39.	In the event that Aboriginal artefacts are identified on the site during development through earthworks, construction or operation of the quarry, the Applicant shall contact the OEH and cease work in the relevant location pending investigation and assessment of its heritage value by OEH and the relevant local Aboriginal groups.	Not Triggered
40.	The Applicant shall consult with the NSW Heritage Council, Council, Armidale Folk Museum and Hillgrove Mining Museum if any European Heritage items, including any future item listed as an environmental heritage item in the Dumaresq LEP 1985, would be potentially affected during the life of the subject development.	Not Triggered
41.	**AIR QUALITY** The Applicant shall implement, in consultation with the EPA, dust control measures aimed at achieving relevant EPA dust deposition standards.	Non-Compliant
42.	Dust sampling shall occur monthly within the development site at locations determined by the EPA with the results submitted annually to the EPA or such shorter intervals as required by the EPA	Compliant
43.	As part of the EMP/s referred to in Condition 7, the Applicant shall prepare a Dust Management Plan which is to have particular regard to the tailings dams, ore stockpiles, internal haul roads and processing facilities.	Non-Compliant
44.	The Applicant shall undertake periodic dust monitoring at any nearby property as required by the EPA following the request of a resident. The Applicant shall notify the resident/s of the general results of dust monitoring. Monitoring results shall be included in the EMP Report (Condition 8).	Not Triggered
45.	**HAZARDS AND SAFETY** At least one month prior to the commencement of construction of the proposed process plant (except for construction of those preliminary works that are outside the scope of the hazard studies), or within such further period as the Secretary may agree, the Applicant shall prepare and submit for the approval of the Secretary the studies set out in paragraphs (a) to (d) (the pre-construction studies) below. Construction, other than of preliminary works, shall not commence until the Secretary has given approval and, with respect to the fire safety study, the Commissioner of the NSW Fire Brigades has also given approval. FIRE SAFETY STUDY A fire safety study for the proposed development. This study shall cover all aspects detailed in the Department of Urban Affairs and Planning's *Hazardous Industry*	Not triggered

	Planning Advisory Paper No. 2, "Fire Safety Study Guidelines". The study shall also be submitted for approval, to the NSW Fire Brigades. In particular the study should address the fire related issues associated with the storage and use of Ammonium nitrate, AN explosive emulsion, SIBX and PAX and Cyanide HAZARD AND OPERABILITY STUDY A Hazard and Operability Study for the proposed development, chaired by an independent qualified person approved by the Secretary prior to the commencement of the study. The study shall in particular address the monitoring, control, alarm and shutdown systems associated with the cyanide and xanthate process streams and be carried out in accordance with the Department of Urban Affairs and Planning's *Hazardous Industry Planning Advisory Paper No. 8, "HAZOP Guidelines".* FINAL HAZARD ANALYSIS A final hazard analysis of the proposed development. The analysis should be prepared in accordance with the Department of Urban Affairs and *Planning's Hazardous Industry Planning Advisory Paper No. 6, "Guidelines for Hazard Analysis"*. The FHA shall in particular address in detail of issues associated with the possible release of toxic materials from processes or the ponds due to plant upsets;	
46.	No later than 2 (two) months prior to the commencement of commissioning of the proposed development, or within such further period as the Secretary may agree, the Applicant shall prepare and submit for the approval of the Secretary the studies set out under paragraphs (a) to (c) (the pre-commissioning studies) below. Commissioning shall not commence until the Secretary has given approval. TRANSPORT OF HAZARDOUS MATERIALS Arrangements covering the transport of hazardous materials including details of routes to be used for the movement of vehicles carrying hazardous materials to or from the proposed development. The study shall be carried out in accordance with the Department of Urban Affairs and Planning's draft *"Route Selection" guidelines*. Suitable routes identified in the study shall be used except where departures are necessary for local deliveries or emergencies. The study should also address issues associated with spills, cleanup procedures, training of clean-up teams, communication and liaison with organisations such as the fire Brigade and state emergency services the inspection and monitoring procedures for chemicals such as explosives, xanthates and cyanides prior to commencement of a trip, to verify the integrity of the packaging; measures to be taken to ensure that the temperature of the materials does not rise about safe levels EMERGENCY PLAN A comprehensive emergency plan and detailed emergency procedures for the proposed development. This plan shall include detailed procedures for the safety of all people outside of the development who may be at risk from the development. The plan shall be in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 1, "Industry Emergency Planning Guidelines".* SAFETY MANAGEMENT SYSTEM A document setting out a comprehensive safety management system, covering all operations on-site and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to procedures. Records shall be kept on-site and shall be available for inspection by the Secretary upon request. The Safety Management System shall be developed in accordance with the *Department's Hazardous Industry Planning Advisory Paper No. 9, "Safety Management"*. The SMS shall include details of: the location and control of all ignition sources throughout the plant; safety features used in storage, transporting and usage of Xanthates including temperature and moisture control and ventilation.	Not Triggered

	equipment for monitoring cyanide levels and detection of system malfunction should have adequate redundancy in order to ensure a high level of integrity; a detailed maintenance and testing program for the detection and shutdown systems should be included in the site safety manual and other relevant manuals;	
47.	**HAZARD AUDIT** Twelve (12) months after the commencement of operations of the proposed development or within such further period as the Secretary may agree, the applicant shall carry out a comprehensive hazard audit of the proposed development and within one (1) month of the audit submit a report to the Secretary. The audit shall be carried out at the applicant's expense by a duly qualified independent person or team approved by the Secretary prior to commencement of the audit. Further audits shall be carried out every three (3) years or as determined by the Secretary and a report of each audit shall within one (1) month of the audit be submitted to the Secretary. Hazard audits shall be carried out in accordance with the Department's *Hazardous Industry Planning Advisory Paper No. 5, "Hazard Audit Guidelines"*. The audit shall include a review of the site safety management system and a review of all entries made in the incident register since the previous audit.	Non-Compliant
48.	Within one (1) month of the date of this consent that Applicant shall consult with WorkCover NSW with regard to the storage and use of dangerous goods. At this time, the Applicant shall ensure that all WorkCover licences are valid.	Not Triggered
49.	**REHABILITATION** The Applicant shall rehabilitate the site to the satisfaction of DRG. This rehabilitation must be generally consistent with the objectives in Table 1. *Table 1: Rehabilitation Objectives* ***Feature*** / ***Objective*** Mine site (as a whole): • Safe, stable & non-polluting • Final land use compatible with surrounding land uses • Site to be revegetated with suitable plan species Surface infrastructure: • To be decommissioned and removed, unless DRG agrees otherwise Community: • Ensure public safety and minimise the adverse socio-economic effects associated with mine closure *Notes:* • *These rehabilitation objectives apply to all environmental consequences cause by mining taking place ager the date of this consent, and to all surface infrastructure and other disturbance which forms part of the development under this consent.* • *Rehabilitation of environmental impacts and consequences caused by mining which took place prior to the date of this consent may be subject to the requirements of other consents and/or applicable mining leases.*	Compliant
50.	The Applicant shall carry out the rehabilitation of the site progressively, that is, as soon as reasonably practicable following disturbance.	Non-Compliant
51.	The Applicant shall prepare and implement a Rehabilitation Management Plan for the development, in consultation with the Department, OEH and Council, and to the satisfaction of DRG. This plan must: be submitted to DRG for approval by the end of December 2015, unless otherwise agreed with the Secretary; be prepared in accordance with any relevant DRG guideline and be consistent with the rehabilitation objectives in Table 1; describe how the performance of the rehabilitation would be monitored and assessed against the objectives in Table 1; and be integrated with the other management plans required under this consent.	Not Triggered
52.	**REVISION OF STRATEGIES AND PLANS** The Applicant shall review and revise all plans required under this consent and submit these revised documents to the Secretary for approval by December 2015, unless otherwise agreed with the Secretary.	Not Triggered
53.	Within 3 months of: an annual environmental management plan report under condition 8; an audit under condition 10; or	Non-Compliant

	any modification to the conditions of this consent (except Modification 3); the Applicant shall review, and if necessary revise the plans required under this consent to the satisfaction of the Secretary. Where this review leads to revisions in any such document, then within 4 weeks of the review, the revised document must be submitted to the Secretary for approval. *Note: This is to ensure the plans are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the development.*	