Rix's Creek Mine

YEM 2025 Annual Review

For period 1 April 2024 - 31 March 2025.

THE Bloomfield GROUP

WE CARE. WE DELIVER.

RCS West Pit South rehabilitation completed YEM 2025.

Table 1. Annual Review title block

Name of Operation	**Rix's Creek Mine**
Name of operator	**Bloomfield Collieries Pty Ltd**
Development consent / project approval # **Rixs Creek North** **Rixs Creek South**	 **PA 08_0102** **SSD6300 & DA49/94**
Name of holder of development consent / project approvals	**Bloomfield Collieries Pty Ltd**
Mining Lease #	**CL357, ML1630, ML1648, ML1649, ML1650, ML1651,CL352, ML1432, ML1725 & ML 1803**
	Bloomfield Collieries Pty Ltd
Water License #	**WAL41500, WAL41555, WAL40777, 20BL170864, WAL 43653**
Name of holder of water license	**Bloomfield Collieries Pty Ltd**
Annual Review start date	**01/04/2024**
Annual Review end date	**31/03/2025**
I, Chris Quinn, certify that this audit report is a true and accurate record of the compliance status of Rix's Creek Mine for the period 01/04/2024 – 31/03/2025 and that I am authorised to make this statement on behalf of Bloomfield Collieries Pty Ltd.	
Name of authorised reporting officer	**Chris Quinn**
Title of authorised reporting officer	**Environmental Superintendent**
Signature of authorised reporting officer	
Date	**27/06/2025**

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List of Abbreviations

AHD	Australian Height Datum
AR	Annual Review
BCL	Bloomfield Collieries Pty Limited
BCT	Biodiversity Conservation Trust
BOA's	Biodiversity Offset Areas
BSA	Biodiversity Stewardship Agreement
AMA	Ancillary Mining Area
bcm	Bank cubic metre
CHPP	Coal Handling and Preparation Plant
CCC	Community Consultative Committee
CL	Coal Lease
DA	Development Application
dBL	Noise decibels (linear)
dBA	Noise decibels (A-weighted)
DDG	Depositional Dust Gauge
DPE	Department of Planning and Environment (Now DPHI)
DPIE	Department of Planning, Industry and Environment (Now DPHI)
DPHI	Department of Planning Housing and Infrastructure
EA	Environmental Assessment
EC	Electrical Conductivity
EIS	Environmental Impact Statement
EL	Exploration Licence
EMP	Environmental Management Plan
EMS	Enviromental Management System
EPA	Environment Protection Authority
EPL	Environment Protection Licence
GCP	Ground Core Piezometer
GDE	Ground Dependent Ecosystems
GHG	Greenhouse Gas
g/m^2/mth	Grams per square metre per month
GRAWSS	Greater Ravensworth Area Water Sharing Scheme
HVAS	High Volume Air Sampler
HRSTS	Hunter River Salinity Trading Scheme
IBC	Intermediate Bulk Container
IEA	Independent Environmental Audit
ISO	International Standard
l/s	Litres per second
LHPA	Livestock Health and Pest Association
LGA	Local Government Area
MBGL	Meters Below Ground Level
MCM	Monthly Communication Meetings
MEG	Mining, Exploration and Geoscience.
MIC	Maximum Instantaneous Charge
mm/s	Millimetres per second
MOD	Modification
MOP	Mining Operations Plan
MI	Megalitre
ML	Mining Lease
Mt	Million tonnes
MU's	Management Units
NAG	Noise Assessment Group
NRAR	Natural Resources Access Regulator
OC	Open Cut
OLC	Over Land Conveyor
PA	Project Approval
PIRMP	Pollution Incident Response Management Plan
PM_{10}	Particulate matter (dust) with a diameter of less than 10 microns
PPM	Parts Per Million
PPV	Peak Particle Velocity
RCS	Rix's Creek South
RCN	Rixs Creek North
RCM	Rix's Creek Mine
RMP	Rehabilitation Management Plan
ROM	Run-of-mine
RR	Resources Regulator
SEPP	State Environmental Planning Policy

SSD	State Significant Development
STP	Sewerage Treatment Plant
TBT	Toolbox Talk
TBG	The Bloomfield Group
TEOM	Tapered Element Oscillating Microbalance
TPH	Total Petroleum Hydrocarbons
TSP	Total Suspended Particulates
VWP	Vibrating Wire Piezometer
WMP	Water Management Plan
WSP	Water Sharing Plan
µS/cm	Micro Siemens per centimetre
$\mu g/m^3$	Micrograms per cubic metre
YEM	Year ending March

SECTION 1 STATEMENT OF COMPLIANCE

Table 2. Summary Statement of Compliance for Major Approvals

Were all conditions of the relevant approval(s) complied with?	
SSD 6300 Mod 1	YES
DC # DA 49/94 Mod 10	YES
PA 08_0102 Mod 9	NO
EPL3391	NO
ML # 1432, CL352, ML1803	NO
ML # CL 357, ML 1630, ML 1648-1651, ML 1725	NO

The non-compliances identified with PA 08_0102, SSD6300, DA49/94, EPL 3391 and associated mining leases are detailed in **Table 2** below**.**

Table 3. Summary of Non Compliances with Rix's Creek North PA 08_0102, Rix's Creek South SSD6300, DA49/94 and EPL3391

Condition	Non-Compliance	Risk Level	Addressed in YEM25 AR / comments
PA 08_0102 Schedule 3, Condition 37.	Finalise long-term security of offset areas or seek further extension from the Secretary to the date required to secure the biodiversity areas listed in PA 08_0102 Schedule 3, Condition 37.	**low**	On 29/10/2024, RCM updated DPHI on the considerable progress made with BCT to finalise the conservation agreement template. The Department granted an extension of time until 31/10/2025 for the finalisation of the conservation agreements.
ML # CL 357, ML 1630, ML 1648-1651, ML 1725 ML # 1432, CL352, ML1803	An official warning was received because the Rehabilitation Management Plan (RMP) did not adhere to the Form and Way guideline format for Large Mines.	**Administrative**	The updated RMP was published on The Bloomfield Group (TBG) website on 8/01/2025. The RR was informed of the update, which now complies with the guideline format.

Compliance status key for Table 3

Risk level	Colour code	Description
High	Non-compliant	Non-compliance with potential for significant environmental consequences, regardless of the likelihood of occurrence
Medium	Non-compliant	Non-compliance with: • potential for serious environmental consequences, but is unlikely to occur; or • potential for moderate environmental consequences, but is likely to occur
Low	Non-compliant	Non-compliance with: • potential for moderate environmental consequences, but is unlikely to occur; or • potential for low environmental consequences, but is likely to occur
Administrative non-compliance	Non-compliant	Only to be applied where the non-compliance does not result in any risk of environmental harm (e.g. submitting a report to government later than required under approval conditions)

SECTION 2 INTRODUCTION

This Annual Review is compiled pursuant to Schedule 2, Condition E9 of SSD6300, Schedule 5, Condition 10 of PA08_0102 and Schedule 2, Condition 19 of DA 49/94 for YEM2025. This Annual Review has been prepared in accordance with the Post Approval Requirements for State Significant Developments – Annual Review Guideline (DPE 2015).

Rix's Creek Mine is wholly owned by Bloomfield Collieries Pty Limited (BCL) an Australian owned company.

Rix's Creek (South) Mine (RCS) commenced operations in July 1990 following the granting of Development Consent DA 86/2889 and Coal Lease No. 352 on 20 October 1989. This followed the submission of Coal Lease Application No. 185, an Environmental Impact Statement (EIS) and a public inquiry into the development application. Subsequently, DA 49/94 was approved on 19 October 1995 for 21 years from the issue of a mining lease in satisfaction of Mining Lease Application No. 17. Mining Lease 1432 was subsequently issued on 24 June 1998.

In 2015, BCL submitted a development application to extend mining operations within the area for 21 more years. This project was named the Rix's Creek (South) Continuation of Mining Project State Significant Development 6300 (SSD6300). BCL sought an extension to the Project Approval (DA 49/94 MOD 10) for nine (9) months to allow continued coal extraction while the Continuation Project assessment was undergoing due process.

The Rix's Creek South Continuation of Mining Project SSD 6300 was commenced on 24 February 2020.

In December 2015, HV Coking Coal Pty Limited (Glencore) completed the purchase of 100% of the Integra Mining Operations Complex. BCL subsequently purchased, from Glencore, the previous Integra Open Cut Operations, Coal Handling Preparation Plant, Train Loading Infrastructure and the Rail Loop. Under the "Operating, Infrastructure Access and Services Agreement", entered into by Glencore and BCL, all current mining operations covered by the 2010 Integra Complex Consent, Project 08_0101 Integra Underground Project and Project 08_0102 Integra Open Cut Project, can continue. BCL operate the Open Cut Operations as Rix's Creek North Mine (RCN). This governs open cut mining in the Camberwell Pit and Falbrook Pit areas. Delivery of Run of Mine (ROM) coal from the Integra Underground Mine, Coal Preparation and Train Loading Operations are all operated and managed by BCL.

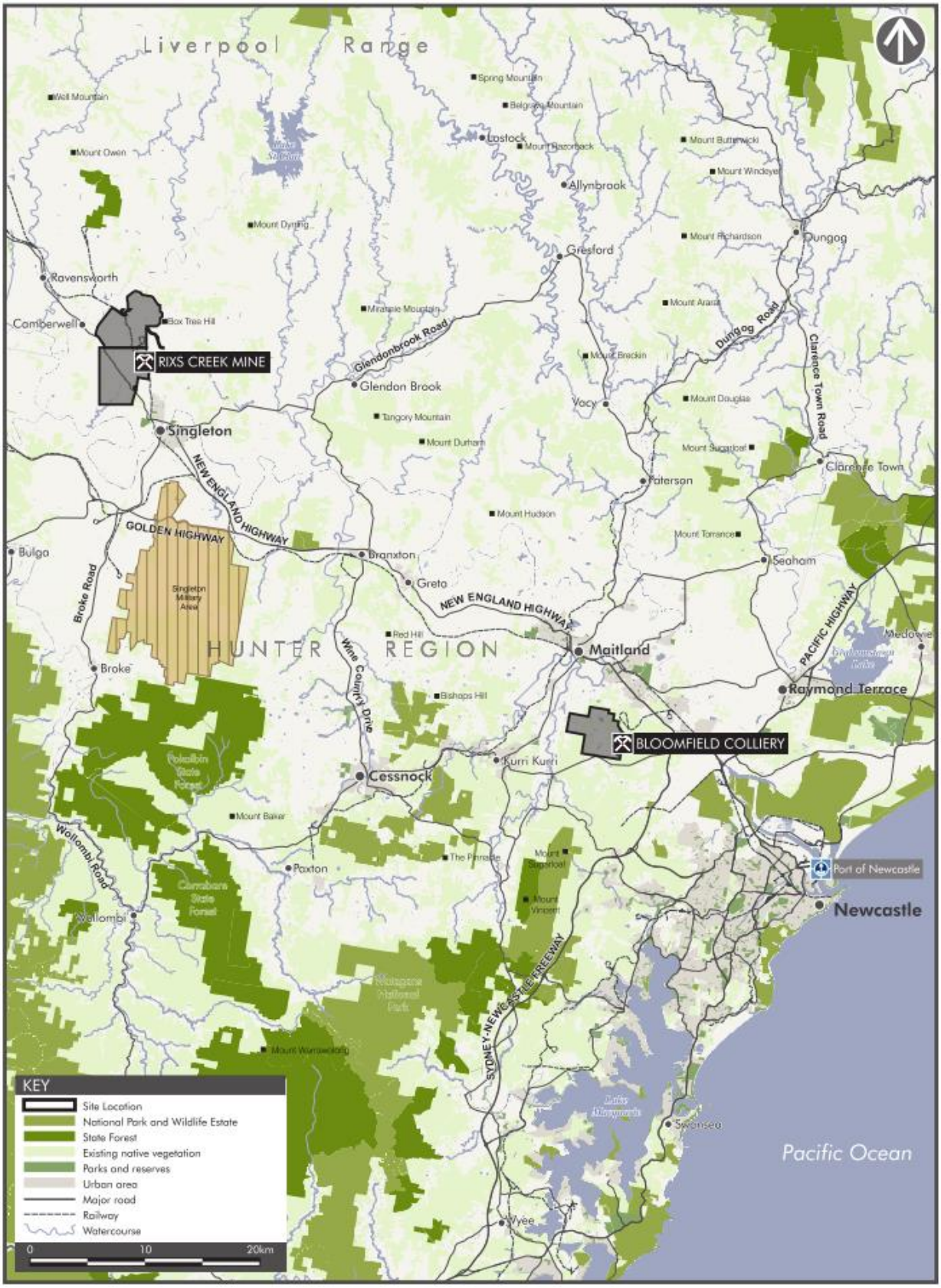


Figure 1. Regional Context Plan

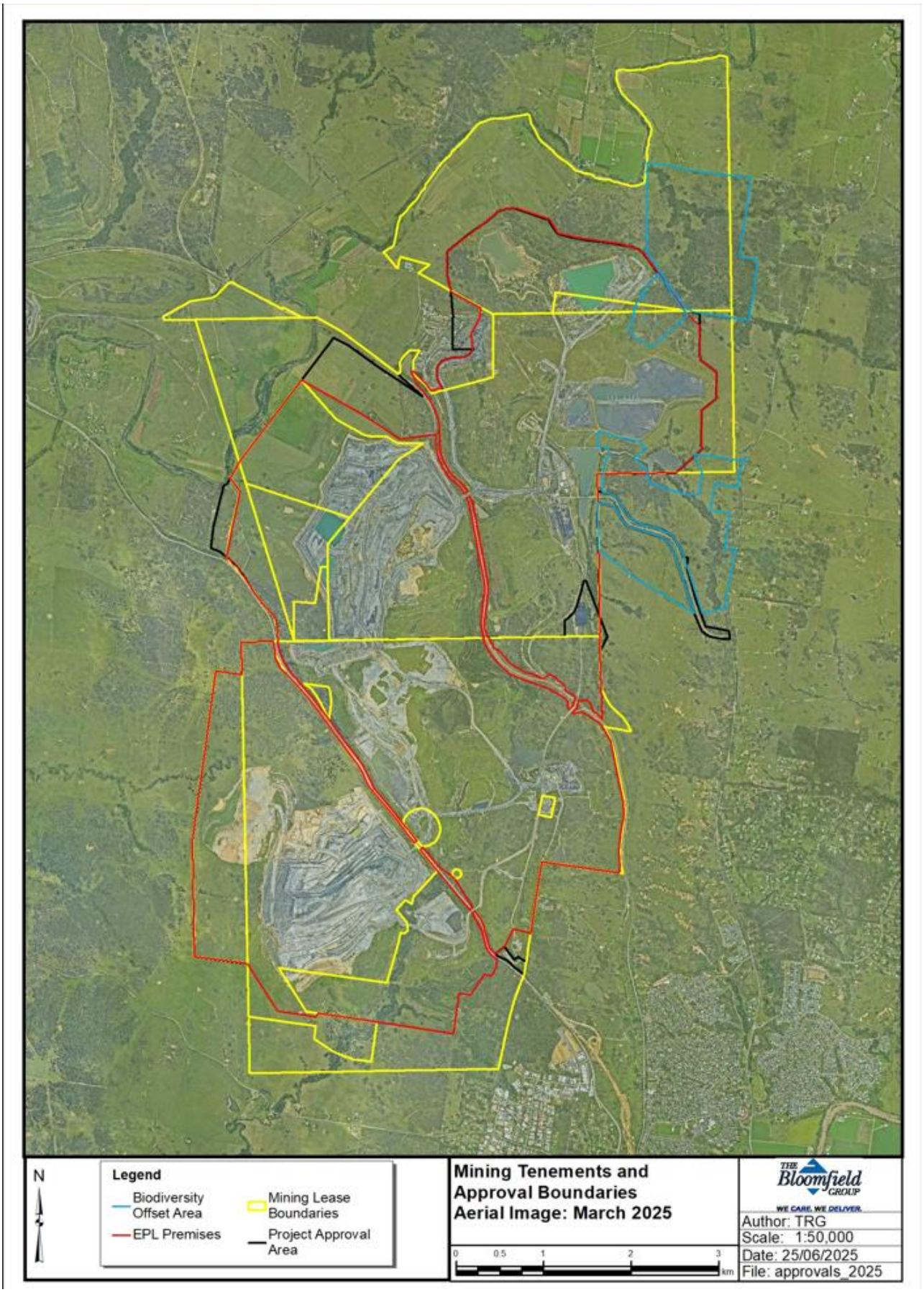


Figure 2. YEM 2025 Mining Tenements and Approval Boundaries

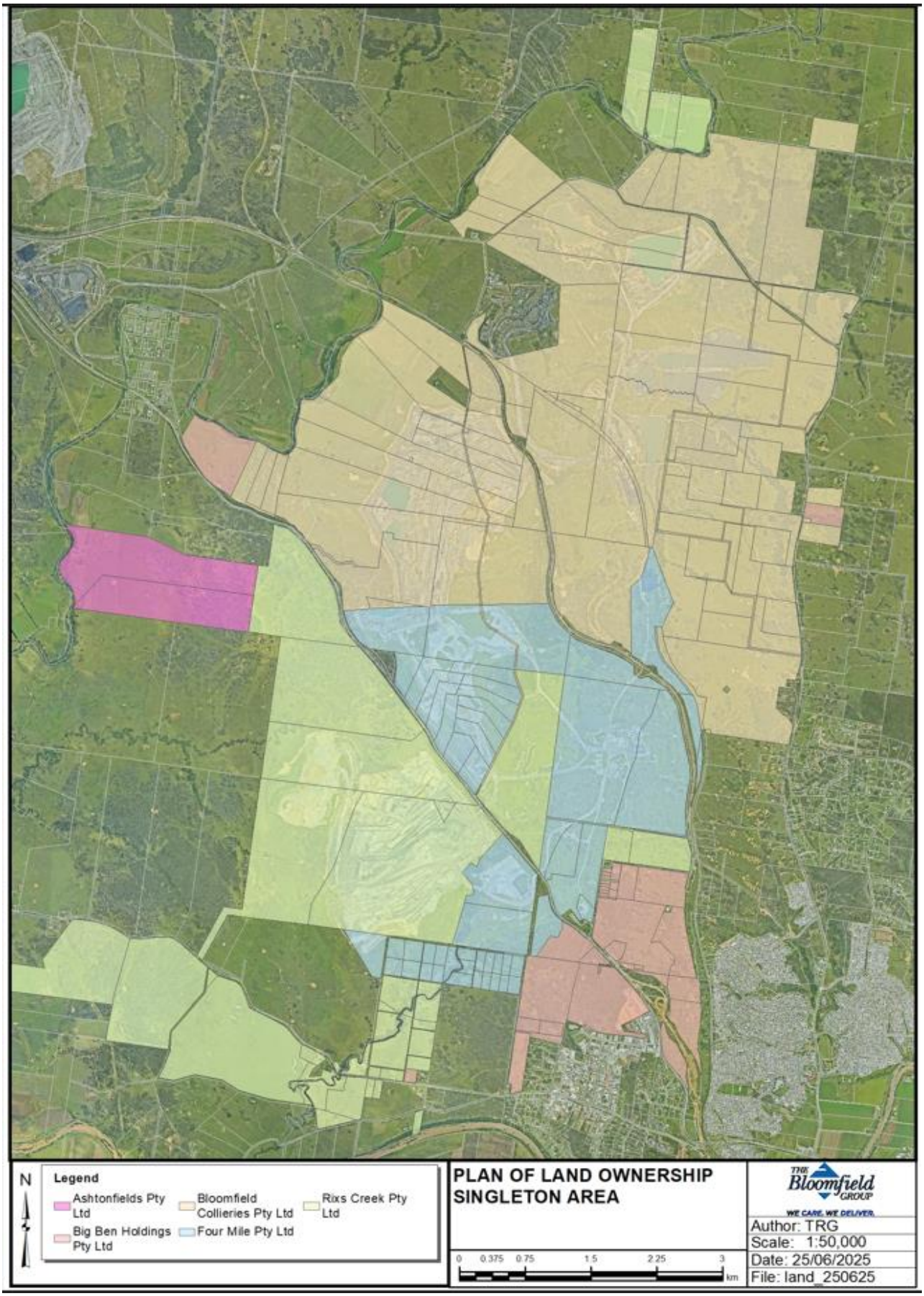


Figure 3. Land Ownership YEM 2025

2.2 Mine Contacts

Rix's Creek Pty Limited

Site:-	Rix's Creek Lane Singleton NSW 2330	Postal Address:-	P O Box 4 EAST MAITLAND NSW 2323.
Telephone:-	02 65788800		
Fax:-	02 65711066		

Rix's Creek Community & Blasting Hotline:-
02 49302665 (24hr)
info@bloomcoll.com.au

The Bloomfield Group Chief Operations Officer: **Luke Murray**
Responsible for overseeing all Bloomfield Group operations.
E-mail:- lmurray@bloomcoll.com.au

Rix's Creek Mine Operations Manager: **Brendon Clements**
Responsible for overseeing all Rix's Creek Mine operations.
E-mail:- bclements@bloomcoll.com.au

Rix's Creek Technical Services Manager: **Tim Gentle**
Responsible for survey and mine planning.
E-mail:- tgentle@bloomcoll.com.au

Rix's Creek Environment Superintendent: **Chris Quinn**
Responsible for consulting with regulatory authorities as required, providing measures for continual improvement to site procedures and ensuring site personnel are trained and competent in relation to environmental aspects of Rix's Creek Mine.
E-mail:- cquinn@bloomcoll.com.au

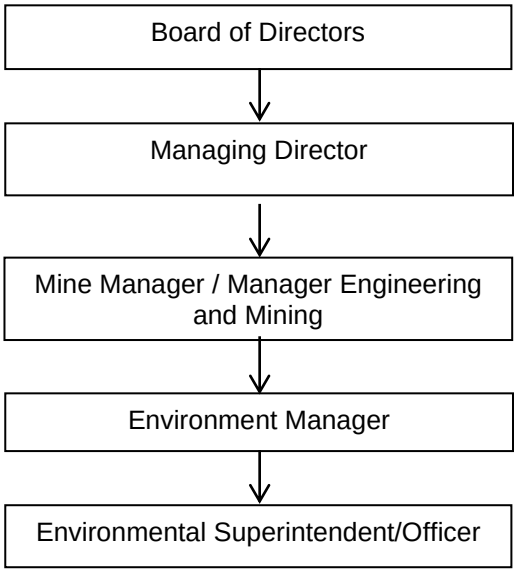
Rix's Creek Environment Officer: **David Holmes**
Responsible for assisting in monitoring and reporting on the environmental performance of the operation.
E-mail:- dholmes@bloomcoll.com.au

Rix's Creek Environment Graduate Officer:- **Julius Harris-Payne**
Responsible for assisting in monitoring and reporting on the environmental performance of the operation.
E-mail:- jharrispayne@bloomcoll.com.au

Bloomfield / Rix's Creek Website:- www.bloomcoll.com.au

2.3 Organisational Chart (Environment)

As per *Rix's Creek Mine Management Structure Register* document:



2.4 Employment Demography

Rix's Creek currently has 359 employees, including staff and operators. This is an increase from the 352 employees reported in the YEM 2024 Annual Review. The areas with the largest number of employees are Singleton Council (30%), Maitland City Council (24%), and Cessnock City Council (18%). Rix's Creek mine endeavours to employ local personnel, and local contractors are preferentially engaged as required.

Table 4. Demographic Breakdown at Rix's YEM 2025

Residential Council	TOTAL	%
Singleton Council	106	30%
Maitland City Council	85	24%
Cessnock City Council	64	18%
Lake Macquarie City Council	30	8%
Newcastle City Council	26	7%
Port Stephens Council	14	4%
Muswellbrook Shire Council	12	3%
Dungog Shire Council	9	3%
Upper Hunter Shire Council	5	1%
Central Coast Council	5	1%
Mid Coast	1	0%
Glenn Innes Severn Council	1	0%
Liverpool Plains Shire Council	1	0%
	359	100%

SECTION 3 – APPROVALS

Current approvals, tenements and MOP for RCM are summarised in Table 5.

Table 5. RCM approvals, tenements and MOP

Approval Number	Description	Issue Date	Expiry Date
Approvals			
NSW Department of Planning, Housing and Infrastructure			
PA No. 08_0102	Development Consent for the construction and operation of surface coal mine extensions.	26 November 2010	31 December 2035 – Mod 9)
Modification 1	Modification to acquisition and mitigation properties, increase Falbrook Pit dump height, North crib huts, Implementation date for OLC extension, BOA extension	18 March 2012	31 December 2035 – Mod 9).
Modification 3	Eliminate OLC, modify Falbrook Pit Operating hours (7a-10p x 7d), additional mitigation property, amend noise criteria at property 112, Further extension to BOA (2 years)	5 October 2012	31 December 2035 – Mod 9).
Modification 2	OLC extension (6months), BOA extension (6 months)	1 February 2013	31 December 2035 – Mod 9).
Modification 4	Application submitted in April 2014 to revise the BOA strategy	24 February 2016.	31 December 2035 – Mod 9).
Modification 5	Transport and Processing of ROM coal from the Open Cut at the CHPP.	26 February 2016	31 December 2035 – Mod 9).
Modification 6	Application submitted Feb 2016 to separate consolidated approval into individual Underground and Open Cut approvals, and extend the timeframe for open cut mining operations till 2035.	23 August 2016.	31 December 2035
Modification 7	The exploration drilling activities as described in EA (Mod 7)	1 September 2017	31 December 2035
Modification 8	Previous mined area outside the approved open-cut limit.	3 April 2019	31 December 2035
Modification 9	Increase in dump height, increase the number of blasts per day and allow for exploration within the Approved Project Area	February 2021	31 December 2035

Approval Number	Description	Issue Date	Expiry Date
DA No. 49/94	Development Consent for the construction and operation of surface coal mine extensions.	19 October 1995	24 February 2022
DA No. 49/94 MOD 1	Consent modification to amend monitoring requirements	11 February 1999	24 February 2022
DA No. 49/94 MOD 2	Consent modification for Rix's Creek Mine to receive ROM coal from Glennies Creek Underground Mine and to process the coal for transport by rail (2003)	30 June 2006	24 February 2022
DA No. 49/94 MOD 3	Consent modification for Rix's Creek Mine to receive, process and transport bulk coal samples from the Bickham Exploration Project (2004);	15 June 2004	24 February 2022
DA No. 49/94 MOD 4	Consent modification for Rix's Creek Mine. To allow a tunnel under the New England Highway (2009);	27 August 2009	24 February 2022
DA No. 49/94 MOD 5	Consent modification for Rix's Creek Mine to enable the construction and operation of a rail loop, associated clean coal stockpile and rail loading facility (2013)	25 November 2013	24 February 2022
DA No. 49/94 MOD 6	Consent modification for Rix's Creek Mine to increase the total volume of material that can be moved annually to 16.1 million bcm (2014);	2 December 2014	24 February 2022
DA No. 49/94 MOD 7	Consent modification for Rix's Creek Mine for ROM coal from Rix's Creek North (former Integra Mine site) to be processed at RCS Coal Handling and Preparation Plant (CHPP) (2016);	26 February 2016	24 February 2022
DA No. 49/94 MOD 8	Consent modification for Rix's Creek Mine Satellite ROM Pads.	20 December 2016	24 February 2022
DA No. 49/94 MOD 9.	Consent modification for Rix's Creek Mine. (Dried tailings refuse to be emplaced in overburden dumps at Rix's Creek North (up to 500,000 m3) and overburden from Rix's Creek South to be placed at Rix's Creek North (up to 5,000,000 m3).	01 September 2017	24 February 2022
DA No. 49/94	Consent Order- 2017/211784- NSW Land and Environment Court.	12 July 2017	24 February 2022

Approval Number	Description	Issue Date	Expiry Date
DA 49/94 MOD 10	Consent Modification for Rix's Creek Mine Extension of approval for coal extraction until 24 March 2020.	12 June 2019	24 February 2022
SSD 6300	Rix's Creek Continuation of Mining Project	12 October 2019	12 October 2040
SSD 6300 MOD 1	Administrative Changes, receipt of coalaceous material and allow exploration within the Approved Project Area		12 October 2040
Singleton Shire Council			
DC	Hydrocarbon Storage Shed	7 December 2005	-
DC	Control Room	12 September 2005	-
Approval to Demolish Existing Dwelling and Shed	Dwelling and shed located at Lot 93 DP 752442 Middle Falbrook Road	13 April 2005	-
DC 719/2003	For Glennies Creek to Ashton Water Pipeline	13 February 2004	-
DC 90/2001 (Mod)	Alterations/additions to a transportable office building	13 June 2001	-
DC 90/2001	For new offices and a bathhouse	5 April 2001	-
BA 2/99	Bathroom/office complex	26 March 1999	-
DA 51/90	Stockpile and Rail Loading Facility	18 October 1990	-
7666/2019	Middle Falbrook Road Closure Permit	22 May 2019	-
18/00657	Consent for Permanent Road Closure- Disused Section of Middle Falbrook Road	18 September 2019	-
8167/2019	Stony Creek Road Use (Closure for Blasting).	30 May 2019	-
5586/2019	New England Highway Road Closure Permit	2 April 2019	-

Approval Number	Description	Issue Date	Expiry Date
Tenements			
CL352	Coal Lease	13 September 2011	Renewed until 20 Oct 2031
ML1432	Mining Lease	16 August 2022	Renewed until 23 June 2040
CL357	Coal Lease	27 March 1990	27 March 2032
ML1630	Mining Lease	16 March 2009	16 March 2030
ML1648	Mining Lease	4 January 2011	4 January 2032
ML 1649	Mining Lease	4 January 2011	4 January 2032
ML1650	Mining Lease	4 January 2011	4 January 2032
ML1651	Mining Lease	4 January 2011	4 January 2032
ML 1725	Mining Lease	6 March 2018	11 Nov 2033
ML 1803	Mining Lease	5 May 2020	5 May 2041
Roads and Maritime			
New England Highway – Road Occupancy Licence.		Licence No 2266758	Renewed until 30 June 2026.
Rehabilitation Management Plan			
Rehabilitation Management Plan		8/01/2025	Not Applicable

Issued By	Number	Grant date	Expiry, renewal or anniversary date	Comment
Environment Protection Licence				
NSW Environment Protection Authority.	EPL 3391	21 August 2000	03 April (Annually)	Coal Works >2Mt – 5Mt annual handling capacity Mining for Coal >3.5Mt - 5Mt Annually

Issued By	Number	Grant date	Expiry, renewal or anniversary date		Comment
Dangerous Goods Notification					
SafeWork NSW	NDG 028098 (RCN)	14/4/2019			Notification of Dangerous Goods on Premises (ammonium nitrate, emulsions and combustible liquids).
SafeWork NSW	NDG 032405 (RCS)	14/4/2019			Notification of Dangerous Goods on Premises (ammonium nitrate, emulsions and combustible liquids).
Water Licences					
Natural Resource Access Regulator	**Number**		**Category**	**Volume**	**Purpose**
	WAL41500		Mining	100 (ML/yr)	Open Cut (dewatering groundwater) Hard Rock
	WAL 41555		Mining	100(ML/yr)	Open Cut (dewatering groundwater) Hard Rock
	WAL 40777		Mining	305 (ML/yr)	Open Cut (dewatering groundwater) Hard Rock
	WAL 43653		Mining	100(ML/yr)	Open Cut (dewatering groundwater) Hard Rock
	WAL 41555		Mining	100(ML/yr)	1 x Bore (dewatering groundwater

Issued By	Number	Grant Date	Expiry, Renewal or Anniversary Date	Comment
NSW Environment Protection Authority. Radiation Management Licence No: **5079169**	Radiation Regulated Material ID 8661	-	14 April 2026	RCN
	Radiation Regulated Material ID 8663	-	14 April 2026	RCN
	Radiation Regulated Material ID 8664	-	14 April 2026	RCN
	Radiation Regulated Material ID 9121	-	14 April 2026	RCN
	Radiation Regulated Material ID 17083	-	14 April 2026	RCS

SECTION 4 – OPERATIONS SUMMARY

Rix's Creek Mine operates 24 hours per day, 7 days per week at Rix's Creek South and Rix's Creek North Mining Areas with reduced operations on weekends. No mining was undertaken within the Falbrook Pit within the reporting period.

Table 6. Rix's Creek North PA08_0102 Production Summary YEM 2025

Material	Approved limit	Previous Reporting Period	This Reporting Period	Next Reporting Period
Waste Rock / Overburden	N/A	5,023,386 BCM	5,165,108 BCM	4,461,762 BCM
ROM Coal / Ore	4.5 Million Tonne per annum (Western Mining area ONLY)	1,238,825t**	970,507t **	1,192,976 BCM
Coarse reject / Fine reject (Tailings)	N/A	375,855t *	607,847t *	***

** RCN CHPP washed Integra UG Coal only. Coarse reject and tailings generated from processing Integra Underground Coal. RCN Open Cut Coal processed at RCS CHPP.*
*** RCN Open Cut Coal tonnage processed at RCS CHPP.*
**** No forecasts from Interga UG for YEM26.*

Table 7. Rix's Creek South SSD6300 Production Summary YEM 2025

Material	Approved limit	Previous Reporting Period	This Reporting Period YEM 23	Next Reporting Period
Waste Rock / Overburden	N/A	11,046,195 BCM	11,280,109 BCM	10,374,258 BCM
ROM Coal / Ore extracted	3.6 Million Tonnes per annum (RCS continued operations)	2,948,672t	3,393,359t	2,876,438t
Coarse reject / Fine reject (Tailings)	N/A	2,643,200t *	2,176,896t *	2,356,930t *
ROM Coal processed on site	4.5 Million Tonnes per annum	4,215,952t	4,369,860t**	4,212,554t
Saleable product	N/A	1,572,752t	1,685,579t	1,855,624t

**Combined coarse reject and tailings from RCS CHPP which processes both RCN and RCS ROM Coal.*
*** ROM Coal processed over a 12 month period. 12 month Approval limit is 5.625Mt.*

During YEM 2025, the Rix's Creek North CHPP washed Glencore's Integra Underground ROM Coal, with fine tailings from the coal washing process being deposited in Rix's Creek North prescribed emplacement facility Tailings Dam 2. Course reject from the processing of Integra UG's coal was disposed within the Rix's Creek North open cut area.

Coal that was extracted from the Rix's Creek North and Rix's Creek South open cut areas was processed at the Rix's Creek South CHPP. Solid bowl centrifuges (SBCs) were primarily used to process tailings which was co-disposed in Rix's Creek South open cut area. Tailings not treated via the SBC's was transferred via pipeline to the RCS Emplacement Area 4, which is referred to as MB19. Return water is decanted from the emplacement area and pumped back to the containment water system that feeds the coal preparation plants. This maximises the recycling of mine water across site. Course reject was disposed in the RCS open cut area.

The solid-bowl centrifuge system located at the RCS CHPP enables a lower amount of tailings to be transported by pipeline as the water removed during the tailings 'drying process allows for co-disposal of the 'dried' tailings within the open cut emplacement area in a similar fashion to overburden. Early testing of dump areas has shown minimal surface slumping/cracking when this dried tailings material is capped with sufficient overburden material from the mining process.

Rix's Creek South SSD6300 operated below the 3.6 million ROM Tonne per annum limit. At Rix's Creek North PA (08_0102) ROM coal production was significantly less than the maximum allowable limit of 6.0 Million Tonnes per annum. (4.5Mt from the Western Mining Area (Camberwell) & 1.5Mt from Northern Mining Area (Falbrook)).

Table 8. Rix's Creek North Production History

YEAR	ROM COAL PRODUCTION (tonnes)	OVERBURDEN REMOVAL (bank cubic metres)	APPROVAL LIMIT ROM Coal (Tonnes) (Western Mining Area ONLY)
2016	915,011	4,825,050	4,500,000*
2017	1,804,652	11,564,760	4,500,000*
2018	2,979,572	10,402,073	4,500,000*
2019	1,213,920	7,352,886	4,500,000*
2020	1,332,678t	5,032,788	4,500,000*
2021	1,180,607t	4,171,424	4,500,000*
YEM 2023	1,764,544t	5,488,681	4,500,000*
YEM 2024	1,238,825t	5,023,386	4,500,000*
YEM 2025	970,507	5,165,108	4,500,000*

* Project Approval 08_0102 Sch 2, Con.7.

Table 9. Rix's Creek South Production History

YEAR	ROM-of-MINE COAL PRODUCTION (tonnes)	OVERBURDEN REMOVAL (bank cubic metres)	Total Movement of Material on site (bank cubic metres)	APPROVAL LIMIT
1997	1,700,000	7,198,000	8,898,000	15,000,000 BCM
1998	1,800,000	7,052,000	8,852,000	15,000,000 BCM
1999	1,888,900	7,635,000	9,523,900	15,000,000 BCM
2000	2,288,900	7,635,000	9,923,900	15,000,000 BCM
2001	1,679,400	7,460,000	9,139,400	15,000,000 BCM
2002	1,754,001	7,787,685	9,541,686	15,000,000 BCM
2003	1,943,095	8,768,068	10,711,163	15,000,000 BCM
2004	1,931,383	8,511,771	10,443,154	15,000,000 BCM
2005	1,628,753	9,567,000	11,195,753	15,000,000 BCM
2006	2,015,042	11,547,989	13,563,031	15,000,000 BCM
2007	2,096,320	11,150,416	13,246,736	15,000,000 BCM
2008	2,096,697	11,020,152	13,116,849	15,000,000 BCM
2009	2,338,424	10,698,123	13,036,547	15,000,000 BCM
2010	2,367,229	10,267,881	12,635,110	15,000,000 BCM
2011	2,212,703	10,589,386	12,802,089	15,000,000 BCM
2012	2,689,935	10,341,895	13,031,830	15,000,000 BCM
2013	2,747,880	11,502,321	14,250,201	15,000,000 BCM

2014	2,760,693	13,234,085	15,994,778	16,100,000 BCM*
2015	2,847,899	13,364,730	15,073,469	16,100,000 BCM
2016	2,662,223	13,534,982	15,132,316	16,100,000 BCM
2017	2,013,486	9,266,678	10,609,002	16,100,000 BCM
2018	1,694,275	8,343,078	10,037,353	16,100,000 BCM
2019	2,332,364t	7,621,847	9,954,211	16,100,000 BCM
2020	3,107,814**			3,600,000 ROM Tonnes extracted
2021	2,955,708t**			3,600,000 ROM Tonnes extracted
YEM 2023	3,382,350t***			3,600,000 ROM Tonnes extracted
YEM 2024	2,948,672t**			3,600,000 ROM Tonnes extracted
YEM 2025	3,393,359t**			3,600,000 ROM Tonnes extracted

*Development Consent 49/94 - Mod 6 approval granted November 2014.

** SSD 6300 consent - Approval limit now ROM Coal Extracted from pit

*** date from 1 January 2022 – 30 March 2023 reported for 15 month period.

Table 10. Rix's Creek North Coal Transport PA 08_0102

YEAR	Product Coal railed from RCN Rail Loop (tonnes)	Coal Transport limit (Tonnes)
2021	2,228,498*	7,300,000
YEM 2023	1,624,535*	7,300,000
YEM 2024	1,355,556*	7,300,000
YEM 2025	430,535*	7,300,000

*Product Coal from Integra Undeground PA 08_0101.

Table 11. Rix's Creek North Train Movements for YEM25

RCN Train Movements			
Annual Average	**YEM 2024**	**YEM 2025**	**PA_08_0102**
Average trains/day over calendar year	**1.92**	**1.51**	**3**
Annual Maximum			
Maximum trains/day	**4**	**3**	**7**
Total days loading			
Days/year loading occurred	**122**	**32**	

4.1 Exploration

During YEM 2025**, exploration drilling was carried out at Rix's Creek Mine. The drilling that was completed in this period comprised** five (5) cored holes drilled across the mine site. The core was sampled for gas analysis to update the mine's fugitive emission model.

Area	Hole Name	Depth (m)	Hole Type
Old North Pit (RCS)	DDH44	120	Cored
Highway Pit (RCN)	DDH45	222	Cored
Dulwich (RCN)	DDH46	204	Cored
Possum's Skin Dam (RCN)	DDH47	255	Cored
West Pit (RCS)	DDH48	270	Cored

4.2 Land Preparation

During the reporting period, Rix's Creek Mine progressed with the disturbance of the Western out of Pit dump area (WOOPD) and WH15 near the high-wall. A small section of the Camberwell Pit RL150 was disturbed for dump progression. 17.40 ha of land was disturbed as per the land disturbance procedure.

The Bloomfield Group have an integrated 'Permit to Disturb' system, which was utilised before clearing any land within the approved disturbance areas. As per the permit to disturb process, a flora and fauna survey is conducted of the area before any clearing takes place.

4.3 Construction

Rixs Creek North Water Management Project

Site works for the Rix's Creek North Water Management Project commenced in January 2025. The project seeks to improve clean water diversions by upgrading open drains and replacing three large-diameter steel culvert structures with precast concrete units. In addition, separation bunds between clean and mine water drains are being raised and reinforced to mitigate the possibility of mine water being discharged from the site during a one-in-100-year storm event.

To date, works have primarily concentrated on open drain construction around the Orica Pad, raising the mitigation bund along the southern base of the RCN Tailings Dams, and offsite manufacture of all precast components. In YEM 2026, Culvert replacement works are scheduled to commence at the end of June with Culvert CC01, adjacent to the Main Northern Rail Line Overbridge.

4.4 Mining

The majority of RCM operations were conducted in Rix's Creek South, where four excavators were working. The Liebherr R9800 (EX456), Hitachi 5500 (EX454), and two Hitachi 3600 excavators (EX450 & EX451) all conducted operations in the West Pit, with most work completed on the southern and western sides of the West Pit.

Operations also took place in Rix's Creek North in the Camberwell Pit. The CAT 6060 (EX455) and another Hitachi 3600 (EX452) both had operations spanning the northern to southern extents of the Camberwell Pit.

No mining occurred in the Falbrook Pit at RCN, which remains in care and maintenance. Falbrook Pit is used as a water storage void.

There has been no major change to mining methods on site during the reporting period. Overburden and inter-burden were removed utilising the Liebherr R9800 excavator, Cat 6060 (EX6060) Hitachi EX5500 excavator, Hitachi EX3600 excavators, and large front end loaders (Caterpillar 994 & 992). These machines load 220 tonne (Caterpillar 793) and 180 tonne (Caterpillar 789) rear dump trucks. Associated with this machinery is the normal suite of ancillary equipment (bulldozers, graders, water carts and drills) used in the overburden and coal removal process.

During YEM 2025, the main operational areas included mining of the Rix's Creek North Camberwell Pit and Rix's Creek West Pit, which continued to progress in a north-west direction aligned with the current forward program and staged plans within the development consent.

Table 12 is a list of equipment utilised on site for the mining operation.

Table 12. Equipment List YEM 2025

Equipment List YEM 2025	
Caterpillar 789 Truck	16
Caterpillar 793 Truck	23
Caterpillar 994 Front-End Loader	3
Caterpillar 992 Front-End Loader	2
Caterpillar 950 Front-End Loader	3
Caterpillar IT12 Front-End Loader	1
Liebherr R9800 Excavator	1
Hitachi EX5500 Excavator	1
Hitachi EX3600 Excavator	3
Caterpillar 6060 Excavator	1
Caterpillar D 11 Bulldozer	8
Caterpillar D 10 Bulldozer	8
Caterpillar Tiger 854 Bulldozer	1
Caterpillar 16M Grader	1
Caterpillar 24H Grader	2
Caterpillar 24 Grader	2
Caterpillar MD6250 Drill	4
Volvo Stemming Truck	2
Volvo Lube Truck	2
Caterpillar 773B Service Truck	1
Caterpillar 785 Water Cart (114,000 l)	3
Caterpillar 777 Water Cart (80,000 l)	3
Isuzu Water Cart (13,000 l)	2

4.5 Waste Management

The following waste streams were serviced during the reporting period:

Waste Water: Grey water generated onsite, consisting of domestic wastewater from the bath house facilities, associated amenity areas and administration areas, passes through septic systems approved by the local authorities. RCS: OSSM Approval No: 15.2022.73.1 and RCN: OSSM Approval No 1379/1999.

These septic facilities comprise primary and secondary treatment process with solid waste processed by anaerobic bacteria. Effluent passes to a maturation pond prior to disposal by evaporation and land irrigation. The septic systems are regularly inspected by a specialist water treatment contractor. The septic tanks are vacuum cleaned out to remove sludge build up on a quarterly schedule or as required by a suitably qualified waste contractor and the resulting waste is removed from site. At the RCS Sewage Treatment Plant, an in-line chlorination dosing system was installed to reduce faecal coliform within the effluent pond in 2021. During 2022 two new septic tanks were installed in preparations for the female bathhouse which was installed in YEM 2024 at RCS.

Waste Oil: Waste oil from mining equipment as a result of scheduled maintenance operations and breakdown repairs is collected in storage tanks and removed for recycling by a licenced waste oil contractor. Most mining machinery is greased automatically by an onboard system. The system is refilled from a bulk bin on the mobile service cart. Alternatively, this is carried out in the main workshop. Any oil-contaminated water is contained within bunded storage areas, passed through specialised oil separation systems before being collected by the licenced waste oil contractor.

Waste Metal Recycling: Scrap metal is collected for recycling on a regular basis and as required. The metal recycler sorts material into hard and soft metal for further economic benefit to the company. A tidy up initiative which began in 2021 was continued in YEM 2023, 2024 and 2025, which saw more scrap metal be recycled to improve the cleanliness of areas around RCM, which included the dismantling and scrapping of retired heavy equipment.

Liquid Waste: Due to the modification of the RCN and RCS Septic tanks, liquid waste removal increased in YEM 2025 compared to the previous reporting period.

Copper Bin: Scrap copper, mostly from electrical wiring, is recycled by a metal contractor and collected on a regular basis. Most wiring remains with the protective layer attached but where economical a contractor strips assorted wire on-site for further economic benefit to the company. A copper waste bin is located in the RCS electrical workshop and RCN CHPP and electrical workshop to further minimise waste.

General Waste: General waste garbage is placed in large bins and taken off site by a licenced waste contractor for disposal.

Paper/Cardboard Recycling: Paper and cardboard is placed in large bins and taken off site by licenced contractor for further recycling. Small paper/recycling bins are placed within the main offices, workshops and CHPP's to enhance recycling.

Batteries: Small general use batteries (AA, AAA, C, D, etc.) recycling was introduced during 2015 to site. Sealed battery tubs are located within the offices, electrical workshop and RCN workshop for further recycling off site by the waste contractor. Large batteries are also stored on bunded pallets, or within designated battery bays and taken off site by a licenced waste contractor.

Oil Filter Bin: Used oil filters from heavy vehicles are placed in large lidded bins located at both the South and North workshops. These are taken off site by a licenced contractor for cleaning and recycling at the waste contractor's facility

Hydraulic Hose Bins: Two hydraulic hose bins are located at each of the RCS and RCN workshops and regularly serviced by a licenced waste contractor.

Oily Rag Bins: There are designated oily rag bins located in and around the RCS and RCN mechanical workshops and they are regularly serviced as required by a licenced waste contractor.

Used printer cartridges: Taken off site by contractor for recycling at the waste contractor's facility as required.

Poly Pipe recycling: Poly pipe was stored on site and reused as required in YEM 2025.

Electronic Waste: E waste is segregated and transported offsite to a local recycler by the primary waste contractor. E-waste can include, printer cartridges, old computers and outdated electronic components from operational machinery.

Co-mingled waste: The introduction of the yellow lid bins and skips around site for plastic bottles, cartons, paper and glass has seen staff separating these items from general waste and other streams, to be recycled independently.

Asbestos waste: A small amount of asbestos was detected at the RCS Helipad Park up / laydown area and a licenced contractor was engaged to remove the asbestos safely.

Table 13. Waste Volumes YEM 2025

Description	YEM 2024 Total	YEM 2025 Total
Liquid Waste (L)	**15,000**	**24,500**
Metal Recycling (t)	**326.900**	**254,620**
Batteries recycling (kg)	**18,028**	**14,767**
Copper (kg)	**2,507**	**1,599**
Waste Oil (L)	**416.900**	**395,200**
Contaminated Grease	**2,110**	**2,036**
Paper and Cardboard (kg)	**25,130**	**15,095**
Timber Recycling(kg)	**42,620**	**31,040**
General Waste (kg)	**202,155**	**254,985**
Co-mingled (kg)	**890**	**1,405**
Oily Rags (kg)	**635**	**573**
Hydraulic hoses (kg)	**16,660**	**13,500**
Oil Filters	**24,834**	**23,438**
Coolant (L)	**-**	**6000**
Asbestos (kg)	-	**5**
Pallecon (IBC's - kg)	-	**471**

In YEM 2023 the implementation of a colour coded bin system was rolled out with the introduction of our new waste management contractor, to ensure that workers and contractors segregate waste more effectively. A training program was implemented throughout the workforce to improve waste segregation. Co-mingled recycling was also introduced onto site via our contracted waste provider and this initiative has seen segregation from general waste quantities.

4.6 Product Stockpiles

Raw coal is transported from the active mining areas in 180 and 220 tonne rear dump trucks (Caterpillar 789 and 793) to the 30,000 tonne capacity run of mine (ROM) stockpile at the coal preparation plant or the two satellite ROM stockpiles prior to washing. Product coal (clean coal) is then conveyed to a 1,000 tonne bin and transported via internal roads using registered semi-trailers to the rail loading facilities. Each semi-trailer holds approximately 48 tonnes of clean coal.

At Rix's Creek North, with the Integra Underground mine no longer producing coal, the RCN CHPP has gone into a term of care and maintenance, and the mine stockpile (ROM) and Product Coal stockpile have been cleared.

4.7 Hazardous Material Management

Under Schedule 11 of the Work Health and Safety Regulation, notification of hazardous substances occurred during the reporting period. The listing of dangerous goods stored on site is listed below:-

Depot 1	Above ground tank for Class C1, UN 00C1 Diesel.	220,000 litres
Depot 2	Above ground tank for Class C1, UN 00C1 Diesel.	90,000 litres
Depot 3	Above ground tank for Class C1, UN 00C1 Diesel.	90,000 litres
Depot 5	Above ground tank for Class C1, UN 00C1 Diesel.	90,000 litres
Depot 6	Above ground tank for Class 3, UN 1989 Aldehydes, N.O.S.	15,000 litres
Depot 8	Above ground tank for Class C1, UN 00C1 Combustible liquids	60,000 litres
GAS1	Cylinder store for Class 2.1, UN1001 Acetylene, dissolved	1,000 litres
GAS2	Cylinder store for Class 2.2, UN1072 Oxygen, compressed	1,000 litres
GAS2	Cylinder store for Class 2.2, UN1006 Argon, compressed	1,000 litres
RCN1	Above ground tank for Class 5.1, Ammonium Nitrate	50,000 kg
TKN1	Above ground tank for Class 5.1, Ammonium Nitrate Emulsion	60,000 kg
TKN2	Above ground tank for Class 5.1, Ammonium Nitrate Emulsion	30,000 kg

A separate licence for the storage and handling of explosives on the site has also been made to WorkCover. License number:- XSTR100131 is granted until 5/7/2027 The listing of explosives stored on site is listed below:-

MAG1	Magazine Class 1.1B, UN 0360, Detonator Assemblies non-electric	10,000 units
MAG1	Magazine Class 1.4S, UN 0349, Articles, Explosives, N.O.S.	10,000 metres
MAG1	Magazine Class 1.4B, UN 0255, Detonators, Electric for blasting	10,000 units
MAG2	Magazine Class 1.1D, UN 0065, Cord, detonating, flexible	3,000 metres
MAG2	Magazine Class 1.1D, UN 0042, Boosters	3,000 kg
RCN1	Explosives Receptacle Class 5.1, Ammonium Nitrate (ANFO)	50,000 kg
TNK1	Above ground tank Class 5.1, UN 3375, ANFO Emulsion	80,000 litres
TNK2	Above ground tank Class 5.1, UN 3375, ANFO Emulsion	40,000 litres

Access to Safety Data Sheets is through the ChemAlert web site. The register is continually updated as new products are brought onsite.

Explosives are stored in explosive magazines located on site.

4.8 Other Infrastructure Management

RCS Carpark

An additional 30 parking spaces have been provided in the staff carpark at RCS through the widening of pavement in the main parking area and resealing in conjunction with upgrade works completed the RCS Access Road. To maximise the yield, the carpark layout was reconfigured to one-way aisles with reverse 45 degree parking spaces.

RCS Access Road

An upgrade of the RCS Access Road was completed in November 2024. As part of these works, several patches along the length of the road were cement stabilised, and the entire length was resealed between the site boundary and the boom gates. The table drains along the roadway were also reshaped to improve pavement drainage. This process has renewed the deteriorating wearing surface and restored the road to full width where edges had failed due to water ingress.

An ongoing maintenance program has replaced existing older lights with new, modern LED lighting that shields and directs light more directly toward the ground rather than outwards. When fixed lighting has been installed at Rix's Creek Mine, the external lighting will be assessed to comply with Australian Standard 4282: 2019—*Control of Obtrusive Effects of Outdoor Lighting.*

4.9 Bush Fire Management

A slashing program is undertaken as required to reduce fuel loads. Excessive grass and weeds are sprayed around site infrastructure to further reduce fuel loads. Rix's Creek and AusGrid also conducted spraying and mulching of power line easements across site throughout the year.

Proactive management was undertaken, including trimming trees that could potentially come in contact with overhead power lines and implementing an inspection program for tree trimming near overhead power lines, CHPPS, and other buildings to reduce the occurrence of grass fires.

Fuel reduction programs are undertaken on a needs-basis and in conjunction with the local Rural Fire Service and local landholders. Areas of land owned within the lease and outside of the active mining area and rehabilitated areas will continually be grazed by TBG or leased to minimise fuel loads across the site.

SECTION 5 – ACTIONS REQUIRED FROM PREVIOUS ANNUAL REVIEWS

5.1 Actions required from previous Annual Reviews

The Department of Planning, Housing and Infrastructure responded to the Rix's Creek Mine YEM 2024 Annual Review on 25/07/2024. The following table outlines comments to be included in future annual reviews.

Additional Information as required by the DPHI from YEM24 Annual Review.	**Sections Addressed in YEM24 Annual Review**
Additional Reporting Requirements for Coal Mine Annual Reviews: *Biodiversity offsets*: Report on the status of long-term security arrangements for Biodiversity offsets required by the development consent for the mine. *Greenhouse gas*: • Report on Greenhouse gas emissions for the reporting period and include a comparison of actual greenhouse gas emissions against predictions in the environmental assessment for the mine. • Report all reasonable and feasible steps undertake during the reporting period to improve energy efficiency and reduce greenhouse gas emissions generated by the mine.	Refer to Section 6.4.5 for updated reporting section. Annual NGER reporting results included Air Quality and Greenhouse Gas Management Plan

Has the TBG made suitable arrangements to provide appropriate long-term security for the biodiversity offset strategy; and if not, has an extension been requested; and to supply a timeframe for the long-term security to be finalised?	TBG has been progressing in finalising the Conservation Agreements for the Northern, Southern, Bridgman, and Martins Creek for RCN PA 08_0102. The Apple Tree Flats Conservation Area was finalised on 13/09/2019 with NSW National Parks and Wildlife. On 29/10/2024, RCM updated DPHI on the considerable progress made with BCT to finalise the conservation agreement template. The Department granted an extension of time until 31/10/2025 for the finalisation of the conservation agreements.

SECTION 6 ENVIRONMENTAL PERFORMANCE

An extensive environmental monitoring program is conducted throughout the site and surrounding areas to monitor the impacts of the operation. Environmental parameters monitored include local meteorology, air quality, water quality, blast vibration, blast over pressure and noise.

6.1 Meteorological

RCM operates a meteorological station on the site. The RCM meteorological station is located on the Western extent of RCS West Pit operations and has real-time capabilities for relevant personnel to access via computer or phone. In September 2019 a new weather station was installed with specification requirements associated with AS/NZS 3580.14:2014 (*Methods for sampling and analysis of ambient air - Meteorological monitoring for ambient air quality monitoring applications*). The RCM meteorological station record the following environmental parameters:-

- wind speed and direction;
- Sigma Theta;
- temperature (2m and 10m);
- relative humidity;
- solar radiation; and
- rainfall.

These parameters are recorded at 10-minute intervals and downloaded on a monthly basis. To complement this, Rix's Creek Mine is a member of the Upper Hunter Sounding Group Joint Venture (UHSGJV) which provides access to an atmospheric prediction model providing more accurate weather parameter predictions for the Rix's Creek operation. This information is used by management to assess environmental conditions for blast scheduling and determine when adverse conditions exist to cease dumping to exposed locations. This model also forecasts meteorological data for the following day so operational activities can be scheduled for the predicted conditions.

6.1.1 Rainfall

Total rainfall for the YEM 2025 period was 848.1mm over 152 days, which was 195.4mm above average for the period. The yearly average for Singleton is 652.7mm (BOM historical yearly average). The monthly rainfall data is provided in **Table 14,** and **Figure 4** shows the results graphically. For YEM 2025, 8 out of the 12 months received above-average rainfall for this period.

Table 14. Annual Rainfall

RIX'S CREEK ANNUAL RAINFALL YEM 2025													
Month	April	May	June	July	August	September	October	November	December	**January**	**February**	**March**	**TOTAL**
Total Rainfall	134	88.8	95.7	37.8	42.8	57.6	51.2	45.6	22.6	94.2	54	123.8	**848.1**
Average Rainfall	70.2	107.6	75.1	383	37.8	31.7	41.7	27.6	44.1	32.8	59.2	86.6	**652.7**
Wet days (>0.2 mm rainfall)	13	20	12	13	15	8	13	9	6	13	13	17	**152**

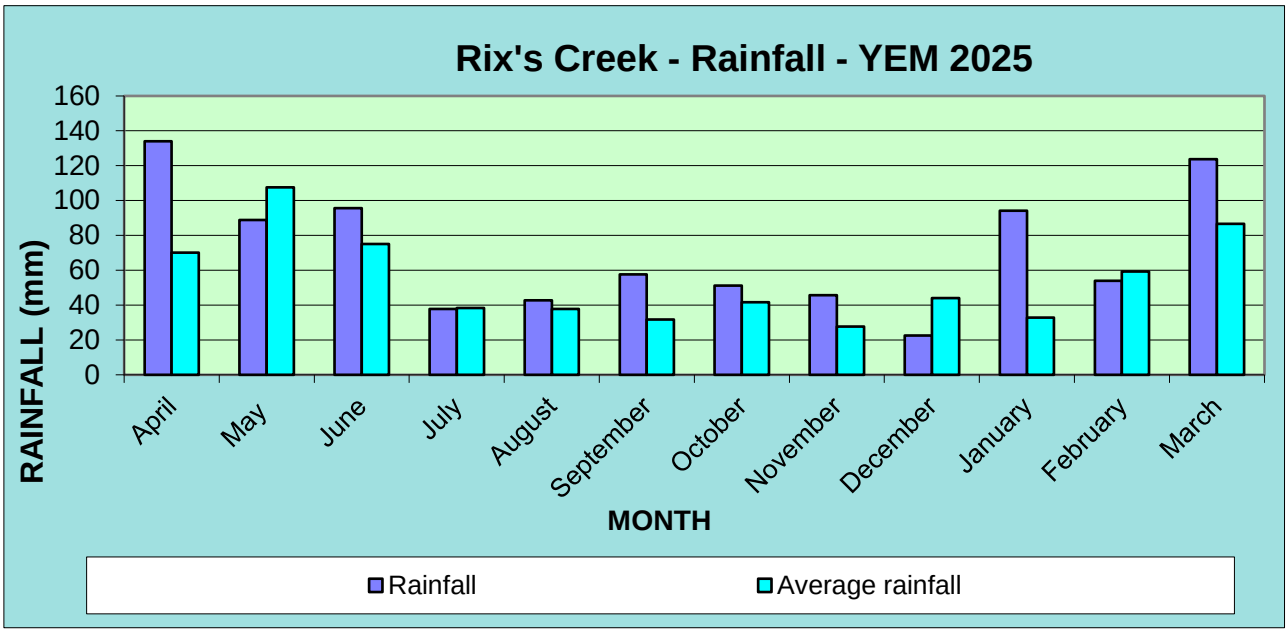


Figure 4. Annual Rainfall YEM 2025

6.1.2 Temperature

The maximum temperature was 41.2 °C in January 2025, and the minimum was 3.4 °C in June 2024. **Figure 5** shows the site's monthly average maximum and minimum temperatures and the maximum and minimum recorded temperatures.

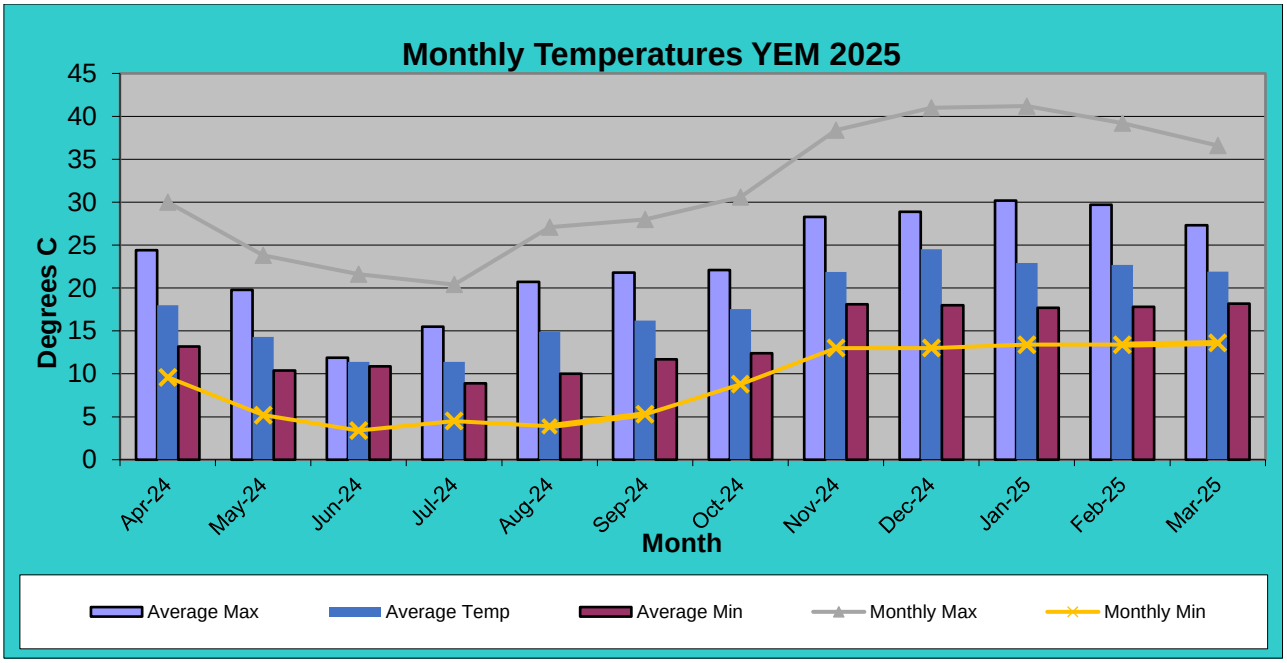
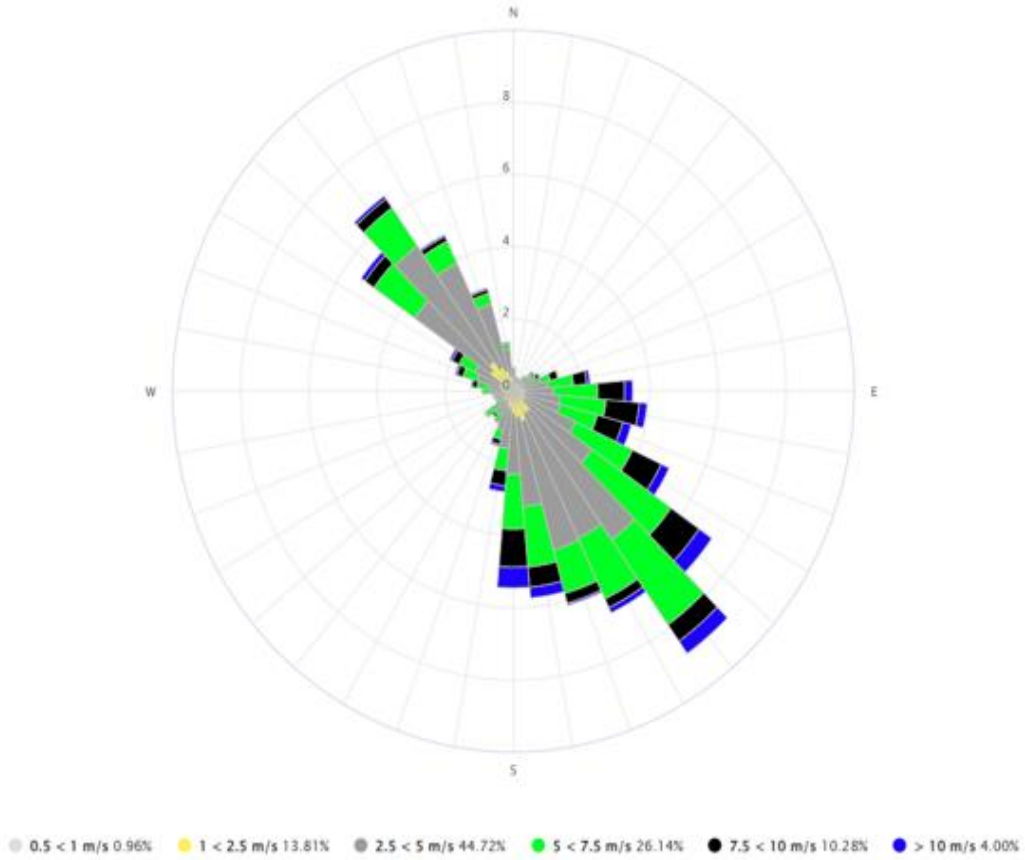


Figure 5. Average Monthly Maximum & Minimum Temperature YEM 2025

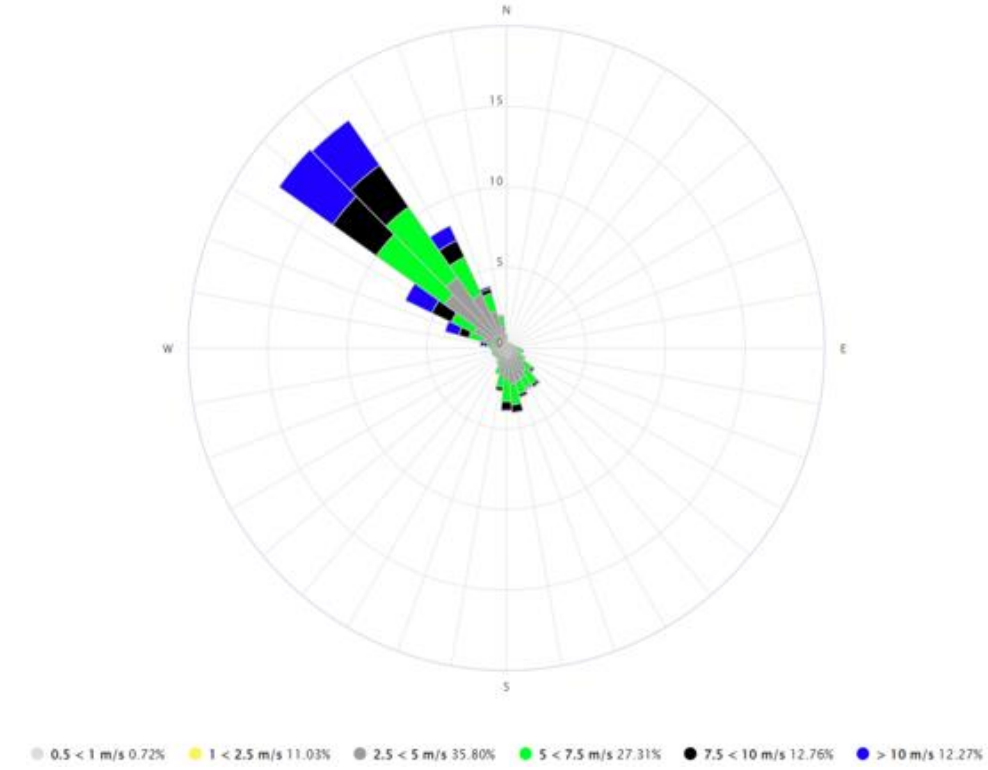
6.1.3 Wind Speed and Direction

The results of wind speed and direction monitoring show similar trends to previous years. During summer, the winds are predominant from the southeast and winter from the northwest. Autumn and Spring are typically transitional seasons with winds distributed between the northwest and southeasterly directions. From all of the wind roses, it is evident that the dominant wind direction for

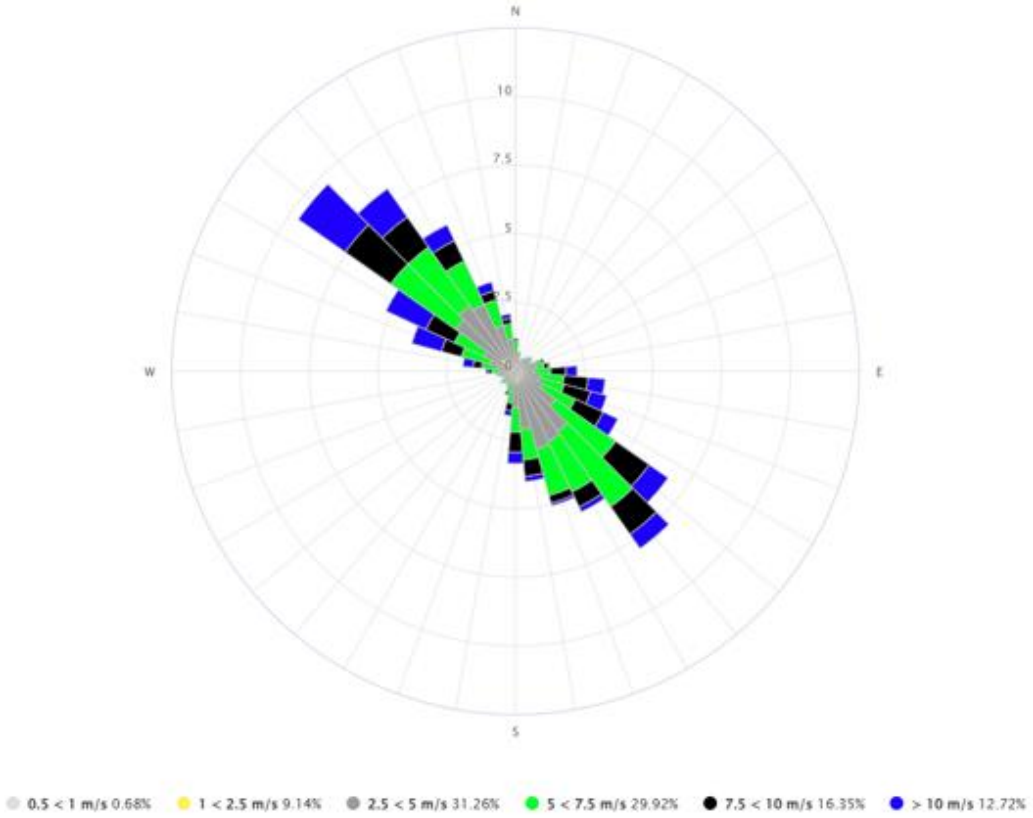
the YEM 2025 was from the northwest. **Figure 6** shows the wind roses generated for the site on a seasonal basis.



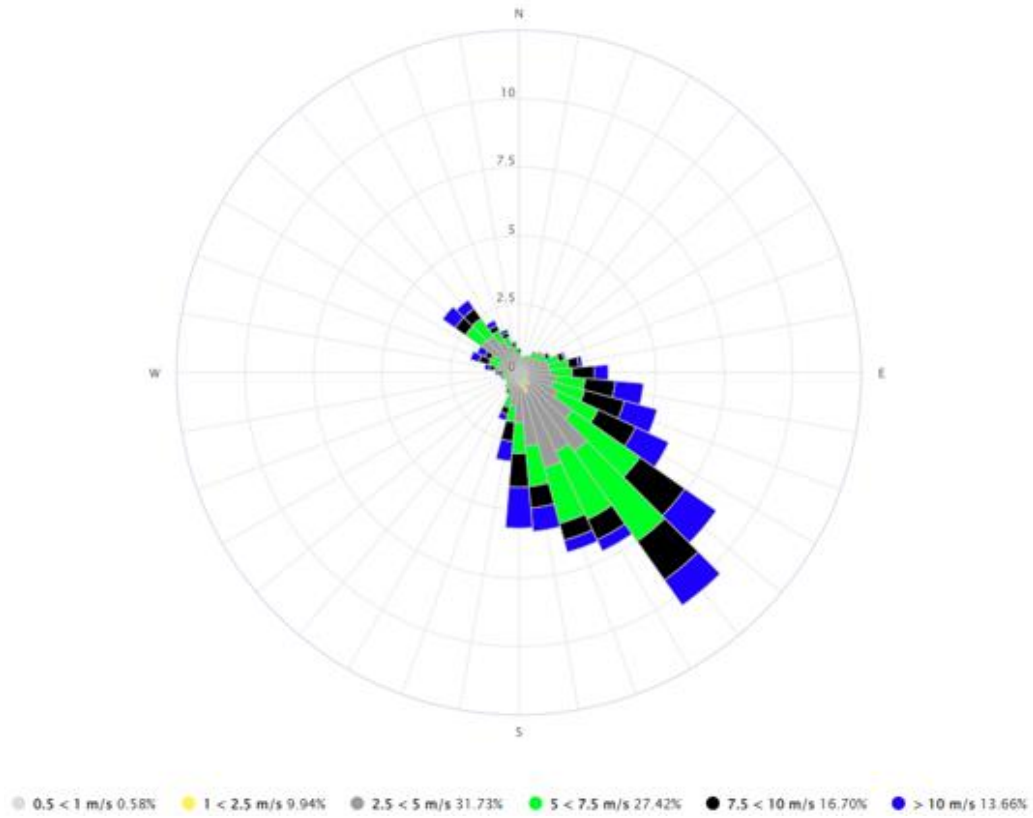
Autumn 2023



Winter 2024



Spring 2024



Summer 2025

Figure 6. Windrose for Rix's Creek YEM 2025

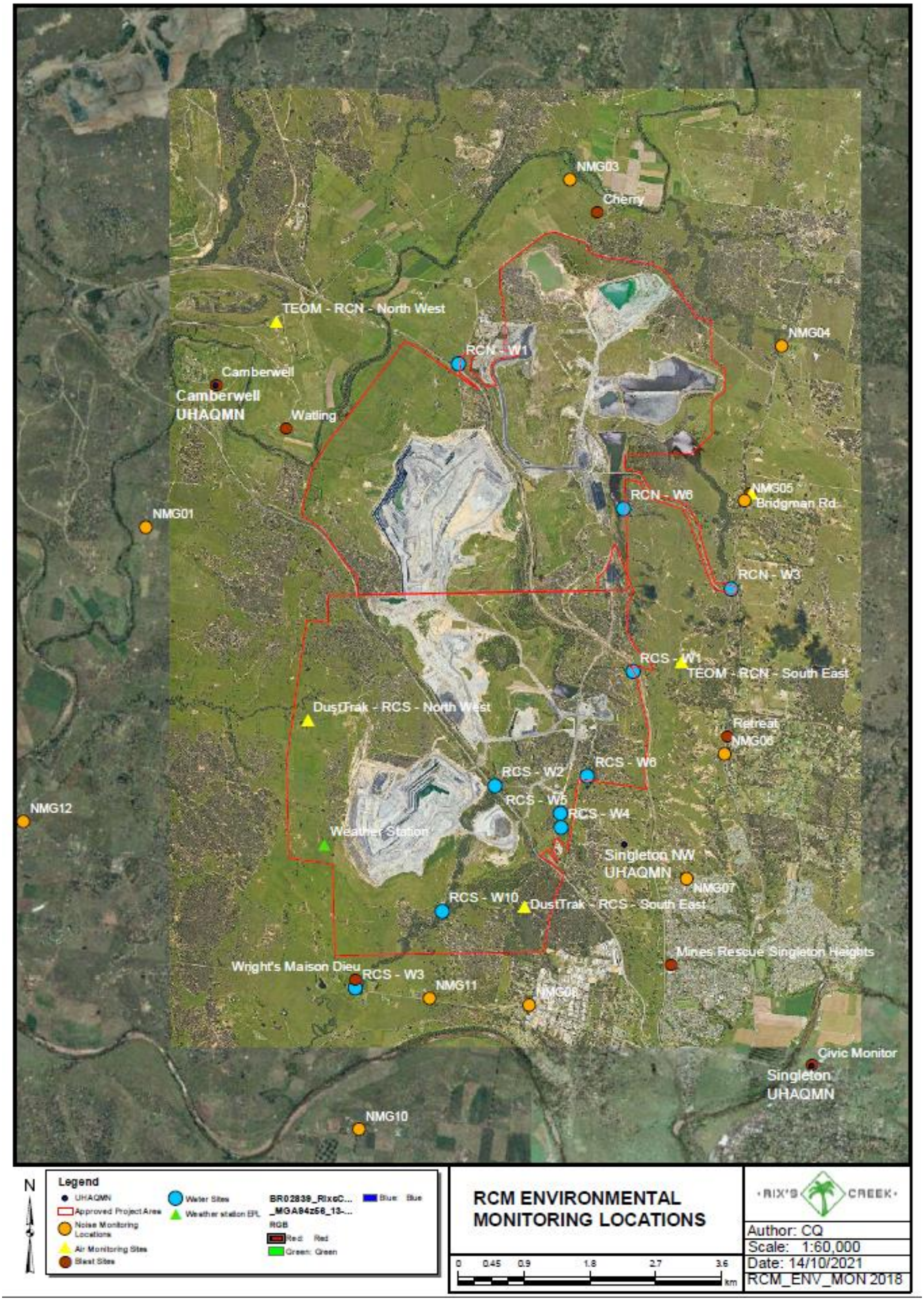


Figure 7. Rix's Creek Mine Compliance Environmental Monitoring Locations

6.2 Operational Noise

6.2.1 Environmental Management

The primary objectives of the RCM Noise Management Plan are to ensure compliance with legislative requirements, support procedures to manage and monitor noise emissions from the mine and provide management mechanisms to minimise the potential for noise from the mine to cause off-site impacts where possible.

Residences surrounding RCM have been grouped generally according to their locality and acoustic environment. The relevant Environmental Assessments reference these groupings as Noise Assessment Groups (NAG).

The Noise Management Plan was updated on the 21/11/2023 to include controls around the installation and operation of evaporation fans at Rix's Creek North. DPHI approved the RCM Noise Management Plan on the 6/12/2023.

Rix's Creek EPL 3391 states that Rix's Creek must seek to ensure that its rail spur is only accessed by locomotives approved to operate on the NSW rail network in accordance with noise limits L6.1 to L6.4 in RailCorp's EPL (No. 12208) and ARTC's EPL (No. 3142) or a Pollution Control Approval issued under the former Pollution Control Act 1970. Rix's Creek Mine has received correspondence from ARTC and understands that each rail provider is required to meet their obligations under their respective EPL and that they must comply with conditions, which include use of approved locomotives from the EPA's list.

6.2.2 Environmental Performance

There were no externally reportable incidents relating to noise during the YEM 2025 reporting period.

A review of the project's environmental noise performance is described in the monthly attended noise monitoring compliance reports available on The Bloomfield Groups website:

https://www.bloomcoll.com.au/sustainability/environmental-management/rixs-creek-assessments/epl-monitoring

In accordance with our Noise Management Plan, Monthly compliance-attended noise monitoring is conducted at zones where a predictive noise model indicates meteorological enhancement. The acoustic consultant develops a monitoring plan based on this meteorological modelling and conducts noise monitoring at six locations where enhancement has been identified. Tables 15 and 16 show results from the Independent Monthly Compliance-Attended Noise monitoring, as conducted by SLR Consulting Australia Pty Ltd.

Table 15. Independent Monthly Compliance Attended Noise monitoring results ($L_{Aeq, 15\ Minute\ dB}$)

YEM 2025 RCM LAeq, 15 Minute dB															
Monitor- ing Location	Monitor- ing Period	RCN Criteria (Laeq, 15 minute dB)	RCS Criteria (Laeq, 15 minute dB)	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
NM01	Night	**38**	**40**	I/A			I/A	I/A			I/A	I/A	I/A		I/A
NM03	Night	**40**	**40**	35			I/A	34	<28		27	30	I/A		32
NM04	Night	**37**	**42**	34*		32	35	35	30		23	32	26	26	26
NM05	Night	**41**	**42**	36	I/A	39	40	34	32	34	I/A	33		27	30
NM06	Night	**36**	**42**	I/A	I/A	41	38	31	40	38		I/A		27	27
NM07	Night	**35**	**40**		I/A	<25			34	37		I/A		I/A	
NM08	Night	**35**	**40**		I/A	32				36			I/A	36	
NM10	Night	**35**	**40**												
NM11	Night	**35**	**40**		28	33				35	I/A		I/A	32	
NM12	Night	**35**	**40**	I/A	35		I/A	I/A	*33	I/A	35		I/A		31

IA = Inaudible; NM = Not Measurable, N/A Not Applicable

Table 16. Independent Monthly Compliance Attended Noise monitoring results ($L_{A1, 1\ Minute\ dB}$)

YEM 2025 RCM LA1, 1Minute dB															
Monitor-ing Location	Monitor-ing Period	RCN Criteria (LA1, 1 minute dB)	RCS Criteria (LA1, 1 minute dB)	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25
NM01	Night	**48**	**47**	I/A			I/A	I/A			I/A	I/A	I/A		I/A
NM03	Night	**45**	**45**	38			I/A	37	29		29	35	I/A		34
NM04	Night	**49**	**47**	37		34	40	39	31		25	35	28	28	28
NM05	Night	**47**	**47**	40	I/A	42	43	41	35	41	I/A	36		30	32
NM06	Night	**48**	**47**	I/A	I/A	45	42	32	45	42		I/A		31	31
NM07	Night	**45**	**47**		I/A	41			40	40		I/A		I/A	
NM08	Night	**45**	**47**		I/A	34				40			I/A	41	
NM10	Night	**45**	**47**												
NM11	Night	**45**	**47**		31	38				37	I/A		I/A	36	
NM12	Night	**45**	**47**	I/A	39		I/A	I/A	*36	I/A	38		I/A		41

IA = Inaudible; NM = Not Measurable, N/A Not Applicable

- *NM04 had an initial exceedance under applicable weather conditions, which was reduced to below criteria for the "within 75 minutes" measurement.*
- *NM12 had an initial exceedance under applicable weather conditions, which was reduced to below criteria for the "within 75 minutes" measurement.*

Based on the results shown in Tables 15 and 16, there were no non-compliances identified in the reporting period. Elevated results were identified during cooler periods between April to September and this is consistent with past years results.

The summary of model predictions for noise levels in the Enviromental Assessment identified predictions for all the subsequent stages of NAG J (NM08) and NAG K (NM11) are less than LAeq(15 minute) 32 dB(A) under neutral atmospheric conditions. Noise modelling for all other NAG are less than or equal to LAeq(15 minute) 35 dB(A) under neutral atmospheric conditions. The results of noise modelling indicate that during neutral atmospheric conditions there would be minimal noise impacts and the operations of the Mine would be inaudible in many circumstances. This is consistent with the attended noise monitoring results for the YEM 2025.

6.2.3 Incidents and Complaints

Three (3) noise complaints were recorded during YEM 2025, a decrease from the five (5) complaints recorded during the YEM 2024 period. Rix's Creek Mine investigates all complaints. All complaints that RCM receives are investigated, and actions are taken if required.

6.2.4 Further Improvements.

RCM employ a full time Environmental Technician and part time contractors that conduct noise monitoring during afternoon and night shifts when Rix's Creek Mine is operational. If the operational noise from the mine is recorded within 2dB of the noise compliance limits, the Open Cut Examiner (OCE) is notified and operations are changed to reduce operational noise.

A noise software package was developed in consultation with Global Acoustics and was introduced at Rix's Creek Mine to assess if low frequency or tonal noise penalties apply. This software is used in combination with the recently updated weather station which determines if the meteorological conditions and atmospheric stability criteria apply. This tool enables the Environmental Technician to assess real-time low frequency and tonal penalties to ensure that RCM comply with the Noise Policy for Industry (NPfI).

All equipment is checked and maintained on a regular basis to ensure noise attenuation equipment such as silencers and mufflers are operational. Installation of sound suppression will continue to be installed on new pieces of earthmoving equipment as committed in the Project Approvals prior to commencing work/s on-site.

Ongoing operation of a real time noise management monitor located near the NM05 (Bridgman Road) receiver continued during YEM 2025. The noise monitor can apply 1/3 octave low frequency and tonal noise penalties in real time in accordance with the Noise Policy for Industry Guidelines 2017 (NPFI). This system provides alarms when measured noise levels are within 2 dB of the noise criteria (Level 1 Alarm), above the noise criteria (Level 2 Alarm), or sustained over two 15 minute periods, (Level 3 Alarm). Each level of alarm requires action by either the noise technician or RCN CHPP operator.

Rix's Creek Mine continued working with Todoroski Air Sciences (TAS) to finesse the 3-D predictive noise model for the Mine. This model has been validated over a period greater than six years and to date noise enhancement has been identified at offsite locations in accordance with the model's forecast prediction.

The model continues to be upgraded from time to time as necessary. The model was upgraded during 2015 to include all offsite receptors (residences) and was again upgraded in 2016 to include the Rix's Creek North operation once purchased. During 2017 further upgrades to the 3-D noise model occurred, with areas of operational noise enhancement being highlighted in yellow within the open cut area. This provides Rix's Creek Mine with additional proactive tools to manage noise when enhancement is predicted by ensuring that the allocation of sound attenuated equipment is utilised in the yellow/orange highlighted areas.

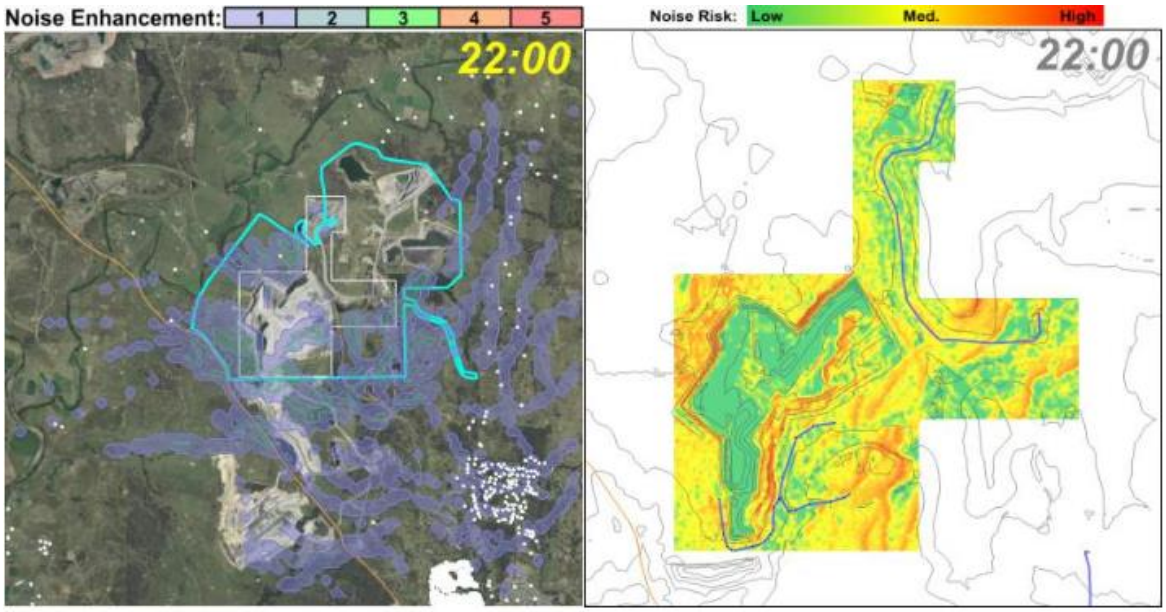


Figure 8. RCS and RCN predictive mine noise forecast models

*White dots indicate off-site receptors / residences closest to mining operation.

The use of the 3-D noise model to plan mining operations has been successful in managing offsite noise and operating in accordance with the NMP and EPL criteria. An integral part of the Noise Management Plan is using real time attended monitoring in conjunction with the noise forecast model. The monitoring results assist in calibration of the noise model and aid the production shift supervisor in determining suitable placement of the mines production units to keep mine noise levels within compliance limits.

6.3 Blasting

6.3.1 Environmental Management

The RCM Blast Management Plan incorporates the conditional requirements for Rix's Creek South and Rix's Creek North operations. In 2021 the Blast Management Plan was updated following the RCN Modification 9 which allows RCN operations to carry out 3 blasts per day across the northern and western mining areas and a maximum of 10 blasts per week onsite, averaged over a 12 month period.

The conditions specified in the Development Consents and Environmental Protection License require blasts to be designed to minimise air blast overpressure and ground vibration. Blasts are designed to ensure that there is less than 5% probability of exceeding an air blast overpressure of 115 $dB_{(Linear)}$ to a maximum of 120 $dB_{(Linear)}$ and vibration with peak particle velocity of 5 mm/sec to a maximum of 10 mm/sec at the closest residence (*not owned by the applicant outside the mining lease*).

During the year blasting in the West Pit was undertaken within the 500m exclusion zone as approved by NSW DPHI under Sch2. Cond B18(b) of SSD 6300 dated 8/2/2020. RCM holds an approved procedure to close the Highway to traffic during blasting. The Company also has approval from the Roads and Maritime Services (RMS) to conduct closures of the Highway for blasting under a Road Occupancy License (currently ROL 1185380) – This approval is renewed annually.

Real-time wind speed and direction information is used in scheduling blasting operations to minimise offsite effects of air blast overpressure and dust. The Company is one of the joint venture partners in the Meteorological Sounding Group. This group has purchased equipment to measure wind speed, direction and temperature in the atmosphere. This data is then used to better predict the impacts of atmospheric conditions that can result in overpressure enhancement off site. The on-site weather station also has real-time data that can be viewed at any time by relevant site personnel. This weather station has the ability to alarm when conditions are not suitable for blasting i.e. wind speed currently greater than 10 m/s.

During YEM 2025 vibration monitoring of the cut and cover tunnel did not exceed 100 mm/sec. It is expected that as mining progresses towards the North at the West Pit, that vibration levels will increase at the cut and cover tunnel, however modelling suggests blast vibration will stay well below the 100mm/ sec limit.

All blasts are monitored to record air blast overpressure and peak particle velocity at residences most likely to be affected. The modelling of dust and fume associated with blasting commenced during March 2012 and is constantly validated using DustTrak and TEOM dust monitors as required. The NOx modelling shows various predicted outcomes and has continued to provide an integral part of Rix's blast regime during YEM 2025 and can be seen in Figure 9. The white dots on the model in Figure 8 are the closest residences/receptor's that can potentially be impacted via blasting.

Rix's Creek sends out an email and/or text message blast notification to nearby mines, residents and impacted employees/contractors prior to all blasts that provides a figure of the location of the blast and the intended time of firing. Rix's Creek Mine also receives blast notifications from nearby mines which identifies the intended time and location of the blast so that coordination of blasts times can occur between mine sites. A formalised communication protocol has been developed with regular meetings being conducted among neighbouring mine sites during the reporting period.

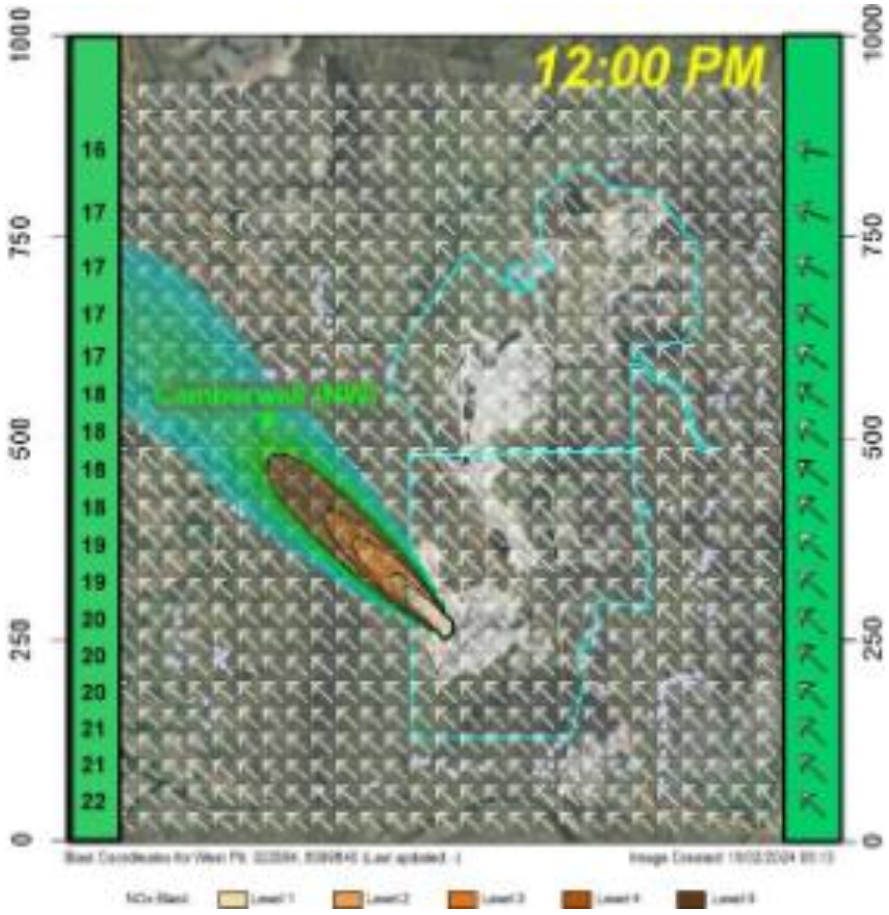


Figure 9. Blast Dust / Fume 'Plume' Model.

6.3.2 Environmental Performance

During YEM 2025 a total of 97 production blasts were initiated. 42 shots were fired in the Camberwell Pit at Rix's Creek Northern operations and 55 shots were fired in the West Pit at Rix's Creek Southern operations.

Rix's Creek North PA 08_0102 and Rix's Creek South SSD 6300 allow up to a maximum of three (3) blasts per day for each site, unless an additional blast is required following a blast misfire. A maximum of ten (10) blasts

per week for each site, averaged over a 12 month period is also approved, This was complied with during the YEM 2025 reporting period. All blasts fired at Rix's Creek Mine were carried out between 9am and 5pm Monday to Saturday. No blasts were fired on Sundays or public holidays in accordance with PA (08_0102) and SSD 6300 conditions.

Individual blast results for YEM 2025 are shown on the Bloomfield website at: https://www.bloomcoll.com.au/sustainability/environmental-management/rixs-creek-assessmen/epl-monitoring

Of the 97 blasts for YEM 2025 the fume ratings recorded were as follows:

Rating		A	B	C
0	58			
1		28	5	
2			6	
3				
4				
5				

Table 17. Blast monitoring criteria/compliance at individual monitoring sites for YEM 2025

Location	Operation	Air blast overpressure	Ground Vibration	Allowable Exceedance	Environmental performance	Key trends	Proposed management actions
Watling	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil
Mines Rescue	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil
Retreat	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil
Wrights Residence	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil
Camberwell	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil

Cherry Residence	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil
Bridgman Rd	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil
Civic	Rix's Creek Mine	115	5	5% of the total number of blasts over a period of 12 months	Compliant	Nil	Nil
		120	10	0%	Compliant	Nil	Nil

The Rix's Creek South Continuation of Mining project identifies majority of mining proposed in the Project would occur to the north-west of the existing operations in the West Pit. This would move the centre of blasting to the North / North West, moving away from the Wright and Mines Rescue Monitors to reduce ground vibration impacts.

The environmental assessment modelled the peak levels for Wrights blast monitor in West Pit operations is 105dBL and a peak particle velocity level (PPV) of 3.4mm/s. This was not exceeded during the reporting period.

6.3.3 Incidents and Complaints

During the reporting period 97 blasts were initiated across Rix's Creek Mine.

No blast during the period exceeded the ground vibration criteria of 5mm/sec (5% of the total number of blasts over a calendar year) or 10mm/sec.

During the period there were 6 blasts that received a fume rating of 2B. Blasts fired in RCS West Pit on the 28/05/2024 and 11/11/2024, and in the RCN Camberwell pit on the 19/04/2024, 06/08/2024, 04/09/2024 and 25/09/2024 recorded the highest fume rating during the YEM 2025 period of 2B. The blasts were fired under very low risk weather conditions and the low level fume did not leave the site boundary. Of the 97 blasts fired 58 did not have any visible fume.

During the reporting period a number of blasts were cancelled and rescheduled due to unfavourable weather conditions, which included rainfall, wind speed, wind direction, dust potential, fume potential and overpressure potential.

During the YEM 2025 reporting period, two (2) complaints were received in relation to blasting at Rix's Creek Mine. This is equivalent to the two (2) complaints that were received for the previous reporting period. Both complaints referred to the one blast. Refer to Appendix 3 for complaint breakdown and actions taken.

6.3.4 Further Improvements

BCL is an active participant of the Terrock EnvMet Research Project. This project provides access to a prediction model for atmospheric enhancement for overpressure. This information is used to access the potential for overpressure enhancement due to the predicted atmospheric conditions throughout the day. This information is used to schedule blasting operations to minimise off site environmental impacts resulting from blast overpressure. The models (overpressure, fume and dust) are now capable to have predictive forecasting for atmospheric conditions two days ahead to further enhance blasting opportunities during ideal weather conditions. The models specifically include nearest receptors which are likely to be affected by blasting activities.

Rix's Creek has access to predictive weather models, in which products are selected for blasting based on possible weather conditions prior to blasting. Blast products were continually reviewed and trialled throughout

YEM 2025 to minimise fume emitted from blasting. Fume will continually be monitored on-site to manage any onsite and off-site impacts in the case of a fume event resulting from a blast.
A small water cart is used for crusting drill cuttings from the drill and blast process. The watering of drill cuttings occurs on the shot and is also prioritised when unfavourable wind conditions are predicted.

6.4 Air Quality

6.4.1 Environmental Management

The Rix's Creek Mine Air Quality and Greenhouse Gas Management Plan (AQGGMP) details the dust management practices and the air quality monitoring network at Rix's Creek Mine.

The AQGGMP was previously reviewed 15/05/2021, and has since been updated, and is presently with the DPHI for approval, following the approval of RCN Modification 9.

The air quality criteria are listed in **Table 18**.

TEOM and DustTrak systems offer the advantage of real-time access to continuous air quality data and the upstream and downstream differentials across the site.

The following air quality monitoring and associated reporting will utilise:-

- 2 dust deposition gauges (DDG28 and DDG32);
- 3 TEOM's units to sample particulates less than 10 microns (PM10) in diameter via real-time / continuous monitoring (RCN North West, RCN South East and RCN North East);
- 2 DustTrak units which sample particulates less than 10 microns (PM10) in diameter via real-time continuous monitoring (RCS North West and RCS South East).

Table 18. Air Quality Criteria

POLLUTANT	STANDARD	PERIOD	AGENCY
TSP	[a,c] 90µg/m3	Annual average	EPA/DPHI
PM2.5	[a,c] 8 µg/m3	Annual Average	EPA/DPHI
	[b] 25 µg/m3	24 hour maximum (contribution)	EPA/DPHI
PM10	[b] 50µg/m3	24 hour maximum (contribution)	EPA/DPHI
	[a,c] 25µg/m3	Annual average	EPA/DPHI
[d]Depositional Dust	[a]4g/m2/month	Annual maximum total deposited dust level	EPA/DPHI
	[b]2g/m2/month	Annual maximum increase in deposited dust level	EPA/DPHI

a Total impact (i.e. incremental increase in concentrations due to the development plus background concentrations due to all other sources).
b Incremental impact (i.e. incremental increase in concentrations due to the development on its own).
c Excludes extraordinary events such as bushfires, prescribed burning, dust storms, fire incidents or any other activity agreed by the Planning Secretary.
d RCN MP 08_0102 ONLY. Deposited dust is to be assessed as insoluble solids as defined by Standards Australia, AS/NZS 3580.10.1:2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulate Matter - Deposited Matter - Gravimetric Method.

Dust Deposition Gauges

Two (2) Depositional Dust Gauges (DDG's) were sampled during the reporting period. The location of the DDG's are referred to in **Figure 7**.

The dust deposition gauges conform to the Australian Standard 2724.1- 1984 Ambient Air - Particulate Matter, Part 1 - Determination of Deposited Matter expressed as insoluble solids and ash residue. Gauges have 150 mm funnels located 2 metres above the ground.

Tapered Element Oscillating Microbalance (TEOM)

The approved AQGGMP has three (3) TEOMS which were reinstated at Rix's Creek North site during February 2016. PM10 is assessed for the purpose of real-time environmental management as defined by Standards Australia AS/NZS 3580.9.8.2008: Methods for sampling and analysis of ambient air – PM10 continuous direct mass method using a tapered element oscillating microbalance analyser.

The location of the TEOMS are shown in **Figure 7**.

Dusttrak Monitors

Two DustTrak units sample particulates less than 10 microns (PM10) in diameter via real-time continuous monitoring. DustTrak monitors are located at the Rix's Creek Southern operations and are located toward the North West of the mining operations in West Pit (DustTrak RCS North West) while the other DustTrak unit has been relocated to the southeast of the West Pit rehabilitation (DustTrak RCS South East).

The location of the DustTrak monitors are shown in **Figure 7**.

Environmental controls employed to minimise dust generation includes the application of recycled mine water to haulage roads and areas with heavy use by machinery, application of recycled mine water to drill pads (i.e. fine cuttings) and sprinkler systems on coal stockpile areas and the surrounds of the washing plant.

Under adverse weather conditions the overburden removal and dumping operation is modified with dumping occurring either in pit or to areas not exposed to the prevailing winds, alternatively operations may be ceased until conditions are suitable. For blasting, information is used in a model to predict the potential for meteorological reinforcement of overpressure as well as directional travel of dust/fume from a blast. The model shows the likelihood which receptors that may be affected by the blast which in turn can alter the timing of the blast being initiated.

The network of ambient air quality monitors surround the mine operation and are positioned in areas representative of sensitive receptor locations and background air quality levels. The ambient monitoring data provides insight into the potential dust contribution due to the operations.

The Camberwell and Singleton Upper Hunter Air Quality Monitoring Network (UHAQMN) sites measure $PM_{2.5}$ as well as PM_{10}. The closest UHAQMN unit to the operation is the Singleton NW site measuring PM_{10}. The prevailing winds are predominately from the northwest during autumn/winter and southeast during spring/summer which indicate they are suitably located to measure any contribution from the Mine and can be used to further verify site monitoring results for PM_{10}.

During YEM 2025 a site-specific dust forecasting tool was used to predict the potential for dust emissions being created on site and affecting air quality. This forecasting tool uses predictive met-data to highlight times throughout the day the operation may be affected. Based on this, the operation can be modified before the high potential for dust is to occur. This may include utilising increased supervisor inspections, additional water carts, re-schedule servicing of equipment, work lower in the pit, shut-down equipment or activate water sprays on stockpiles, where required.

14/05/2024																								
	12am	1am	2am	3am	4am	5am	6am	7am	8am	9am	10am	11am		12pm	1pm	2pm	3pm	4pm	5pm	6pm	7pm	8pm	9pm	10pm	11pm
Wind Speed (m/s)	4.2	4.1	4.4	4.6	4.3	4.4	4.9	4.8	5.0	4.2	2.6	1.1	Wind Speed (m/s)	0.4	1.0	3.3	3.0	2.9	2.4	3.0	2.5	2.4	2.0	0.9	1.5
Wind Direction	NW	NW	NW	NW	NW	NW	NW	WNW	NW	NW	NW	NW	Wind Direction	SSW	SSE	SSE	SE	SE	SE	ESE	ESE	ESE	ESE	SE	SSW
Max 1-hour average PM_{10} concentration ($\mu g/m^3$)																								
South-East	32	38	13	13	31	30	30	13	12	11	10	5	South-East	1	0	0	0	0	0	0	0	0	0	0	0

15/05/2024													16/05/2024											
	12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm	10pm		12am	2am	4am	6am	8am	10am	12pm	2pm	4pm	6pm	8pm
Wind Speed (m/s)	2.9	2.9	2.6	1.9	1.4	1.9	1.4	1.7	2.6	3.1	1.9	1.6	Wind Speed (m/s)	1.4	1.1	1.4	1.7	1.8	2.1	3.1	3.8	3.3	2.2	2.0
Wind Direction	S	S	S	S	SSE	ESE	ESE	SE	ESE	ENE	SSE	SE	Wind Direction	ESE	E	SE	SE	SE	SSE	SE	SE	SE	SSE	S	
Max 2-hour average PM_{10} concentration ($\mu g/m^3$)																								
North-West	68	42	63	21	5	1	0	1	1	0	6	11	North-West	27	9	26	24	6	3	4	5	7	9	12

Figure 10. Example of dust forecasting tool to assist operations during YEM 2025

6.4.2 Environmental Performance

Insoluble Solids

During the YEM 2025 reporting period, both dust depositional gauges DDG28 and DDG32 complied with the deposited dust criteria of an annual average result of less than 4 gm/m2/month. The YEM 2025 average of DDG28 was 1.6 g/m2/month, while the average of DDG32 was 1.5 g/m2/month. Both recorded a slight decrease compared to the YEM 2024 reporting period, which averages of 1.9 and 1.8 g/m2/month, respectively.

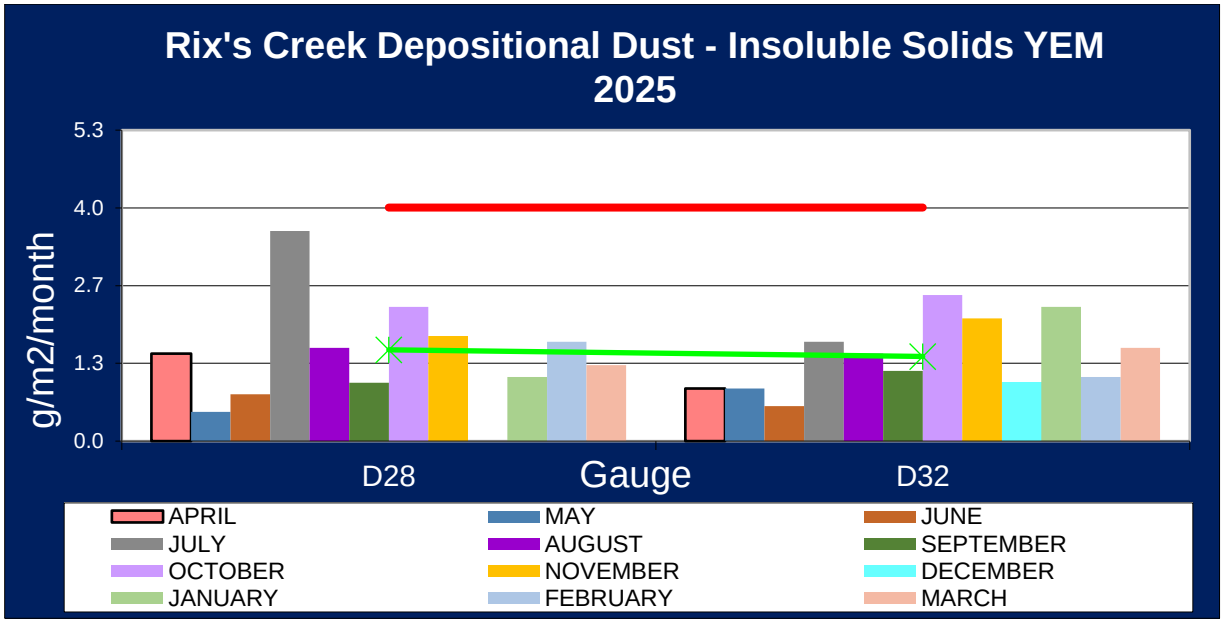


Figure 11. Rix's Creek Insoluble Solids Dust Deposition YEM 2025

Table 19. Dust Monitoring Sites

SITE	LOCATION
28	Off New England Highway north-west of lease. Relocated August 2011
32	Pre-School Gardner Circuit

In YEM 2025, the average result of 4 g/m2/month for either DDG28 or DDG32 was not exceeded. Figure 11 displays the individual monthly insoluble solids deposition rates for each gauge and the annual average deposition result in g/m2/month. One contaminated sample was recorded for DDG28 in December 2024.

Particulates Less Than 10 Micron

During the YEM 2025 reporting period, the North West, the South East and North East RCN TEOM did not exceed the 24 hour PM10 contribution from Rix's Creek Mine operations.

The monthly averages and 12 month rolling averages are shown in **Figure 12.** The RCN North West TEOM recorded an annual average of 17.4ug/m3**.** The South East RCN TEOM recorded an annual average of 19.5ug/m3 while the RCN North East TEOM recorded an annual average of 15.1ug/m3.

Due to above average rainfall in YEM 2025 all annual PM10 averages had decreased compared with YEM 2024's recorded averages (RCN North West 18.7ug/m3; RCN South East 18.2ug/m^3 and RCN North East 15.5ug/m^3). The RCN North West TEOM recorded moderate monthly averages for YEM 2025. Eight (8) months in YEM 2025 recorded above average rainfall during the reporting period.

When the Rix's Creek North air quality results for YEM 2025 are compared to the 2009 Environmental Assessment modelled results, for year 6 part pit extent of the operations, it was determined that the annual average at the RCN North West TEOM (17.4ug/m3) was much lower than the EA prediction at the mine owned residence ID 85 (27ug/m3), which is where the location of the RCN North West TEOM is located. The RCN South East TEOM (19.5ug/m3) and RCN North East TEOM PM10 (15.1ug/m3) averages were slightly below the 2009 EA predictions for year 6 part pit extent operations.

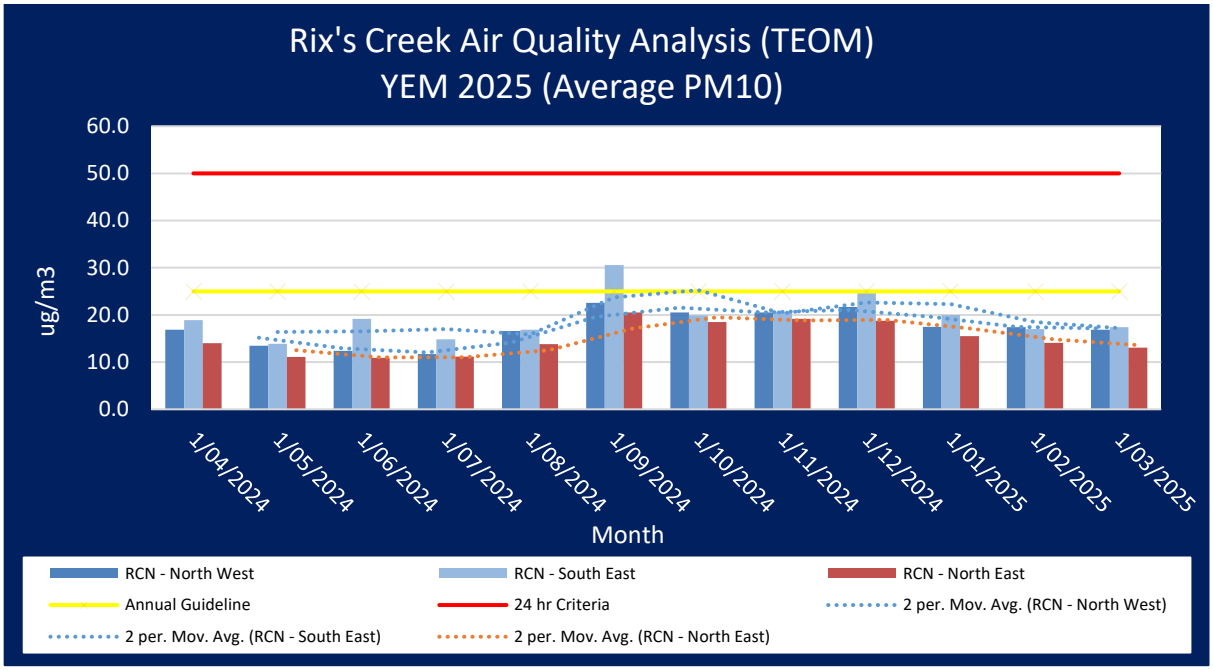


Figure 12. PM10 Micron Monthly and Rolling Averages YEM 2025 - TEOM

The RCM dusttraks for the YEM 2025 period both remained below the Annual Guideline of 25ug/m3 with the South East dusttrak recording its highest average reading of 18.4ug/m3 in August 2024 with prevailing northwest winds for the month. The North West dusttrak recorded its highest monthly average reading of 15.5ug/m3 in December 2024 with prevailing southerly winds.

The average for RCS North West dusttrak in YEM 2025 was 9.9ug/m3 and RCS South East dusttrak recorded an average result of 11.8ug/m3. When compared to the modelling predictions from the 2014 Rix's Creek Environmental Assessment (EA) for year 2026, the nearest privately owned receptor, ID 173 to the RCS North West dusttrak modelled 31ug/m3 for the YEM 2025 period. Receptor ID 140, which is the closest private receptor to the RCS South East DustTrak unit modelled 27ug/m3. Both dusttrak units were below the 2026 predicted modelling results in the 2014 Rix's Creek EA.

The Camberwell UHAQMN monitor recorded an annual average of 19.2ug/m3 for the YEM 2025 reporting period, an decrease from 20.9ug/m3 recorded for the YEM 2024 reporting period. The Singleton North West UHAQMN monitor recorded an annual average of 18.7ug/m3 for the YEM 2025 reporting period, an decrease from 21.9ug/m3 recorded for the YEM 2024 reporting period. This can be attributed to YEM 2025 receiving a much higher rainfall than the YEM 2024 period.

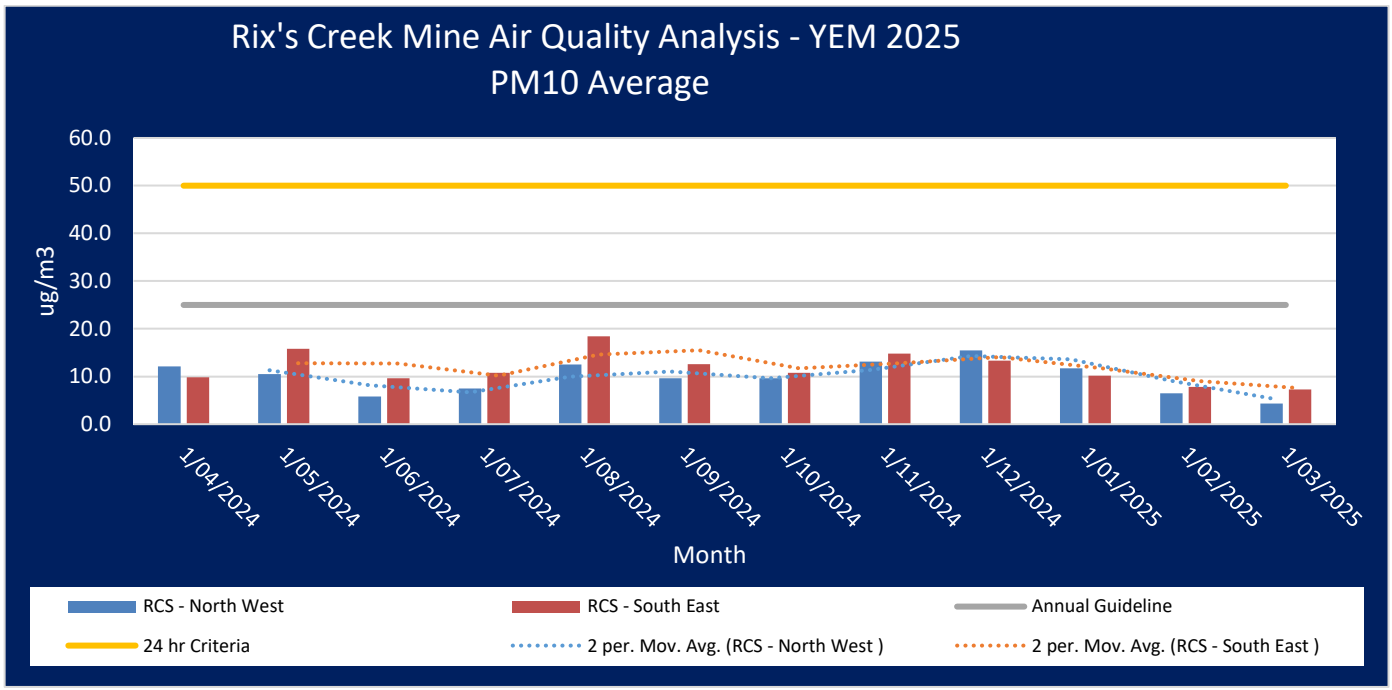


Figure 13. PM10 Micron Monthly and 12 Month Rolling Averages YEM 2025 – DustTrak

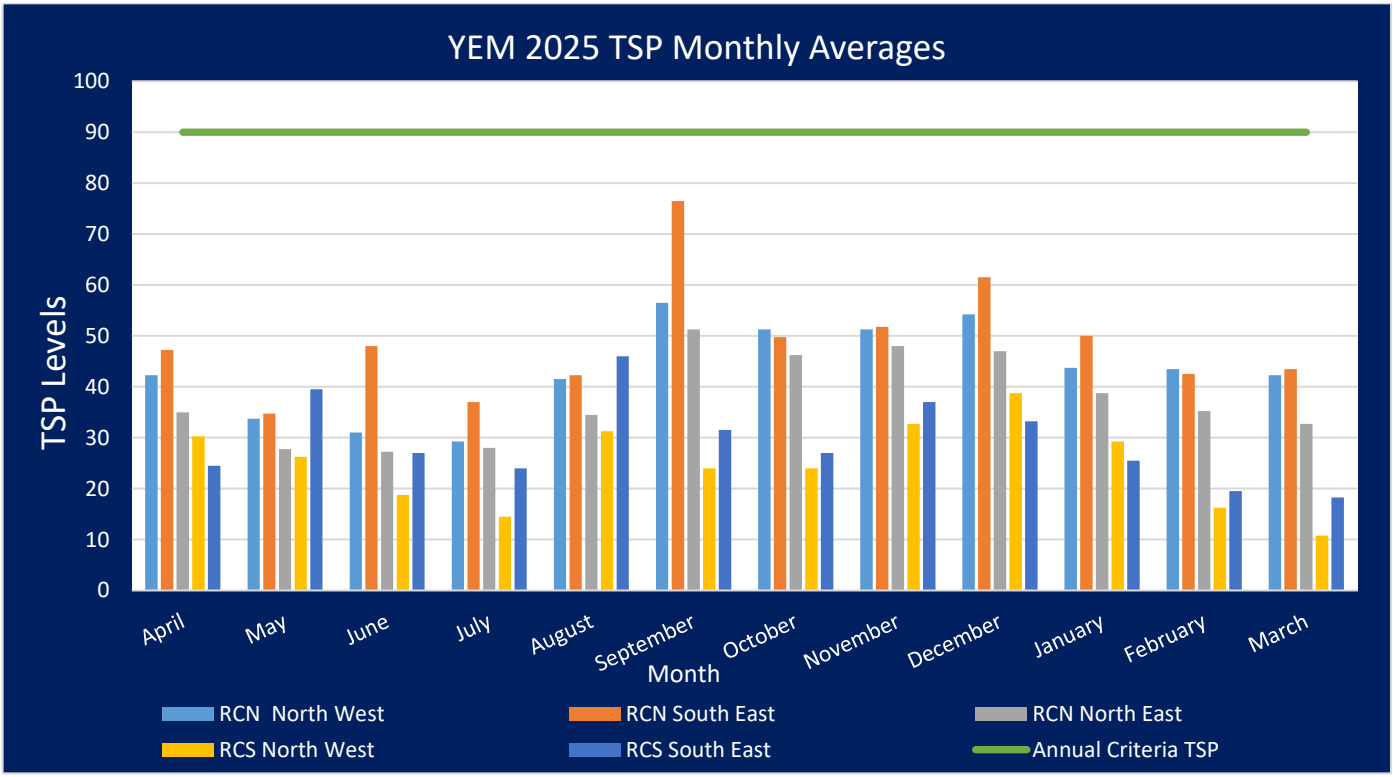


Figure 14. Total Suspended Particulate Monthly Averages for YEM 2025

Total Suspended Particulate matter refers to the total dust particles that are suspended in the air and nominally defined with an upper size range of 30 micrometres (µm). TSP levels are inferred from the measured PM_{10} data by calculating that the TSP level is 2.5 times the measured PM_{10} level. This inference is derived from measurements in the report '*Particle size distributions in dust from open cut mines in the Hunter Valley*' (SPCC, 1986). The results for YEM 2025 have remained below the Annual Criteria of 90µg/m^3 at all five monitoring points.

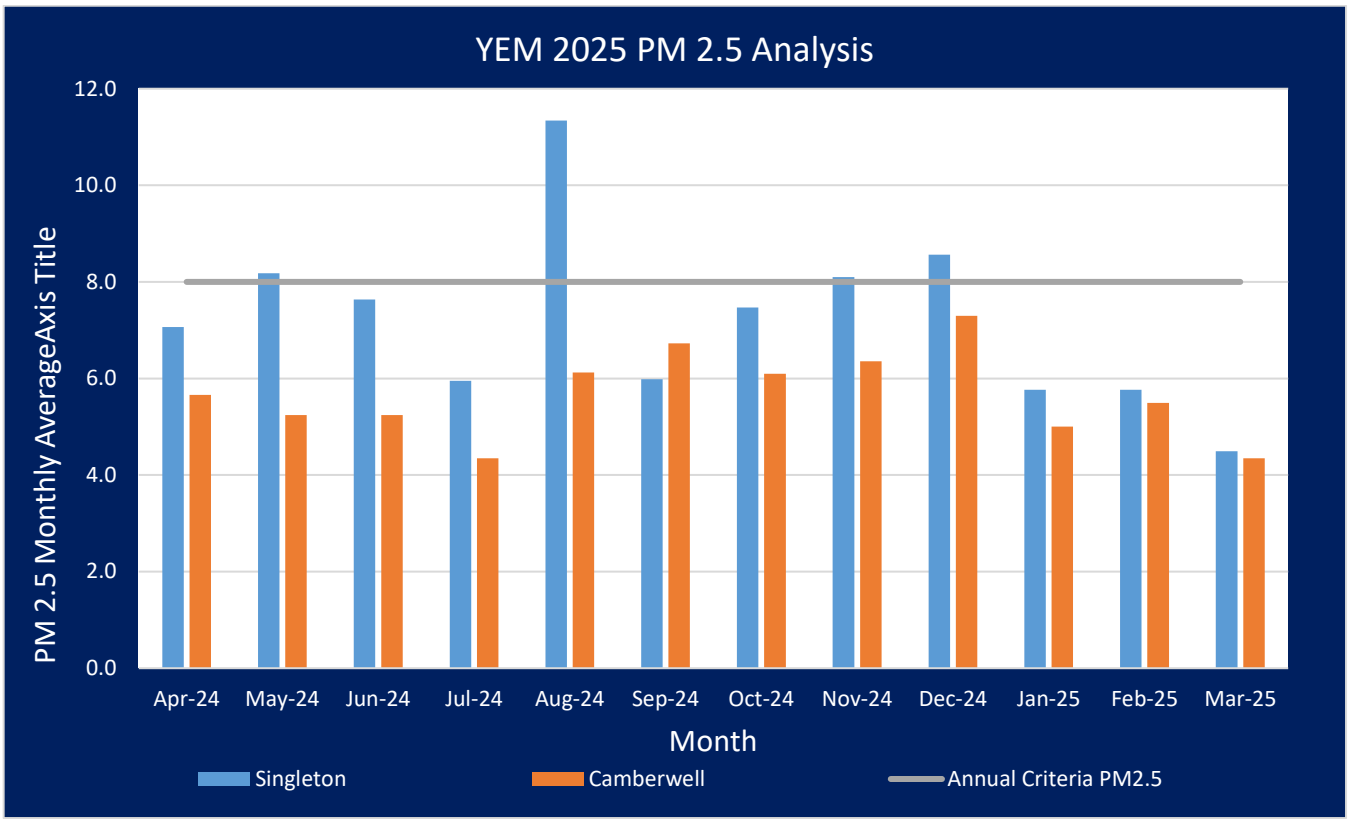


Figure 15. Monthly Particulate Matter 2.5 Analysis for YEM 2025

Particulate Matter 2.5 refers to particulate matter with an aerodynamic diameter less than 2.5µm. $PM_{2.5}$ is a measurement of the regional airshed and is reflective of air quality over a larger area than direct source emissions as specific upstream and downstream mine site contributions such as PM_{10}. In accordance with Schedule 3 Condition 27 (d) of the RCN Project Approval ad Schedule 2 B22 SSD 6300 data has been sourced from the Upper Hunter Air Quality Monitoring Network (UHAQMN) that was used in Figure 15.

During the YEM 2025 period, there were three (3) occurrences where the 24-hour PM10 criteria of 50ug/m3 were exceeded at individual dust monitors. **Table 20** shows the assessment undertaken to determine the incremental impact from Rix's Creek Mine. On all three occasions, RCM was experiencing winds from the North or southwest direction.Two of these occasions saw a contribution according to the wind direction across the mine, while the third occasion saw a reduction in contribution.

On the 25/09/2024 Rix's Creek Mine experienced predominant NW winds. The assessment of the RCN NW TEOM and RCN SE TEOM identified a contribution of 12.0ug/m3 on the 25/09/2024 from Rix's Creek Mine operations. It must be noted that the UHAQMN readings from Camberwell and Singleton show similar raised levels of 48.7 and 42.5 respectively for the day.

On the 4/11/2024 Rix's Creek Mine experienced predominant WSW winds. The assessment of the RCN NW TEOM and RCN SE TEOM identified a contribution of 9.7ug/m3 on the 4/11/2024 from Rix's Creek Mine operations. It must be noted that the UHAQMN readings from Camberwell and Singleton show similar raised levels of 37.1 and 44.3 respectively for the day.

On the 15/03/2025 Rix's Creek Mine experienced predominant SW winds. The assessment of the RCN NW TEOM and RCN SE TEOM identified a reduction of 32.8ug/m3 on the 15/03/2025 from Rix's Creek Mine operations. It must be noted that the UHAQMN readings from Camberwell and Singleton show similar low level levels of 20.6 and 24 respectively for the day, which corresponds with the RCN SE TEOM.

See **Table 20** below for comparison.

Table 20. Calculation of Incremental Impact of PM10 24 Hour Emissions on Air Quality by Rix's Creek North TEOM's. (Schedule 3 Condition 22.Table 10 (b)).

Date	RCN SE TEOM 24 Av (ug/m3)	RCN NW TEOM 24 Av (ug/m3)	Up / Down stream Differential	Predominant Wind Direction	Av Max Wind Speed (m/s)	Singleton UHAQMN 24 Av (ug/m3)	Camberwell UHAQMN 24 Av (ug/m3)
25/9/24	51.3	39.3	-12.0	315	4.2	48.7	42.5
4/11/24	50.8	41.1	-9.7	258	4.7	37.1	44.3
15/3/25	24.3	57.1	32.8	223	2.6	20.6	24

6.4.3 Routine Downtime

From the EPA guidance note, where continuous monitoring is to be undertaken, the system must be operated and maintained in a proper and efficient manner, ensuring that the availability of the monitoring system is maximised. After allowing sufficient down time for routine maintenance and calibrations, a continuous monitoring system should be able to achieve at least a 95% availability. RCM compliance TEOM's and Dust Trak units recorded availability over 98% during the reporting period.

Minor downtime of TEOMS occurred below:

22/06/2024 – 24/06/2024 RCN NW TEOM lost power, power restored on Monday by the Environment Officer

29/06/2024 – 01/07/2024 RCN NW TEOM went offline, contractor replaced TEOM unit on Monday.

17/09/2024 – 18/09/2024 RCS NW Dusttrak went offline. Environment Officer replaced Dusttrak unit next day.

07/10/2024 – 08/10/204 RCS NW Dusttrak went offline. Environment Officer rebooted Dusttrak unit next day.

26/11/2024 – 27/11/2024 RCS NW Dusttrak went offline. Environment Officer rebooted Dusttrak unit next day.

23/12/2024 – 24/12/2024 RCN NW, NE and SE TEOM were down for calibration. Maintenance was completed by the next day by contractor.

25/02/2025 – 26/02/2025 RCN NE TEOM offline due to power outage. Environment Officer next day rebooted TEOM.

16/03/2025 – 17/03/2025 RCS SE Dusttrak went offline due to battery failure. Battery was replaced next day.

6.4.4 Further Improvements

The Rix's Creek Mine real time air quality monitoring network has been upgraded and integrated with the sites Environmental Monitoring and Management Teledata system. This allows both the environmental team and contracted environmental consultants to identify when a machine is malfunctioning, with the aim to reduce downtime of air quality units at Rix's Creek.

6.4.5 Greenhouse Gas Emissions

The Bloomfield Group continues to monitor and report greenhouse gas emissions from the site in accordance with the requirements of the National Greenhouse and Energy Reporting Act 2007 (NGER, 2007) and the National Greenhouse and Energy Reporting Regulations 2008 (NGER, 2008). The Clean Energy Regulator and NGERS require emissions calculations in financial years. NGER results for Rix's Creek Mine are shown in **Table 21**.

Table 21. NGER Greenhouse Gas emissions reporting for RCM facility.

Greenhouse Gas Emissions	FY 2023-2024	FY 2022-2023	FY 2021-2022
Scope 1 (t CO2-e)	93,376	89,521	82,551
Scope 2 (t CO2-e)	18,668	21,564	26,423
Total (t CO2-e)	**112,044**	**111,085**	**108,974**

As outlined in the RCM Air Quality and Greenhouse Gas Management Plan, TBG implements all reasonable and feasible measures to minimise the release of GHG emissions. Various mitigation and energy measures utilised on site to help reduce GHG emissions are as follows:

- Monitoring the fuel efficiency of and regularly maintaining the diesel equipment;
- Minimise excess diesel use by scheduling operations to maximise efficiency and reduce vehicle kilometres travelled;
- Switch off engines when not in use;
- Adequate pollution reduction devices fitted to any new mine fleet;
- Monitoring the total site electricity consumption and investigate avenues to minimise the requirement;
- Conduct a review of alternative renewable energy sources;
- Development of targets for GHG emissions and energy use, as well as monitoring and reporting against these;
- Use of high efficiency electric motors;
- Investigating efficiency of transformers;
- Conducting energy awareness programs for staff;
- Minimising the production of waste generated on-site; and
- Efficient outdoor lighting systems with lux sensors and timers.

6.5 Biodiversity

6.5.1 Environmental Management

Rix's Creek North

The Rix's Creek North Biodiversity Management Plan (BMP) was approved by DPE. The objectives of the Biodiversity Management Plan are to rehabilitate, revegetate and manage land for biodiversity within the biodiversity offset areas (BOA's) and the mine site during and post mining.

Efforts continue with the NSW Biodiversity Conservation Division (BCD) to finalise the Conservation Agreements for the Rix's Creek North Martins Creek, Bridgman, Southern and Northern Biodiversity Offset Areas. During October 2020 the offset areas were inspected by BCD and further progress has been made with the agreements. The draft agreements are currently with BCD to be finalised. RCM continues to work toward finalisation of the agreement.

During 2020, an independent audit as required under Sch. 3 Cond.41 of PA 08_0102 was undertaken of the BOA's This audit report was provided to DPE on the 25 August 2021. During 2025, a second independent audit will be undertaken of the BOA's.

Rix's Creek Mine is awaiting finalisation of the Conservation Agreements with BCD and at that time will update the RCN Biodiversity Management Plan to reflect the updated agreement requirements.

Rix's Creek South

In accordance with Schedule 2, Condition B43 of SSD 6300, Bloomfield Collieries are required to retire credits to fulfil the requirements of the condition.

To fulfil the credit requirements TBG established two Biodiversity Stewardship Agreements (BSA) with the NSW Biodiversity Conservation Division . The two BSA's established by TBG created 97.39% of the credits required for SSD6300. Other credits required for the Project included the purchase of credits of HU962- Zone 5:Grey Box grassy open forest of the central and lower Hunter Valley (PCT 1748) from the market and credits from the Biodiversity Conservation Fund of HU818- Zone 10: Narrow-leaved Ironbark – Grey Box – Spotted Gum shrub – grass woodland of the central and lower Hunter (PCT2150).

All biodiversity credits required for the Project have now been retired which was acknowledged by DPHI on 5 April 2024.

The Berewin Biodiversity Stewardship Agreement ID number BS0028, and the Pinkerton Biodiversity Stewardship Agreement ID number BS0087 continue to be managed by TBG as required under the BSA Management Plans.

The Rix's Creek South Biodiversity Management Plan was submitted on the 17/8/2020 and was subsequently reviewed and approved by DPE on the 23/12/2020.

6.5.2 Environmental Performance

The ecological monitoring of Rix's Creek North biodiversity offset areas is prescribed in Section 2.7 – Flora and Fauna Monitoring of the Biodiversity Management Plan (BMP) 2018 – 2020 (AECOM, 2017). Components relevant to biennial monitoring at Rix's Creek North include:

- Inspection of installed nest and roost boxes for a variety of tree hollow dependent fauna, including the threatened Brush-tailed Phascogale, Squirrel Glider and honeybees;
- Diurnal and nocturnal surveys along 6 designated transects for the threatened and protected species;
- Monitoring of feral predators by use of remote infra-red cameras, presence of impact / damage, sightings and scats, and
- Comprehensive surveys for all fauna groups conducted in 2018 and 2020, then every 3 years.

Nest box usage across the offsets varied in 2022, with a high proportion of glider style and possum style boxes being utilised. However, the high usage is due to the loss of many of the boxes due to natural decay and damage from falling tree branches. Those boxes that remain are heavily utilised, particularly in offset areas with low abundance of natural tree hollows. During the survey period, 3 species were recorded utilising nest boxes, the Brush-tailed Phascogale, Squirrel Glider and Common Brushtail Possum. Many additional boxes contain the characteristic nests constructed by each species. No evidence of microbats were recorded in the installed nest boxes specific to the group.

During July 2023, 69 nest boxes were replaced which included 23 glider /phascogale type, 10 small bird type, 22 microbat type and 14 possum / large parrot type.

Bird census counts conducted at each of the 6 monitoring sites in 2023 recorded species diversity of 34 native and 2 introduced species. The total number of species recorded in 2023 is significantly lower than that recorded in 2020, in which 68 native bird species were recorded. The lower count in 2023 may have been influenced by absence of flowering events in native trees, with low diversity and abundance of some bird groups, particularly honeyeaters. The total bird species diversity recorded in Rix's Creek North biodiversity offsets since the initial surveys in 2004 is 123 bird species, which compares to 52 bird species recorded in 2004 and 2007 EIS surveys.

Seventeen native and 2 introduced mammal species were recorded in the Rix's Creek biodiversity offset areas in 2023. Mammals were recorded from a combination of trapping, spotlight searches, field camera monitoring, echolocation call recordings and opportunistic observations. Two threatened mammal species, the Brush-tailed Phascogale and Squirrel Glider, were recorded by spotlight search and inspection of nest boxes. Monitoring of feral or pest species by remote cameras recorded Fox and Black Rat. The native Dingo was also recorded, but both larger predators were recorded in low abundance. The Fox and Dingo were only recorded on once each from 68 continuous monitoring days, suggesting low abundance.

A total of 5 threatened species (2 bird species and 3 mammals) were recorded during surveys in 2023. All 5 threatened species have previously been recorded in the offsets.

Biennial flora and fauna monitoring will be undertaken in YEM 2025.

6.5.3 Reportable Incidents

No external reportable incidents relating to flora and fauna management occurred during the YEM 2024 reporting period.

6.6 Aboriginal Heritage

6.6.1 Environmental Management

In accordance with SSD 6300 the Rix's Creek South Aboriginal Cultural Heritage Management Plan (ACHMP) was submitted on the 25/5/2020 to the Biodiversity Conservation Division (BCD) and DPIE for approval. On the 2/9/2020 the ACHMP was approved by BCD and DPIE.

In accordance with the Rix's Creek North Project Approval (08_0102) and Rix's Creek South Project Approval (SSD 6300) an Aboriginal Cultural Heritage Management Plan sets out the procedures for the protection of Aboriginal sites as well as the salvage and care of Aboriginal objects found within the operational activities. Additional objectives of the Aboriginal Heritage Management Plan are:

- To establish an ongoing Aboriginal stakeholder consultation process;
- To describe the manner in which certain Aboriginal sites will be salvaged;
- To provide a summary research design and work plan for the sub surface excavation of select sites and areas; and
- To describe a program for Aboriginal site survey and assessment in areas not addressed by the respective EA's.

The Aboriginal Heritage Management Plan also outlines the importance of ongoing consultation with Aboriginal stakeholders during mining. All staff and contractors as part of a site induction are provided with information on what constitutes an artefact and what to do if an item of Aboriginal heritage is located.

6.6.2 Environmental Performance

During YEM 2025 no Archaeological excavation and salvage were undertaken, in accordance with the Aboriginal Cultural Heritage Management Plan (ACHMP) and Salvage Management Plan requirements for SSD 6300 Rix's Creek South Continuation of Mining Project.

6.6.3 Reportable Incidents

There were no reportable incidents during the YEM 2025 period.

6.7 Non-Aboriginal Heritage

6.7.1 Environmental Management

The Historic Heritage Management Plan (HHMP) forms part of a series of Environmental Management Plans for RCM. This HHMP is applicable to RCS only and is the primary tool that will be utilised to manage items of historical significance predicted to be impacted by the development of RCS in accordance with SSD 6300. The HHMP was submitted for consultation and review on the 21/08/2020. After two additional amendments the HHMP was approved by DPIE on the 23/12/2020.

The management of Historical Heritage at RCN is managed under a separate Heritage Management Plan Rix's Creek North (Bloomfield, 2016).

6.7.2 Environmental Performance

A specialised consultant was engaged to develop a Coke Oven management measures plan. The plan will be used by the RCM Environment Department to manage the coke ovens to ensure that the cultural heritage values of the location are maintained. The Plan will also provide appropriate management in relation to the auxiliary features. Procedures within this Plan will be used by contractors engaged by RCM to carry out works within the buffer area of the coke ovens.

6.7.3 Reportable Incidents

There were no reportable incidents in relation to non-aboriginal heritage during the YEM 2025 reporting period.

6.7.4 Further Improvements.

The program of protection of the Coke oven area and other known natural heritage sites will continue. Annual inspections are undertaken of the areas with known heritage. Any weeds identified will be sprayed. Vegetation maintenance may be required as necessary and fencing and signage are checked for adequacy. Implementation of the Management Measures, Rix's Creek Coke Ovens and Associated Works will be undertaken in accordance with timelines identified in the approved RCS Historic Heritage Management Plan.

SECTION 7 WATER MANAGEMENT

7.1 Rix's Creek Setting and Context

7.1.1 Geology

Local Geology

The Project is confined within a basin-like north–south trending syncline that hosts the Permian coal seams of the Foybrook Formation that are part of the Whittingham Coal Measures. The syncline is approximately 8 km long by 3 km wide and is bounded by the Camberwell and Darlington Anticlines. The syncline is asymmetrical, the western limb generally dipping at a steeper angle than the eastern limb. The syncline is also locally double-plunging forming the synclinal basin structure centred on the Rix's Creek operations. North of the Rix's Creek mining lease, the syncline plunges to the north.
The major coal seams identified in the Rix's Creek syncline are (in descending stratigraphic order):

- Lemmington Seam
- Pikes Gully Seam
- Arties Seam
- Liddell Seam
- Barrett Seam
- Hebden Seam.

The seams typically out-crop within the syncline, with the outcrop of Barrett and Hebden seams to the east, west, and south, marking the limit of the mineable resources. The target coal seams vary widely throughout the area and often occur as several dispersed splits, separated by interburden sediments that comprise alternating sandstone, siltstone, conglomerate, mudstone and shale, as well as occasional minor coal seams. The interburden between the Barrett and Upper Hebden seams increases to more than 20 m in the northern and western regions, rendering the Upper Hebden seam uneconomical to mine.

7.1.2 Hydrogeological Setting

Conceptual Hydrogeological Model

The conceptual hydrogeological model for Rix's Creek is relatively simple in that the basin-like structure of the Rix's Creek Syncline acts to isolate the Coal Measures from the broader regional hydrogeological regime, with little groundwater interaction through the bounding low permeability siltstones.

The basin-like structure as defined by the base of the Hebden Seam (and upper surface of the underlying siltstone basement rock of the Saltwater Creek Formation) is depicted on Figures 17 and 18 (below).

The limbs of the anticline have a relatively shallow dip on the eastern limb with the western limb dipping at a much steeper angle. The syncline axis also plunges from the north and south. The lowest point of the Coal Measures in the synclinal basin is approximately -130mAHD.

Although geologically more complex on the local scale due to the splitting and merging of multiple minor seams, the aquifer system at Rix's Creek has been simplified and represented by a layer cake style system, with the layer geometry reflecting the synclinal basin structure. Within the layer cake, the major coal seams represent the main aquifers, with the interburden units acting as low permeability aquitards between the aquifers. Within the coal seam aquifers, preferential groundwater flow is along the bedding. Large scale groundwater flow vertically between coal units is impeded by the low permeability interburden units consisting of siltstones, sandstones, tuffs and shales.

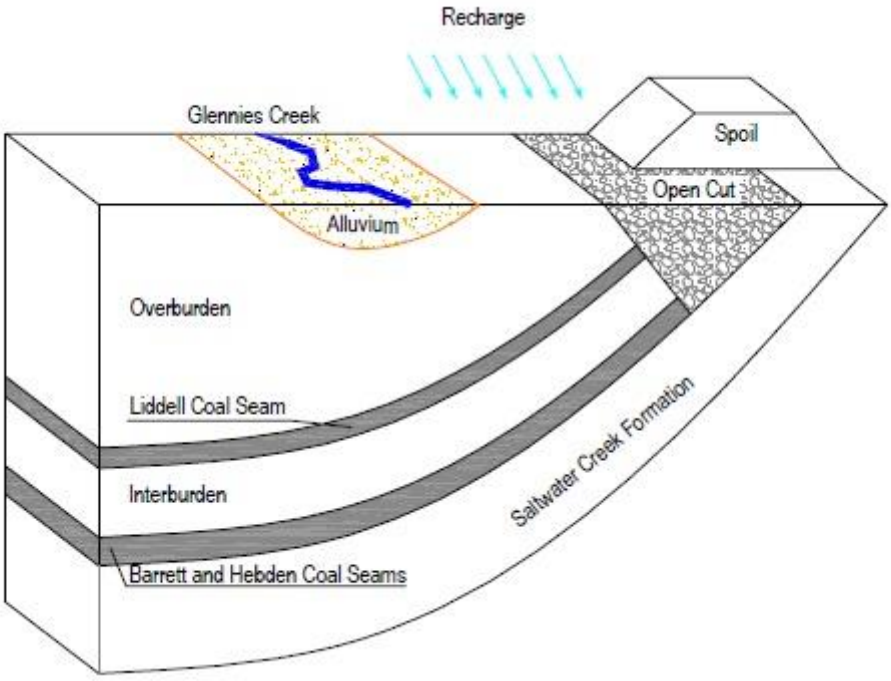


Figure 16. Conceptual Hydrogeological Model of the Rix's Creek Syncline area

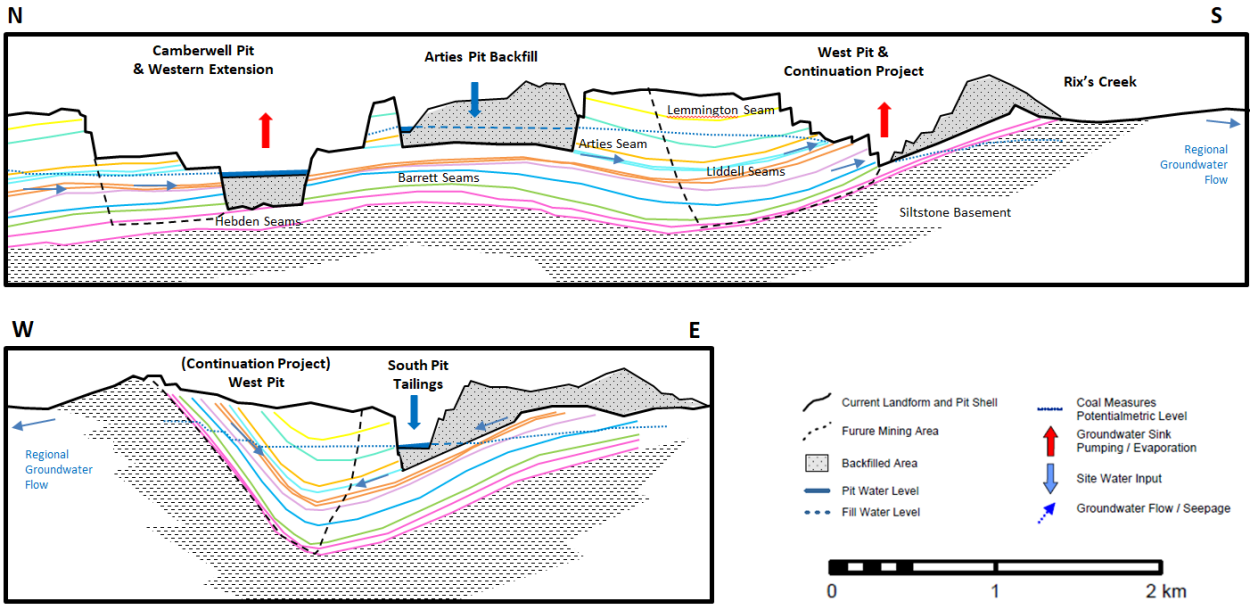


Figure 17. Conceptual Hydrogeological Cross Section

Aquifer Recharge

Rainfall recharge and infiltration will occur on remnant regolith areas, as well as rehabilitated mine areas, and direct rainfall to open cut areas. A degree of enhanced recharge and infiltration will also occur from the Old North Pit water storage and the deposition of tailings slurry in South Pit (although tailings seepage is anticipated to be a minor contributor to the overall water balance).

The lack of water level response observed at shallow monitoring bores in the creek alluvial system, located within the limit of Coal Measures outcrop, demonstrates the disconnection of the shallow regolith and alluvial aquifers from the deeper groundwater regime. It also shows that the shallow aquifers in these locations are locally reliant on direct rainfall recharge, and that this has not been diminished by the ongoing mining operations

Hydrological Setting

Figures 16 and 17 gives an indication of the approximate extent of the surface water catchments draining to the various storages within the Rix's Creek sites. In the RCN area, the eastern portion of the Falbrook Pit area intercepts runoff from the Reedy Creek catchment. Several diversion banks with excavated channels are used to divert clean catchment runoff around or through areas disturbed by mining operations.

In the RCS area, the Arties Pit, West & South Pit are surrounded by natural landforms that slope inwards towards the active mining area which directs any runoff over disturbed areas to flow back towards the pits. Clean water diversion structures have been installed to divert clean water away from active pits in average rainfall conditions.

In the vicinity of the mine footprint, all clean water flowing through or around the mine site area finds its way into either Glennie's Creek or Rix's Creek and ultimately into the Hunter River.

The catchment areas and diversion structures are progressively changing with the ongoing excavation of approved mining areas – and are adapted and maintained to enable the outcomes described above.

Groundwater Dependent Ecosystems (GDE's)

The proximity of GDEs to the Project area has been assessed by reviewing the Water Sharing Plan (WSP) and the Groundwater Dependent Ecosystem Atlas (Bureau of Meteorology, 2012). The findings have confirmed that there are no identified GDEs in the vicinity of the Project (RCS and RCN).

Most of the existing mine footprint is situated up hydraulic gradient of Rix's Creek and there are no alluvium deposits associated with the creek in the immediate vicinity of the mine. Surface water monitoring data (EC and flow observations) obtained from the creek shows the water to be relatively fresh (EC <200 µS/cm) and flows to be occasional, which suggests that the flow within the Creek is almost entirely derived from surface water run-off.

As there is no alluvium in the RCS mining area and no apparent base flow contributions, the pumping or interception of groundwater with the Permian Coal Measure aquifer from current or future mining activities is unlikely to impact upon on creek flow volumes in the regolith/alluvial aquifer system. The only risks to the creek therefore relate to water quality impacts associated with dirty water runoff.

7.2 Water Licences

Rix's Creek has the following active groundwater licences:

Table 22. Rix's Creek Water Licences

Water Licences					
	Number		**Category**	**Volume**	**Purpose**
Natural Resource Access Regulator	WAL41500		Mining	100 (ML/yr)	Open Cut (dewatering groundwater) Hard Rock
	WAL 41555		Mining	100(ML/yr)	Open Cut (dewatering groundwater) Hard Rock

	WAL 40777		Mining	305 (ML/yr)	Open Cut (dewatering groundwater) Hard Rock
	WAL 43653		Mining	100(ML/yr)	Open Cut (dewatering groundwater) Hard Rock
	WAL 41555		Mining	100(ML/yr)	1 x Bore (dewatering groundwater

7.2.1 Water Management

In January 2019 the RCM Water Management Plan was approved combining both RCN and RCS to rationalise and combine the monitoring programme. This YEM 2025 water review uses the monitoring programme outlined in RCM combined Water Management Plan. The RCM combined WMP with inclusion of the SSD6300 conditions was approved 16/3/2021.

A static water balance was calculated for YEM 2025 providing information on inputs and outputs for RCM operations and the results are shown in **Table 24**.

Rix's Creek Mine Results

During the reporting period the strategy was to manage water levels in the open cut at Rix's Creek Mine operations by pumping water to the CHPP for re-use, to surface dams and disused pits to maximise evaporation. Water is pumped to the CHPP Dams and from west pit open cut operations and MB19 water storage area.

The Camberwell Pit is dewatered to Dirty Water Dam 1 (D1), the CHPP supply dam. Water carts operated from the fill point adjacent to the workshop hardstand over this reporting period.

Rix's Creek has a water management system where all water on-site has generally been retained in storages: mine water dams, mine voids and tailings dams for re-use by mining and processing operations. Water can be transferred from these storages via pipelines to the CHPP, the mine or to the evaporation fans. Water was also pumped to offsite storages under the Great Ravensworth Area Water Tailings Strategy (GRAWTS), which continued to occur during this reporting period.

In YEM 2025, the strategy was to continue managing water levels in the open cuts by pumping water to the CHPP for re-use, utilising GRAWTS transfers, operating evaporation fans and for increased use of water carts for dust suppression of roads and dig faces. Water is pumped to the CHPP Dams and the North Pit Tailings Dam from the open cuts. Water carts were operated over the whole operational year.

Potable Water Use
31.2 megalitres (ML) of potable water was sourced from the Singleton town water supply in YEM 2025 for potable supply and bathhouse facilities.

Hunter River Salinity Trading Scheme
Rixs Creek Mine does not discharge under the Hunter River Salinity Trading Scheme.

Groundwater
There was an estimated 236.6 ML of groundwater inflow into the Rix's Creek South open cut voids during the reporting period.

There was an estimated 254.8 ML of groundwater inflow into the Rix's Creek North open cut voids during the reporting period.

The groundwater inflow and seepage from rehabilitated emplacements and spoil dumps into the Underground Portal Storage was estimated at 1,467.0 ML.

Site Inventory

The total RCM site inventory (including water stored in the in-pit spoil pore spaces) decreased from 20,440 ML to 17,128 ML during YEM 2025. This was due to the GRAWTS transfers evaporation fan use during the YEM 2025 period. Integra Mine is no longer active and is not required to return seepage water back to Rix's Creek Mine during the reporting period. Seepage from RCM to Integra Mine is accounted for under the GRAWTS.

Surface Water Dams

Water inventories in site process water dams decreased over the year due to active management measures:

The Falbrook Pit is used as a storage for excess mine water and the inventory steadily decreased from 8,211 ML to 6,643 ML over the year, due to the active water management measures.

Possum Skin Dam inventory decreased from 487 ML in January, closing the year at an estimated 263 ML.

DWD4 was mostly around 300 ML to 400 ML over the year.

Free water in the tailings dams was estimated at 216 ML during the reporting period.

Table 23. Estimated Sample Static Water Balance Rix's Creek Mine YEM 2025

Water Stream	YEM 2025	Estimation technique
Inputs		
Imported Fresh Water	0	High (metered)
Imported Potable	31.2	High (metered)
Groundwater Seepage To Open Cuts	491.4	Low
Seepage Transfer from Integra UG to RCN	0.0	Low (modelled)
Rainfall-driven Seepage from Local Spoil Aquifers	491.4	
Underground Dewatering	72.8	Low
Rainfall Runoff – Into Dirty Water System	2,626.9	Low (catchment)
Recycled to CHPP from Tails & Storage (not included in total below)	865.1	Low
Water from ROM Coal	634.1	Low
Total Inputs	**4,347.8**	
Outputs		
Groundwater Seepage Out (Down dip losses and high wall evaporation)	1,467.0	Low
Dust Suppression – Water Carts	684.8	High (metered)
Exported to Other Mines – through GRAWTS	2,559.4	High (metered)
Evaporation - Mine Water & Tailings Dams	1,044.9	Low
Evaporation – Evaporation fans	953.1	Medium (metered feed, estimated effectiveness)
Entrained in Process Waste	512.8	Low
Water in Product Coal	406.7	Low
Potable Usage	31.2	High (metered)
Total Outputs	**7,659.9**	
Estimated Change in Pit Storage	**-3,312.1**	

7.2.2 Climate / Rainfall

Specific rainfall during YEM 2025 is as follows:

- Over the review period, 8 months exceed the monthly average rainfall for YEM 2025.
- YEM 2025 annual rainfall at Rix's Creek was 847.9mm, which is significantly higher than the long-term average of 652.7mm. April, June, August, September, October, November, January and March all recorded totals above the historical monthly average. Meanwhile May, July, December and February all recorded below the historical averages. This is compared to YEM 2024 where no month recorded above their historical monthly averages.

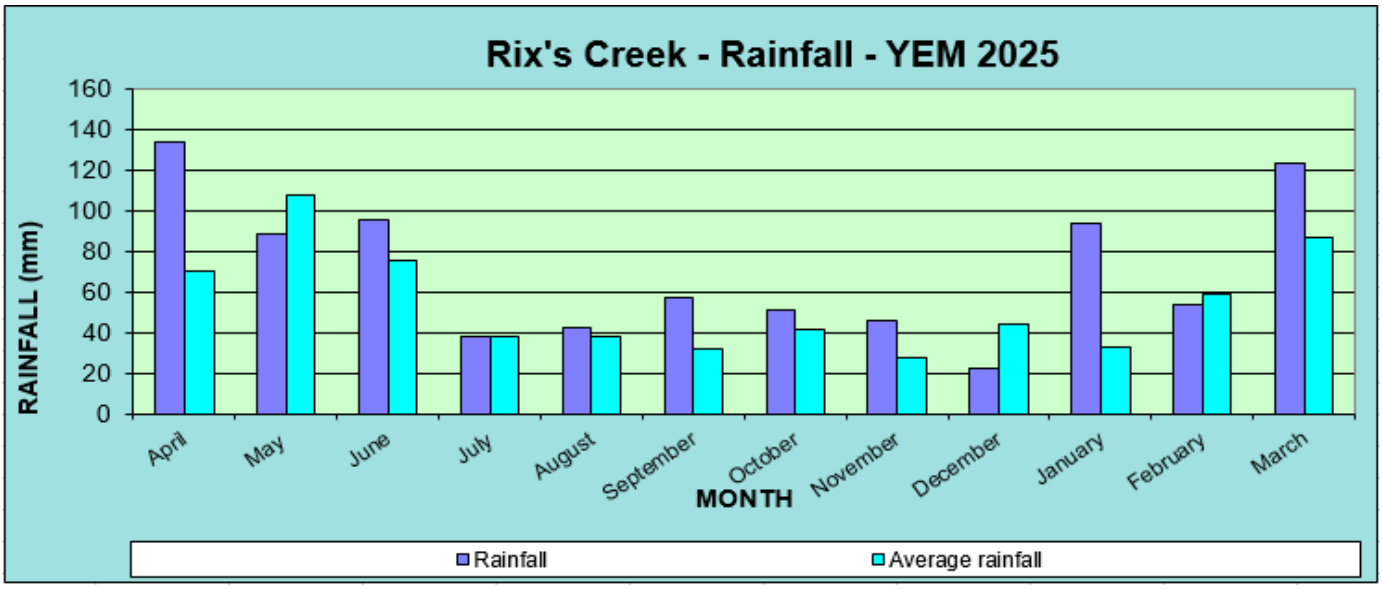


Figure 18. Annual Rainfall at Rix's Creek YEM 2025

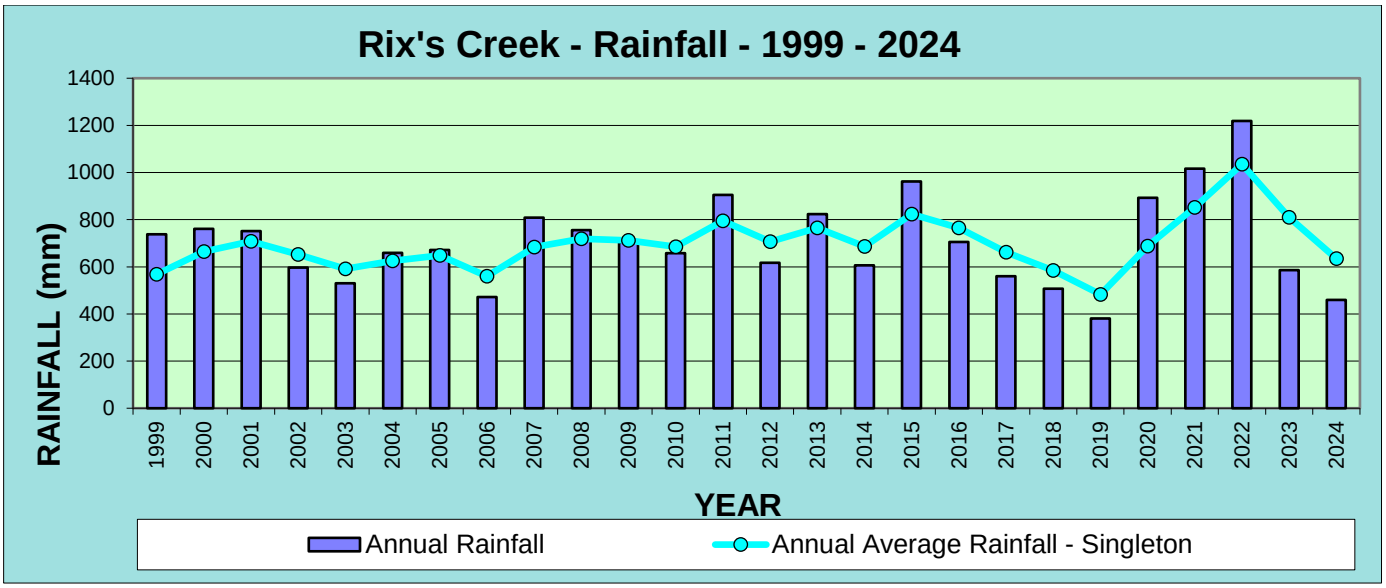


Figure 19. Annual rainfall at Rix's Creek 1999- 2024

7.3 Surface Water

7.3.1 Environmental Management

The water management system at Rix's Creek mine has been designed with the primary objectives of:

- Segregation of uncontaminated, clean water runoff, from mine water on site; and
- Priority use of mine water for mining operations

Clean Water

Runoff from undisturbed areas at Rix's Creek South is directed away from mining operations through diversion banks and channels. The clean water is directed into Rix's Creek, which flows through the lease. North of the New England Highway the Creek joins with Stonequarry Gully, a 3rd order stream which consists of a number of flow lines from smaller catchments. South of the Highway Rix's Creek continues as a 3rd order stream just prior to the lease boundary where an unnamed tributary joins from the Maison Dieu area where Rix's Creek becomes a 4th order stream.

Water quality is monitored in Rix's Creek on a monthly basis when there is sufficient water to sample as Rix's Creek is an ephemeral stream. Water quality is also monitored in a smaller creek north of the operation labelled Deadman's Creek.

For Rix's Creek Northern operations, in the open cut mining lease area east of the main Northern Railway Line, rainwater runoff from non-mined or rehabilitation areas, as well as from the diversion of the Martins Creek and Blackwattle Creek catchments, is collected in a series of four dams (C1, C2, C3 and C4). A clean water channel connects these dams. C3 and C4 are maintained with sufficient freeboard to ensure adequate surge capacity during storm events. Three further dams, C5, C6 and C6a are sediment laden water dams in the south of the mining lease and these dams bywash to Dam C3.

The area west of the Main Northern Railway Line had several dams constructed in 2000 due to the increase in Camberwell Pit operations and the need to separate clean and mine water. The water management system comprises clean water dams C7 to C11. The dams and diversion banks divert clean runoff water from entering mine workings. Dams C7, C8 and C11 bywash and flow into C4 via the vegetated channel, while dam C9 (west of the south pit) bywashes into Station Creek. Dam C10 was located in the active mining area and was 'mined-through' in 2001.

Mine Water

Runoff from disturbed areas is contained within a system of detention dams designed to allow settlement of the suspended solids. Runoff from active mining areas is pumped to the mine water storages.

First priority is given to the use of mine water in operations. Mine water is used in the coal washing process and for dust suppression via water carts for haul road watering and spraying coal stockpiles.

Hunter River Salinity Trading Scheme

Rix's Creek Mine purchased one (1) credit during the 2022 HRSTS credit auction. Rix's Creek currently does not have a licenced discharge point in accordance with EPL 3391 requirements.

Rix's Creek Mine is completing a feasibility study into the potential to discharge from site after undertaking required studies and obtaining all required approvals.

Sampling Locations

Water samples are taken from Rix's Creek South in four locations. They are:-

- Site 1 - Railway Underpass, as the Creek enters the site;
- Site 2 - New England Highway Bridge, at the mid-point through the mine site;
- Site 10 – Below Operation, on Rix's Creek below the operation; and
- Site 3 - Maison Dieu Road Bridge, after the Creek has left the site.

Water storage dams 1, 2, and 6 are sampled and analysed monthly. The location of these dams are shown on Figure 23 with the relationship being:-

- Site 4 - Clean Water Dam 1 - (CWD 1)
- Site 5 - Clean Water Dam 2 - (CWD 2)
- Site 7 - Clean Water Dam 6 - (CWD 6)

For Rix's Creek North, Environmental Protection Licence (EPL 3391) requires the monitoring of surface waters for pH, EC, TSS and TDS at the following sites on a monthly basis:

- W3 - Martins Creek, where it enters the site;
- W6 - Blackwattle Creek, where it enters the site; and
- W1 - Station Creek, where it leaves the mine site.

EPL Samples are taken on a monthly basis. Sampling site locations are indicated on Figure 20.

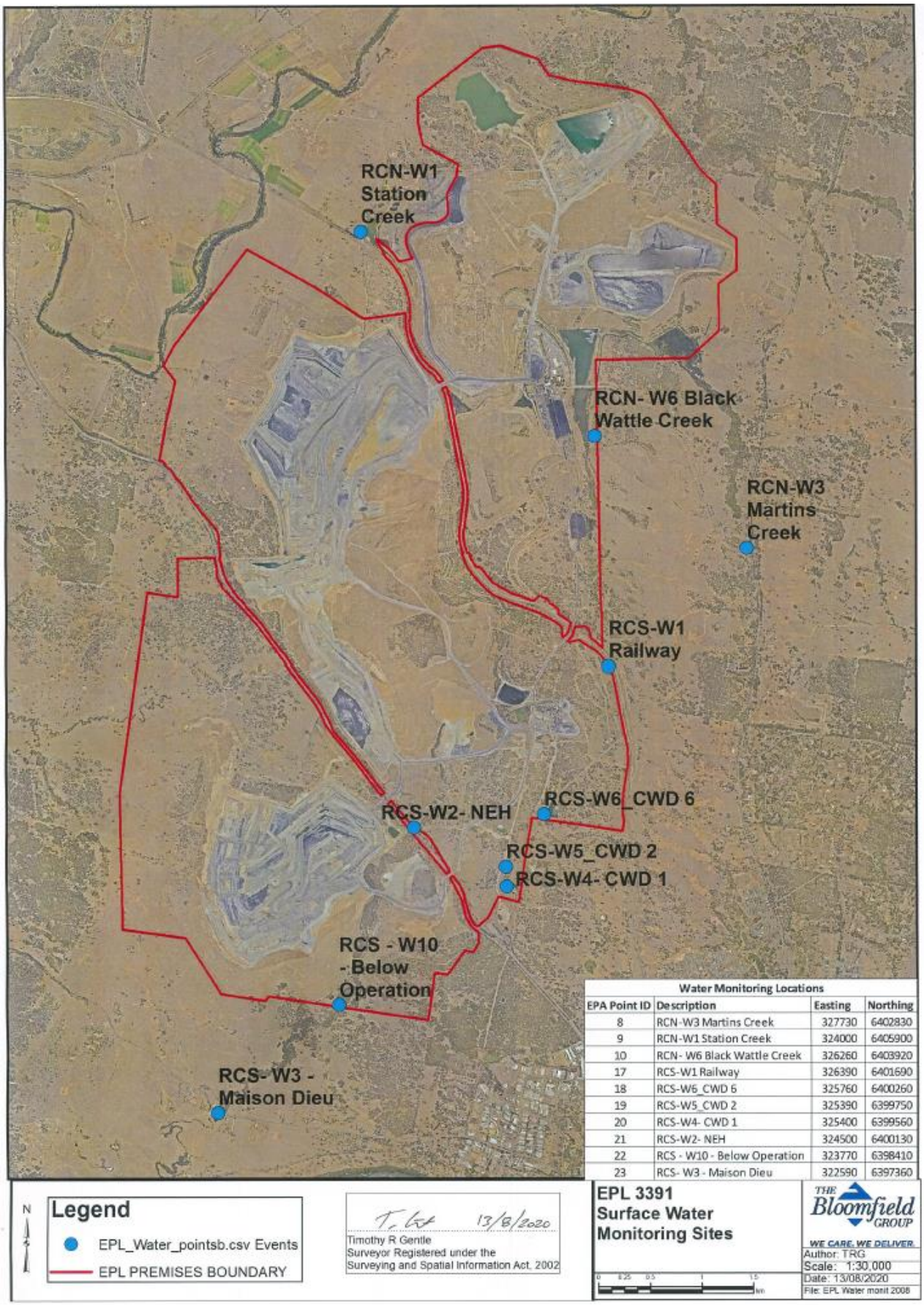


Figure 20. EPL 3391 water monitoring sites

Table 24. RCN Surface Water Monitoring Sites

Monitoring Point	Location
W1	Station Creek
W3	Martins Creek
W4	Glennies Creek upstream of the Station Creek confluence
W5	Glennies Creek downstream of the Station Creek confluence
W6	Blackwattle Creek
W7	Stony Creek where it crosses Stony Creek Road
W10	Clean Water Dam – C4
W11	Glennies Creek downstream at Camberwell where it crosses the New England Highway
W12	Clean Water Dam – C1
W13	Clean Water Dam – C6
W14	Clean Water Dam – C3
W15	Clean Water Dam – C6A (after C5 spillway channel before clean water channel)
W16	Sediment Control Dam – C7
W17	Clean Water Dam – C2
W18	Clean Water Dam – C5
W19	Mine Water Dam D1
W20	Northern Stock Water Dam No. 1
W21	Northern Stock Water Dam No. 2
W22	Station Creek Up
W23	Station Creek Down
GCS003	Possum Skin Dam
GCS004	PS Dam Seepage Collector
GCS005	PS Dam Clean Water diversion Sediment Pond
SD1	South Sediment Dam
SD2	Central Sediment Dam
SD3	North Sediment Dam
GC1	Middle Falbrook Rd Bridge
GC2	Glennies Creek Nobles Crossing
Nobles Crossing	Nobles Crossing

7.3.2 Environmental Performance

Water samples are analysed for water quality parameters of pH, electrical conductivity, total dissolved solids and total suspended solids. The water samples are analysed by ALS Laboratory Group at Warabrook. The laboratory is registered by the National Association of Testing Authorities, Australia (NATA).

Rix's Creek Mine surface water results

During the YEM 2025 surface water assessment, rainfall increased from the previous reporting period and eight (8) months were above the historical rainfall average. The general trend with pH is that it increases under low flow or periods of low rainfall and conversely, there's a general reduction in pH under periods of above average rainfall is experienced. This trend was demonstrated during the YEM 2024 period.

pH

The pH results are presented in **Appendix 1**. The general pH trend in the Creeks and site dams is to decrease under flow conditions and increase in times of stagnant conditions or limited flow. The decrease in pH under flow conditions reflects the slightly acidic nature of rainfall. The pH ranged from 6.6 to 9.8 throughout YEM 2025. Due to the increase in rainfall experienced in the past year there was a general tightening in the range in pH when compared to YEM 2024.

The surface water assessment of the pH of upstream ephemerals W6 (Black Wattle Creek) ranged between 6.9 and 7.8 and W3 (Martins Creek) ranging between 6.9 and 7.2. The Upstream Railway underpass recorded pH between 6.9 and 9.4. W1 (Station Creek) downstream ephermal monitoring site is located downstream of mining operations and recorded a neutral to slightly elevated pH during the reporting period ranging between 7.3 and 7.8.

Electrical Conductivity (Salinity)

The Electrical Conductivity results are presented in **Appendix 1**. Salinity levels at RCM generally fluctuated in correlation with variations in rainfall and flowing vs non-flowing conditions, ranging from 68µS/cm to 23,100µS/cm (*Stagnant creek line*) during the YEM 2025 reporting period.

Results for the South ranged from 138µS/cm at the Sediment Dam 20 to 21,000µS/cm at the Above Industrial Catchment site (*Stagnant creek line*).

The EC of upstream ephemeral W3 (Martins Creek) ranged between 68 µS/cm (May 2024) and 1,570µS/cm (October 2024), with W3 unable to be sampled for 3 months due to the creek being dry (April, November 2024 and January 2025), as compared to last reporting period where sampling was not possible 5 months of the year. W1 (Station Creek) monitoring site is located downstream of mining operations ranging between 306 and 1,720µS/cm. W1 was able to be sampled all year round due to the more prevalent rainfall of YEM 2025. Black Wattle Creek, which is ephemeral recorded 671µS/cm to 23100µS/cm and was too low to sample on two (2) occasions during the reporting period as compared to seven (7) the previous reporting period.

Total Suspended Solids

Total Suspended Solids (TSS) results are presented in **Appendix 1**. TSS ranged from <5mg/l at the numerous sites over several months to 72mg/l at Above Industrial Estate Catchment in March 2024. The general trend is for levels to increase down the catchment under flow conditions. This historic trend is an indication that the water flowing in the Creeks picks up sediment and increases the sediment load down the catchment. This trend is depicted in the YEM 2024 period and is consistent with previous reporting periods.

TSS results are presented in **Appendix 1**. TSS results ranged from <5 mg/l at numerous sites over several months to 875mg/l (July) at the Dirty Water Dam 2 site. The Ephemeral Black Wattle Creek ranged from <5 mg/l to 14 mg/l with flow following sampling undertaken after a rain event, though sampling was not possible for two (2) month (Jan and Mar 2025). The general trend is for levels to increase down the catchment under flow conditions. This historical trend is an indication that the water

flowing in the Creeks picks up sediment and increases the sediment load down the catchment.

Total Dissolved Solids

The Total Dissolved Solids (TDS) results for Rix's Creek Mine are presented in **Appendix 1**. TDS ranged from 146 mg/L – Sediment Dam 20 (Sept 2024) to 17,700 mg/L – W6 Black Wattle Creek (Dec 2024). Throughout the YEM 2025 reporting period there was above average rainfall resulting in a general increase of TDS.

The higher results during coincided with reduced rainfall, while after more significant rainfall was recorded saw lower TDS results. The general trend saw TDS reduce when above average rainfall was experienced. Total dissolved solids at monitoring site W1 (Station Creek) ranged between 282 mg/l in April and 1260mg/l in Jan 2025, While every month was able to be sampled compared to YEM 2024 when only 5 months a sample was available. Even with the ephemeral nature of Black Wattle Creek, only on two (2) occasions Black Wattle Creek was too low to sample during YEM 2025. At W3 Martins Creek the TDS ranged between 17mg/l (July 2024) and 514mg/l (May 2024), with only April, November and January when samples were not attainable.

7.3.3 Reportable Incidents

There were no reportable events relating to water.

Table 25. YEM 2025 Rix's Creek South Surface Waters pH and EC results.

YEM 2025 Rix's Creek South Surface Waters										
	pH Results					EC Results (µS/cm)				
Monitoring Location	Min	Ave	Max	Lower Criteria	Upper Criteri	Min	Ave	Max	Criteria	Comments
Railway Underpass	6.9	8.2	9.4	6.5	8	323	661	959	125 - 2500	
New England Highway	7.3	7.5	7.8	6.5	8	1030	1819	3060	125 - 2500	
Maison Dieu Bridge	7.2	7.4	7.7	6.5	8	909	1847	5900	125 - 2500	Stagnant - low flow ephemeral creek
Clean Water Dam No. 1	6.8	8.1	9.6	6.5	8	208	459	625	125 - 2500	
Clean Water Dam No. 2	6.6	7.4	8.4	6.5	8	169	331	446	125 - 2500	
Clean Water Dam No. 6	7	8.2	9.6	6.5	8	258	361	708	125 - 2500	
Dirty Water Dam No. 1	8.4	8.7	9	-	-	5140	6744	8190	-	
Dirty Water Dam No. 2	8.3	8.6	9	-	-	4760	6786	8100	-	
Dirty Water Dam No. 4	8.4	8.7	9	-	-	4630	6646	8050	-	
Below Operations	7.8	8.2	9.3	6.5	8	836	1357	2210	125 - 2500	Stagnant - low flow ephemeral creek
Industrial Estate Catchment	7.7	8.0	8.3	6.5	8	632	1258	1990	125 - 2500	
Above Industrial Catchment	7.5	7.9	8.2	6.5	8	1530	8147	21100	125 - 2500	Stagnant - low flow ephemeral creek
Turkey's Nest Dam	8.1	8.5	8.9	-	-	4330	6459	8960	-	
Dead Man's Gully Dam	6.6	7.4	7.8	-	-	149	223	309	-	
Dead Man's Gully Creek	6.9	7.5	8.2	-	-	1900	10647	21000	-	
Sediment Dam 16	7.6	8.4	8.9	6.5	8	1400	3600	5740	125 - 2500	
Sediment Dam 17	7.2	8.1	9.1	6.5	8	262	346	477	125 - 2500	
Sediment Dam 20	6.6	7.4	7.9	6.5	8	138	198	298	125 - 2500	
Woop Dam 1	7.4	8.1	9	-	-	400	729	1160	-	
Woop Dam 2	7.9	8.6	9.4	-	-	690	1711	2820	-	

Table 26. YEM 2025 Rix's Creek North Surface Waters pH and EC results.

YEM 2025 Rix's Creek North Surface Waters										
	pH Results					EC Results (µS/cm)				
Monitoring Location	Min	Ave	Max	Lower Criteria	Upper Criteri	Min	Ave	Max	Criteria	Comments
North Sediment Dam	7.4	7.6	8.0	6.5	8	513	632	822	125 - 2500	
Centre Sediment Dam	7.6	8.1	8.6	6.5	8	419	476	582	125 - 2500	
South Sediment Dam	7.3	7.7	8.0	6.5	8	298	341	404	125 - 2500	
B 2	7.0	7.6	8.8	6.5	8	149	232	356	125 - 2500	
B 6	7.6	8.0	9.1	6.5	8	209	398	763	125 - 2500	
W 20	8.0	8.5	9.2	-	-	523	7975	9850	-	
W 21	7.4	7.8	8.5	-	-	362	1267	9940	-	
Falbrook Pit	8.2	8.7	8.8	-	-	6160	7188	8090	-	
W 1 Station Creek	7.3	7.6	7.8	6.5	8	306	1023	1720	125 - 2500	
W 3 Martins Creek	6.9	7.0	7.2	6.5	8	68	412	1570	125 - 2500	
W 4 Glennies Creek Up	7.4	7.7	8.0	6.5	8	268	510	787	125 - 2500	
W 5 Glennies Creek Down	7.5	7.8	8.3	6.5	8	262	512	777	125 - 2500	
W 6 Blackwattle Creek	6.9	7.4	7.8	6.5	8	671	8991	23100	125 - 2500	collected under no-flow conditions, ephemeral creek.
W 7 Stony Creek	6.6	7.0	7.3	6.5	8	210	687	1550	125 - 2500	
W 10 Dam C4	7.4	8.3	8.9	6.5	8	1120	1437	1630	125 - 2500	
W 11 Glennies Creek NEH	7.6	7.8	8.2	6.5	8	266	541	798	125 - 2500	
W 12 C1 Dam	7.5	8.6	9.2	6.5	8	1030	2341	3500	125 - 2500	collected during period of below average rainfall.
W 13 C6 Dam	7.1	7.6	8.6	6.5	8	208	299	404	125 - 2500	
W 14 Dam C3	7.4	8.3	9.4	6.5	8	951	3256	6270	125 - 2500	collected during period of below average rainfall.
W 15 Dam C6A	6.9	7.3	7.7	6.5	8	177	277	402	125 - 2500	
W 16 South Pit	7.8	8.6	9.5	6.5	8	2790	4060	5330	125 - 2500	
W 17 Dam C2	7.0	8.6	9.8	6.5	8	763	1776	2300	125 - 2500	
W 18 Dam C5	7.1	7.7	8.7	6.5	8	198	323	455	125 - 2500	
W 19 Dam D1	8.7	8.9	9.1	-	-	5700	7086	8430	-	

7.4 Groundwater

The groundwater monitoring sites across the Rix's Creek mine sites have been combined in **Table 28** and are provided as a reference to compare Rix's Creek South and Rix's Creek North.

Table 27. Rix's Creek Ground Water Monitoring Sites

Bore ID	License	Easting	Northing	Screened Interval (mgbl)	Stick Up (m)	Surface Elevation (mAHD)	Total Depth (mbgl)
Rix's Creek North							
Open Cut Piezometers and Wells							
Glennies Creek Alluvium							
GCP9	(20BL171708)	323259	6407315	Unknown	1.5	69.9	9
GCP10	(20BL171708)	324414	6408030	Unknown	0.7	74.9	11.5
GCP19	(20BL171708)	325086	6408333	8.5 - 12	0.63	77.5	12
GCP20	(20BL171708)	325201	6408179	5.2 - 8.2	0.67	82	8.2
GCP21	(20BL171721)	324466	6407916	6 to 11	0.82	76	11
GCP22	(20BL171721)	324558	6407814	8.5 - 12	0.7	75	12
GCP23	(20BL171721)	324535	6407659	4.6 - 8	1.01	75	8
Coal Measure							
GCP1	(20BL169631)	325124	6406664	Unknown	0.34	96.0	108
GCP2	(20BL169631)	325160	6406490	Unknown	0.61	105.5	105
GCP5	(20BL169631)	324337	6406203	Unknown	0.54	80.3	108
GCP6	(20BL169631)	324941	6406784	Unknown	0.38	102.9	126
GCP7	(20BL169628)	325864	6407071	60 - 72 and 96 - 102	0.1	93.0	120
GCP8	(20BL169630)	326332	6407214	Unknown	0.44	105.1	120
GCP13	(20BL169628)	326169	6406745	Unknown	0.15	105.4	66
GCP14	(20BL169628)	325774	6407042	Unknown	0.66	90.99	123
GCP15	(20BL169628)	325912	6406961	Unknown	0.42	95.04	114
GCP16	(20BL169628)	326029	6407077	Unknown	0.7	98.85	120
GCTB	(20BL169631)	325149	6406572	Unknown	0.2	102.5	90
Extended Southern Pit							
Glennies Creek Alluvium							
GCP28	(20BL171722)	322651	6405459	6.7 -12.0	0.8	69.5	12
GCP29	(20BL171722)	323191	6405356	4.5 - 10.0	0.9	71	10
GCP30	(20BL171720)	322438	6404649	5.5 -12.0	0.94	67.5	12
Coal Measure							
GCP27	(20BL171881)	323197	6406037	36.5-37.5	1.11	70	27.5
GCP32	(20BL171880)	322491	6404250	49.0-55.0	0.66	70.5	55.55
GCP34	(20BL171879)	322800	6403235	47.0-56.25	0.61	101	56.25
GCP36	(20BL171722)	322915	6405320	14.5-16.0	0.85	70.5	16
GCP38	(20BL171878)	323468	6405626	17.0-24.3	0.98	71	24.3
GCP24	(20BL171722)	323241.8	6407107	46-48	0.6	71.25	48
Rix's Creek South							
Regolith (Upper weathered zone)							
BH3		325457	6401923	5-8	0.97	100	11
BH4		323982	6398666	7-10	0.74	63	10
BH8		321803	6401175	5-14	0.8	85.4	20
Coal Measure							
BH1		323190	6400562	115-121, 127-130	0.85	113	130
BH2		322936	6401923	84-87	0.98	136	90
BH5		324562	6399924	63-66	1.04	76.46	66.5
BH7		323345	6401709	150.5-198.5	0.72	100.8	200.5
20BL170864		324633	6400335		0.3	80.5	~70

7.4.1 Monitoring Background

As part of the Water Management Plan for Rix's Creek Mine, a monitoring program has been implemented to detect any impacts from mining on the groundwater regime, and from neighbouring groundwater users. The monitoring program incorporates both shallow and deep groundwater monitoring locations monitoring the water levels in the Glennie's Creek Alluvial deposits and the Permian Coal Measures around both Rix's Creek South Mine and the Rix's Creek North Mine.

Mining activities that have the potential to impact groundwater levels and quality are:

- Tailings emplacement area
- Spoils and emplacement
- Surface water bodies – these may locally control groundwater levels in surrounding spoil and Permian strata; and
- Waste dumps & coal handling plant – surface water runoff and associated water quality issues.

7.4.2 Groundwater Monitoring Performance

Rix's Creek South Groundwater Levels

For Rix's Creek South operations, three piezometers are installed into the Permian coal measures and three into overlying regolith zone. Bore details are summarised in **Table 27**.

Piezometers BH1, BH5 and BH7 are the deeper bore holes into the coal measures while Piezometers BH3, BH4 and BH8 are shallow into the overlying regolith. The monitoring network also included the existing production bore 20BL170864. BH2 was installed in the Permian coal measures, however this bore was destroyed in 2011.

BH1 was damaged in the second half of 2017 and BH2 was destroyed in early 2012.

Piezometer BH6 was proposed but was not completed due to several problems when drilling during 2015, with BH8 being completed in its place.

Groundwater level monitoring has been undertaken since 2010 and on a bi-monthly basis from 2012 to 2025 in accordance with the 2024 Rix's Creek Mine Water Management Plan (WMP).

Groundwater levels for Rix's Creek South groundwater bores (BH3, BH4 and BH8) have remained fairly consistent in the shallow aquifer since the commencement of monitoring ground water levels with the Coal Measures acting in hydraulic isolation from the shallow regolith and alluvium aquifer systems.

During the latest monitoring period, depressurisation was observed in BH5, BH7 and 20BL170864 in response to ongoing strata dewatering in the broader Rix's Creek area.

Piezometers in BH4 and BH8 have remained relatively stable throughout the monitoring period, indicating the deeper coal measures are hydraulically separated from the shallow regolith and alluvium system.

BH3 showed a slight decline then rise in water levels in association with decreased rainfall, however, the bore log notes that the screened interval is within a small coal seam and may be connected to the deeper coal measures than the shallow regolith unit. Its water level ranged from 5.17 – 7.65 mbgl.

During YEM 2024 BH4 ranged from 1.35 – 1.86 mbgl and BH8 ranged between 2.35 – 2.68 mbgl.

Overall the regolith water levels are relatively stable in the shallow water table with fluctuating responses to rainfall and no observable correlation to water levels in the coal measures.

Groundwater levels are shown in **Appendix 2**.

In accordance with the 2019 WMP, the BH4 and BH8 water level variability did not fall by greater than 0.51m and 0.33m respectively in the YEM 2024 monitoring period.

Pit Inflows

There were 492.8ML of estimated groundwater inflows into Rix's Creek Mine compared to 505ML Open Cut (deatering groundwater) Hardrock licences.

Rix's Creek South Groundwater Quality

During YEM 2024, salinity within BH3 ranged from 3,620 – 6,810 uS/cm, whilst BH4 ranged from 4,780 – 20,200 uS/cm which is inconsistent with the parameters outlined in the Rix's Creek South Water Management Plan. BH4 historical range for Electrical conductivity is between 15,000 – 20,000, with July 2023 result (4,780uS/cm) an outlier when compared to the results throughout the reporting period.

In the same period, salinity in the coal seam (BH5) ranged between 5,770 – 13,000 uS/cm with a decreasing salinity trend starting around July 2023.

Salinity levels are relatively consistent in the coal seams and the regolith which indicates limited connectivity (and mixing) between the two aquifer zones.

No negative water quality trends are being driven from mining operations in the area which is consistent with the hydrogeological conceptualisation and impact assessment predictions.

7.4.3 Water Take

Table 28 presents the relevant water sources, units licensed by Rix's Creek Mine and predicted take for the YEM 2024 reporting period. No water was imported from Hunter Regulated - River Alluvial – Glennies Creek Management Zone 3a for operational use during the reporting period.

Table 28. Mine inflows YEM 2025

Number	Category	Total units	Purpose
WAL41500	Mining	100	Open Cut (dewatering groundwater) Hard Rock
WAL 41555	Mining	100	Open Cut (dewatering groundwater) Hard Rock
WAL 40777	Mining	305	Open Cut (dewatering groundwater) Hard Rock
20BL170864	Mining	100	1 x Bore (dewatering groundwater)

Table 29. Rix's Creek South YEM 2025 Groundwater Monitoring Network

Bore ID	Type	Depth (mbgl)	Location	Change in Water Levels during YEM 2025 (m)
BH1	Standpipe Piezometer	130	Middle of basin - Upper / Lower Arties	Bore Damaged Aug 2017
BH2	Standpipe Piezometer	90	West of basin, close to outcrop- Lower Barrett	Bore Destroyed March 2012
BH3	Standpipe Piezometer	11	East of waste dump / backfill area- Regolith and shallow coal seams	+1.35
BH4	Standpipe Piezometer	10	Rix's Creek south of Pit 3- Regolith	+0.01
BH5	Standpipe Piezometer	66.5	East of Rix's Creek / tailings emplacement area- Lower Barrett	+13.89
BH7	Standpipe Piezometer	200.5	Bottom of basin- Hebden	-2.7
BH8	Standpipe Piezometer	20	Dead Man's Creek west of coal outcrop – regolith	-0.04
20BL170864	Production bore	~70	Above underground Workings - All coal seams	Bore blocked Nov 2024

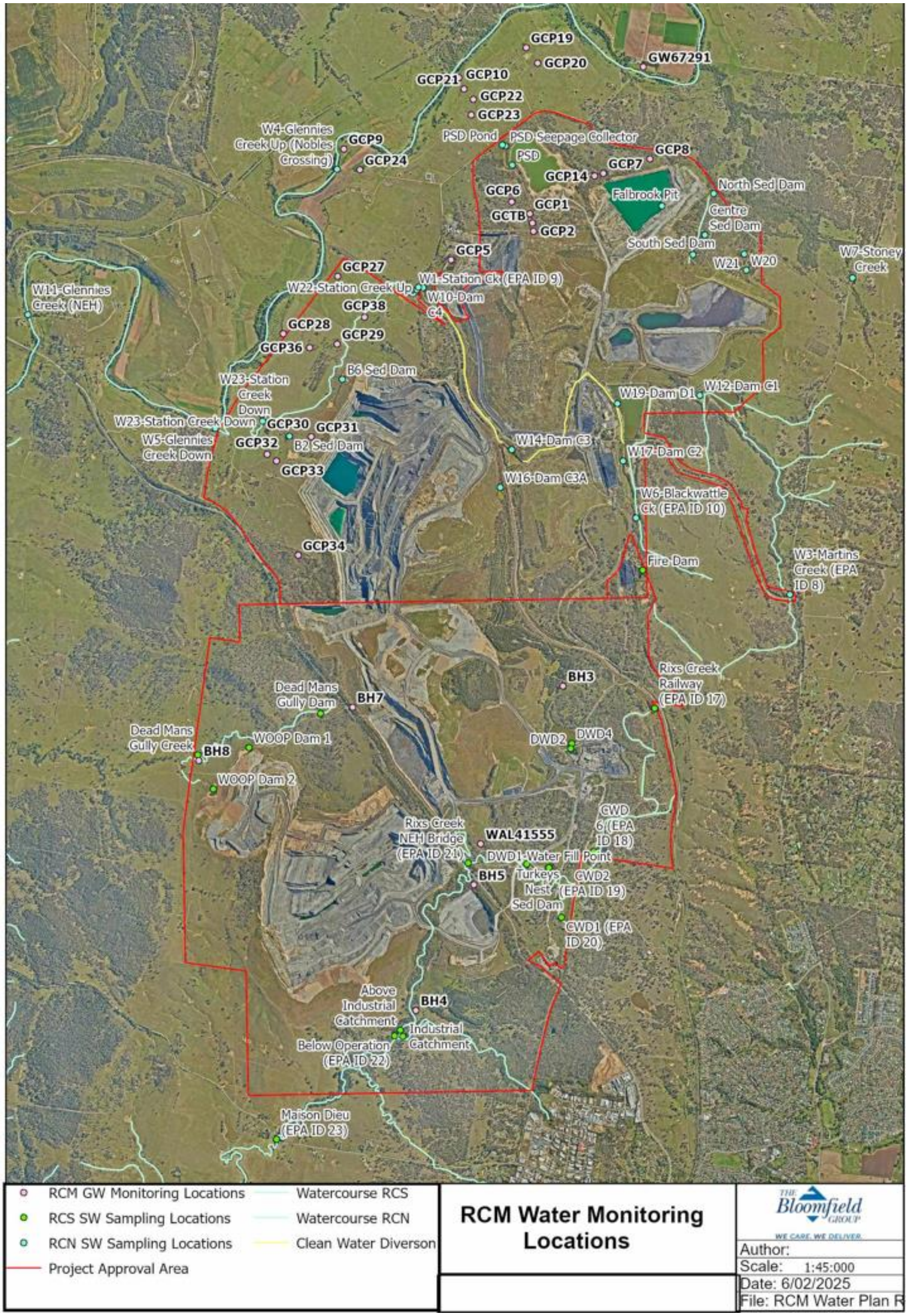


Figure 21. Rix's Creek Mine Ground and Surface Water Monitoring sites

Rix's Creek North Groundwater Levels

Piezometers and bores included in the YEM 2025 Rix's Creek Mine Groundwater Monitoring Plan include the Foybrook Formation basement coal measures as well as the Glennie's Creek and Station Creek alluvium groups.

Due to the complex interactive depressurisation effects of numerous coal mines on steady state groundwater levels within the model area, calibration of the 2017 groundwater model was focused on obtaining a correlation between known and modelled mine inflow rates, as opposed to matching observed and modelled groundwater levels.

The Rix's Creek North groundwater monitoring program is referred to in **Table 30** and with results presented in **Appendix 2**.

Alluvium

From the 2017 Environmental Assessment, the model indicated that groundwater within alluvial aquifers associated with Glennie's Creek and Station Creek had the potential to be marginally to negligibly affected by the proposed pit during its active mining phase, with drawdowns ranging up to 1.2m near the Mine Area until the pit excavation was completed.

As shown in **Appendix 2**, results up to the end of the YEM 2025 monitoring period show the alluvium water levels have been relatively consistent with some variation induced by reduced rainfall, evaporation and natural creek flow process.

Alluvial groundwater level monitoring indicated no response to mining outside of the influences of normal climatic variability in proximity to drawdown associated with the Falbrook Open Cut in the Glennie's Creek catchment, or the Camberwell Open Cut in the Glennie's Creek and Station Creek catchments.

Dewatering of the neighboring/underlying coal seams and broad depressurisation of the Permian basement has not resulted in water level impacts within the creek alluvium system.

Table 30. Rix's Creek North Ground Water Monitoring Network

Bore ID	Type	Total Depth (mbgl)	Formation	Change in Water Levels during YEM 2025 (m)
GCP09	OSP	9	Glennie's Creek Alluvium	0
GCP10	OSP	11.5	Glennie's Creek Alluvium	-0.01
GCP19	OSP	12	Glennie's Creek Alluvium	0.04
GCP20	OSP	8.2	Glennie's Creek Alluvium	n/a
GCP21	OSP	8.2	Glennie's Creek Alluvium	-0.02
GCP22	OSP	12	Glennie's Creek Alluvium	0.07
GCP23	OSP	8	Glennie's Creek Alluvium	0.10
GCP28	OSP	12	Glennie's Creek Alluvium	0.03
GCP29	OSP	10	Glennie's Creek Alluvium	0.04
GCP30	OSP	12	Glennie's Creek Alluvium	0.04
GCP32	OSP	55.56	Camberwell Pit Basement	0.03
GCP34	OSP	56.26	Camberwell Pit Basement	n/a
GCP36	OSP	15.98	Camberwell Pit Basement	0.03
GCP38	OSP	24.31	Camberwell Pit Basement	0.07
GCP02	OSP	105	Falbrook Pit Basement	-0.31
GCP05	OSP	108	Falbrook Pit Basement	-0.55
GCP06	OSP	126	Falbrook Pit Basement	1.48
GCP07	OSP	120	Falbrook Pit Basement	6.27
GCP08	OSP	120	Falbrook Pit Basement	6.59
GCP13	OSP	66	Falbrook Pit Basement	3.45
GCP14	OSP	123	Falbrook Pit Basement	7.34
GCTB	OSP	90	Falbrook Pit Basement	-0.33

Note: OSP = open standpipe piezometer

In accordance with the 2024 WMP, the GCP10, 21, 23, 28, 29 and GCP30 water level variability did not fall by greater than 0.01, 0.02, 0.01, 0.03, 0.04 and 0.04m respectively in the YEM 2025 monitoring period.

Basement

As shown in **Appendix 2**, the basement monitoring data to the end of the YEM 2025 reporting period indicated;

- During the YEM 2025 monitoring period, there were only minimal increase in water levels occurring in GCP09, 10 and GCTB, along with normal climatic variability for the remaining piezometers within the Falbrook Open Cut; and
- All other basement bores at RCN saw slight increases in water levels associated with regional increase in annual rainfall total.

TD2 Dam

Monitoring wells B1 to B6 monitor the groundwater pressure within the TD2 dam wall, which is driven by the water stored in the dam and is separate from the underlying regional groundwater system.

The results recorded in each piezometer were relatively stable throughout the YEM 2025 and past reporting periods.

Bores 1, 4, 5 and 6 were dry during the YEM 2025 reporting period.

Rix's Creek North Groundwater Quality

The pH and salinity in the Glennie's Creek alluvial open standpipe piezometers have not shown any significant trend since they were installed in 2007, except for a reducing salinity profile in GCP30 between mid-2009 and early 2011.

The pH and salinity in the Camberwell basement open standpipe piezometers have not shown any significant trends since they were installed after mid 2007.

The pH and salinity in the Falbrook Open Cut basement open standpipe piezometers have not shown any significant trends since they were installed in 2012 except for a fall in salinity in GCP14 in mid 2016 to late 2017, and GCP08 in early 2018, both of which are north of the Falbrook Pit and may be influenced by fresher stored water within the Falbrook pit void.

The groundwater chemistry trends are summarised in **Appendix 2**.

Table 31. Rix's Creek South Ground Waters pH and EC results YEM 2025.

YEM 2025 Rix's Creek South Ground Waters							
	pH Results			EC Results (µS/cm)			
Monitoring Location	Min	Ave	Max	Min	Ave	Max	Comments
BH3	4.9	4.9	5.0	6930	7095	7250	Level to low to sample, dry.
BH4	7.0	7.2	7.2	13800	17317	19600	Within historical range
BH5	6.7	6.7	6.8	4410	4607	5950	Within historical range
20BL170864	7.0	7.1	7.2	2250	4943	6870	Within historical range
BH8	6.7	6.9	7.2	19900	20383	20600	Within historical averages

Table 32. Rix's Creek North Ground Waters pH and EC results YEM 2025.

YEM 2025 Rix's Creek North Ground Waters							
	pH Results			EC Results (µS/cm)			
Monitoring Location	Min	Ave	Max	Min	Ave	Max	Comments
GCP01	8.5	8.5	8.6	9950	10392	10700	Within historical range
GCP02	7.8	7.9	8.0	11800	11933	12100	Within historical range
GCTB	8.0	8.1	8.2	14500	14617	14800	Within historical range
GCP05	7.4	7.4	7.5	11800	12150	12400	Within historical range
GCP06	6.8	6.9	7.0	12200	12317	12500	Within historical range
GCP07	6.8	7.0	7.4	6890	7255	8210	Within historical range
GCP08	7.5	7.5	7.6	6840	6987	7110	Within historical range
GCP09	6.9	7.0	7.3	426	466	499	Within historical range
GCP10	7.0	7.2	7.5	493	597	688	Within historical range
GCP13	6.8	6.9	7.0	12300	12350	12400	Within historical range
GCP14	5.8	8.0	9.4	8760	8993	9280	Within historical range
GCP19	7.1	7.1	7.2	3320	3463	3560	EC slighty below historic average elevated rainfall.
GCP21	6.9	7.0	7.1	1540	1592	1650	Within historical range
GCP22	6.9	6.9	7.0	11500	12060	12400	Within historical range
GCP23	7.3	7.4	7.5	15700	15883	16000	Within historical range
GCP24	7.7	7.8	8.0	3000	3127	3260	Within historical range
GW67291	6.6	7.3	7.8	268	785	1300	Within historical range
GCP27	7.5	8.7	9.3	969	3592	4520	EC slighty below historic average elevated rainfall.
GCP28	7.0	7.6	8.1	718	1374	2130	Within historical range
GCP29							Too Low to sample, dry.
GCP30	6.8	7.0	7.3	3310	3502	3720	Within historical range
GCP32	7.0	7.1	7.1	14200	14440	14800	Within historical range
GCP36	7.5	7.7	7.7	981	1057	1090	Within historical range
GCP38	7.1	7.1	7.2	10400	10867	11400	Within historical range

7.5 Erosion and Sediment

7.5.1 Environmental Management

Erosion and sedimentation control is an integral part of the water management across the entire site. Erosion control on reshaped and rehabilitation areas is achieved by having the minimum delay in time and area between the active mining operation and establishing rehabilitation. Contour embankments are integral design components of final landform design and shaping procedures, these structures direct flows of water into relevant catchment facilities.

Revegetation of rehabilitation areas is undertaken as soon as an area becomes available with the aim to establishing a minimum of 70% ground cover, the level required to adequately control soil erosion. Accompanied with this is the use of sediment detention basins in front of the operation, along haulage roads and on drainage lines flowing from establishing rehabilitation areas.

Throughout the reporting period sediment dams across site were de-silted whilst climatic conditions were dry allowing adequate access and works to take place. This required the use of two 20t excavators accompanied by a small fleet of 12t tipper trucks. An additional long reach excavator was also utilised to desilt dams that couldn't be reached with a 20t excavator. Several other smaller sediment dams and drainage lines were also cleaned via an on-site backhoe as required throughout the year. These sediment dams contain the same material as that excavated from the open cut operation as well as clays, soil and silt from the surrounding environment.

Monthly sediment and erosion checklists were completed at Rix's Creek Mine, with routine repairs to sediment fences being completed during the reporting period.

7.5.2 Environmental Performance

Total Suspended Solids (TSS) results from water sampling is used as a key indicator of sediment control. TSS results are discussed in Section 7.3 Surface Water environmental performance section.

7.5.3 Reportable Incidents

There were no reportable events regarding passive release of water during the reporting period.

7.5.4 Further Improvements

Any sediment collected within the light-vehicle wash-down pad, heavy-vehicle wash-down pad, diesel fill-point sump, electrical workshop sump, mechanical workshop sump are all cleaned regularly with the sediment particles relocated to the site bioremediation areas in accordance with the internal site bioremediation procedure.

SECTION 8 REHABILITATION

8.1 Annual Rehabilitation Report and Forward Program

Please refer to **Appendix 4** for the Annual Rehabilitation Report and Forward Program. The Annual Rehabilitation Report and Forward Program can be found on The Bloomfield Group website - https://www.bloomcoll.com.au/sustainability/environmental-management/rixs-creek-assessments/mining-lease

SECTION 9 COMMUNITY

9.1 Community Engagement.

Rix's Creek Mine is required under the respective project approvals to operate a Community Consultative Committee (CCC). The committee consists of community representatives, local council and is chaired by an independent person appointed by DPHI. Other government agencies and community representatives are invited to participate on the committee. Rix's Creek was the first mine in the Hunter Valley to have a CCC which has operated for over 30 years.

The Committee representatives are:-

Independent Chairperson:-	Lisa Andrews
Community representatives:-	Councillor Sue George
	Reg Eveleigh
	Patricia Bestic
	Michelle Higgins
	Deidre Olofsson

Company representatives:-

Chief Development Officer - Thomas Holz
Operations Manager - Brendon Clements
Environment Manager – Chris Knight
Environmental Superintendent – Chris Quinn
Environment Officer – David Holmes
Environment Graduate Officer – Julius Harris-Payne

The Committee met two times during the YEM 2025.

On the 22nd May 2024, the first CCC meeting was held during YEM 2025. At this meeting, an overview of the current operations was delivered, noting the continued mining operations in the West Pit and the North's Camberwell Pit.

The Environment Superintendent gave an overview of the past year's environmental performance, covering rainfall for the period, operational noise management, blast results, weed management, and general air quality. The Superintendent also discussed the reportable incidents that had occurred and the resolution of those issues.

Members of the committee raised questions on rehabilitation that had occurred on site. This discussion expanded to weed management and feral pests across site and in buffer areas. The committee were told that rehabilitation had been completed to the year ending March and that Rix's Creek Mine have an ongoing weed management plan in place and employ a contract company to map the site and help develop a plan for individual weed spraying. The Group Environment Manager noted that feral pigs were only now becoming an issue for RCM and other neighbouring properties.

The Environment Superintendent outlined two complaints that were received in relation to blasting at Rix's Creek Mine. One exceedance occurred due to blasting during the reporting period. On 12 September, a blast was released in West Pit operations, resulting in an air blast overpressure result of 124.9dB at the Wrights monitor, southwest of the operation. No other monitors recorded elevated levels and there were no complaints associated with this exceedance. As part of the Superintendents presentation an overview of the fume ratings was explained to the committee.

On the 23rd October 2024 the second CCC meeting was held onsite at the RCS meeting room. General business and past requests for information were discussed as per the usual protocols of the CCC meeting and the Environmental Monitoring and Performance of the past 6 months were outlined. Group Environment Manager provided an overview of the progress of the Mod 10 project. Members asked questions concerning different aspects of the presentation.
The meeting covered off on weed and pest management, with feral pig activity becoming more prevalent in the south of the operation, and on properties around the mine. The Group Environment

Manager spoke of the numerous programs that the mine had run, which included reducing the Kangaroo population, feral dog and fox baiting and Hog-eye pig trapping.

In other business the committee discussed attracting new members to the committee. The Chair noted that interest had been shown by potential new member though they were unable to attend. A committee member raise the possibility of a mine tour for the next CCC meeting in May 2025, so the committee could see first hand the work that is being done.

A copy of the Rix's Creek Mine Community Consultative Committee meeting minutes can be located at:

https://www.bloomcoll.com.au/sustainability/environmental-management/rixs-creek-assessments/ccc-minutes

Additional community consultation that was conducted during the reporting period included company newsletters which informed community members on updates to Rix's Creek operations, which included:

- A number of advertisements in local newspapers such as the Singleton Argus and Coalface.
- Rix's Creek North continuation project newsletters
- Rix's Creek Mine Operations update newsletter

A copy of the Newsletter can be found at https://www.bloomcoll.com.au/sustainability/environmental-management/rixs-creek-assessments/newsletters-fact-sheets

Notifications on kangaroo culling and 1080 wild dog and fox baiting were also distributed to near neighbours during the reporting period.

Internal employee newsletters were also distributed throughout the workforce that provided updates for environmental initiatives occurring onsite.

The Environmental Department and Property Manager maintained a continued active presence within the local community providing updates and information on Rix's Creek operations to community members.

The Company is a financial member of the Hunter Coal Environmental Group (HCEG).

The Company is a financial member of the Hunter Valley Combined Wild Dog Association (HVCWDA) Incorporation.

The company is also part of the Upper Hunter Mining Dialogue (UHMD) in association with the NSW Minerals Council (NSWMC) which brings industry, community, and key stakeholder groups together across various projects and goals relating to:-

- Land Management
- Social Impacts and Infrastructure
- Water
- Emissions and Health

The Bloomfield Group UHMD representatives are:-

Steering Committee	Chief Development Officer – Thomas Holtz
UHMD Industry Working Group	Environment Manager – Chris Knight Environmental Superintendent – Chris Quinn

9.2 Community Contributions.

In the 12 month period 1st April 2024 to 31st March 2025, the Company provided support to 62 charitable groups and local community groups.

In the Singleton Community during that 12-month period the Company contributed to:

- Business Singleton - Business Breakfasts and events 2025
- Legacy Club Services - Singleton Legacy
- Mount Pleasant Public School P&C - Intensive Swim Program
- Police Citizens Youth Club Singleton - DRIVE program
- Salvation Army - Singleton Christmas Appeal
- Singleton Australian Football Club Inc (Roosters) equipment for juniors players
- Singleton Council - Seniors Week High Tea and Information Expo
- Singleton Fire Brigade Social Club - Santa Lolly Run 2024
- Singleton High School - Talented Athletes Program
- Singleton Historical Society & Museum - archiving and storage
- Singleton Hospital - 2x spirometers & consumables (Emergency & Medical Surgery)
- Singleton Men's Shed - defibrillator
- Singleton Neighbourhood Centre - Open Door Project Officer wages, Christmas appeal
- Singleton Netball Association - Come and Play Day (5-10 years)
- Singleton Pony Club Show Jumping Day
- Singleton Public School P&C - Custom built BBQ trailer fundraiser
- Singleton Rugby Club Juniors - subsidise junior registrations
- Singleton Show
- Special Olympics Australia (Hunter Valley) Basketball Weekend (juniors)
- The Samaritans - Christmas Lunch Singleton
- Ungooroo Aboriginal Corporation - Negative Pressure Room project GP Clinic

Over the reporting period, the Company continued to assist in the administration of the Singleton Community Economic Development Fund. Signatories to the deed, Singleton Council, Glencore and The Bloomfield Group oversee the use and provision of proceeds from the Economic Development Fund, which was developed to use the proceeds from Voluntary Planning Agreements (VPAs).

Round Four recipients announced during the reporting period will receive $295,650 for a range of community initiatives.

9.3 Community Complaints.

All complaints received are registered and investigated. Complaints are referred to the Operations Manager and Environmental Superintendent and are dealt with on an individual basis. The Company standard is to personally deal with every complainant to find a resolution to the stakeholders concerns.

During YEM 2025, eleven (11) complaints were received. This is a decrease from YEM 2024, when eighteen (18) complaints were recorded. No complaints were received in October, November 2024, January, February, and March 2025.

Of the eleven (11) complaints received in YEM 2025, two (2) were related to blast, three (3) to dust, three (3) to noise, and two (2) to lighting. One other complaint did not fall into these recognised categories for an external issue.

Refer to **Appendix 3** for the Rix's Creek Mine Community Complaints Register.

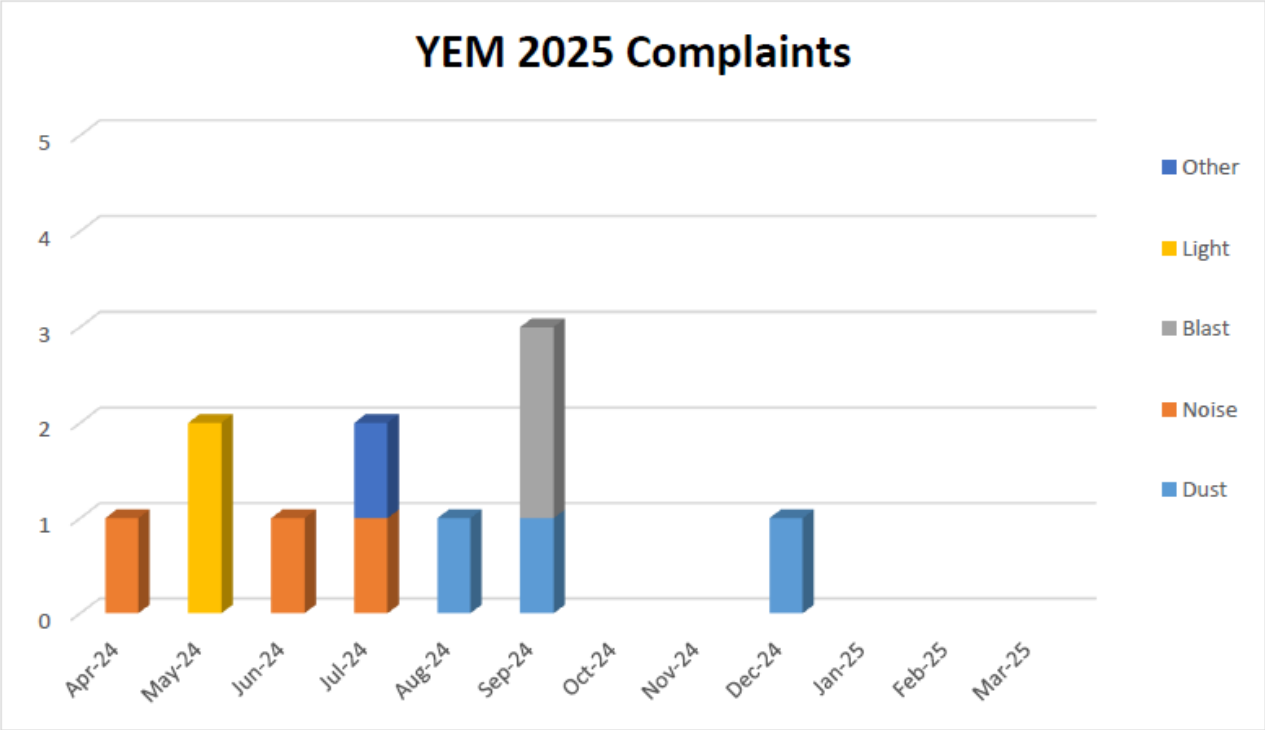


Figure 22. RCM Complaints Summary YEM 2025

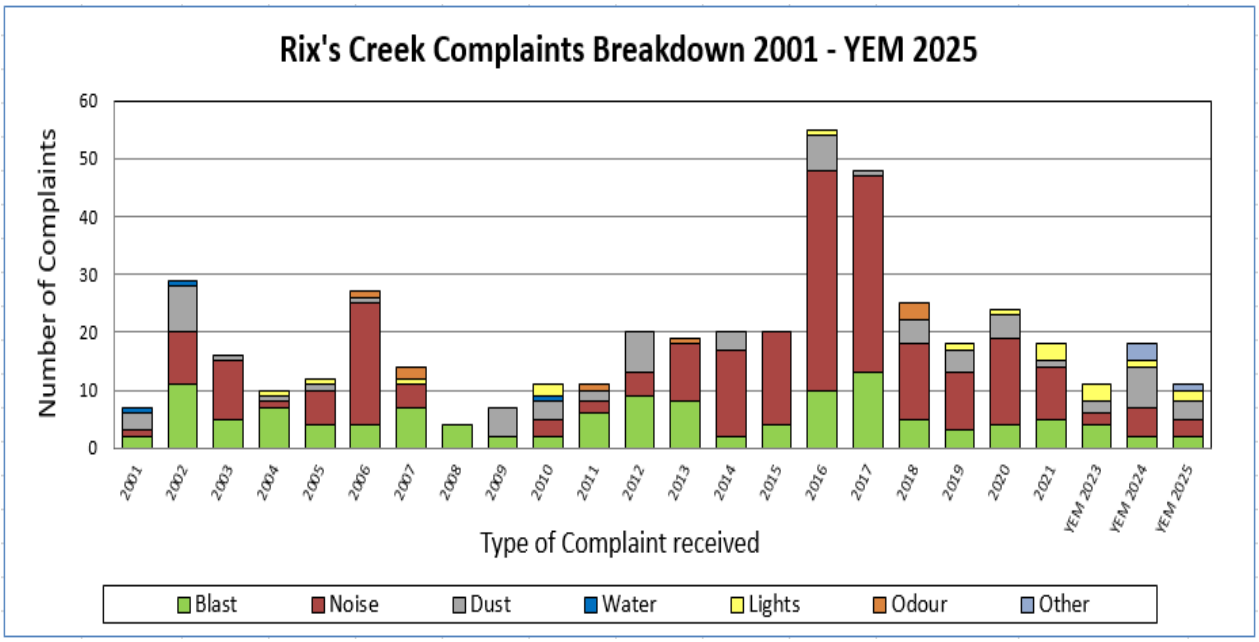


Figure 23. Summary of Rix's Creek Complaints 2001- YEM 2025

SECTION 10 – INDEPENDENT AUDIT

During 2023 an independent audit covering Rix's Creek North Project Approval (08_0102), Rix's Creek South SSD 6300, EPL 3391 and associated mining leases were independently audited by DPHI approved consultants Atlantech.

10.1 Development Consent

A summary of the compliance assessment against Rix's Creek Mine Development Consents is included below.

The Independent Audit Reports can also be viewed on the website

https://www.bloomcoll.com.au/sustainability/environmental-management/rixs-creek-assessments/independent-review

Refer below to progress made in implementing actions from the 2023 Independent Environmental Audit.

2023 Rix's Creek Mine Independent Environmental Audit
Response to Auditors Recommendations

THE Bloomfield GROUP
WE CARE. WE DELIVER.

Number	Condition	Auditors Recommendation	Bloomfield's Response
1	PA 08_0102 Schedule 3, Condition 37.	Finalise long-term security of offset areas or seek further extension from the Secretary to the date required to secure the biodiversity areas listed in PA 08_0102 Schedule 3, Condition 37.	Considerable progress has been made to date, consultation with the NSW Biodiversity Conservation Trust (BCT) regarding the Conservation Agreements remain ongoing. Rix's Creek Mine will seek an extension of time from DPE and will continue to progress with the final submission of the Conservation Ageements to finalise long-term security of offsets.
2	SSD 6300 Schedule 2, Condition B19	Update the Road Closure Plan to include provisions for minimising the duration of closures and for avoiding peak traffic periods as far as reasonable.	Road closure plan to be updated by 31/12/2024 to include provisions for minising the duration of closures and avoiding peak traffic periods.
3	SSD 6300 Schedule 2, Condition B41	Continue to investigate longer term controls to lower the water level and prevent seepage from the historic underground coal workings.	RCM will continue to investigate options for lowering the water levels in historic underground workings.
4	SSD 6300 Schedule 2, Condition B57	Update the worker induction package or develop a new training package to address all training requirements outlined in Section 6 of the Rix's Creek South Aboriginal Cultural Heritage Management Plan.	Worker induction to be updated to include additional training requirements from Section 6 of the Rix's Creek South Aboriginal Cultural Heritage Management Plan by 31/12/2024.
5	SSD 6300 Schedule 2, Condition B67	Update the Bushfire Management Plan to include a schedule for undertaking proposed bushfire mitigation work including monitoring and maintenance.	A review of the bushfire management plan will be undertaken and a schedule to assess fuel loads will be incorporated in the document by 31/06/2024.
6	EPL 3391 Condition O4.2	Replace signage in place at the effluent discharge utilisation areas with signage that states "Effluent Re-Use Area Keep Out".	Signage to be upgraded to include the exact wording "Effluent Re-Use Area Keep Out" by 31/03/2024.
7	EPL 3391 Condtion R5.6	Ensure the total tonnage of tyres disposed is included in the Heavy Plant-Tyre Disposal Report provided for future Annual Return submissions.	Total tonnage of tyres to be included in the Heavy Plant tyre Disposal Report in the next EPL3391 Annual Return.

The Road Closure Plan has been updated and identifies that road occupancy licence has certain times where temporary road closures can occur.

Total tonnage of tyres were reported in the EPL 3391 Annual Return Heavy Plant-Tyre Disposal Report submitted to EPA on 27/05/2024 and on 28/05/2025.

Finalise long term security of offset areas. On 29/10/2024, RCM updated DPHI on the considerable progress made with BCT to finalise the conservation agreement template.

The Department granted an extension of time until 31/10/2025 for the finalisation of the conservation agreements.

SECTION 11 – INCIDENTS AND NON-COMPLIANCES DURING THE YEM 2025 REPORTING PERIOD.

11.1 Official Caution Resources Regulator

On 6/1/2025, the Resources Regulator issued Rix's Creek Mine an official caution because the Rehabilitation Management Plan (RMP) did not adhere to the Form and Way guideline format for Large Mines. The updated RMP was published on The Bloomfield Group (TBG) website on 8/01/2025. The RR was informed of the update, which now complies with the guideline format.

SECTION 12 – ACTIVITIES TO BE COMPLETED IN THE NEXT REPORTING PERIOD

Mining is to continue within the West Pit open cut and Camberwell open cut area over the duration of YEM25. The mining technique at RCM is a multi-seam bench system which mines up to six seams and numerous splits, mining down to the Hebden seam. The mine plan is designed to maximise resource recovery of the whole suite of seams within the lease.

The Western out of pit dump (WOOPD) was established during YEM23 and will continue to be used during YEM25. Overburden and interburden from West Pit operations will be emplaced at the WOOPD. For YEM25 it is anticipated than another 33.29ha is planned to be disturbed at the WS15 block, South Pit dump as well as a Camberwell Pit RL150 dump. 14.87ha of rehabilitation is scheduled for completion as per the Year 1 YEM 2025 Forward Program.

In pit dumping within West pit operations will continue as coal is mined down to the Hebden seams. The in pit dump will move in a northerly direction away from the Singleton Township. As the in pit dump reaches final landform, topsoil and subsoil material from the WOOPD will be used to rehabilitate West Pit South operations.

Material will continue to be dumped in South pit Tailings Emplacement Area 3. Emplacement Area 3 is currently being capped under a High Risk Activity Notification (Work Health and Safety Mines and Petroleum Sites Regulation 2022). Material from west pit operations will be used to continue dumping in the former south pit area.

In the Camberwell Pit operations, mining will progress in the southern section down to the Upper Barrett seam. The Dulwich block at the North of the Camberwell Operations will continue to be mined. In pit dumping will continue to backfill the Camberwell Pit as the mining progresses.

Further improvements to the Rix's Creek environmental systems include the ongoing implementation and use of the INX software package to track environmental compliance requirements.

Environmental management is an ongoing process at Rix's Creek Mine with continual improvement being made to the existing systems already in place.

Table 33. Environmental Performance Improvement Activities

Environmental Performance Improvement Activities	Target Date
Rix's Creek Mine Rehabilitation Progression	Q1-Q4 YEM25
RCN BOA Audit	Q2 – Q4 YEM25
Teledata System Environmental Updates/Process Improvements	Q4 YEM25
Quality Assurance process improvements for Rehabilitation	Q4 YEM25

SECTION 13 MANAGEMENT PLAN REVIEW

Management Plans are required to be updated when a review is triggered. An update can be triggered by any of the following:-

- Action from independent environmental audit;
- Submission of Annual Review;
- Approval modification;
- Result of an environmental incident; and changes to the operation.

The management plans for both RCN and RCS as required under their relevant approvals are listed in **Table 34** along with their relevant status. Management Plans were updated to include SSD 6300 conditions during the 2021 period and for subsequent modifications as required.. Management Plans were reviewed during YEM 2025 in accordance with the conditional review requirements. Where updates or changes were identified Management Plans were updated and submitted to the relevant agencies for consultation and approval.

Table 34. Environmental Management Plans

Approval Authority	Approval Date	Review Completed YEM 25	Title **Management Plan currently under review*
	Rixs Creek North		
DPHI	21/12/2017		Biodiversity Management Plan
DPHI	19/2/2016	-	Heritage Management Plan
DPHI	16/10/2020	-	Rix's Creek North Glennies Creek and Station Creek Riparian Management Programme
DA49/94	**Rix's Creek South**		
DPHI	22/1/2014	-	Rix's Creek South Final Void Management Plan
DPHI	22/1/2014	-	Rix's Creek South Mine Closure Plan
DPHI	22/1/2014	-	Rix's Creek Mine Erosion and Sediment Control Plan
DPHI	22/1/2014	-	Rix's Creek Mine Traffic Management Plan
DPHI	22/1/2014	-	Rix's Creek South Landscape Management Plan
SSD 6300	**Rixs Creek South**		
DPHI	21/01/2021	-	Rix's Creek South Rehabilitation Strategy
DPHI	18/12/2020	-	Rix's Creek South Historic Heritage Management Plan
DPHI	23/12/2020	-	Rix's Creek South Biodiversity Management Plan
DPHI	02/09/2020	-	Rix's Creek South Aboriginal Cultural Heritage Management Plan
DPHI	17/01/2022		Rix's Creek South Coalceous Material Haulage Management Plan
DPHI	29/01/2021		Rix's Creek South Rehabilitation Strategy
	RCM Integrated Management Plan to cover Rixs Creek North & Rixs Creek South Operation		
DPHI	11/03/2021		Environmental Management Strategy
RR	8/01/2025		RCM Rehabilitation Management Plan
DPHI	6/12/2023	21/11/2023	Noise Management Plan
DPHI	17/6/2021	-	Blast Management Plan
DPHI	23/12/2020	31/03/2024*	Air Quality & Greenhouse Gas Management Plan
DPHI	14/11/2024		Water Management Plan
DPHI	14/09/2021	-	Bushfire Management Plan
LGA	17/08/2020	-	Social Impact Management Plan

DPHI	30/11/2021		RCM Exploration Activities Management Plan

Appendix 1

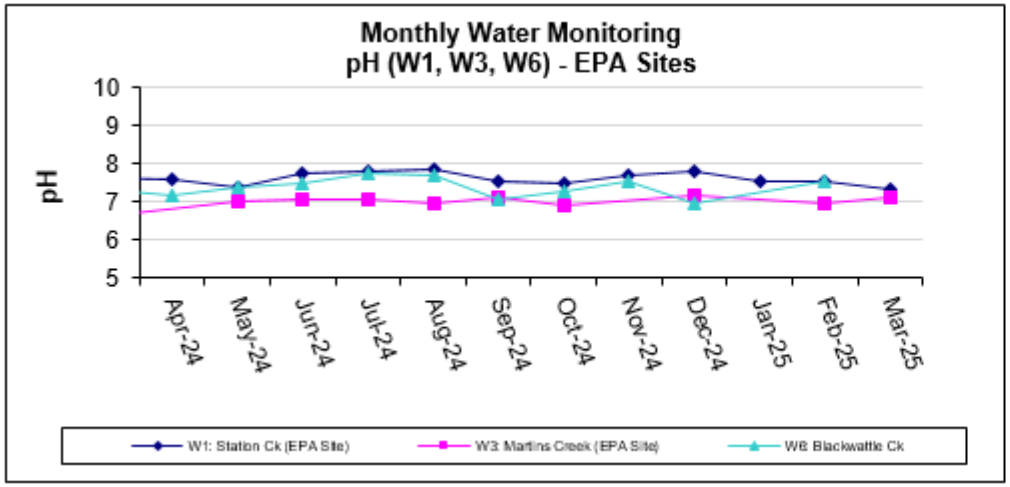
Rix's Creek Complex Surface Water Sampling Results

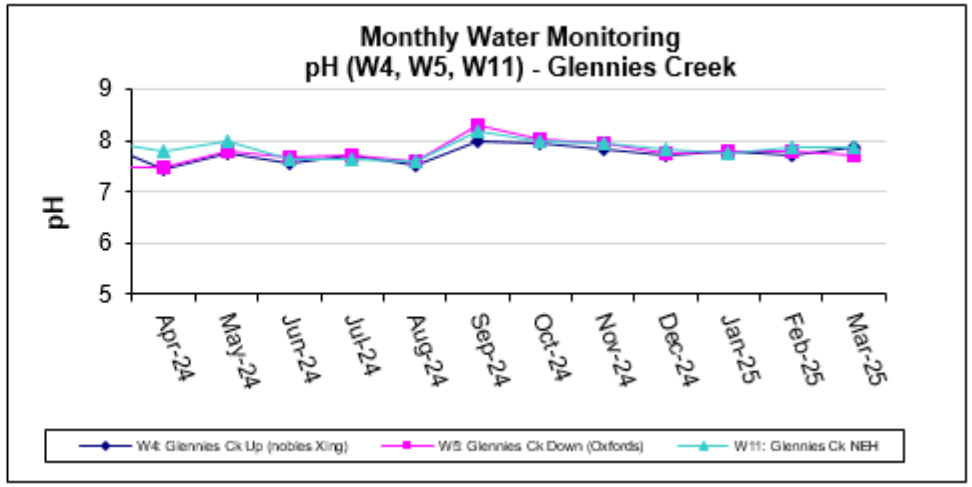
Sampled by RCN																	
Date Sampled	Month Sampled	**W1**: Station Ck (EPA Site)				**W3**: Martins Creek (EPA Site)				**W4**: Glennies Ck Up (nobles Xing)				**W5**: Glennies Ck Down (Oxfords)			
		pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l
10/04/2024	Apr-24	7.60	345	8	282					7.42	509	15	338	7.47	495	14	320
6/05/2024	May-24	7.39	306	13	275	7.02	68	514	758	7.76	730	10	406	7.78	649	11	378
12/06/2024	Jun-24	7.77	1290	13	843	7.07	316	21	311	7.57	665	10	379	7.67	656	11	376
10/07/2024	Jul-24	7.80	1120	6	663	7.09	200	17	329	7.72	455	25	284	7.71	436	26	287
7/08/2024	Aug-24	7.84	1240	<5	859	6.95	290	21	344	7.51	367	47	296	7.58	384	45	308
4/09/2024	Sep-24	7.54	1470	<5	804	7.10	596	40	451	8.00	787	<5	402	8.28	777	<5	405
2/10/2024	Oct-24	7.51	1110	15	694	6.90	1570	18	1180	7.93	631	16	391	8.01	706	10	431
7/11/2024	Nov-24	7.71	1270	8	702					7.82	431	12	228	7.93	473	13	267
4/12/2024	Dec-24	7.79	1340	12	799	7.15	208	58	596	7.70	394	17	246	7.75	413	15	248
7/01/2025	Jan-25	7.56	1720	12	1260					7.77	268	12	176	7.78	262	13	178
5/02/2025	Feb-25	7.55	539	<5	538	6.94	247	87	566	7.72	532	9	362	7.8	569	8	377
4/03/2025	Mar-25	7.34	612	8	438	7.12	211	48	642	7.85	355	<5	196	7.72	318	<5	224

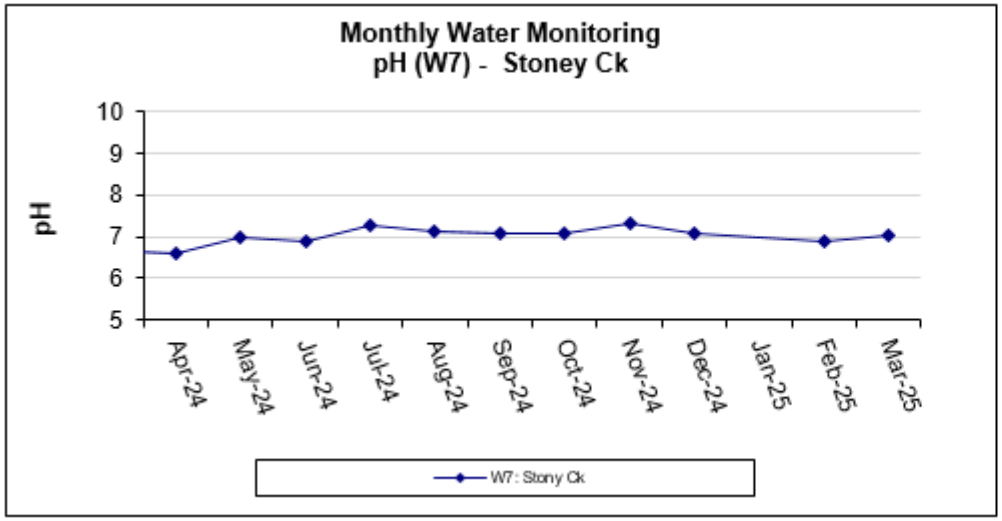
Sampled by RCN																			
Date Sampled	Month Sampled	**W6**: Blackwattle Ck				**W7**: Stony Ck				**W10**: Dam C4 (EPA Site)					**W11**: Glennies Ck NEH			
		pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	Disch. Flow	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l
10/04/2024	Apr-24	7.18	6810	6	4720	6.62	292	15	270		8.92	1440	22	832	7.8	467	14	297
6/05/2024	May-24	7.39	5040	12	3210	7	210	14	234		8.74	1500	6	828	7.99	798	10	459
12/06/2024	Jun-24	7.48	1650	11	962	6.91	387	23	342		7.4	1270	13	722	7.64	710	14	398
10/07/2024	Jul-24	7.77	671	12	559	7.28	338	14	312		7.47	1120	9	640	7.64	511	29	313
7/08/2024	Aug-24	7.71	1240	12	854	7.13	394	10	370		7.54	1240	<5	816	7.61	414	40	312
4/09/2024	Sep-24	7.05	13700	10	7860	7.07	805	10	477		7.99	1500	<5	831	8.16	754	<5	392
2/10/2024	Oct-24	7.28	12100	<5	7900	7.1	472	7	292		8.4	1370	6	924	8.00	638	8	404
7/11/2024	Nov-24	7.53	12200	14	7670	7.33	947	5	523		8.38	1460	10	827	7.95	510	13	285
4/12/2024	Dec-24	6.94	23100	13	17700	7.08	944	18	578		8.63	1500	7	877	7.84	428	13	266
7/01/2025	Jan-25										8.84	1610	14	1060	7.74	266	16	176
5/02/2025	Feb-25	7.53	13400	12	9810	6.89	1220	20	886		8.77	1600	<5	1140	7.87	602	9	410
4/03/2025	Mar-25					7.02	1550	9	881		8.94	1630	<5	913	7.86	390	<5	210

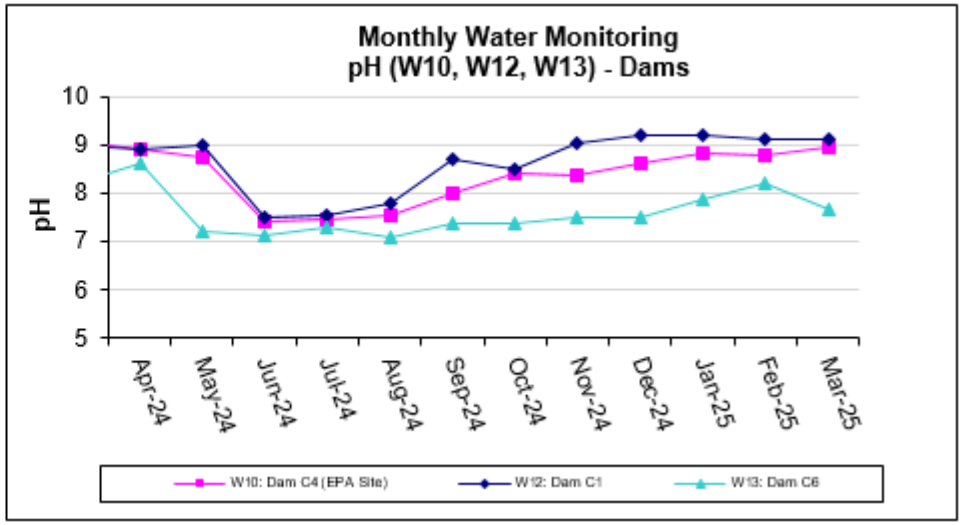
Sampled by RCN																			
Date Sampled	Month Sampled	**W12**: Dam C1				**W13**: Dam C6				**W14**: Dam C3				**W15**: Dam C6A				**W16**: Dam C8 (South Pit)			
		pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l
10/04/2024	Apr-24	8.93	3500	14	2150	8.61	391	41	272	9.36	4190	29	2500	7.04	270	46	354	9.1	5330	144	3960
6/05/2024	May-24	8.98	3480	10	2090	7.2	258	13	182	7.63	1550	20	920	6.88	177	39	236	8.98	2980	58	2100
12/06/2024	Jun-24	7.5	1030	11	594	7.12	213	10	192	7.37	951	11	592	6.98	216	27	224	7.8	2790	5	1870
10/07/2024	Jul-24	7.53	1450	14	819	7.28	214	<5	186	7.62	1420	16	784	7.14	223	<5	212	8.08	3240	<5	2080
7/08/2024	Aug-24	7.81	1440	14	945	7.07	208	<5	191	7.87	1910	342	1100	7.09	230	7	222	7.99	3310	6	2280
4/09/2024	Sep-24	8.71	1730	12	949	7.39	238	6	166	8.06	3440	120	2410	7.23	256	16	190	8.18	3400	16	2480
2/10/2024	Oct-24	8.50	1890	9	1140	7.39	243	<5	181	8.42	3120	82	1960	7.41	252	7	208	8.22	3940	21	2500
7/11/2024	Nov-24	9.04	2180	8	1260	7.52	341	11	205	8.76	4480	68	3000	7.55	294	8	206	8.47	3960	26	2720
4/12/2024	Dec-24	9.2	2600	6	1500	7.49	303	31	241					7.39	317	6	244	8.76	4570	14	3180
7/01/2025	Jan-25	9.22	2780	8	2080	7.88	404	46	376					7.64	402	14	388	9.23	4960	35	3360
5/02/2025	Feb-25	9.12	2870	<5	2020	8.21	368	34	413	8.26	6270	22	4780	7.72	336	19	372	9.45	5010	32	3400
4/03/2025	Mar-25	9.12	3140	<5	1770	7.67	402	46	296	9.3	5230	206	3640	7.52	356	<5	250	9.31	5230	103	3730

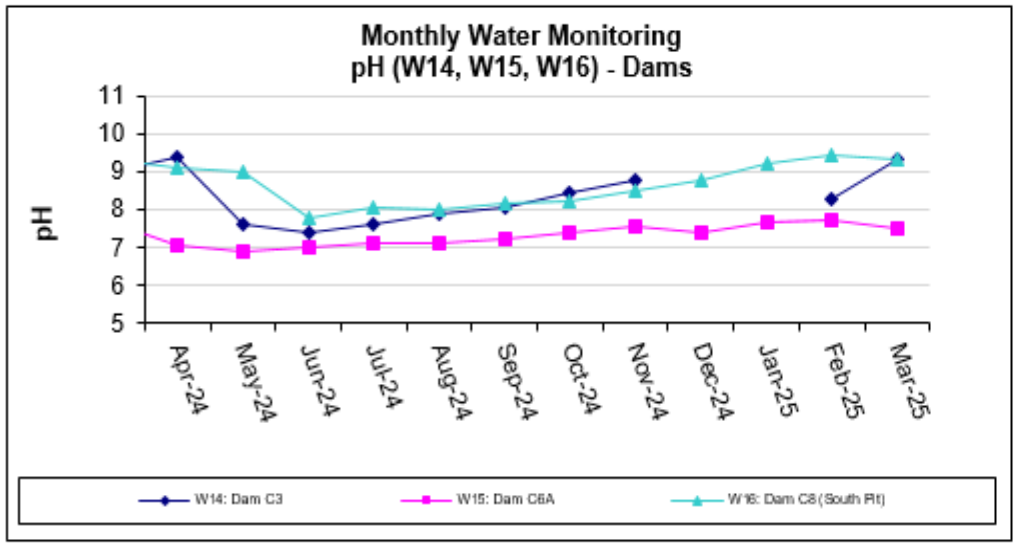
Sampled by RCN																			
Date Sampled	Month Sampled	**W17**: Dam C2				**W18**: Dam C5				**W19**: Dam D1				**W20**: North Dam 1				**W21**: North Dam 2			
		pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l	pH	EC uS/cm	TSS mg/l	TDS mg/l
10/04/2024	Apr-24	9.2	2300	14	1370	7.81	455	18	317	9.05	7730	22	5190	8.43	8990	13	5990	7.52	631	67	533
6/05/2024	May-24	7.84	1800	28	1040	7.42	248	22	188	8.98	6700	34	4410	8.31	8200	12	5760	7.42	588	15	416
12/06/2024	Jun-24	6.97	763	17	471	7.1	198	16	185	8.79	5800	34	3350	8.29	8120	<5	5590	7.53	382	8	304
10/07/2024	Jul-24	7.32	1170	<5	676	7.28	230	<5	206	8.89	5700	13	3670	8.26	8440	7	5440	7.5	364	9	248
7/08/2024	Aug-24	7.50	1410	24	940	7.28	244	<5	225	8.8	5810	<5	4070	8.42	8250	8	5460	7.40	362	<5	272
4/09/2024	Sep-24	7.86	1680	9	911	7.52	280	8	186	8.73	6660	8	3920	8.44	7370	6	5650	7.42	371	<5	248
2/10/2024	Oct-24	8.29	1690	12	1110	7.84	288	<5	208	8.78	6830	16	4480	8.44	7900	8	5140	7.57	376	<5	260
7/11/2024	Nov-24	8.68	1960	<5	1100	7.91	329	9	208	8.84	7240	11	4630	8.59	9060	33	5920	7.48	450	97	390
4/12/2024	Dec-24	9.8	1990	<5	1200	7.82	349	<5	256	9.01	7710	6	5110	7.99	523	16	326	8.48	9940	19	6830
7/01/2025	Jan-25	9.73	2170	<5	1530	8.17	438	12	397	8.98	8280	12	6170	9.07	9850	16	6210	8.51	616	11	341
5/02/2025	Feb-25	9.84	2160	<5	1520	8.66	400	5	269	9.02	8140	<5	6130	9.21	9740	7	6660	8.43	552	12	306
4/03/2025	Mar-25	9.58	2220	<5	1220	7.86	422	<5	282	8.88	8430	<5	6130	8.76	9260	20	6670	8.15	575	26	341

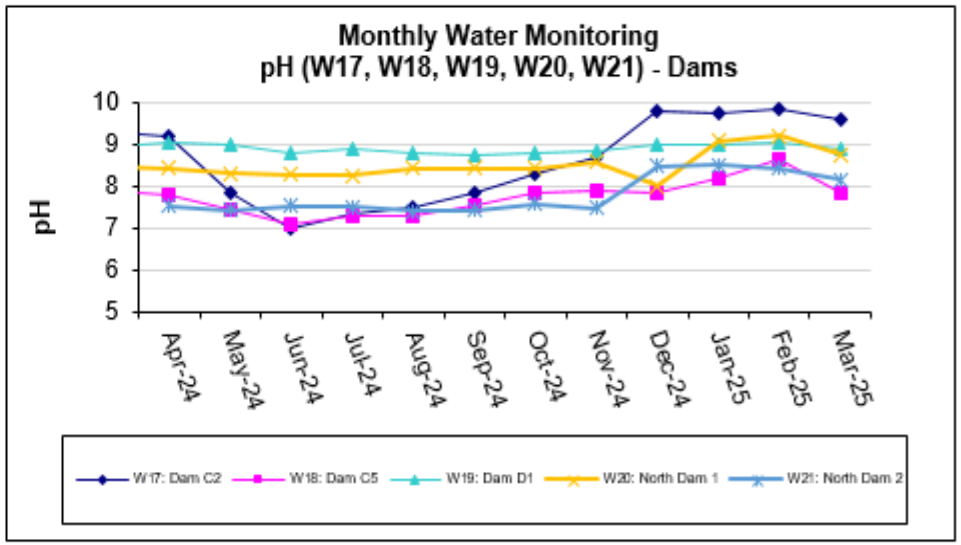

Monthly Water Monitoring
pH (W1, W3, W6) - EPA Sites
pH
10
9
8
7
6
5
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W1: Station Ck (EPA Site)
W3: Martins Creek (EPA Site)
W6: Blackwattle Ck

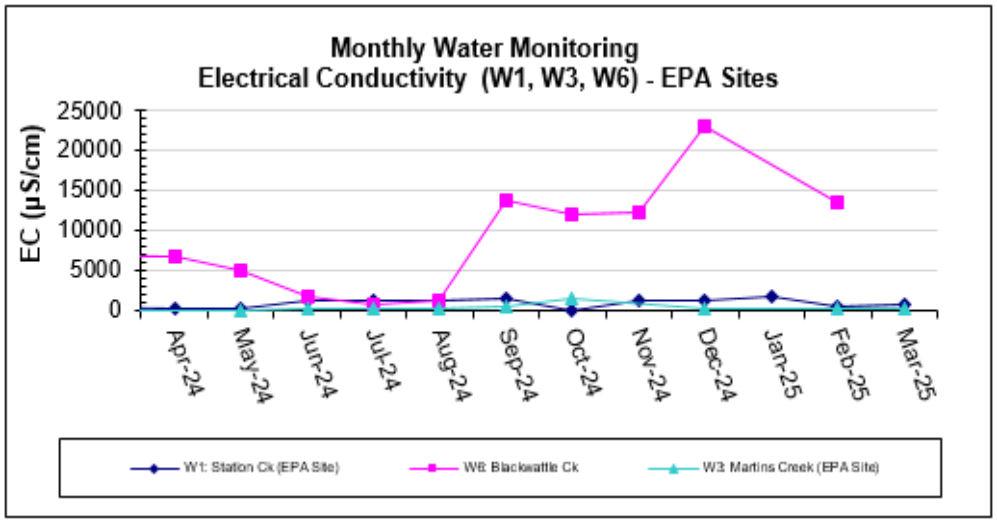

Monthly Water Monitoring
pH (W4, W5, W11) - Glennies Creek
pH
9
8
7
6
5
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W4: Glennies Ck Up (nobles Xing)
W5: Glennies Ck Down (Oxfords)
W11: Glennies Ck NEH

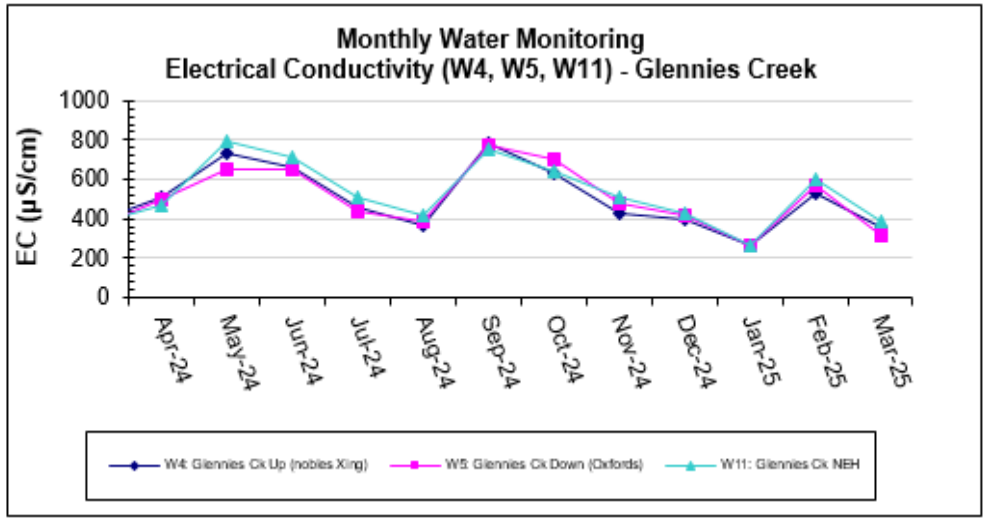

Monthly Water Monitoring
pH (W7) - Stoney Ck
pH
10
9
8
7
6
5
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W7: Stony Ck

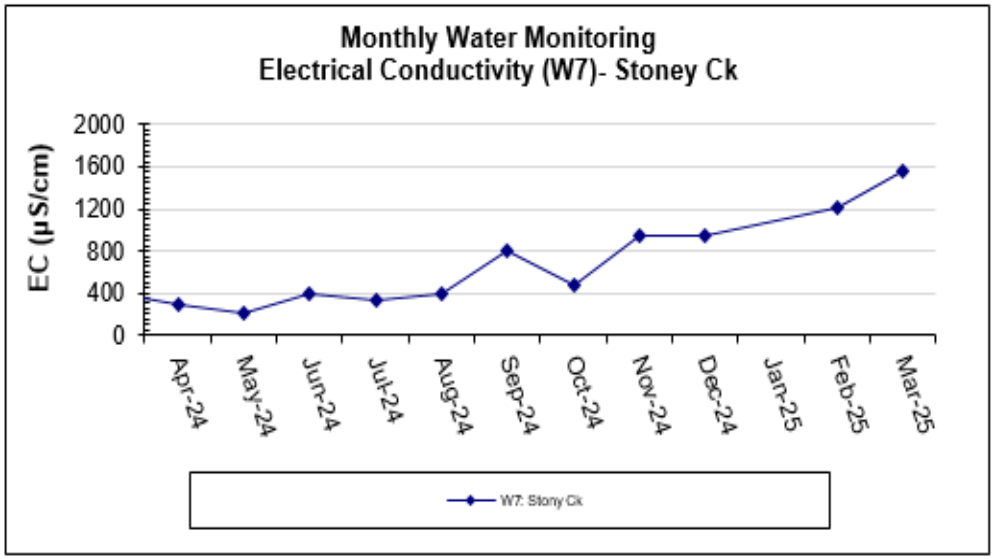

Monthly Water Monitoring
pH (W10, W12, W13) - Dams
pH
10
9
8
7
6
5
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W10: Dam C4 (EPA Site)
W12: Dam C1
W13: Dam C6

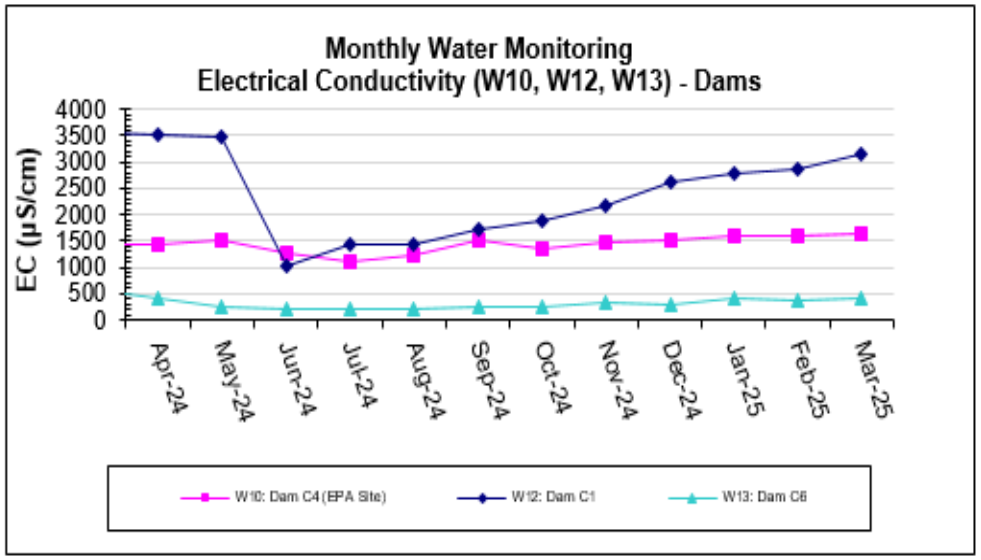

Monthly Water Monitoring
pH (W14, W15, W16) - Dams
pH
11
10
9
8
7
6
5
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W14: Dam C3
W15: Dam C6A
W16: Dam C8 (South Pit)

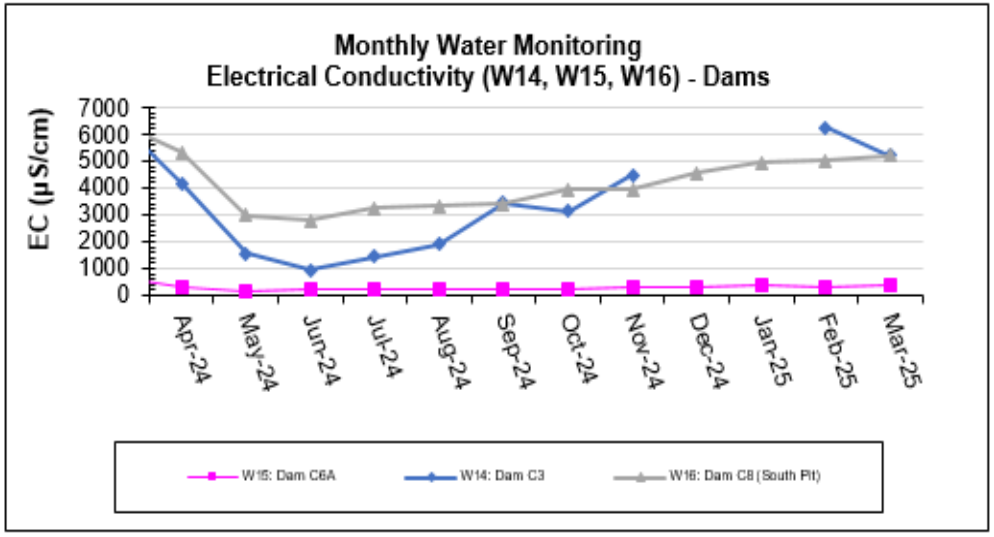

Monthly Water Monitoring
pH (W17, W18, W19, W20, W21) - Dams
pH
10
9
8
7
6
5
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W17: Dam C2
W18: Dam C5
W19: Dam D1
W20: North Dam 1
W21: North Dam 2

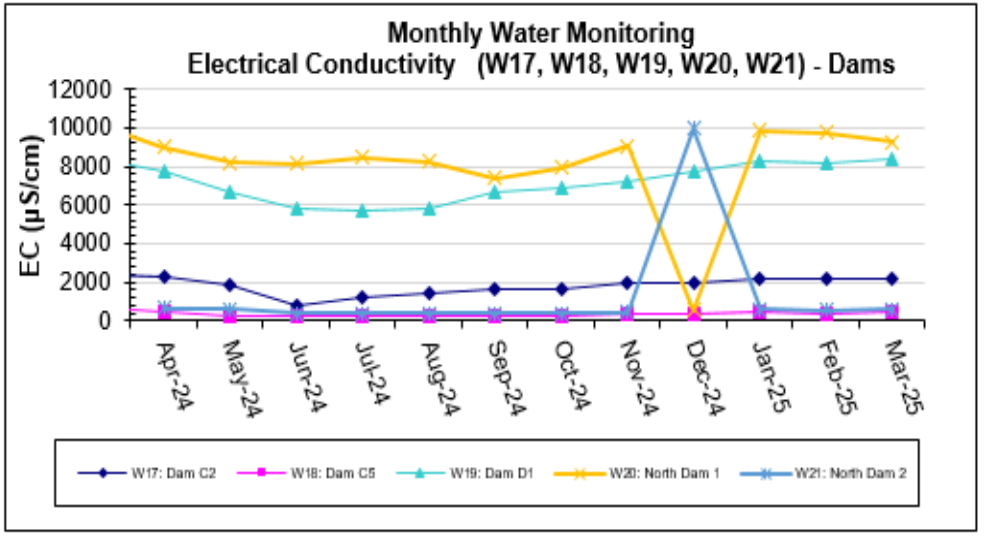

Monthly Water Monitoring
Electrical Conductivity (W1, W3, W6) - EPA Sites
EC (µS/cm)
25000
20000
15000
10000
5000
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W1: Station Ck (EPA Site)
W6: Blackwattle Ck
W3: Martins Creek (EPA Site)

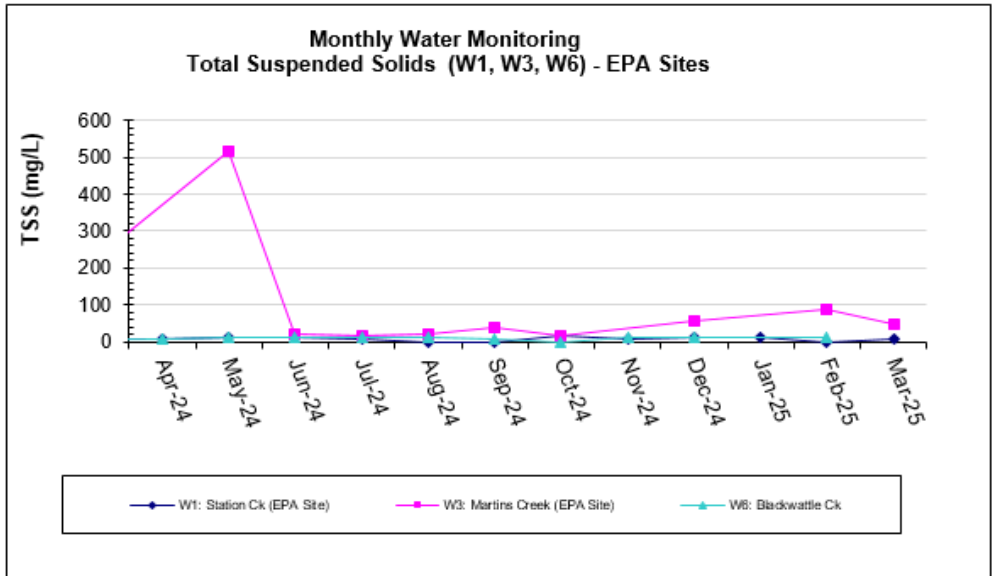

Monthly Water Monitoring
Electrical Conductivity (W4, W5, W11) - Glennies Creek
EC (µS/cm)
1000
800
600
400
200
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W4: Glennies Ck Up (nobles Xing)
W5: Glennies Ck Down (Oxfords)
W11: Glennies Ck NEH

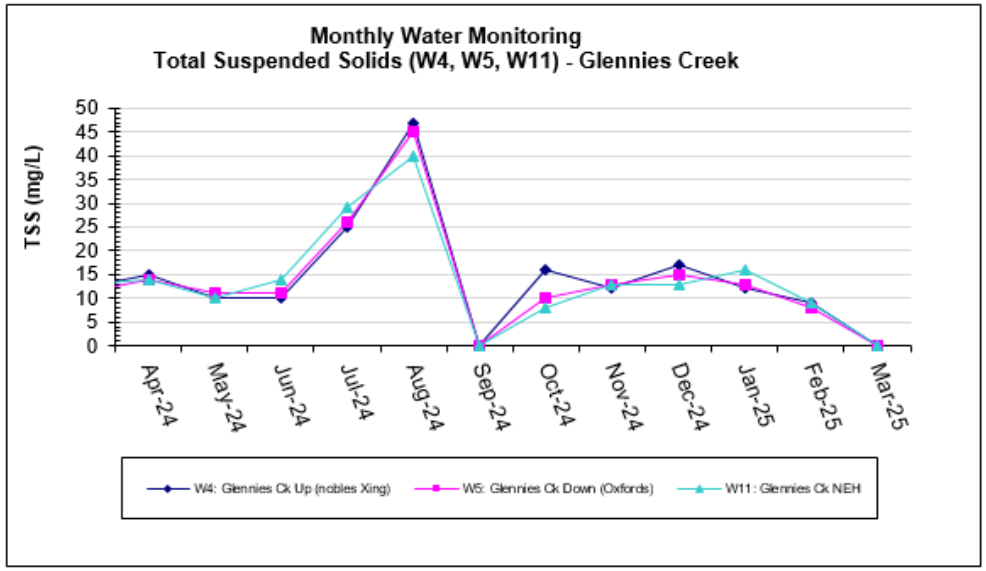

Monthly Water Monitoring
Electrical Conductivity (W7)- Stoney Ck
EC (µS/cm)
2000
1600
1200
800
400
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W7: Stony Ck

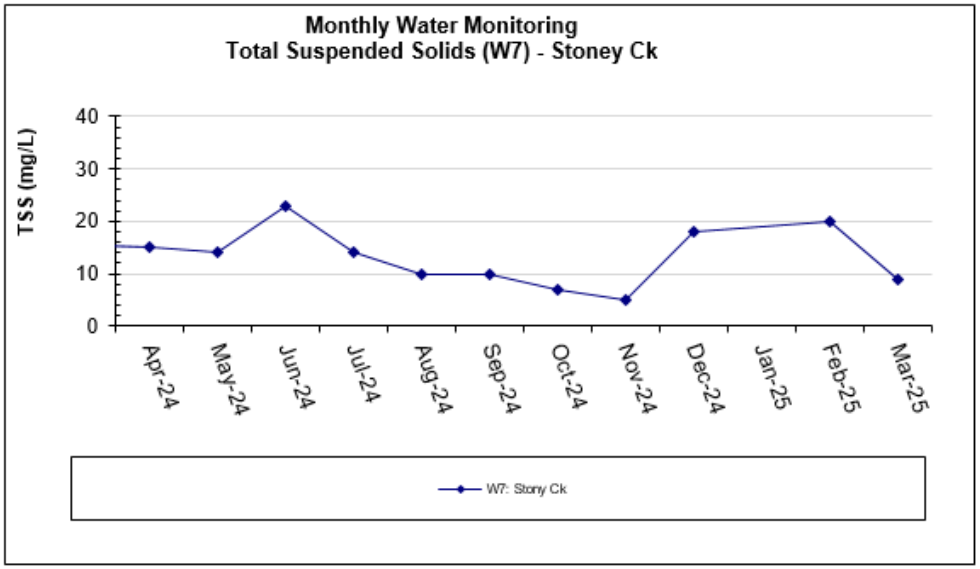

Monthly Water Monitoring
Electrical Conductivity (W10, W12, W13) - Dams
EC (µS/cm)
4000
3500
3000
2500
2000
1500
1000
500
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W10: Dam C4 (EPA Site)
W12: Dam C1
W13: Dam C6

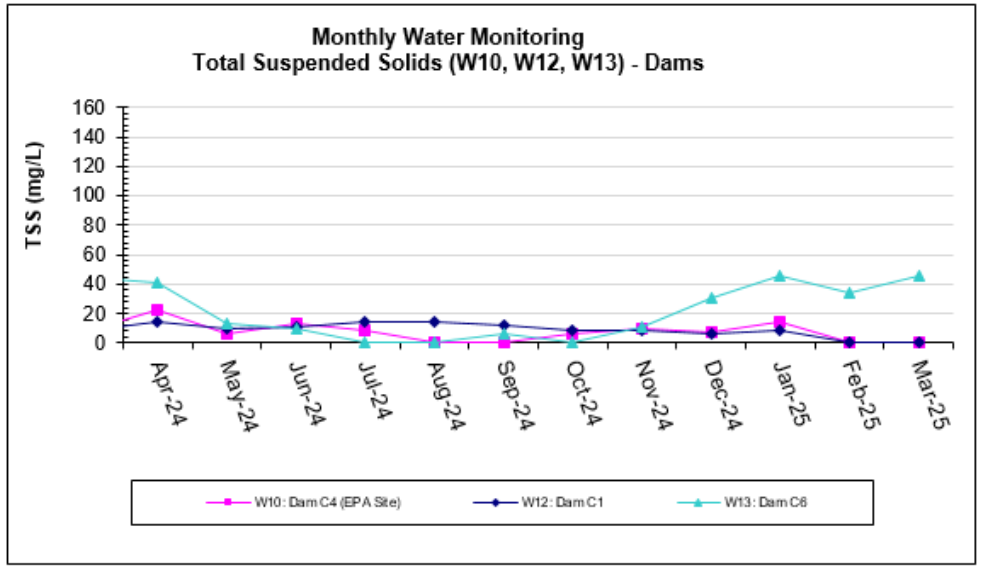

Monthly Water Monitoring
Electrical Conductivity (W14, W15, W16) - Dams
EC (µS/cm)
7000
6000
5000
4000
3000
2000
1000
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W15: Dam C6A
W14: Dam C3
W16: Dam C8 (South Pit)

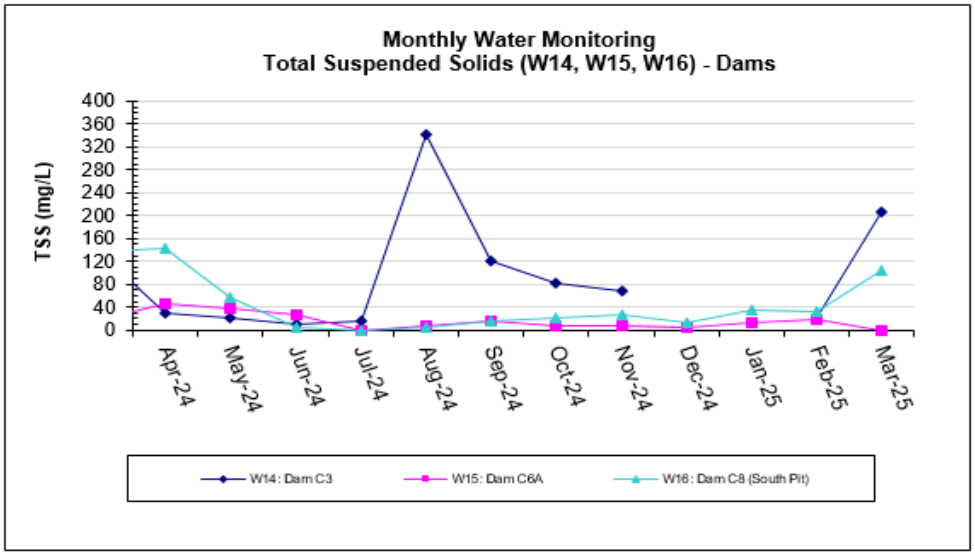

Monthly Water Monitoring
Electrical Conductivity (W17, W18, W19, W20, W21) - Dams
EC (µS/cm)
12000
10000
8000
6000
4000
2000
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W17: Dam C2
W18: Dam C5
W19: Dam D1
W20: North Dam 1
W21: North Dam 2

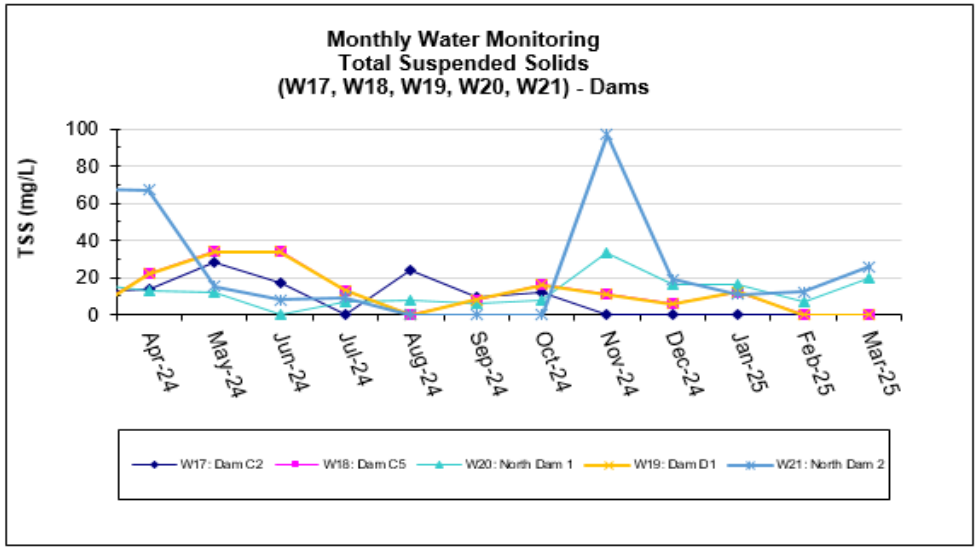

Monthly Water Monitoring
Total Suspended Solids (W1, W3, W6) - EPA Sites
TSS (mg/L)
600
500
400
300
200
100
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W1: Station Ck (EPA Site)
W3: Martins Creek (EPA Site)
W6: Blackwattle Ck

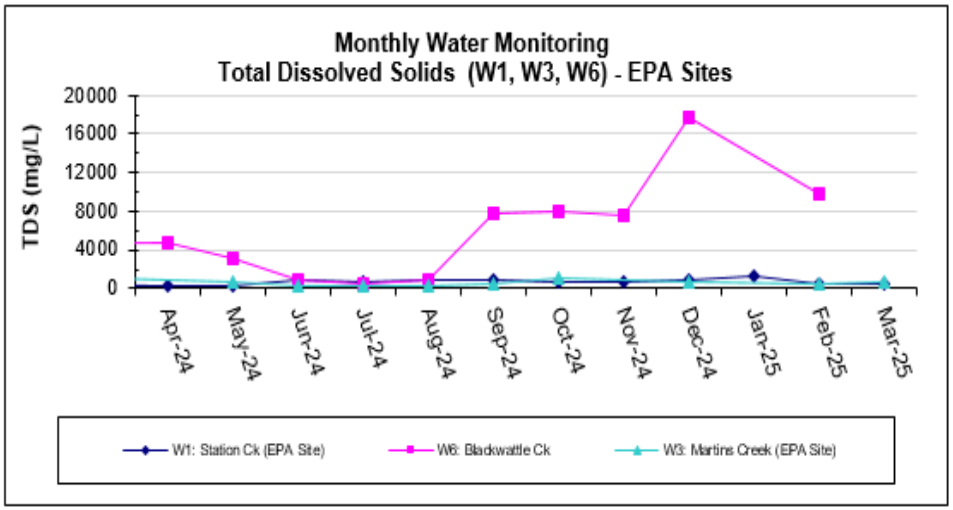

Monthly Water Monitoring
Total Suspended Solids (W4, W5, W11) - Glennies Creek
TSS (mg/L)
50
45
40
35
30
25
20
15
10
5
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W4: Glennies Ck Up (nobles Xing)
W5: Glennies Ck Down (Oxfords)
W11: Glennies Ck NEH

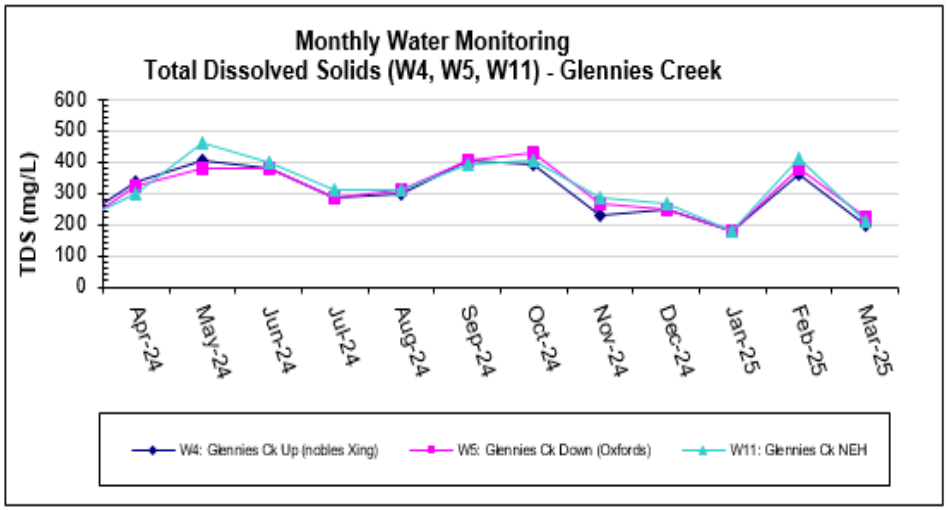

Monthly Water Monitoring
Total Suspended Solids (W7) - Stoney Ck
TSS (mg/L)
40
30
20
10
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W7: Stony Ck

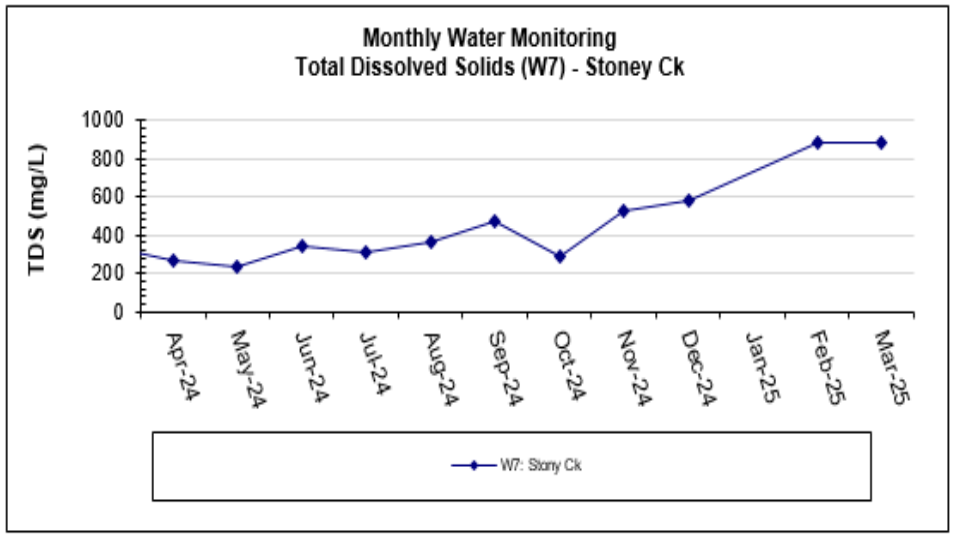

Monthly Water Monitoring
Total Suspended Solids (W10, W12, W13) - Dams
TSS (mg/L)
160
140
120
100
80
60
40
20
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W10: Dam C4 (EPA Site)
W12: Dam C1
W13: Dam C6

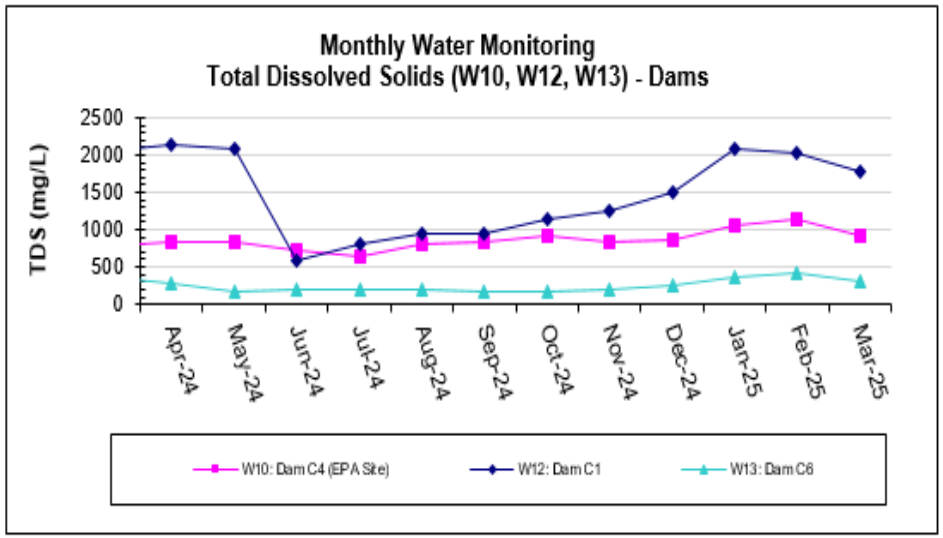

Monthly Water Monitoring
Total Suspended Solids (W14, W15, W16) - Dams
TSS (mg/L)
400
360
320
280
240
200
160
120
80
40
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W14: Dam C3
W15: Dam C6A
W16: Dam C8 (South Pit)

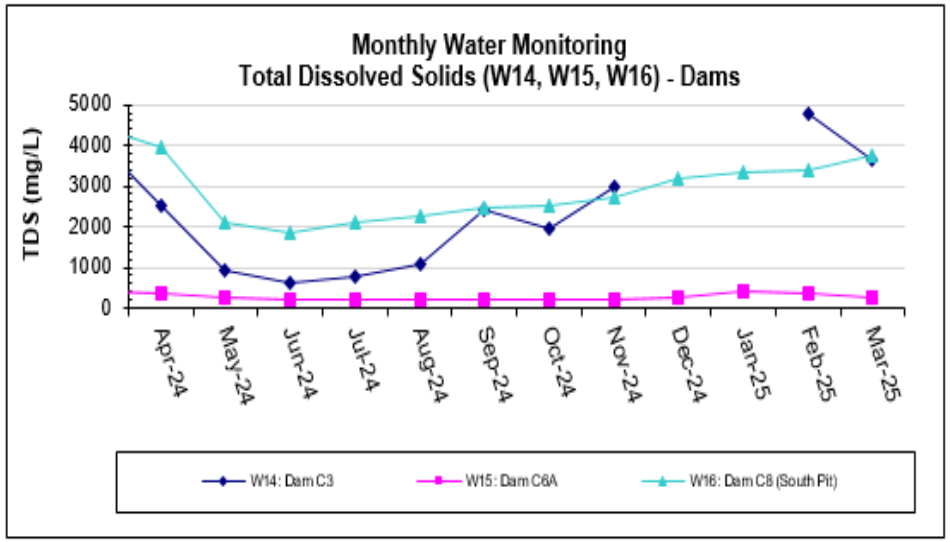

Monthly Water Monitoring
Total Suspended Solids
(W17, W18, W19, W20, W21) - Dams
TSS (mg/L)
100
80
60
40
20
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W17: Dam C2
W18: Dam C5
W20: North Dam 1
W19: Dam D1
W21: North Dam 2

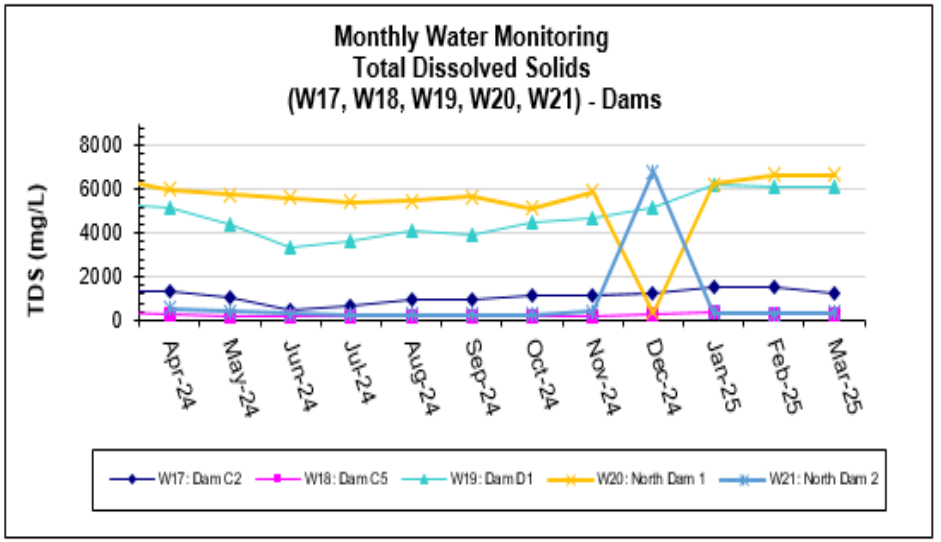

Monthly Water Monitoring
Total Dissolved Solids (W1, W3, W6) - EPA Sites
TDS (mg/L)
20000
16000
12000
8000
4000
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W1: Station Ck (EPA Site)
W6: Blackwattle Ck
W3: Martins Creek (EPA Site)


Monthly Water Monitoring
Total Dissolved Solids (W4, W5, W11) - Glennies Creek
TDS (mg/L)
600
500
400
300
200
100
0
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W4: Glennies Ck Up (nobles Xing)
W5: Glennies Ck Down (Oxfords)
W11: Glennies Ck NEH


Monthly Water Monitoring
Total Dissolved Solids (W7) - Stoney Ck
TDS (mg/L)
0
200
400
600
800
1000
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W7: Stony Ck


Monthly Water Monitoring
Total Dissolved Solids (W10, W12, W13) - Dams
TDS (mg/L)
0
500
1000
1500
2000
2500
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W10: Dam C4 (EPA Site)
W12: Dam C1
W13: Dam C6


Monthly Water Monitoring
Total Dissolved Solids (W14, W15, W16) - Dams
TDS (mg/L)
0
1000
2000
3000
4000
5000
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W14: Dam C3
W15: Dam C6A
W16: Dam C8 (South Pit)

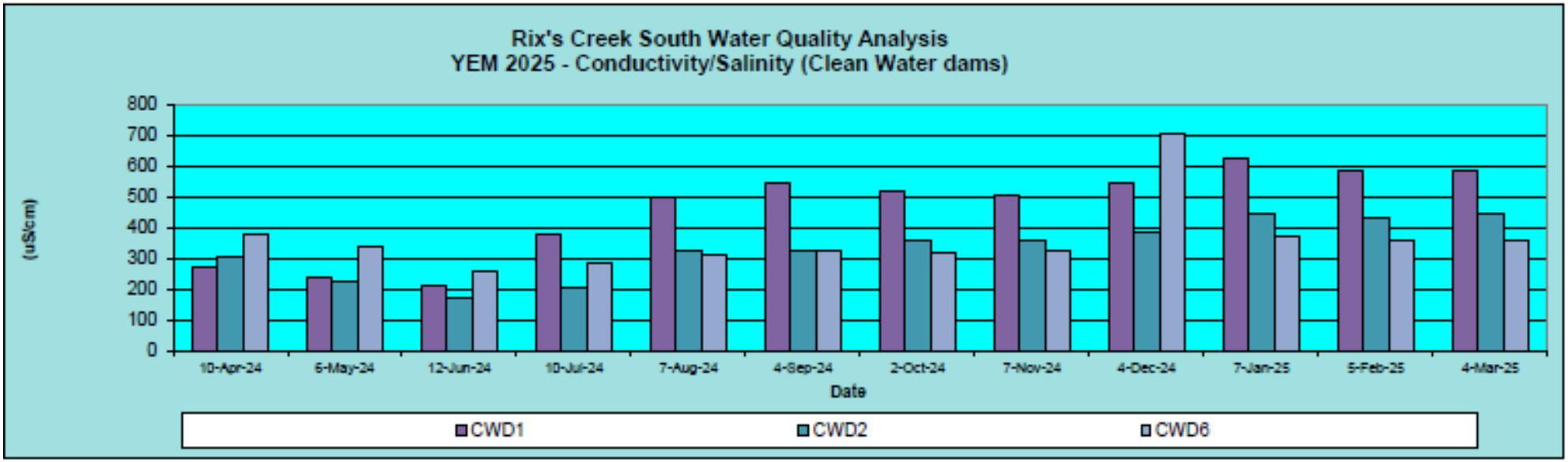

Monthly Water Monitoring
Total Dissolved Solids
(W17, W18, W19, W20, W21) - Dams
TDS (mg/L)
0
2000
4000
6000
8000
Apr-24
May-24
Jun-24
Jul-24
Aug-24
Sep-24
Oct-24
Nov-24
Dec-24
Jan-25
Feb-25
Mar-25
W17: Dam C2
W18: Dam C5
W19: Dam D1
W20: North Dam 1
W21: North Dam 2

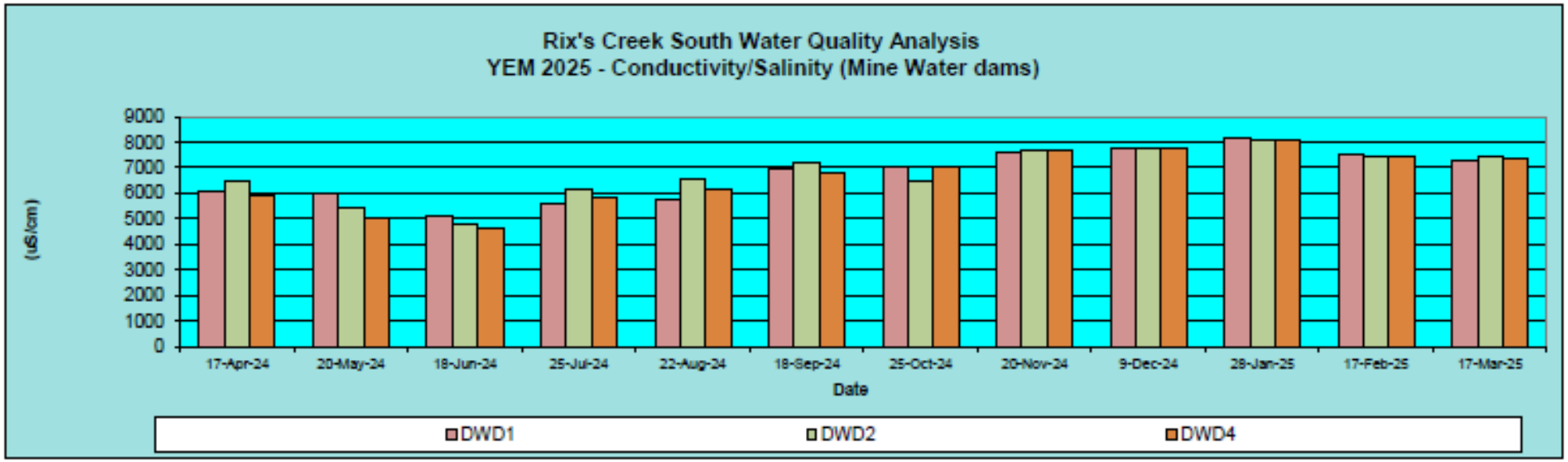
Date	RAILWAY UNDERPASS				NEW ENGLAND HIGHWAY				MAISON DIEU BRIDGE				CLEAN WATER DAM No:- 1			
17/04/2024	7.80	839	13	500	7.50	1090	19	640	7.60	1160	37	714	7.5	272	16	212
20/05/2024	7.40	457	29	398	7.40	1030	6	585	7.20	1200	27	711	7.1	235	22	248
18/06/2024	6.90	323	15	215	7.30	1040	7	584	7.20	1980	24	1100	6.8	208	7	261
25/07/2024	7.34	457	<5	282	7.28	1320	<5	721	7.19	2970	12	1690	7.06	379	6	310
22/08/2024	7.57	476	5	476	7.65	1900	8	1030	7.37	1660	18	932	7.21	496	13	386
18/09/2024	7.90	602	<5	318	7.77	2100	7	1130	7.48	5900	6	3290	7.54	547	12	312
25/10/2024	7.93	640	<5	360	7.48	3060	12	1700	7.43	1360	24	818	7.67	518	<5	339
20/11/2024	8.84	664	<5	410	7.74	3010	8	1710	7.53	1090	<5	633	9.14	506	<5	312
9/12/2024	8.65	712	44	393					7.74	1510	7	798	9.44	545	<5	329
14/01/2025	9.41	910	10	485					7.31	1020	17	559	9.03	625	77	336
17/02/2025	9.25	893	<5	477					7.30	909	26	572	9.55	588	8	299
1/03/2025	9.18	959	9	550					7.48	1400	8	757	9.61	586	6	352

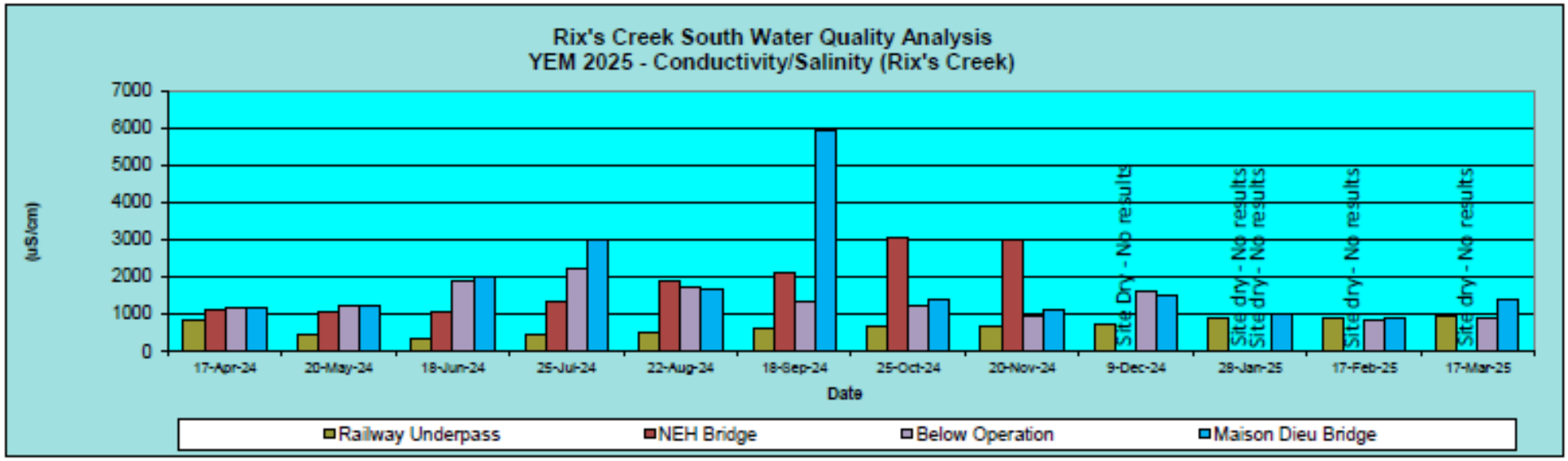
CLEAN WATER DAM No:- 2				DWD No:-4				CLEAN WATER DAM No:- 6				DWD No 1				DWD No 2			
7.4	304	8	216	8.9	5940	15	3690	8.6	381	10	250	8.7	6070	11	3740	8.6	6470	21	3860
7	227	8	190	8.9	5010	25	2990	7.1	337	9	236	8.6	5990	5	3480	8.6	5440	14	3240
6.6	169	5	194	8.7	4630	141	2830	7	258	10	218	8.4	5140	5	2960	8.6	4760	38	3000
6.95	203	7	217	8.43	5860	12	3650	7.06	282	<5	240	8.44	5590	<5	3470	8.33	6120	875	3880
7.02	325	8	269	8.58	6180	5	3860	7.54	308	7	265	8.65	5790	5	3320	8.59	6520	27	4220
7.44	323	21	229	8.36	6840	7	4360	7.5	324	14	240	8.54	6990	<5	4430	8.43	7200	24	4690
7.39	359	13	255	8.66	7020	11	4320	8.5	318	12	248	8.48	7070	12	4260	8.64	6480	58	4320
7.48	359	<5	246	8.65	7660	<5	4830	8.93	324	<5	242	8.68	7570	<5	4880	8.64	7710	28	4920
7.6	384	31	243	8.82	7750	13	4980	8.44	708	14	398	8.71	7750	10	4990	8.80	7730	20	4850
7.62	442	32	245	8.9	8050	38	5320	9.33	368	26	209	8.93	8190	28	5290	8.96	8100	19	5310
8.05	431	5	226	8.99	7430	28	4750	9.58	357	77	198	9.00	7530	17	4780	8.98	7430	53	4750
8.35	446	<5	273	8.77	7380	25	4760	9.41	361	10	224	8.97	7280	28	4710	8.51	7470	54	4940

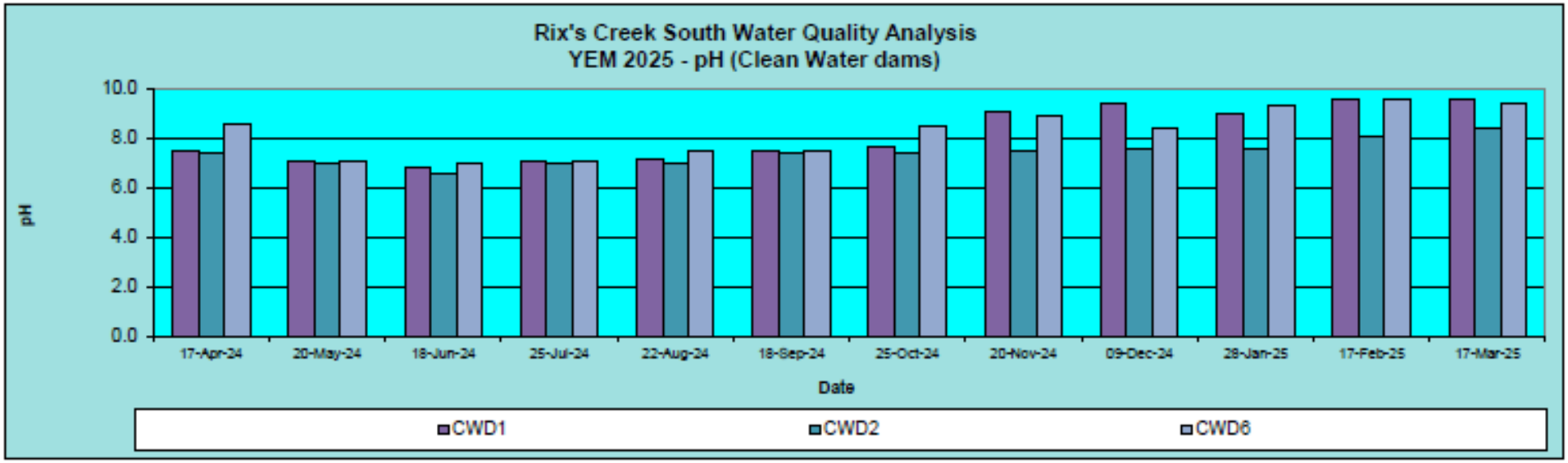
BELOW OPERATIONS				INDUSTRIAL ESTATE CATCHMENT				ABOVE INDUSTRIAL CATCHMENT				Turkey's Nest Dam				Dead Man's Gully (Dam)			
8.3	1160	5	620	8.3	1130	7	593	8.2	2000	13	1150	8.1	4440	13	2720	7.8	309	42	272
8	1230	23	902	7.8	1190	18	721	7.6	1530	8	875	8.7	4800	6	2850	7	188	27	243
8	1860	9	1070	7.9	1770	7	945	7.7	2070	10	1160	8.5	5190	12	3180	6.6	149	43	243
8.01	2210	17	1200	8.08	1990	<5	1080	7.53	2430	6	1390	8.32	6980	7	4440	6.95	159	16	220
8.05	1700	7	991	8.32	1320	9	738	7.78	2240	8	1250	8.92	6070	7	3750	6.93	171	5	233
9.28	1320	8	670					7.89	5020	<5	2860	8.46	7690	9	4860	7.36	188	22	172
7.85	1200	27	666	7.71	1200	28	686	7.96	15900	30	10100	8.6	6150	24	3700	7.54	200	8	179
8.18	924	7	525	7.87	632	<5	380	7.99	19300	<5	12600	8.6	6450	6	4100	7.56	202	<5	166
8.33	1610	6	916					8.05	21100	6	14100	8.71	8020	12	5280	7.50	237	10	167
												8.6	8960	20	5800	7.65	290	20	187
8.11	836	22	461	7.82	831	24	462	8.14	9880	16	6270	8.21	4330	23	2670	7.57	278	13	174
7.84	877	27	480									8.52	8430	11	5590	7.56	299	77	205

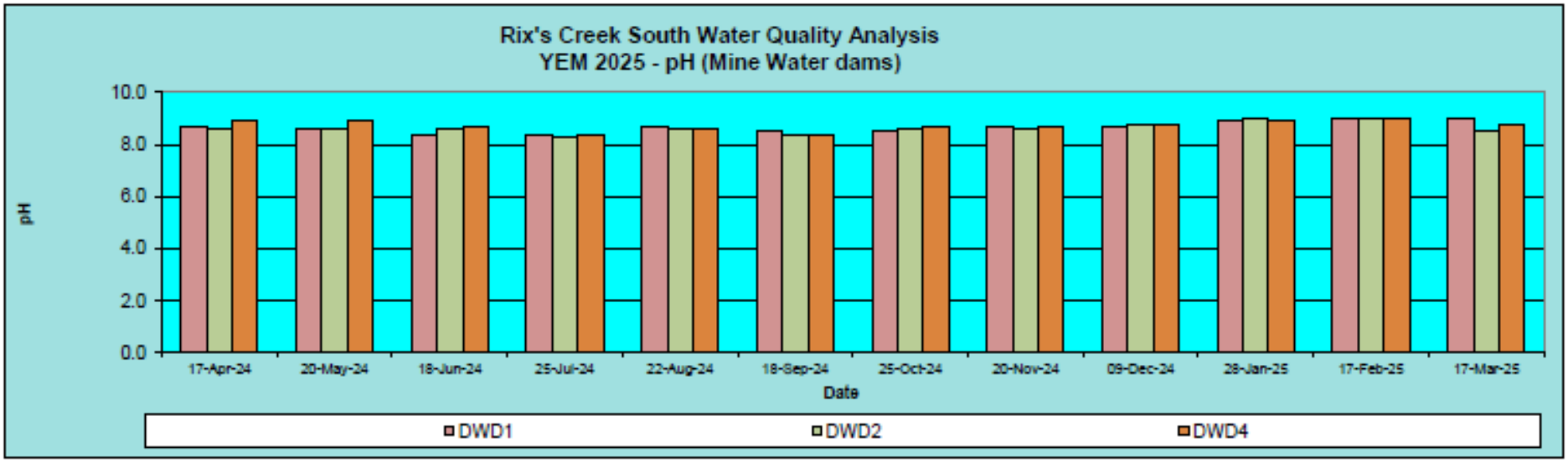
Dead Man's Gully (Creek)				Sediment Dam 16				Sediment Dam 17				Sediment Dam 20				WOOP Dam 1				WOOP Dam 2			
8.2	10800	26	7160	8.8	4820	31	2900	8.4	477	20	311	7.9	298	16	244	7.7	400	1730	2220	7.9	690	38	445
7.2	1900	13	1100	7.8	1420	20	917	7.5	355	9	276	7	199	7	236	7.4	538	60	532	7.9	1050	6	637
7	1910	14	1120	7.6	1400	17	870	7.2	262	12	236	6.6	138	37	183	7.8	683	109	683	8.4	1920	10	1150
7.06	2350	13	1350	8.01	2090	<5	1180	7.37	268	29	230	7.89	702	<5	510	7.89	702	<5	510	8.56	2640	6	1620
6.86	1900	25	1140	7.94	2230	6	1330	7.5	271	15	226	6.97	160	79	183	7.95	636	24	576	8.75	2590	8	1530
7.6	7300	<5	4430	8.23	2870	8	1650	7.66	290	13	190	7.4	171	15	146	9.03	850	18	456	8.76	2820	7	1710
7.68	10300	21	6180	8.42	3440	14	2100	7.96	296	7	258	7.62	171	12	148	7.95	601	211	938	8.84	2010	22	1150
7.72	14300	<5	9000	8.64	4180	14	2400	8.24	306	7	212	7.33	181	<5	147	8.10	799	167	794	8.99	1640	15	969
7.75	15800	43	10400	8.63	4310	15	2600	8.88	338	9	221	7.54	199	10	154	8.53	1010	169	673	9.11	1940	33	1130
7.8	20600	42	13100	8.6	5370	43	3050	8.63	426	45	270	7.69	235	22	174	8.49	1160	6600	832	9.41	1530	20	854
7.76	19600	16	6270	8.9	5330	48	3050	9.09	415	18	240	7.47	233	25	152	8.13	636	1220	1180	7.92	722	352	606
7.65	877	27	480	8.88	5740	36	3340	8.82	452	26	280	7.76	249	12	183					8.25	984	186	713

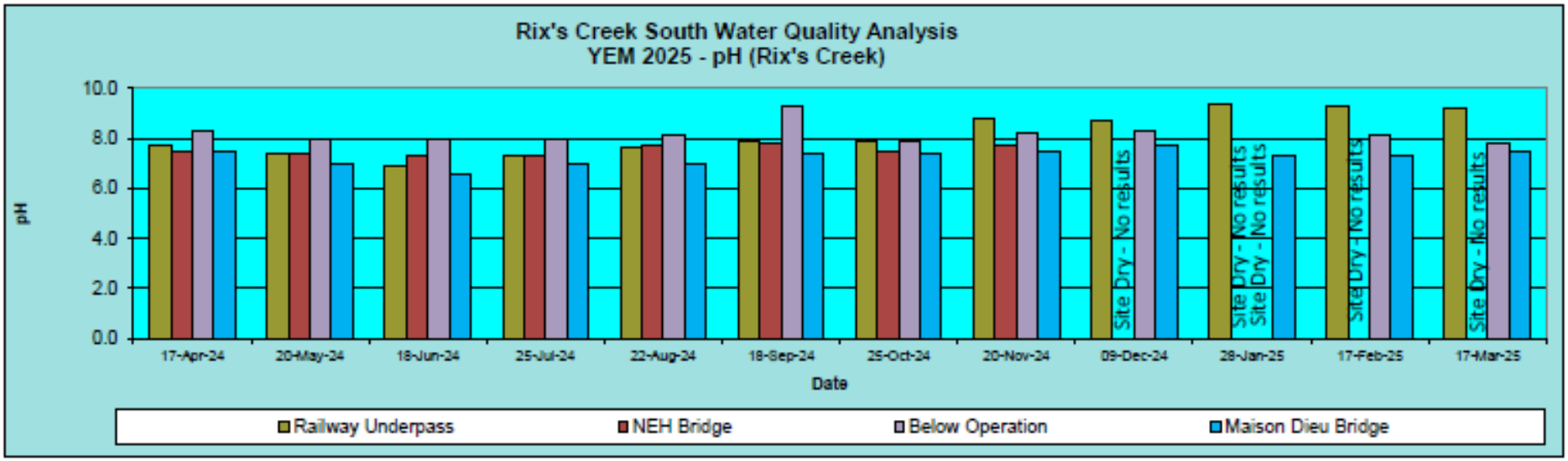

Rix's Creek South Water Quality Analysis
YEM 2025 - Conductivity/Salinity (Clean Water dams)
(uS/cm)
800
700
600
500
400
300
200
100
0
10-Apr-24
6-May-24
12-Jun-24
10-Jul-24
7-Aug-24
4-Sep-24
2-Oct-24
7-Nov-24
4-Dec-24
7-Jan-25
5-Feb-25
4-Mar-25
Date
CWD1
CWD2
CWD6

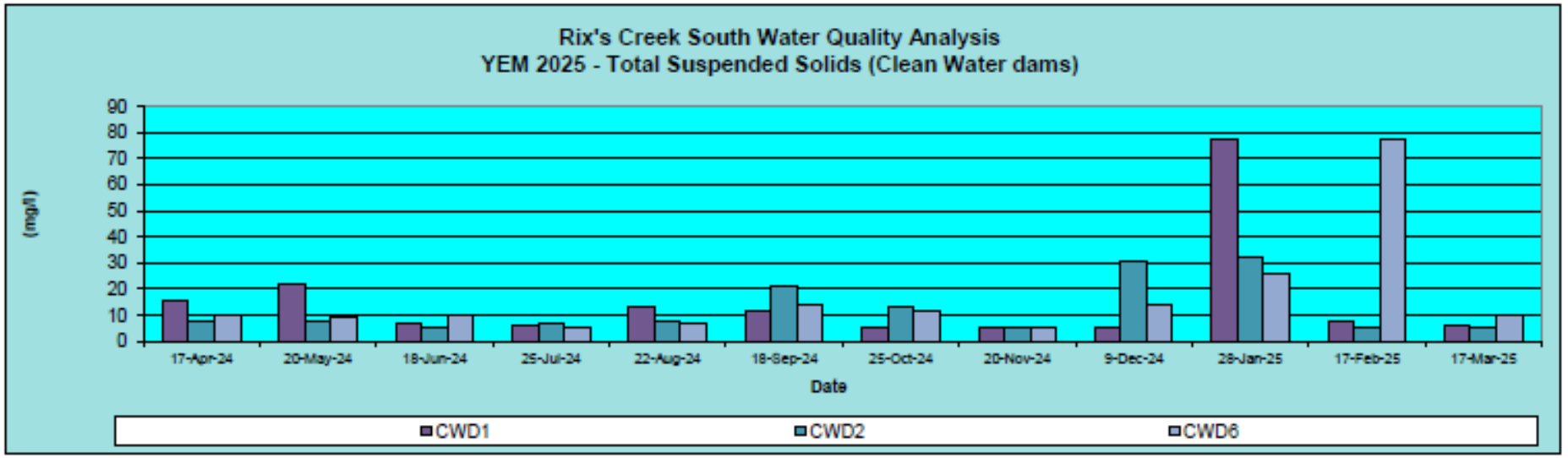

Rix's Creek South Water Quality Analysis
YEM 2025 - Conductivity/Salinity (Mine Water dams)
(uS/cm)
9000
8000
7000
6000
5000
4000
3000
2000
1000
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
DWD1
DWD2
DWD4

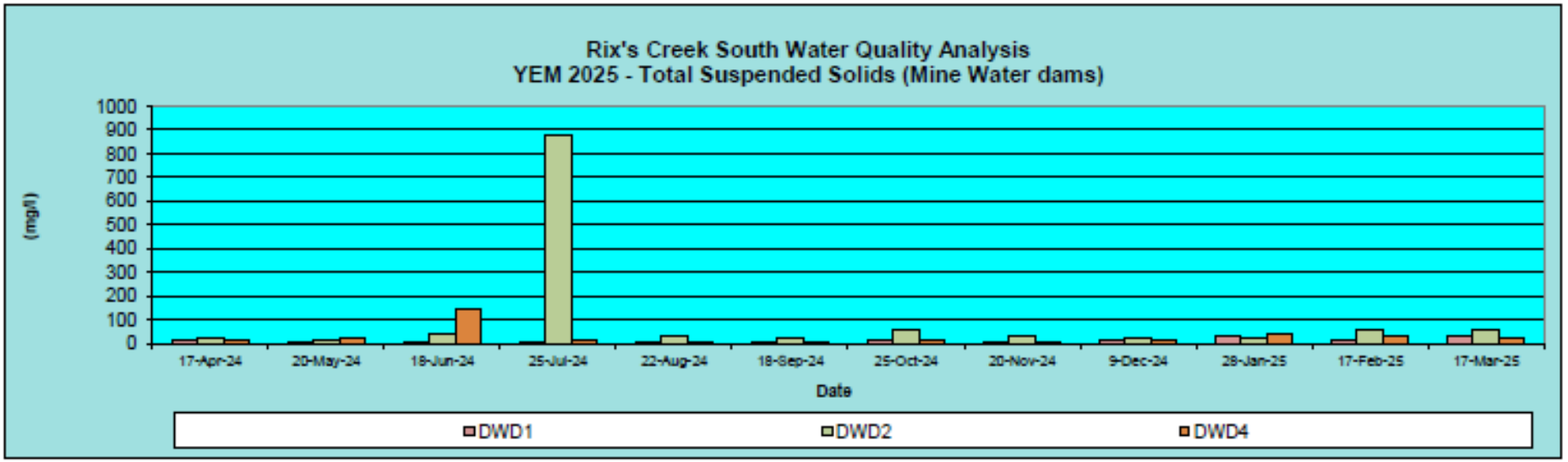

Rix's Creek South Water Quality Analysis
YEM 2025 - Conductivity/Salinity (Rix's Creek)
(uS/cm)
7000
6000
5000
4000
3000
2000
1000
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Site Dry - No results
Site dry - No results
Site dry - No results
Site dry - No results
Date
Railway Underpass
NEH Bridge
Below Operation
Maison Dieu Bridge

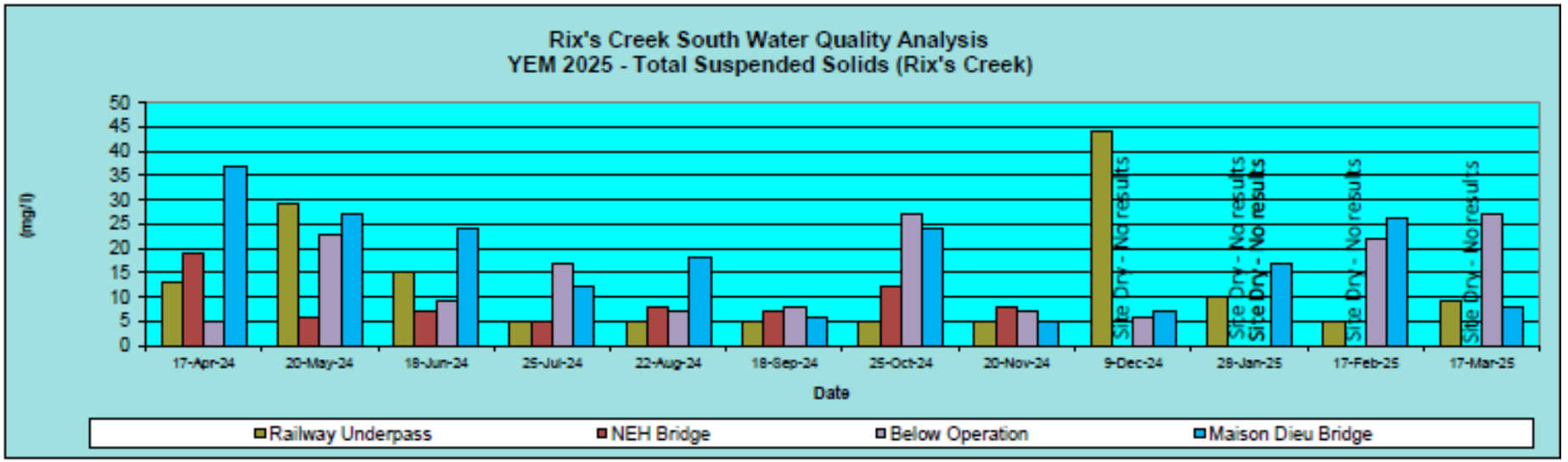

Rix's Creek South Water Quality Analysis
YEM 2025 - pH (Clean Water dams)
pH
10.0
8.0
6.0
4.0
2.0
0.0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
09-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
CWD1
CWD2
CWD6

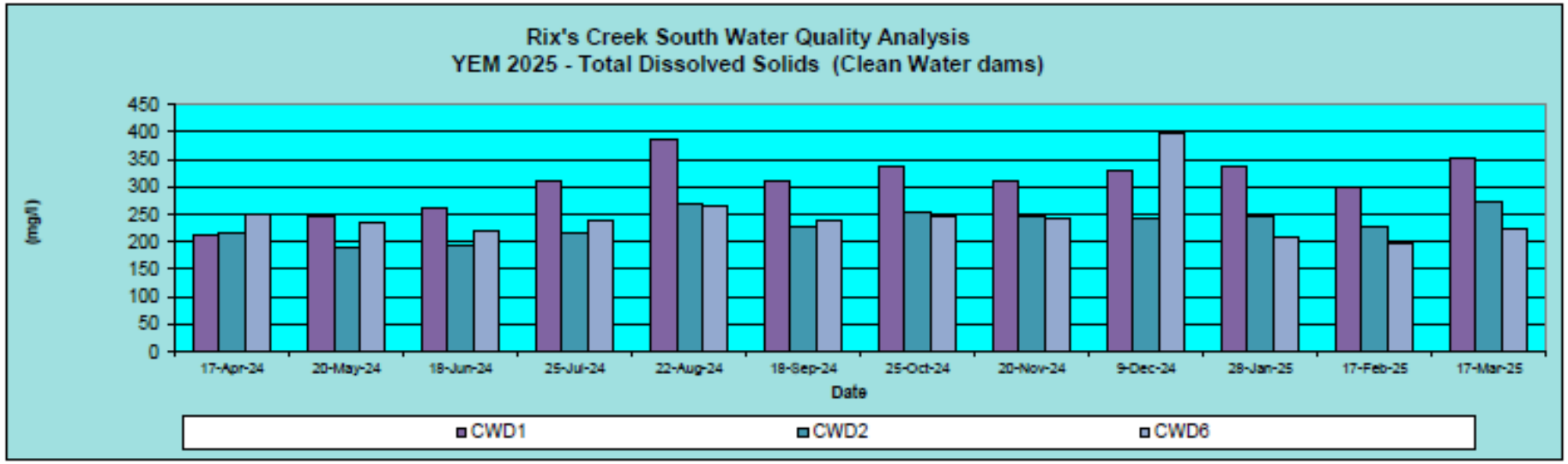

Rix's Creek South Water Quality Analysis
YEM 2025 - pH (Mine Water dams)
pH
10.0
8.0
6.0
4.0
2.0
0.0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
09-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
DWD1
DWD2
DWD4

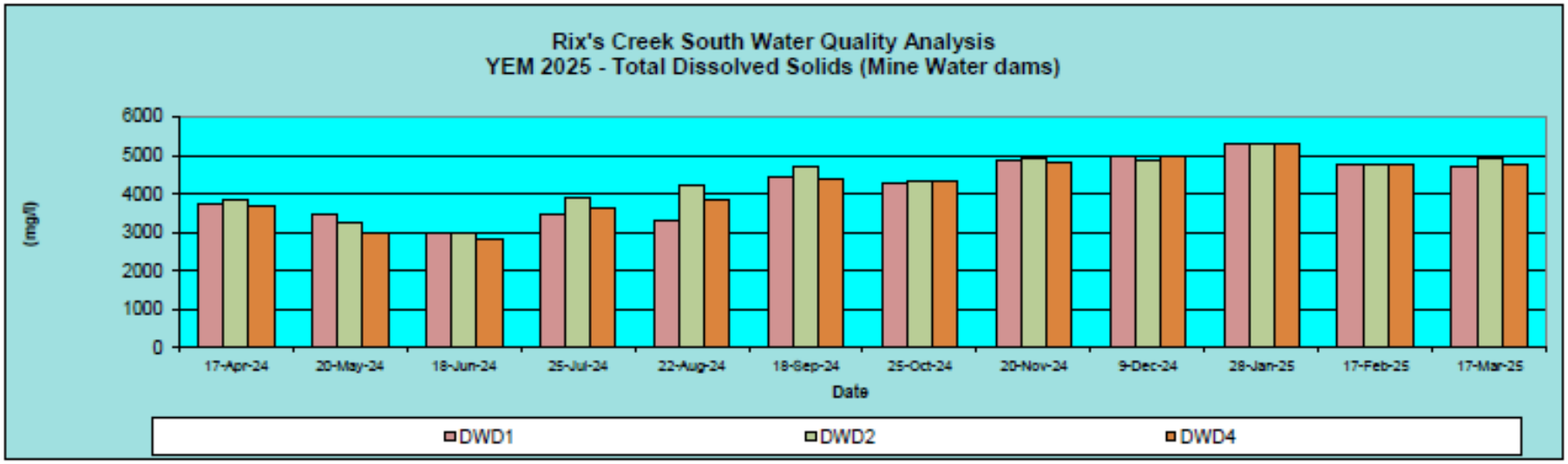

Rix's Creek South Water Quality Analysis
YEM 2025 - pH (Rix's Creek)
pH
10.0
8.0
6.0
4.0
2.0
0.0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
09-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
Site Dry - No results
Railway Underpass
NEH Bridge
Below Operation
Maison Dieu Bridge

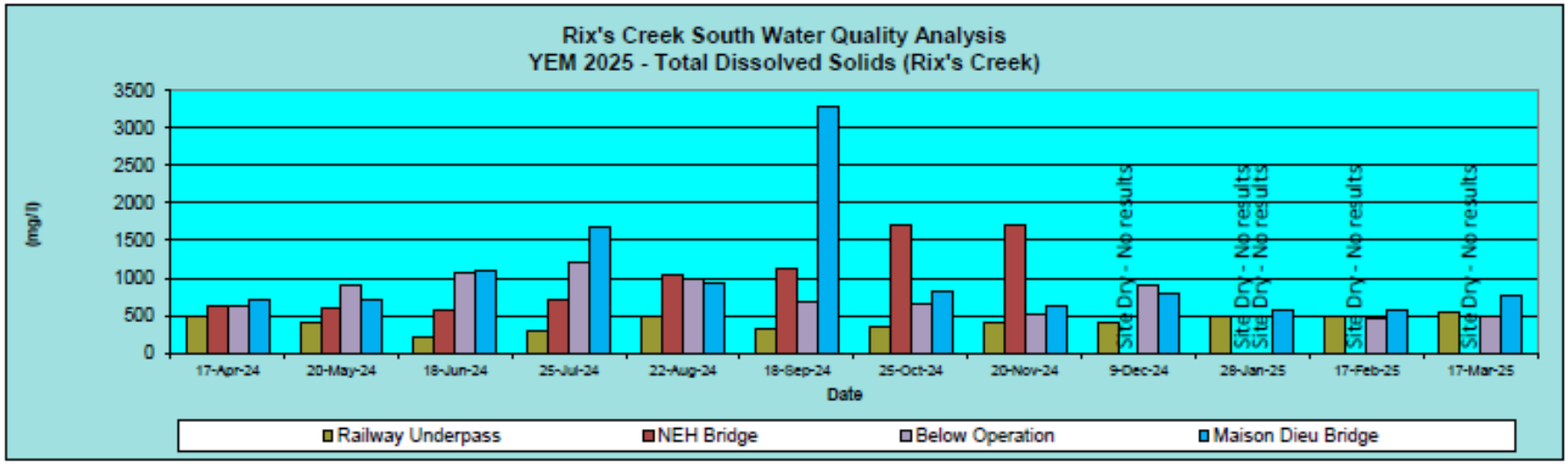

Rix's Creek South Water Quality Analysis
YEM 2025 - Total Suspended Solids (Clean Water dams)
(mg/L)
90
80
70
60
50
40
30
20
10
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
CWD1
CWD2
CWD6


Rix's Creek South Water Quality Analysis
YEM 2025 - Total Suspended Solids (Mine Water dams)
(mg/L)
1000
900
800
700
600
500
400
300
200
100
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
DWD1
DWD2
DWD4


Rix's Creek South Water Quality Analysis
YEM 2025 - Total Suspended Solids (Rix's Creek)
(mg/l)
50
45
40
35
30
25
20
15
10
5
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Site Dry - No results
Site Dry - No results
Site Dry - No results
Site Dry - No results
Date
Railway Underpass
NEH Bridge
Below Operation
Maison Dieu Bridge


Rix's Creek South Water Quality Analysis
YEM 2025 - Total Dissolved Solids (Clean Water dams)
(mg/l)
450
400
350
300
250
200
150
100
50
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
CWD1
CWD2
CWD6

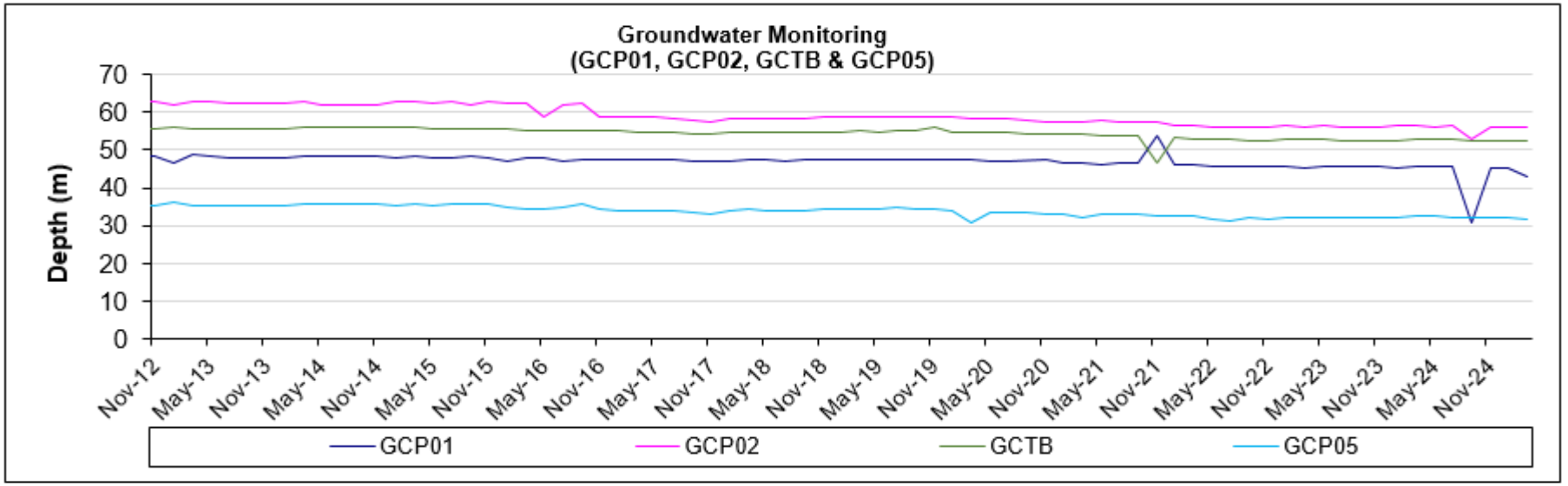

Rix's Creek South Water Quality Analysis
YEM 2025 - Total Dissolved Solids (Mine Water dams)
(mg/l)
6000
5000
4000
3000
2000
1000
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Date
DWD1
DWD2
DWD4

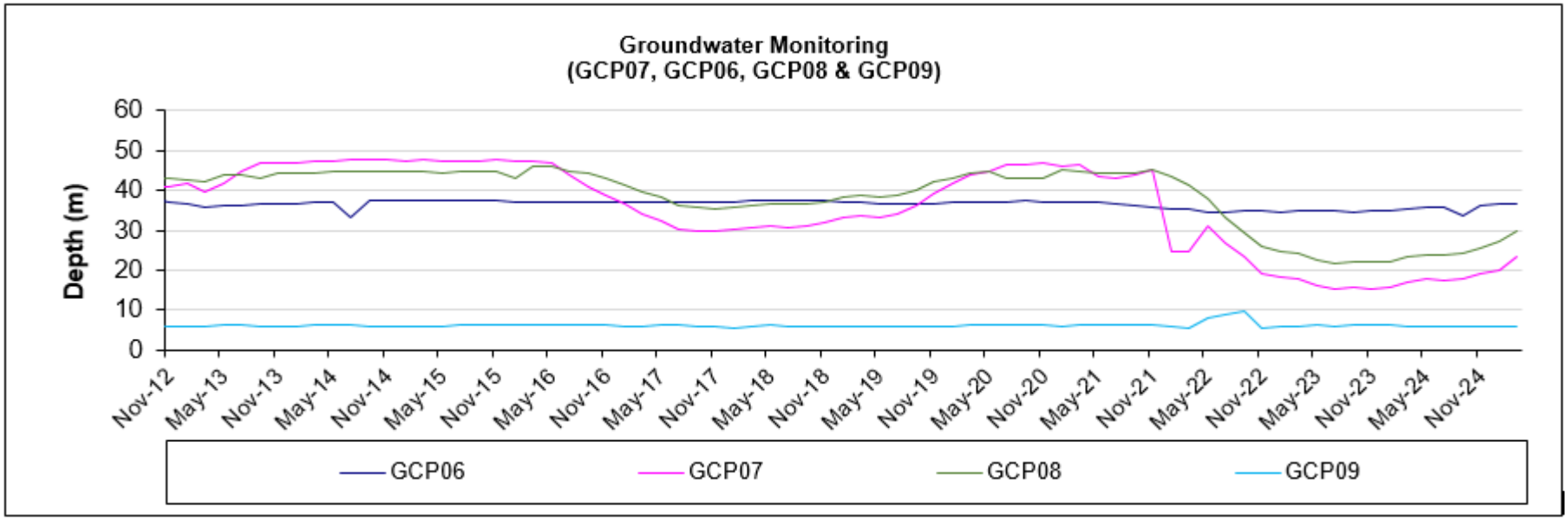

Rix's Creek South Water Quality Analysis
YEM 2025 - Total Dissolved Solids (Rix's Creek)
(mg/l)
3500
3000
2500
2000
1500
1000
500
0
17-Apr-24
20-May-24
18-Jun-24
25-Jul-24
22-Aug-24
18-Sep-24
25-Oct-24
20-Nov-24
9-Dec-24
28-Jan-25
17-Feb-25
17-Mar-25
Site Dry - No results
Site Dry - No results
Site Dry - No results
Site Dry - No results
Date
Railway Underpass
NEH Bridge
Below Operation
Maison Dieu Bridge

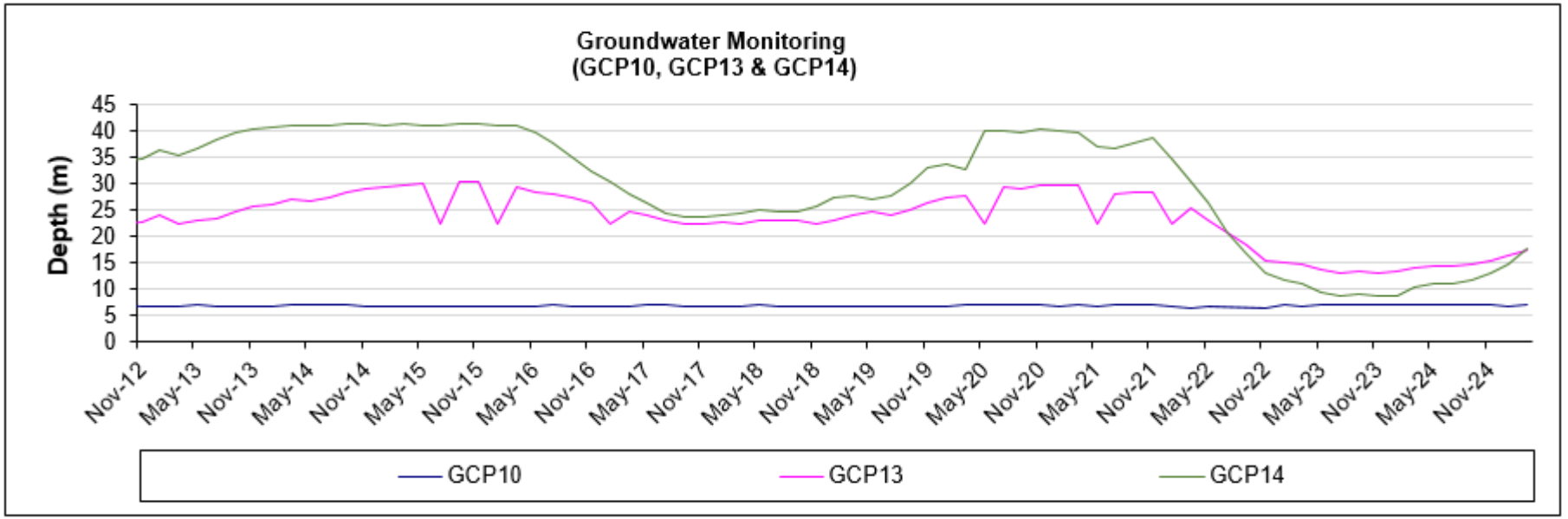
Appendix 2

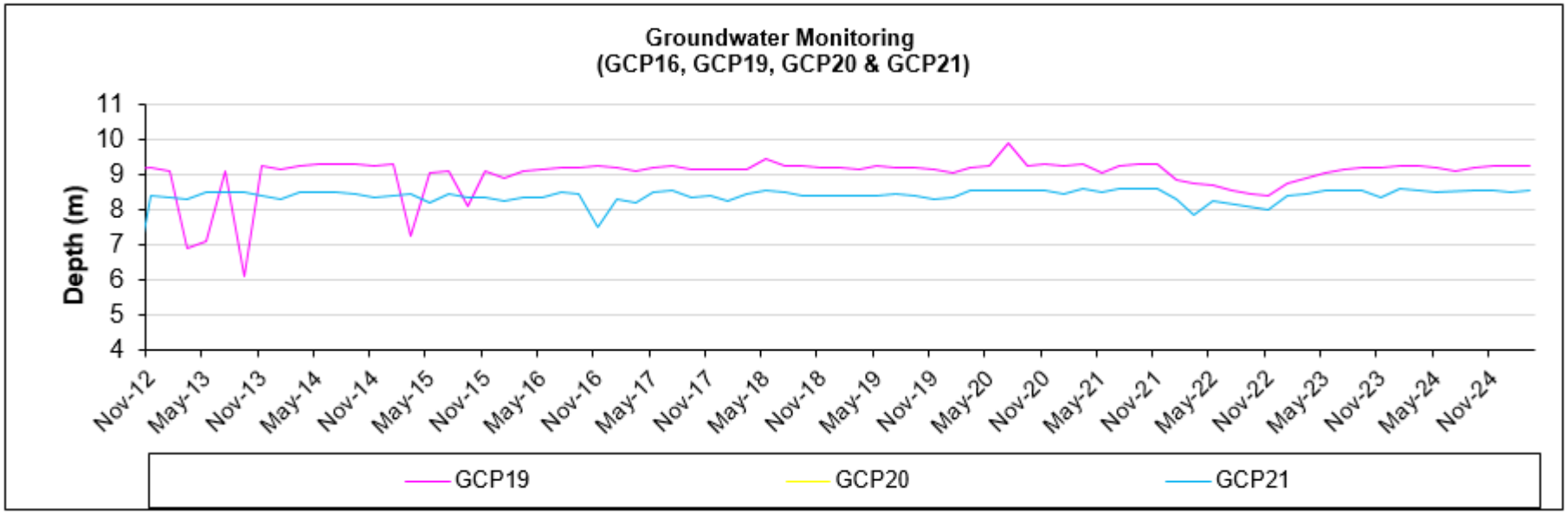
Rix's Creek Mine Ground Water Sampling Results

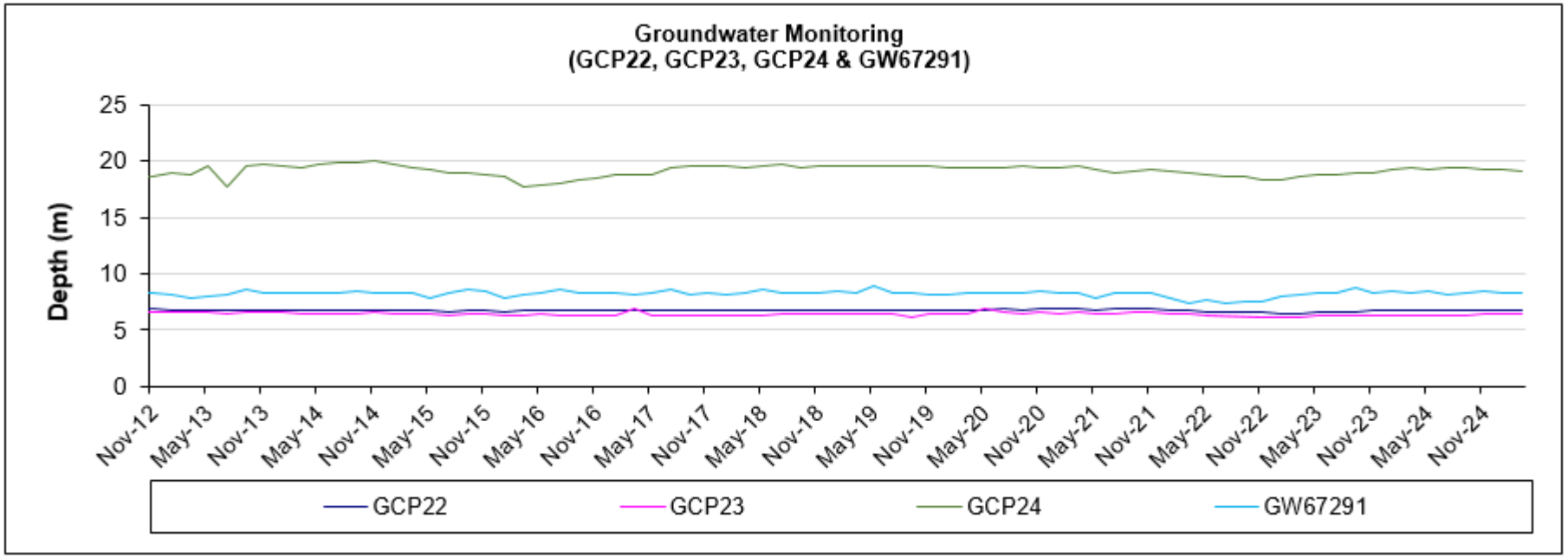
RCN Basement Ground Waters

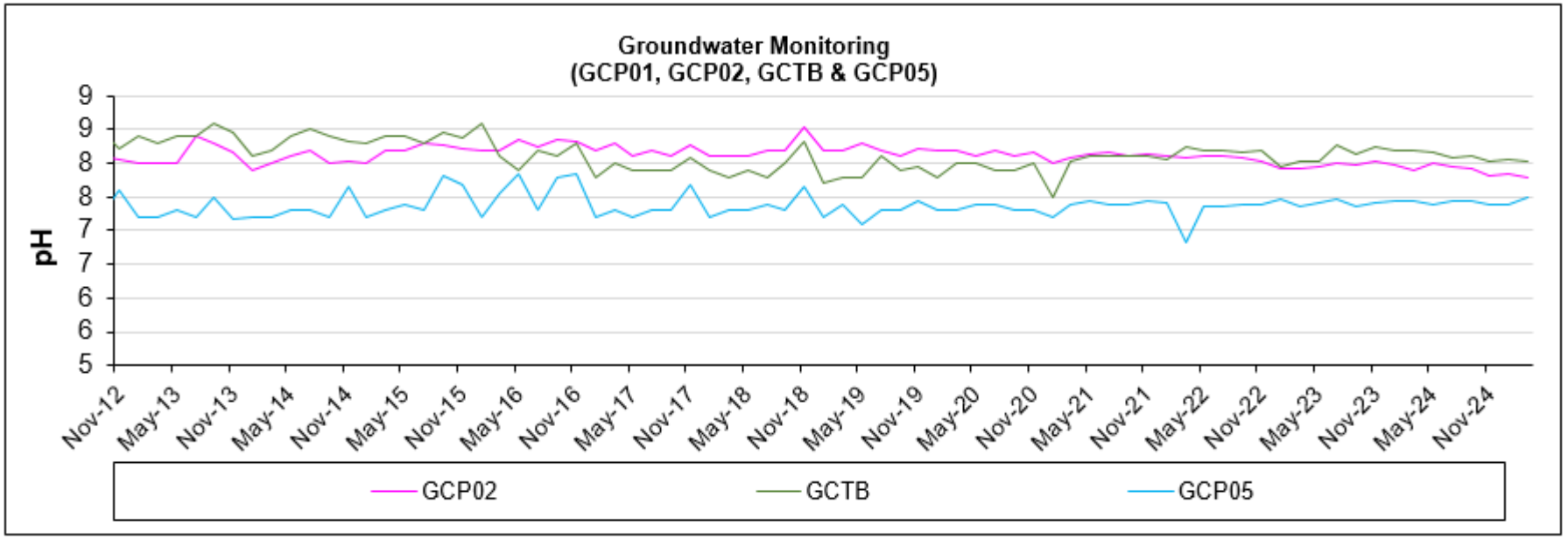


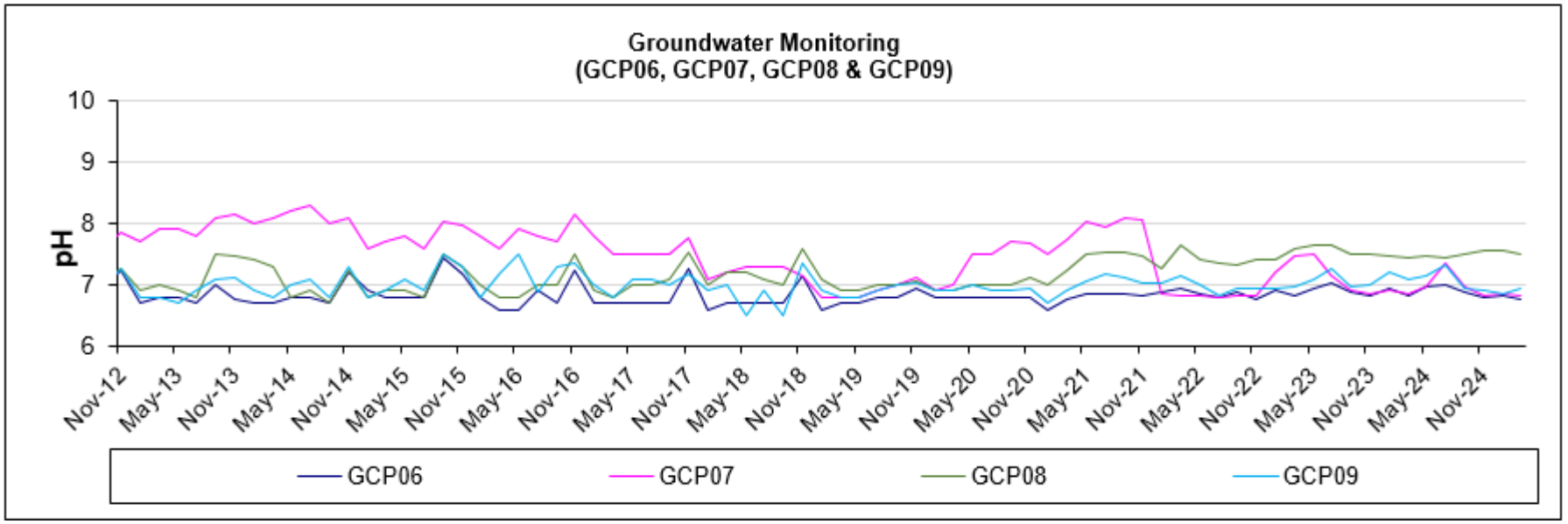


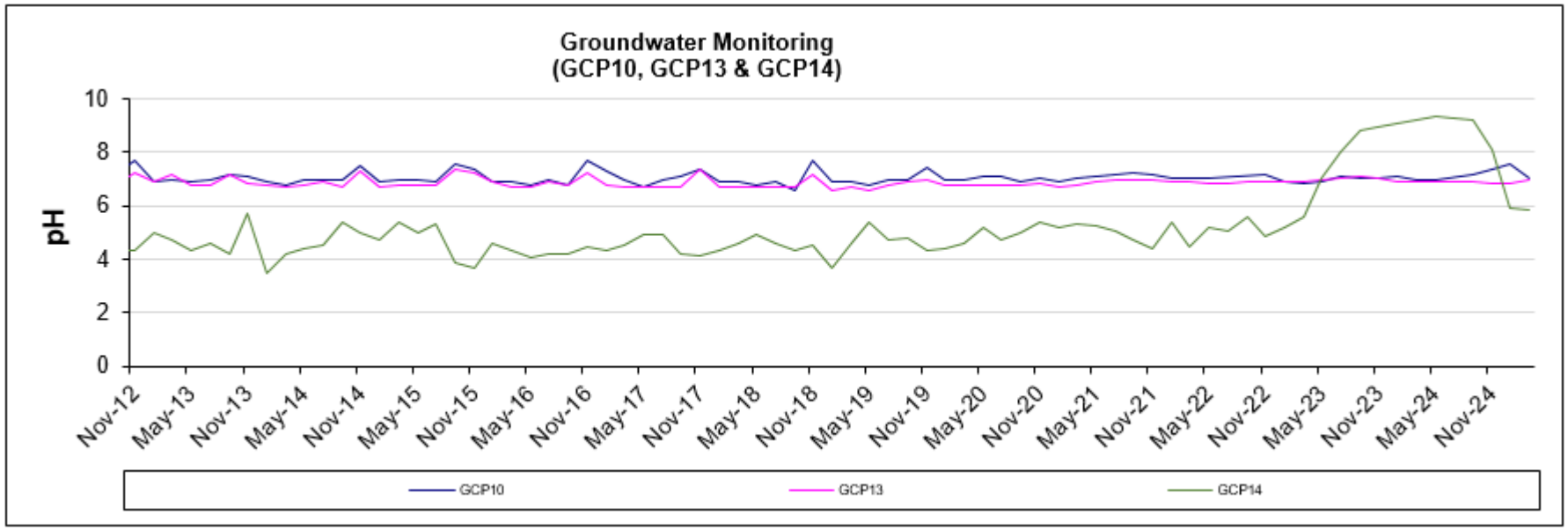

Groundwater Monitoring
(GCP10, GCP13 & GCP14)
Depth (m)
45
40
35
30
25
20
15
10
5
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP10
GCP13
GCP14

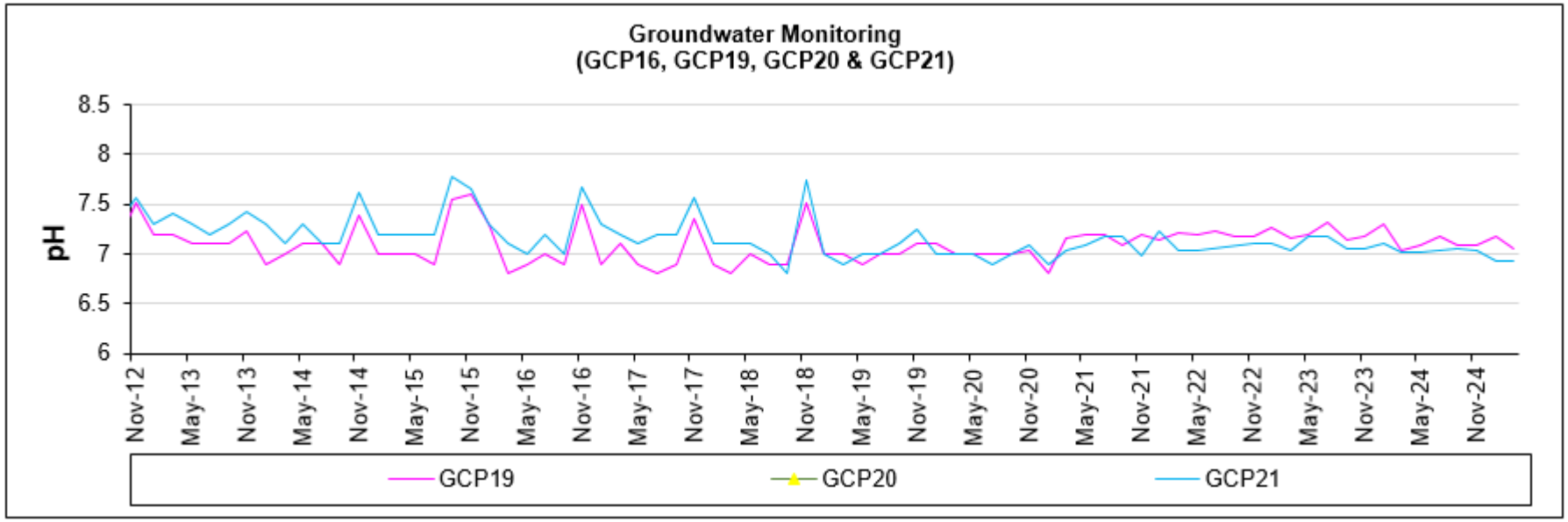

Groundwater Monitoring
(GCP16, GCP19, GCP20 & GCP21)
Depth (m)
11
10
9
8
7
6
5
4
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP19
GCP20
GCP21

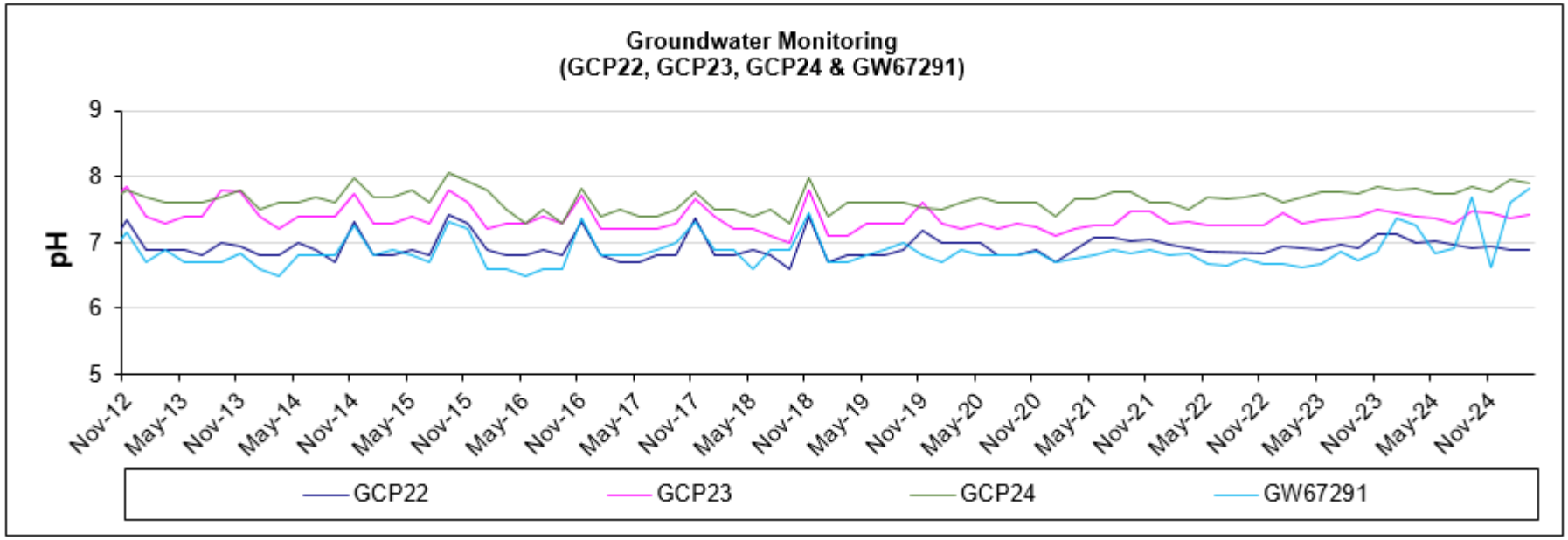

Groundwater Monitoring
(GCP22, GCP23, GCP24 & GW67291)
Depth (m)
25
20
15
10
5
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP22
GCP23
GCP24
GW67291

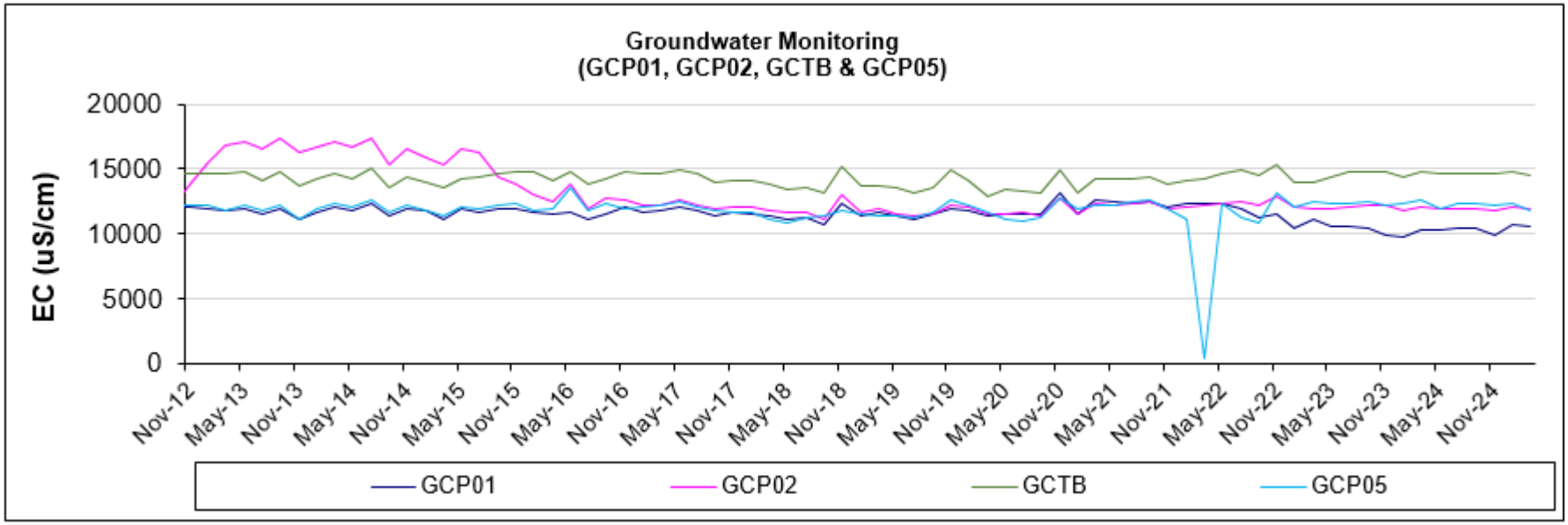

Groundwater Monitoring
(GCP01, GCP02, GCTB & GCP05)
pH
9
9
8
8
7
7
6
6
5
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP02
GCTB
GCP05

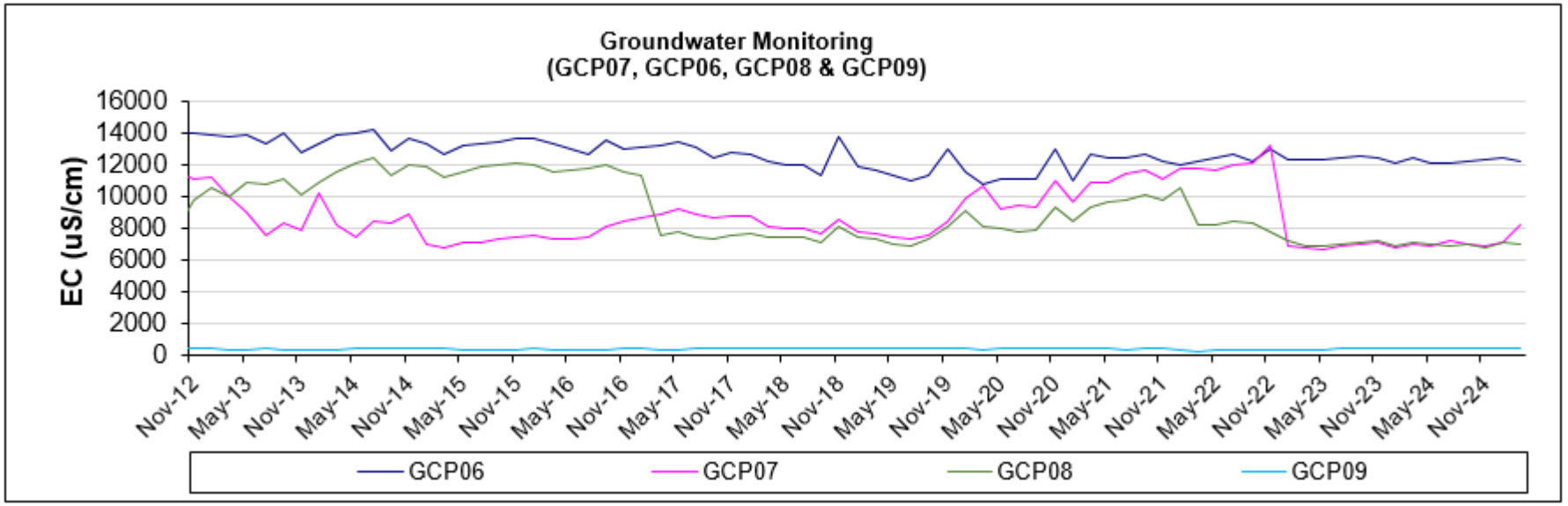

Groundwater Monitoring
(GCP06, GCP07, GCP08 & GCP09)
pH
10
9
8
7
6
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP06
GCP07
GCP08
GCP09


Groundwater Monitoring
(GCP10, GCP13 & GCP14)
pH
10
8
6
4
2
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP10
GCP13
GCP14


Groundwater Monitoring
(GCP16, GCP19, GCP20 & GCP21)
pH
8.5
8
7.5
7
6.5
6
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP19
GCP20
GCP21


Groundwater Monitoring
(GCP22, GCP23, GCP24 & GW67291)
pH
9
8
7
6
5
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP22
GCP23
GCP24
GW67291


Groundwater Monitoring
(GCP01, GCP02, GCTB & GCP05)
EC (uS/cm)
20000
15000
10000
5000
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP01
GCP02
GCTB
GCP05


Groundwater Monitoring
(GCP07, GCP06, GCP08 & GCP09)
EC (uS/cm)
16000
14000
12000
10000
8000
6000
4000
2000
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
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May-22
Nov-22
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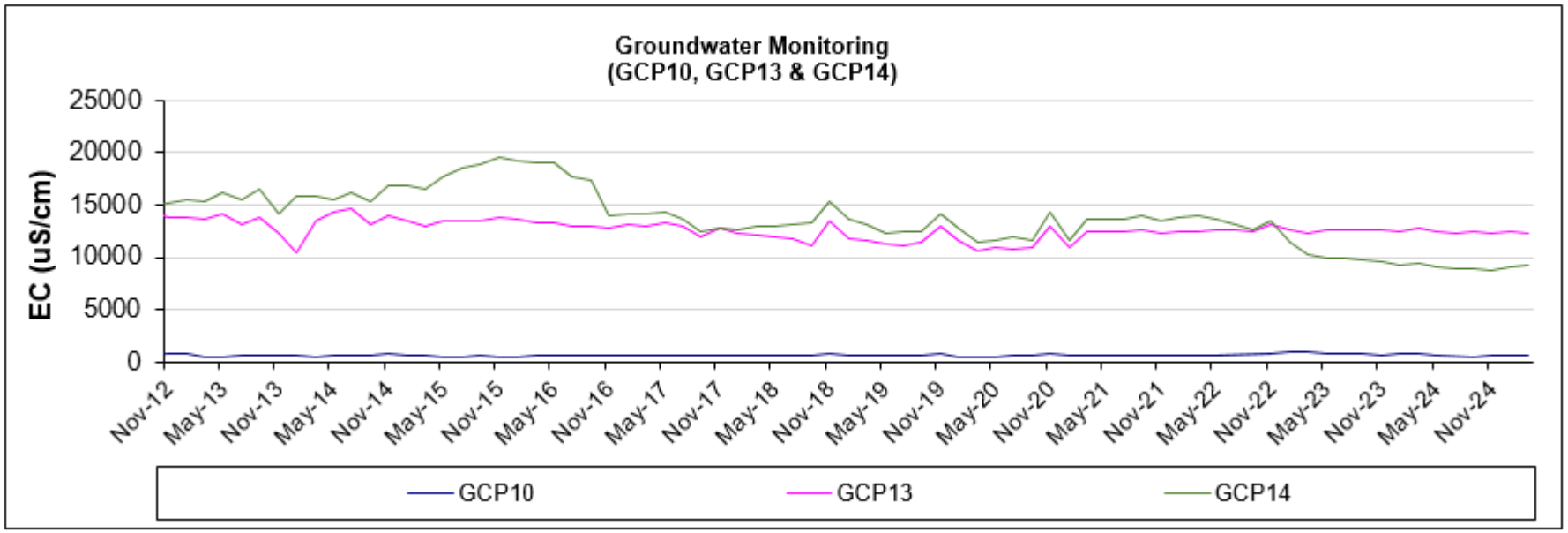
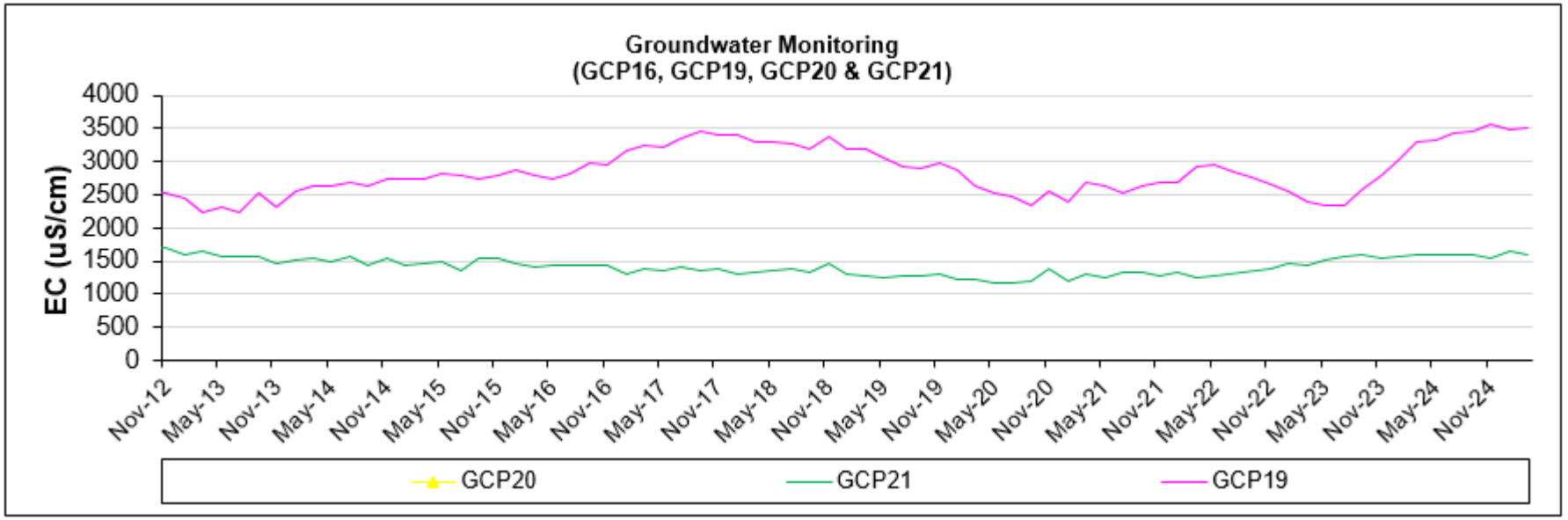
Nov-23
May-24
Nov-24
GCP06
GCP07
GCP08
GCP09


Groundwater Monitoring
(GCP10, GCP13 & GCP14)
EC (uS/cm)
25000
20000
15000
10000
5000
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP10
GCP13
GCP14


Groundwater Monitoring
(GCP16, GCP19, GCP20 & GCP21)
EC (uS/cm)
4000
3500
3000
2500
2000
1500
1000
500
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
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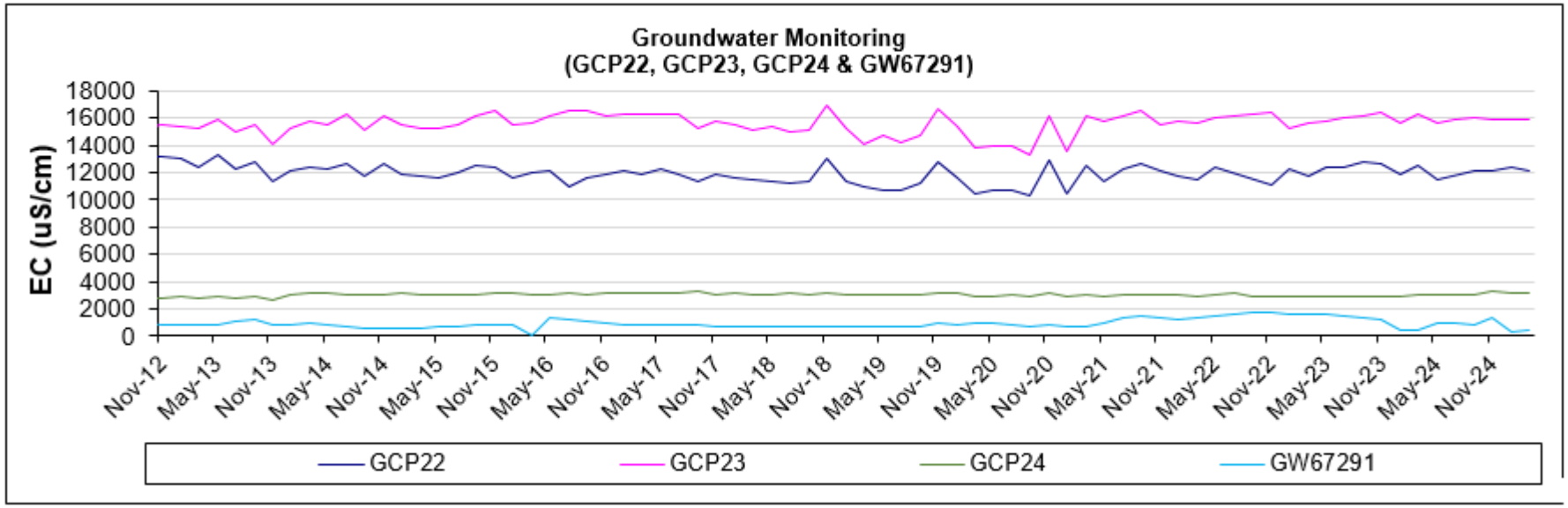
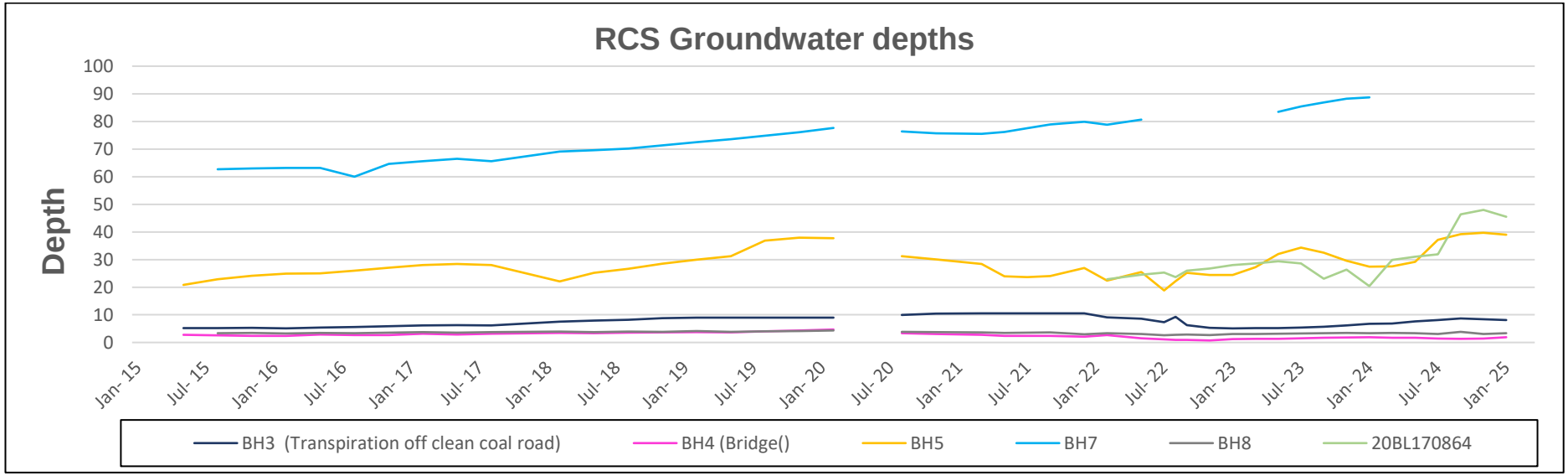
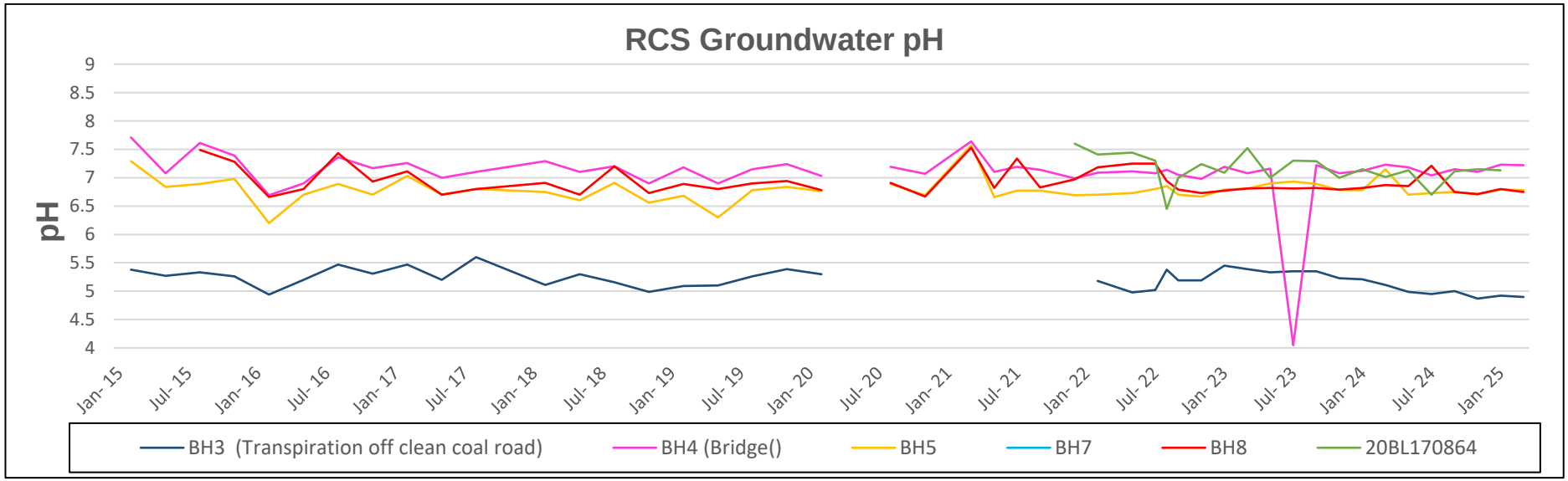
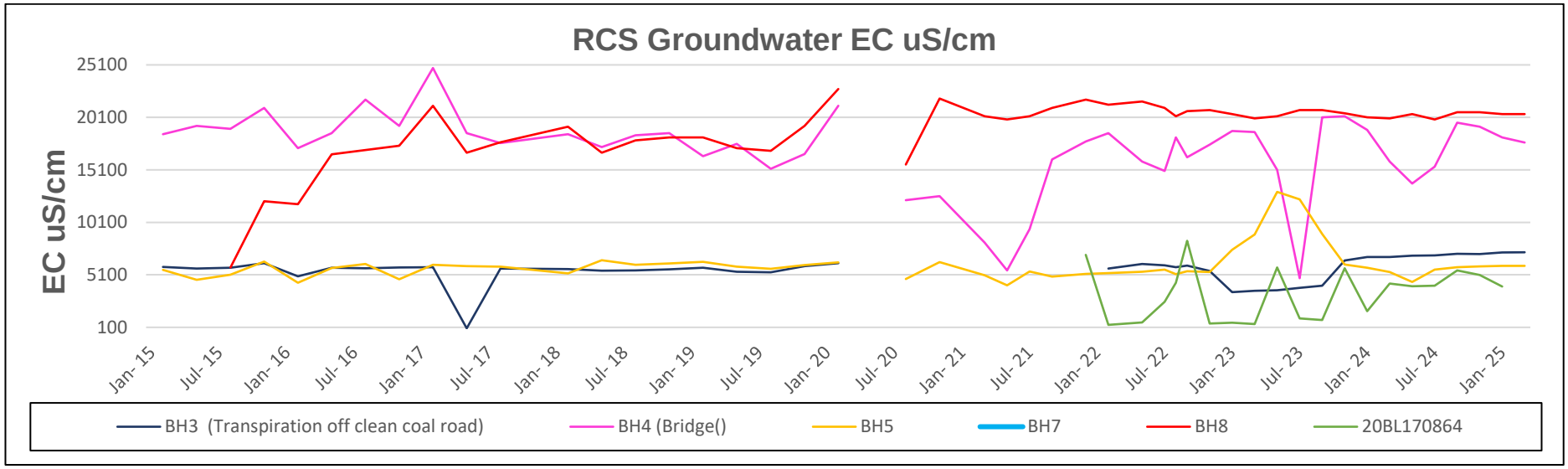
Nov-23
May-24
Nov-24
GCP20
GCP21
GCP19


Groundwater Monitoring
(GCP22, GCP23, GCP24 & GW67291)
EC (uS/cm)
18000
16000
14000
12000
10000
8000
6000
4000
2000
0
Nov-12
May-13
Nov-13
May-14
Nov-14
May-15
Nov-15
May-16
Nov-16
May-17
Nov-17
May-18
Nov-18
May-19
Nov-19
May-20
Nov-20
May-21
Nov-21
May-22
Nov-22
May-23
Nov-23
May-24
Nov-24
GCP22
GCP23
GCP24
GW67291

RCS Ground Water Results






RCS Groundwater EC uS/cm
EC uS/cm
25100
20100
15100
10100
5100
100
Jan- 15
Jul- 15
Jan- 16
Jul- 16
Jan- 17
Jul- 17
Jan- 18
Jul- 18
Jan- 19
Jul- 19
Jan- 20
Jul- 20
Jan- 21
Jul- 21
Jan- 22
Jul- 22
Jan- 23
Jul- 23
Jan- 24
Jul- 24
Jan- 25
BH3 (Transpiration off clean coal road)
BH4 (Bridge()
BH5
BH7
BH8
20BL170864

Appendix 3

Rix's Creek Mine Community Complaints YEM 2025

THE Bloomfield GROUP

WE CARE. WE DELIVER.

Rix's Creek Mine

Complaints Register

Year Ending March 2025

Number	Date Received	Site	Nature of Complaint	Location	How received	Action taken and findings
April 2024						
1	09/04/2024	Rix's Creek North	Noise	Bridgman	Rix's Creek Community and Blasting Hotline	**Actions:** Environment Superintendent (ES) identified the noise as pump 23. Opportunities for sound attenuation are being investigated. **Findings:** Pump 23 has been identified and subsequent sound attenuation is scheduled.
May 2024						
2	20/05/2024	Rix's Creek Mine	Light	Long Point	Rix's Creek Community and Blasting Hotline	**Actions:** OCE (Open Cut Examiner) shut down all lighting plants in the area and repositioned them on day shift. **Findings:** Ensure lighting plants are facing towards operations and continue to conduct lighting assessments. To be raised with operations manager.

3	31/05/2024	Rix's Creek Mine	Light	Maison Dieu	Rix's Creek Community and Blasting Hotline	**Actions:** A lighting assessment was undertaken, which identified the lighting plant allowing the unit to be repositioned. **Findings:** Ensure lighting plants are facing towards operations and continue to conduct lighting assessments. To be raised with operations manager.
June 2024						
4	4/06/2024	Rix's Creek Mine	Noise	Bridgeman	EPA Email (Anonymous)	**Actions:** Environment Superintendent (ES) provided a response to NSW EPA providing Environmental Noise Technician (ENT) readings and monthly compliance noise testing which also occurred at the same date. **Findings:** ES found that both ENT and monthly compliance noise testing was below compliance limits. Awaiting response from EPA.
July 2024						
5	17/07/2024	Rix's Creek Mine	Noise	Bridgeman	Rix's Creek Community and Blasting Hotline	**Actions:** Environment Superintendent (ES) called complainant and provided additional information on noise management. **Findings:** Informed complainant that we were operating below our approved noise levels and provided information to contact Rix's Creek Mine using the community hotline.
6	22/07/2024	Rix's Creek Mine	Other	Rix's Creek lane	Phone	**Actions:** Environment Superintendent (ES) called complainant regarding excessive speed on access roads. **Findings:** Communicate to site employees and contractors to obey speed limits when leaving site.

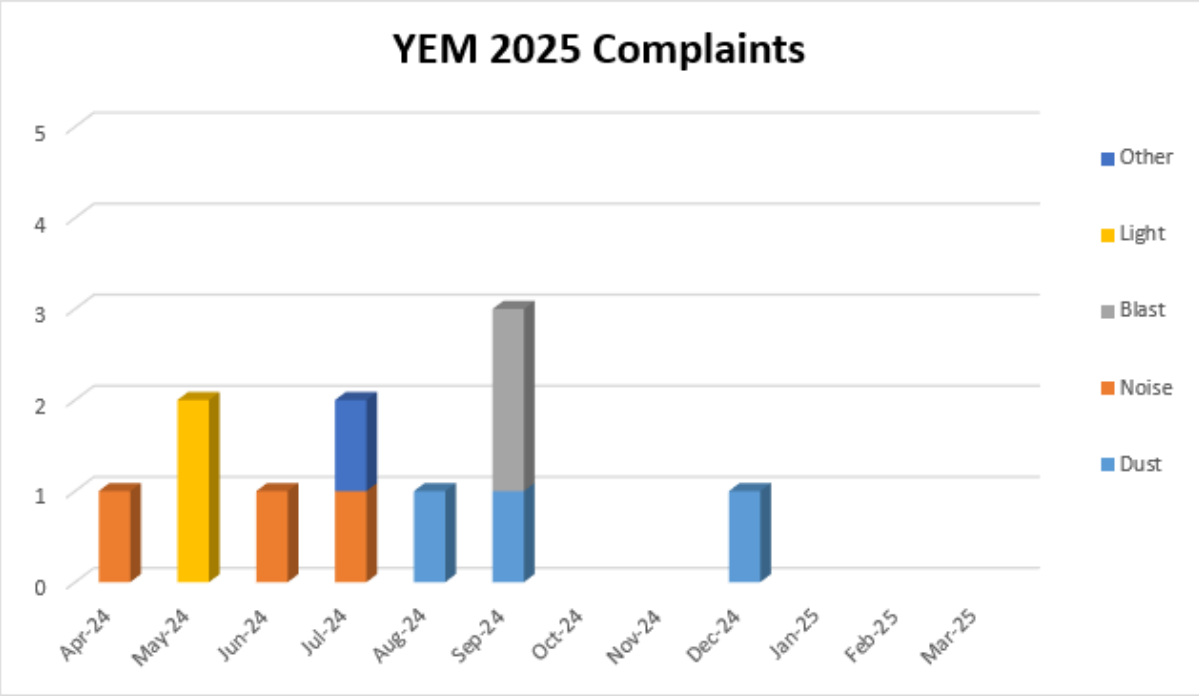
August 2024						
7	28/08/2024	Rix's Creek Mine	Dust	Bridgman	Rix's Creek Community and Blasting Hotline	**Actions:** Environment Superintendent (ES) called complainant providing an overview of dust control measures that had been implemented throughout the day to mitigate the impacts caused by adverse meteorological conditions. **Findings** Evaporative fans, watercarts, spigot lines and reduced operations were all utilised to mitigate dust creation.
September 2024						
8	2/09/2024	Rix's Creek Mine	Dust	Bridgman	Rix's Creek Community and Blasting Hotline	**Actions:** Environment Superintendent (ES) responded explaining the dust mitigation methods being utilized on site. ES also provided an overview of meteorological conditions contributing to poor regional air shed. **Findings** Evaporative fans, watercarts, spigot lines and reduced operations were all utilised to mitigate dust creation.
9	25/09/2024	Rix's Creek Mine	Blast	Camberwell	Email	**Actions:** Environment Superintendent (ES) responded to complainant providing data regarding the blast demonstrating that it was within all compliance criteria **Findings** Conducted internal review to determine opportunities for process improvement
10	25/09/2024	Rix's Creek Mine	Blast	New England Highway	Email	**Actions:** Environment Superintendent (ES) responded to complainant providing data regarding the blast demonstrating that it was within all compliance criteria **Findings** Conducted internal review to determine opportunities for process improvement

October 2024						
November 2024						
December 2024						
11	17/12/2024	Rix's Creek Mine	Dust	Unknown	Rix's Creek Community and Blasting Hotline	**Actions:** Environment Superintendent (ES) returned call and left a message with contact details complainant did not reply. Dust control measures had been implemented throughout the day to mitigate the impacts caused by adverse meteorological conditions. **Findings:** Evaporative fans, watercarts, spigot lines and reduced operations where all utilised to mitigate dust creation.
January 2025						
February 2025						
March 2025						

YEM 2025 Complaints Summary

	Blast	Noise	Dust	Water	Lights	Odour	Other
Summary	2	3	3	0	2	0	1
YEM 2025 Total Complaints	11						

Data updated 2/04/2025.



Appendix 4

Rix's Creek Mine Annual Rehabilitation Report

https://www.bloomcoll.com.au/sustainability/environmental-management/rixs-creek-assessments/mining-lease

YEM 2025