BHP

Prominent Hill Operation

PEPR Compliance Report 2025

September 2025

ML 6228	MINERAL LEASE
MPL 91, MPL 96, MPL 97, MPL 101	CONCENTRATE EXPORT ROAD
MPL 81, MPL 82	VIRGO BOREFIELD
MPL 93, MPL 94, MPL 112 – MPL 117	ARIES BOREFIELD
MPL 83, MPL 84	SITE ACCESS ROAD
MPL 119 – MPL 122	ELECTRICITY TRANSMISSION LINE
EML 6234, EML 6236 – EML 6242	EXTRACTIVE MINERALS AREAS
EML 6278 – EML 6296, EML 6299 – EML 6301	

Acknowledgements

Acknowledgements go to all staff across the Prominent Hill Operation for their contributions to the overall report and for undertaking all activities in a safe and effective manner. We also acknowledge the Antakarinja Matu Yankunytjatjara Peoples for their ongoing support and assistance provided.

Document control

PH-999-SEC-REP-5044

Version	Description	Author	Approval	Date
1	Prominent Hill PEPR Compliance Report 2025	Tina Law – Principal Asset Biodiversity Josh Allen – Environment Operations Superintendent	Sally Durandt Manager Asset Environment Approvals and Sustainability	26/09/2025

Executive summary

BHP Prominent Hill submits this Program for Environment Protection and Rehabilitation (PEPR) Compliance Report for the period July 2024 to June 2025 (Compliance Report); as required by the Mining Act 1971 (SA) and associated regulations and conditions of the Prominent Hill Mining Lease (ML 6228) and associated Miscellaneous Purposes Licences (MPL) and Extractive Minerals Leases (EML). This Compliance report demonstrates compliance with the ML and MPL conditions, Environmental Outcomes and Outcome Measurement Criteria committed to in the PEPR (MPEPR2022/137). This Compliance Report has been completed in general accordance with the Determination Terms of Reference 009 (TOR009) – Mining Compliance Reports (DEM 2020).

On 2 May 2023 BHP Group Limited completed the acquisition of OZ Minerals Prominent Hill Limited. The Prominent Hill site has been integrated into the BHP Copper South Australia (SA) asset's, also incorporating the ex-OZ minerals site Carrapateena mine, BHP's Olympic Dam mine and Oak Dam exploration site. Copper SA falls under the BHP Minerals Australia business portfolio which also incorporates Western Australia Iron Ore, Nickel West, Coal, Mt Arthur Coal and Operations Services.

At Prominent Hill, the Operations Expansion (PHOX) project reached a key milestone in Q4FY2025 with the completion of the Wira Shaft sink. The project is expected to extend the mine life to at least 2040 and is on track to come online in the second half of FY2027 (BHP 2025).

During the reporting period, the Prominent Hill Operation was compliant to all conditions.

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1 Introduction

BHP Prominent Hill submits this Program for Environment Protection and Rehabilitation (PEPR) Compliance Report as required by the *Mining Act 1971* (SA) *and* associated regulations, conditions of the Prominent Hill Mining Lease (ML 6228) and associated tenements.

This Compliance Report demonstrates compliance with the ML and MPL conditions and Environmental Outcomes committed to in the approved PEPR for the associated tenements (OZ Minerals 2022). Proponent details are provided in Table 1.1.

Table 1.1: Proponent details

Mine name	Prominent Hill	PEPR	MPEPR2022/137 (PEPR 2022)	
		Date Approved	01/03/2022	
Lease holder	OZ Minerals Prominent Hill Operations Pty Ltd			
Operator	BHP			
Mining lease approval date	2 August 2006			
Tenements	Prominininent Hill Mine Lease		ML 6228	
	Concentrate Export Road		MPL 91	
			MPL 96	
			MPL 97	
			MPL 101	
	Site Access Road		MPL 83-84	
	Electricity Transmission line		MPL 119-122	
	Wellfields (Borefields and Associated Infrastructure		MPL 81 (Virgo)	
			MPL 82 (Virgo)	
			MPL 93-94 (Aries)	
			MPL 112-117 (Aries)	
	Extractive Minerals Leases		EML 6234	
			EML 6236-6242	
			EML 6278-6296	
			EML 6299-6301	
Ministerial determination	The Compliance Report has been completed in general accordance with the Determination Terms of Reference 009 (TOR 009) Mining Compliance Reports (DEM 2020) and associated Mineral Regulatory Guideline (MG3) (DEM 2021)			
Site location details	Located approximately 650 km north-north-west of Adelaide (Figure 1-1)			
Site contact	Kirsty Liddicoat, General Manager, Prominent Hill			
	Email	Kirsty.Liddicoat@bhp.com		
	Phone number	08 8672 8102		
Reporting period	July 2024 – June 2025	Date of compliance report preparation	September 2025	

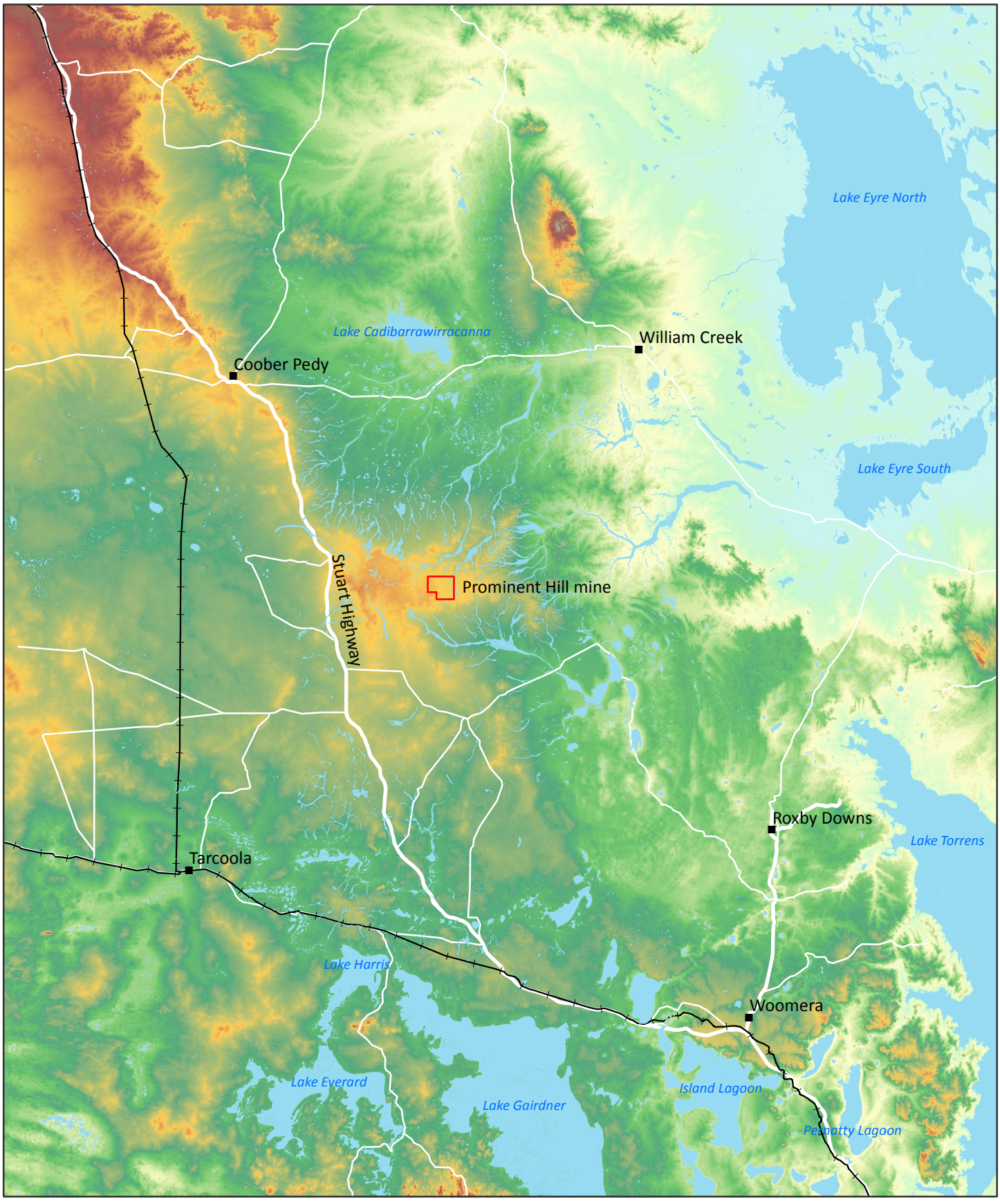

Figure 1.1: Project Location

2 Declaration of accuracy

Person responsible for the preparation of the Compliance Report			
This document has been prepared to fulfil the requirement under sub-regulation 77(3)(b) of Mining Regulations 2020 (SA) for the tenements listed herein. The information contained in this report is to the best of my knowledge a true and accurate record of the mining activities and compliance status for the reporting period.			
Name	**Position or Agent**	**Signature**	**Date**
Anna Wiley	Asset President Copper South Australia		26/09/2025
Company/Agent			
Report prepared by tenement holder			
Summary of steps undertaken to review the compliance to ensure report accuracy			
This report has been prepared by the Prominent Hill Environment Team. Information and judgment pertaining to compliance in the areas of ecology, groundwater and sediment have been provided by external subject matter experts.			

3 Public liability insurance

Details of the public liability insurance for the Prominent Hill Operation are provided in Table 3.1. A copy of the cover note for the public liability insurance and/or a copy of the policy of insurance is included in Appendix A.

Table 3.1: Public liability insurance details

Certificate of currency general liability	
Principal insured	BHP Group Limited and all subsidiaries' companies and all/or related and/or affiliated and/or controlled, managed, administered and associated companies or corporation and/or related joint ventures and/or partnerships and other entities.
Start date	1 July 2025
Finish date	30 June 2026
Limits of liability	$20,000,000 USD
Company/Agent	
Report prepared by tenement holder	
Summary of steps undertaken to review the compliance to ensure report accuracy	
This report has been prepared by the Prominent Hill Environment Team. Information and judgment pertaining to compliance in the areas of ecology, air quality and radiation have been provided by external subject matter experts.	

4 Tenements

A summary of the existing tenements for the Prominent Hill Operation is provided in Table 4.1. The locations of these tenements are shown on Figure 4.1.The extent of mining lease acitivities is shown on Figure 4.2.

Table 4.1: Tenement summary

Tenement	Tenement number	Tenement grant date	Tenement expiry date	Status of currency
Prominent Hill Mining Lease	ML 6228	02/08/2006	01/08/2041	Current
Site Access Road	MPLs 83-84	20/10/2006	01/08/2041	Current
Concentrate Export Road	MPL 91	21/08/2007	01/08/2041	Current
	MPL 96	22/10/2007	01/08/2041	Current
	MPL 97	22/10/2007	01/08/2041	Current
	MPL 101	05/11/2007	01/08/2041	Current
Wellfields (borefields) and Associated Infrastructure[1]	MPL 81 (Virgo)	19/09/2006	01/08/2041	Current
	MPL 82 (Virgo)	04/10/2006	01/08/2041	Current
	MPLs 93-94 (Aries)	10/09/2007	01/08/2041	Current
	MPLs 112-117 (Aries)	03/10/2008	01/08/2041	Current
Electricity Transmission Line	MPLs 119-122	09/07/2010	01/08/2041	Current
Extractive Minerals Areas	EML 6234	17/10/2006	01/08/2041	Current
	EMLs 6236-6242	09/11/2006	01/08/2041	Current
	EMLs 6278-6296	20/12/2007	01/08/2041	Current
	EMLs 6299-6301	23/01/2008	01/08/2041	Current

Any activities associated with Exploration Licences (ELs) in the vicinity of the Prominent Hill operations are managed and reported separately as they are subject to exploration compliance reporting.

[1] NB. Wellfields are referred to as borefields within this report

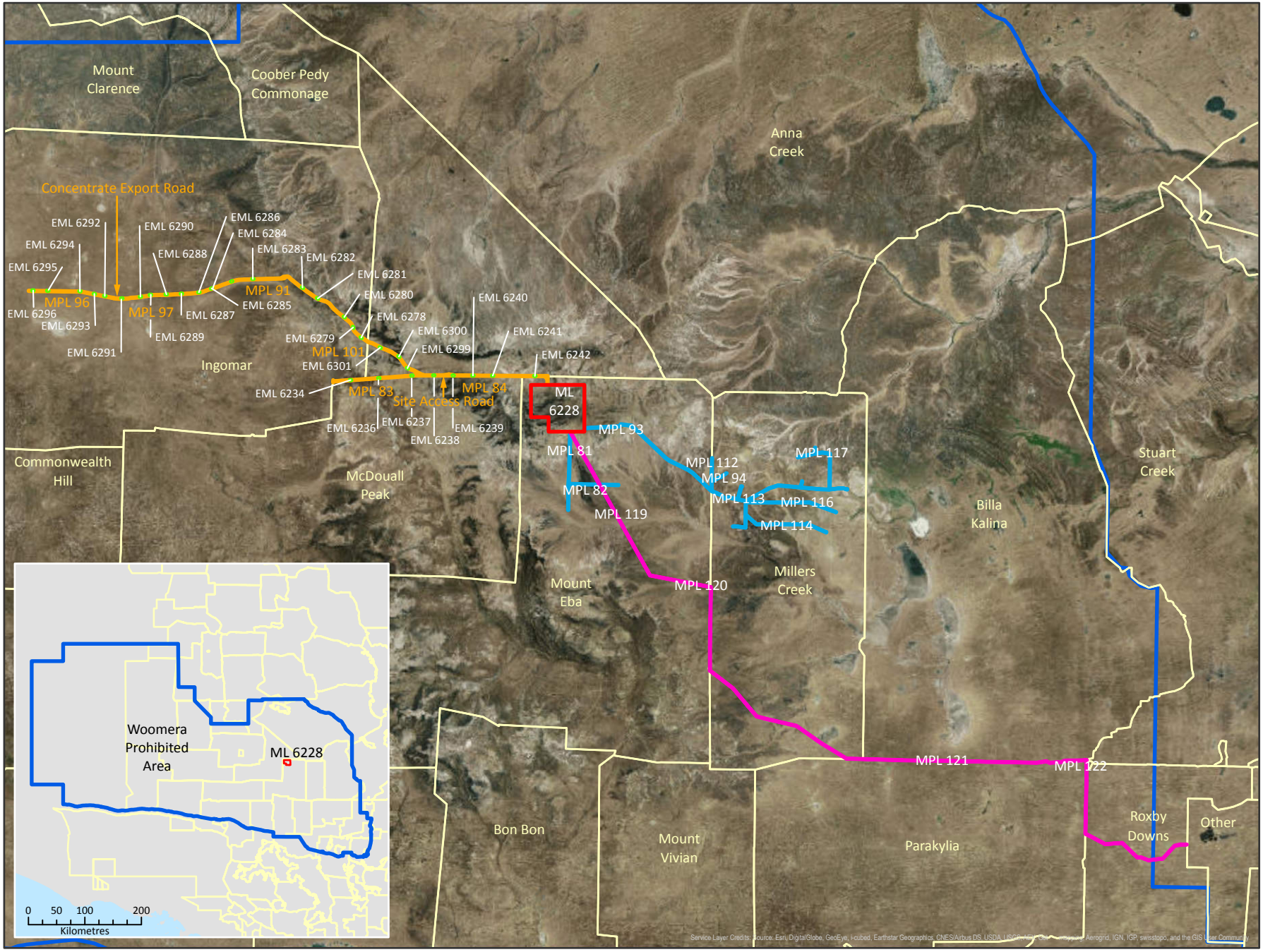

Figure 4.1: Mining lease boundary and associated tenements

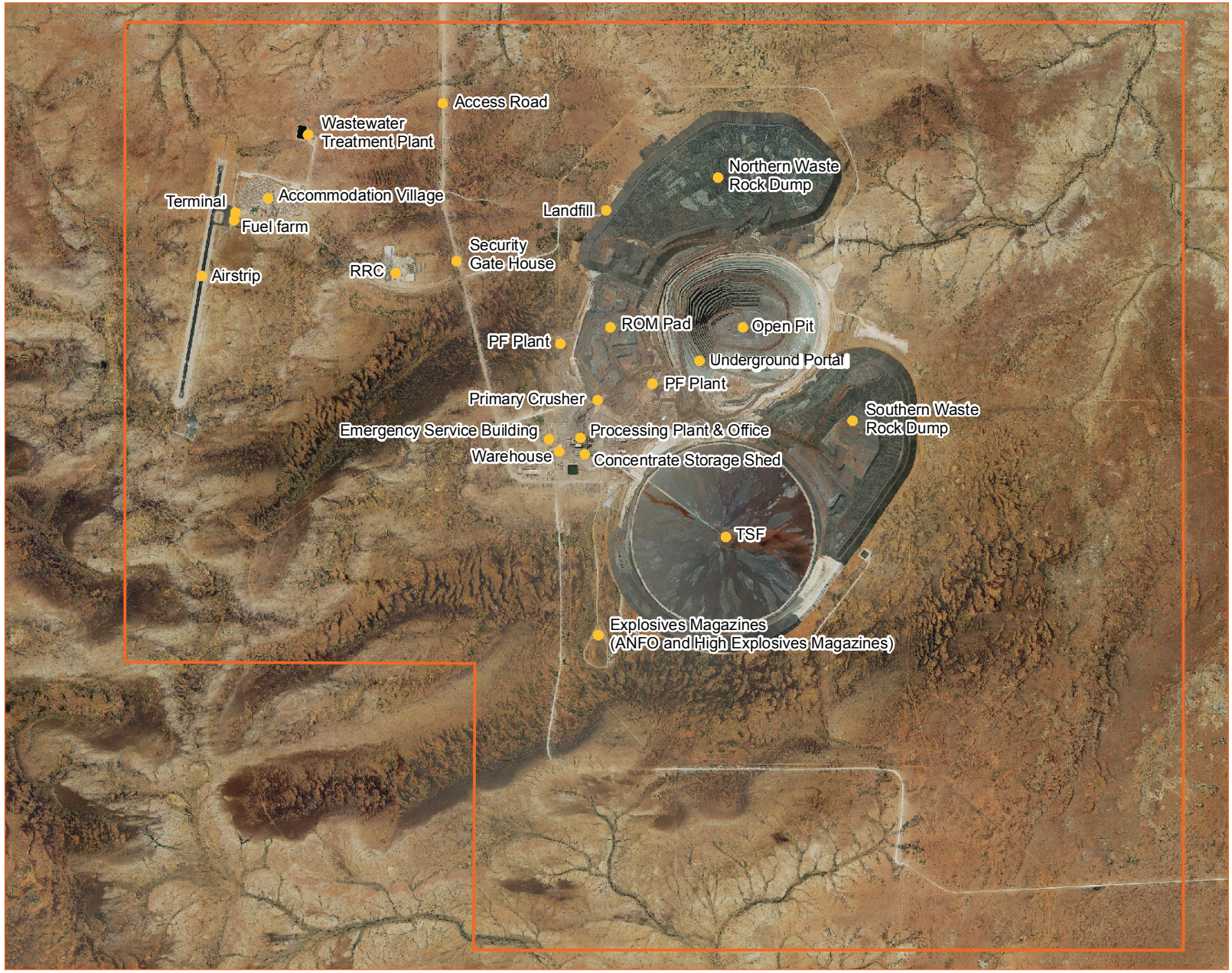

Figure 4.2 | Mining lease activities

5 Other approvals, licences, permits, waivers, native title and agreements

Table 5.1: Other approvals, licences, permits, waivers, native title and landholder agreements

Approval document	Regulatory authority or other	Supporting document	Status of currency
Environment Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) Approval of a controlled action. Ref: 2005/2040	Australian Government Department of Climate Change, Energy, the Environment and Water (DCCEEW)	Threatened Fauna Management Plan (PH-9999-SEC-PLN-0052) SEB Stage Two Offset Area Management Plan (PH-0000-SEC-REP-0934)	Expires on relinquishment of mining tenement
Government of South Australia's Environment Protection Authority (EPA) Licence to conduct Prescribed Activities (22764) – 2(5) Concrete batching works 2(9) Mineral Works 3(3)(a) Landfill depot 3(4)(b) Wastewater Treatment Works (outside MLR WPA) 8(6a)(b) Desalination plant that discharges wastewater to a wastewater lagoon	EPA	Waste Management Plan (PH-9999-SEC-PLN-0033) Wastewater Management Plan (PH-9999-PRO-PLN-0001)	Expires on 3 October 2028
Licence to Carry Out Mining or Mineral Processing (Ref: 51429) Category IV – Mineral processing with radioactive by products	EPA	Radiation Management Plan (PH-9999-SEC-PLN-0021) Radioactive Waste Management Plan (PH-9999-SEC-PLN-0022)	Expires on 30 June 2026
Government of South Australia's Department for Environment and Water (DEW) Haul Road Maintenance Water Licence No. 396809	DEW	Groundwater Management Plan (PH-9999-SEC-PLN-0044) Water Licence 396809 Monitoring Plan (PH-9999-SEC-PLN-0035)	Expires 30 June 2042
Borefields Water Licence No. 396811	DEW	Groundwater Management Plan (PH-9999-SEC-PLN-0044) Water Licence 396811 Monitoring Plan (PH-9999-SEC-PLN-0034)	Expires 30 June 2042
Water Affecting Activity – Water Permit to Drill	DEW	Separate permits for each drilled borehole	Expires upon relinquishment of mining tenement and closure of boreholes
Stuart Highway – Underpass Access Deed of Agreement	Department for Infrastructure and Transport (DIT)	Traffic Management Plan (PH-3000-PRO-PLN-0001)	Effective until terminated
Australian Government Woomera Prohibited Area Deed of Access	Department of Defence (DoD)	Agreement – Confidential (PH-0000-SEC-AGR-0045)	Expires 5 July 2027
Native Title Mining Agreement	Antakirinja Matu- Yankunytjatjara Land Management Aboriginal Corporation	Mining Native Title Agreement PH-0000-SEC-AGR-0010 – Confidential Cultural Heritage Management Plan – Confidential	Expires upon relinquishment of mining tenement
Approval for the Cartage and Use of Recycled Water for Dust Suppression (WCS No. 2309)	Government of South Australia, Department for Health and Wellbeing (DHW)	Waste Water Management Plan (PH-0000-SEC-PLA-0050)	For the life of the system
Waste Water Treatment Plant (WCS No. 2259)	DHW	Waste Water Management Plan (PH-0000-SEC-PLA-0050)	For the life of the system
Australian Government Civil Aviation Safety Authorirty (CASA) Aerodrome Certificate (1-HOO80)	CASA	Aerodrome Management Manual (PH-9999-PNP-PLN-0002)	Effective until terminated
Government of South Australia Safefwork SA Dangerous Substances Licence No. 366468	Safework SA	Hazardous Chemicals Management (PH-9999-SEC-PLN-0040)	Expires 16 January 2026
Apparatus Licences (various licence numbers)	Australian Government Australian Communications and Media Authority	NA	Expires upon relinquishment of mining tenement
Permit to Purchase Explosives Licence 864749	Safework SA	Explosives Principal Hazard Management Plan (PH-9999-SEC-PLN-0042)	14 March 2026

Approval document	Regulatory authority or other	Supporting document	Status of currency
Explosives Magazine Licences Ref 331741, 530014, 667094 and 98484	Safework SA	Explosives Principal Hazard Management Plan (PH-9999-SEC-PLN-0042)	31 March 2026
Registration under the Safe Drinking Water Act 2011	DHW	Drinking Water Risk Management Plan (PH-9999-SEC-PLN-0051)	For the life of the system
Electricity Transmission Licence (1.5.4LIC001)	Essential Services Commission of South Australia	NA	For the life of the system Fee paid annually
Billa Kalina Land Access and Compensation Agreement	Billa Kalina Pastoral Lease Holder (2415)	Agreement (PH-0000-SEC-AGR-0021– Confidential)	Expires upon relinquishment of mining tenement
Ingomar Land Access and Compensation Agreement	Ingomar Pastoral Lease Holder (2153, 2339, 2527)	Agreement (PH-0000-SEC-AGR-0016– Confidential)	Expires upon relinquishment of mining tenement
McDouall Peak Land Access and Mining Compensation Agreement	McDouall Peak Pastoral Lease Holder (2341)	Agreement (PH-0000-SEC-AGR-0015– Confidential)	Expires upon relinquishment of mining tenement
Millers Creek Land Access and Mining Compensation Agreement	Millers Creek Pastoral Lease Holder (2315)	Agreement (PH-0000-SEC-AGR-0014– Confidential)	Expires upon relinquishment of mining tenement
Mount Eba Land Access and Compensation Agreement	Mount Eba Pastoral Lease Holder (2197)	Agreement (PH-0000-SEC-AGR-0019– Confidential)	Expires upon relinquishment of mining tenement
Parakylia Land Access and Mining Compensation Agreement	Parakylia Pastoral Lease Holder (2197)	Agreement (PH-0000-SEC-AGR-0049– Confidential)	Expires upon relinquishment of mining tenement

6 Ore reserves and mineral resources

6.1 Ore reserves

The 2025 Mineral Resources and Ore Reserves can be found in the BHP Annual Report 2025, Additional Information; Section 6, which can be found on the BHP website at bhp.com/investors/annual-reporting (BHP 2025).

6.2 Estimated mine life

A scope of works is underway to determine a revised Mine Life, Life of Mine (LoM) information will be updated upon completion of the works. As of 2025, the estimated life-of-mine for the SLC is 20 years. Any expansion works to increase the LoM are subject to regulatory approval.

6.3 Exploration activities

No exploration activities occurred on the mining tenements that overlap with the exploration lease during this reporting period.

7 Mining, processing and waste storage activities

7.1 Ore mining

Ore mined – mine life (t)	Ore mined – reporting period (t)	Expected quantity of ore to be mined during next reporting period (Mt)	Quantity of ore stockpiled on the tenement at the end of the reporting period (t)
142,882,506	4,343,216	4.8	1,700,000

7.2 Ore processing

Ore processed – mine life (t)	Ore processed – reporting period (t)	Expected quantity to be processed during next reporting period (Mt)
148,635,645	6,681,213	6.5[2]

7.3 Concentrate or other product exported

Concentrate or other product exported – mine life (dmt)	Amount of concentrate or other product exported – reporting period (dmt)	Expected amount of ore to be processed during next reporting period (t)
2,987,310	93,335	89,600

7.4 Overburden/waste

Overburden mined – mine Life (t)	Reporting period – overburden mined (t)	Next reporting period – overburden to be mined (t)
441,711,068	1,200,491	1,319,996
Production notes: Overburden is defined as any material that is not processed by the mill. All raise bore waste is trucked to surface to minimize the risk of a potential cutter head through the crusher. Some development waste will be trucked to surface during crusher downtimes (planned/unplanned shuts)		

Volume of PAF and NAF material mined during reporting period (t)	Remaining capacity of current waste facilities or planned future waste facilities as per approved PEPR
Potentially-acid forming (PAF): 0* Non-acid forming (NAF): 1,204,491 t	4.4 Mt

[2] The difference between the expected quantity of ore to be mined and the quantity to be processed during the next reporting period is due to the planned processing of existing surface stockpiles previously mined from the open pit.

Will the remaining quantities of overburden to be mined be accommodated in the current or planned waste facilities (waste rock dump (WRD), tailings storage facility (TSF))? If not included, what future work?
Yes. Overburden will be used to backfill underground voids and cap the TSF at closure in addition to being placed in the open pit.
Are your waste facilities sufficient to deal with the volume of PAF material generated annually? If not, include what future work is required? *(Include any identification of PAF and NAF in the preceding reporting period and strategies to minimise the environmental impacts of this material.)*
No PAF material is being generated in the mine plan.

8 Compliance summary

Throughout the reporting period, no non-compliances were recorded.

9 Compliance tables

Compliance for the 2024 reporting period is summarised from Section 9.1 to Section 9.7. Regarding the column headings for each table, the following explanations or assessment drivers apply:

- **Environmental Outcome:** provides a copy of the regulatory outcome provided in the relevant tenement document.
- **Tenement, Grouped condition and Impact No:** provides the details of the tenement that the environmental condition relates to, and the grouped condition and impact as outlined in the PEPR 2022.
- **Regulatory commitment**: provides the OMC, Leading Indicator, Strategy or Future Works commitment related to the Environmental Outcome.
- **Compliance status:** provides the status of the regulatory commitment as one of the following:
  - Compliant (to OMC or Leading Indicator)
  - Non-compliant
  - Unable to determine
  - No longer relevant to risk profile of Operation.
- **Evidence:**
  - For each criterion, states what measures have been taken to monitor compliance and provides an interpretation of the results (i.e. compliant or non-compliant).
  - Provides a summary of the key measurements (using a graph to summarise data where possible) and refers to a summary of the detailed/raw data (if necessary) in an appendix but only to the extent necessary to verify the compliance conclusion reached.
  - Where graphs are used to illustrate compliance, the relevant compliance limits are clearly included on the graph.
  - Evidence where applicable document control number of the report or technical memo is included.
- **Forward work plan:**
  - If non-compliant, Leading Indicator triggered or any alterations to Outcomes or OMC are recommended, with a summary of actions being undertaken to rectify the non-compliance.
  - If unable to demonstrate compliance, states reasons and relevance of the OMC to the current risk profile of the Operation or current stage of the Operation.
  - States whether OMC or lease condition amendments are required.
  - Quantifies the risks associated with the non-compliance if applicable.
  - States whether the Leading Indicator is adequate to pick up the non-compliance or if it needs to be amended.

9.1 Surface water

Environmental Outcome	Tenement, Grouped Condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to spillage of miscellaneous chemicals or generation of fugitive sediment from activity within the EMLs	All EMLs GC07, IN7	**Outcome Measurement Criteria:** Annual inspection including photographs taken at four corners of EML and areas in the EML where high runoff is detected.	Compliant	Inspections were carried out on all EML sites in May 2025. Photographic records have been captured at each EML and demonstrate some minor erosion at a number of sites, with rilling on the slopes of the EML depression. However, it should be noted that all sediment is flowing into the depression of the EML and is not flowing outside of the EML boundary.
		Outcome Measurement Criteria: Records maintained within the incident reporting system (INControl) indicate that all spills of miscellaneous chemicals are managed in accordance with Chemical and hydrocarbon spill procedure (PH-9999- SEC-PRO-0056).	Compliant	There was no evidence of any spills that had not been remediated.
No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to generation of fugitive sediment	ML6228 GC15, IN15.1	**Outcome Measurement Criteria:** Concentrations of targeted heavy metals are in the 'low risk (no action)' category identified in the decision tree process in Figure 7-2 and Section 3.5 of the ANZECC/ARMCANZ (2000) sediment quality guidelines (see Figure 7-2). As per this ANZECC/ARMCANZ decision tree approach, the outcome is achieved if: • Concentrations of targeted heavy metals are below Interim Sediment Quality Guideline trigger values (ISQG-Low) identified in the ANZECC/ARMCANZ (2000) sediment quality guidelines, or where no guideline trigger value is specified, concentrations are below an adopted trigger value calculated in accordance with ANZECC/ARMCANZ (2000)) as stated in Table 7-3 to Table 7-7); or • If the ISQG-Low trigger values are exceeded, concentrations of targeted heavy metals are below background concentrations; or • If ISQG-Low trigger values or adopted trigger values (Table 7-3 to Table 7-7) (where relevant) and background concentrations are exceeded, bioavailable concentrations (analysed as acid extractable metals) are below ISQ-Low trigger values or adopted trigger values (where relevant); or • If bioavailable concentrations exceed ISQ-Low trigger values or adopted trigger values (Table 7-3 to Table 7-7), acute and chronic toxicity testing conducted in accordance with ANZECC/ARMCANZ (2000) demonstrates that concentrations are in the 'low risk (no action)' category.	Compliant	Concentrations of targeted heavy metals at sites WW-1 and MI-1 remained within the low-risk category and are therefore compliant with GC15. Due to land access constraints during the monitoring period, sampling could not be conducted at sites WW-2, WW-3, WA-2, and WA-3. However, historical data from these locations consistently show concentrations below the ANZECC (2000) low trigger thresholds. Given that the Integrated Waste Landform (IWL) has been largely finalised, and there was no increase in Run-of-Mine (ROM) or IWL activities during the reporting period, it is highly unlikely that there has been any change in the source of fugitive emissions. As such, the environmental outcome is considered to be met. Additionally, internal leading indicator sites WA-1 and WA-1b, located in close proximity to the operational area, recorded heavy metal concentrations below ANZECC low trigger thresholds. This further supports the conclusion that levels at the more distant sites are unlikely to have changed. There is active engagement to resolve the land access constraints in a reasonable timeframe. Once resolved, BHP will conduct sampling at sites WW-2, WW-3, WA-2, and WA-3 to confirm if this data supports compliance. A full summary of the results is provided as Appendix B FY25 Compliance Report – Prominent Hill Creek Sediment Review (Lathwida Environmental 2025).
No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to spillages of miscellaneous chemicals	ML6228 GC15, GC18, IN15.2	**Outcome Measurement Criteria:** Records maintained within the incident reporting system (INControl) indicate that all spills of miscellaneous chemicals are managed in accordance with the Chemical and hydrocarbon spill procedure (PH-9999-SEC-PRO-0056).	Compliant	All spills which occur on site are recorded in the InControl risk management database. Records of these can be provided upon request. A review of these records indicates that all spills have been cleaned up and disposed of immediately as per the outcome achievement criteria.
No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to altered flow regimes.	ML6228 GC15, GC18, IN15.3	**Outcome Measurement Criteria:** Refer to Section 9.3 Flora and Fauna	Compliant	Refer to Section 9.3 Flora and fauna Appendix C Prominent Hill Ecological Autumn Survey Report (Ecological)
No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to seepage from the TSF or process water dam.	ML6228 GC15, IN15.4	**Outcome Measurement Criteria:** Concentrations of targeted heavy metals are in the 'low risk (no action)' category identified in the decision tree process in Figure 7-2 and Section 3.5 of the ANZECC/ARMCANZ (2000) sediment quality guidelines (see Figure 7-2). As per this ANZECC/ARMCANZ decision tree approach, the outcome is achieved if: • Concentrations of targeted heavy metals are below Interim Sediment Quality Guideline trigger values (ISQG-Low) identified in the ANZECC/ARMCANZ (2000) sediment quality guidelines, or where no guideline trigger value is specified, concentrations are below an adopted trigger	Compliant	Concentrations of targeted heavy metals at sites WW-1 and MI-1 remained within the low-risk category and are therefore compliant with GC15. Due to land access constraints during the monitoring period, sampling could not be conducted at sites WW-2, WW-3, WA-2, and WA-3. However, historical data from these locations consistently show concentrations below the ANZECC (2000) low trigger thresholds. Given that the Integrated Waste Landform (IWL) has been largely finalised, and there was no increase in Run-of-Mine (ROM) or IWL activities during

Environmental Outcome	Tenement, Grouped Condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
		value calculated in accordance with ANZECC/ARMCANZ (2000)) as stated in Table 7-3 to Table 7-7); or • If the ISQG-Low trigger values are exceeded, concentrations of targeted heavy metals are below background concentrations; or • If ISQG-Low trigger values or adopted trigger values (Table 7-3 to Table 7-7) • (where relevant) and background concentrations are exceeded, bioavailable concentrations (analysed as acid extractable metals) are below ISQ-Low trigger values or adopted trigger values (where relevant); or If bioavailable concentrations exceed ISQ-Low trigger values or adopted trigger values (Table 7-3 to Table 7-7), acute and chronic toxicity testing conducted in accordance with ANZECC/ARMCANZ (2000) demonstrates that concentrations are in the 'low risk (no action)' category. **Leading Indicator Criteria Summary:** Annual external third-party audit of operational TSF that that includes but is not limited to: • visual inspection of structural integrity, i.e. no seepage or cracks in perimeter • review of operational surveillance records and piezometer monitoring data		the reporting period, it is highly unlikely that there has been any change in the source of fugitive emissions. As such, the environmental outcome is considered to be met. Additionally, internal leading indicator sites WA-1 and WA-1b, located in close proximity to the operational area, recorded heavy metal concentrations below ANZECC low trigger thresholds. This further supports the conclusion that levels at the more distant sites are unlikely to have changed. There is active engagement to resolve the land access constraints in a reasonable timeframe. Once resolved, BHP will conduct sampling at sites WW-2, WW-3, WA-2, and WA-3 to confirm if this data supports compliance. A full summary of the results is provided as Appendix B, FY25 Compliance Report – Prominent Hill Creek Sediment Review (Lathwida Environmental). All Leading Indicator Criteria have been met. Annual audit completed by WSP (2025) indicates there was no evidence of erosion on the perimeter of the TSF during the reporting period. The WSP Annual TSF review report has been provided as Appendix D, 2024 Annual Operational Review Prominent Hill Tailings Storage Facility (WSP)
No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to ARD.	ML6228	**Outcome Measurement Criteria:** Concentrations of targeted heavy metals are in the 'low risk (no action)' category identified in the decision tree process in Figure 7-2 and Section 3.5 of the ANZECC/ARMCANZ (2000) sediment quality guidelines (see Figure 7-2). As per this ANZECC/ARMCANZ decision tree approach, the outcome is achieved if: • Concentrations of targeted heavy metals are below Interim Sediment Quality Guideline trigger values (ISQG-Low) identified in the ANZECC/ARMCANZ (2000) sediment quality guidelines, or where no guideline trigger value is specified, concentrations are below an adopted trigger value calculated in accordance with ANZECC/ARMCANZ (2000)) as stated in Table 7-3 to Table 7-7); or • If the ISQG-Low trigger values are exceeded, concentrations of targeted heavy metals are below background concentrations; or • If ISQG-Low trigger values or adopted trigger values (Table 7-3 to Table 7-7**) (where** relevant) and background concentrations are exceeded, bioavailable concentrations (analysed as acid extractable metals) are below ISQ-Low trigger values or adopted trigger values (where relevant); or If bioavailable concentrations exceed ISQ-Low trigger values or adopted trigger values (Table 7-3 to Table 7-7), acute and chronic toxicity testing conducted in accordance with ANZECC/ARMCANZ (2000) demonstrates that concentrations are in the 'low risk (no action)' category. **Leading Indicator Criteria:** Review of records undertaken annually while WRDs operational confirm that NAF thicknesses of 10 m minimum surrounding PAF material has been maintained during operation.	Compliant	A review of annual aerial photography data and visual inspection completed by the onsite geotechnical team showed no indication that PAF cover was compromised. Please also refer to GC15, IN15.1 above. Appendix E Prominent Hill Aerial Imagery 2025
No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to water from open pit and underground operations.	ML6228 GC15, IN15.6	**Outcome Measurement Criteria:** Compliance with measurement criteria (sediment quality) detailed for Impact 15.1. If leading indicator is triggered, further investigation (e.g. additional sampling, modelling of seepage extent and targeted inspections for indications of seepage (e.g. surface salinity, vegetation changes) indicates that seepage has not or is not likely to adversely affect aquatic fauna and habitat biodiversity (incl. riparian vegetation). In the event that an emergency (controlled) discharge of pit water and/ or underground water needs to occur, records to demonstrate that approval was obtained from DEM, and that pit water quality data was collected.	Compliant	A review of the InControl and Borealis databases demonstrates there has been no emergency discharge of pit water to the environment during the reporting period.

9.2 Groundwater

Environmental Outcome	Tenement, Grouped Condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
No reduction in groundwater flows and/or quality to the Great Artesian Basin springs due to project water extraction.	ML6228, MPL81, MPL82, MPL91, MPL96, MPL97, MPL101, MPLs112-117 GC16, IN16	**Outcome Measurement Criteria:** Groundwater pressure results to be within historical variation (i.e., 90-115 kPa) and show no decreasing trend that is attributable to Prominent Hill operations. Water quality results (pH and salinity) are within baseline (+/-10%).	Compliant	The Margaret Creek Bore reported pressure readings of 60 kPa in October 2024 and 100 kPa in April 2025. While the pressure reading in October was below known historical readings it should be noted that as previously advised, the pressure gauge has not been accurate for a couple of years and has only recently been replaced by DEW so historical readings may not be representative of true variations in pressure levels. In addition, the pressure levels were within range when the second reading was taken in April 2025 therefore not indicating a decreasing trend. The pressure levels will continue to be monitored as per the current monitoring program. Salinity and pH readings were within baseline. Appendix F 2025 Compliance Report Water Resource Works Approval 396907 (EcoLogical)
No reduction in groundwater quantity and/or quality to existing third-party users of the Boorthanna Formation aquifer resulting in a loss of ability to operate pastoral station due to project water abstraction. No reduction in groundwater quantity and/or quality to existing third-party users of the Eromanga Formation aquifer due to project water abstraction.	ML6228, MPL81, MPL82, MPL91, MPL96, MPL97, MPL101, MPLs112-117	**Outcome Measurement Criteria:** This outcome is achieved by demonstrating that there has been no reduction in overall water supply access to the landholder to meet the demand of pastoral operations as a result of drawdown of the Boorthanna Formation & Eromanga Formation. This can be demonstrated by: • Hydrographs which show no declining trend in standing water level or a drawdown of less than 2 m. • In an instance where there is more than 2 m of drawdown within a third party well that is used for water supply purposes OZ Minerals must undertake a make good agreement to replace or renew lost water supply. This must be implemented before there is less than 2 m of available drawdown above the pump inlet. Evidence of any replacement/ renew water supply strategies and acceptance of these by the landholder must be provided to DEM. Water quality results (salinity) are within baseline (+/- 20% as agreed with landholders). **Leading Indicator Criteria Summary:** Standing water levels measured against model outputs to confirm if levels are trending in accordance with model predictions, or to confirm when a well will soon **become unusable and thus engagement with** the landholder is required for replacement/ renew water supply strategies.	Compliant	Monitoring conducted during July 24 – June 25 demonstrates no reduction in the water quality or standing water levels that has resulted in a loss of ability to operate their pastoral station and, no reduction in water quality in the non-artesian Eromanga. Groundwater monitoring results will be submitted to the Department for the Environment and Water in line with the requirements of BHP's Water Licence requirements. Appendix F 2025 Compliance Report Water Resource Works Approval 396907 (EcoLogical)
No reduction in groundwater quality affecting suitability for water uses (potable use and agricultural use) due to seepage from TSF or acid rock drainage from the IWL.	ML6228 GC17, IN17.2	**Outcome Measurement Criteria:** Water sampling and laboratory analysis of bulldog shale wells (shallow wells) and non-Artesian Eromanga aquifer wells (deep wells) (Figure 7-5) and analysis of pH, EC and metals demonstrates water quality is within the rolling two-year statistical analysis over the preceding two years for all samples. **Leading Indicator Criteria:** Review of records undertaken annually while WRDs operational confirm that NAF thicknesses of 10 m minimum surrounding PAF material has been maintained during operation. Annual external third-party audit of operational TSF that includes but is not limited to: • visual inspection of structural integrity, i.e., no seepage or cracks in perimeter • review of operational surveillance records and piezometer monitoring data	Compliant	Following the outcomes of the statistical assessment, based on the available results, concentrations of indicator analytes in groundwater sampled from shallow groundwater wells (targeting the Bulldog Shale which is not used as a regional source of water) were generally either stable or decreasing with the exception of a small number of analytes from some shallow groundwater wells which were observed to be potentially increasing. Concentrations of indicator analytes in groundwater sampled from deep groundwater wells (non-artesian Eromanga Aquifer utilised regionally as a water source outside of the Mine Lease area) were considered to be generally stable and did not exhibit significant increasing trends with the exception of copper. Several heavy metals, including copper, detected in samples in June 2025 may have been influenced by field and/or laboratory error due to reported dissolved concentrations exceeding the reported total concentrations. If there is a data quality issue, the reported dissolved metals may have influenced the trends observed in this report. Resampling should occur as scheduled in September 2025, including: • Care to ensure field filtration of samples with 0.45µm filter. • Submitting an unfiltered sample to the laboratory for 0.22 µm filtration before analysis. • Duplicate sampling at TSF-A. • Prompt review and scrutiny of laboratory results and quality control sample results. Based on the outcomes of this assessment, noting the observed stable conditions of the deeper non- Appendix G Groundwater Quality Assessment – Prominent Hill Mine, SA (Land & Water Consulting)

9.3 Flora and fauna

Environmental Outcome	Tenement, Grouped Condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
Environmental offsets are approved and in place for all clearance of native vegetation	All tenements GC13, GC14, IN13	**Outcome Measurement Criteria:** Habitat Quality Indicators including vegetation and soils (representing broader ecosystem function) 100 x 100m VEGETATION QUADRATS (Biol. Survey Method): • identification of all species present (species diversity/richness, inclusive of annuals) • cover (%) of individual species • species identified as recruiting. 10x2m SUB PLOT within VEGETATION QUAD RAT. For each 1x1m unit of sub-plot: • estimate of% grass cover (ephemerals, annuals) • estimate of% bare ground • estimate of% litter cover within the plot • estimate of% surface crust • counts of recruits (all shrubs) to provide recruitment score • long lived perennials (over and under storey) via species abundance counts (density) for both juveniles and adults. Panoramic photographs collected to aid in assessment of vegetation cover for recruitment. Observational data to be collected at all sites including (but not limited to) vehicle tracks, erosion, vegetation clearing, distance to mine site, light, dust, inappropriate access, feral animals and weeds. GIS output of approved clearance boundary and actual clearance boundary. **Leading Indicator Criteria:** Reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. Suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. An increase in bare ground and/or scald/erosion % cover at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. If leading indicator triggered, further assessment of detected impacts vs pre-mine condition by comparison with sites outside of SEB area required to determine non-compliance with lease condition. Annual review of vegetation clearance confirms all clearance has been approved	Compliant	EcoLogical Associates were engaged to conduct the annual vegetation survey that was completed in April to May 2025. The following is a summary of their findings. The full report is provided as Appendix C. <u>Statement addressing achievement of outcome measurement criteria</u>: The species diversity, vegetation cover and the percentage of species recruiting in 2025 remains high, compared to the historical data (2017-2024). Mallee woodland had higher diversity at control sites than impact sites, and the opposite was true for acacia woodlands and chenopod shrublands in 2025. The percentage of vegetation cover was higher at control than impact sites for acacia woodland and chenopod shrublands. Whereas cover was higher for impact sites in mallee woodland. The percentage of native perennial species recruiting was higher for impact sites than control sites for acacia and mallee woodlands in 2025. both control and impacts were the same for chenopod shrublands in 2025. Rabbit activity was observed across all sites for all three vegetation types. <u>Statement addressing leading indicators</u>: The following observations have been made in relation to the leading indicator criteria: • The average total species diversity increased in 2025 compared to 2024. Native vegetation cover (abundance) has remained constant over the 2021-2025 period. • The proportion of species recruiting is higher at impact than control sites across all three vegetation types. • The amount of grass cover at all sites has decreased compared to 2024. • Bare ground cover has increased in 2025 at all sites. Appendix C Prominent Hill Annual Autumn Ecological Survey 2025 (EcoLogical)
No loss of abundance or diversity of native vegetation, or reduction in habitat quality, on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities unless prior approval under relevant legislation is obtained and environmental offsets are approved and in place.	All tenements GC12, IN12	**Outcome Measurement Criteria:** As per GC13 above. **Leading Indicator Criteria:** Indicators of habitat degradation, including: Reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. Suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. An increase in bare ground and/or scald/erosion % cover at impact sites without a corresponding increase at control sites over three consecutive monitoring periods. If leading indicator triggered, implement targeted threatened bird surveys to confirm ongoing presence of Thick-billed Grass wren and Chestnut- breasted Whiteface within impacted sites.	Compliant	As provided for Grouped Conditions: GC13, GC14, IN13 above.

Environmental Outcome	Tenement, Grouped Condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
No introduction of new species of weeds, plant pathogens or pests (including feral animals), nor sustained increase in abundance of existing weed or pest species in the licence area compared to adjoining land as a result of mining operations.	All tenements GC64, IN64	**Outcome Measurement Criteria:** Weed infestations are recorded, treated and monitored for ongoing management requirements. Pest animal sightings are recorded and will result in the initiation of a trapping/baiting program and subsequent monitoring. **Leading Indicator Criteria:** Annual review of the weed survey and management register (results of field monitoring and visual observations) considering trends that could indicate population increase or new weed species. Quarterly review of cat sightings and trapping register considering trends that could indicate population increase and requirement for increase in trapping program	Compliant	EcoLogical Associated were engaged to conduct the annual vegetation survey which was conducted in April - May 2025. The following is a summary of their findings. The full report is provided as an Appendices to this document. Statement addressing achievement of outcome measurement criteria: Weed monitoring was completed in and outside of the ML. No new weed species were detected in the 2025 monitoring period across the five weed monitoring sites or at the 20 permanent vegetation monitoring sites. *Malvastrum americanum var americanum* was observed in higher abundance at all sites, however this perceived increase was not statistically signficant. Statement addressing leading indicators: A review of the onsite weed survey and management register shows there have been some minor outbreaks of buffel grass (*Cenchrus ciliaris*) and caltrop (*Tribulus terrestris*) within the EMLs on the access road and on the ML respectively. All plants present were physically removed by grubbing, the location of the sightings were captured via GPS and will be monitored for any recurrence. A regular feral cat trapping program is undertaken by the environment team prompted by reports of sightings by site personnel. During the 2024-25 reporting period 14 feral cats were captured and euthanised. The environment team also undertake a six-monthly wild dog baiting program to meet our obligations under the Landscape South Australia Act 2019. Appendix C Prominent Hill Annual Autumn Ecological Survey 2025 (EcoLogical)

9.4 Radiation and air quality

Environmental Outcome	Tenement, Grouped Condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
No adverse impacts on flora and fauna due to the release or accumulation of radionuclides into the environment.	ML6228 GC46, IN46	**Outcome Measurement Criteria:** Record review - compliance reporting under the Radiation and Protection Control Act 1982 and associated facilities licence Reporting demonstrates compliance with facilities licence.	Compliant	The Environmental Radiation Monitoring Report has been submitted to the EPA demonstrating compliance with the facilities licence and is provided as Appendix H.
No significant nuisance impacts due to dust as a result of project activities. (A significant nuisance impact is considered to be one that generates a complaint that is attributable to project activities and cannot be addressed within the time frames specified in the measurement criteria.)	MPL81, MPL82, MPLs119-122, MPL93, MPL94, MPLs112-117, MPL91, MPL96, MPL97, MPL101. All EML tenements GC11, IN11	**Outcome Measurement Criteria:** Annual review of complaints register demonstrates that in respect of complaints relating to dust impacts from project activities: • complaint initially responded to within 5 business days • issues underlying complaint are currently/have been investigated, causes identified, complaint closed, and corrective actions implemented within a reasonable period or other time frame agreed by DPC and/or complainant.	Compliant	A review of the Borealis Stakeholder Compliance Management System shows no complaints have been received relating to dust over this reporting period.

9.5 Land use

Environmental Outcome	Tenement, Grouped condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
No long-term soil contamination that would compromise agreed future land uses.	ML6228 MPL81, MPL82, MPLs119-122, MPL93, MPL94, MPLs112-117, MPL91, MPL96, MPL97, MPL101. EML 6234, EMLs 6236-6242 GC06, IN06	**Outcome Measurement Criteria:** Investigation and corrective actions triggered as a result of an accidental spill report demonstrate that all spillage to soil have been remediated as per Chemical and hydrocarbon spill procedure (PH-9999-SEC-PRO-0056).	Compliant	All spills which occur on site are recorded in the EMS risk management database. Records of these can be provided upon request. A review of these records indicates that all spills have been cleaned up and disposed of immediately as per the outcome achievement criteria.
No adverse impacts to Department of Defence operations within the WPA.	All tenements GC65, IN65	**Outcome Measurement Criteria:** Quarterly review of records demonstrates there has been no breaches of the deed with DoD or if a breach has occurred that it was notified within 24 hours and corrective actions are closed out within 14 days or other time frame agreed by Department of Defence (or other authorised officer) in accordance with PH-9999-SEC-PRO-0052 Enquiry, Complaint and Grievance Management Procedure.	Compliant	A review of the Borealis stakeholder communications database shows there were no breaches of the deed with DoD during the reporting period.

9.6 Roads, traffic and other infrastructure

Environmental Outcome	Tenement, Grouped condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
No significant adverse impacts on pastoral roads, public roads, traffic and other infrastructure.	ML6228 MPL81, MPL82, MPLs119-122, MPL93, MPL94, MPLs112-117, MPL91, MPL96, MPL97, MPL101. EMLs 6278-6296, EMLs 6299-6301, EML 6234, EMLs 6236-6242 GC19, GC20, IN19	**Outcome Measurement Criteria:** Complaint initially responded to within 24 hours. Issues underlying complaint are/ have been investigated, causes identified, complaint closed, and corrective actions implemented within 14 days. Reporting demonstrates all complaints regarding roads, traffic and other infrastructure related to mining activities have been responded to within 24 hours and corrective actions are closed out within 14 days or other time frame agreed by Director of Mines (or other authorised officer) in accordance with PH-9999-SEC-PRO- 0052 Enquiry, Complaint and Grievance Management Procedure.	Compliant	A review of the Borealis stakeholder communications database demonstrates that complaints were received in relation to cattle strikes, fence damage and management and use of the shared pastoral roads. All complaints were responded to within 24 hours and closed out within agreed time frames. Please refer to Section 16 for more information on the individual complaints.

* Intent of MPL 149 PEPR (OZ Minerals 2017b)

9.7 Indigenous and non-indigenous cultural heritage management

Environmental Outcome	Tenement, Grouped condition and Impact No.	Regulatory commitment	Compliance status	Evidence and forward work plan
No disturbance to indigenous and non-indigenous artefacts or sites of significance unless it is authorised under the relevant legislation (Aboriginal Heritage Act 1988 or Heritage Places Act 1993).	ML6228 MPL81, MPL82, MPLs119-122, MPL93, MPL94, MPLs112-117, MPL91, MPL96, MPL97, MPL101. EMLs 6278-6296, EMLs 6299-6301, EML 6234, EMLs 6236-6242	**Outcome Measurement Criteria:** Land disturbance is within areas subject to cultural heritage clearance. No disturbance to identified sites attributable to project operations. Records demonstrate that work ceased in the immediate area of discovery, appropriate authorities were advised, and work recommenced only after necessary authorisation under the Aboriginal Heritage Act 1988 was obtained.	Compliant	Cultural heritage inspections have been completed and recorded (with photographs) on the cultural heritage database located on the BHP server. Due to cultural sensitivities these images are not provided. Please contact BHP if you require further clarification.

10 Summary of grouped lease conditions with corresponding environmental outcomes

This section reports against all grouped lease conditions.

Grouped Condition No.	Grouped Lease Condition	Corresponding Environmental Outcomes (refer to Table 7-21 in PEPR 2022 for details)	Compliance Status	Evidence
GC05	The Lessee muse ensure that all fuel and liquid chemical storage areas are bunded and lined in accordance with current EPA (South Australia) guidelines	No long-term soil contamination that would compromise agreed future land uses	Compliant	Refer to Section 9.5
GC06	The Lessee must, in constructing, operating and post mine closure ensure there is no post-closure soil contamination.	No long-term soil contamination that would compromise agreed future land uses	Compliant	Contaminated site register holds all contamination information, possible subsequent investigation to be managed at closure.
GC07	The Lessee of active Extractive Mineral Leases (EMLs) must ensure that all water borne silt (or any other mining related contaminants) be contained on the mining lease EMLs.	Waterborne silt (or any other mining related contaminants) is contained on the mining lease EMLs.	Compliant	As for GC07 in Section 9.1
GC08	The Lessee/Licensee must, in constructing, operating the lease/licence, ensure there is no disturbance to indigenous and non-indigenous artefacts or sites of significance unless prior approval under the relevant legislation (Aboriginal Heritage Act 1988 or Heritage Places Act 1993) is obtained.	No disturbance to indigenous and non-indigenous artefacts or sites of significance unless it is authorised under the relevant legislation (Aboriginal Heritage Act 1988 or Heritage Places Act 1993).	Compliant	As for GC08 in Section 9.7
GC09	The Lessee/Licensee must ensure that all employees and contractors on-site are properly advised of the significance of Aboriginal heritage and culture and are to take due care to preserve all Aboriginal Sites and Objects as defined by the Aboriginal Heritage Act 1988.	As for GC08	Compliant	As for GC08 in Section 9.7
GC11	The Lessee/Licensee must ensure that dust from the operation be effectively controlled and managed.	No significant nuisance impacts due to dust as a result of project activities.	Compliant	As for GC11 in Section 9.4
GC12	The Lessee/Licensee must, in constructing, operating the lease/licence, and post mine closure, ensure there is no significant adverse impact to the abundance and diversity of threatened or non-threatened native fauna species.	No loss of abundance or diversity of native vegetation, or reduction in habitat quality, on or off the Mining and or miscellaneous purposes lease areas during construction, operation and post mine completion through: • land clearance, • dust/contaminant deposition, • fire, • reduction in, or introduction of, water supply, or • other damage, unless prior approval under relevant legislation is obtained and environmental offsets are approved and in place.	Compliant	As for GC12 in Section 9.3
GC13	The Lessee must, in constructing, operating and post mine closure ensure there is no avoidable disturbance to vegetation.	As above	Compliant	As for GC14 in Section 9.3 and as for GC08 in Section 9.7
GC14	The Lessee/Licensee must, in constructing, operating and lease/licence, and post mine closure, ensure there is no significant adverse impact on the abundance and diversity of threatened or non-threatened native flora species or communities.	As above	Compliant	As for GC13 in Section 9.3
GC15	The Lessee must, in constructing, operating and post mine closure ensure no long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to: • generation of fugitive sediment • miscellaneous chemicals • altered flow regime • seepage from Tailings Storage Facility • seepage from the process water dam • acid Rock Drainage • pit water.	No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to generation of fugitive sediment No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to spillages of miscellaneous chemicals No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to seepage from the TSF No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to ARD No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to water from open pit and underground operations.	Compliant	As for GC15 in Section 9.1 Monitoring data collected during the reporting period, supported by consistent historical trends across all sediment sites, substantiates compliance with GC15 despite not being verified by the OMC.

Grouped Condition No.	Grouped Lease Condition	Corresponding Environmental Outcomes (refer to Table 7-21 in PEPR 2022 for details)	Compliance Status	Evidence
GC16	The Lessee must, in constructing, operating and post mine ensure there is no reduction in groundwater flows to Great Artesian Basin springs due to project water extraction.	No reduction in groundwater flows to Great Artesian Basin springs due to project water extraction.	Compliant	As for GC16 in Section 9.2
GC17	The Lessee must, in constructing, operating and post mine closure ensure that is no reduction in the quantity and quality of water for existing users.	No reduction in groundwater quantity and/or quality to existing third-party users of the Boorthanna Formation aquifer resulting in a loss of ability to operate pastoral station due to project water abstraction. No reduction in groundwater quantity and/or quality to existing third-party users of the non-artesian Eromanga aquifer due to project water abstraction. No reduction in groundwater quality affecting suitability for water uses (potable use and agricultural use) due to seepage from TSF or acid rock drainage from the IWL.	Compliant	As for GC17 and GC18 detailed in Section 9.2
GC18	The Licensee must, in constructing and operating the Miscellaneous Purposes Licences, ensure that there is no adverse impact to the quality and quantity of groundwater and or surface water caused by mining operations to existing users and water dependent ecosystems.	No reduction in groundwater quantity and/or quality to existing third-party users of the Boorthanna Formation aquifer resulting in a loss of ability to operate pastoral station due to project water abstraction. No reduction in groundwater quantity and/or quality to existing third-party users of the non-artesian Eromanga aquifer due to project water abstraction.	Compliant	As for GC17 and GC18 detailed in Section 9.2
GC19	The Lessee must, in constructing, operating and post mine closure ensure no significant adverse impacts on public roads, traffic and power supplies.	No significant adverse impacts on pastoral roads, public roads, traffic and other infrastructure	Compliant	As per GC19 detailed in Section 9.6
GC20	The Licensee must, in constructing and operating the licence, ensure that there is no unauthorised damage to adjacent public or private infrastructure.	As above	Compliant	As per GC19 detailed in Section 9.6
GC22	The Lessee must control erosion on the external slopes of the Integrated Waste Landform	No long-term soil contamination that would compromise agreed future land uses.	Compliant	As per GC22 detailed in Section 9.5
GC27	Adjacent land use: The Licensee must in constructing and operating the Licence, ensure that there are no adverse impacts to adjacent land use.	No significant adverse impacts on pastoral roads, public roads, traffic and other infrastructure. No adverse impacts to Department of Defence operations within the Woomera Prohibited Area.	Compliant	As per GC27 detailed in Section 9.6
GC45	The Lessee must, in constructing, operating and post mine closure ensure there is no adverse impact on pastoralists' incomes.	No reduction in groundwater quantity and/or quality to existing third-party users of the Boorthanna Formation aquifer resulting in a loss of ability to operate pastoral station due to project water abstraction. Other relevant impacts are discussed, addressed and managed if the arise. No reduction in groundwater quantity and/or quality to existing third-party users of the non-artesian Eromanga aquifer due to project water abstraction.	Compliant	As per GC45 detailed in Section 9.2
GC46	The Lessee must, in constructing, operating and post mine closure ensure there is no adverse impacts on flora and fauna due to the release or accumulation of radionuclides into the environment.	No adverse impacts on flora and fauna due to the release or accumulation of radionuclides into the environment.	Compliant	As for GC46 detailed in Section 9.4
GC61	The Lessee/Licensee must ensure that all affected topsoil is removed and stockpiled prior to carrying out any activity, and minimise the mixing and erosion of topsoil and overburden stockpiles.	No loss of abundance or diversity of native vegetation, or reduction in habitat quality, on or off the Mining and or miscellaneous purposes lease areas during construction, operation and post mine completion through: • land clearance • dust/contaminant deposition • fire • reduction in, or introduction of, water supply or • other damage unless prior approval under relevant legislation is obtained and environmental offsets are approved and in place.	Compliant	As for GC61 detailed in Section 9.3
GC64	The Lessee/Licensee must in constructing, operating the lease/licence and post mine closure ensure no introduction of new weeds, plant pathogens or pests (including feral animals), nor increase in abundance or distribution of existing weed or pest species in the lease/licence area and adjacent areas caused by mining operations. The Lessee/Licensee must ensure that all employees and contractors on-site are fully aware of the requirement to operate in a manner that will minimise the spread of weeds and plant pathogens. Weeds are defined in this condition as any invasive plant that threatens native vegetation in the local area, or any species recognised as invasive in SA.	No introduction of new species of weeds, plant pathogens or pests (including feral animals), nor sustained increase in abundance of existing weed or pest species in the licence area compared to adjoining land as a result of mining operations.	Compliant	As for GC64 in Section 9.3 The general onsite induction informs any new personnel coming onto site of their environmental obligations including those related to weeds.
GC65	The Lessee of Mining Lease 6228 must, in constructing, operating and post mine closure ensure there is no adverse impacts to Department of Defence operations within the Woomera Prohibited Area.	No adverse impacts to Department of Defence operations within the Woomera Prohibited Area (WPA).	Compliant	As for GC46 detailed in Section 9.5

11 Summary of grouped lease conditions with no corresponding environmental outcome

This section reports against all non-outcome based Second Schedule lease conditions.

Grouped Condition No.	Grouped Lease Condition	Comment	Compliance Status	Evidence
GC05	The Lessee muse ensure that all fuel and liquid chemical storage areas are bunded and lined in accordance with current EPA (South Australia) guidelines	This is a control strategy, not an outcome, and has been incorporated into the control measures for Impact 6 / lease condition GC06.	Compliant	BHP undertake site inspections which investigate the storage of liquid chemicals and fuels. Records of these inspections are maintained within the InControl risk management system database on the Prominent Hill server. No chemicals are stored onsite within natural surface water runoff zones.
GC09	The Lessee/Licensee must ensure that all employees and contractors on-site are properly advised of the significance of Aboriginal heritage and culture and are to take due care to preserve all Aboriginal Sites and Objects as defined by the Aboriginal Heritage Act 1988.	This is a control strategy, not an outcome, and has been incorporated into the control measures for Impact 8 / lease condition GC08.	Compliant	The Cultural Heritage Management Plan (Confidential Document) (PH-0000-SEC-PRO-0001) is in place.
GC10	The Licensee of Miscellaneous Purposes Licence (MPL) 91 must enter into a formal agreement with the Department of Transport, Energy and Infrastructure for construction, maintenance works and technical and operational issues regarding the Stuart Highway underpass. A copy of this formal agreement must be supplied to the Director of Mines and registered against the Miscellaneous Purposes Licence, prior to construction of the underpass	Deed of agreement with the Department of Transport, Energy and Infrastructure is in place.	Compliant	Deed of agreement with the Department for Infrastructure and Transport Infrastructure (PH-0000-SEC-AGR-0048) is in place. On 27 October 2022 DIT advised OZ Minerals that a structural inspection will be completed by their department in FY2025/26 and there is no requirement BHP to provide any further information at this point in time.
GC22	The Lessee must control erosion on the external slopes of the Integrated Waste Landform	This is a control strategy, not an outcome, and has been incorporated into the control measures for Impact 15.1 / Grouped Condition GC15	Compliant	The majority of the IWL has been fully rock armoured during the course of mining operations. Only a portion of the TSF and southern waste rock dump require additional rock armour. This criterion will be able to be assessed on completion of the operation.
GC26	The Integrated Waste Landform (IWL) must be designed, constructed, operated and decommissioned in accordance with Tailings Management Guidelines as approved from time to time by the Chief Inspector of Mines in consultation with the Environment Protection Authority.	This is a control strategy, not an outcome, and has been incorporated into the control measures for Impact 15.4 / Grouped Condition GC15	Compliant	Design intent commentary for the Tailings Storage Facility has been provided in Section 8 of the TSF Operational Review 2024 (WSP 2025) completed in August 2025. A Construction Records Report is to be prepared following completion of Stage 6 TSF construction. Next audit due late 2025. Audit report provided as Appendix D.
GC27	Adjacent land use: The Licensee must in constructing and operating the Licence, ensure that there are no adverse impacts to adjacent land use.	No significant adverse impacts on pastoral roads, public roads, traffic and other infrastructure. No adverse impacts to Department of Defence operations within the Woomera Prohibited Area.	Compliant	Compliant with all deeds and agreements. Please refer to Section 16 for details of complaint management in this reporting period.
GC56	Significant Environmental Benefit (SEB) Vegetation Offset Area: The Lessee of Mining Lease 6228 must submit a detailed Significant Environmental Benefit Offset Area Management Plan (OZ Minerals 2016b) to the satisfaction of the Chief Inspector of Mines within 12 months from the grant of the lease. This must include an inventory of the flora and fauna within the offset site and a plan for the long-term future management and monitoring activities.	SEB Offset Area Stage 2 Management Plan (PH-ENVREP-0005) has been submitted and approved.	Compliant	Refer to Section 9.3 for SEB Offset Area compliance

12 Rectification of non-compliance

No non-compliances occurred during the reporting period.

13 Disturbance and rehabilitation activities

The current PEPR includes a SEB Stage 2 Offset Management Plan (OZ Minerals 2022) for disturbance at Prominent Hill.

Each year BHP conducts an audit of the land disturbance database to review and reconcile existing data. During the 2025 audit it was found that an area of 0.154 ha was disturbed within ML 6228 (Table 13.1). In line with requirements of the PEPR, all disturbance was approved by DEM and the Native Vegetation Council.

As outlined in the Significant Environmental Benefit Stage Two Offset Area Management Plan (2022) the Prominent Hill Operation has a credit balance of 24.81 ha remaining with the Native Vegetation Council for future disturbance activities.

Table 13.1: Land disturbance summary

Area where disturbance and rehabilitation activity occurred (ha)	Description of disturbance works carried out in the reporting period (ha)	Amount of land disturbed during the reporting period (ha)	Estimated amount of land to be rehabilitated in the next reporting period (ha)	Total amount of land where rehabilitation works are completed (ha)
ML 6228	Vegetation clearance at perimeter of explosives magazine (0.141 ha) Installation of new weather station (0.013 ha)	0.154	0	0
Access / Haul Roads	-	-	-	-
Transmission Line	-	-	-	-
Aries Wellfield	-	-	-	-
Virgo Wellfield	-	-	-	-
EMLs	-	-	-	-
All tenements (total)		**0.154**		

Strategies implemented to avoid or minimise disturbance:
Land Disturbance Permitting process ensures that work areas are safely minimised, and already disturbed land is used for new works as much as reasonably possible. For temporary works the stripping of topsoil is avoided. Land Disturbance Areas are surveyed and pegged to avoid any disturbance outside of the allowed area.
Summary of any potential improvements learned from previous rehabilitation activities
The establishment of new rehabilitation sites will be monitored going forward utilising the Landscape Function Analysis methodology to determine the suitability of current rehabilitation processes.

14 *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act)

In April 2005, the Federal Environment Department made a controlled action decision under the EPBC Act against the Prominent Hill operation, based on the assumption that the project would have a significant environmental impact on listed threatened species and communities. Six environmental approval conditions were subsequently issued and have been reported against on an annual basis.

In December 2017, the DoEE as part of an internal audit process, reviewed the project approval, and in June 2018 issued a variation to the existing project conditions, superseding the previous conditions.

Table 14.1 shows the revised conditions and evidence of compliance for this reporting period

Table 14.1: Summary of compliance against EPBC Conditions

Condition No.	Condition	Compliance status	Evidence demonstrating compliance with condition
1	To mitigate impacts to the thick-billed grass wren (*Amytornis modestus indulkanna*) and the plains rat (*Pseudomys australis*), the person taking the action must, prior to 1 July 2018, submit an Environment Management Plan (EMP) for the approval of the Minister. The EMP must be prepared in accordance with the Department's Environmental Management Plan Guidelines and include, but not be limited to: a) Management measures to maintain or improve habitat condition including: I. Measures to prevent and control human and stock access to species habitat; and ii. The control of feral predator and weed species; and b) Feral predator, weed and habitat condition monitoring, triggers for management intervention and correction actions. The person taking the action must implement the approved EMP.	Compliant	Ecological Associates (ELA) completed annual vegetation and habitat monitoring in Autumn 2025. (Appendix C) ELA found no sustained significant difference between the control and impact sites, including mean perennial species abundance, richness and total diversity, mean recruitment scores and mean soil/ecosystem function scores. This demonstrates success in meeting the requirements of the outcome criteria for this environmental outcome. ELA completed weed monitoring as part of the Autumn 2025 ecological survey. ELA detected no new weed species and no significant increase in abundance of existing species. Feral animal control occurred as needed, based on sighting reports. Records show the capture and euthanasia of 14 cats during the reporting period.
2	The person taking the action must, unless otherwise agreed by the Minister, submit by 30 September of each year (beginning in 2019) written advice to the Minister demonstrating how the person taking the action has complied with the conditions of the approval.	Compliant	The Compliance Report will be submitted to DCCEEW on or by 30 September 2025.
3	The person taking the action may choose to revise the plan approved by the Minister under condition 1 without submitting it for approval under section 143A of the EPBC Act, if the taking of the section in accordance with the revised plan would not be likely to have a new or increased impact. If the person taking the action makes this choice they must notify the Department in writing	Compliant	N/A

Condition No.	Condition	Compliance status	Evidence demonstrating compliance with condition
	that the approved plan has been revised and provide the Department, at least four weeks before implementing the revised plan, with: i. An electronic copy of the revised plan; ii. An explanation of the differences between the revised plan and the approved plan; and iii. The reasons the person taking the action considers that the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact.		
4	The person taking the action may revoke its choice under condition 3 at any time by giving written notice to the Department. If the person taking the action revokes the choice to implement the revised plan, without approval under section 143A of the EPBC Act, the plan approved by the Minister must be implemented.	Compliant	N/A
5	If the Minister give a notice to the person taking the action that the Minister is satisfied that the taking of the action in accordance with the revised plan would be likely to have a new or increased impact, then: i. Condition 3 does not apply, or ceases to apply, in relation to the revised plan, and ii. The person taking the action must implement the plan approved by the Minister. To avoid any doubt, this condition does not affect any operation of conditions 3 and 4 in the period before the day the notice is given. At the time of giving the notice, the Minister may also notify that for a specified period of time condition 3 does not apply for the plan required under the approval. Conditions 3, 4 and 5 are not intended to limit the operation of section 143A of the EPBC Act which allows the person taking the action to submit a revised plan to the Minister for approval.	Compliant	N/A

15 Exempt land

There are no parcels of exempt land application to Prominent Hill Operations.

16 Complaints

Records show Prominent Hill received seven queries from community members during the reporting period. Details of the queries are provided in Table 16.1.

Table 16.1: Summary of community queries

Date of complaint	Nature of complaint	Complaint related to non-compliance	What action was taken to address the complaint	Resolution date
12/08/24	Singular stock strike on Haul Road	No	EMS incident raised and investigated with road users. Pastoralist notified and compensated for loss.	13/08/24
15/09/24	Stock strike Access Road	No	EMS incident raised and investigated with road users. Pastoralist notified and compensated for loss	15/09/04
06/01/25	Injured calf on Access Road	No	EMS incident raised and investigated with road users. Pastoralist notified and compensated for loss.	14/01/25
06/01/25	Access Road – damage to fence	No	EMS incident raised and investigated with road users. Pastoralist notified, damage repaired.	06/02/25
28/01/25	Windrows on Access Road limiting access to Station tracks	No	EMS incident raised and investigated with road maintenance team. Repaired and pastoralist notified.	28/01/25
09/02/25	Mine fleet LV unauthorised entry on pastoral road	No	EMS incident raised and investigated with road user. Pastoralist notified.	10/02/25
26/03/25	Mine fleet LV bogged at Maria's Gate damaging shared used track	No	EMS incident raised with road users. Pastoralist notified and damage repaired	26/04/25

17 Management system reviews

The following table outlines the recommendations associated with management system reviews at Prominent Hill during the reporting period. Open recommendations from previous reviews are also considered to be relevant in this reporting period and are therefore included.

Date of review and Item #	Auditor	Recommendation	Status	Corrective Action / Response from BHP
2023_02	WSP Golder	Complete the installation of flow meters on the horizontal bores to monitor flow on individual drains. Flow data could be reconciled against deposition records and available decant pond data.	Open	Flow meters not yet installed. To be undertaken in 2025.
2024_01	WSP Golder	Collect daily decant pond data throughout Stage 6 operations. We expect this would include both the area of the decant pond and the proximity to the nearest embankment based on Rocket DNA survey.	Actioned	BHP commenced data collection in mid-2025.
2024_02	WSP Golder	Develop a plan to store tailings for the remaining life of mine based on current tailings generation forecasts.	Actioned	Study has already commenced.
2024_03	WSP Golder	Collect monthly water level data for the Enviro and Raw Water Dams. This recommendation is linked to recommendation 2024_04.	Open	

2024_04	WSP Golder	Assess the flood capacity of the Enviro and Raw Water Dams in the context of their design intent and the planned life of mine.
		WSP recommends a staged approach:
		• Stage 1: Review existing conditions of the ponds, which includes a general water balance to understand/confirm the inflows and outflows and general fluxes. Undertake a hydrologic and hydraulic assessment to estimate:
		  ○ The current (baseline) hydraulic capacity of the spillway in the Raw Water Dam and to understand the degree of erosion resistance in its current form.
		  ○ The risk of overtopping in the Enviro Dam
		• Stage 2: Undertake a subsequent hydrologic and hydraulic assessment at each pond to estimate the minimum required spillway size to comply with current ANCOLD guidelines (and other relevant regulatory guidance documents) with baseline and climate change scenario to time horizon (2040/2050) design storm events.
			Open	

Date of review and Item #	Auditor	Recommendation	Status	Corrective Action / Response from BHP
		• Stage 3: If required, undertake a civil design where the spillway invert and downstream erosion control measures are redesigned to manage the updated hydraulic regime as assessed in Stage 2.		
2024_05	WSP Golder	Update relevant operating documents prior to commissioning Stage 6 TSF operations. We expect this would include the OMS, TMS and EPRP.	Open	
2024_06	WSP Golder	Prepare the Stage 6 Construction Records Report and comment on design intent verification.	Open	To be prepared following Stage 6 TSF construction. BHP has engaged WSP to do this.
2024_07	WSP Golder	Undertake a CPTu investigation during early stages of Stage 6 operation, in accordance with the TMS.	Open	Fieldwork following Stage 6 TSF construction. Draft scope of work issued.
2024_08	WSP Golder	Undertake a drilling investigation to improve the quality of hydrogeological data available, and to inform other studies (refer Item non 2024_10). Groundwater water samples could be collected to support the testing described in Iten no. 2024_09	Open	Fieldwork following Stage 6 TSF construction. Draft scope of work issued.
2024_09	WSP Golder	Undertake laboratory testing on Sandy Clay/Clayey Sand samples, to assess the impact of saline groundwater on material strength. Commentary on chemicals present in groundwater and tailings samples should be included in these works. This task is also from the 2024 ITRB recommendations.	Open	Fieldwork following Stage 6 TSF construction. Draft scope of work issued.
2024_10	WSP Golder	Revise the TSF water balance with improved instrumentation/measurement of the individual components of flow (horizontal drains, TSF airwells, pit airwells etc.) The GoldSim water balance developed by WSP should be revisited with the improved metered flows to use as a predictive tool for TSF performance, instead of the BHP spreadsheets.	Open	BHP advised it would commence this task following Stage 6 embankment construction.
2024_11	WSP Golder	Develop a 2D seepage model (for example in Seep/W) to focus on the interface between the TSF and the Open Pit. The models should compare expected seepage volumes and volumes currently collected by horizontal and vertical bores. The model could also be used to predict future development of pore pressure conditions within the TSF and review existing TARP seepage values. The GoldSim model should be updated following these works.	Open	Should not occur before the site investigation recommendations 2024_07 and 204_08 are completed.
2024_12	WSP Golder	Undertake a 2D deformation model (for example using FLAC) to review the TSF displacement trigger values.	Open	

18 Verification of uncertainties

Table 18.1 provides a description and status of works undertaken during the reporting period to address the verification of uncertainties identified in Table 11.1 of the PEPR (2022).

Table 18.1: Verification of uncertainties

Description of assumption or uncertainty	Estimated date to resolve	Progress in reporting period	Confirmed	Forward work plan
Closure Strategy Review **Develop and document a closure vision, principles, objectives and post closure land uses.** A closure vision will be established to articulate aspirations for what will be achieved with mine closure, compatible with the Mining Lease outcomes. The vision will incorporate an overview of the post closure land use and will evolve as more information becomes available. Closure principles will be established to outline the common precepts that will guide the basis of the closure plan, such as promoting physical and chemical stability, meeting regulatory obligations, and facilitating social transition. Closure objectives will be established to articulate what is to be achieved through implementation of the closure activities. Post-closure land uses (or possible uses) and required land capabilities will be identified and documented to aid closure planning activities and stakeholder engagements. This will inform all aspects of the closure plan, particularly the definition of both the closure vision and objectives.	Q2 2026	Works are currently underway to uplift Prominent Hill's closure strategy to meet the requirements in the BHP Closure and Legacy Management Global Standard. Activities include: • Completing a closure risk assessment utilising internal and external experts • Establish closure objectives • Conduct a closure options assessment by closure domain and feature. The assessment will consider credible options for closure which support the closure objectives and mitigate key risks.		
Closure Risk Assessment **Undertake and document a closure risk assessment** A risk assessment will be performed to identify and assess threats and opportunities associated with closure, including physical, social, economic and ecological considerations. The risk assessment at a minimum will consider all potential failure models of the IWL (WRD and TSF) via a Failure Modes and Effects Analysis (FMEA). Formal identification and evaluation of threats and opportunities will help to set priorities and shape many aspects of the Closure Plan, including identification and	Q2 2026	As part of the work to be completed by BHP a risk assessment will be completed by means of a risk workshop attended by internal and external experts.		

Description of assumption or uncertainty	Estimated date to resolve	Progress in reporting period	Confirmed	Forward work plan
selection of closure activities (controls) that will feed into the Closure Execution Plan, improving the knowledge base and inform final landform design.				
Closure Execution Plan **Develop a Closure Execution Plan** A CEP will be developed to identify specific actions (controls) that will be implemented during the mine life in support of closure planning and implementation of closure activities. The actions included in the CEP will be informed by the closure risk assessment process. Controls that will be included into the CEP to increase the knowledge base include: • Determining net percolation rates within the IWL • An integrated hydrological and seepage assessment • An erosion assessment. This should include validation of the IWL cover design through modelling – such as landform evolution modelling, net percolation modelling and sensitivity analysis • Audit of as built WRD (completed) • Investigation options for tailings re-treatment Draft controls that will be included into the CEP to inform the Closure plan include: • Detailed design of the final landform IWL (WRD and tailings) • Abandonment bund detailed design • Determination if revegetation is required for the TSF cover design for a safe and stable landform The CEP will be provided to DEM for review	Q2 2026	With the input from the closure strategy workshop and closure risk assessment, Engenie will develop a comprehensive closure plan that integrates operational knowledge, regulatory requirements and stakeholder input.		
Government Engagement of CEP Undertaken Consultation with the DEM on the Development of the CEP Engagement with DEM is critical to demonstrate and provide confidence that the actions (controls) identified in the CEP will reduce uncertainty relating to closure outcomes identified in the PEPR	Ongoing			
Update the Rehabilitation Liability Update the Rehabilitation Liability to incorporate the outcomes of the CEP The rehabilitation liability calculator will be updated to reflect the scope of the new PEPR/Mine Closure Plan	Ongoing			

Description of assumption or uncertainty	Estimated date to resolve	Progress in reporting period	Confirmed	Forward work plan
Stakeholder Engagement Undertake and document stakeholder engagement with pastoralist, local communities and Antakarinja Matu-Yankunytjatjara Aboriginal community. Engagement with stakeholders to take place throughout the closure planning process, with insight that engagement used to shape key elements of the closure plan.	Ongoing	Details of stakeholder engagement in the reporting period or provided in Section 22.		

19 Changes to mining operations

Description of change to existing mining operation	Significance level (1–4)	Date submitted to DEM	Date endorsed by DEM	Current status at the end of the reporting period
Program Notification – Aries Borefield Holding Dam on MPLs 112 and 94	3	2/06/2022	6/07/2022	Approved - Completed
Program Notification – Village carpark expansion and installation of new potable water pipeline	3	4/09/2023	23/11/2023	Approved – Completed
Miscellaneous Purposes Licence Application – Aries pipeline replacement	4	15/05/2025	Under review	Application is currently under review

Provide a description of any new or emerging environmental hazards that apply, or appear to be arising, in relation to mining operations
No new or emerging environmental hazards have been identified that relate to mining operations

20 Technical reports

The following table lists all technical data, studies and reports generated during the reporting period that support the achievement of tenement conditions and environmental outcomes in the approved PEPR.

Report Title	Author
Appendix B Sediment Analysis Report 2025	Lathwida Environmental
Appendix C Prominent Hill Ecological Autumn Survey Report 2025	EcoLogical Australia
Appendix D Tailings Storage Facility Operational Review 2024	WSP Golder
Appendix F Compliance Report 2025 Works Approval 396907 – Prominent Hill	EcoLogical Australia
Appendix G TSF Groundwater Chemistry Analysis 2025	Land Water Consulting
Appendix H Environmental Radiation Monitoring Report 2025	BHP

21 Voluntary information

Item	Description
Operation footprint	2,044 ha
Greenhouse gas emissions	BHP triggers reporting thresholds for greenhouse gas emissions under the *National Greenhouse and Energy Reporting Act 2007* (Cth) (NGER Act). Prominent Hill's energy and emissions are included in the total emissions and energy published for BHP, available at Corporate emissions and energy data (cleanenergyregulator.gov.au)
Resource development	The 2025 Mineral Resources and Ore Reserves are reported in the BHP Annual Report 2025, Additional Information; Section 6, which can be found on the BHP website at BHP Annual Report 2025 (BHP 2025)
Community or wider environment support activities	BHP works closely with the Antakarinja Matu-Yankunytjatjara Aboriginal Corporation (AMYAC), and as part of our NTMA obligations to oversee education, employment and training, business development and culture and heritage. This is done via the Tjunguringanyi (Working Together) Steering Committee, Scholarship Trust Committee, Health Check and other partnering workshops and attendance at AMYAC board meetings when required. BHP provides extensive sponsorship opportunities for local community groups, particularly for those with an educational and/or sustainable focus. A partnering agreement has been in place with the Coober Pedy Area School, that, amongst other activities, promotes opportunities for employment at the mine and in the region, engagement with a variety of staff at BHP to enrich the school curriculum and strategic financial investment in STEM related materials and excursions. Engagement has increased also at Port Augusta Secondary School and Coober Pedy Area School, where a range of VET pathway options have been explored and direct employment into Traineeships has been successful. Additionally, BHP sponsors and actively participates in a number of community event important to members of the regional communities and pastoral lessees in the project area. BHP is represented on numerous government, industry and community groups within the area including the Kingoonya Landscapes Group.
Community engagement activities	The operation has immediate neighbours on Pastoral Land and has ongoing communication with them. BHP Prominent Hill participates in presentations with community groups and provides formal and informal updates to local councils and industry chambers groups. Operational and local sourcing opportunity updates were given at various conferences and events throughout the reporting period.
Environmental research information	Activities have been ongoing at site as part of our monitoring to improve our understanding of the natural environment. BHP continues to collect data around air quality, flora, surface water sediments and groundwater. This will further support our understanding of the environment and further expand on the baseline data collected in previous years.

22 Community engagement

The following table summarises community engagement activities during the reporting period.

Community or wider environment support activities	Description
AMYAC Scholarship Meeting 4-5 July 2024 - Coober Pedy	Meeting to discuss AMYAC Scholarship opportunities
NAIDOC Week 2024 8-12 July 2024	Smoking Ceremony, storytelling and Indigenous inspired menu week held at Prominent Hill
Oodnadatta Bronco Branding 13 July 2024	Annual outdoor mustering and horse race events
Local Buyers Program (C-Res) rollout and information sessions 17-18 July 2024	C-Res buyers program rollout sessions at Prominent Hill 17 July and Coober Pedy 18 July
Prominent Hill Community Day 20 July 2024	AMYAC initiated Community open day for Coober Pedy residents to attend Prominent Hill for site tours
TACTIC Conference 30 July - 1 August 2024	SLT and Manager attendance along with other BHP Representatives in Port Augusta
Coober Pedy Gymkhana 10 August 2024	Annual outdoor horse and motorbike race events
Willam Creek Bronco Branding 17 August 2024	Annual outdoor mustering and horse race events
AMYAC Scholarship Meeting 13 September 2024	Meeting to discuss AMYAC Scholarship opportunities
Port Augusta Pathways Site Visit 23 September 2024	Resources and Infrastructure students from Port Augusta Secondary School visited Prominent Hill for a 'Day in the Life' of a miner.
Coober Pedy SLT Opal Mine AMYAC day 24 September 2024	Senior Leaders collaboration workshop with Coober Pedy local businesses and AMYAC
Glendambo Gymkhana 12 October 2024	Annual Horse and Motorbike races.
Tjunguringanyi 15 October 2024	Steering committee meeting with AMYAC and BHP- held at Prominent Hill
Prominent Hill Yarning Circle Opening November 2024	Cultural opening of event by Traditional Owners
Coober Pedy Christmas Pageant	Annual Christmas Pageant celebration in Coober Pedy
Pastoralist Christmas Lunch 6 December 2024	Gathering with Copper SA land connected Pastoralists for end of year get together
Coober Pedy Basketball Sports Court Opening 11 December 2024	Social investment project to upgrade outdoor sporting facility
Northwest Christmas tree event 14 December 2024	Pastoral Christmas gathering for all local stations
Willam Creek Gymkhana 15 March 2025	Annual Horse and Motorbike races.
AMYAC Scholarship Trust Meeting 10th May 2024	Attend a scholarship trust meeting in Coober Pedy with the AMYAC Board
Oodnadatta Gymkhana 10 May	Annual Horse and Motorbike races.
Reconciliation Week 2 June 2025	Provided a BBQ onsite and speech from General Manger
Coober Pedy Clontarf Engagement 7 June 2025	Coober Pedy and Murray Bridge Soccer tournament
Coober Pedy Breakaways Marathon 8 June 2025	Annual Coober Pedy Marathon held at the Breakaways. Prominent Hill had 24 employees compete on the day.

Community or wider environment support activities	Description
AMYAC Board Meeting – June 2025	Meeting held with AMYAC in Coober Pedy
Coober Pedy Opal Festival 13-15 June 2025	Annual Coober Pedy Opal festival. Prominent Hill had several employees volunteer on the day with stalls, security, and community game support.

23 Forward works plan

The following table summarises the actions raised throughout this Compliance Report. These actions will form the basis of the forward work plan for BHP Prominent Hill during the 2026 reporting period. These actions are the responsibility of various operational departments at Prominent Hill.

Action No.	Action description	Proposed completion date	Report reference
1	**Update mine closure strategy** As per FWP in the PEPR (2022). Review and update the mine closure strategy for Prominent Hill including stakeholder engagement.	Q2 2026	Section 18
2	**Annual TSF review recommendations** As per the findings of the 2024 Annual TSF Operational Review, all recommended actions were accepted and will be progressed during FY26.	FY26	Section 17
3	**Contingency plan for inaccessible monitoring locations** Determine alternate means of measuring OMCs if monitoring locations cannot be accessed during FY26.	FY26	Section 9

24 Ministerial checklist

This Compliance Report has been completed in general accordance with the TOR 009 Mining Compliance Reports (DEM 2020) and associated Mineral Regulatory Guideline (MG3) (DEM 2021). Table 24.1 provides a cross-reference of the requirements of MG3 (DEM 2021) with the associated section of the Compliance Report for the required information.

Table 24.1: Checklist of Compliance Report against the Ministerial Determination requirements

Requirement	Included? Or N/A
Public liability insurance	
Provide a copy of the cover note	Section 3 Appendix A
Identification	
Tenement number(s)	Section 4
Name of the mine operation	Section 1
General location details	Section 1
Name(s) of the mine owner and mine operator(s)	Section 1
Site Contact	Section 1
Reference and approved date of relevant PEPR being reported against	Section 1
Dates of the reporting period for the report	Section 1
Date of preparation of the report.	Section 1
Tenements	
Summary table of all tenements including ML, MPL, EML etc.	Section 4
Plan of the mining operations showing all tenement boundaries covered by the approved PEPR	Section 4
Other Licences, Permits, Waivers, Native Title and Agreements	
Summary table of all licences, permits, waivers, native title and other agreements relevant to the PEPR.	Section 5
Ore reserves and mineral resources	
Summary of mineral resource and ore reserves	Section 6
New delineation or exploration drilling activities on or off the lease (if required)	Section 6
Estimated mine life	Section 6
Mining processing and waste storage activities	
Quantity of ore mined and stockpiled	Section 7
Amount of overburden/waste	Section 7
Volumes of concentrate produced	Section 7

Requirement	Included? Or N/A
Compliance with environmental outcomes and leading indicators	
Provide a summary of compliance for each environmental outcome specified in the tenement conditions or approved PEPR	Section 9/Section 10
Summarise data relating to any leading indicator criteria in the approved PEPR	Section 9/Section 10
Compliance with non-outcome based tenement conditions	
If you have any lease conditions which do not have an outcome measurement criteria relating to it please list the compliance status and evidence against each condition in a summary table	Section 11
Rectification of non-compliance	
If a 'not complied' is recorded, the following must be included:	Section 12
Date of the incident	Section 12
What environmental outcome or tenement condition was breached	Section 12
The date of incident was reported under Regulation 87 of the Mining Regulation	Section 12
The cause of non-compliance	Section 12
Actions taken to rectify the non-compliance	Section 12
Where non-compliance under Regulation 86 or initial incident reports under Regulation 87 of the Mining Regulations have previously been reported in compliance reports and not fully rectified at the time of reporting, a progress report must be included to assess the effectiveness of rectification	Section 12
Disturbance and rehabilitation activities	
The amount of land disturbed and activity that created disturbance in the reporting period	Section 13
Rehabilitation worked carried out in the reporting period	Section 13
The amount of land where rehabilitation works are completed	Section 13
An estimated amount of land to be rehabilitated in the next reporting period	Section 13
Any potential improvements learned from previous rehabilitation activities	Section 13
Reconciliation of native vegetation clearance	
Where the PEPR includes an approved native vegetation management plan for clearance of native vegetation under the *Native Vegetation Act 1991*, include:	Section 13
The approved maximum vegetation clearance	Section 13
The amount of native vegetation cleared in the reporting period	Section 13
The total amount cleared to date	Section 13
An estimated amount proposed to be cleared in the next reported period	Section 13
Provision of information, including annual monitoring and progress reports to demonstrate compliance with the NVMP where Significant Environmental Benefit (SEB) is being provided	Section 13
***Environment Protection and Biodiversity Conservation Act 1999* reporting**	
Demonstration of compliance with EPBC conditions (if required)	Section 14

Requirement	Included? Or N/A
Exempt land	
Provide a statement that waivers for land relevant to the mining operation are in place and compliance with exempt land provisions in accordance with Section 9 of the Mining Act	Section 15
The status of exempt land, including name of person entitled to exemption, certificate of title, reason for exemption, area of exemption, date waiver registered and any relevant conditions	Section 15
A plan showing all exempt land relevant to the mining operations	Section 15
Complaints	
Summary table of complaints made by members of the public during the reporting period and include: the date of complaint the nature of complaint whether or not it related to non-compliance what action was taken to address the complaint the date the complaint was resolved	Section 16
Management system reviews	
Provide a summary of any management system review undertaken during the reporting period in order to ensure compliance with relevant tenement conditions and environmental outcomes, including:	Section 17
When the audit ore review was undertaken	Section 17
Who undertook the audit or review	Section 17
What aspect(s) of the management system was/were audited/reviewed	Section 17
What issues, or recommendations for improvement, were noted	Section 17
An assessment of the potential for any issues identified in the audit/ review to lead to a noncompliance with approved environmental outcomes	Section 17
What corrective action that has or will be taken to address any issues.	Section 17
Verification of uncertainties	
Provide a description and status of works undertaken during the reporting period or proposed undertaken to address any identified uncertainties made in the approved PEPR (or any additional uncertainties or assumptions identified since PEPR approval)	Section 18
Technical Reports	
Summary of technical data studies and reports generated in reporting period	Section 20

25 References

Australian and New Zealand Environment and Conservation Council (ANZECC) and Agriculture and Resource Management Council of Australian and New Zealand (ARMCANZ) (2000) Sediment Quality Guidelines.

BHP (2025) Annual Report 2025. August 2025. Accessed at: Annual reporting | BHP

DEM (Department for Energy and Mining) (2020) Determination Terms of Reference 009 (TOR 009) Mining Compliance Reports. Notice under Regulation 77 of the Mining Regulations 2020. Dated 11 December 2020. Government of South Australia's Department for Energy and Mining, South Australia, Adelaide.

DEM (Department for Energy and Mining) (2021) Preparing a mining compliance report. Mineral Regulatory Guidelines MG3, Mineral Resources Division. Dated August 2021. Government of South Australia's Department for Energy and Mining, South Australia. Adelaide.

OZ Minerals (2022) Prominent Hill Program for Environment Protection and Rehabilitation 2022. Issue date January 2022. Dated 22 January 2022. OZ Minerals, South Australia, Adelaide.

26 Abbreviations and units of measure

26.1 Definition of acronyms

Acronym	Expansion
AMYAC	Antakarinja Matu-Yankynytjatjara Aboriginal Corporation
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DEM	Department for Energy and Mining
DEW	Department for Environment and Water
DoEE	Australian Government's Department of the Environment and Energy (now DCCEEW)
EML	Extractive mineral lease
EMS	Event Management System
EPA	Government of South Australia's Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
LoM	life-of-mine
Mining Act	*Mining Act 1971* (SA)
ML	Mining Lease
MPL	Miscellaneous Purposes Licence
NAF	non-acid forming
NGER Act	*National Greenhouse and Energy Reporting Act 2007* (Cth)
OMC	Outcome Measurement Criteria
PAF	potentially-acid forming
PEPR	Program for Environment Protection and Rehabilitation
pH	Measure of acidity or basicity
ROM	run-of-mine
SEB	significant environmental benefit
TOR	Terms of Reference
TSF	tailings storage facility
WRD	waste rock dump

26.2 Units of measure

Acronym	Expansion	Acronym	Expansion
$	Australian dollars(s)	m^3	cubic metres
US$	United States dollar(s)	m	metre
%	percent	mAHD	metres Australian Height Datum
µGy	microgray	mBGL	metres below ground level
µS	microsiemen	mg	milligram
cm	centimetre	ML	megalitre
D	day	mm	millimetre
dmt	dry metric tonne	mSv	millisieverts
g	gram	Mt	million tonnes
ha	hectare	pH	measure of acidity or basicity
kg	kilogram	s	second
kL	kilolitre	t	tonnes
km	kilometre		
L	litre	wt%	weight percentage
m^2	square metre	w/w	weight per weight

Appendices

Appendix A Public liability insurance

STEIN INSURANCE COMPANY LIMITED

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Heritage Hall
Le Marchant Street
St Peter Port
Guernsey GY1 4JH
Telephone +44 (0) 1481 737100
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26 June 2025

To Whom It May Concern

Certificate of Placement – Public & Products Liability

This certificate is issued as a matter of information only and confers no rights upon the holder. It does not amend, extend or alter the coverage afforded by the policy/policies listed. It is issued as a summary only of the cover provided and is current only at the date of issue. For full particulars reference should be made to the current policy wording.

Named Insured:	BHP Group Limited and all subsidiary companies and all related and/or affiliated and/or controlled, managed, administered and associated companies or corporations (now existing or hereinafter acquired, formed or incorporated) and/or related joint ventures and/or partnerships and other entities named or described herein for their respective rights and interests.
Insurer(s):	Stein Insurance Co. – a Captive Insurance Company and wholly owned subsidiary of BHP Group Ltd currently rated A- by Standard & Poor's
Policy Number:	PL/0001/25
Period of Insurance:	1st July 2025 to 30th June 2026, both days inclusive, local standard time at the location of the property, operations or activities insured.
Interest Insured:	The Insurers will indemnify the Insured up to the Limit of Liability stated in the Schedule for all amounts which the Insured shall become legally liable to pay by way of compensation (including claimants' costs and expenses) for and/or arising out of Personal Injury (including death) and/or Property Damage occurring during the Period of Insurance in connection with the Business of the Insured and/or the Insured's Products and/or Completed Operations

STEIN INSURANCE COMPANY LIMITED

Including the Insured's Liability arising out of the ownership, possession or use by or on behalf of the Insured of any Automobile excluding claims which are the subject of statutory or similar legislation controlling the use of Automobiles for which the Insured is compelled to effect insurance

Situation and/or Premises: Anywhere in the world but the Insurers shall not be liable to pay any claim or indemnity hereunder to the extent that payment of such would expose the Insurers to any sanction, prohibition or restriction under any United Nations resolutions or any trade or economic sanctions, laws or regulations of any applicable jurisdiction.

Limit of Liability: US$20,000,000 any one occurrence in respect of Public Liability

US$20,000,000 any one occurrence and in the annual aggregate in respect of Products Liability

US$20,000,000 any one occurrence and in the annual aggregate in respect of Medical Malpractice

US$20,000,000 any one occurrence and in the annual aggregate in respect of Professional Indemnity

Notice of Occurrence: The Insured shall promptly furnish the Insurers with all information available respecting any Claim, and the Insurers shall have the right to appoint adjusters, assessors or surveyors and to control all negotiations, adjustments and settlements in connection with such Claim, subject always to the terms and conditions of the policy wording.

All other terms and conditions as per the full policy wording.

Signed for and on behalf of
Stein Insurance Company
J. Stewart - Manager

Appendix B Sediment Analysis – Prominent Hill 2025 (Lathwida Environmental)

FY25 Compliance Report

Prominent Hill

Creek Sediment Review

BHP

LATHWIDA ENVIRONMENTAL

August 2025

FINAL

Document status

Version	Doc Type	Reviewed By	Approved By	Date Issued
Revision A	Draft for internal review	David Winterburn	David Winterburn	15 August 2025
Revision 0	Final	David Winterburn, Rachel Farrugia, Tina Law	Josh Allen	29 August 2025

Project details

Client	BHP
Project	Prominent Hill FY25 Creek Sediment Compliance Review
Project Number	LE25018
Report Subject	Creek Sediment and compliance with Leading Indicators
Project Manager	David Winterburn
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File Reference	250901_PH Creek Sediment Compliance Review FY25_Rev0.docx

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1 Introduction

1.1 Context

The Prominent Hill Operation (Operation) is a mine targeting copper and gold in the north-west of South Australia, located approximately 100 km south-east of Coober Pedy and 150 km north-west of Roxby Downs. The operation commenced in 2009 with Oxiana Pty Ltd (Oxiana), subsequently OZ Minerals Limited (OZ Minerals), and now BHP Olympic Dam Corporation Pty Ltd (BHP). Prominent Hill Operation includes an Integrated Waste Landform (IWL) for waste rock and tailings, a Run of Mine (ROM) pad, a processing plant, accommodation village, airstrip and associated infrastructure, including the Aries Borefield from which water is sourced. The site operates in accordance with a Program for Environment Protection and Rehabilitation (PEPR), approved by the Government of South Australia's Department for Energy and Mining (DEM).

The current, approved PEPR is MPEPR2022/137, approved in 2022 (OZ Minerals 2022). The PEPR contains a suite of Environmental Outcomes, Outcome Measurement Criteria (OMC) and Leading Indicators (LI) regulated to manage the environmental and social impacts and risks associated with the Operation.

BHP commissioned Lathwida Environmental Pty Ltd (Lathwida) to review the results of monitoring undertaken on site during financial year 2025 (FY25) in the context of those Environmental Outcomes, OMCs and LIs related to creek sediment. This is presented across the following sections, with reference to the relevant PEPR requirement.

1.2 Data sources

BHP provided the following information in support of this review:

- Creek sediment analysis results (total metals, weak acid digest (WAD) metals) collected:
  - biannually at sites WA-1, WA-1b and MI-1
  - annually at site WW-1.

Sampling at WA-2, WA-3, WW2, WW3 could not be conducted during the monitoring period due to land access constraints. The second biannual sample at WW-1 was not collected for the same reason.

2 Creek sediment compliance review

The review of the above information was undertaken with reference to the relevant Environmental Outcome, OMCs and LIs described in MPEPR2022/137 (OZ Minerals 2022).

2.1 Fugitive sediment

2.1.1 Criteria

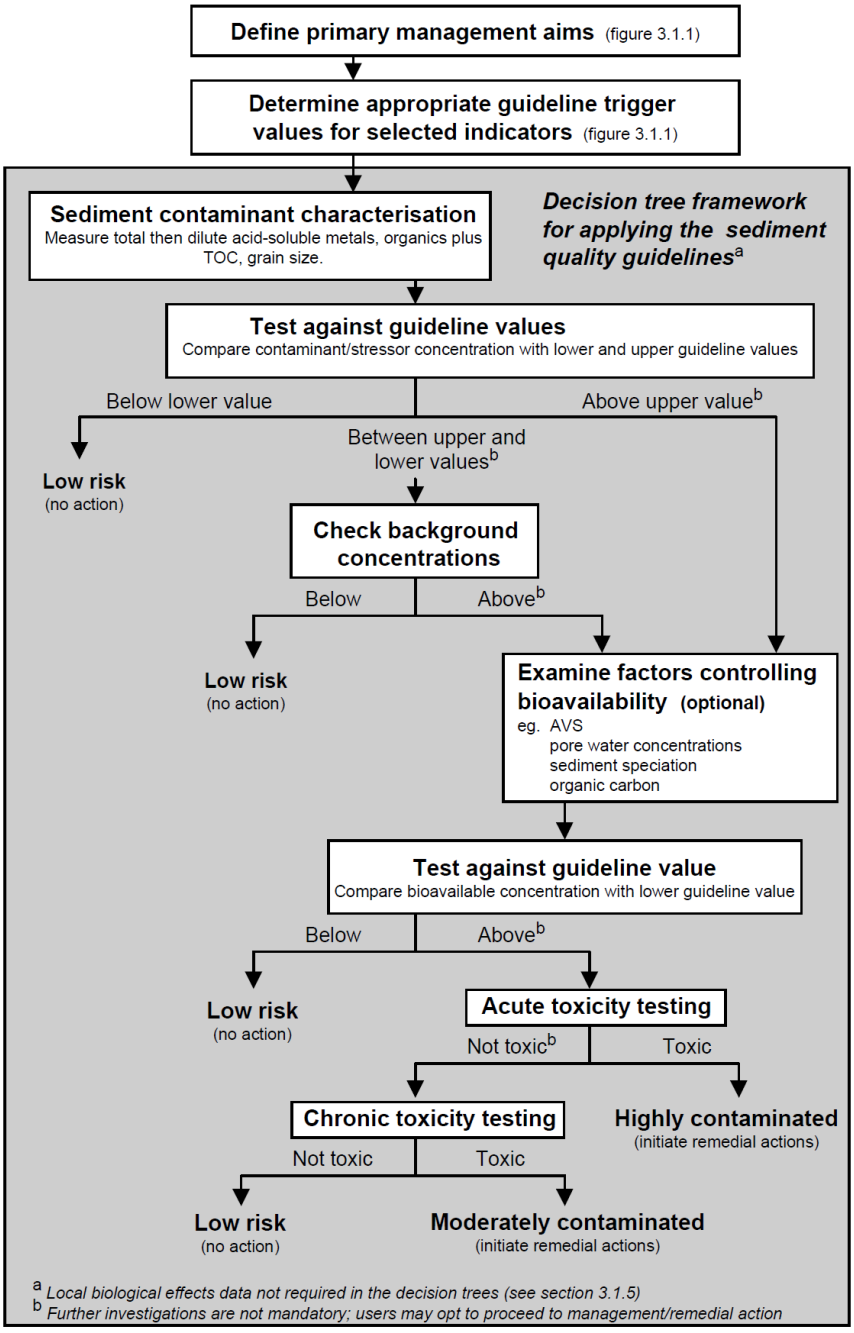
The compliance criteria for adverse fugitive sediment impacts (principally from the IWL and ROM pad) as they could affect aquatic fauna and habitat biodiversity (including riparian biodiversity) in Warriner Creek, Wattiwarriganna Creek and Millers Creek, respectively, are described in Table 2.1.

Table 2.1: Fugitive sediment compliance criteria

Public nuisance criteria	Details
Environmental Outcomes	
• No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to generation of fugitive sediment. • No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to seepage from the Tailings Storage Facility (TSF). • No long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to Acid Rock Drainage (ARD)	
Outcome Measurement Criteria	
ID	GC15 (15.1)
Measurement method	Sediment sampling and analysis at NATA accredited laboratory. Concentrations of targeted heavy metals will be measured in sediment through laboratory analysis of total metals (and analysis of acid extractable metals if assessment of bioavailability is required). The targeted metals comprise: Aluminium, Arsenic, Barium, Beryllium, Cadmium, Copper, Lead and Uranium (total only).
Location	Monitoring sites WA-2, WA-3, WW-1, WW-2, WW-3 and MI-1*
Outcome achievement	Concentrations of targeted heavy metals are in the 'low risk (no action)' category identified in the decision tree process in Figure 7.2 of the 2022 PEPR and Section 3.5 of the ANZECC (2000) sediment quality guidelines. As per this decision tree (also included as Figure 2.1 (ANZECC 2000)), the outcome is achieved if: • Concentrations of targeted heavy metals are below Interim Sediment Quality Guideline trigger values (ISQG-Low) identified in the ANZECC (2000) sediment quality guidelines, or where no guideline trigger value is specified, concentrations are below an adopted trigger value calculated in accordance with ANZECC (2000); or • If the ISQG-Low trigger values are exceeded, concentrations of targeted heavy metals are below background concentrations; or • If ISQG-Low trigger values or adopted trigger values (where relevant) and background concentrations are exceeded, bioavailable concentrations (analysed as acid extractable metals) are below ISQG-Low trigger values or adopted trigger values (where relevant); or

Public nuisance criteria	Details
	• If bioavailable concentrations exceed ISQG-Low trigger values or adopted trigger values, acute and chronic toxicity testing conducted in accordance with ANZECC (2000) demonstrates that concentrations are in the 'low risk (no action)' category.
Frequency	Annually (note frequency amended to bi-annually after external review (Golder 2021) but not yet captured formally in PEPR)
Project phase	Operations

* Site MI-1 (Millers Creek) whilst not within Warriner Creek and Wattiwarriganna Creek is also monitored, as stated by PEPR GC15/15.1. Site WA-1 in Mineral Lease (ML) 6228 is also monitored as an internal leading indicator but is not a Leading Indicator or compliance site for this purpose.



Source: ANZECC 2000

Figure 2.1: Decision tree for the assessment of contaminated sediments

2.1.2 Trigger values and assessment guidelines

Appendix A provides the relevant ANZECC (2000) trigger value guidelines for each tested analyte. Where no explicit guidelines exist, Appendix A provides trigger values developed for site using pre-mining baseline conditions as the basis (ELA 2017).

Trigger guidelines values have, however, not been provided for total beryllium as there are no relevant trigger values provided by ANZECC (2000) nor baseline data collected for this analyte. Note also that baseline data was not collected for the Millers Creek sampling site (MI-1).

2.1.3 Sampling review

Golder were commissioned to undertake a review and risk assessment of elevated metal results captured in Warriner Creek in 2020 (Golder 2021). Key recommendations that were further adopted into the sediment sampling method, from 2023 onwards, included:

- Analysis of creek bed samples for both total and WAD metal concentrations, with the latter providing for a measure of the bioavailable portion of metals present (Simpson and Batley 2016, as referenced in Golder 2021). This has routinely been adopted for all metals excluding uranium.
- Increase of monitoring frequency from annually to at least bi-annually to assess the effectiveness of the upstream sediment control measures implemented. Monitoring frequency was thereafter adjusted to bi-annually.
- Modification of PEPR monitoring location WA-1. Whilst this monitoring location is not a compliance point – rather is a Leading Indicator – the presence of the road creek crossing (immediately adjacent) is likely to be causing a misleading localised concentration of metal-containing sediments. This recommendation resulted in the establishment of an additional monitoring site WA-1b (E 557516 N 6712911, GDA94 Z53) downstream of WA-1 (Figure 2.2).

2.2 Methods

Sediment samples are collected bi-annually from three creek lines at seven sites as described in Table 2.2 and shown in Figure 2.2. Sampling was conducted in accordance with the Sediment Sampling Safe Operating Procedure (6.2.4SOP012, OZ Minerals 2016).

Table 2.2: Sediment sampling sites and analyses FY25

Location	Site	FY25 sampling event	Analyses
Warriner Creek	WA-1*	08/12/2024 18/05/2025	• Soil moisture content (%) • Total metals (mg/kg) and acid extractable (mg/kg) of aluminium, arsenic, barium, beryllium, cadmium, copper, lead, uranium • WAD (mg/kg) and acid extractable (mg/kg) of aluminium, arsenic, barium, beryllium, cadmium, copper, lead
	WA-1b*	08/12/2024 18/05/2025	
	WA-2	Site inaccessible 2024/25^	
	WA-3	Site inaccessible 2024/25^	

Location	Site	FY25 sampling event	Analyses
Wattiwarriganna Creek	WW-1	Site inaccessible 2024[1] 18/05/2025	*(as above)*
	WW-2	Site inaccessible 2024/25^	
	WW-3	Site inaccessible 2024/25^	
Millers Creek	MI-1	08/12/2024 18/05/2025	

* Site WA-1 in ML 6228 is also monitored as an internal lead indicator but is not a lead indicator or compliance site for this purpose.

^ Site inaccessible during the nominated sampling time period due to rainfall and land access related matters.

2.3 Results – OMC GC15

Table 2.3 presents the results of total metal analyses, and Table 2.4 presents the results of WAD metal analyses, for the FY25 monitoring period. Associated time series graphs are provided in Appendix B. Sites WA-2, WA-3, WW-2, WW-3 were inaccessible and unable to be sampled during the FY25 period. Site WW-1 was inaccessible and unable to be sampled in 2024 (one sample taken only; 18 May 2025).

Table 2.3: Total metals at sediment sampling sites FY25

Site	FY25 event	Aluminium (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Uranium (mg/kg)
WA-1	08/12/24	16,100	5	830	<1	<1	312	8	3.5
	18/05/25	19,400	6	730	<1	<1	317	7	2.9
WA-1b	08/12/24	11,200	6	420	<1	<1	149	10	1.6
	18/05/25	11,100	6	240	<1	<1	69	6	0.7
WA-2	No data								
WA-3	No data								
WW-1	No data								
	18/05/25	7,980	6	160	<1	<1	12	5	0.4
WW-2	No data								
WW-3	No data								
MI-1	08/12/24	8,920	<5	120	<1	<1	11	7	0.4
	18/05/25	11,800	<5	270	<1	<1	16	6	0.3

Table 2.4: WAD metals at sediment sampling sites FY25

Site	FY25 event	Aluminium (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)
WA-1	08/12/24	1,080	<1	300	<1	<0.1	238	4.4
	18/05/25	1,580	2.1	300	<1	<0.1	198	52
WA-1b	08/12/24	850	<1	112	<1	<0.1	65.6	3.1
	18/05/25	950	<1	114	<1	<0.1	35.5	2.8
WA-2	No data							
WA-3	No data							
WW-1	No data							

Site	FY25 event	Aluminium (mg/kg)	Arsenic (mg/kg)	Barium (mg/kg)	Beryllium (mg/kg)	Cadmium (mg/kg)	Copper (mg/kg)	Lead (mg/kg)
	18/05/25	720	<1	70.8	<1	<0.1	3	2.3
WW-2	No data							
WW-3	No data							
MI-1	08/12/24	980	<1	48.6	<1	<0.1	2.9	1.8
	18/05/25	1,380	<1	142	<1	<0.1	4.9	1.7

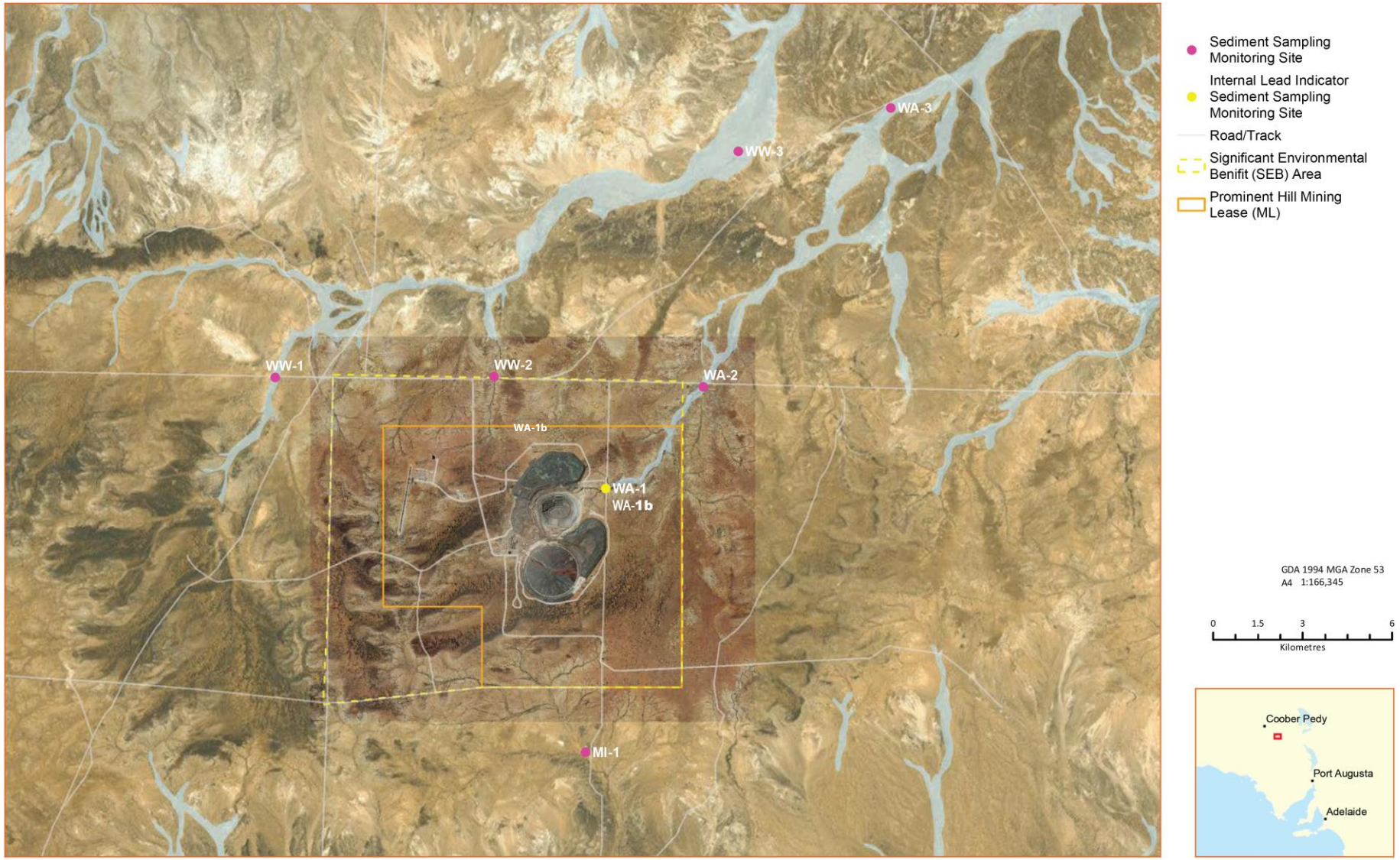


Figure 2.2: Sediment Sampling Sites

Laboratory results of the FY25 reporting period were compared against the ANZECC (2000) sediment quality guidelines and internal trigger limits. All sites were found compliant with the criteria with the exception of site WA-1, which exceeded the upper ANZECC trigger level for copper.

2.3.1 OMC GC15 Compliance Sites: Aluminium

Site WW-1, WA-1 and WA-1b remained below internal trigger thresholds (note the threshold for WA-1 and WA-1b is considered to be the same due to the close proximity of these sites, refer Figure 2.2). Sites WW-2, WW-3, WA-2 and WA-3 were unable to be sampled in FY25. Historically, results at all four sites have remained well below the internal trigger thresholds set. Site MI-1 (not monitored during baseline hence has no established trigger threshold) returned a result consistent with historic levels at this site.

2.3.2 OMC GC15 Compliance Sites: Arsenic

Sites WW-1, WA-1, WA-1b and MI-1 remained below the ANZECC (2000) low trigger threshold of 20 mg/kg total arsenic. Sites WW-2, and WA-2 were unable to be sampled in FY25. Historically, results at WW-2 and WA-2 two sites have remained well below the internal trigger thresholds. Sites WW-3 and WA-3 were also unable to be sampled in FY25. Both sites previously have recorded fluctuation in returned results below, at, or exceeding the lower trigger threshold. Neither site has historically exceeded the high trigger threshold of 70 mg/kg. Due to the inaccessibility of WW-3 and WA-3, the bioavailability of arsenic at these locations was also unable to be determined (as required by the ANZECC decision tree (Figure 2.1)).

2.3.3 OMC GC15 Compliance Sites: Barium

Sites WW-1, WA-1b remained below respective internal trigger threshold for barium (noting the internal trigger limit for WA-1 is used as a proxy for site WA-1b due to close co-location of sites). Consistent with the last few years of results, WA-1 returned a result that exceeded the internal trigger limit of 700 mg/kg. In line with the decision tree, bioavailability analysis results were examined and recorded 71 mg/kg, well below the established barium bioavailability trigger level (200 mg/kg). Site MI-1 (not monitored during baseline and subsequently without a defined trigger threshold) returned a result slightly higher than historic levels (270 mg/kg compared with historic values between 60 and 140 mg/kg). It is noted that there are no ANZECC guidelines for this analyte, nor an established baseline for barium with which to established internal thresholds. Sites WW-2, WW-3, WA-2 and WA-3 were unable to be sampled in FY25.

2.3.4 OMC GC15 Compliance Sites: Beryllium

Sites WA-1, WW-1, WW-1b and MI-1 remained at or below the detectable Limit of Reporting (LOR) for beryllium. Sites WW-2, WW-3, WA-2 and WA-3 were unable to be sampled in FY25. It is noted that there is no ANZECC guideline (2000) for beryllium nor any constituent guideline developed using baseline data (for monitoring sites).

2.3.5 OMC GC15 Compliance Sites: Cadmium

Sites WA-1, WW-1, WW-1b and MI-1 remained at or below the detectable LOR for cadmium, and below the ANZECC lower trigger threshold of 1.5 mg/kg. Sites WW-2, WW-3, WA-2 and WA-3 were unable to be sampled in FY25. Historically, results at all four sites have remained at or below the detectable LOR for cadmium.

2.3.6 OMC GC15 Compliance Sites: Copper

Sites WW-1 and MI-1 remained below the ANZECC low trigger threshold of 65 mg/kg total copper. Consistent with the last few years or results, the value of total copper at WA-1 was above the high ANZECC (2000) trigger threshold of 270 mg/kg, and above the low trigger threshold at WA-1b. In line with the decision tree, bioavailability results were examined and although the levels were reduced, it remained in in excess of the low trigger threshold but remained below the high trigger threshold. This site is considered an internal monitoring site and is not a compliance site. Sites WW-2, WW-3, WA-2 and WA-3 were unable to be sampled in FY25. It is noted that all four sites have previously been below the ANZECC low trigger threshold.

2.3.7 OMC GC15 Compliance Sites: Lead

Sites WW-1, WA-1, WA-1b and MI-1 remained below the ANZECC low trigger threshold of 50 mg/kg total lead. Sites WW-2, WW-3, WA-2 and WA-3 were unable to be sampled in FY25. Previously, results at all four sites have remained well below the ANZECC low trigger threshold for lead.

2.3.8 OMC GC15 Compliance Sites: Uranium

Sites WW-1, WA-1b remained below respective internal trigger limits for uranium (noting the internal trigger limit for WA-1 is used as a proxy for site WA-1b due to close co-location of sites). Consistent with the last few years of results, WA-1 returned a result that exceeded the internal trigger limit of 1 mg/kg. WA-1 is an internal monitoring site and not a compliance site. Site MI-1 (not monitored during baseline and thus without an established trigger threshold) returned a result consistent with historic levels at this site.

Sites WW-2, WW-3, WA-2 and WA-3 were unable to be sampled in FY25. Historically, results at all four sites have remained well below the individual internal trigger limits set per site.

3 Conclusion

3.1 Compliance sites

Review of relevant 2025 creek sediment analysis data were undertaken to establish the status of compliance against relevant Environmental Outcomes, OMCs and LIs as presented in the Prominent Hill PEPR (OZ Minerals 2022).

Due in most part to access issues, the compliance status determined from this review is:

- GC15: **Compliant (WW-1, MI-1)**, **Could not be determined (WW-2, WW-3, WA-2, WA-3)**

3.1.1 Wattiwarriganna Creek catchment sites (WW-1, WW-2, WW-3) – Compliant (WW-1), Could not be determined (WW-2 and WW-3)

Site WW-1 was able to be accessed and sampled during the FY25 period. The results of this site show that all tested metals are at below established internal trigger thresholds or ANZECC (2000) low trigger thresholds, which is compliant with GC15 (15.1).

However, sites WW-2 and WW-3 were unable to be sampled during the FY25 period. Historic results at WA-2 and WA-3 for aluminium, cadmium, lead and uranium have trended either at or below internal trigger thresholds or ANZECC low trigger thresholds. Site WW-2 has previously returned results for total arsenic below the ANZECC low trigger threshold. However, site WW-3 was at this low trigger threshold for arsenic in 2024, and with a previous high result also recorded in 2021 (close to this limit), needs to be further investigated to determine if there is an establishing upwards trend. Total barium has previously exceeded internal trigger thresholds set at WW-2 but was below internal trigger thresholds set at WW-3. Results for total beryllium and total copper have predominately been below thresholds with the exception of one historic exceedance each (WW-2 total copper in 2018, WW-3 total beryllium in 2021).

Regardless of historic trends, without FY25 data we are unable to determine compliance for this period.

3.1.2 Warriner Creek catchment sites (WA-2, WA-3) – Could not be determined

Sites WA-2 and WA-3 were unable to be accessed or sampled during the FY25 period. Historic results at WA-2 and WA-3 for aluminium, barium, cadmium, copper, lead and uranium have all trended below internal trigger thresholds or ANZECC (2000) low trigger thresholds. However, we are unable to make a determination of compliance for this FY25 period.

Historic results for arsenic have similarly trended below the ANZECC low trigger threshold at WA-2, but in recent years have exceeded this threshold at WA-3. Due to the inaccessibility of WA-3, the bioavailability of arsenic was unable to be determined (as required by the ANZECC decision tree (Figure 2.1). It is therefore recommended that sampling at WA-3 be conducted as soon as access is re-established.

There is no internal trigger threshold or ANZECC trigger threshold for beryllium, and so a determination on compliance is not applicable with respect to this analyte.

3.1.3 Millers Creek catchment site (MI-1) – Compliant

There are no ANZECC guidelines nor internal trigger limits (with an absence of baselining in Millers Creek) for aluminium, barium, beryllium or uranium at MI-1.

Returned FY25 sediment analysis results for arsenic, cadmium, copper and lead were all determined to be below ANZECC low trigger thresholds. The results at MI-1 are considered compliant with GC15 (15.1).

3.2 Warriner Creek internal monitoring sites (WA-1, WA-1b) – Not applicable

Sites WA-1 and WA-1b are noted as internal monitoring sites, and hence a determination of compliance against GC15 (15.1) is not required.

Site WA-1 and WA-1b remained below internal trigger thresholds or ANZECC low trigger thresholds for total Aluminium, Arsenic, Beryllium, Cadmium, Lead and hence are compliant for these analytes.

For Barium, WA-1b remained below respective internal trigger threshold (noting the internal trigger limit for WA-1 is used as a proxy for site WA-1b due to close co-location of sites), but consistent with the last few years of results, exceeded the internal trigger limit of 700 mg/kg at WA-1. In line with the decision tree bioavailability analysis results were examined and recorded 71 mg/kg, well below the established Barium bioavailability trigger level (200 mg/kg). Therefore, no further action is considered necessary.

Consistent with the last few years or results, the value of total Copper at WA-1 was above the high ANZECC trigger threshold of 270 mg/kg, and above the low trigger threshold at WA-1b. In line with the decision tree, bioavailability results were examined and although the levels were reduced, it still exceeded the low trigger threshold (remaining below the high trigger threshold) at site WA-1. Site WA-1b however fell below the ANZECC lower threshold. Therefore, site WA-1 is not in accordance with GC15 (15.1) although it is noted that WA-1 is an internal monitoring site.

Sites WA-1b remained below respective internal trigger limits for Uranium (noting the internal trigger limit for WA-1 is used as a proxy for site WA-1b due to close co-location of sites). Consistent with the last few years of results, WA-1 returned a result that exceeded the internal trigger limit of 1 mg/kg. As previously investigated by the Prominent Hill Radiation Safety Officer, the uranium levels returned remain below the regulatory environmental thresholds for both South Australia and Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). Therefore, the levels of uranium at WA-1 are considered non-radioactive under all jurisdictions.

4 References

ANZECC (2000) *National Water Quality Management Strategy Paper No. 4, Volume 1, The Guidelines (Chapters 1 to 7)*. Australian and New Zealand Guidelines for Fresh and Marine Water Quality, Australian and New Zealand Environment and Conservation Council / Agriculture and Resource Management Council of Australia and New Zealand.

ELA (Eco Logical Australia) (2017) *Surface Water monitoring and sediment sampling recommendations*. Letter prepared for OZ Minerals Limited, 28 March 2017.

Golder (Golder Associates Pty Ltd) *Investigation and Risk Assessment of Elevated Metals in Warriner Creek. Prominent Hill Mine.* Report prepared for OZ Minerals, 12 July 2021.

OZ Minerals (2016) *Sediment sampling safe operating procedure. 6.2.4SOP012*. South Australia, Prominent Hill.

OZ Minerals (2022) *Prominent Hill Program for Environment Protection and Rehabilitation*, OZ Minerals January 2022. South Australia, Adelaide.

Appendices

Appendix A. Trigger value guidelines

Appendix Table A.1: ANZECC (2000) trigger guidelines

Constituent	Unit	ANZECC (2000) lower trigger	ANZECC (2000) upper trigger
Total Aluminium	mg/kg	No guideline	No guideline
Total Arsenic	mg/kg	20	70
Total Barium	mg/kg	No guideline	No guideline
Total Beryllium	mg/kg	No guideline	No guideline
Total Cadmium	mg/kg	1.5	10
Total Copper	mg/kg	65	270
Total Lead	mg/kg	50	220
Total Uranium	mg/kg	No guideline	No guideline

Appendix Table A.2: Constituent guideline established on baseline data: total Aluminium (ELA 2017)

Sample site	Unit	Baseline data	Date	Trigger level*
WA-1	mg/kg	14,300	27/06/2010	28,600
WA-2	mg/kg	18,600	27/06/2010	37,200
WA-3	mg/kg	19,300	27/06/2010	38,600
WW-1	mg/kg	10.700	27/06/2010	21,400
WW-2	mg/kg	7,020	27/06/2010	14.040
WW-3	mg/kg	16,400	27/06/2010	32,800

Appendix Table A.3: Constituent guideline established on baseline data: total Uranium (ELA 2017)

Sample site	Unit	Baseline data	Date	Trigger level*
WA-1	mg/kg	0.5	27/06/2010	1.0
WA-2	mg/kg	0.4	27/06/2010	0.8
WA-3	mg/kg	1.1	27/06/2010	2.2
WW-1	mg/kg	0.3	27/06/2010	0.6
WW-2	mg/kg	0.3	27/06/2010	0.6
WW-3	mg/kg	0.8	27/06/2010	1.6

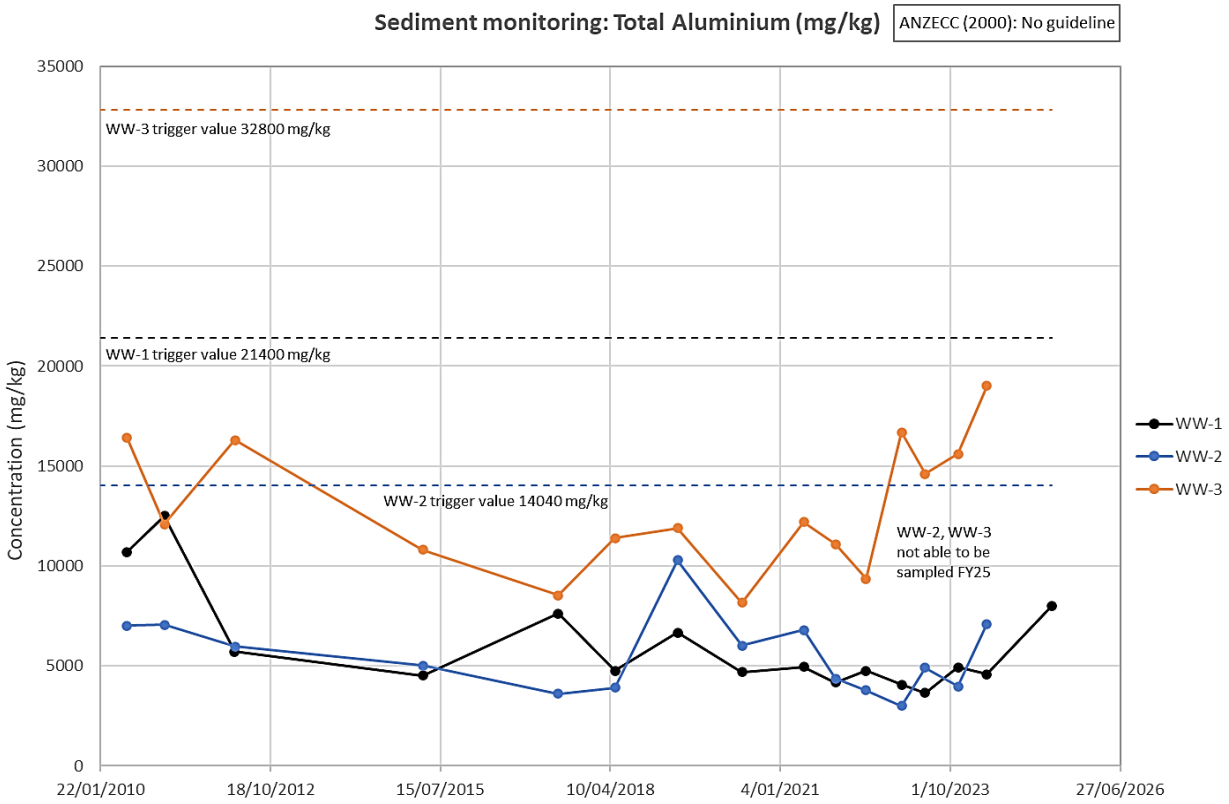
Appendix Table A.4: Constituent guideline established on baseline data: total Barium (ELA 2017)

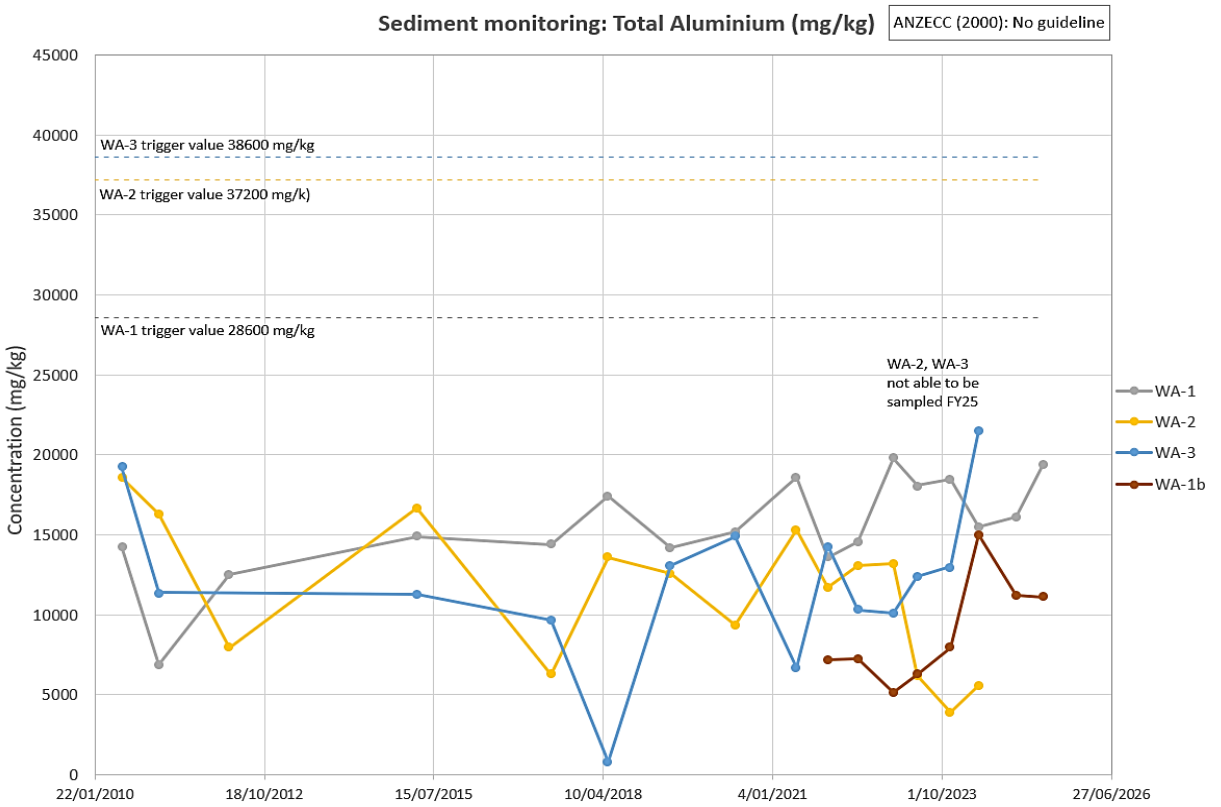
Sample site	Unit	Baseline data	Date	Trigger level*
WA-1	mg/kg	350	27/06/2010	700
WA-2	mg/kg	580	27/06/2010	1,160
WA-3	mg/kg	230	27/06/2010	460
WW-1	mg/kg	100	27/06/2010	200
WW-2	mg/kg	120	27/06/2010	240
WW-3	mg/kg	300	27/06/2010	600

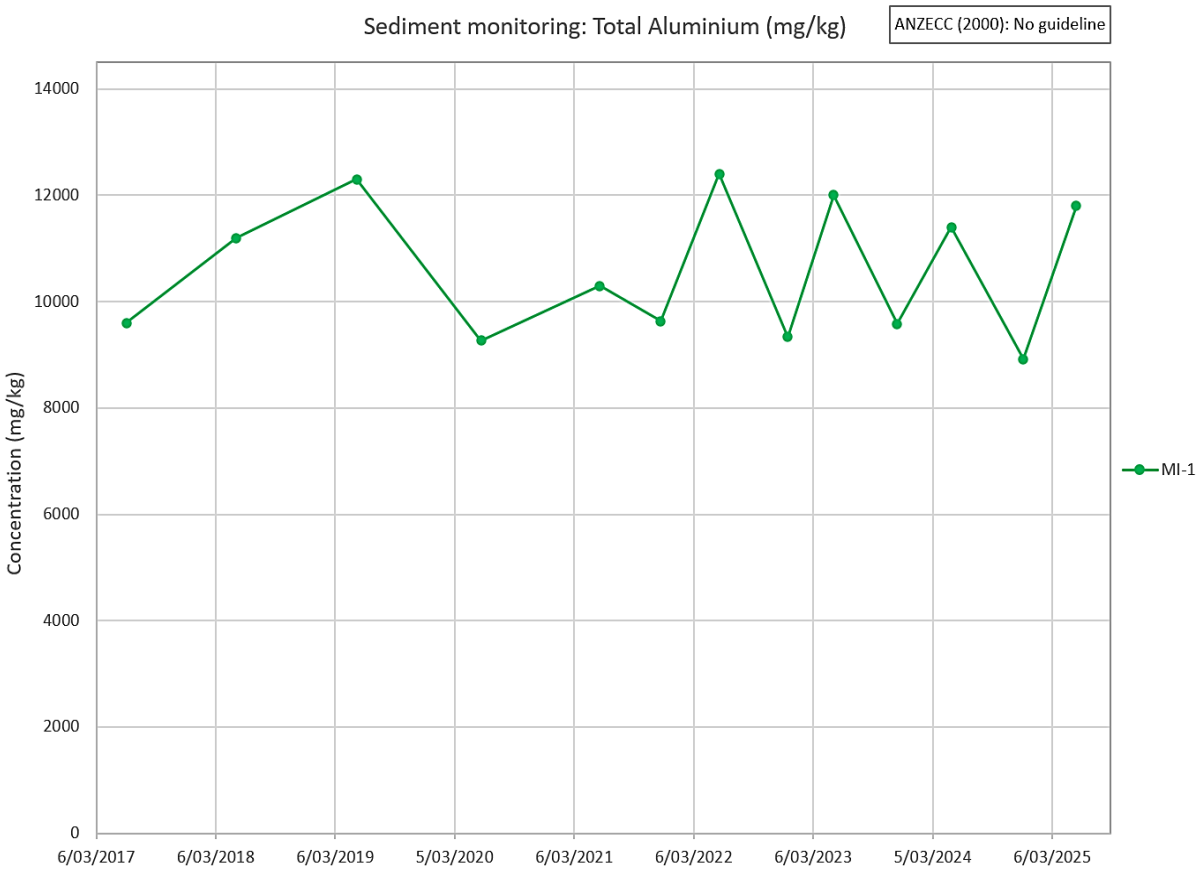
* Trigger level at 2 x baseline level

Appendix B. Time series graphs

Appendix B1. Aluminium



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ANZECC (2000): No guideline
Concentration (mg/kg)
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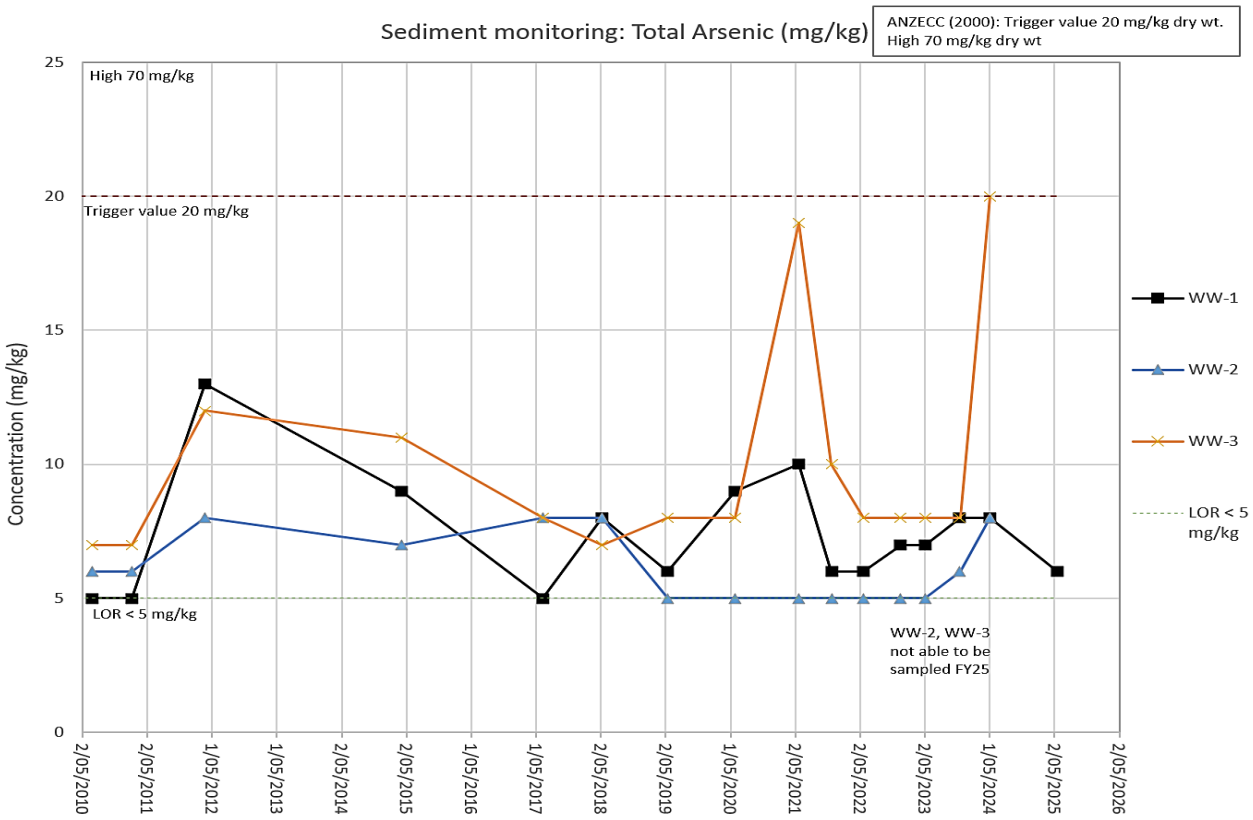
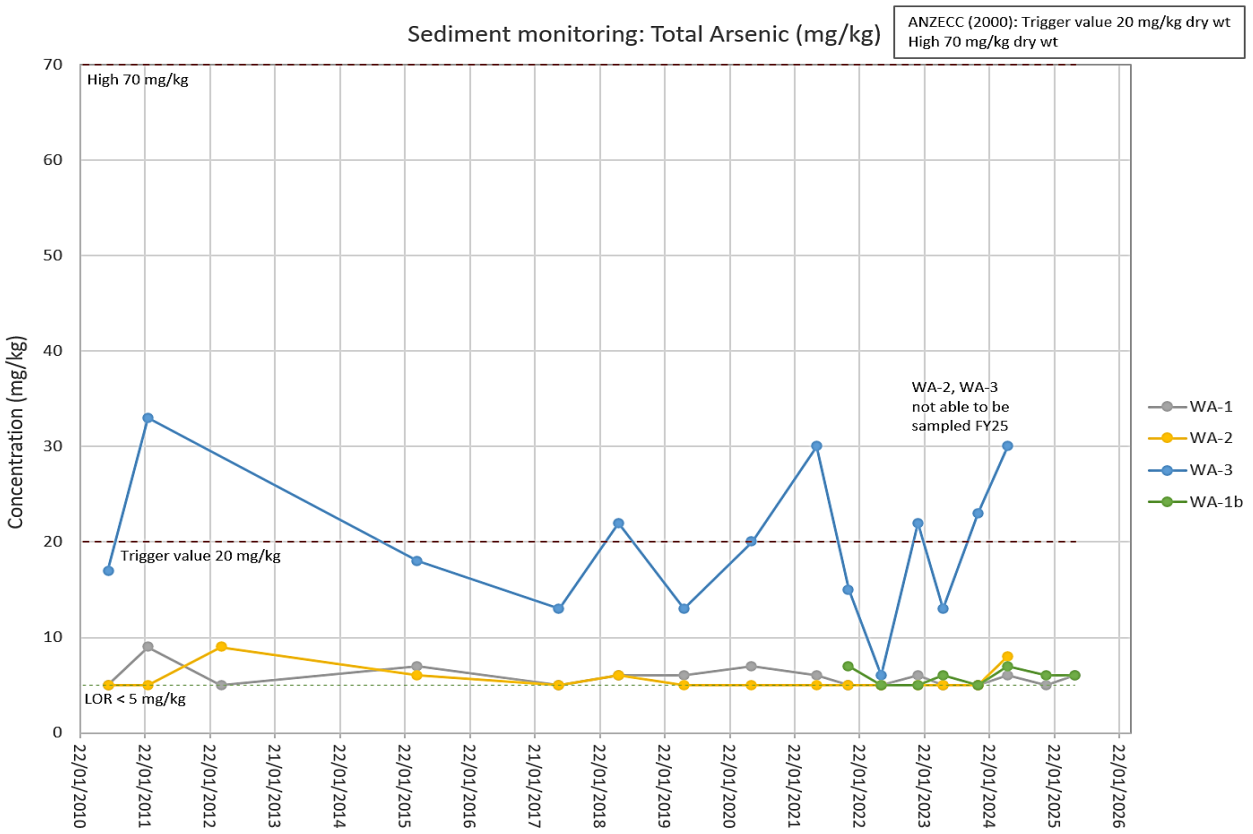
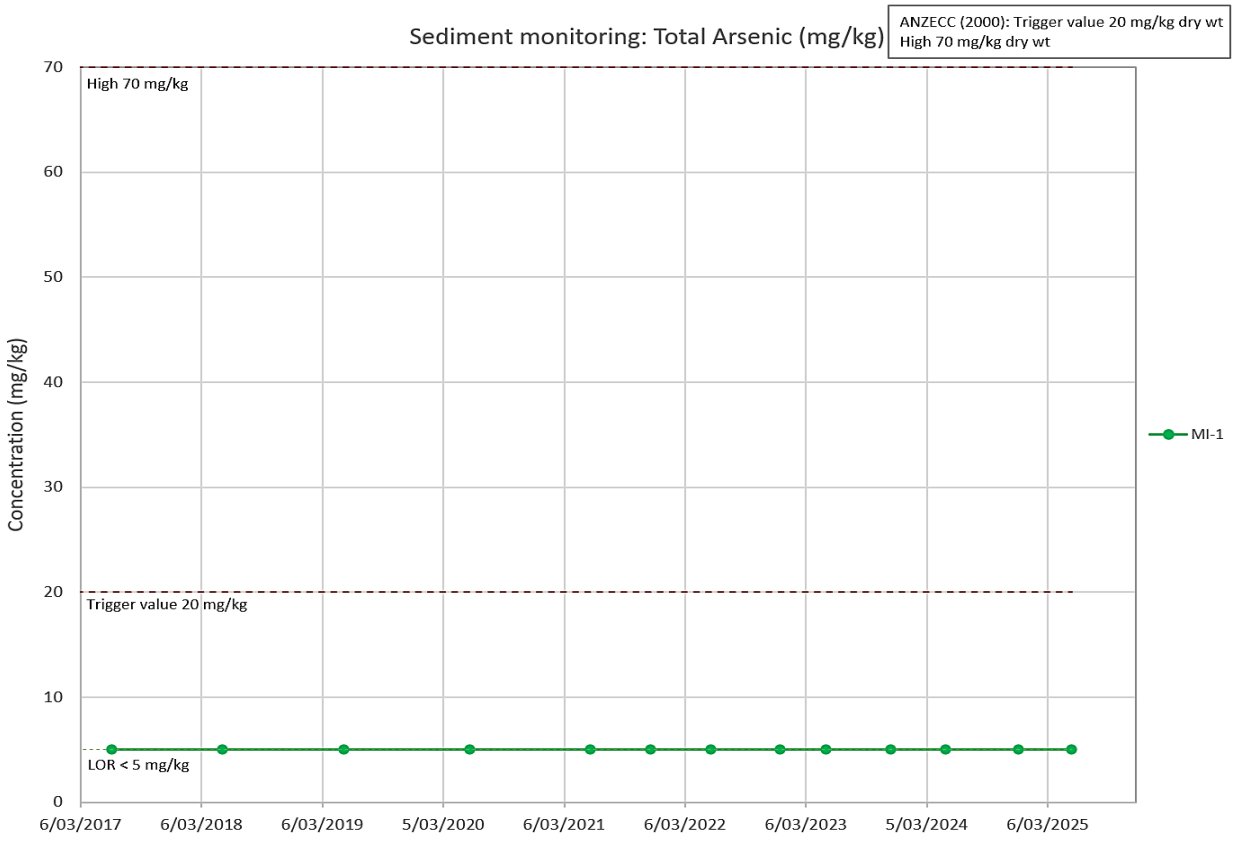
12000
10000
8000
6000
4000
2000
0
6/03/2017
6/03/2018
6/03/2019
5/03/2020
6/03/2021
6/03/2022
6/03/2023
5/03/2024
6/03/2025
MI-1

Appendix B2. Arsenic



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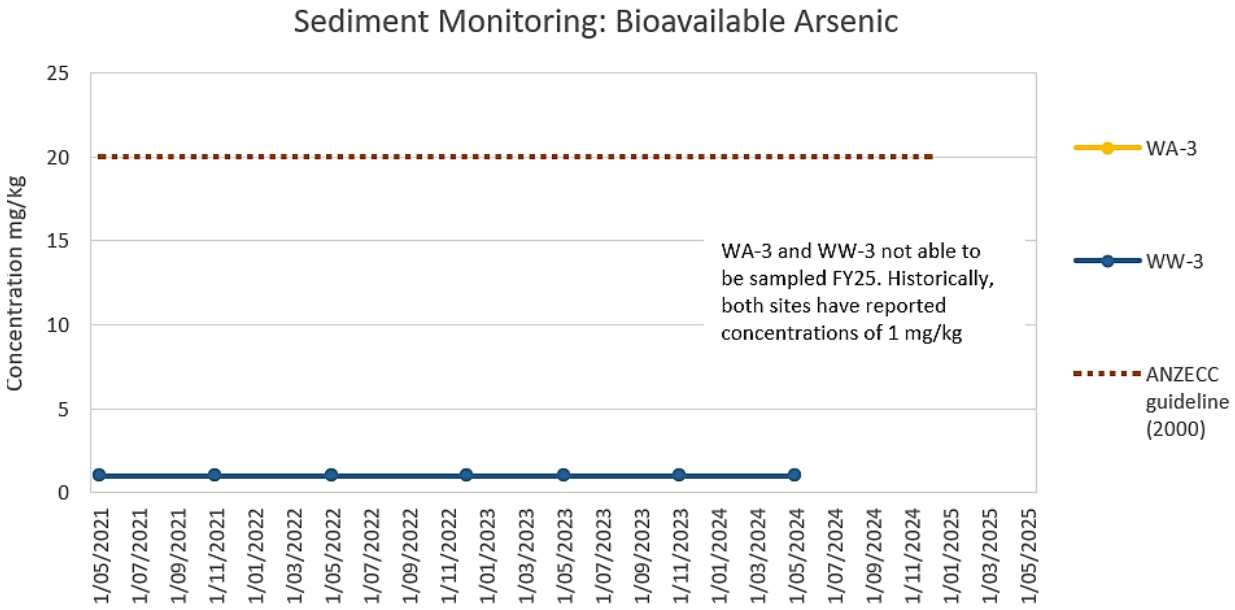
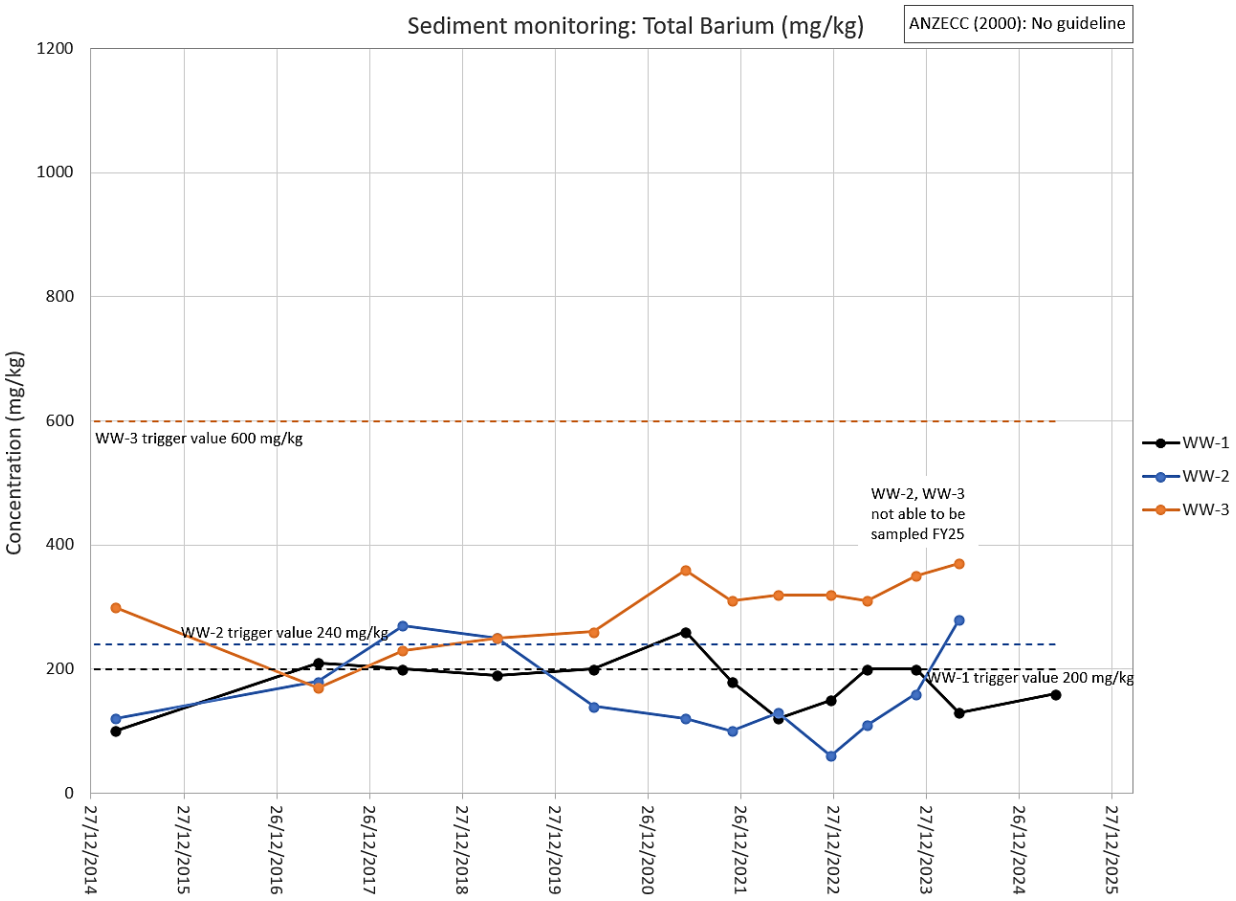
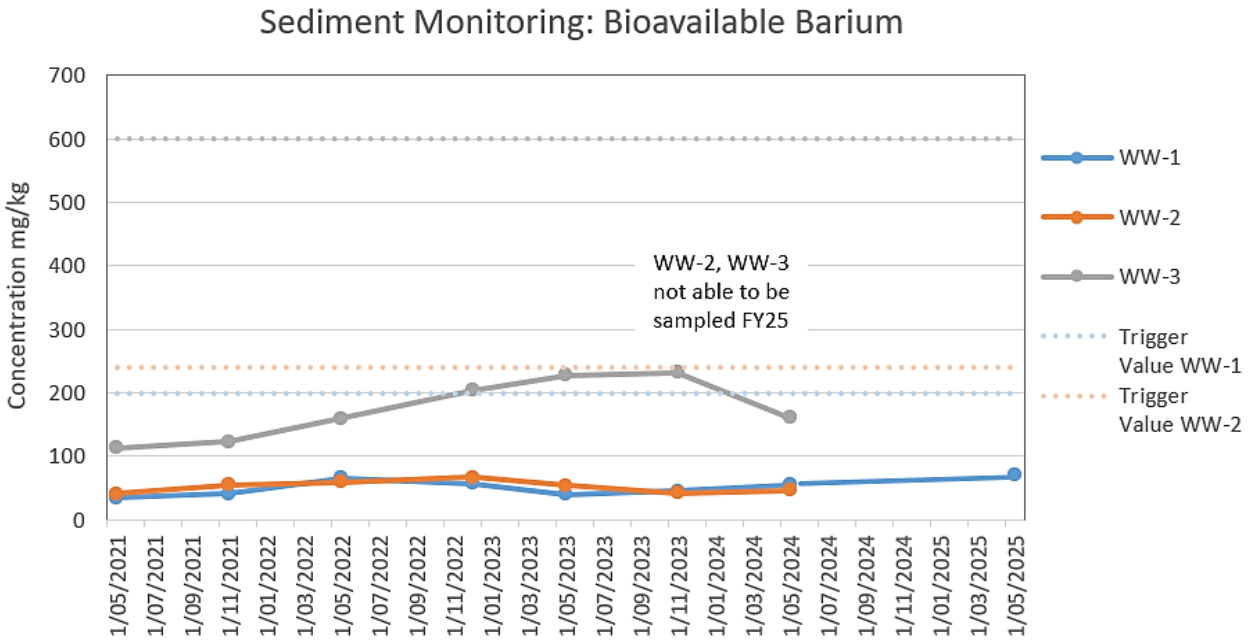
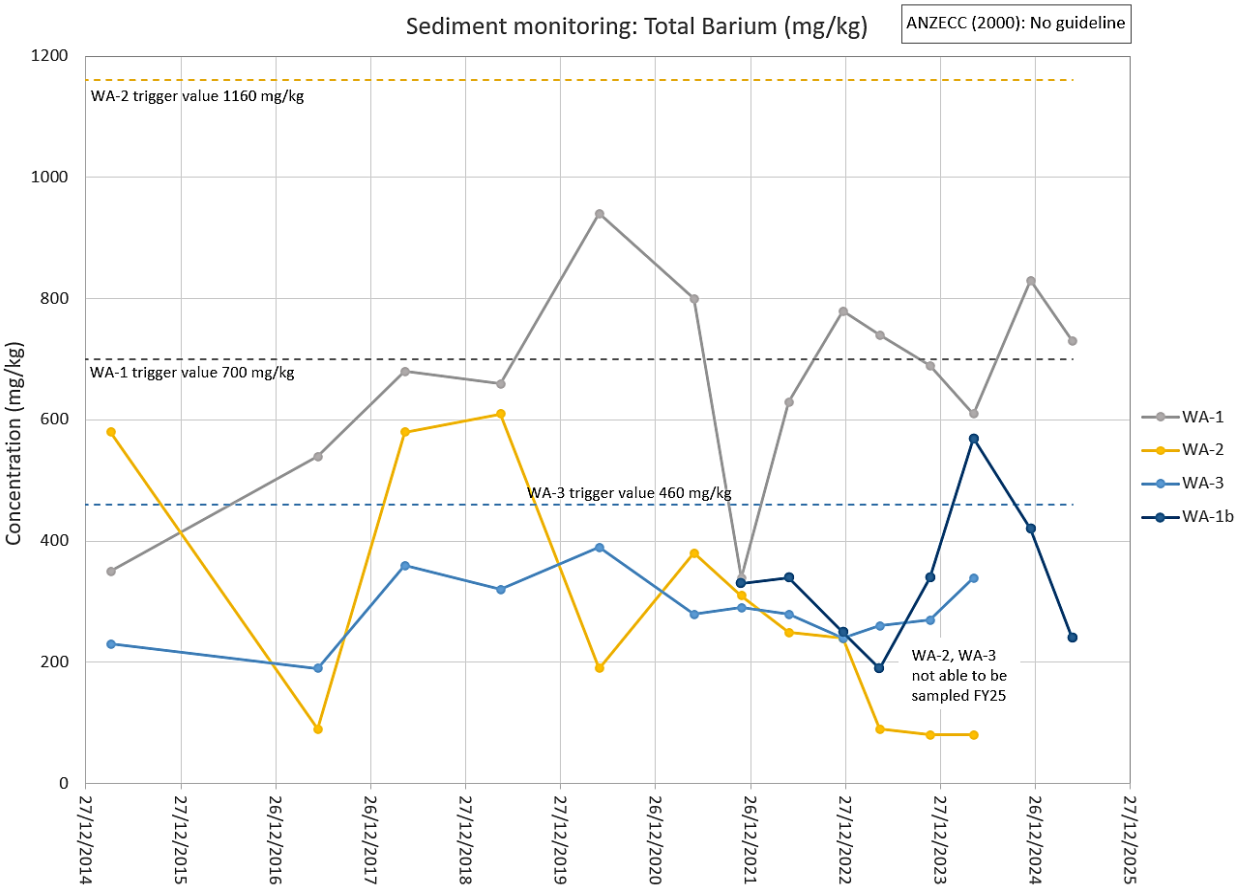
ANZECC (2000): Trigger value 20 mg/kg dry wt
High 70 mg/kg dry wt
High 70 mg/kg
Trigger value 20 mg/kg
LOR < 5 mg/kg
Concentration (mg/kg)
MI-1
0
10
20
30
40
50
60
70
6/03/2017
6/03/2018
6/03/2019
5/03/2020
6/03/2021
6/03/2022
6/03/2023
5/03/2024
6/03/2025

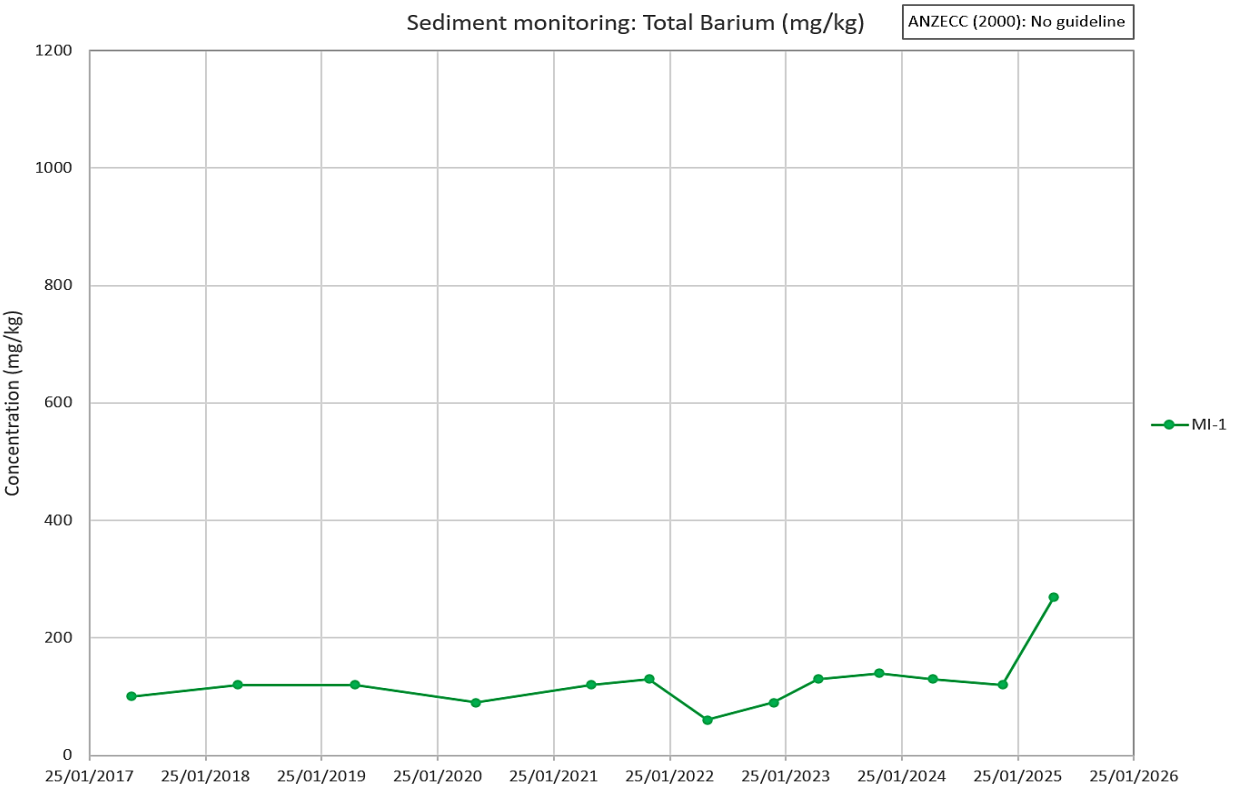

Sediment Monitoring: Bioavailable Arsenic
Concentration mg/kg
WA-3 and WW-3 not able to be sampled FY25. Historically, both sites have reported concentrations of 1 mg/kg
WA-3
WW-3
ANZECC guideline (2000)
0
5
10
15
20
25
1/05/2021
1/07/2021
1/09/2021
1/11/2021
1/01/2022
1/03/2022
1/05/2022
1/07/2022
1/09/2022
1/11/2022
1/01/2023
1/03/2023
1/05/2023
1/07/2023
1/09/2023
1/11/2023
1/01/2024
1/03/2024
1/05/2024
1/07/2024
1/09/2024
1/11/2024
1/01/2025
1/03/2025
1/05/2025

Appendix B3. Barium

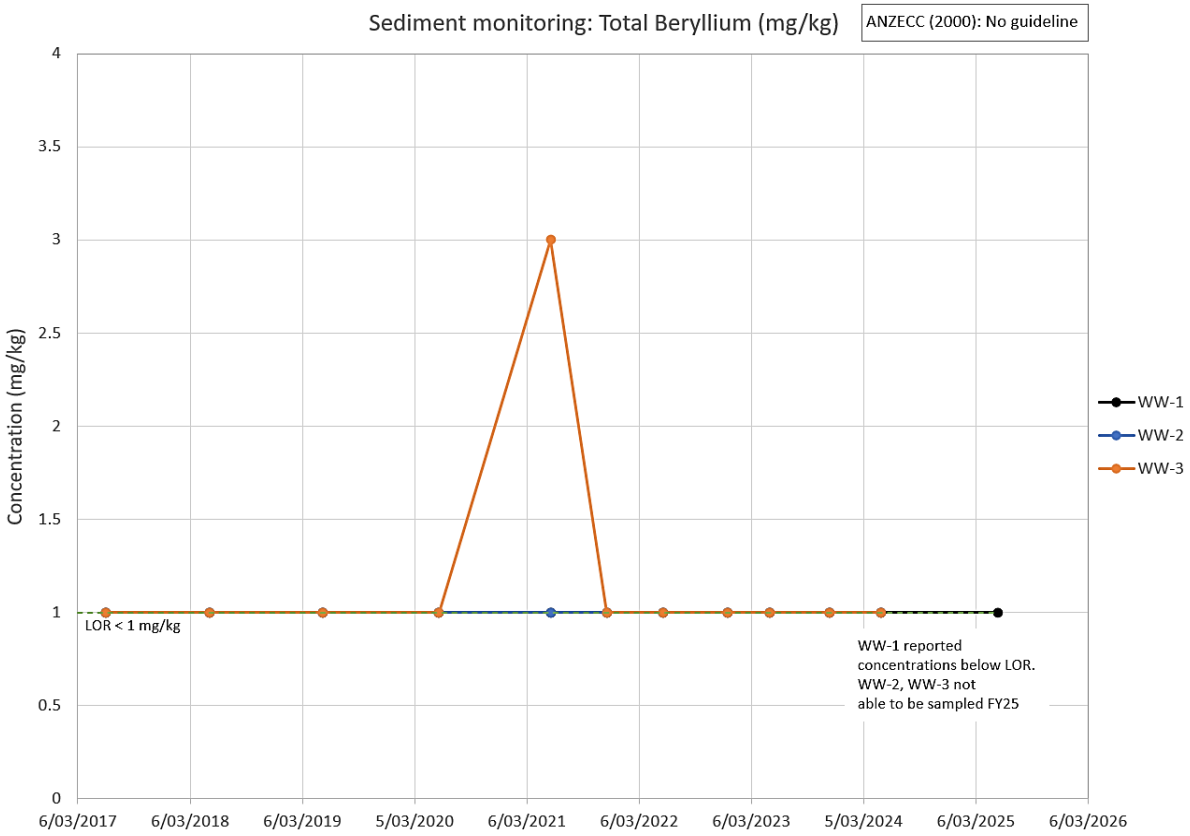


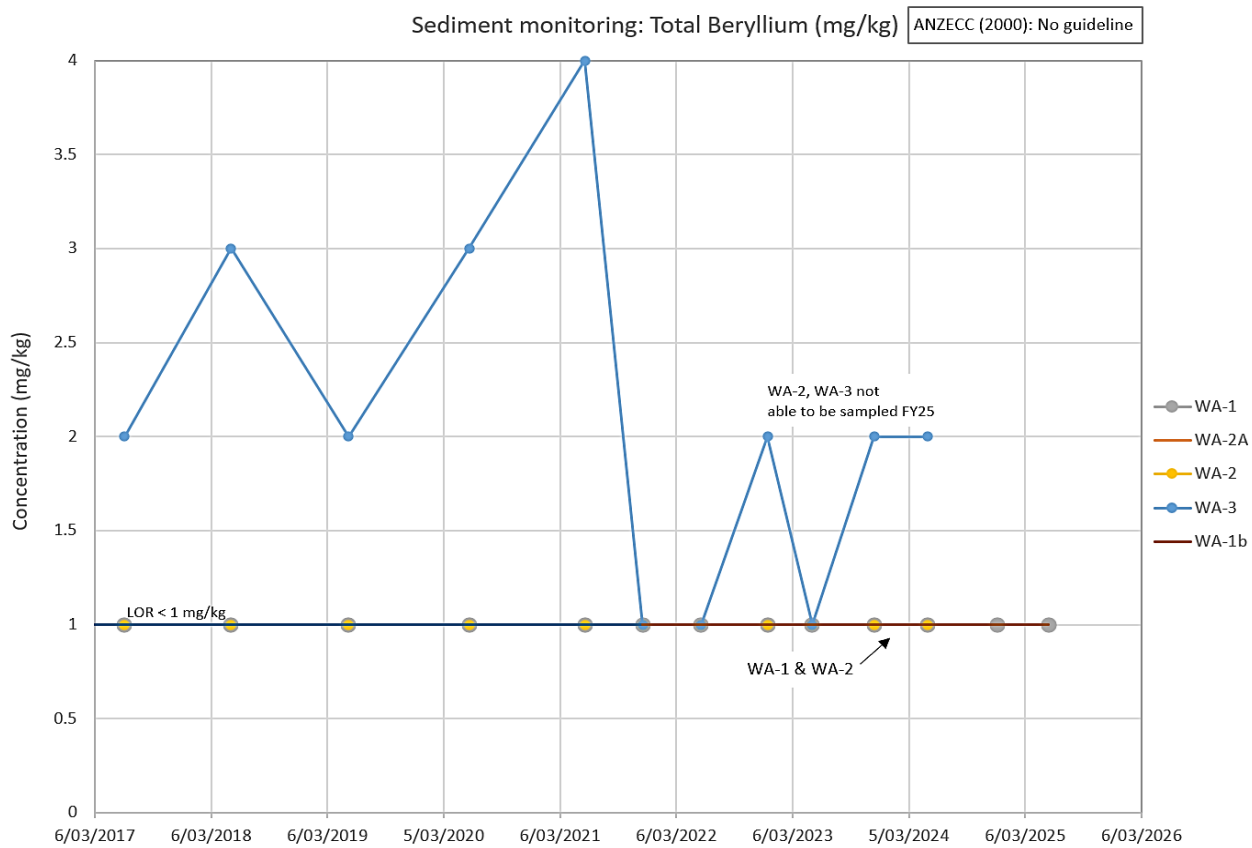


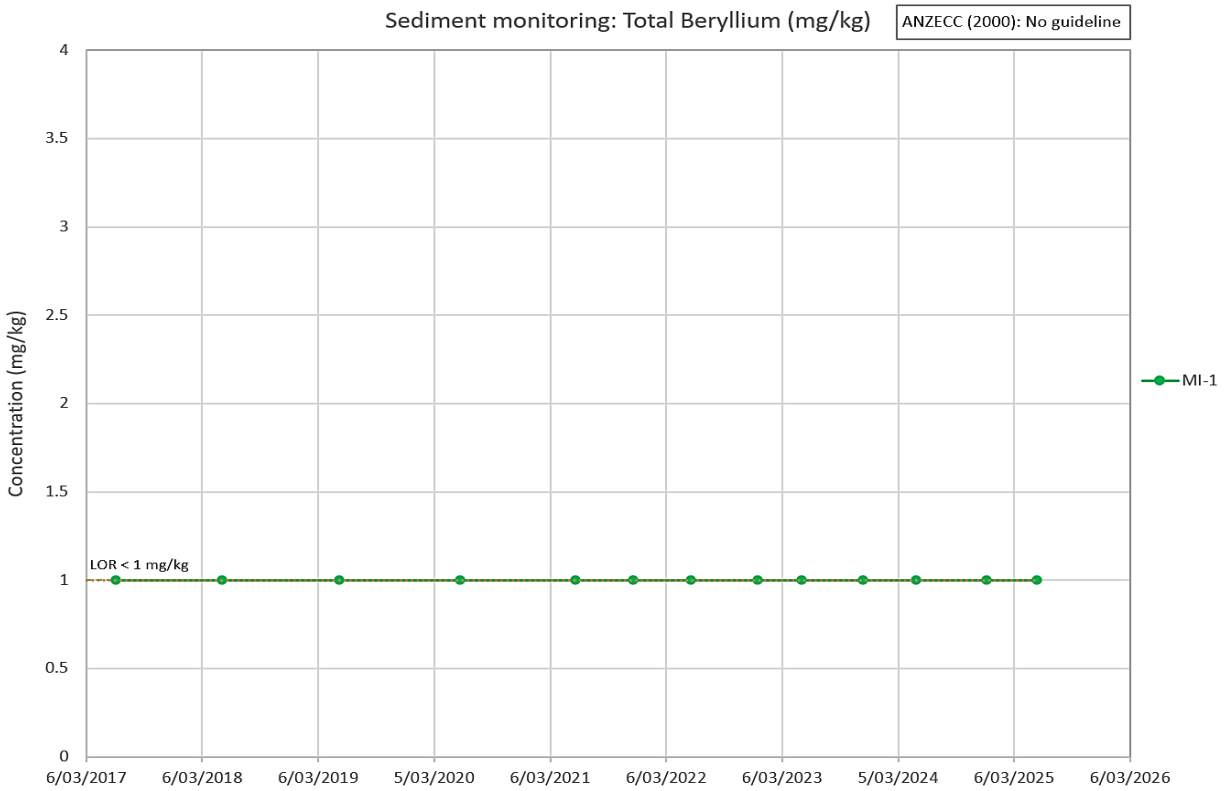

Sediment monitoring: Total Barium (mg/kg)
ANZECC (2000): No guideline
WA-2 trigger value 1160 mg/kg
WA-1 trigger value 700 mg/kg
WA-3 trigger value 460 mg/kg
WA-2, WA-3 not able to be sampled FY25
Concentration (mg/kg)
0
200
400
600
800
1000
1200
27/12/2014
27/12/2015
26/12/2016
26/12/2017
27/12/2018
27/12/2019
26/12/2020
26/12/2021
27/12/2022
27/12/2023
26/12/2024
27/12/2025
WA-1
WA-2
WA-3
WA-1b


Sediment monitoring: Total Barium (mg/kg)
ANZECC (2000): No guideline
Concentration (mg/kg)
0
200
400
600
800
1000
1200
25/01/2017
25/01/2018
25/01/2019
25/01/2020
25/01/2021
25/01/2022
25/01/2023
25/01/2024
25/01/2025
25/01/2026
MI-1

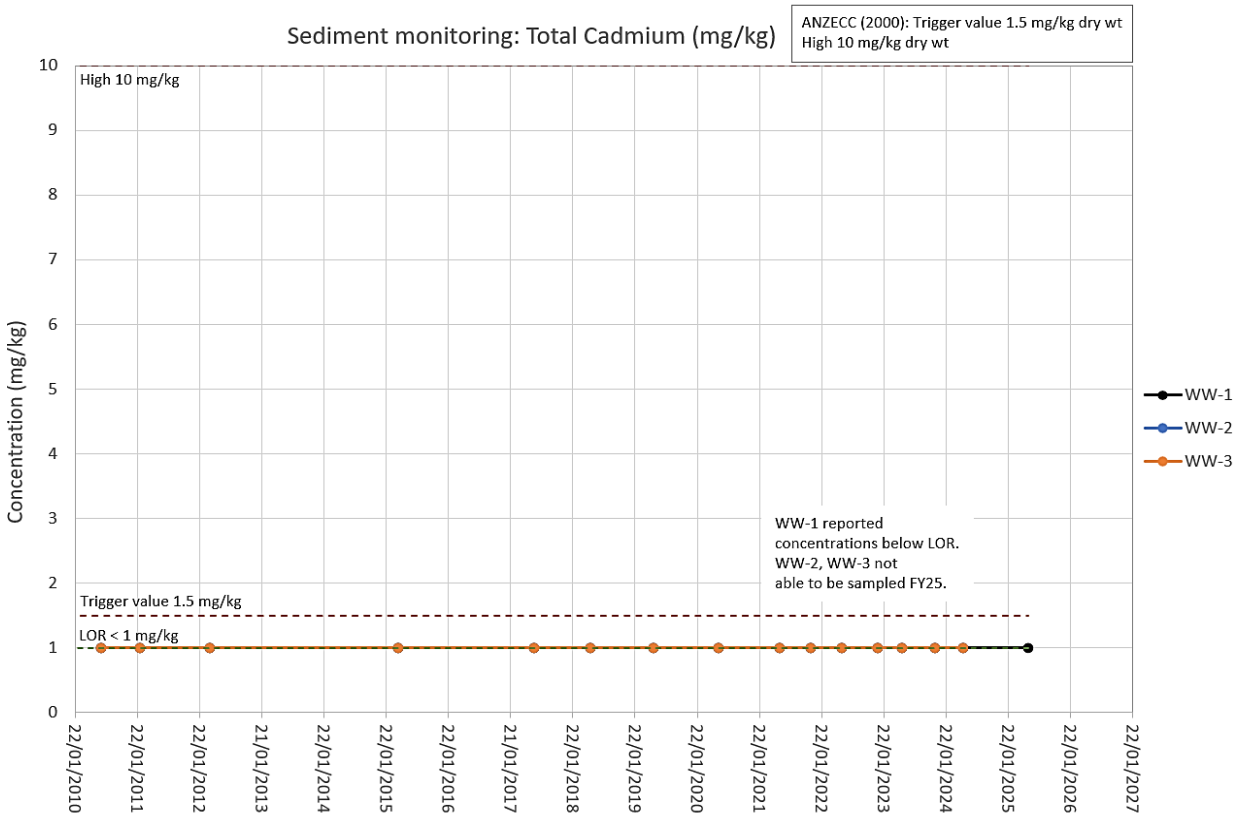
Appendix B4. Beryllium

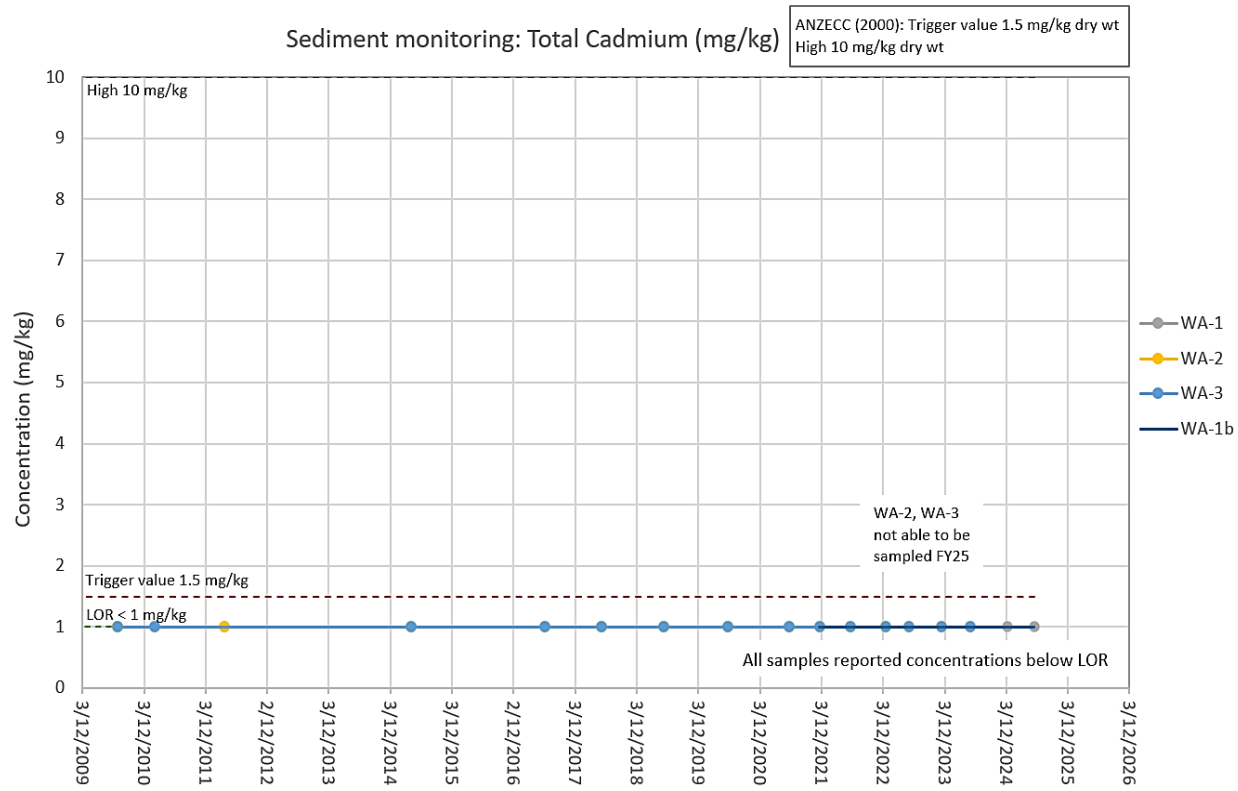


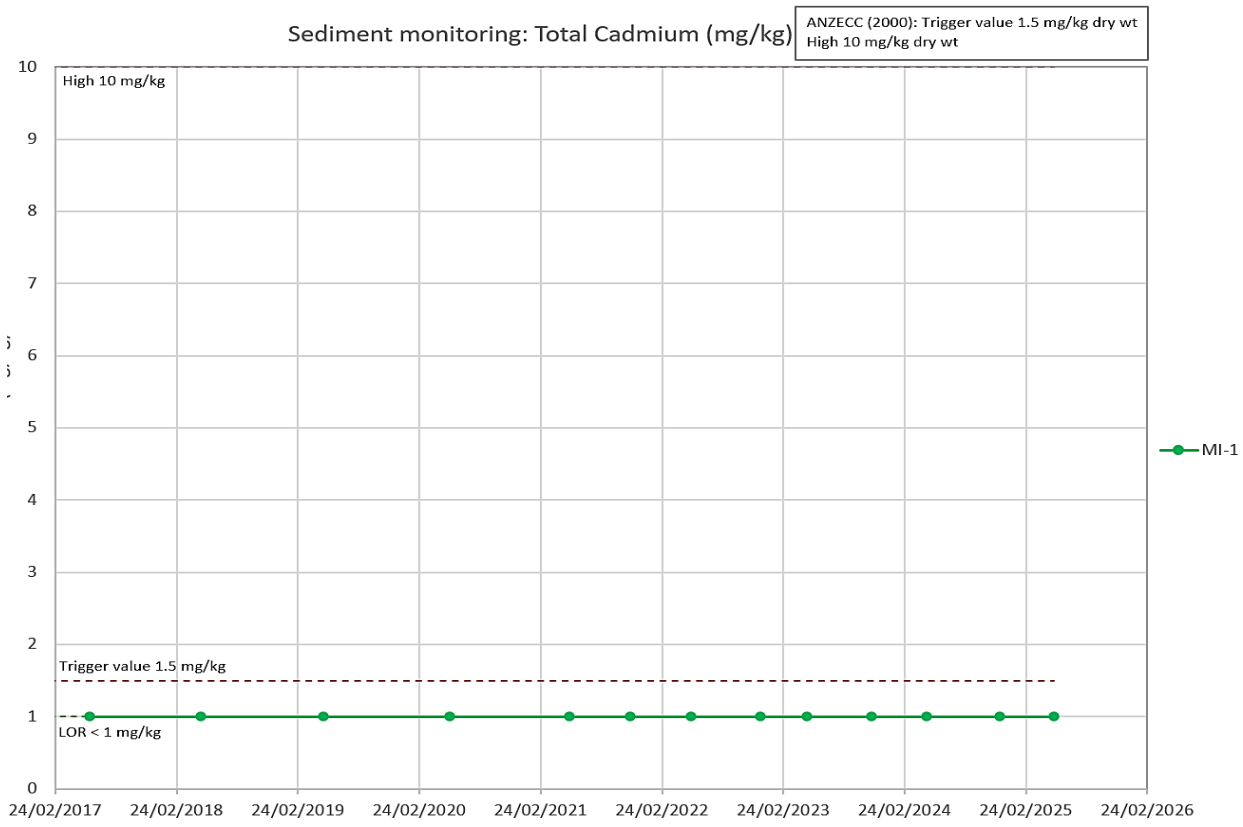



Sediment monitoring: Total Beryllium (mg/kg)
ANZECC (2000): No guideline
Concentration (mg/kg)
4
3.5
3
2.5
2
1.5
1
0.5
0
LOR < 1 mg/kg
6/03/2017
6/03/2018
6/03/2019
5/03/2020
6/03/2021
6/03/2022
6/03/2023
5/03/2024
6/03/2025
6/03/2026
MI-1

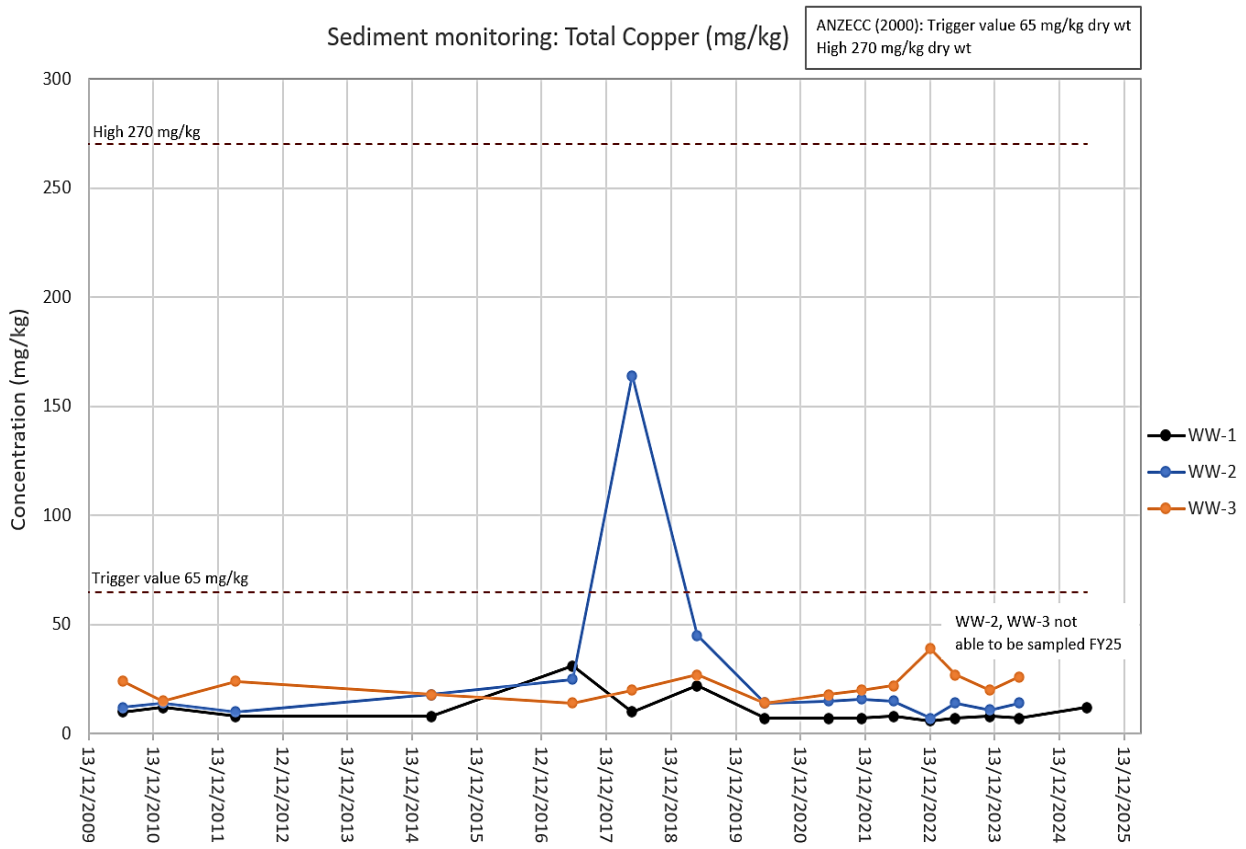
Appendix B5. Cadmium

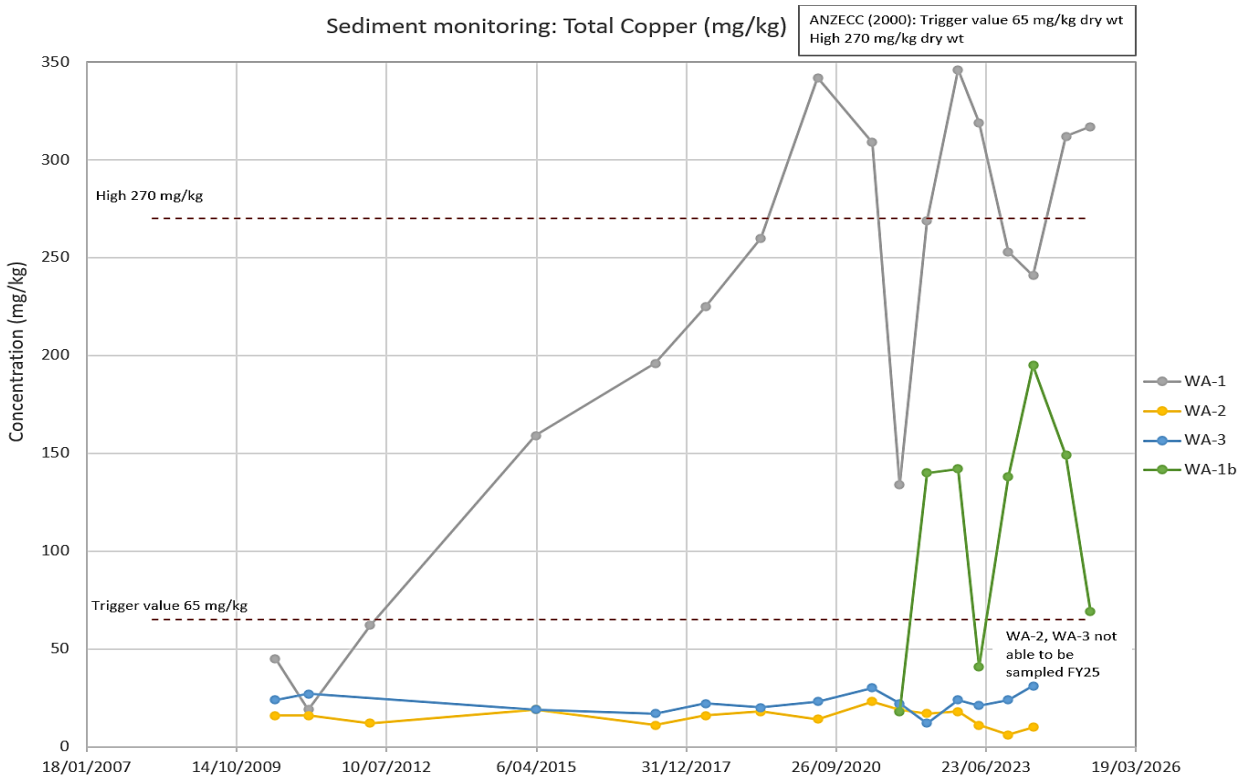


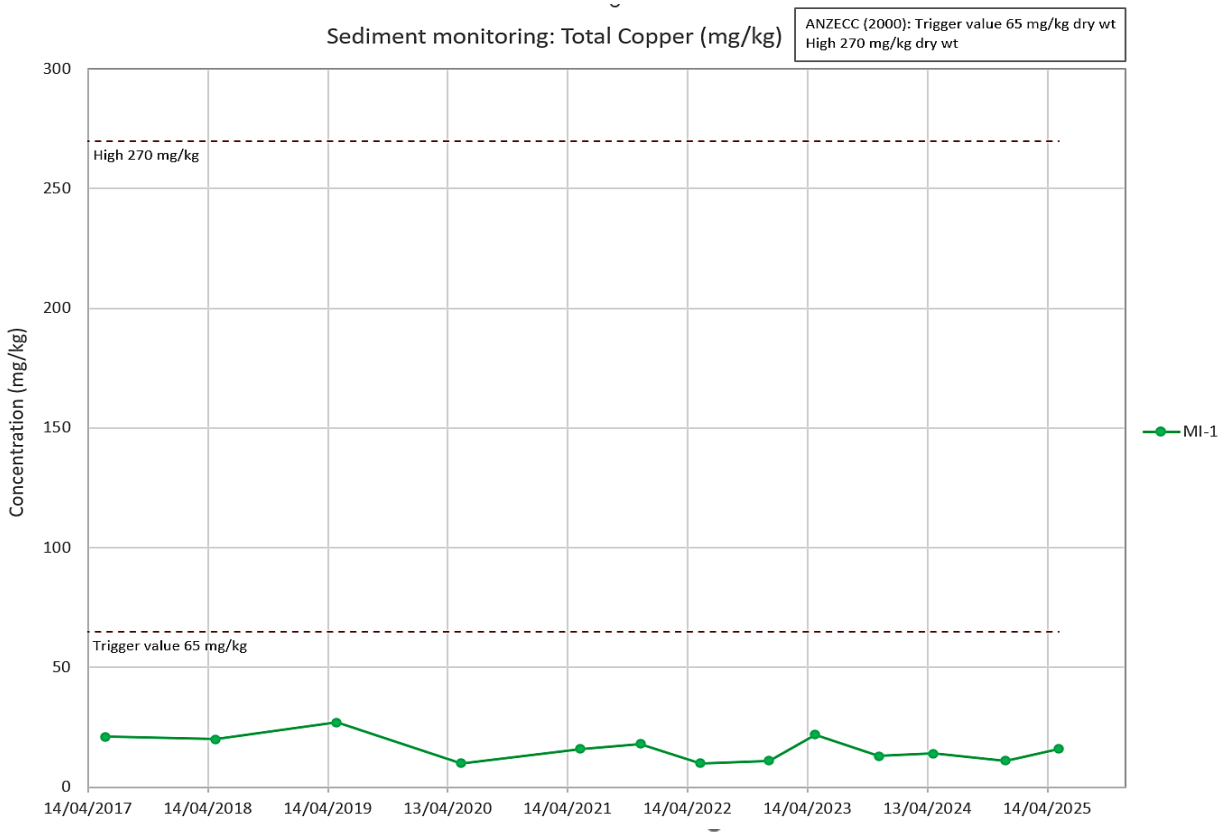


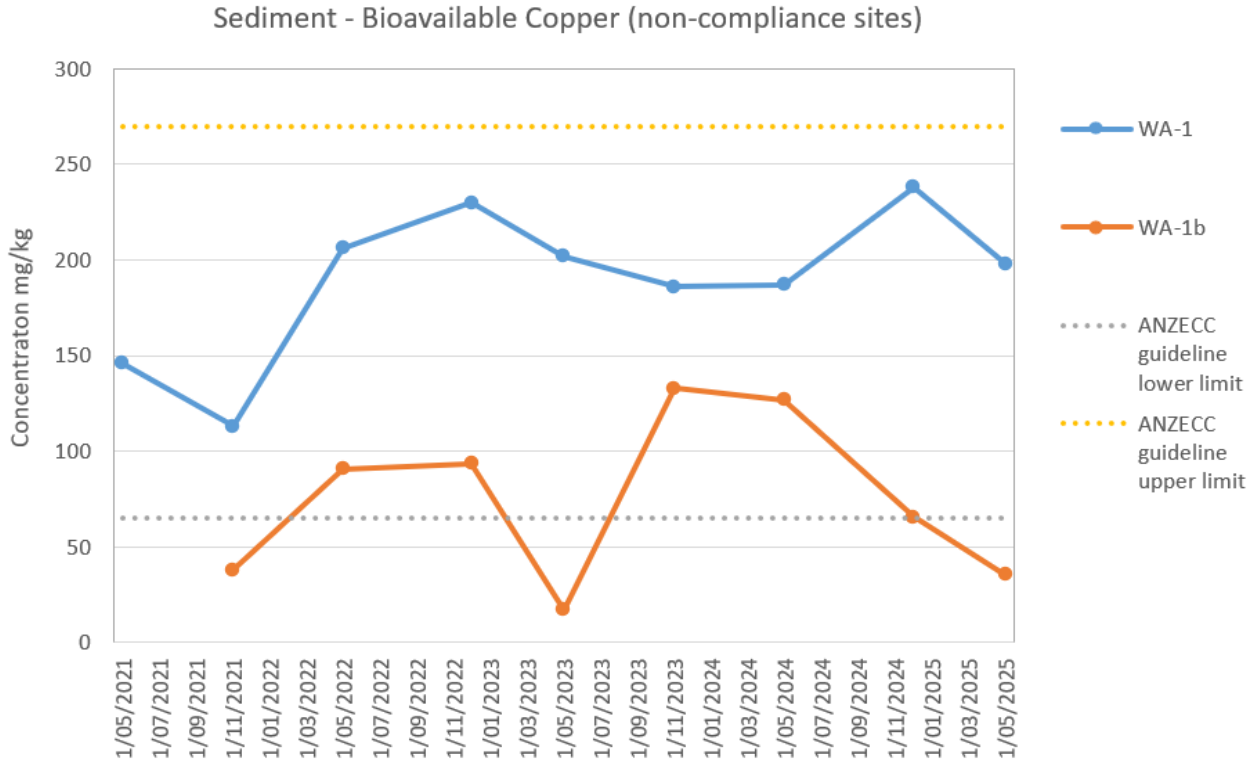

Sediment monitoring: Total Cadmium (mg/kg)
ANZECC (2000): Trigger value 1.5 mg/kg dry wt
High 10 mg/kg dry wt
High 10 mg/kg
Trigger value 1.5 mg/kg
LOR < 1 mg/kg
MI-1
10
9
8
7
6
5
4
3
2
1
0
24/02/2017
24/02/2018
24/02/2019
24/02/2020
24/02/2021
24/02/2022
24/02/2023
24/02/2024
24/02/2025
24/02/2026

Appendix B6. Copper

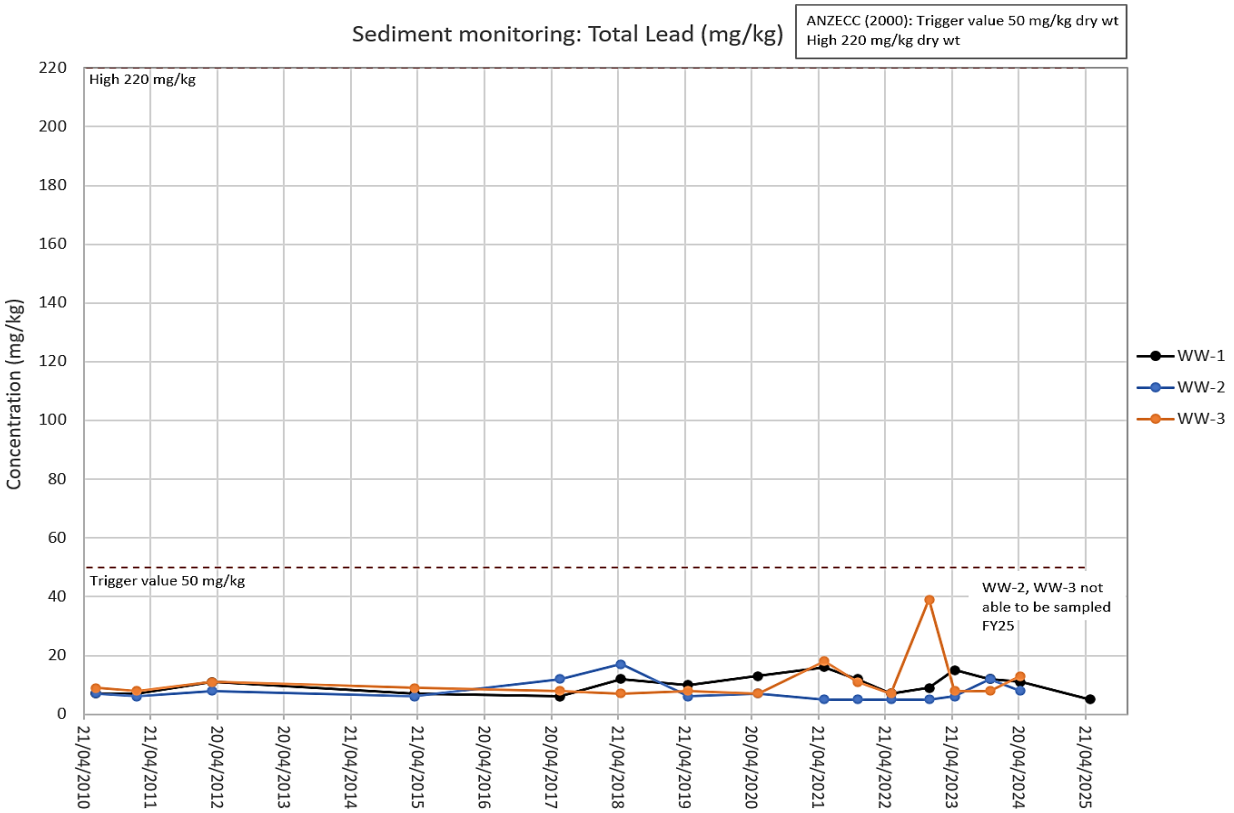


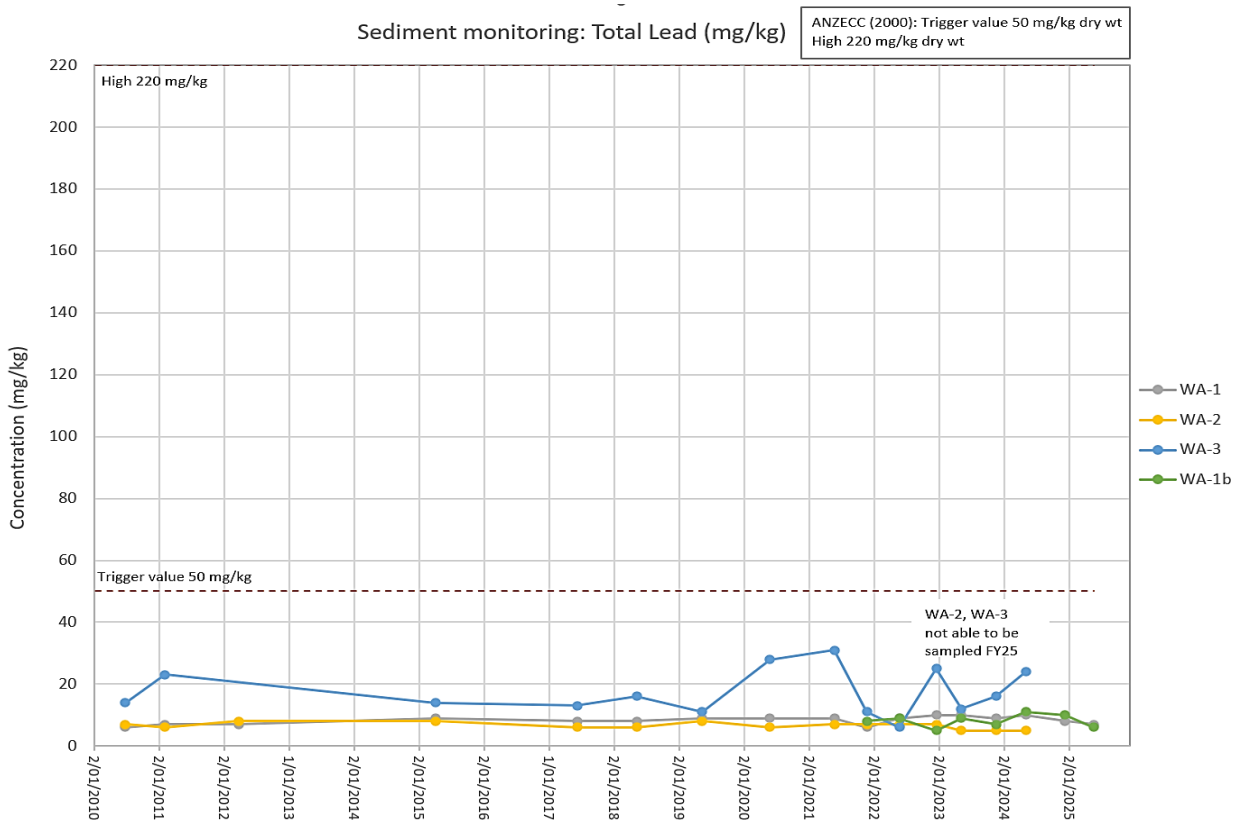


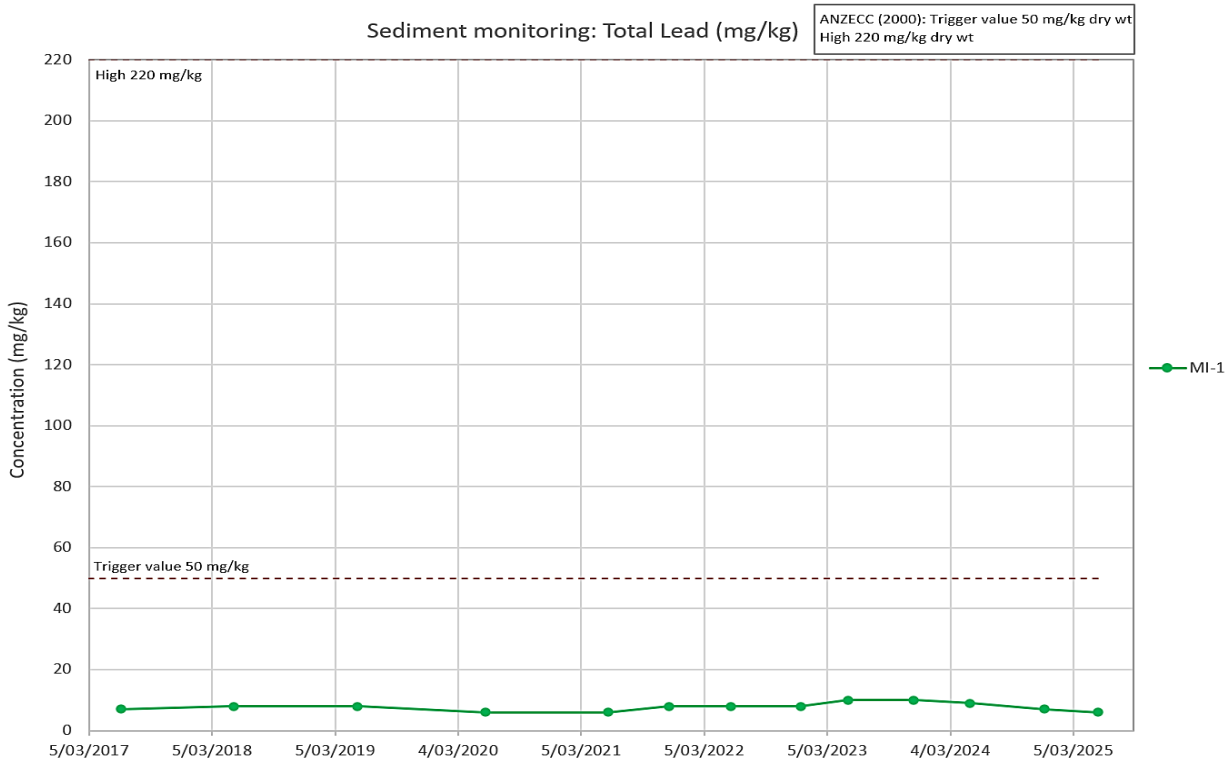

Sediment monitoring: Total Copper (mg/kg)
ANZECC (2000): Trigger value 65 mg/kg dry wt
High 270 mg/kg dry wt
High 270 mg/kg
Trigger value 65 mg/kg
Concentration (mg/kg)
300
250
200
150
100
50
0
14/04/2017
14/04/2018
14/04/2019
13/04/2020
14/04/2021
14/04/2022
14/04/2023
13/04/2024
14/04/2025
MI-1


Sediment - Bioavailable Copper (non-compliance sites)
Concentraton mg/kg
300
250
200
150
100
50
0
1/05/2021
1/07/2021
1/09/2021
1/11/2021
1/01/2022
1/03/2022
1/05/2022
1/07/2022
1/09/2022
1/11/2022
1/01/2023
1/03/2023
1/05/2023
1/07/2023
1/09/2023
1/11/2023
1/01/2024
1/03/2024
1/05/2024
1/07/2024
1/09/2024
1/11/2024
1/01/2025
1/03/2025
1/05/2025
WA-1
WA-1b
ANZECC guideline lower limit
ANZECC guideline upper limit

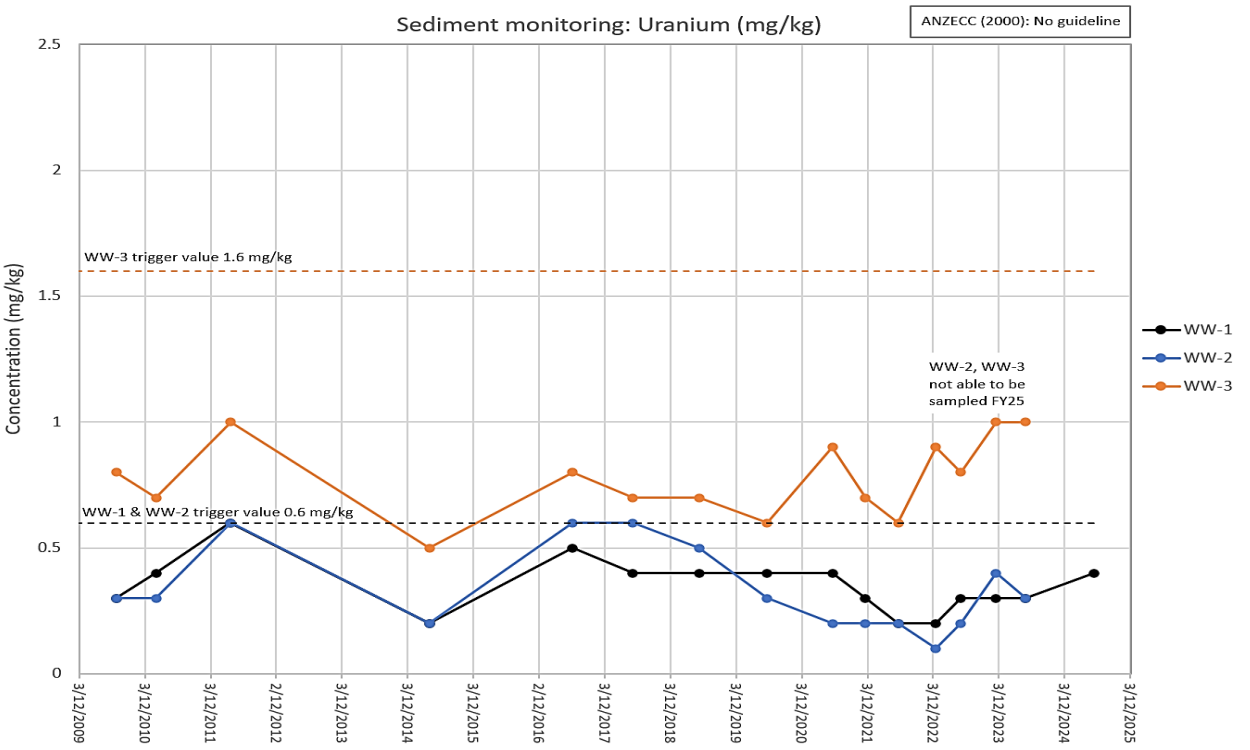
Appendix B7. Lead

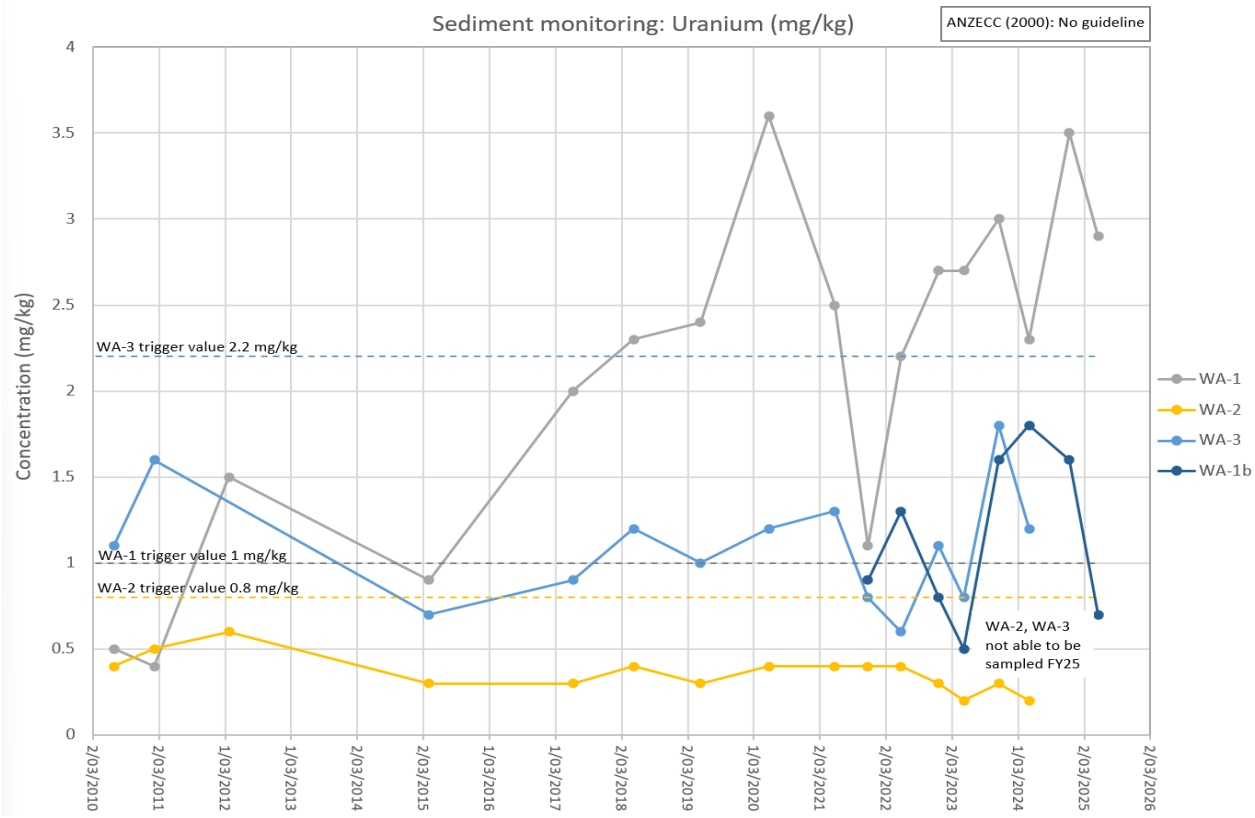


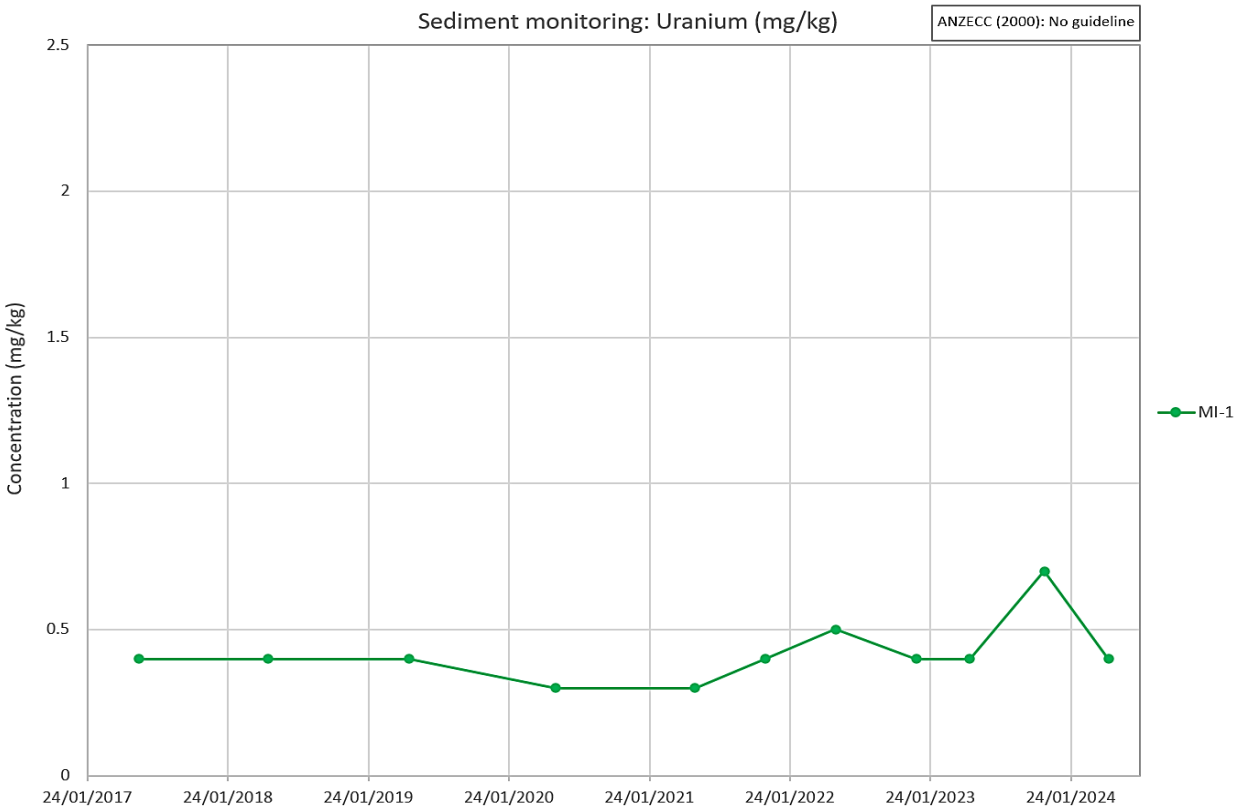



Sediment monitoring: Total Lead (mg/kg)
ANZECC (2000): Trigger value 50 mg/kg dry wt
High 220 mg/kg dry wt
High 220 mg/kg
Trigger value 50 mg/kg
Concentration (mg/kg)
220
200
180
160
140
120
100
80
60
40
20
0
5/03/2017
5/03/2018
5/03/2019
4/03/2020
5/03/2021
5/03/2022
5/03/2023
4/03/2024
5/03/2025
MI-1

Appendix B8. Uranium






Sediment monitoring: Uranium (mg/kg)
ANZECC (2000): No guideline
Concentration (mg/kg)
2.5
2
1.5
1
0.5
0
24/01/2017
24/01/2018
24/01/2019
24/01/2020
24/01/2021
24/01/2022
24/01/2023
24/01/2024
MI-1

Appendix C Prominent Hill Ecological Autumn Survey Report 2025 (EcoLogical Associates)

Prominent Hill autumn ecological survey 2025

BHP

ecological AUSTRALIA
A TETRA TECH COMPANY

Document Tracking

Project Name: Prominent Hill autumn ecological survey 2025

Project Number: 600-25ADL10562

Project Manager: Jasmine Richards

Version	Prepared by	Reviewed by	Approved by	Status	Date
1	Lauren Heddle	Ryan Lewis	Jasmine Richards	Draft	18/06/2025
2	Ryan Lewis, Emrys Leitch	Jasmine Richards	Jasmine Richards	Final	24/07/2025

This report should be cited as 'Eco Logical Australia 2025, Prominent Hill autumn ecological survey 2025, Prepared for BHP.'

Acknowledgements

This document has been prepared by Eco Logical Australia Pty Ltd with support from BHP staff Luke Polkinghorne and Eva Kozberski.

Abbreviations

Abbreviation	Description
BOM	Bureau of Meteorology
DEM	Department for Energy and Mining
ELA	Eco Logical Australia
EML	Extractive Mineral Leases
IBRA	The Interim Biogeographic Regionalisation for Australia
ML	Mining Lease
MPL	Miscellaneous Purpose Licences
NVC	Native Vegetation Council
PEPR	Program for Environment Protection and Rehabilitation
PH01 – PH27	Monitoring sites
SAAL	South Australian Arid Lands
SE	Standard Error
SEB	Significant Environmental Benefit
BOM	Bureau of Meteorology
DEM	Department for Energy and Mining

Executive Summary

Eco Logical Australia (ELA) was engaged by BHP (formerly OZ Minerals) to conduct the ecological compliance monitoring autumn survey for 2025 at the Prominent Hill copper and gold mine. BHP Group Limited acquired 100% of the shares in OZ Minerals Limited, as of the 2 of May 2023 (BHP 2023). Prominent Hill (Mining Lease (ML) 6228 and associated tenements) is located approximately 650 km north of Adelaide and 136 km southeast of Coober Pedy, South Australia. The 2025 survey marks the ninth year of monitoring for the mine since the survey methodology was updated in the 2017 Program for Environment Protection and Rehabilitation (PEPR). BHP has a legislative requirement under the approved PEPR to conduct ecological monitoring on ML 6228, within the surrounding Significant Environmental Benefit (SEB) offset area and at several weed sites along main access routes to assess the potential impacts of the mine on the abundance and diversity of native flora and fauna.

Twenty permanent vegetation quadrats (ten impact and ten control) were monitored, along with five weed sites. The vegetation quadrats have been positioned to capture the potential effects of the mine on the surrounding ecological environment by comparing sites within or close to the ML (impact sites) to those positioned away from the active mining area (control sites). The vegetation quadrats occur in three vegetation types – acacia woodland, chenopod shrubland and mallee woodland, with chenopod shrubland being the dominant vegetation type. The weed monitoring sites are positioned along the mine Access Road to the Stuart Highway and Haul Road to the Wirrida Rail Siding to assess the potential for the introduction of weeds to the region from vehicles and machinery as well as other vectors such as wind and animals. Species diversity, vegetation cover, recruitment and potential impacts such as dust deposition, inappropriate access, weeds and pest animals were assessed at the 20 monitoring quadrats to determine if the mining operation is influencing the surrounding environment. Within each quadrat a 10 m x 2 m subplot was used to assess surface cover (%) of grass, bare ground, litter, crust and scalded surface/ erosion. In 2020, Jessup transects were re-instated at each of the 20 quadrats to provide information about plant densities and recruitment.

In 2025, 161 species (160 native / 1 exotic) were recorded which is the highest species richness observed since the current monitoring program began in 2017, 153 species were recorded in 2024. The number of species declined between 2017 and 2019 (116-75 species) but increased in 2020 and again in 2021, likely due to higher-than-average annual rainfall from 2020 onwards. Cat and rabbit sightings were observed from remote cameras deployed at three sites in 2024, with less cat and rabbit activity from remote cameras observed in 2025.

Results were not significantly different when comparing control and impact sites in 2025, except for bare ground cover in acacia woodland sites, which had significantly higher cover ($p = 0.044$) at impact sites compared to control. This trend is consistent with results from 2024 and has not significantly increased until 2025. Overall, the results reflect a resilient and stable rangeland system incorporating large areas of acacia woodland, chenopod shrubland and mallee woodland. Overall, the range condition observed in 2025 within or close to the ML area (impact sites) is in most cases consistent with observations made within the surrounding SEB Offset areas (control sites). Within the acacia woodland sites, cover percentage tended to be lower for impact sites compared to control sites. The result of this survey do not indicate that BHP's Prominent Hill mine is negatively impacting vegetation or habitat condition, with no significant difference between control and impact sites. However, an exception is at acacia woodland sites where bare ground cover was significantly higher at impact sites. This could be a result of reduced rainfall but should continue to be monitored. Levels of native species abundance, richness, diversity and recruitment within impact sites do not indicate trends different from those measured within the control sites, across vegetation types.

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1. Introduction

BHP's (formerly OZ Minerals) Prominent Hill mine site is located approximately 650 km north west of Adelaide, South Australia (SA) and is within the Stony Plains bioregion (Oodnadatta subregion – STP02) as part of the Interim Biogeographic Regionalisation for Australia (IBRA) (Figure 1). The Mining Lease (ML) for Prominent Hill (ML 6228) was approved in 2006 for production of copper and gold. The Prominent Hill operation is comprised of a number of tenements approved under the *Mining Act 1971* (Mining Act) between 2006 and 2010, including ML 6288, Miscellaneous Purpose Licences (MPL 81, 82, 83,84, 91, 93, 94 96, 97, 101, 112-117 and 119-122) and Extractive Mineral Leases (EML 6234, 6236-6242, 6278-6296, 6299-6301).

On the 2 May 2023, BHP Group Limited acquired 100% of the shares in OZ Minerals Limited (BHP 2023).

A review of the monitoring program in 2017 resulted in a change to ecological survey requirements within the Program for Environment Protection and Rehabilitation (PEPR) (PEPR 2022). The changes to PEPR outcome measurement criteria (OMC) were tailored to support the ongoing monitoring and passive management of the surrounding Significant Environmental Benefit (SEB) offset area and serves to limit the establishment and spread of weeds within the ML area and nearby receptors within the broader landscape. This report marks the nineth year of compliance monitoring since the OMC was amended in 2017. We note while the PEPR was revised and approved in 2022, the ecological monitoring and assessment OMC have remained unchanged since 2017.

1.1. Background and purpose

Monitoring at Prominent Hill has been occurring since 2005.The monitoring previously assessed native vegetation communities and fauna presence with a focus on threatened species within the landscape.

A review to determine whether the program was fit for purpose to meet the lease conditions and PEPR outcomes was completed in 2017 by Jacobs. As a result of this review, site numbers were reduced from 34 to 20, seven of which are new sites, and, as a surrogate for fauna surveys, flora sites were selected based on fauna habitat condition. Due to these methodology changes, and difficulty locating previous quadrats by reason of lack of physical quadrat set up and GPS information, comparisons with years prior to 2017 is problematic. Adjustments to site set up have been made and is described further in the methodology section below. Therefore, data collected in 2017 is now used as baseline data for the floristic monitoring at Prominent Hill in support of the 2022 PEPR.

The following report is based on compliance requirements as outlined in the PEPR. This floristic monitoring report will seek to demonstrate compliance with PEPR criteria. Eco Logical Australia (ELA) understands this monitoring report will be made available to the Department for Energy and Mining (DEM) who assess BHP's ongoing compliance with vegetation and habitat conditions by review of performance against the OMC (including leading indicator criteria (LIC)) detailed Table 1 below.

1.2. Objectives

The objectives of the 2025 Prominent Hill annual flora survey were to:

- Undertake monitoring at 20 permanent vegetation sites to assess potential changes in species diversity, vegetation cover, recruitment, perennial densities, the percentage of ground cover (grass, litter), bare ground and any changes to the abundance or diversity of native vegetation or a reduction in habitat quality at both impact and control sites.

- Undertake weed monitoring at five locations to determine whether there has been introduction of new weed species or an increase in abundance or distribution of existing species.
- Provide a report that considers the potential impact of the Prominent Hill mine on vegetation and habitat condition with reference to maintaining levels of native vegetation species abundance, richness, diversity and recruitment.

1.3. Scope

To meet above listed objectives, ELA has undertaken a survey comprising the following aspects (as contained within the PEPR and the *what will be measured* column of Table 1 habitat quality indicators including vegetation and soils (representing broader ecosystem function)

- 20 x 100 m x 100 m vegetation quadrats (Biological Survey Method (DEW 1997))
    - panoramic photographs collected to aid in identifying temporal change in vegetation cover and structure
    - identification of all species present (species diversity/ richness, inclusive of annuals)
    - cover (%) of individual species
    - species identified as recruiting.
- 20 x 100 m Jessop Transect
    - abundance counts for species present
    - counts of recruits for any recruiting species
    - counts of reproductive individuals from recruiting species identified.
- 20 x 10 m x 2 m subplot within the vegetation quadrat, for each 1 x 1 m unit of sub-plot:
    - estimate of % grass cover (ephemerals, annuals)
    - estimate of % bare ground
    - estimate of % litter cover within the plot
    - estimate of % surface crust
    - counts of recruits (all shrubs) to provide recruitment score
    - long lived perennials (over and under storey) via species abundance counts (density) for both juveniles and adults.
- observational data including vehicle tracks, erosion, vegetation clearing, dust, inappropriate access, feral animals (and weeds)

counts and identification of any declared weed infestations observed along transects at each location.

Table 1: PEPR summary table (Reference: Table 7-12 in the 2022 PEPR)

Impact event	Environmental outcome	Outcome measurement criteria details					Leading indicator criteria
		What will be measured and form (method) of measurement	Location	Outcome achievement	Frequency	Control or baseline data	
Reduced conditions favourable for plant growth due to disturbance, dust, salinity, altered surface water flow or soil erosion. Reduced species abundance due to vegetation clearing, increased grazing resulting from increased water. Significant impacts to threatened species due to vegetation clearing. Altered vegetation composition due to increase in fire ignition and/or changes in fire frequency and intensity.	Environmental offsets are approved and in place for all clearance of native vegetation	Habitat Quality Indicators including vegetation and soils (representing broader ecosystem function) 100 x 100m vegetation quadrat (Biol. Survey Method) • identification of all species present (species diversity/richness, inclusive of annuals) • cover (%) of individual species • species identified as recruiting. 10 x 2m SUB PLOT within vegetation quadrat For each 1 x 1m unit of sub-plot: • estimate of % grass cover (ephemerals, annuals) • estimate of % bare ground	See7-6 (in PEPR). Assessment will be undertaken at a series of permanent impact sites (adjacent to mining operations) and control sites (replicate sites remote from mining operations but within SEB) to enable comparison between potential mine related activities and seasonal variations. Sites selected in representative habitats for key fauna species, including EPBC and NPW listed species, and to be representative of the broad	Approved Native Vegetation Management Plan and SEB Offset in place.	Annually	REP021 Prominent Hill Analysis of Flora and Fauna Monitoring Data 2007 to Spring 2012. Other Flora survey reports, conducted at the site biannually between 2007 and 2016. Comparable data up until methodology changes in 2015.	Reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. Suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. An increase in bare ground and/ or scald/ erosion % cover at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. If leading indicator triggered, further assessment of detected impacts vs pre-mine condition by comparison with sites outside of SEB area required to determine non-compliance with lease condition. Annual review of vegetation clearance confirms all clearance has been approved

Impact event	Environmental outcome	Outcome measurement criteria details				Leading indicator criteria
		What will be measured and form (method) of measurement	Location	Outcome achievement	Frequency	Control or baseline data
		• estimate of % litter cover within the plot • estimate of % surface crust • counts of recruits (all shrubs) to provide recruitment score • long lived perennials (over and under storey) via species abundance counts (density) for both juveniles and adults. Panoramic photographs collected to aid in assessment of vegetation cover for recruitment. Observational data to be collected at all sites including (but not limited to) vehicle tracks, erosion, vegetation clearing, distance to mine site, light, dust,	vegetation community types present within the ML, MPL and SEB areas. Impact sites (PH01, PH02, PH03a, PH10, PH12, PH 13a, PH 15, PH19, PH22, PH23) and control sites (PH06, PH07, PH11, PH16, PH17, PH18, PH20, PH24, PH25, PH27).			

Impact event	Environmental outcome	Outcome measurement criteria details					Leading indicator criteria
		What will be measured and form (method) of measurement	Location	Outcome achievement	Frequency	Control or baseline data	
		inappropriate access, feral animals and weeds. GIS output of approved clearance boundary and actual clearance boundary.					
Reduced species abundance due to vegetation clearing, increased grazing from increased surface water, traffic, noise and vibration and downstream effects. Significant impacts to threatened species due to vegetation clearing and predation	No loss of abundance or diversity of native vegetation, or reduction in habitat quality, on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities unless prior approval under relevant legislation is obtained and environmental offsets are approved and in place.	As above	As above	As above	As above	As above	Indicators of habitat degradation, including: Reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. Suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. An increase in bare ground and/or scald/erosion % cover at impact sites without a corresponding increase at control sites over three consecutive monitoring periods. If leading indicator triggered, implement targeted threatened

Impact event	Environmental outcome	Outcome measurement criteria details					Leading indicator criteria
		What will be measured and form (method) of measurement	Location	Outcome achievement	Frequency	Control or baseline data	
							bird surveys to confirm ongoing presence of Thick-billed Grasswren and Chestnut-breasted Whiteface within impacted sites.
Increased weed density and distribution as a result of Prominent Hill operations Introduction of new weed species as a result of Prominent Hill operations	No introduction of new species of weeds, plant pathogens or pests (including feral animals), nor sustained increase in abundance of existing weed or pest species in the licence area compared to adjoining land as a result of mining operations.	Records of counts and identification of any declared weed infestations observed along transects at each location. Records of weed control actions implemented (where relevant). Records of feral animal observations, trapping and capture rates.	Five weed monitoring locations as identified in Figure 1. Various locations including landfill, camp and as per opportunistic sightings	Weed infestations are recorded, treated and monitored for ongoing management requirements.	Annually	PH-ENV-REP-0500 Stage Two Significant Environmental Benefit Offset Area Management Plan REP021 Prominent Hill Analysis of Flora and Fauna Monitoring Data 2007 to Spring 2012.	Annual review of the weed survey and management register (results of field monitoring and visual observations) considering trends that could indicate population increase or new weed species.
				Pest animal sightings are recorded and will result in the initiation of a trapping/baiting program and subsequent monitoring.	As required		Quarterly review of cat sightings and trapping register considering trends that could indicate population increase and requirement for increase in trapping program

* Historical information can be found in Jacobs (2017) - 2017 Review of Prominent Hill Ecological Monitoring. All annual ecological monitoring reports. Other Flora and Fauna survey reports, conducted at the site biannually between 2007 and 2016. All annual ecological monitoring reports.

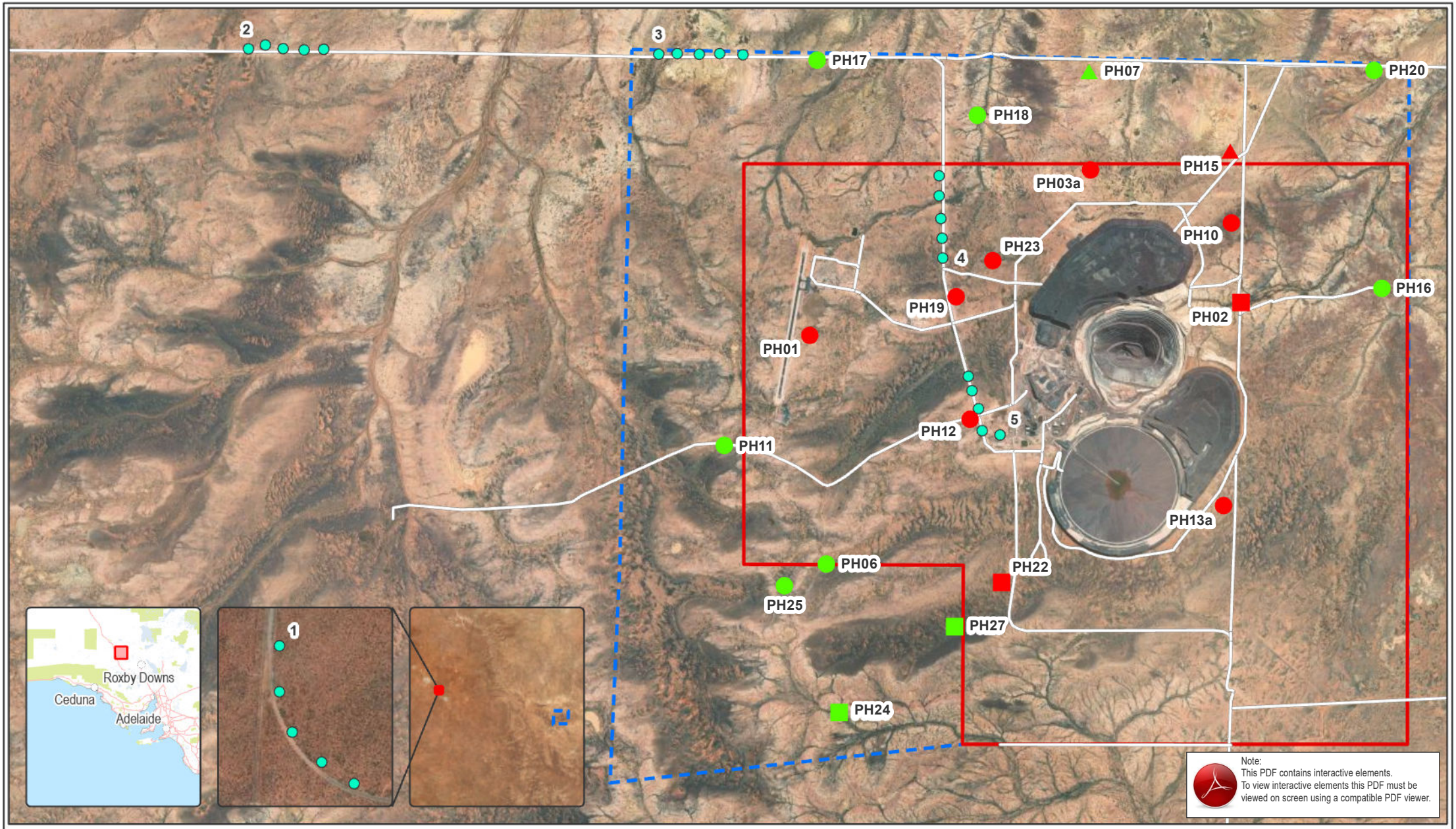

Figure 1: Prominent Hill 2025 Floristic Monitoring

- Prominent Hill mining lease area
- Significant Environmental Benefit (SEB) Offset Area
- Vegetation monitoring sites - Floristic quadrat
- Subplot
- 4m Jessup buffer
- NW corner / panorama photo point
- 100m transect
- Weed monitoring sites
- Mine access road

Impact sites

- Acacia Woodland Impact
- Chenopod Shrubland Impact
- Mallee Woodland Impact

Control sites

- Acacia Woodland Control
- Chenopod Shrubland Control
- Mallee Woodland Control

0 1 2
Kilometres

Datum/Projection:
GDA 1994 MGA Zone 53
24ADL7673-OK Date: 6/12/2025

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2. Methodology

2.1. Survey team

The 2025 ecological monitoring was undertaken between 28 April – 1 May 2025. The surveys were carried out by ELA Senior Ecologist, Emrys Leitch and Ecologist, Lauren Heddle.

2.2. Monitoring site selection

2.2.1. Floristic monitoring quadrats

A total of 20 permanent floristic monitoring quadrats were surveyed comprising, ten control and ten impact sites (Table 2 and Figure 1). The permanent floristic monitoring quadrats (control/ impact sites) have been selected to reflect a representative sample of three broad vegetation types that are present within the ML area. These include acacia woodland, chenopod shrubland and mallee woodland. The sites are defined within the PEPR, and the selected quadrats meet the measurement criteria conditions as defined in Table 1 The floristic monitoring quadrats and representative vegetation community are detailed in Table 2, below.

Table 2: Vegetation monitoring sites by vegetation type and treatment (impact/ control)

Vegetation type	Impact or Control	Floristic monitoring quadrats
chenopod shrubland	Control	PH06, PH11, PH16, PH17, PH18, PH20, PH25
chenopod shrubland	Impact	PH01, PH03, PH10, PH12, PH13, PH19, PH23
acacia woodland	Control	PH24, PH27
acacia woodland	Impact	PH02, PH22
mallee woodland	Control	PH07
mallee woodland	Impact	PH15

Each of the 20 monitoring sites consists of a permanent 1 ha (100 m x 100 m) vegetation quadrat, a randomly positioned subplot (10 m x 2 m) located in the northwest corner and a 100 m Jessup transect (Table 3). The Jessup transect includes an investigational buffer area of 4 m x 100 m (Figure 2). The Jessup transect runs from the western to eastern quadrat boundary (Figure 2). Quadrat and subplot corners as well as Jessup transect start and end points are marked with a permanent metal star picket. The location coordinates (latitude and longitude) were recorded for each corner point as were the start and end of the Jessup transect. A panoramic photograph was taken from the north-west corner (Figure 2).

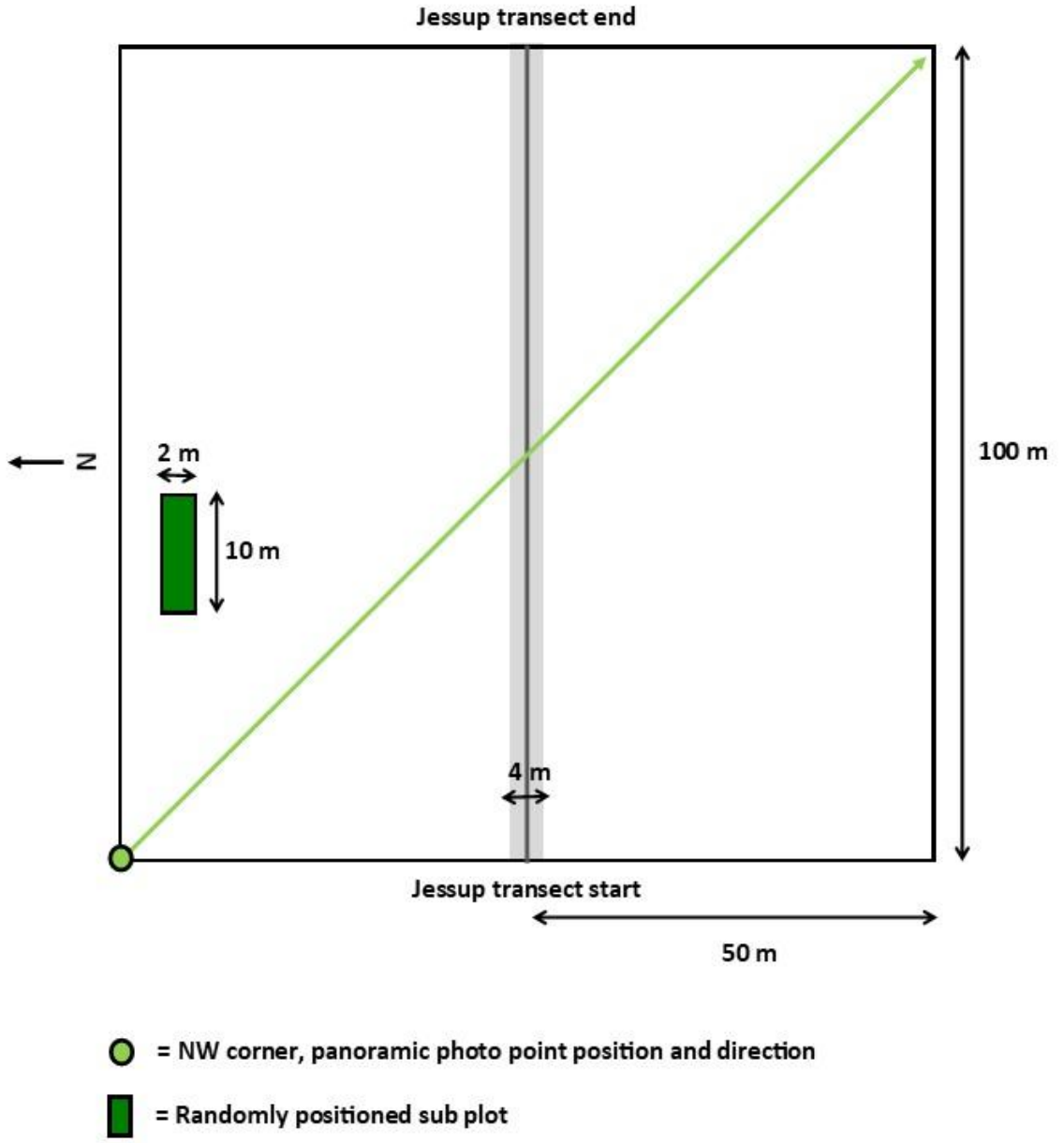

Figure 2: Monitoring quadrat diagram

2.2.2. Monitoring methods

Within each quadrat, a meandering survey was undertaken across the entire 1 ha area to document species richness and abundance (% cover). Data is also recorded for recruitment and life form present (budding, flowering, immature fruit, mature fruit, vegetative or dead).

A Jessup transect with investigational buffer (belt transect) (4 m x 100 m) is in the centre of the quadrat in accordance with the survey methodology outlined in the *Pastoral Lease Assessment – Technical Training Manual 2011* (DENR 2011). The Jessup transect is used to capture information about the amount of recruitment for perennial species, to get a ratio of adult to juvenile plants and measure plant density. The total number of adult and juvenile individuals for each perennial species within each of the Jessup plots (20 plots of 10 m x 2 m) was recorded.

Randomly positioned subplots (2 m x 10 m) were used to estimate the percent of grass cover, bare ground, litter cover, surface crust, scalded surface or erosion and number of perennial recruits.

Table 3: Floristic data recorded annually

Measurement	Method
100 m x 100 m quadrat	Identification of species present % cover of individual species Record of species recruiting Record of life forms present for each species
4 m x 100 m Jessup transect	Counts of adult and juvenile long-lived perennials (woody shrubs) Recruitment index score
10 m x 2m sub plot	Estimate of % grass cover Estimate of % bare ground Estimate of % litter cover Estimate of % surface crust Estimate of % scalded surface or erosion Counts of perennial recruits

Species diversity

The mean number of flora species (i.e. species richness) was determined for each condition and vegetation type combination (i.e. control and impact conditions in acacia woodland, chenopod shrubland and mallee woodland), and statistical analysis was conducted to determine differences between control and impact sites for each vegetation type. A similar comparison was also made between control and impact sites for perennial species richness in each vegetation type. These analyses address the LIC outlined in the PEPR (Table 1), specifically regarding whether there was any indication of "*reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites"*. Species richness was used as a diversity metric for these comparisons to help confirm "*no loss of abundance or diversity of native vegetation, or reduction in habitat quality on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities"*.

Vegetation cover

Vegetation cover (% cover) was determined for each condition and vegetation type combination and statistical analysis was undertaken to determine differences between control and impact sites for each vegetation type. A similar comparison was also made between control and impact sites for perennial cover in each vegetation type. These analyses address LIC outlined in the PEPR (Table 1), specifically regarding whether there was any indication of "*reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites"*. This was used to assess whether BHP are trending towards achievement of the environmental outcome "*no loss of abundance or diversity of native vegetation, or reduction in habitat quality on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities"*.

Perennial density

Perennial density (stems/ m^2) was recorded for both mature and juvenile perennials using a Jessup belt transect (Figure 2) for each condition and vegetation type combination. Statistical analyses were performed to determine differences between control and impact sites for each vegetation type. These analyses were undertaken to address two of the LIC. The first of these aims to detect "*reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites"*. The second aims to detect "*suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods"*. These leading indicator criteria are designed to support achievement of the environmental outcome of "*no loss of abundance or diversity of native vegetation, or reduction in habitat*

quality on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities" through early indication of potential mining impacts that can be addressed or assessed further (Table 1).

Native recruitment

Native recruitment (proportion of species present with recruits) was determined for each condition and vegetation type combination and statistical analysis was undertaken to determine differences between control and impact sites for each vegetation type. These analyses address the LIC outlined in the PEPR (Table 1), specifically regarding whether there was any indication of "*suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods"*. This was used to assess whether or not BHP is trending to achieve the environmental outcome of "*no loss of abundance or diversity of native vegetation, or reduction in habitat quality on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities"*.

Subplot monitoring

The ground cover metrics measured in the subplots include grass cover (%), bare ground (%), litter cover (%), soil crust (%) and scalded surface/ erosion (%). Maintaining ground cover is paramount in the South Australian Arid Lands (SAAL) as it helps to protect soils from erosion as well as providing protection for seed germination (DPI 2006). Each ground cover type was averaged for subplots in each condition and vegetation type combination and statistical analysis was undertaken to determine differences between control and impact sites for ground cover. A similar comparison was also made between control and impacts sites for perennial recruit numbers in the subplots for each condition and vegetation type combination. Analyses of ground cover were undertaken to address a specific LIC in the PEPR (Table 1) regarding whether there is any indication of "*an increase in bare ground and/or scald erosion % cover at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods"*. Additionally, analyses were performed for perennial recruitment numbers in the subplots to address two leading indicator criteria. The first of these is regarding whether there is any "*reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites"*. The second is regarding whether there is any "*suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods"*. These LIC are used to assess whether BHP is trending towards achievement of the environmental outcome "*no loss of abundance or diversity of native vegetation, or reduction in habitat quality on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities"*.

2.2.3. Weed monitoring transects

In addition to the 20 floristic monitoring quadrats, five permanent weed monitoring transects were also surveyed during the 2025 survey period. The permanent weed monitoring transects were established in 2017 and are monitored as a requirement of the OMC detailed within the PEPR (Table 1).

The five weed monitoring transects are located alongside the mine access road towards the Stuart Highway and the Haul Road to the Wirrida Rail Siding, located approximately 198 km (northwest) from the mine, (Figure 1). These sites were identified to represent key environmental vectors and high frequency transport routes and allow early detection of new and emerging exotic species within the ML and surrounds (Figure 1).

Each of the five weed monitoring sites comprise five consecutive 100 m x 50 m transects, spaced 250 m apart, arranged in a linearly (along the roadside). Each weed transect is traversed on foot and weed species and abundance recorded.

2.3. Weather data

The Stony Plains bioregion experiences an arid climate with extreme temperatures and has a spatially averaged annual rainfall (1890-2005) of 118mm (Commonwealth of Australia 2008).

ELA used rainfall data provided by BHP, from the Prominent Hill weather station, to review local rainfall patterns and establish a long-term (17.5-year) rainfall average (2009-2025) across all seasons at Prominent Hill. In the year leading up to the 2025 monitoring period, April 2024 to April 2025, Prominent Hill received 94.2 mm of rainfall. This was lower than other annual averages (Jan – Dec) since surveys began as well as the 12 months prior to all previous surveys with the exception of 2019 (33.8 mm). (Table 4).

Table 4: Historical rainfall data (Prominent Hill weather station data for November 2009 to May 2025)

Monthly rainfall (mm)													
Year	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Annual
2009	12.4											30.6	-
2010	9.2	4.6	0.4	10	42.8	26.4	0	2.8	27.2	24.8	22.2	29.8	200.2
2011	23.2	15.6	64.6	62.0	0.0	20.2	0.8	13.0	1.4	0.6	20.4	8.0	229.8
2012	18.8	4.0	3.4	49.0	5.8	0.0	2.8	0.4	0.0	0.0	0.6	5.0	89.8
2013	2.8	0.0	4.8	15.0	2.6	36.0	36.6	4.8	0.0	0.6	2.0	1.0	106.2
2014	2.6	1.2	14.2	1.6	75.2	8.0	0.8	1.0	8.6	1.6	0.8	5.2	120.8
2015	24.8	43.4	0.0	0.8	1.6	37.4	8.0	0.6	1.8	0.2	0.2	2.2	121
2016	42.2	5.4	5.0	41.6	0.2	22.2	20.8	5.6	25.4	23.2	1.4	1.6	194.6
2017	12.6	84.2	2.0	0.0	24.6	4.6	9.0	0.0	0.6	0.2	8.0	41.0	186.8
2018	0.8	23.6	3.6	0.0	0.0	7.0	1.8	0.0	1.8	0.0	6.0	10.0	54.6
2019	0.0	6.8	0.0	0.4	5.6	0.4	2.4	0.0	0.0	2.6	0.6	2.6	21.4
2020	13.4	51.2	106.2	2.8	8.2	0.2	0.4	0.0	24.4	49.0	41.0	0.4	297.2
2021	6.4	8.4	20.0	31.8	0.0	6.4	7.6	7.0	0.0	0.0	4.4	61.8	153.8
2022	0.8	56.4	4.2	0.2	36.8	17.6	2.4	1.2	4.8	1.0	107.4	8.8	241.6
2023	60	47.4	2.8	2.0	31.2	0	42.6	0	1.6	0	0.4	12.2	200.2
2024	9.6	16	0	5.8	0	2.8	9.2	22.4	8.4	4	2.4	31.4	112.0
2025	-	0	0.2	16.2	0	0	4.2	-	-	-	-	-	20.6
Monthly mean	14.9	23.0	14.5	14.9	14.7	11.8	9.3	3.9	7.1	7.2	14.5	15.7	
Seasonal mean	Summer			Autumn			Winter			Spring			
	17.5			13.8			6.8			12.5			

The aligned rainfall average recorded in the year leading up to the survey (May 2024 to April 2025) meant that conditions were less favourable for plant establishment, growth and recruitment than the 2024 survey. Following higher-than-average rainfall recorded in both 2022 (241.6 mm) and (200.2 mm) 2023, and significantly less rainfall the following year in 2024 (112 mm). Results therefore may show less new perennial recruits, perennial cover and decreased species diversity within the monitoring sites.

3. Results

Results are presented as the mean ± standard error (SE), where applicable. Please note that mallee woodland only has one impact and one control site, therefore no SE is presented. Jessup transects were re-instated in 2020, so there are four years of baseline metrics to compare to with the Jessup belt transect data.

In the results below, metric data has been presented for analysis to include both perennial/ annual species as well as just perennial species.

As part of these results, statistical analyses have been conducted to determine whether control and impact sites have significant differences in vegetation condition. For these statistical analyses a p-value of 0.05 has been selected as a threshold for accepting or rejecting the null hypothesis. The null hypothesis is that there is no statistically significant difference between two sets of data. If the p-value is greater than 0.05 we cannot reasonably reject the null hypothesis. Therefore, results with a p-value greater than 0.05 have data variability attributed to random effects. Random effects are effects that influence a result to varying degrees in an unpredictable manner causing inevitable variability in results for biological data.

3.1. Vegetation quadrat monitoring

3.1.1. Species diversity

Summary

In 2025, 161 species (160 native/ 1 exotic) were observed which is the highest species richness since the monitoring program began in 2017 (Table 5). Noting that 153 species were recorded in 2024. The total number of species declined from 2017 to 2019 with 116 species in 2017, 93 in 2018 and 75 in 2019 (ELA 2017; ELA 2018; GHD 2019; ELA 2021), following years of low rainfall. Species richness increased for 2020 to 2025 in comparison to the 2017 to 2019 period, largely due to increased representation of annual species following the high rainfall received during these years, with 49 annual species recorded in 2021 (ELA 2021), 30 recorded in 2022, 39 in 2023, 39 in 2024 and 34 in 2025; this is an increase from zero annual species in 2018 and 2019 (ELA 2018; GHD 2019). All 20 monitoring sites had records in 2025 of at least one species not previously identified (Table 5), these species have all been observed previously within the ML area however not within monitoring sites.

Table 5: New flora species records for each site

Floristic monitoring quadrat	Number of new species to site	Species names
PH01	2	*Eremophila glabra* *Sclerolaena cuneata*
PH02	3	*Centipeda thespidioides* *Frankenia serpyllifolia* *Roepera aurantiaca ssp. aurantiaca*
PH03	2	*Atriplex fissivalvis* *Cullen australis*
PH06	9	*Alterantha sp.* *Atriplex fissivalvis* *Centipeda thespidioides* *Cullen sp.*

Floristic monitoring quadrat	Number of new species to site	Species names
		Einadia nutans ssp. *Maireana integra* *Sclerolaena cuneata* *Tribulus terrestorus* *Tripogonella loliiformis*
PH07	4	*Enteropogon acicularis* *Santalum acuminatum* *Sclerolaena divaricate* *Solanum petrophilum*
PH10	9	*Brachyscome ciliaris* *Euphorbia drummondii* *Gnephosis arachnoidea* *Leiocarpa sp.* *Malvastrum americanum* *Scleroleana cuneata* *Scleroleana divarcata* *Scleroleana ericantha* *Tripogonella loliiformis*
PH11	2	*Einadia nutans ssp.* *Leiocarpa sp.*
PH12	5	*Atriplex fissivalvis* *Gnephosis zygophylloides* *Leiocarpa websteri* *Sclerolaena cuneata* *Senna artemisioides ssp. X artemisioides*
PH13	8	*Alternanthera sp.* *Crassula sp.* *Daucus glochidiatus* *Gnephosis zygophylloides* *Maireana integra* *Sclerolaena cuneata* *Senna artemisiodes X cori* *Sida petrophila*
PH15	4	*Arabidella trisecta* *Euphorbia tannensis ssp. eremophila* *Ptilotus nobilis ssp.* *Tripogonella loliiformis*
PH16	8	*Boerhavia sp.* *Erodium sp.* *Leiocarpa sp.* *Maireana astrotricha* *Senna artemisioides ssp. filifolia* *Sida corrugata* *Swainsona phacoides* *Vittadinia sp.*
PH17	1	*Einadia nutans ssp.*
PH18	3	*Acacia aneura complex* *Enteropogon acicularis* *Gnephosis zygophilodes*

Floristic monitoring quadrat	Number of new species to site	Species names
PH19	4	*Lysiana exocarpi ssp. exocarpi* *Maireana integra* *Santalum lanceolatum* *Sclerolaena cuneata*
PH20	6	*Eriachne sp.* *Frankenia serpyllifolia* *Leiocarpa websteri* *Maireana spongiocarpa* *Oxalis perennans* *Sida sp.*
PH22	5	*Enteropogon acicularis* *Gnephosis zygophilodes* *Maireana integra* *Maireana spongiocarpa* *Tripogonella loliiformis*
PH23	7	*Atriplex fissivalvis* *Euphorbia tannensis ssp. eremophila* *Oxalis perennans* *Santalum lanceolatum* *Sclerolaena cuneata* *Sclerolaena eriacantha* *Senecio lanibracteus*
PH24	4	*Gunniopsis zygophylloides* *Maireana spongiocarpa* *Neurachne munroi* *Tripogonella loliiformis*
PH25	8	*Alterantha sp.* *Crassula sp.* *Calotis hispidula* *Centipeda thespidioides* *Portulaca oleracea* *Sclerolaena cuneata* *Senna phylloidinea* *Setaria constricta*
PH27	6	*Amyema preissii* *Calotis hispidula* *Daucus glochidiatus* *Leiocarpa websteri* *Maireana georgei* *Senna phyllodinea*

Comparison between sites for all species diversity

When observing patterns in total species richness between impact and control sites, the 2025 data indicate lower species richness at the impact sites compared to control sites for chenopod shrubland (-3.92 %) and acacia woodland (-4.55 %). However, for mallee woodland, the impact site had higher species richness than the control site in 2025 (+29.3%). Despite this, statistical analysis did not indicate significant difference in total species richness between control and impact sites for any vegetation type in 2025($p = 0.79$).

Comparison between years

The average total species diversity in 2025 decreased for all vegetation-condition type combinations except mallee woodland impact sites compared to the 2024 monitoring data (Figure 3). The largest decrease was observed in the acacia woodland and chenopod shrubland control sites with a decrease of 5 species per site on average. However, the control and impact site in mallee woodland did not differ from 2024. Both impact sites for chenopod shrubland and acacia woodland decreased by 1 to 2 species per site on average from 2024 to 2025.

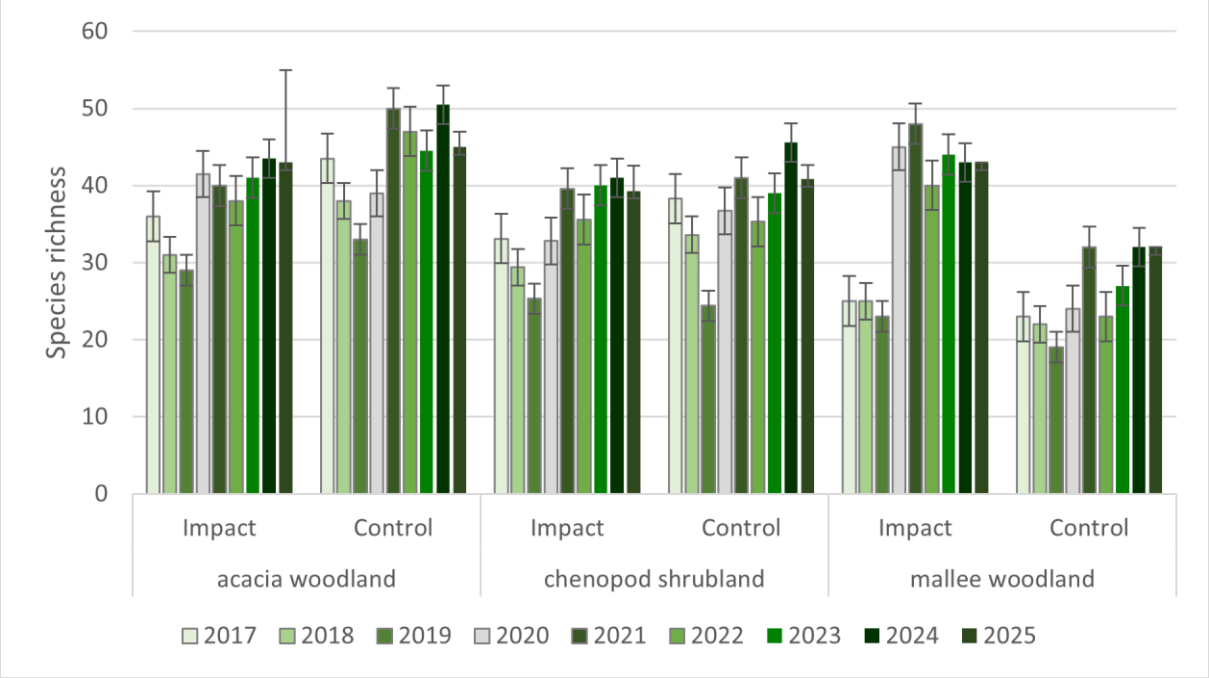

Figure 3: Total mean species richness (± SE) across the 2017-2025 monitoring period

Comparison between years for perennial species diversity

Perennial species diversity declined from 2024 to 2025 (Figure 4). While perennial species in mallee woodland and acacia woodland control sites increased across the same period.

Comparison between sites for perennial species diversity

On average, there was lower perennial species diversity at the impact sites compared to control sites for the chenopod shrubland (control = 30.85 species, impact = 30.29 species) in 2025. For acacia woodland perennial species diversity did not differ between control and impact sites (34.5 species). mallee woodland perennial species diversity was higher at impact sites compared to control sites (control = 29 species, impact = 35 species). However, statistical analysis did not indicate a significant difference in perennial species diversity for any vegetation type in 2025 (p=0.87).

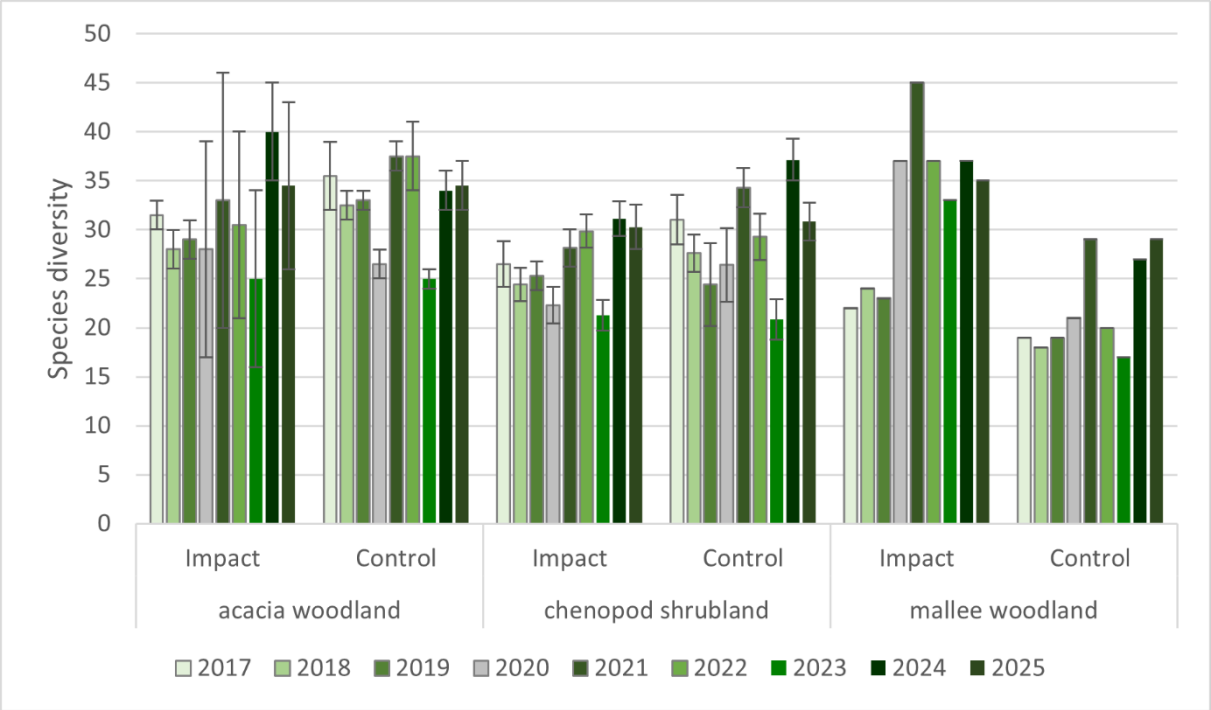

Figure 4: Mean perennial species diversity (± SE) across the 2017-2025 monitoring period

3.1.2. Vegetation cover

Site comparison for all species cover

Patterns in total species cover between quadrats in control versus impact sites, the 2025 data show higher average cover for control sites than impacts sites in acacia woodland (+29.9 %) and chenopod shrubland (+24 %). However, the mallee woodland control site had lower cover than the impact site (-38.6%). Despite this, statistical analysis indicated no significant difference in total species cover between control and impact sites for any vegetation type in 2025(p=137).

Comparison between years

The average total vegetation cover for quadrats in 2025 decreased for both control and impacts sites in chenopod shrubland when compared to the 2024 monitoring data. However, both control and impact sites for mallee woodland increased for 2025. In acacia woodland, the impact site increased, and control site decreased when compared with 2024 (Figure 5).

Comparison between sites for perennial species cover in quadrats

The 2025 data for perennial species cover, shows higher average cover in control sites for acacia woodland (+27.2%) and chenopod shrubland (+21.3%). However, perennial species cover was lower in control sites than impact sites for mallee woodland (-37.1%). Despite this, statistical analysis indicated no significant difference in perennial species cover between control and impact sites for any vegetation type in 2025 (p=0.152).

Comparison between years for perennial species cover in quadrats

Average total vegetation cover for perennials in 2025 decreased in both control and impact sites in chenopod shrubland when compared to the 2024 data. However, both control and impact sites for mallee woodland increased for 2025 (4% increase for control site and 2% increase for impact site). In acacia woodland, the impact site increased, and control site decreased when compared to 2024 (Figure 6).

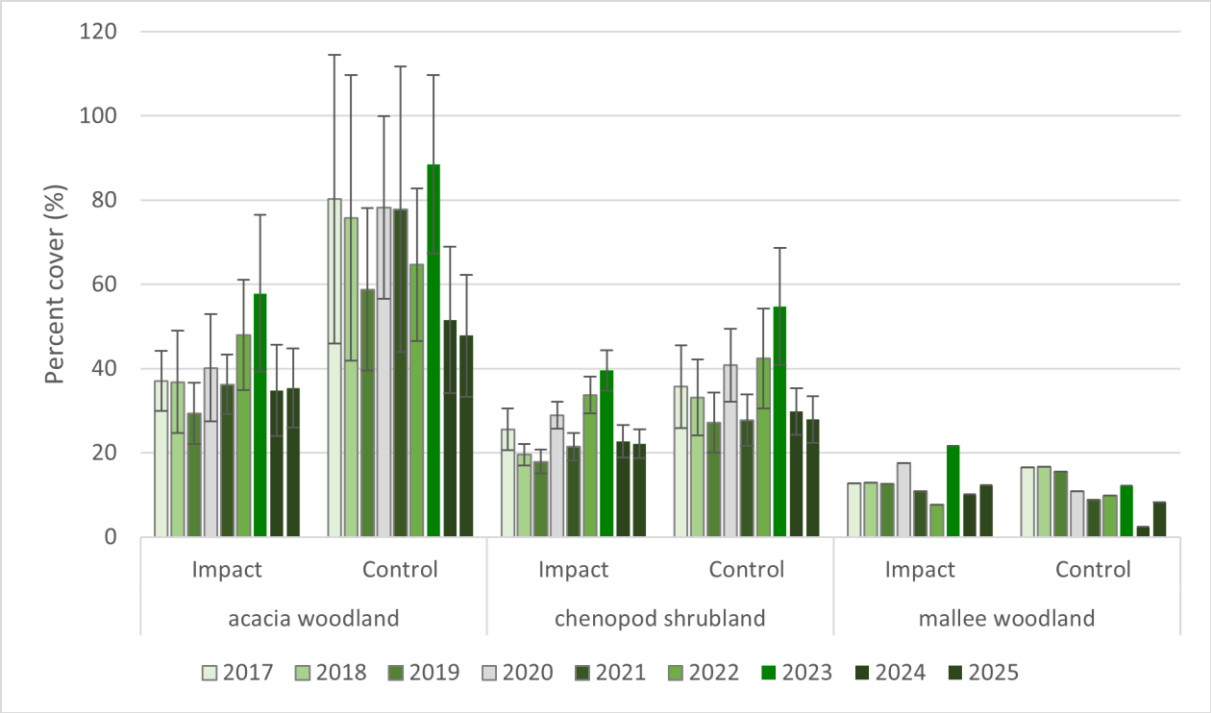

Figure 5: Mean total (annual and perennial species) percent vegetation cover (± SE) across the 2017-2025 monitoring period

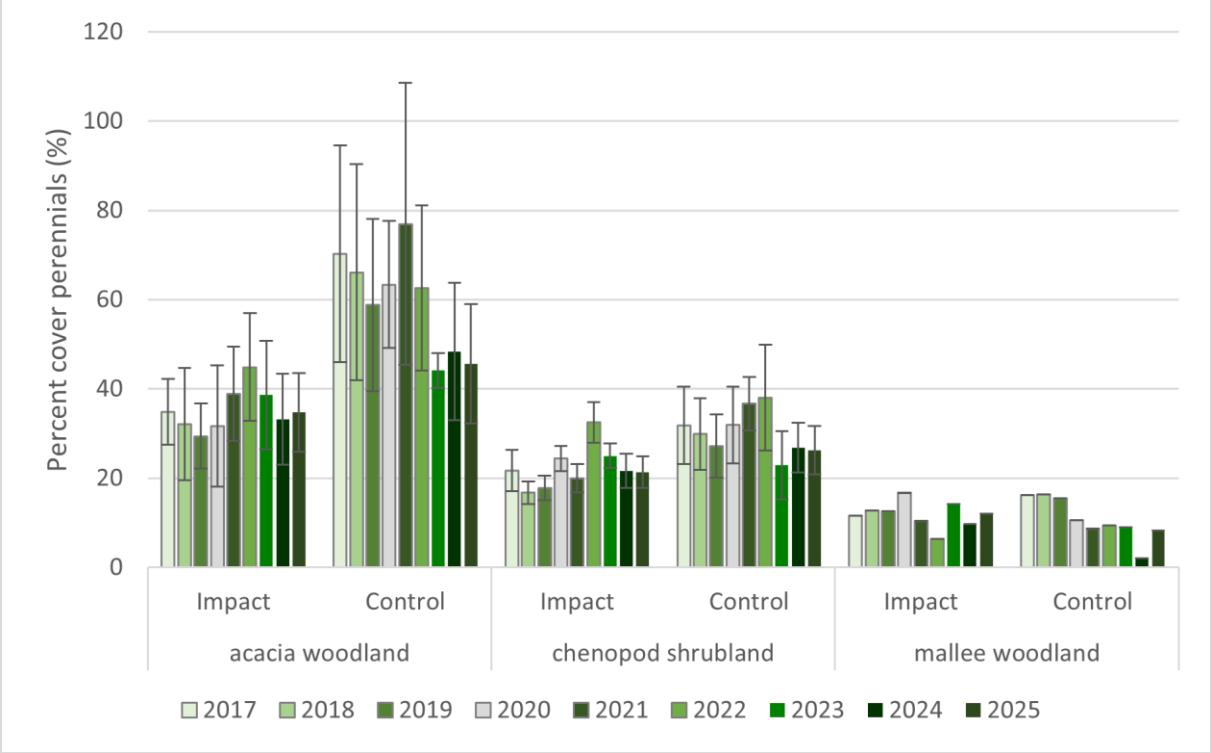

Figure 6: Mean perennial percent vegetation cover (± SE) across the 2017-2025 monitoring period

3.1.3. Perennial density

Comparison between sites for all species cover in quadrats

When observing patterns in perennial density between Jessup transects in control versus impact sites, the 2025 data show lower average total perennial density for control sites than impact sites in acacia

woodland (-50.9 %) and chenopod shrubland (-47.5 %). However, the mallee woodland control site had higher perennial density than the impact site (+159.5 %).

For mature perennials, the 2025 data showed higher mature perennial density for impact sites than control sites in acacia woodland (+62.4 %) and chenopod shrubland (+45.3 %). However, the mallee woodland impact site had lower mature perennial density than the control site (-167.1 %).

For juvenile perennials, the 2025 data showed higher juvenile perennial density for control sites than impact sites in chenopod shrubland (+62.1 %). For acacia woodland the control sites contained slightly higher juvenile perennial density of only +2.25 %. The perennial density for mallee woodland did not differ between impact and control sites (0.005 stems/ m^2), or from 2024 to 2025.

Despite notable differences between control and impact sites, a statistical analysis did not indicate significant difference in total perennial density (p=0.673), mature perennial density (p=0.683) or juvenile perennial density (p=0.636) for any vegetation type in 2025.

Comparison between years

On average total perennial density decreased from 2024 to 2025 for impact sites except in mallee woodland. Total perennials increased in all control sites of acacia woodland and chenopod shrubland. On average, mature perennial density decreased from 2024 to 2025 for sites except for impact sites in mallee woodland. On average, juvenile perennial density decreased from 2024 to 2025 for impact sites in acacia woodland and chenopod shrubland except for in mallee woodland (Figure 7).

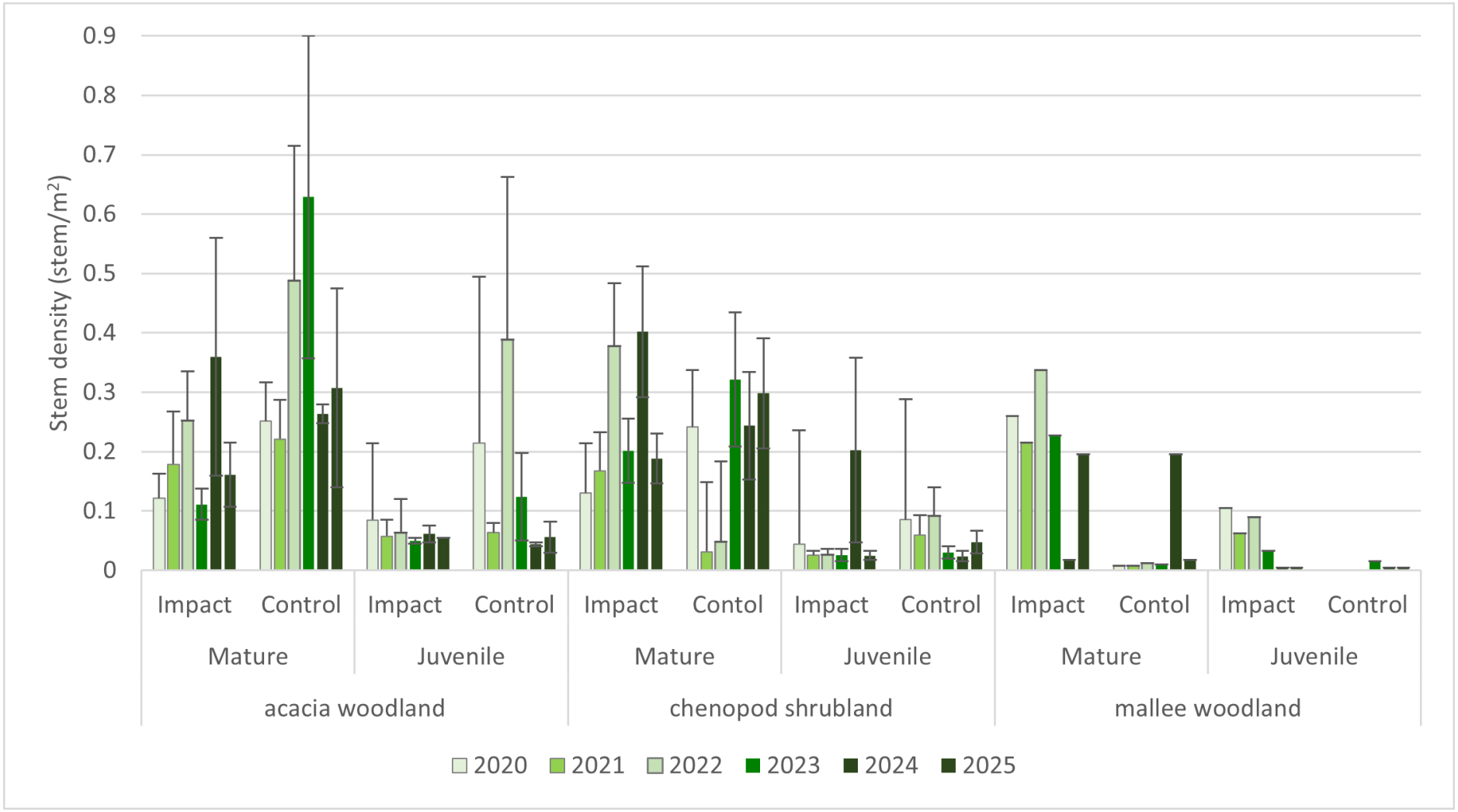

Figure 7: Mean density (± SE) of adult and juvenile plants based on Jessup transect across the 2020-2024 monitoring period

3.1.4. Native recruitment

Comparison of native recruitment

When observing patterns in native recruitment between quadrats in control versus impact sites, the 2025 data shows lower average native recruitment for control sites than impact sites in acacia woodland (-34.3 %), and mallee woodland (-46.4 %) (Figure 8). For chenopod shrubland, native recruitment was higher in control sites (+2.5 %). Although statistical analysis did not indicate a significant difference between control and impact sites for any vegetation type in 2025 (p=0.399).

Comparison between years

The average native recruitment for quadrats decreased for control and impact sites for all vegetation types, except for the chenopod shrubland control between 2024 and 2025.

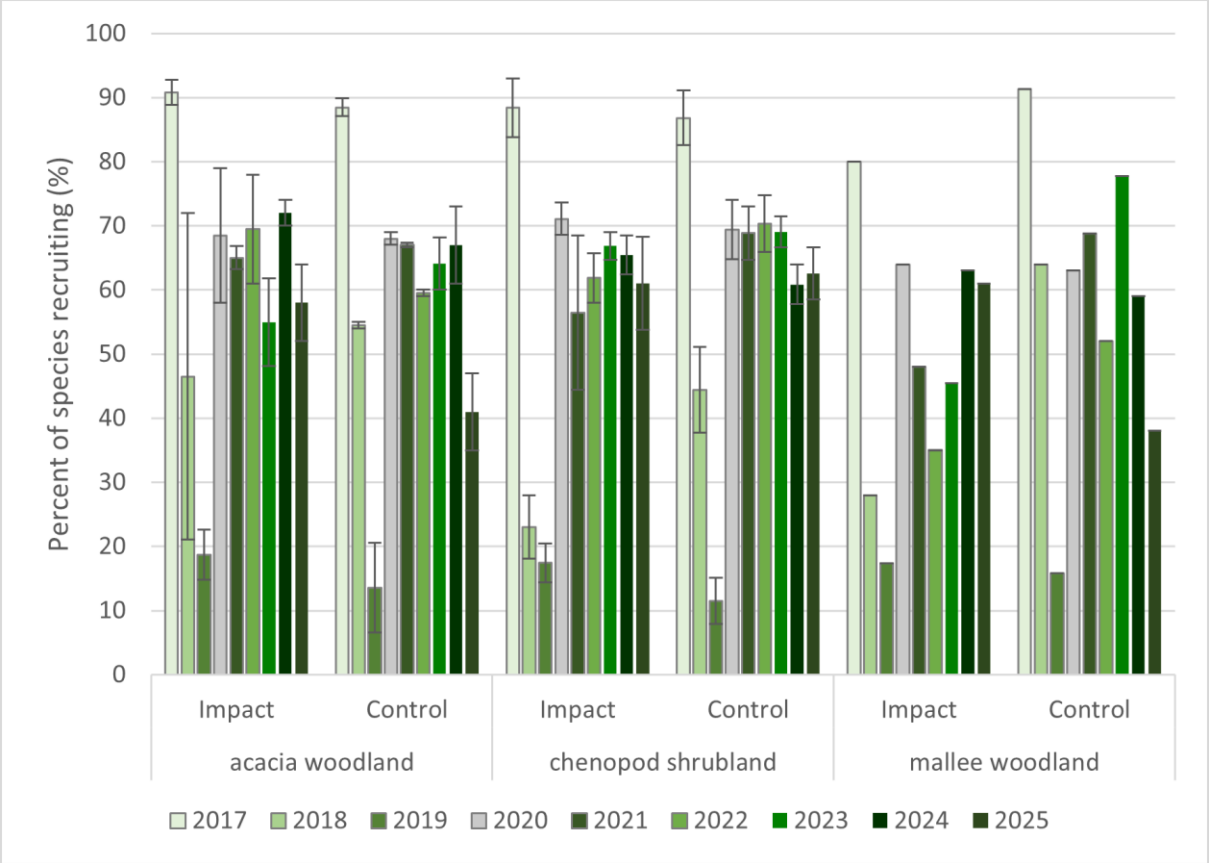

Figure 8: Mean percentage (± SE) of species recruiting across the 2017-2025 monitoring period

3.1.5. Subplot monitoring (% cover estimates and perennial recruitment)

Comparison between ground cover and perennial recruitment

When comparing ground cover in acacia woodland subplots for control versus impact sites, the 2025 data show higher average grass cover and increased soil crust in control sites compared to impact sites, which is consistent with 2024. Bare ground and litter cover on average are lower in control sites than impact sites for acacia woodland no scalded surface was recorded at any sites.

When comparing ground cover in chenopod shrubland subplots for control versus impact sites, the 2025 data show higher average grass cover, litter cover and scalded surface in control sites than impact sites.

Bare ground was on average lower in control sites compared to impact sites for chenopod shrubland and no soil crust was recorded, with data consistent with 2024.

When comparing ground cover in mallee woodland subplots for control and impact sites, the 2025 data show higher average bare ground, scalded surface and litter cover in control sites than impact. Grass cover was lower in control site than impact. Soil crust was undetected at mallee woodland sites, consistent with 2024.

Despite variations in ground cover between control and impact sites for each vegetation type, statistical analysis indicated no significant difference in grass cover (p=0.717), litter cover (p=0.861), soil crust (p=0.968) or scalded surface/ erosion (p=0.391) for any vegetation type in 2025. However, there was a significant difference in the percentage of bare ground cover for acacia woodland in 2025, with impact sites being higher (p=0.044).

When comparing number of perennial recruits between subplots in control versus impact sites, the 2025 data show higher average perennial recruitment for impact sites compared to control sites for acacia woodland (+70.9 %). For chenopod shrubland the average perennial recruitment was the same for both control and impact sites (0.4285). No perennial recruits were present in the control site for mallee woodland, while two perennial recruits were present in the impact site, consistent with 2024. Despite this, statistical analysis indicated no significant difference in perennial recruitment numbers between control and impact sites for any vegetation type in 2024 (p=0.381).

Comparison between years

Between 2024 and 2025 in acacia woodland there was a decrease in grass cover and bare ground for impact and control sites as well as litter for impact sites. There has been an increase in grass cover, litter and soil crust at control sites (Figure 9).

Between 2024 and 2025 for the chenopod shrubland there has been a decrease in grass cover for impact and control sites, and an increase in litter cover for impact and control sites (Figure 10). For bare ground and soil crust decreased at impact sites and increased for control sites. Scalded surface increased at impact sites and decreased for control sites.

There was no difference between 2024 and 2025, for mallee woodland sites or vegetation types (Figure 11).

Between 2024 and 2025 there was a decrease in the average perennial recruits for both control and impact sites in all vegetation types except for the mallee woodland impact site (Figure 12).

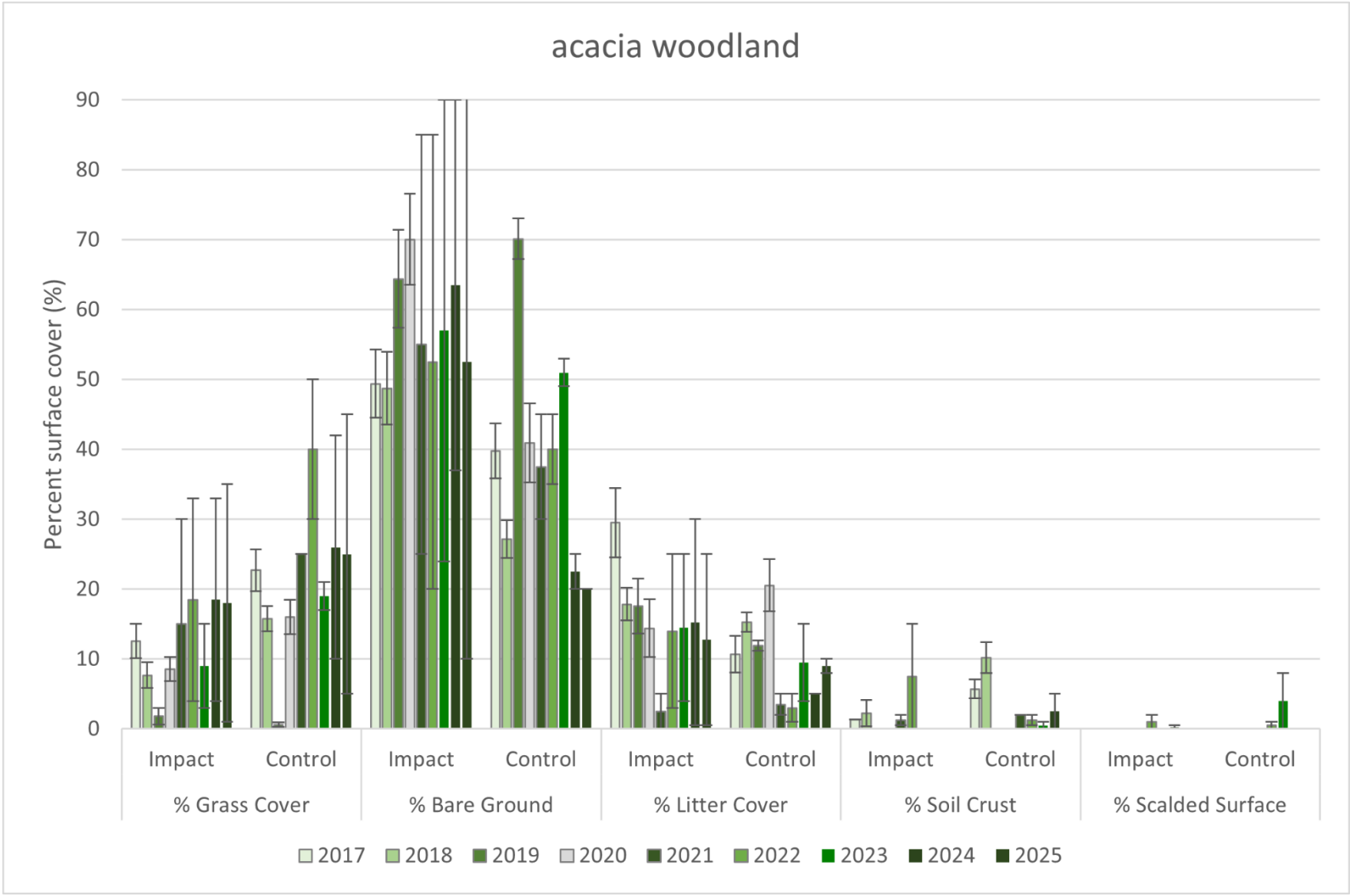

Figure 9: Mean percentage surface cover (%; ± SE) for acacia woodland across the 2017-2025 monitoring period

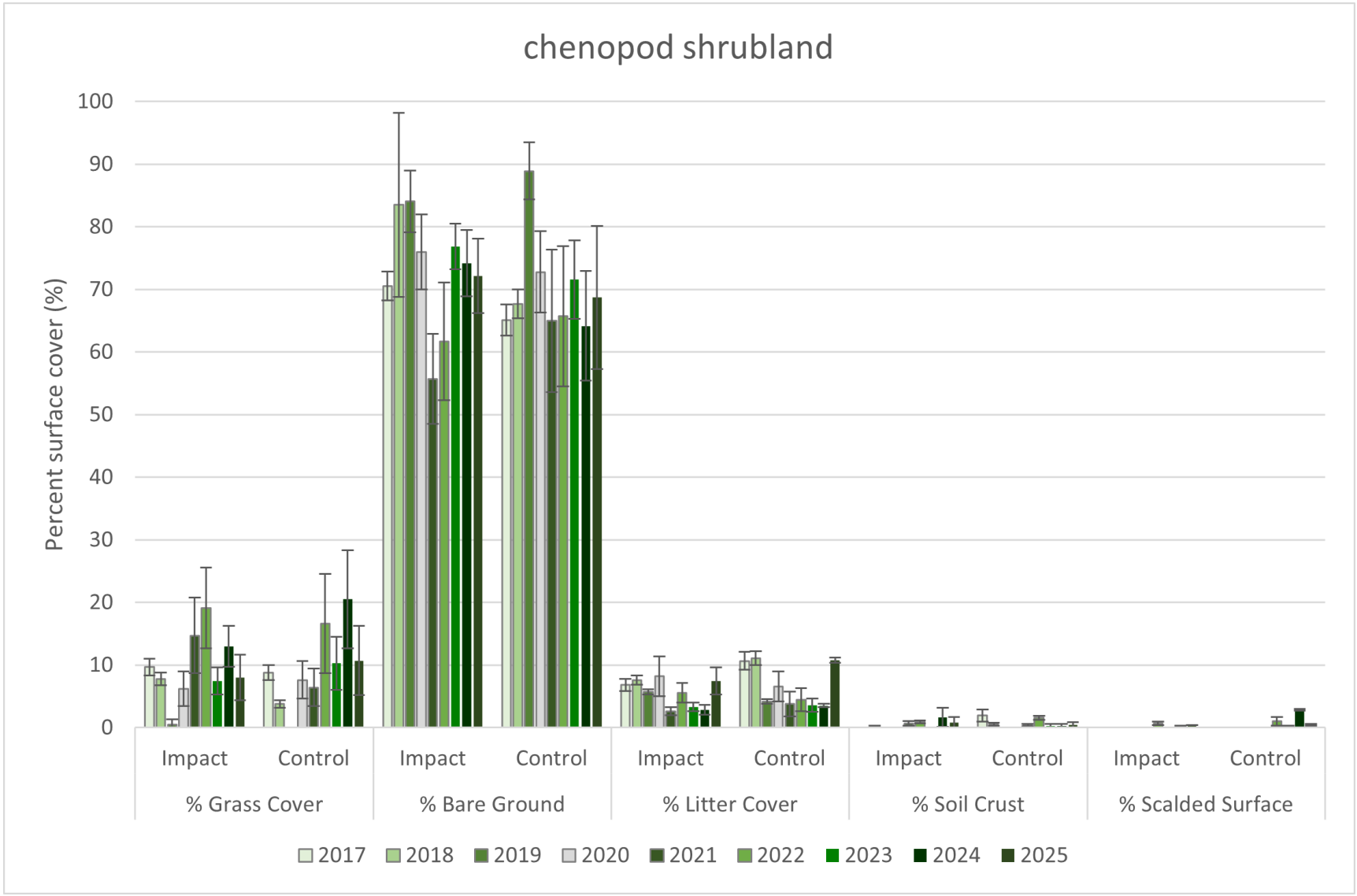

Figure 10: Mean percentage surface cover (%; ± SE) for chenopod shrubland across the 2017-2025 monitoring period

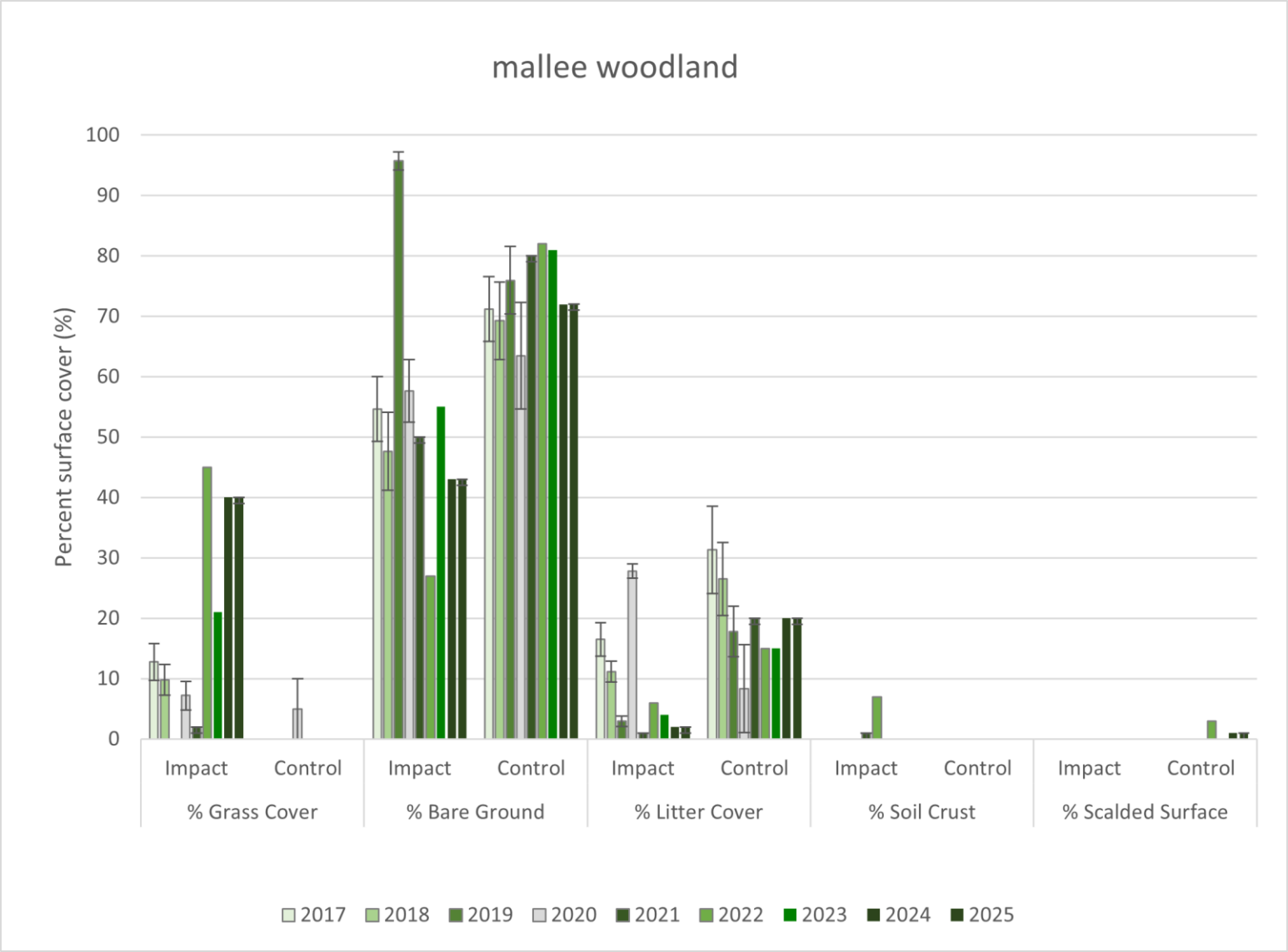

Figure 11: Mean percentage surface cover (%; ± SE) for mallee woodland across the 2017-2025 monitoring period

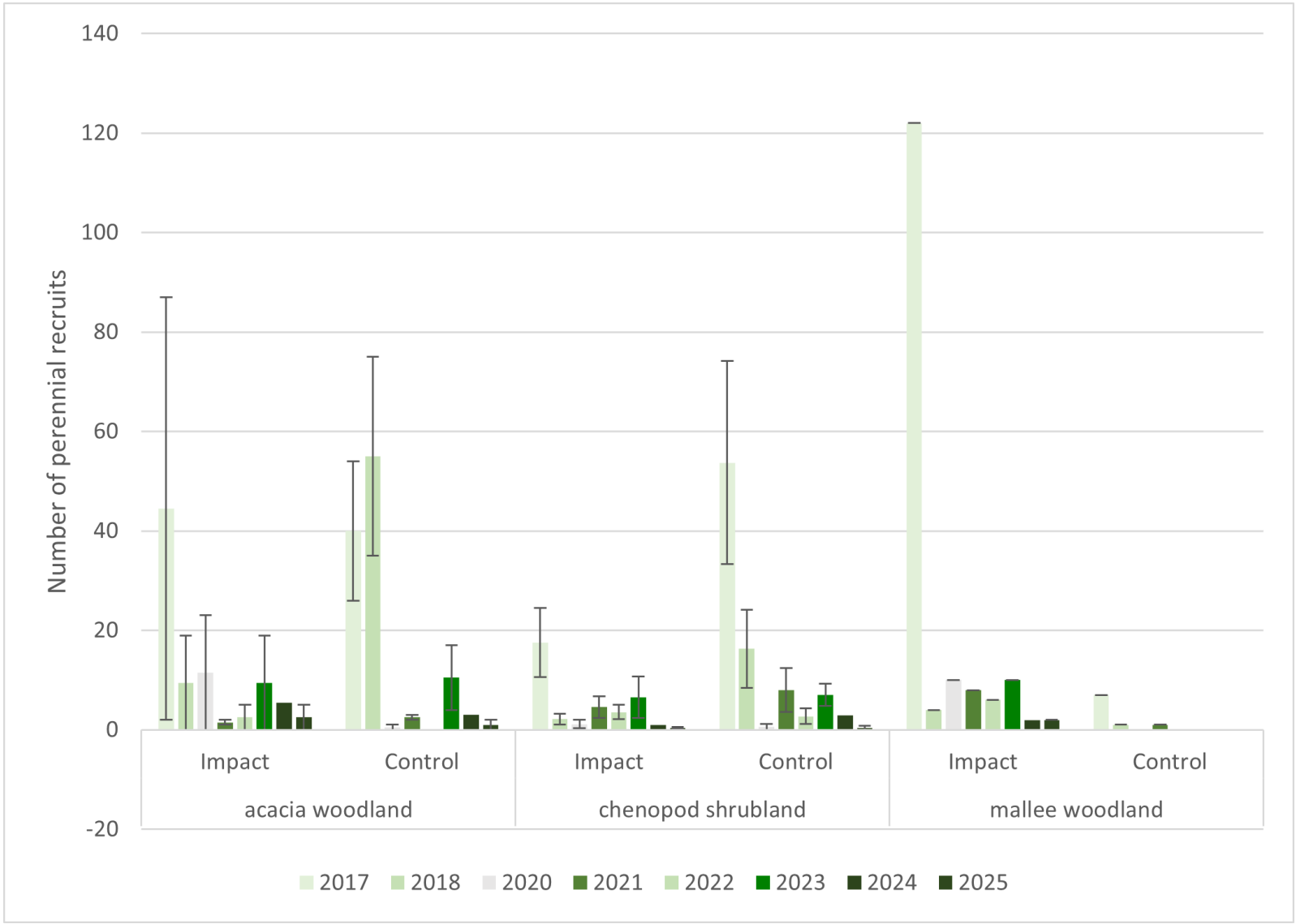

Figure 12: Mean number of perennial recruits (%; ± SE) recorded in each 2 m x 10 m subplot (2019 data unavailable)

3.1.6. Exotic flora and fauna and incidental observations

Signs of rabbit activity were present at PH03, with warrens observed and small cat scats were observed at most monitoring sites in 2025, but less than what was recorded in 2024. In contrast, there was no sign of predator activity (*Felis catus* (cat) and/or *Vulpes vulpes* (fox)) observed across any of the vegetation communities during 2022 and 2023 surveys.

Other observations, include patches of *Malvastrum americanum* observed at most monitoring sites, one *Tachyglossus aculeatus* (short-beaked echidna) opportunistically sighted near site PH27 and *Taeniopygia guttata* (zebra finch) observed at most sites (Table 6).

No trends regarding dust impacts were recorded in 2025 but should continue to be monitored. There were no signs of recent fire recorded in 2025.

Table 6: Other observational data recorded during the 2025 survey

Site	Vegetation type	Impact/ control	Observations
PH01	chenopod shrubland	Impact	Pitfall caps in good condition and pose no danger to wildlife. *Malvastrum americanum* present.
PH02	acacia woodland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH03	chenopod shrubland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife. *Oryctolagus cuniculus* warrens present.
PH06	chenopod shrubland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH07	mallee woodland	Control	Pitfall caps in good condition and pose no danger to wildlife.
PH10	chenopod shrubland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH11	chenopod shrubland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH12	chenopod shrubland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH13	chenopod shrubland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH15	mallee Woodland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH16	chenopod shrubland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH17	chenopod shrubland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH18	chenopod shrubland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH19	chenopod shrubland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH20	chenopod shrubland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.

Site	Vegetation type	Impact/ control	Observations
PH22	acacia woodland	Impact	Pitfall caps in good condition and pose no danger to wildlife.
PH23	chenopod shrubland	Impact	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH24	Acacia woodland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH25	chenopod shrubland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife.
PH27	acacia woodland	Control	*Malvastrum americanum* present. Pitfall caps in good condition and pose no danger to wildlife. *Tachyglossus aculeatus* present.

3.2. Weed monitoring

Each of the five monitoring sites consisted of five linear transects that were assessed for the presence of weeds. Of the five sites surveyed, *Malvastrum americanum* var *americanum* was the only exotic plant species observed in 2025 and was recorded at one of the five sites (Figure 13). Since 2022, *Malvastrum americanum* var *americanum* has reduced in abundance at sites 1, 2, 4 and 5 but increased at site 3 (Figure 13).

Malvastrum americanum var *americanum* is the most common weed species across the study area, occurring in all except one of the monitoring sites. Figure 14 shows cover for both the control and impact sites across the study area. Both the control and impact sites show variation in cover that is consistent with some seasonal variation and do not indicate and increase in this particular weed species as a result of disturbance from the mine.

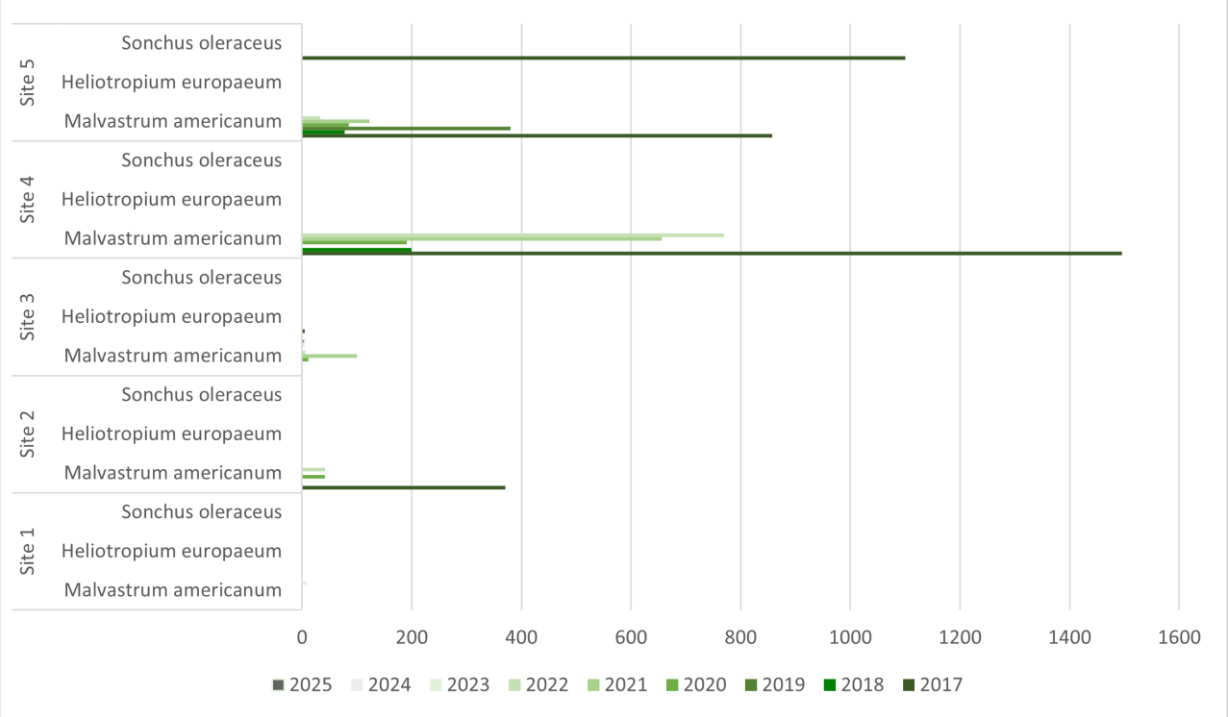

Figure 13: Weed abundance across the five weed monitoring locations 2017-2025 surveys

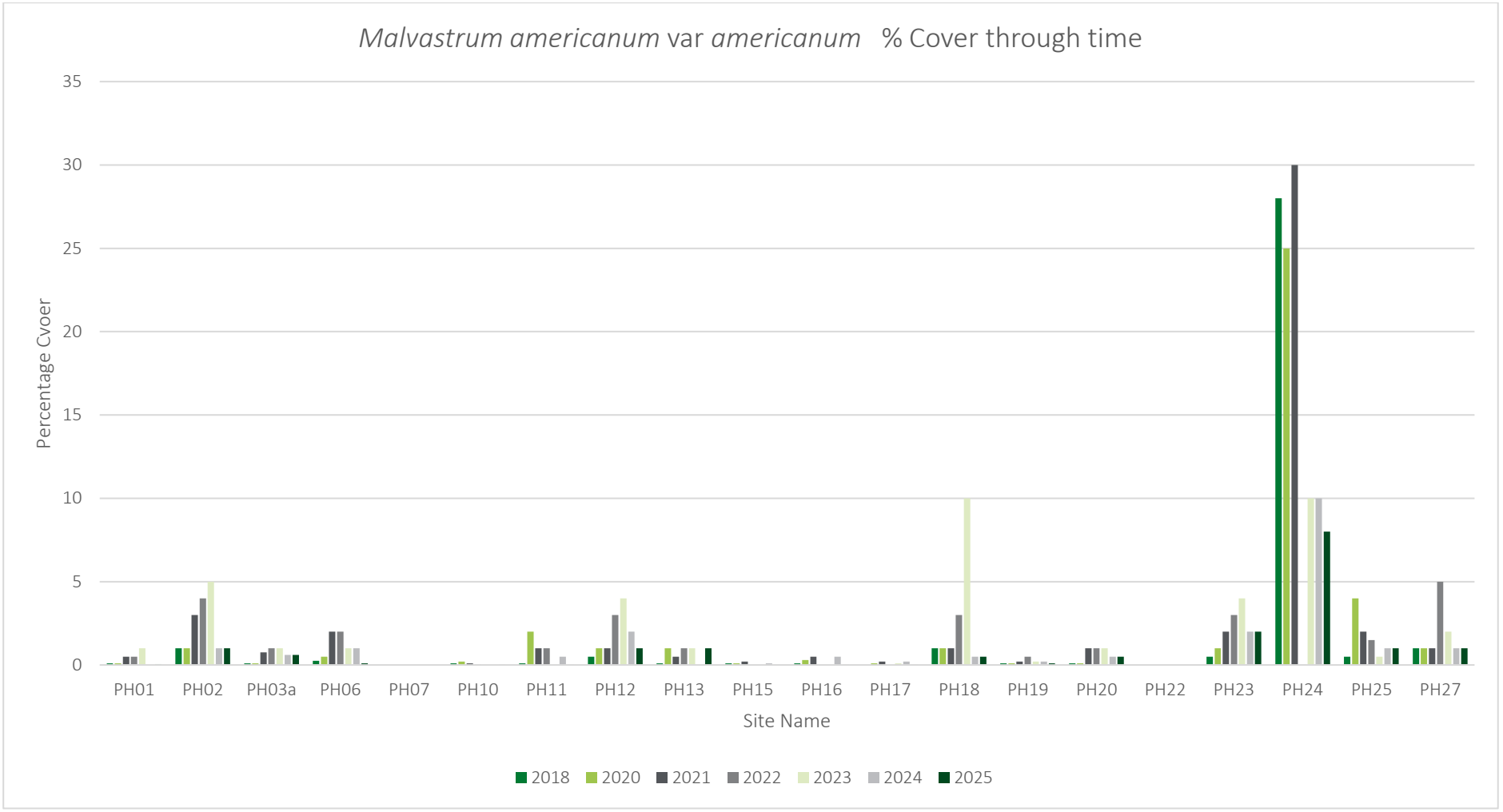

Figure 14: Cover of *Malvastrum americanum* var *americanum* through time

4. Discussion

Background

In the SAAL, rainfall is limited, and it is not uncommon to observe a bias in species diversity and abundance following rainfall events. Rainfall at Prominent Hill in the 12-month period prior to the field survey (94.2 mm) was lower than previous years, with mean annual rainfall of 169.8 mm in 2024 and 200.2 mm in 2023. It is important to look solely at perennial species as these provide stability to grazing/ disturbance systems due to their ability to persist during drier periods. The measurement of plant attributes such as density and frequency of perennials, particularly those which are palatable, are important in understanding plant dynamics and overall rangeland condition (DENR 2011).

Data from the 2025 survey were compared with previous years and between impact and control sites to infer whether mining activities at Prominent Hill are impacting surrounding vegetation communities.

2025 survey results

Higher species numbers were recorded in 2025 (161) and 2024 (154) compared to previous years. This increase from 2024 as well as previous years is likely due to consistent rainfall averages to December 2024, providing favourable conditions for these species recruit and establish. At least one new species was observed at each monitoring site. The records are new to the sites but have previously been recorded within the ML area. This demonstrates that species within the ML area continue to successfully recruit and increase in distribution. Decreased abundance in annual species diversity/ richness were recorded at impact sites and control sites for acacia woodland and chenopod shrubland, whereas mallee woodland species increased in abundance within impact sites, although the difference between control and impact sites was not significant. Mean species diversity is variable year to year, likely due to annual species fluctuations caused by variable rainfall and climatic condition in the SAAL.

When perennial species diversity was assessed alone it showed a general decrease in perennial species from 2024 to 2025, with an increase in mallee woodland and acacia woodland control sites. No significant difference in total species richness was observed between control and impact sites for any vegetation type in 2025, suggesting the variation between sites is due to random effects rather than impacts from Prominent Hill mining activities.

When observing patterns in total species cover between quadrats, higher than average cover for control sites than impacts sites in acacia woodland and chenopod shrubland in 2025. However, for mallee woodland, the control site had lower cover than the impact site. The average total vegetation cover for quadrats in 2025 decreased for both control and impacts sites in chenopod shrubland compared to 2024. However, both control and impact sites for mallee woodland increased in 2025. The decrease across all sites on average suggest impacts from environmental factors such as lower rainfall than in previous years, however some seasonal variability is expected. There was no significant difference in perennial species cover for any of the vegetation types in 2025 which suggests that variation is likely due to random effects rather than impacts from Prominent Hill mining activities.

When comparing perennial density chenopod shrubland and acacia woodland impact sites showed higher average perennial density than control sites for total, mature and juvenile perennials. mallee woodland had lower densities at impact sites than control sites for mature and did not differ for juvenile perennials. Comparatively, on average, total perennial density decreased from 2024 to 2025 for control sites in acacia woodland, chenopod shrubland and mallee woodland. On average, total perennial density decreased from 2024 to 2025 for all impact sites except mallee woodland. Total perennials generally increased across control sites of acacia woodland and chenopod shrubland. On average, mature perennial density decreased from 2024 to 2025 for all sites except for impact sites in mallee woodland.

On average, juvenile perennial density decreased from 2024 to 2025 for impact sites in acacia woodland and chenopod shrubland except for sites in mallee woodland. It is possible that perennial density decreased following low rainfall in early 2025 and impacted on perennial species recruitment compared to previous high rainfall years (2023 and 2024). A decline resulting from low rainfall is natural, as is an increase following higher rainfall. Fluctuations suggest effects of seasonal variability rather than impacts from Prominent Hill mining activities.

The 2025 data shows higher average native recruitment for impact sites than control sites across vegetation types except for chenopod shrubland, where control sites were higher. No significant difference was found between any vegetation type in 2025. Overall, these results suggest it is reasonable to attribute the variation between sites to random effects for acacia woodland, mallee woodland and chenopod shrubland vegetation types. When comparing native recruitment between years, the average native recruitment for quadrats decreased for both control and impact sites for all vegetation types, except for the control site within chenopod shrubland between 2024 and 2025. No significant difference was observed across sites and years for recruitment.

High variability in coverage of grass, bare ground, litter, and crust between vegetation type and site condition was observed in 2025. When comparing ground cover in acacia woodland subplots, the 2025 data shows higher average grass cover and soil crust in control sites than impact sites. Bare ground and litter cover on average were lower in control sites than impact sites for acacia woodland. No scalded surface was recorded at sites in acacia woodland. In chenopod shrubland, higher average grass cover, litter cover and scalded surface was observed in control than impact sites. Bare ground was on average lower in control than impact sites and soil crust was not recorded in either. Within mallee woodland, higher average bare ground, scalded surface and litter cover were present in control sites than impact sites. Grass cover was lower in the control compared to the impact site in mallee woodland. Soil crust was not detected in the mallee woodland sites which was consistent with 2024. However, no significant difference was observed, except for bare ground cover for acacia woodland in 2025, with impact sites being significantly higher than controls ($p=0.044$). This could be a result of reduced rainfall or other environmental factors but should continue to be monitored.

Perennial recruitment within the subplots was lower for control sites within all vegetation types. Overall, perennial recruitment reduced in all sites from 2024 to 2025. No recruitment was occurring at control sites for mallee woodland, whilst recruitment increased by two at impact sites. Despite this variability, no significant difference was determined following statistical analysis. Therefore, it is reasonable to attribute variation between sites to random effects rather than impacts from Prominent Hill Mining activities.

Survey limitations

Some discrepancies in data collection exist, likely due to differences in survey teams from year to year. Monitoring this over future years will be important to ensure that these discrepancies do not produce a false perception of changes in habitat quality.

No rainfall was recorded at Prominent Hill in January, April and May and low rainfall in February (0.2 mm) in 2025. However, there was significant rainfall recorded in March 2025 of 16.2 mm. The decrease in vegetation cover and perennial species in 2025 could be due to low rainfall and impacted recruitment, but did not impact species richness, which increased in 2025 (Hunter and Melville 1994).

Introduced predator (cat and fox) activity was not present across all vegetation communities in 2025, which may suggest successful pest management is occurring. It could also be a product of low rainfall prior to the survey period, resulting in lower prey density in the area. The observations of cat and rabbit activity in 2025 suggests that predators should continue to be monitored.

No fire or dust impacts were observed in 2025, consistent with previous surveys from 2022 to 2024.

Weed monitoring sites

The overall presence of weeds within the site is difficult to ascertain from five roadside monitoring sites nearby to the mining operations, however the smallest number of weeds across all monitoring years (2017 – 2025) and weed sites (weed site 3: 4 individuals) was observed in 2025. This can be attributed to the confirmed management of weeds within the mine site and along the haul road as well as within the village area. *Malvastrum americanum* var *americanum* was recorded across 18 of the 20 monitoring sites (Table 6). *Malvastrum americanum* var *americanum* has not been observed at Site PH01 until 2025. It is important to note that this species is listed as a 'possible weed' on the South Australian Census, but it is not a 'declared weed' (eFlora 2020, PIRSA 2020). It should also be noted that both eFloraSA, the electronic taxonomic key of the Flora of South Australia and PlantNet, the online taxonomic key of the Flora of New South Wales, identify *Malvastrum americanum* var *americanum* as naturalised (eFloraSA 2007, PlantNET 2023).

Recommendations

The trends from 2017 to 2025 in vegetation and habitat compliance monitoring at Prominent Hill demonstrate that the condition of vegetation in arid systems fluctuates with rainfall. High rainfall from 2020 onwards has led to improvements in most condition indicators observed in 2021, compared to the previous monitoring years, and these improvements persisted in 2024 where rainfall was close to the long-term average. However, in 2025 survey the rainfall was less than the long-term average. It is important to consider the strong influence of rainfall in arid environments and its potential to conceal impacts from other sources, e.g. grazing or mining. Regular vegetation monitoring is critical to detect impacts outside of climatic variation or environmental factors in relation to changes in vegetation condition or community structure.

5. Conclusions

The objective to undertake monitoring to determine if there have been any changes in the abundance or diversity of native vegetation or a reduction in habitat quality is considered to be met. The 2025 data does not indicate measurable loss of abundance or diversity of native vegetation, or reduction in habitat quality, the vegetation condition observed within the ML area is in most cases, consistent with the surrounding SEB offset areas.

The objective to undertake weed monitoring was met and it is considered there has been no introduction of new weed species. An increase in the abundance or distribution of existing species in 2025 has occurred, though only at one site, in comparison to last year. However, cover has decreased to zero at all other sites in 2024 and 2025, though this is expected as *Malvastrum americanum* var *americanum* is known to be sensitive to rainfall and typically found along drainage lines where water persists (Western Australian Herbarium 1998).

The results of the Autumn 2025 ecological survey do not indicate that the Prominent Hill mine is impacting native vegetation and habitat condition. Levels of native vegetation species abundance, richness, diversity and recruitment within impact sites do not indicate a trend different from that observed at control sites, in any vegetation type.

A summary of the relevant compliance and outcome criteria contained within the PEPR is provided in Table 7, further demonstrates that the objectives of this survey, as presented in Section 1.2, have been met.

Table 7: Compliance summary

Grouped condition number	Environmental outcome	OMC details	Statement addressing the OMC	Outcome achievement	LIC	Statement addressing the LIC
GC12	No loss of abundance or diversity of native vegetation, or reduction in habitat quality, on or off the Mining and or miscellaneous purposes lease areas during construction, operation as a result of mining activities unless prior approval under relevant legislation is obtained and environmental offsets are approved and in place.	10 x 2 m SUB PLOT within VEGETATION QUADRAT. For each 1 x 1 m unit of sub-plot: o Estimate of % grass cover (ephemerals, annuals) o Estimate of % bare ground o Estimate of % litter cover within the plot o Estimate of % surface crust o Counts of recruits (all shrubs) to provide recruitment score o Long lived perennials (over and understory via species abundance counts (density) for both juveniles and adults. Panoramic photographs collected to aid in assessment of vegetation cover for recruitment. Observational data to be collected at all sites including (but not limited to) vehicle tracks, erosion, vegetation clearing, distance to mine site, light, dust, inappropriate access, feral animals and weeds. GIS output of approved clearance boundary and actual clearance boundary.	The species diversity, vegetation cover and the percentage of species recruiting in 2025 remains high, compared to the historical data (2017-2024). Mallee woodland had higher diversity at control sites than impact sites, and the opposite was true for acacia woodlands and chenopod shrublands in 2025. The percentage of vegetation cover was higher at control than impact sites for acacia woodland and chenopod shrublands. Whereas cover was higher for impact sites in mallee woodland. The percentage of native perennial species recruiting was higher for impact sites than control sites for acacia and mallee woodlands in 2025. Both control and impacts were the same for chenopod shrublands in 2025. Rabbit activity was observed consistent across all sites for all three vegetation types. ELA cannot confirm an approved Native Vegetation Management Plan and SEB Offset in place. Our results are not relevant to any clearance, unapproved or otherwise and the survey work did not include review of clearance boundaries. We understand BHP include this work in their annual reporting.	Approved Native Vegetation Management Plan and SEB Offset in place.	Indicators of habitat degradation, including: o Reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. o Suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. o An increase in bare ground and/ or scald/ erosion % cover at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. If leading indicator triggered, implement targeted threatened bird surveys to confirm ongoing presence of Thick-billed Grasswren and Chestnut-breasted Whiteface within impacted sites.	The following observations have been made in relation to the leading indicator criteria: 1. The average total species diversity increased in 2025 compared to 2024. Native vegetation cover (abundance) has remained constant over the 2021-2025 period. 2. The proportion of species recruiting is higher at impact than control sites across all three vegetation types. 3. The amount of grass cover at all sites has decreased compared to 2024. 4. Bare ground cover has increased in 2025 at all sites. Our results are not relevant to any clearance, unapproved or otherwise and the survey work did not include review of clearance boundaries. We understand BHP include this work in their annual reporting.
GC13 GC14	Environmental offsets are approved and in place for all clearance of native vegetation	As above	As above	As above	Reduction of perennial species abundance (counts) at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods. Suppression of recruitment indicated by a reduction in recruitment index scores at impact sites without a corresponding reduction at control sites over three consecutive monitoring periods for Chenopod Shrubland. An increase in bare ground and/ or scald/ erosion % cover at impact sites without a corresponding reduction at control over three consecutive monitoring periods. If leading indicator triggered, further assessment of detected impacts vs pre-mine condition by comparison with sites outside of SEB area required to determine non-compliance with lease condition. Annual review of vegetation clearance confirms all clearance has been approved.	As above

Grouped condition number	Environmental outcome	OMC details	Statement addressing the OMC	Outcome achievement	LIC	Statement addressing the LIC
GC64	No introduction of new species of weeds, plant pathogens or pests (including feral animals), nor sustained increase in abundance of existing weed or pest species in the licence area compared to adjoining land as a result of mining operations.	Records of counts and identification of any declared weed infestations observed along transects at each location. Records of weed control actions implemented (where relevant). Records of feral animal observations, trapping and capture rates.	Weed monitoring was completed in and outside of the ML. No new weed species were detected in the 2025 monitoring period across the five weed monitoring sites or at the 20 permanent vegetation monitoring sites. *Malvastrum americanum* var *americanum* was observed in higher abundance at all sites, however this perceived increase was not statistically significant.	Weed infestations are recorded, treated and monitoring for ongoing management requirements	Annual review of the weed survey and management register (results of field monitoring and visual observations) considering trends that could indicate population increase or new weed species. Quarterly review of cat sightings and trapping register considering trends that could indicate population increase and requirement for increase in trapping program.	Annual review of the weed survey and management register (results of field monitoring and visual observations) considering trends that could indicate population increase or new weed species.

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ELA (2023) Prominent Hill Annual Vegetation and Habitat Compliance Monitoring. Prepared for OZ Minerals.

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GHD (2019) Prominent Hill Vegetation Monitoring 2019. Prepared for OZ Minerals.

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Appendix A - 2025 species matrix

Table 8: Vegetative life stage key

Abbreviation	Definition
B	Budding
F	Flowering
I	Immature fruit
M	Mature fruit
V	Vegetative
D	Dead

Species Name	Common Name	Lifespan (Perennial / Annual)	Total Sites	PH01			PH02			PH03			PH06			PH07		
Abutilon fraseri ssp.		P	1															
Abutilon halophilum	Plains Lantern-bush	P	10	0.01	1	IV	0.01	1	VF							0.01	0	X
Abutilon leucopetalum	Desert Lantern-bush	P	1															
Abutilon sp.	Lantern-bush	P	1															
Acacia aneura complex	Mulga	P	9				11	1	V				0.5	0	VR	0.25	1	V
Acacia oswaldii	Umbrella Wattle	P	2															
Acacia tetragonophylla	Dead Finish	P	14.33333				4	1	VDX	0.2	1	X	0.1	1	V	0.1	1	V
Acacia victoriae ssp. victoriae	Elegant Wattle	P	1															
Alectryon oleifolius ssp. canescens	Bullock Bush	P	2							0.2	0	V						
Amyema fitzgeraldii	Pincushion Mistletoe	P	1															
Amyema maidenii ssp. maidenii	Pale-leaf Mistletoe	P	1.333333				1	0	V									
Arabidella trisecta	Shrubby Cress	P	3													0.01	1	D
Aristida capillifolia	Needle-leaf Three-awn	P	3				3	0	XD									
Aristida contorta	Curly Wire-grass	P	20	15	1	VD	1	1	XD	0.1	1	D	5	1	V	0.1	1	X
Aristida holothera	Tall Kerosene Grass	P	0															
Astrebla pectinata	Barley Mitchell-grass	P	5															
Atriplex quinii	Kidney-fruit Saltbush	P	16.66667				0.01	1	DF	0.1	1	MF	0.1	1	DVM			
Atriplex vesicaria	Bladder Saltbush	P	19	10	1	V	4	1	VF	5	1	F	2	1	V	0.5	0	V
Austrostipa sp.	Spear-grass	P	1							0.01	0	DX						
Boerhavia dominii	Tar-vine	P	1															
Brachyscome ciliaris var. ciliaris	Variable Daisy	P	6										0.01	1	D			
Convolvulus remotus	Grassy Bindweed	P	11	0.1	0	V				0.01	0	DXV	0.01	1	VM			
Cullen australasicum	Tall Scurf-pea	P	5															
Cynanchum viminale ssp. australe	Caustic Bush	P	3															
Cyperus alterniflorus	Umbrella Flat-sedge	P	1				0.1	1	MD									
Digitaria brownii	Cotton Panic-grass	P	16	0.2	0	MV	0.1	1	XD	0.01	1	M	0.1	1	DV			
Digitaria sp.	Summer-grass	P	0															
Diplachne fusca ssp. muelleri	Brown Beetle-grass	P	0															
Dissocarpus paradoxus	Ball Bindyi	P	2										0.05	1	VD			
Einadia nutans ssp.	Climbing Saltbush	P	11				0.1	1	M				0.02	0	V			
Enchylaena tomentosa var. tomentos	Ruby Saltbush	P	14	0.61	0	V	1	1	V	0.01	1	V	0.05	0	V	0.01	1	SI
Enneapogon cylindricus	Jointed Bottle-washers	P	18	7	0	D	2	1	M	0.5	1	M	0.1	1	V	0.01	1	M
Enneapogon nigricans	Black-head Grass	P	1															
Enteropogon acicularis	Umbrella Grass	P	11				0.01	1	X							0.01	0	M
Eragrostis setifolia	Bristly Love-grass	P	7				0.2	1	X				0.01	1	D			
Eremophila latrobei ssp. glabra	Crimson Emubush	P	5															
Eremophila longifolia	Weeping Emubush	P	2															
Eremophila rotundifolia	Round-leaf Emubush	P	2															
Eremophila serrulata	Green Emubush	P	8				0.05	0	V									
Eucalyptus socialis ssp. socialis	Beaked Red Mallee	P	2													6	0	M
Frankenia serpyllifolia	Thyme Sea-heath	P	2				0.01	0	V									
Glycine canescens	Silky Glycine	P	1															
Goodenia fascicularis	Silky Goodenia	P	3				0.01	0	D									
Gunniopsis zygophylloides	Twin-leaf Pigface	P	1															
Leiocarpa leptolepis	Pale Plover-daisy	P	9										0.01	0	D			
Leiocarpa websteri	Narrow Plover-daisy	P	5				0.01	0	D									
Lotus cruentus	Red-flower Lotus	P	1															
Lysiana exocarpi ssp. exocarpi	Harlequin Mistletoe	P	6							0.05	0	F						
Lysiana murrayi	Mulga Mistletoe	P	1				0.01	0	F									
Maireana aphylla	Cotton-bush	P	9				0.05	1	V				6	1	V			
Maireana appressa	Pale-fruit Bluebush	P	1															
Maireana astrotricha	Low Bluebush	P	13.33333	3			0.7	1	V	6	1	V				0.2	0	V
Maireana campanulata	Bell-fruit Bluebush	P	0															
Maireana coronata	Crown Fissure-plant	P	0															
Maireana eriantha	Woolly Bluebush	P	7							0.1	1	M	0.01	0	V			
Maireana georgei	Satiny Bluebush	P	3															
Maireana integra	Entire-wing Bluebush	P	19	0.5	0	V	0.5	0	V	0.2	1	V	0.01	0	V	0.01	0	V
Maireana lobiflora	Lobed Bluebush	P	0															
Maireana pentatropis	Erect Mallee Bluebush	P	3				0.01	0	V							0.05	0	VD
Maireana pyramidata	Black Bluebush	P	7.666667	0.1	0	V				7	1							
Maireana sedifolia	Bluebush	P	1															
Maireana spongiocarpa	Spongy-fruit Bluebush	P	4															
Maireana trichoptera	Hairy-fruit Bluebush	P	2															
Maireana triptera	Three-wing Bluebush	P	9				0.01	0	V							0.01	0	V
Maireana turbinata	Top-fruit Bluebush	P	0															
Malvastrum americanum var. america	Malvastrum	P	18	0.05	1	V	1	1	M	0.6	1	MF	0.1	1	VM			
Malva weinmanniana	Australian Hollyhock	P	0															
Marsilea drummondii	Common Nardoo	P	6				0.25	1	D				0.4	1	V			
Minuria cunninghamii	Bush Minuria	P	5	0.1	0	D												
Minuria leptophylla	Minnie Daisy	P	2															
Neurachne munroi	Window Mulga-grass	P	1															
Osteocarpum dipterocarpum	Two-wing Bonefruit	P	4							0.01	1	M						
Oxalis perennans	Native Sorrel	P	3							0.01	1	V						
Panicum decompositum var. decomp	Native Millet	P	5															
Pittosporum angustifolium	Native Apricot	P	14	0.1	1	V	0.5	1	VR	0.1	1	MSR	0.2	1	RM	0.3	1	VSM
Ptilotus obovatus	Silver Mulla Mulla	P	20	0.1	0	M	8	1	V	2	1	F	2	1	VM	0.01	0	M
Rhagodia spinescens	Spiny Saltbush	P	17	0.1	0	M	3	0	V	0.1	1	F	0.2	0	V	0.01	1	VS
Roepera aurantiaca ssp. aurantiaca	Shrubby Twinleaf	P	1				0.01	1	V									
Roepera crassissima	Thick Twinleaf	P	1													0.01	0	V
Santalum acuminatum	Quandong	P	3				0.1	0	V							0.01	0	V
Santalum lanceolatum	Plumbush	P	7				0.1	1	V									
Sclerolaena brachyptera	Short-wing Bindyi	P	1															
Scaevola spinescens	Spiny Fanflower	P	0															
Sclerolaena diacantha	Grey Bindyi	P	16	0.01	0	V	0.2	0	M	0.1	1	M	0.02	1	V	0.01	1	M
Sclerolaena divaricata	Tangled Bindyi	P	14				0.01	1	D	0.01	1	DM	0.1	1	M	0.01	0	MD
Sclerolaena eriacantha	Silky Bindyi	P	10	0.5	1	MI	0.01	1	M									
Sclerolaena lanicuspis	Spinach Bindyi	P	14				0.01	0	M	0.01	1	M	0.1	1	V	0.01	1	M
Sclerolaena obliquicuspis	Oblique-spined Bindyi	P	0															
Sclerolaena patenticuspis	Spear-fruit Bindyi	P	1													0.01	0	DM
Sclerolaena tricuspis	Three-spine Bindyi	P	2				0.01	0	MD									
Senecio lanibracteus	Inland Shrubby Groundse	P	10	0.1	0	V	1	1	V	0.6	1	F						
Senna artemisioides ssp. filifolia	Fine-leaf Desert Senna	P	3															
Senna artemisioides ssp. helmsii	Blunt-leaf Senna	P	2															
Senna artemisioides ssp. X artemisio	Silver Senna	P	11				0.2	1	VX									
Senna artemisioides ssp. X sturtii	Grey Senna	P	1															
Setaria constricta	Knotty-butt Paspalidium	P	6				0.01	1	M									
Sida fibulifera	Pin Sida	P	20	0.2	0	V	0.2	1	V	0.1	0	M	0.01	1	MD	0.01	0	M
Sida intricata	Twiggy Sida	P	12	0.1	0	MD				0.01	0	MD						
Sida petrophila	Rock Sida	P	6															
Sida sp.	Sida	P	1															
Sida spodochroma		P	6															
Solanum petrophilum	Rock Nightshade	P	1													0.01	0	V
Solanum quadriloculatum	Plains Nightshade	P	19	0.01	0	D	0.01	0	DF				0.01	1	DMV	0.01	0	V
Swainsona phacoides	Dwarf Swainson-pea	P	1															
Swainsona sp.	Swainson-pea	P	3															
Tecticornia pergranulata ssp.	Black-seed Samphire	P	3													0.5	0	V
Tribulus eichlerianus	Eichler's Caltrop	P	1															
Vittadinia gracilis	Woolly New Holland Daisy	P	6							0.5	1	F						
Acacia sp.		P	1										0.5	0	V			
Rhagodia ulicina		P	1													0.01	0	M
Minuria sp.		P	1													0.01	0	V
Cullen sp.		P	2										0.01	0	V			
Amyema preissii		P	1															
Crassula sp.		AP	3															
Alternanthera angustifolia	Narrow-leaf Joyweed	A	1															
Alternanthera denticulata	Lesser Joyweed	A	1				0.02	1	VD									
Atriplex angulata	Fan Saltbush	A	1															
Atriplex crassipes var. crassipes		A	1															
Atriplex fissivalvis	Gibber Saltbush	A	4							0.01	1	F	0.02	1	VM			
Atriplex holocarpa	Pop Saltbush	A	5										0.1	1	I			
Atriplex spongiosa	Pop Saltbush	A	1.666667															
Calotis hispidula	Hairy Burr-daisy	A	2															
Centipeda thespidioides	Desert Sneezeweed	A	7				0.01	1	D	0.01	1	MD	0.5	1	VD			
Dactyloctenium radulans	Button-grass	A	4										0.01	0	D			
Daucus glochidiatus	Native Carrot	A	3										0.01	1	V			
Enneapogon avenaceus	Common Bottle-washers	A	9				1	1	M									
Enneapogon polyphyllus	Leafy Bottle-washers	A	17	0.1	1	M	0.01	1	XDM				0.1	1	VD			
Eragrostis dielsii	Mulka	A	1				0.01	0	MD									
Eragrostis leptocarpa	Drooping Love-grass	A	2															
Eremophila glabra				0.01	0	V												
Eriachne sp.																		
Erodium sp.	Heron's-bill/Crowfoot	A	3															
Euphorbia drummondii group		A	12				0.01	1	F				0.01	0	MF			
Euphorbia tannensis ssp. eremophil	Desert Spurge	A	5															
Gnephosis arachnoidea	Spidery Button-flower	A	13	0.01	0	V	0.01	0	V				0.01	0	D			
Gnephosis zygophilodes																		
Heliotropium europaeum	Common Heliotrope	A	0.333333				0.1											
Lepidium phlebopetalum	Veined Peppercress	A	4				0.01	1	D				0.01	1	V			
Pimelea simplex ssp.	Desert Riceflower	A	0															
Plantago cunninghamii	Clay Plantain	A	1															
Portulaca oleracea	Common Purslane	A	1															
Ptilotus nobilis ssp.		A	2				0.001	0	D									
Ptilotus gaudichaudii	Paper Fox-tail	A	1															
Rhodanthe charsleyae		A	1															
Roepera apiculata	Pointed Twinleaf	A	2													0.1	1	DS
Rhodanthe uniflora	Woolly Daisy	A	1										0.01	0	DF			
Salsola australis	Buckbush	A	20	0.2	1	DV	0.05	1	V	0.25	1	M	0.01	0	VM	0.01	1	DM
Sclerolaena cuneata													0.01	1	MV			
Tetragonia tetragonoides	New Zealand Spinach	A	1															
Trianthema triquetrum	Red Spinach	A	8										0.01	1	VM			
Tripogonella loliiformis	Five-minute Grass	A	17	0.01	0	V	0.01	1	V				0.01	1	M	0.01	0	V
Cullen australis										0.01	0	V						
Leiocarpa sp.																		
Tribulus terrestorus													0.01	1	MV			
Sclerolaena cuneata				0.01	0	D												
Senna art X cori																		
Senna phylloidinea																		
Sida corrugata																		
Alterantha sp.													0.01	1	M			
Vittandea sp.																		
Boerhavia sp.																		
				Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage
	Total Species		**136**	**27**			**55**			**32**			**45**			**32**		
	Sum Cover			**38.23**			**44.751**			**23.92**			**18.57**			**8.32**		
	Proportion Recruiting				**30%**			**64%**			**78%**			**67%**			**38%**	
	Reproductive Number					**14**			**35**			**26**			**28**			**19**
	Proportion Reproductive					**52%**			**64%**			**81%**			**62%**			**59%**
	Total Perennial Species			**21**			**43**			**28**			**29**			**29**		
	Sum Cover Perennial			**37.89**			**43.51**			**23.64**			**17.73**			**8.2**		

Species Name	Common Name	PH10			PH11			PH12			PH13			PH15		
Abutilon fraseri ssp.																
Abutilon halophilum	Plains Lantern-bush	0.01	1	F												
Abutilon leucopetalum	Desert Lantern-bush															
Abutilon sp.	Lantern-bush															
Acacia aneura complex	Mulga				0.1	1	RV									
Acacia oswaldii	Umbrella Wattle													0.01	0	V
Acacia tetragonophylla	Dead Finish				0.1	1	RV				0.3	0	V	0.01	0	VX
Acacia victoriae ssp. victoriae	Elegant Wattle										1	0	V			
Alectryon oleifolius ssp. canescens	Bullock Bush													0.1	0	V
Amyema fitzgeraldii	Pincushion Mistletoe															
Amyema maidenii ssp. maidenii	Pale-leaf Mistletoe													0		
Arabidella trisecta	Shrubby Cress													0.01	1	VF
Aristida capillifolia	Needle-leaf Three-awn															
Aristida contorta	Curly Wire-grass	0.1	1	XD	8	1	X	0.5	1	V	3	1	XD	0.1	1	XD
Aristida holothera	Tall Kerosene Grass															
Astrebla pectinata	Barley Mitchell-grass				0.1	1	XD	0.1	0	D	0.5	1	V			
Atriplex quinii	Kidney-fruit Saltbush	0.01	1	F	0.01		FM	0.05	1	F	0.01	0	V	0.01	0	V
Atriplex vesicaria	Bladder Saltbush	0.5	0	VD	3	0	F	4	1	VF	2	1	V	2	1	V
Austrostipa sp.	Spear-grass															
Boerhavia dominii	Tar-vine															
Brachyscome ciliaris var. ciliaris	Variable Daisy				0.01	1	F	0.01	0	F						
Convolvulus remotus	Grassy Bindweed	0.01	1	XD	0.01	0	D	0.01	1	V	0.01	1	V			
Cullen australasicum	Tall Scurf-pea							0.01	1	V	0.01	0	V			
Cynanchum viminale ssp. australe	Caustic Bush	0.1	0	F												
Cyperus alterniflorus	Umbrella Flat-sedge															
Digitaria brownii	Cotton Panic-grass				0.05	0	XDM	0.01	1	X	0.1	0	XDM			
Digitaria sp.	Summer-grass															
Diplachne fusca ssp. muelleri	Brown Beetle-grass															
Dissocarpus paradoxus	Ball Bindyi										0.01	0	D			
Einadia nutans ssp.	Climbing Saltbush				0.01	0	I				0.01	0	DM			
Enchylaena tomentosa var. tomentos	Ruby Saltbush				0.01	0	V							0.01	0	V
Enneapogon cylindricus	Jointed Bottle-washers	0.2	1	MD	4	1	M	3	1	D				1	1	M
Enneapogon nigricans	Black-head Grass													0.01	1	MX
Enteropogon acicularis	Umbrella Grass							0.01	0	MD	0.01	1	D	0.01	0	XD
Eragrostis setifolia	Bristly Love-grass				0.01	0	V									
Eremophila latrobei ssp. glabra	Crimson Emubush				0.01	1	RV				0.2	1	M			
Eremophila longifolia	Weeping Emubush															
Eremophila rotundifolia	Round-leaf Emubush															
Eremophila serrulata	Green Emubush															
Eucalyptus socialis ssp. socialis	Beaked Red Mallee													2	0	BX
Frankenia serpyllifolia	Thyme Sea-heath															
Glycine canescens	Silky Glycine															
Goodenia fascicularis	Silky Goodenia															
Gunniopsis zygophylloides	Twin-leaf Pigface															
Leiocarpa leptolepis	Pale Plover-daisy				0.01	0	V	0.01	1	F	0.1	0	V			
Leiocarpa websteri	Narrow Plover-daisy							0.01	0	VF						
Lotus cruentus	Red-flower Lotus							0.01	0	V						
Lysiana exocarpi ssp. exocarpi	Harlequin Mistletoe							0.01	0	V				0.01	0	F
Lysiana murrayi	Mulga Mistletoe															
Maireana aphylla	Cotton-bush				0.01	0	V	0.01	0	M	4	1	M			
Maireana appressa	Pale-fruit Bluebush													0.01	1	M
Maireana astrotricha	Low Bluebush	2	1	V				1	1	V				3	1	V
Maireana campanulata	Bell-fruit Bluebush															
Maireana coronata	Crown Fissure-plant															
Maireana eriantha	Woolly Bluebush										0.01	0	V			
Maireana georgei	Satiny Bluebush															
Maireana integra	Entire-wing Bluebush	0.05	1	V				0.1	1	V	0.01	0	V	0.01	1	V
Maireana lobiflora	Lobed Bluebush															
Maireana pentatropis	Erect Mallee Bluebush													0.1	1	V
Maireana pyramidata	Black Bluebush	3	0	V				6	1	V	3	0	V	0.02	0	F
Maireana sedifolia	Bluebush													2	1	V
Maireana spongiocarpa	Spongy-fruit Bluebush				0.01	0	XV									
Maireana trichoptera	Hairy-fruit Bluebush	0.01	0	V							0.01	0	V			
Maireana triptera	Three-wing Bluebush	0.01	1	V							0.01	0	V	0.01	0	V
Maireana turbinata	Top-fruit Bluebush															
Malvastrum americanum var. america	Malvastrum	0.01	1	VMF	0.01	1	DM	1	1	VM	1	0	V	0.01	1	M
Malva weinmanniana	Australian Hollyhock															
Marsilea drummondii	Common Nardoo										0.2	0	D			
Minuria cunninghamii	Bush Minuria							0.2	1	VF						
Minuria leptophylla	Minnie Daisy															
Neurachne munroi	Window Mulga-grass															
Osteocarpum dipterocarpum	Two-wing Bonefruit							0.1	1	VF						
Oxalis perennans	Native Sorrel															
Panicum decompositum var. decomp	Native Millet	0.01	1	MIDV				0.01	0	D						
Pittosporum angustifolium	Native Apricot	0.05	1	V				0.5	1	V				0.05	0	M
Ptilotus obovatus	Silver Mulla Mulla	1	1	M	1	0	VX	1	1	V	0.05	0	XD	0.75	1	VF
Rhagodia spinescens	Spiny Saltbush	0.01	1	F				0.3	1	VF	0.5	0	V	0.01	0	F
Roepera aurantiaca ssp. aurantiaca	Shrubby Twinleaf															
Roepera crassissima	Thick Twinleaf															
Santalum acuminatum	Quandong															
Santalum lanceolatum	Plumbush							0.05	1	VF						
Sclerolaena brachyptera	Short-wing Bindyi															
Scaevola spinescens	Spiny Fanflower															
Sclerolaena diacantha	Grey Bindyi	0.01	1	M	0.01	0	V	0.05	1	V				0.01	1	V
Sclerolaena divaricata	Tangled Bindyi	0.01	1	MD	8	1	D	0.1	1	VM	0.25	1	M			
Sclerolaena eriacantha	Silky Bindyi										0.01	1	M			
Sclerolaena lanicuspis	Spinach Bindyi	0.01	0	MD				0.01	1	VM				0.01	1	I
Sclerolaena obliquicuspis	Oblique-spined Bindyi															
Sclerolaena patenticuspis	Spear-fruit Bindyi															
Sclerolaena tricuspis	Three-spine Bindyi															
Senecio lanibracteus	Inland Shrubby Groundse							0.5	1	VF				0.1	0	V
Senna artemisioides ssp. filifolia	Fine-leaf Desert Senna															
Senna artemisioides ssp. helmsii	Blunt-leaf Senna				0.1	0	M									
Senna artemisioides ssp. X artemisio	Silver Senna							0.1	1	R	0.1	0	X	0.01	1	V
Senna artemisioides ssp. X sturtii	Grey Senna															
Setaria constricta	Knotty-butt Paspalidium							0.1	1	VF				0.01	1	M
Sida fibulifera	Pin Sida	0.5	1	MF	0.1	0	M	0.01	1	V	0.01	0	D	0.01	1	M
Sida intricata	Twiggy Sida	0.01	0	M										0.01	0	M
Sida petrophila	Rock Sida	0.01	1	VM				0.1	0	D	0.01	1	D	0.5	1	I
Sida sp.	Sida															
Sida spodochroma					0.01	1	M									
Solanum petrophilum	Rock Nightshade															
Solanum quadriloculatum	Plains Nightshade	0.01	1	D	0.01	1	FM	0.01	1	V	0.01	1	V	0.01	1	V
Swainsona phacoides	Dwarf Swainson-pea															
Swainsona sp.	Swainson-pea										0.01	0	V			
Tecticornia pergranulata ssp.	Black-seed Samphire													0.01	0	X
Tribulus eichlerianus	Eichler's Caltrop										0.01	1	M			
Vittadinia gracilis	Woolly New Holland Daisy	0.01	1	X				0.01	1	F				0.01	1	I
Acacia sp.																
Rhagodia ulicina																
Minuria sp.																
Cullen sp.																
Amyema preissii																
Crassula sp.											0.01	1	M			
Alternanthera angustifolia	Narrow-leaf Joyweed															
Alternanthera denticulata	Lesser Joyweed															
Atriplex angulata	Fan Saltbush															
Atriplex crassipes var. crassipes											0.05	1	D			
Atriplex fissivalvis	Gibber Saltbush							0.05	1	V						
Atriplex holocarpa	Pop Saltbush				0.01	0	VR	0.01	0	D						
Atriplex spongiosa	Pop Saltbush				0.01	1										
Calotis hispidula	Hairy Burr-daisy															
Centipeda thespidioides	Desert Sneezeweed										0.01	1	M			
Dactyloctenium radulans	Button-grass										0.01	0	D			
Daucus glochidiatus	Native Carrot										0.01	0	D			
Enneapogon avenaceus	Common Bottle-washers							0.01	1	D				0.1	1	V
Enneapogon polyphyllus	Leafy Bottle-washers	0.1	1	M	3	1	V	1	1	V	0.5	1	M	0.1	1	M
Eragrostis dielsii	Mulka															
Eragrostis leptocarpa	Drooping Love-grass										0.5	0	D			
Eremophila glabra																
Eriachne sp.																
Erodium sp.	Heron's-bill/Crowfoot															
Euphorbia drummondii group		0.01	1	M	0.01	1	I	0.01	0	V	0.01	0	M	0.01	1	V
Euphorbia tannensis ssp. eremophil	Desert Spurge				0.01	1	MF							0.01	0	FM
Gnephosis arachnoidea	Spidery Button-flower	0.01	0	D	0.01	1	D				0.01	0	R			
Gnephosis zygophilodes								0.01	0	D	0.01	1	V			
Heliotropium europaeum	Common Heliotrope															
Lepidium phlebopetalum	Veined Peppercress															
Pimelea simplex ssp.	Desert Riceflower															
Plantago cunninghamii	Clay Plantain															
Portulaca oleracea	Common Purslane															
Ptilotus nobilis ssp.														0.01	0	DX
Ptilotus gaudichaudii	Paper Fox-tail															
Rhodanthe charsleyae											0.01	1	FD			
Roepera apiculata	Pointed Twinleaf													0.01	1	V
Rhodanthe uniflora	Woolly Daisy															
Salsola australis	Buckbush	0.5	1	DM	0.5	1	M	0.5	1	M	0.01	0	D	0.1	1	M
Sclerolaena cuneata																
Tetragonia tetragonoides	New Zealand Spinach													0.01	1	M
Trianthema triquetrum	Red Spinach	0.01	1	M	0.01	0	D	0.01	1	V	0.01	1	M			
Tripogonella loliiformis	Five-minute Grass	0.01	1	V	1	1	MD				0.01	1	M	0.01	1	X
Cullen australis																
Leiocarpa sp.		0.01	1	F												
Tribulus terrestorus																
Sclerolaena cuneata		0.01	1	M				0.1	1	V	0.05	1	M			
Senna art X cori											0.1	0	V			
Senna phylloidinea																
Sida corrugata																
Alterantha sp.											0.01	1	M			
Vittandea sp.																
Boerhavia sp.																
		Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage
	Total Species	**33**			**34**			**45**			**49**			**44**		
	Sum Cover	**8.31**			**29.25**			**20.7**			**17.78**			**12.3**		
	Proportion Recruiting		**76%**			**53%**			**71%**			**41%**			**61%**	
	Reproductive Number			**26**			**28**			**27**			**30**			**27**
	Proportion Reproductive			**79%**			**82%**			**60%**			**61%**			**61%**
	Total Perennial Species	**25**			**25**			**36**			**32**			**35**		
	Sum Cover Perennial	**7.65**			**24.69**			**19**			**16.46**			**11.94**		

Species Name	Common Name	PH16			PH17			PH18			PH19			PH20		
Abutilon fraseri ssp.																
Abutilon halophilum	Plains Lantern-bush	0.01	1	FM							0.1	1	M	0.01	1	V
Abutilon leucopetalum	Desert Lantern-bush							0.01	1	V						
Abutilon sp.	Lantern-bush															
Acacia aneura complex	Mulga							0.01	1	V						
Acacia oswaldii	Umbrella Wattle							0.3	0	V						
Acacia tetragonophylla	Dead Finish							4	1	VDX	4		V	0.5	0	X
Acacia victoriae ssp. victoriae	Elegant Wattle															
Alectryon oleifolius ssp. canescens	Bullock Bush															
Amyema fitzgeraldii	Pincushion Mistletoe							0.01	0	VB						
Amyema maidenii ssp. maidenii	Pale-leaf Mistletoe															
Arabidella trisecta	Shrubby Cress															
Aristida capillifolia	Needle-leaf Three-awn							0.4	0	DX				0.2	1	X
Aristida contorta	Curly Wire-grass	2	1	XD	10	1	XD	0.5	1	M	4	1	XV	0.3	1	VX
Aristida holothera	Tall Kerosene Grass															
Astrebla pectinata	Barley Mitchell-grass	0.1	0	XD												
Atriplex quinii	Kidney-fruit Saltbush	0.01	0	F	0.01	1	VM				0.1	1	VF	0.01	0	FM
Atriplex vesicaria	Bladder Saltbush	12	1	F	10	1	F	30	1	F	1	1	V	7	1	FS
Austrostipa sp.	Spear-grass															
Boerhavia dominii	Tar-vine													0.01	1	M
Brachyscome ciliaris var. ciliaris	Variable Daisy	0.01	1	V	0.01	1	F							0.01	1	F
Convolvulus remotus	Grassy Bindweed	0.01	0	X												
Cullen australasicum	Tall Scurf-pea	0.01	0	V												
Cynanchum viminale ssp. australe	Caustic Bush				0.01	0	V									
Cyperus alterniflorus	Umbrella Flat-sedge															
Digitaria brownii	Cotton Panic-grass				0.1	1	X	0.1	1	DX	1	1	SMV	0.01	1	M
Digitaria sp.	Summer-grass															
Diplachne fusca ssp. muelleri	Brown Beetle-grass															
Dissocarpus paradoxus	Ball Bindyi															
Einadia nutans ssp.	Climbing Saltbush				0.01	1	I	0.01	0	D	0.01	0	V			
Enchylaena tomentosa var. tomentos	Ruby Saltbush							0.25	0	V	0.01	0	V	0.01	1	V
Enneapogon cylindricus	Jointed Bottle-washers	1	1	M	5	1	X	10	1	MXD	1	1	X	0.5	1	M
Enneapogon nigricans	Black-head Grass															
Enteropogon acicularis	Umbrella Grass				1	1	S	0.01	0	D				0.01	1	M
Eragrostis setifolia	Bristly Love-grass	0.01	0	D												
Eremophila latrobei ssp. glabra	Crimson Emubush															
Eremophila longifolia	Weeping Emubush				1	1	V									
Eremophila rotundifolia	Round-leaf Emubush															
Eremophila serrulata	Green Emubush							0.1	0	D	1	1	V	0.1	0	V
Eucalyptus socialis ssp. socialis	Beaked Red Mallee															
Frankenia serpyllifolia	Thyme Sea-heath													0.01	0	V
Glycine canescens	Silky Glycine															
Goodenia fascicularis	Silky Goodenia	0.01	1	V				0.01	0	DX						
Gunniopsis zygophylloides	Twin-leaf Pigface															
Leiocarpa leptolepis	Pale Plover-daisy				0.01	0	F	0.01	1	F						
Leiocarpa websteri	Narrow Plover-daisy				0.01	0	F							0.01	1	F
Lotus cruentus	Red-flower Lotus															
Lysiana exocarpi ssp. exocarpi	Harlequin Mistletoe							0.01	0	V	0.1	0	F	0.01	0	F
Lysiana murrayi	Mulga Mistletoe															
Maireana aphylla	Cotton-bush							0.01	0	V						
Maireana appressa	Pale-fruit Bluebush															
Maireana astrotricha	Low Bluebush	0.01	0	V	0.1	1	V	3	1	VS	0.01	0	V	0.01	0	V
Maireana campanulata	Bell-fruit Bluebush															
Maireana coronata	Crown Fissure-plant															
Maireana eriantha	Woolly Bluebush				0.01	1	V	0.1	1	MD	0.1	1	V	0.01	0	V
Maireana georgei	Satiny Bluebush										0.1	1	V			
Maireana integra	Entire-wing Bluebush	0.05	1	M	0.1	1	V	0.1	1	V	0.1	1	V	0.01	1	VF
Maireana lobiflora	Lobed Bluebush															
Maireana pentatropis	Erect Mallee Bluebush															
Maireana pyramidata	Black Bluebush							0.5	0	V						
Maireana sedifolia	Bluebush															
Maireana spongiocarpa	Spongy-fruit Bluebush													0.01	1	MV
Maireana trichoptera	Hairy-fruit Bluebush															
Maireana triptera	Three-wing Bluebush										0.5	0	V			
Maireana turbinata	Top-fruit Bluebush															
Malvastrum americanum var. america	Malvastrum	0.01	1	FI	0.01	1	M	0.5	1	DM	0.1	1	M	0.5	1	M
Malva weinmanniana	Australian Hollyhock															
Marsilea drummondii	Common Nardoo							0.01	0	MD						
Minuria cunninghamii	Bush Minuria										0.01	0	M	0.05	1	M
Minuria leptophylla	Minnie Daisy	0.01	1	F	0.2	1	V									
Neurachne munroi	Window Mulga-grass															
Osteocarpum dipterocarpum	Two-wing Bonefruit													0.1	0	M
Oxalis perennans	Native Sorrel													0.01	0	F
Panicum decompositum var. decomp	Native Millet	0.01	0	D	0.01	0	S	0.01	0	DX						
Pittosporum angustifolium	Native Apricot	0.2	1	M				0.1	1	V	0.1	0	V	0.3	1	M
Ptilotus obovatus	Silver Mulla Mulla	0.2	1	M	0.3	1	V	3	1	M	1	1	V	0.5	1	V
Rhagodia spinescens	Spiny Saltbush	1	1	F	0.1	1	V	2	0	F				0.2	0	M
Roepera aurantiaca ssp. aurantiaca	Shrubby Twinleaf															
Roepera crassissima	Thick Twinleaf															
Santalum acuminatum	Quandong															
Santalum lanceolatum	Plumbush							1	0	V	0.1	0	B			
Sclerolaena brachyptera	Short-wing Bindyi													0.1	1	M
Scaevola spinescens	Spiny Fanflower															
Sclerolaena diacantha	Grey Bindyi				0.1	1	V	0.1	1	M	0.1	1	M			
Sclerolaena divaricata	Tangled Bindyi										0.2	1	MD			
Sclerolaena eriacantha	Silky Bindyi	0.01	0	M	0.01	1	V	0.1	1	V	0.1	1	V			
Sclerolaena lanicuspis	Spinach Bindyi	0.01	1	M							0.1	0	VM	0.2	1	M
Sclerolaena obliquicuspis	Oblique-spined Bindyi															
Sclerolaena patenticuspis	Spear-fruit Bindyi															
Sclerolaena tricuspis	Three-spine Bindyi	0.01	1	M												
Senecio lanibracteus	Inland Shrubby Groundse	0.01	0	F	0.1	1	F				0.01	0	V	0.01	0	F
Senna artemisioides ssp. filifolia	Fine-leaf Desert Senna	0.01	0	F				0.01	0	V						
Senna artemisioides ssp. helmsii	Blunt-leaf Senna															
Senna artemisioides ssp. X artemisio	Silver Senna				1	1	RV	0.01	1	V	3	1	V	0.5	1	VM
Senna artemisioides ssp. X sturtii	Grey Senna															
Setaria constricta	Knotty-butt Paspalidium				0.1	1	XD							0.01	1	M
Sida fibulifera	Pin Sida	0.05	1	M	0.1	1	V	0.05	1	M	0.1	1	V	0.01	1	VM
Sida intricata	Twiggy Sida	0.01	0	D	0.01	1	V	0.01	0	DM	0.01	0	M	0.01	0	M
Sida petrophila	Rock Sida															
Sida sp.	Sida													0.01	0	M
Sida spodochroma					0.01	0	V	0.01	1	F	0.01	0	V	0.01	1	V
Solanum petrophilum	Rock Nightshade															
Solanum quadriloculatum	Plains Nightshade	0.01	1	F	0.01	0	DVF	0.01	1	DMVI	0.01	0	DVI	0.01	1	VF
Swainsona phacoides	Dwarf Swainson-pea	0.01	1	V												
Swainsona sp.	Swainson-pea										0.01	0	V			
Tecticornia pergranulata ssp.	Black-seed Samphire													2	0	V
Tribulus eichlerianus	Eichler's Caltrop															
Vittadinia gracilis	Woolly New Holland Daisy				0.1	1	F							0.1	1	F
Acacia sp.																
Rhagodia ulicina																
Minuria sp.																
Cullen sp.																
Amyema preissii																
Crassula sp.																
Alternanthera angustifolia	Narrow-leaf Joyweed															
Alternanthera denticulata	Lesser Joyweed															
Atriplex angulata	Fan Saltbush															
Atriplex crassipes var. crassipes																
Atriplex fissivalvis	Gibber Saltbush															
Atriplex holocarpa	Pop Saltbush	0.01	0	D												
Atriplex spongiosa	Pop Saltbush													0.01	1	M
Calotis hispidula	Hairy Burr-daisy															
Centipeda thespidioides	Desert Sneezeweed															
Dactyloctenium radulans	Button-grass							0.01	0	D						
Daucus glochidiatus	Native Carrot															
Enneapogon avenaceus	Common Bottle-washers	1	1	M	0.01	1	X	1	1	MD	0.5	1	V			
Enneapogon polyphyllus	Leafy Bottle-washers	1	1	XD	0.2	1	X				0.2	1	X	0.01	1	M
Eragrostis dielsii	Mulka															
Eragrostis leptocarpa	Drooping Love-grass															
Eremophila glabra																
Eriachne sp.														0.01	0	M
Erodium sp.	Heron's-bill/Crowfoot	0.01	1	V												
Euphorbia drummondii group		0.01	0	M	0.01	1	M	0.01	1	I						
Euphorbia tannensis ssp. eremophil	Desert Spurge										0.01	0	FI			
Gnephosis arachnoidea	Spidery Button-flower	0.01	1	V	0.01	1	F				0.01	1	D			
Gnephosis zygophilodes								0.01	0	D						
Heliotropium europaeum	Common Heliotrope															
Lepidium phlebopetalum	Veined Peppercress										0.01	1	D			
Pimelea simplex ssp.	Desert Riceflower															
Plantago cunninghamii	Clay Plantain															
Portulaca oleracea	Common Purslane															
Ptilotus nobilis ssp.																
Ptilotus gaudichaudii	Paper Fox-tail										0.01	0	DX			
Rhodanthe charsleyae																
Roepera apiculata	Pointed Twinleaf															
Rhodanthe uniflora	Woolly Daisy															
Salsola australis	Buckbush	0.2	1	M	0.05	1	D	1	1	M	0.1	1	VM	0.1	1	M
Sclerolaena cuneata																
Tetragonia tetragonoides	New Zealand Spinach															
Trianthema triquetrum	Red Spinach															
Tripogonella loliiformis	Five-minute Grass	0.01	1	D				0.01	1	M	0.01	1	MD	0.1	1	D
Cullen australis																
Leiocarpa sp.		0.1	1	F												
Tribulus terrestorus																
Sclerolaena cuneata											0.1	1	VM			
Senna art X cori																
Senna phylloidinea																
Sida corrugata		0.01	0	V												
Alterantha sp.																
Vittandea sp.		0.01	1	XF												
Boerhavia sp.		0.01	1	FI												
		Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage
	Total Species	**40**			**35**			**43**			**41**			**44**		
	Sum Cover	**19.17**			**29.81**			**58.4**			**19.04**			**13.6**		
	Proportion Recruiting		**60%**			**83%**			**56%**			**56%**			**66%**	
	Reproductive Number			**32**			**22**			**30**			**22**			**35**
	Proportion Reproductive			**80%**			**63%**			**70%**			**54%**			**80%**
	Total Perennial Species	**28**			**30**			**37**			**32**			**39**		
	Sum Cover Perennial	**16.79**			**29.53**			**56.36**			**18.09**			**13.37**		

Species Name	Common Name	PH22			PH23			PH24			PH25			PH27		
Abutilon fraseri ssp.														0.01	1	M
Abutilon halophilum	Plains Lantern-bush	0.01	1	M	0.01	1	FM				0.01	1	I			
Abutilon leucopetalum	Desert Lantern-bush															
Abutilon sp.	Lantern-bush							0.01	0	XD						
Acacia aneura complex	Mulga	3	0	V				6	1	V	0.01	0	V	3	1	V
Acacia oswaldii	Umbrella Wattle															
Acacia tetragonophylla	Dead Finish	3	0	V	0.5		X	5	0	DVS	0.2	0	V	5	1	VX
Acacia victoriae ssp. victoriae	Elegant Wattle															
Alectryon oleifolius ssp. canescens	Bullock Bush															
Amyema fitzgeraldii	Pincushion Mistletoe															
Amyema maidenii ssp. maidenii	Pale-leaf Mistletoe															
Arabidella trisecta	Shrubby Cress	0.01	0	V												
Aristida capillifolia	Needle-leaf Three-awn															
Aristida contorta	Curly Wire-grass	5	1	VD	2	1	XD	7	0	D	6	1	XM	3	1	XD
Aristida holothera	Tall Kerosene Grass															
Astrebla pectinata	Barley Mitchell-grass										0.01	0	V			
Atriplex quinii	Kidney-fruit Saltbush	0.01	0	F	0.1	1	MF	0.01	0	I	0.01	1	F	0.01	1	F
Atriplex vesicaria	Bladder Saltbush				3	1	F	20	1	V	7	1	F	4	1	F
Austrostipa sp.	Spear-grass															
Boerhavia dominii	Tar-vine															
Brachyscome ciliaris var. ciliaris	Variable Daisy															
Convolvulus remotus	Grassy Bindweed	0.01	0	V	0.01	1	DXV							0.01	0	DM
Cullen australasicum	Tall Scurf-pea				0.01	0	V				0.01	1	M			
Cynanchum viminale ssp. australe	Caustic Bush										0.02	0	F			
Cyperus alterniflorus	Umbrella Flat-sedge															
Digitaria brownii	Cotton Panic-grass	1	0	DX	0.1	1	XDM	1	1	XD	1	1	X	2	1	XD
Digitaria sp.	Summer-grass															
Diplachne fusca ssp. muelleri	Brown Beetle-grass															
Dissocarpus paradoxus	Ball Bindyi															
Einadia nutans ssp.	Climbing Saltbush	0.01	0	V	0.01	1	MI	0.5	1	V				0.01	0	V
Enchylaena tomentosa var. tomentos	Ruby Saltbush	0.05	1	VM	0.01	1	V	0.02	0	V				0.75	1	V
Enneapogon cylindricus	Jointed Bottle-washers	3	1	DM	1	1	XD				2	1	M	1	1	XD
Enneapogon nigricans	Black-head Grass															
Enteropogon acicularis	Umbrella Grass	0.01	1	DM				0.01	0	DX	0.1	1	MD			
Eragrostis setifolia	Bristly Love-grass							0.1	0	D	0.2	1	M	0.01	1	DM
Eremophila latrobei ssp. glabra	Crimson Emubush	1	1	F	0.5	0	MI							0.01	0	VFM
Eremophila longifolia	Weeping Emubush	0.05	1	V												
Eremophila rotundifolia	Round-leaf Emubush				0.5	0	V				1	0	V			
Eremophila serrulata	Green Emubush	0.1	0	V	0.1	1	M	0.01	0	V				0.01	0	V
Eucalyptus socialis ssp. socialis	Beaked Red Mallee															
Frankenia serpyllifolia	Thyme Sea-heath															
Glycine canescens	Silky Glycine													0.05	0	V
Goodenia fascicularis	Silky Goodenia															
Gunniopsis zygophylloides	Twin-leaf Pigface							0.01	0	V						
Leiocarpa leptolepis	Pale Plover-daisy				0.01	1	XV	1	1	V	0.01	0	D			
Leiocarpa websteri	Narrow Plover-daisy													0.01	0	D
Lotus cruentus	Red-flower Lotus															
Lysiana exocarpi ssp. exocarpi	Harlequin Mistletoe															
Lysiana murrayi	Mulga Mistletoe															
Maireana aphylla	Cotton-bush				0.1	0	V	0.5	0	V				0.5	1	V
Maireana appressa	Pale-fruit Bluebush															
Maireana astrotricha	Low Bluebush							0.5	0	V	0.5	0	V			
Maireana campanulata	Bell-fruit Bluebush															
Maireana coronata	Crown Fissure-plant															
Maireana eriantha	Woolly Bluebush															
Maireana georgei	Satiny Bluebush				0.7	0	X							0.01	0	X
Maireana integra	Entire-wing Bluebush	0.01	1	D	0.1	1	M	1	1	V	0.5	0	V	0.01	0	V
Maireana lobiflora	Lobed Bluebush															
Maireana pentatropis	Erect Mallee Bluebush															
Maireana pyramidata	Black Bluebush				4	1	V									
Maireana sedifolia	Bluebush															
Maireana spongiocarpa	Spongy-fruit Bluebush	0.1	0	V				0.1	0	XV						
Maireana trichoptera	Hairy-fruit Bluebush															
Maireana triptera	Three-wing Bluebush				3	1	V	1	0	V				0.01	0	V
Maireana turbinata	Top-fruit Bluebush															
Malvastrum americanum var. america	Malvastrum				2	1	MF	8	1	M	1	1	D	1	1	MR
Malva weinmanniana	Australian Hollyhock															
Marsilea drummondii	Common Nardoo							0.2	0	D				0.1	1	D
Minuria cunninghamii	Bush Minuria				0.01	1	M									
Minuria leptophylla	Minnie Daisy															
Neurachne munroi	Window Mulga-grass							0.1	1	M						
Osteocarpum dipterocarpum	Two-wing Bonefruit										0.01	0	V			
Oxalis perennans	Native Sorrel				0.01	1	FM									
Panicum decompositum var. decomp	Native Millet															
Pittosporum angustifolium	Native Apricot				3	1	M							0.01	0	M
Ptilotus obovatus	Silver Mulla Mulla	1	1	V	4	1	FX	2	1	V	2	1	V	1	1	V
Rhagodia spinescens	Spiny Saltbush				0.75	1	M	2	0	V	0.2	0	F	1	0	F
Roepera aurantiaca ssp. aurantiaca	Shrubby Twinleaf															
Roepera crassissima	Thick Twinleaf															
Santalum acuminatum	Quandong	0.1	0	D												
Santalum lanceolatum	Plumbush				0.1	1	B	0.25	0	V				3	1	VMI
Sclerolaena brachyptera	Short-wing Bindyi															
Scaevola spinescens	Spiny Fanflower															
Sclerolaena diacantha	Grey Bindyi	3	1	V	0.01	1	M	0.2	1	M				0.01	1	M
Sclerolaena divaricata	Tangled Bindyi	0.1	0	D	0.5	1	M	0.1	0	D	2	0	MD	0.1	1	M
Sclerolaena eriacantha	Silky Bindyi	0.01	0	I	0.01	1	M	0.01	1	M						
Sclerolaena lanicuspis	Spinach Bindyi				0.01	1	M	0.5	1	M	0.1	1	M	0.01	0	V
Sclerolaena obliquicuspis	Oblique-spined Bindyi															
Sclerolaena patenticuspis	Spear-fruit Bindyi															
Sclerolaena tricuspis	Three-spine Bindyi															
Senecio lanibracteus	Inland Shrubby Groundse				0.01	1	X									
Senna artemisioides ssp. filifolia	Fine-leaf Desert Senna													0.1	0	V
Senna artemisioides ssp. helmsii	Blunt-leaf Senna													0.5	0	X
Senna artemisioides ssp. X artemisio	Silver Senna	5	1	VX				0.01	1	R				1	1	V
Senna artemisioides ssp. X sturtii	Grey Senna													3	1	X
Setaria constricta	Knotty-butt Paspalidium										0.01	1	M			
Sida fibulifera	Pin Sida	0.1	1	M	0.2	1	M	0.8	0	D	1	1	I	2	1	D
Sida intricata	Twiggy Sida				0.01	1	X				0.01	0	M	0.01	0	D
Sida petrophila	Rock Sida				0.01	0	M				0.5	0	V			
Sida sp.	Sida															
Sida spodochroma					0.01	1	V									
Solanum petrophilum	Rock Nightshade															
Solanum quadriloculatum	Plains Nightshade	0.1	1	MF	0.1	1	FI	1	0	D	0.01	0	DF	0.01	0	D
Swainsona phacoides	Dwarf Swainson-pea															
Swainsona sp.	Swainson-pea				0.01	0	V									
Tecticornia pergranulata ssp.	Black-seed Samphire															
Tribulus eichlerianus	Eichler's Caltrop															
Vittadinia gracilis	Woolly New Holland Daisy															
Acacia sp.																
Rhagodia ulicina																
Minuria sp.																
Cullen sp.		0.1	0	D												
Amyema preissii														0.01	0	M
Crassula sp.											0.01	1	M	0.01	0	D
Alternanthera angustifolia	Narrow-leaf Joyweed							0.01	0	D						
Alternanthera denticulata	Lesser Joyweed															
Atriplex angulata	Fan Saltbush							0.01	0	D						
Atriplex crassipes var. crassipes																
Atriplex fissivalvis	Gibber Saltbush				0.01	0	M									
Atriplex holocarpa	Pop Saltbush										0.01	0	MD			
Atriplex spongiosa	Pop Saltbush															
Calotis hispidula	Hairy Burr-daisy										0.01	0	D	0.01	0	D
Centipeda thespidioides	Desert Sneezeweed							0.2	0	V	0.01	0	D	0.01	0	D
Dactyloctenium radulans	Button-grass							0.01	0	D						
Daucus glochidiatus	Native Carrot													0.01	0	D
Enneapogon avenaceus	Common Bottle-washers							1	1	I	0.5	1	M			
Enneapogon polyphyllus	Leafy Bottle-washers	0.01	1	F	0.2	1	XD	2	0	D	0.05	1	M	0.5	1	XD
Eragrostis dielsii	Mulka															
Eragrostis leptocarpa	Drooping Love-grass							0.01	0	D						
Eremophila glabra																
Eriachne sp.																
Erodium sp.	Heron's-bill/Crowfoot				0.01	1	V	0.01	1	V						
Euphorbia drummondii group					0.01	1	M				0.01	1	M			
Euphorbia tannensis ssp. eremophil	Desert Spurge				0.01	0	M				0.01	1	M			
Gnephosis arachnoidea	Spidery Button-flower				0.01	0	D	0.01	0	D	0.01	0	D	0.01	0	D
Gnephosis zygophilodes		0.01	0	D												
Heliotropium europaeum	Common Heliotrope															
Lepidium phlebopetalum	Veined Peppercress	0.01	0	D												
Pimelea simplex ssp.	Desert Riceflower															
Plantago cunninghamii	Clay Plantain										0.01	0	D			
Portulaca oleracea	Common Purslane										0.01	1	V			
Ptilotus nobilis ssp.																
Ptilotus gaudichaudii	Paper Fox-tail															
Rhodanthe charsleyae																
Roepera apiculata	Pointed Twinleaf															
Rhodanthe uniflora	Woolly Daisy															
Salsola australis	Buckbush	0.05	1	DM	0.2	1	M	0.01	0	D	0.2	1	DI	0.5	1	VX
Sclerolaena cuneata					0.01	0	M				0.01	1	M			
Tetragonia tetragonoides	New Zealand Spinach															
Trianthema triquetrum	Red Spinach				0.01	1	M				0.01	1	M	0.01	0	D
Tripogonella loliiformis	Five-minute Grass	0.01	1	M	0.01	1	MD	0.1	0	D	0.1	1	M	0.01	0	D
Cullen australis																
Leiocarpa sp.																
Tribulus terrestorus																
Sclerolaena cuneata																
Senna art X cori																
Senna phylloidinea											0.01	1	X	0.01	0	VX
Sida corrugata																
Alterantha sp.											0.01	1	M			
Vittandea sp.																
Boerhavia sp.																
		Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage	Cover %	Recruits	Life Stage
	Total Species	**31**			**48**			**43**			**45**			**47**		
	Sum Cover	**25.97**			**26.99**			**62.31**			**26.4**			**33.35**		
	Proportion Recruiting		**52%**			**75%**			**35%**			**53%**			**47%**	
	Reproductive Number			**21**			**39**			**27**			**35**			**35**
	Proportion Reproductive			**68%**			**81%**			**63%**			**78%**			**74%**
	Total Perennial Species	**26**			**38**			**32**			**28**			**37**		
	Sum Cover Perennial	**25.88**			**26.51**			**58.94**			**25.42**			**32.27**		

Appendix B - Floristic monitoring sites and panoramic photographs

Appendix B– Floristic Monitoring sites and panoramic photographs

Site ID	Vegetation Community	Type	Northwest corner	
			Latitude	Longitude
PH01	Chenopod Shrubland	Impact	29.71758652S	135.52812195E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH02	*Acacia* Woodland	Impact	29.71266747S	135.59562683E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH03	Chenopod Shrubland	Impact	29.69483376S	135.57168579E

Site ID	Vegetation Community	Type	North west corner Latitude	Longitude
PH06	Chenopod Shrubland	Control	29.74950446S	135.52990631E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH07	Mallee Woodland	Control	29.68139458S	135.57141113E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH10	Chenopod Shrubland	Impact	29.701975S	135.593815E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH11	Chenopod Shrubland	Control	29.73239136S	135.51400757E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH12	Chenopod Shrubland	Impact	29.72888651S	135.55339703E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH13	Chenopod Shrubland	Impact	29.74042511S	135.59289551E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH15	Mallee Woodland	Impact	29.69200524S	135.59357799E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH16	Chenopod Shrubland	Control	29.71088982S	135.61737061E

Site ID	Vegetation Community	Type	North west corner Latitude	Longitude
PH17	Chenopod Shrubland	Control	29.68013382S	135.52932739E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH18	Chenopod Shrubland	Control	29.68750763S	135.55403137E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH19	Chenopod Shrubland	Impact	29.71213913S	135.55108643E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH20	Chenopod Shrubland	Control	29.68099976S	135.61598206E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH22	*Acacia* Woodland	Impact	29.7509861S	135.55839539E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH23	Chenopod Shrubland	Impact	29.70710564S	123.55673218E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH24	*Acacia* Woodland	Control	29.76878357S	135.53315735E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH25	Chenopod Shrubland	Control	29.75158433S	135.52481204E

Site ID	Vegetation Community	Type	North west corner	
			Latitude	Longitude
PH27	*Acacia* Woodland	Control	29.75692749S	135.55107117E

Appendix D Tailing Storage Facility 2024 Operational Review (WSP Golder 2025)

BHP Prominent Hill Operations Pty Ltd

2024 Annual Operational Review

Prominent Hill Tailings Storage Facility

August 2025

Confidential

Question today
Imagine tomorrow
Create for the future

2024 Annual Operational Review
Prominent Hill Tailings Storage Facility

BHP Prominent Hill Operations Pty Ltd

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Rev	Date	Details
A	20 May 2024	Draft Prominent Hill TSF 2024 Annual Operational Review
B	6 June 2025	Draft Prominent Hill TSF 2024 Annual Operational Review – with BHP's data
0	10 July 2025	Final
1	7 August 2025	Final

	Name	Date	Signature
Prepared by:	Harry Lewis	7 August 2025	
	Steve Chen	7 August 2025	
Reviewed by:	Brad Tiver	7 August 2025	
Approved by:	Tom Gallasch	7 August 2025	

WSP acknowledges that every project we work on takes place on First Peoples lands.
We recognise Aboriginal and Torres Strait Islander Peoples as the first scientists and engineers and pay our respects to Elders past and present.

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1 Project background

1.1 General

BHP has engaged WSP to undertake the annual operational review of the Tailings Storage Facility (TSF) at the Prominent Hill operation as part of the Engineer of Record (EoR) roles and responsibilities. This review period covers 1 January 2024 to 31 December 2024, following an inspection of the facility undertaken on 3 February 2025.

Commentary in this report is based on the review of information and data provided by BHP, as well as observations made during the site inspection of the TSF.

1.2 Compliance with statutory requirements

One of the purposes of this annual review was to consider whether the TSF was operated in accordance with the relevant documentation during the review period and to provide commentary and advice for ongoing safety management and storage efficiency of the facility to report against the Outcome Measurement Criteria (OMC) outlined in the Program for Environment Protection and Rehabilitation (PEPR) [1]. BHP will submit the report to the Department for Energy and Mining (DEM), the principal mining regulator for South Australia.

The Prominent Hill IWL has maintained compliance with the relevant items in the PEPR during 2024. A summary of TSF compliance against the PEPR is provided in Appendix A.

1.3 Tailings management system documents

In addition to compliance with the PEPR, compliance with the Global Industry Standard on Tailings Management (GISTM) [2] is also now required, in accordance with the Tailings Management System (TMS) [3]. These standards have been used to inform the Stage 6 TSF design completed throughout 2024. A summary of key documents prepared during this process is included in Appendix B. These documents will continue to be updated as the knowledge base continues to evolve.

2 Background

2.1 Site overview

The Prominent Hill Tailings Storage Facility (TSF) is located inside a mine waste dump, approximately 650 km north-west of Adelaide, 100 km south-east of Coober Pedy and 150 km north-west of Roxby Downs in northern South Australia. The TSF is encapsulated within the waste rock dump (WRD) and the combination of the two is referred to as an Integrated Waste Landform (IWL).

The TSF is a singular circular cell within the IWL and contains tailings generated from the processing of ore from open pit and underground mines. The TSF has an average diameter of ~1,750 m and a storage surface area of approximately 243 ha. The containment embankments are constructed of waste rock and integrated with the southern WRD. A plan view of the site, showing the IWL and the general arrangement of the TSF and its ancillary facilities, is presented in Figure 2.1.

The Prominent Hill operation comprises an open pit (no longer being mined) and underground mine, a processing plant, as well as an accommodation village, airstrip, and associated infrastructure (not shown in Figure 2.1), covering an area of approximately 78.5 km^2. The mine is located on Mining Lease (ML) 62287 and commenced operations in August 2006.

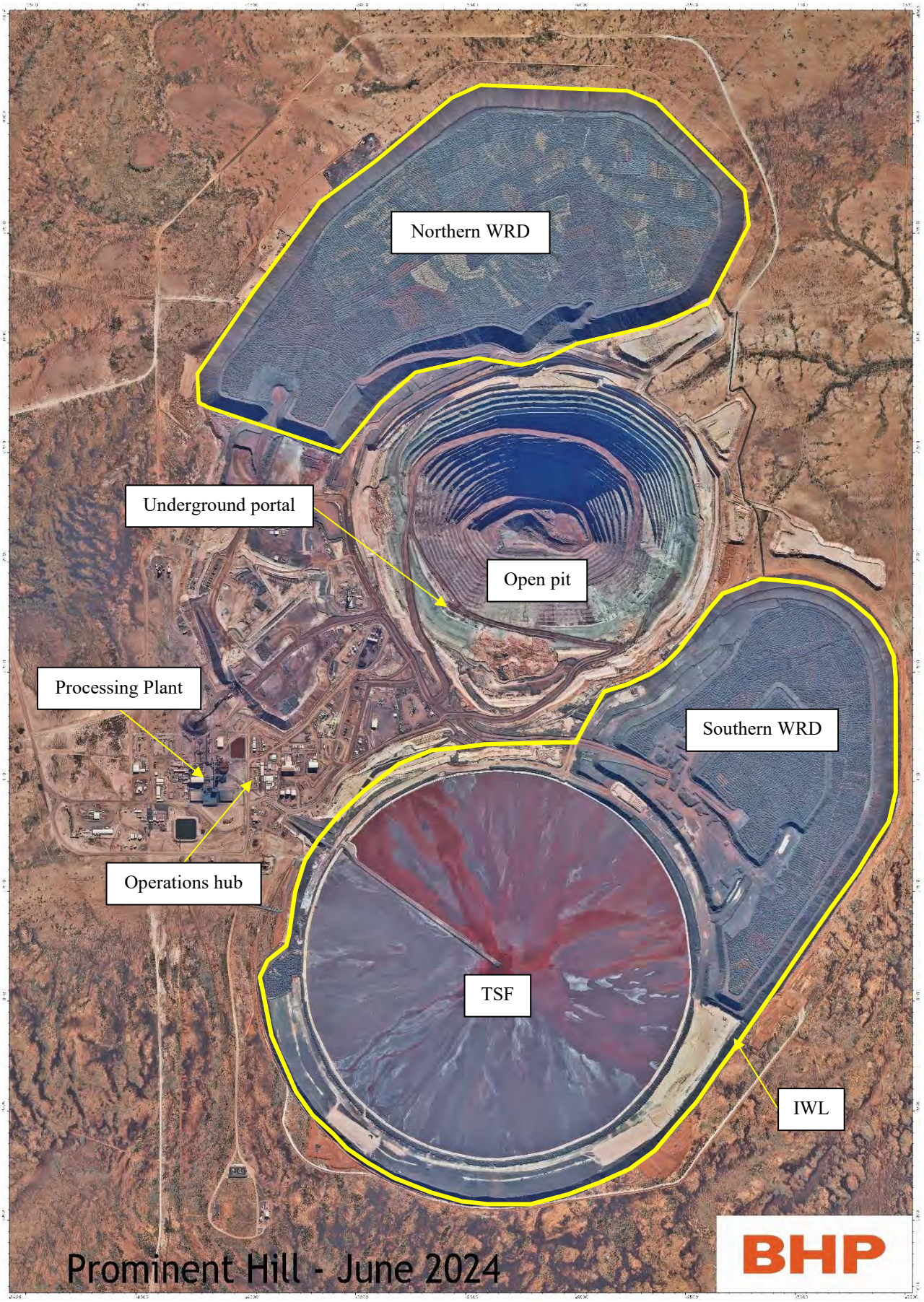


Figure 2.1 Prominent Hill site layout

2.2 Mining and TSF operations

2.2.1 Mineral processing

The Prominent Hill operation produces a high-quality copper-gold concentrate using a conventional crushing, grinding, flotation and dewatering circuit. Ore is sourced from underground workings using the sub-level open stoping technique and from remaining stockpile reserves on cessation of open pit mining in March 2018. Concentrate production in 2024 was about 90,000 tonnes, generating about 6.7 Mt of tailings across the same period. 1.9 Mt of tailings was stored underground as paste and 4.8 Mt of tailings remained on surface in the TSF.

2.2.2 Tailings delivery and water return

2.2.2.1 Tailings delivery

Tailings are pumped from a thickener located at the processing plant to the TSF via a hopper using variable speed underflow pumps. Tailings enter the facility via sub-aerial spigot discharge at spigot points spaced at 108 m intervals around the perimeter of the TSF. The existing arrangement has 25 spigots on two pipelines (a total of 50 spigots) that extend from the process plant to the top of the TSF embankment and around the southern and northern perimeter.

The spigots comprise tee-pieces with valves, which connect to a discharge pipe that is in turn inserted in a perforated conductor pipe (diffuser). The diffuser is founded on a geotextile mat to reduce erosion at the spigot points and reduce the spray back that can occur during windy conditions.

The tailings beach is managed through planned activation or deactivation of perimeter spigots to generally prevent channelling and facilitate the formation of uniform beaches.

2.2.2.2 Water return

The Prominent Hill operation is located in an arid environment where evaporation far exceeds rainfall by an annual average ratio of 23:1. Reducing raw water consumption and increasing water recycling are integral to the project design and ongoing water management. Water is returned from the TSF via a submersible pump located in the centre of the TSF. The pump is located within a slotted decant tower, which is surrounded by rock designed to provide some filtration and return clean water.

In addition to the main decant return system, a series of production wells have been installed along the decant access causeway. As the decant access causeway was constructed from waste rock during the initial stages, water can collect in this zone and hence the wells are in place to improve water return from the TSF. This is considered good practice, particularly in an arid climate.

2.3 Stage 6 design

2.3.1 Overview

Detailed design of the Stage 6 TSF embankment raise was undertaken throughout 2024. The detailed design process included the following stages:

1. Collating and interpreting data collected to improve the understanding of risks identified for the Stage 5 TSF layout.
2. Preparing Issued for Construction (IFC) documentation for Stage 6 construction.
3. Quantifying the risk profile for the current TSF layout and inferring a likely risk profile for the end of Stage 6 operations based on information that is currently available. This was undertaken by a Quantitative Risk Assessment (QRA).

Stage 6 construction commenced in March 2025. Given this is outside of the review period limited commentary on construction progress has been included in this document. More details relating to each design stage is presented in the following subsections.

2.3.2 Interpretation

The scope of the Stage 6 design was split into an interpretation stage to review new data included in the knowledge base and a design stage based on the interpretive process. Changes to the knowledge base included the following:

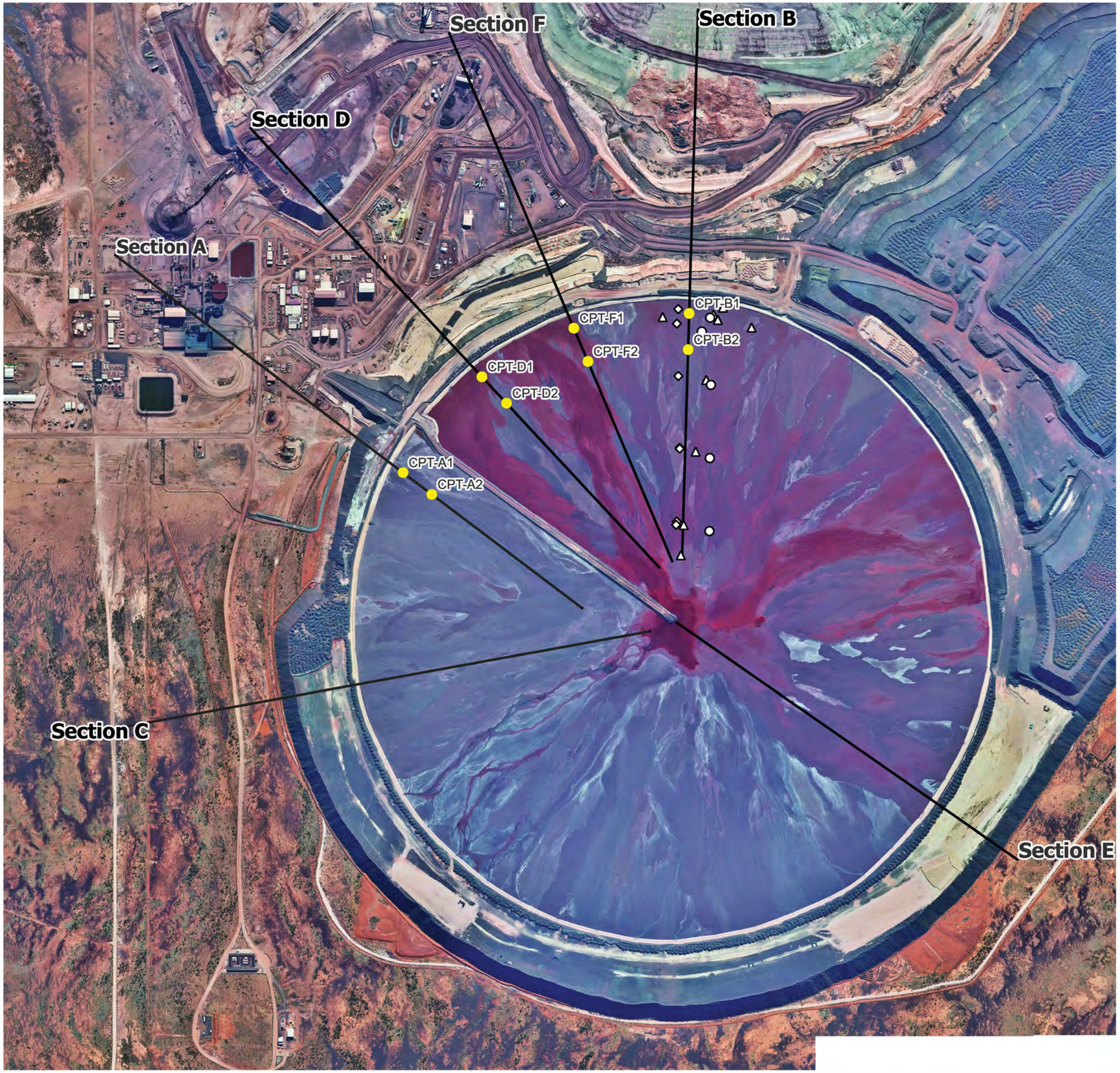
1. A Probabilistic Seismic Hazard Assessment (PSHA) to review the peak ground acceleration (PGA) of the design earthquake [4].
2. An assessment of climate change at the Prominent Hill TSF [5] and its affect on future rainfall and evaporation conditions.
3. An updated Dam Break Assessment (DBA) for the proposed Stage 6 TSF layout based on failure modes identified in the Stage 5 QRA [6].
4. The Consequence Category was revised to 'Extreme' due to the population at risk (PAR) and PLL associated with failure [7]. This change is still going through internal sign off within BHP.
5. A geotechnical investigation undertaken to address key risks identified in the Stage 5 QRA [8].
6. The following design items included in the Stage 6 design report [9]:
    a. An updated liquefaction assessment using historic undrained cone penetration test (CPTu) data due to Steps 1 and 4.
    b. Interpretation of data collected during the Stage 6 Geotechnical Investigation.
    c. Updated slope stability model inputs based on the interpretation above, resulting in updated FoS estimates for slope instability.

All cross-sections presented in Figure 2.2 other than Section A were considered during the Stage 6 design. Section A was excluded due to its proximity to Section D and based on FoS estimates from previous stability modelling.

The FoS presented in the design report are summarised in Table 2.1 for the Stage 5 and Stage 6 layouts, with Section B and Section D presented in Figure 2.3 and Figure 2.4 respectively. These values indicate the Stage 5 layout for Prominent Hill TSF was 'Avoidant' based on minimum FoS criteria outlined in BHP's Key Risk Indicator (KRI) document and the Stage 6 layout would meet 'Target' criteria.

Table 2.1 Deterministic FoS estimates for the Stage 5 and Stage 6 TSF layouts

Cross-section	Failure surface	Stage 5			Stage 6		
		Static	Undrained	Post peak	Static	Undrained	Post peak
Section B (pit alignment)	IWL failure (shallower)	2.47	1.96	1.94	2.08	1.56	1.30
	Pit related failure (deeper)	1.78	1.78	1.67	1.51	1.50	1.35
Section C (southern embankment)	-	4.29	4.06	4.18	3.35	3.00	3.00
Section D (processing plant alignment)	-	2.09	1.72	1.64	1.81	1.51	1.10
Section E (potential borrow)	-	3.65	3.36	3.27	3.18	2.74	2.58



Geotechnical Investigation

CPT - WSP (2019) ○

CPTu - WSP (2022) ◇

CPTu - Worley Parson (2016) △

Proposed Geotechnical Investigation

CPT Investigation ●

1:10000

1:10000

100 0 100 200 300 400 m

ISSUED FOR

INFORMATION

CLIENT

BHP Prominent Hill Operations Pty Ltd

CONSULTANT

wsp

DD-MM-YYYY	09/04/2025
DESIGNED	SC/LC
PREPARED	SC/LC
REVIEWED	HL
APPROVED	BT

PROJECT

Prominent Hill Tailings Storage Facility - Proposed Geotechnical Investigation 2025

TITLE

Locations of Borehole Drilling

PROJECT NO	DOC	REV.
PP217796	Proposal	1

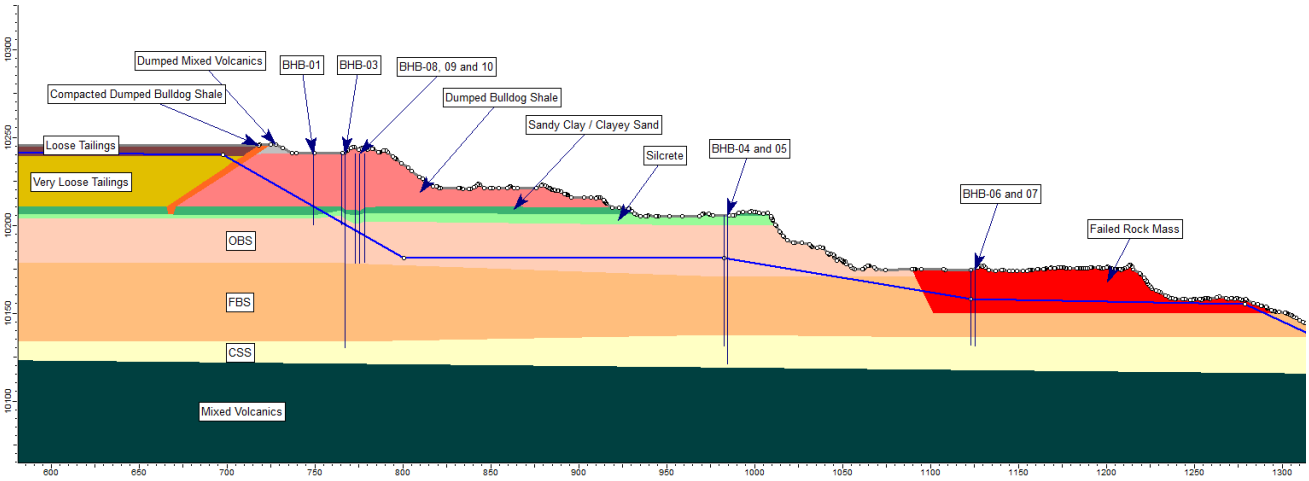


Figure 2.3 Stage 6 TSF layout at Section B (pit alignment)

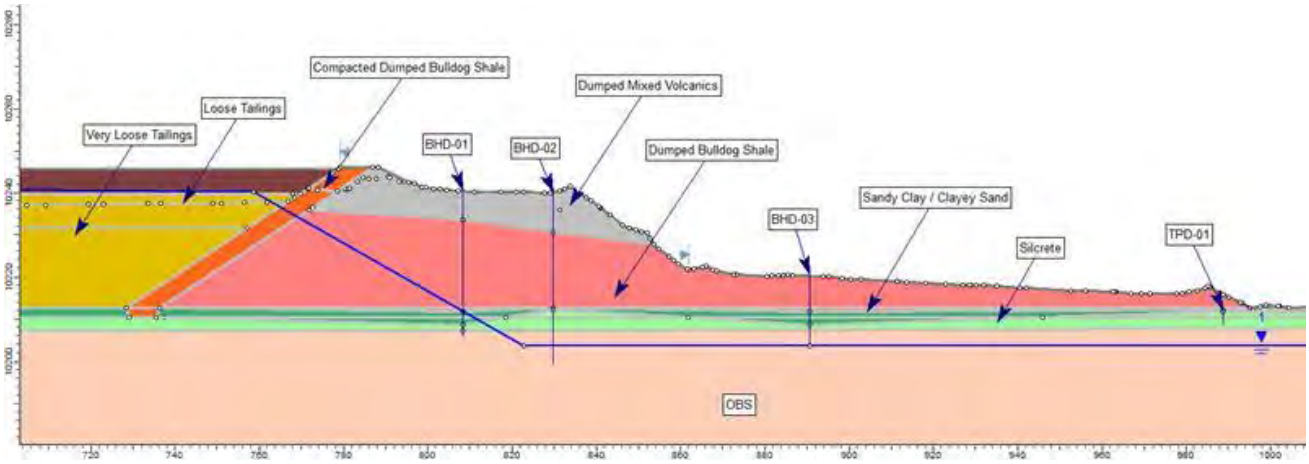


Figure 2.4 Stage 6 TSF layout at Section D (processing plant alignment)

2.3.3 Design

The design scope was limited to the earthworks for Stage 6, which included shaping portions of the Southern WRD within the Stage 6 footprint and placement of engineered fill to facilitate:

- Raising the perimeter embankments from a crest elevation at reduced level (RL) 10,241 m, up to RL 10,246 m using the downstream method.
- Revising the access ramp alignment and the intersection of the ramp, perimeter embankment and decant causeway.
- Raising the central decant causeway and decant tower.

The design considered the potential material borrow sources proposed by BHP for use during Stage 6 TSF construction.

2.3.4 Risk assessment update

A QRA workshop was completed on 17 December 2024 near the end of detailed design for the upcoming Stage 6 TSF embankment construction [10]. The assessment indicated that the TSF's risk profile currently sits below industry approved risk thresholds provided appropriate monitoring practices are maintained. Additional studies have been recommended to manage risks associated with the facility in accordance with the As Low As Reasonably Practicable (ALARP) principle [11].

3 Field observations and commentary

3.1 Overview

The TSF was inspected on 3 February 2025 by Brad Tiver, Engineer of Record and Tom Gallasch, Project Manager. Craig Goss, Responsible Tailings Facility Engineer of BHP, escorted WSP around the TSF for the inspection, along with David Goodchild, of BHP Prominent Hill. The inspection was undertaken travelling around the TSF perimeter in an anticlockwise direction in a slow-moving vehicle, with stops made intermittently as required. Overall, the TSF was considered to be in good condition.

Key observations made during the site visit and are outlined in the following subsections.

3.2 Tailings surface and perimeter embankment

3.2.1 Tailings discharge system

During the inspection, we stopped at a few spigots around the TSF to observe the discharge system. There had been recent deposition at Spigot 25 (refer Figure 3.1) and at the time of inspection there was discharge of tailings through spigot 15 on the southern embankment, shown in Figure 3.2. Delivery pipelines appeared in good condition, with no signs of leakage, corrosion or damage observed, as shown in Figure 3.3.

Figure 3.1 Recent tailings discharge from Spigot 25 at the southern embankment, facing north-west

Figure 3.2 Tailings beach with active deposition, southern embankment spigot 15

Figure 3.3 Discharge pipeline, southern embankment

3.2.2 Perimeter embankment

No deformation of the TSF embankment was observed at the time of the site visit, with a photograph of the southern TSF embankment shown in Figure 3.3. Infrequent cracking was observed near the upstream edge of the TSF embankment. It was discussed that these cracks would be remediated during Stage 6 TSF construction, which commenced in March 2025. No damp spots suggesting seepage were observed. No erosion was observed on the downstream slope of the IWL.

3.2.3 Beach development

Beach development appeared to be even and uniform on the northern embankment and for most of the southern embankment, as shown in Figure 3.4. The tailings beach generally appeared to be dry and had significant cracking at the surface due to desiccation of the tailings.

The tailings remining project had progressed on the southern portion of the tailings beach, as shown in Figure 3.5. Generally, the base of the excavation appeared to grade towards the decant pond, with a lip present at the upstream extent as shown in Figure 3.5. It is envisaged that temporary ponding may occur at this location during early stages of Stage 6 operation, unless drainage channels are excavated for water management.

Figure 3.4 Tailings beach showing desiccation cracks, southern embankment

Figure 3.5 Tailings near to the southern embankment being tilled and piled up

3.2.4 *Freeboard capacity*

At the time of the site visit, the Stage 5 operating freeboard was assessed to be consistently less than 1 m, with isolated instances where the tailings beach was approaching the limit of 0.3 m. Observations of the freeboard available for the southern and northern embankments are shown in Figure 3.3 and Figure 3.6 respectively. Stage 6 construction commenced on the southern embankment in March 2025.

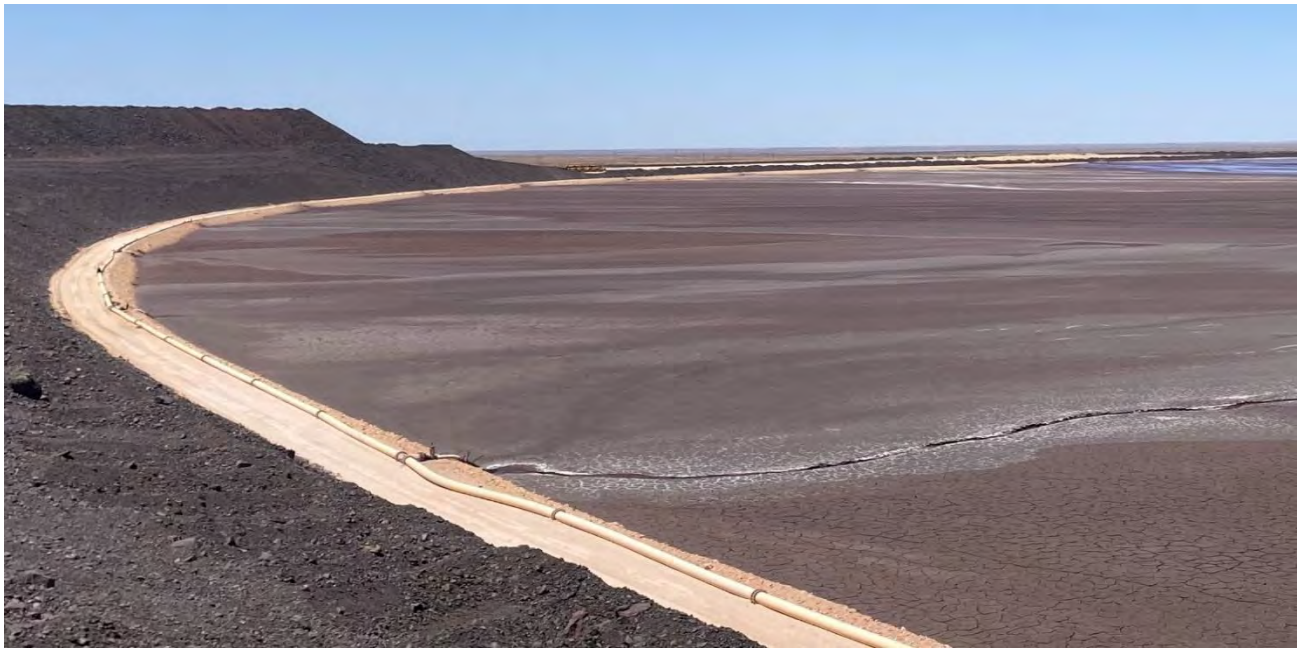


Figure 3.6 Freeboard capacity observation, northern embankment

3.3 Waste rock dump crest

Tailings won from the deposit during the remining works described in Section 3.2.3, were hauled to the southern portion of the waste rock dump crest and stockpiled for reuse as underground backfill, as shown in Figure 3.7. The stockpiled tailings remained at these locations longer than expected due to limitations surrounding the reuse of this material. WSP suggest that a plan to exhaust stockpiled material should be developed as soon as practicable to manage risks associated with dust.

Figure 3.7 Tailings stockpiles on the southern waste rock dump crest (photo taken 2 April)

The Rocket DNA drone was being commissioned on the crest of the WRD downstream of the southern embankment at the time of the site visit, as shown in Figure 3.8. The drone will be used to provide survey and aerial imagery throughout Stage 6 TSF operations.

Figure 3.8 Rocket DNA drone home location

3.4 Decant facility

3.4.1 Decant tower and causeway

The structure of the decant tower and the water return pipeline appeared to be in good condition, as shown in Figure 3.9. BHP replaced the finer drainage rock that was previously impeding the flow of water into the Decant Tower during 2023. BHP informed us that these works significantly improved the decant operation. The Decant Pond was relatively small at the time of the site visit (i.e., within the normal operating zone) and water was observed to be flowing into the Decant Tower, consistent with the design intent.

Cracking was observed at the surface of bulk fill placed to form the Stage 5 Decant Causeway. This cracking has previously been attributed to differential settlement due to consolidation of the tailings and is not considered an instability risk for the TSF. Nevertheless, WSP recommends that BHP continue to monitor the cracking development on the decant causeway.

Figure 3.9 Decant causeway tower

3.4.2 Decant pond

The decant pond was observed at the end of the causeway during the site visit, as shown in Figure 3.10. The pond was considered to be relatively circular in nature, with a radius of less than 100 m. Our calculations indicate a surface area of less than 3 ha based on these observations, which is comfortably within the normal operating zone based on the trigger values presented in Section 6.

Figure 3.10 Extent of decant ponding observed during the site visit

3.5 Horizontal bores

The horizontal bores and the collection sump located at the first bench of the southern pit wall were observed during the site visit. The bores extending from the pit wall and water pipelines appeared to be in reasonable condition at surface, as shown in Figure 3.11. Some damp spots and vegetation were observed on the face of the open pit, as shown in Figure 3.12.

Seepage collected by the horizontal bores is redirected to two sumps inside the open pit, one of which is shown in Figure 3.12. Seepage was observed to be flowing freely into both sumps at the time of the site visit, with no solids observed in flows collected. WSP is aware that BHP is installing flow meters on the horizontal bores, and installing additional bores to improve the seepage collection system.

Based on our technical studies in 2024 during development of the Stage 6 embankment raise, it is clear that the performance of horizontal bores key to managing risks associated with the stability of the TSF embankment. We recommend that BHP continues to monitor damp spots and vegetation growth on the face of the southern pit wall and review flow data collected by the horizontal bores. More information on flows collected at the horizontal bores is described in Section 4.1.2.

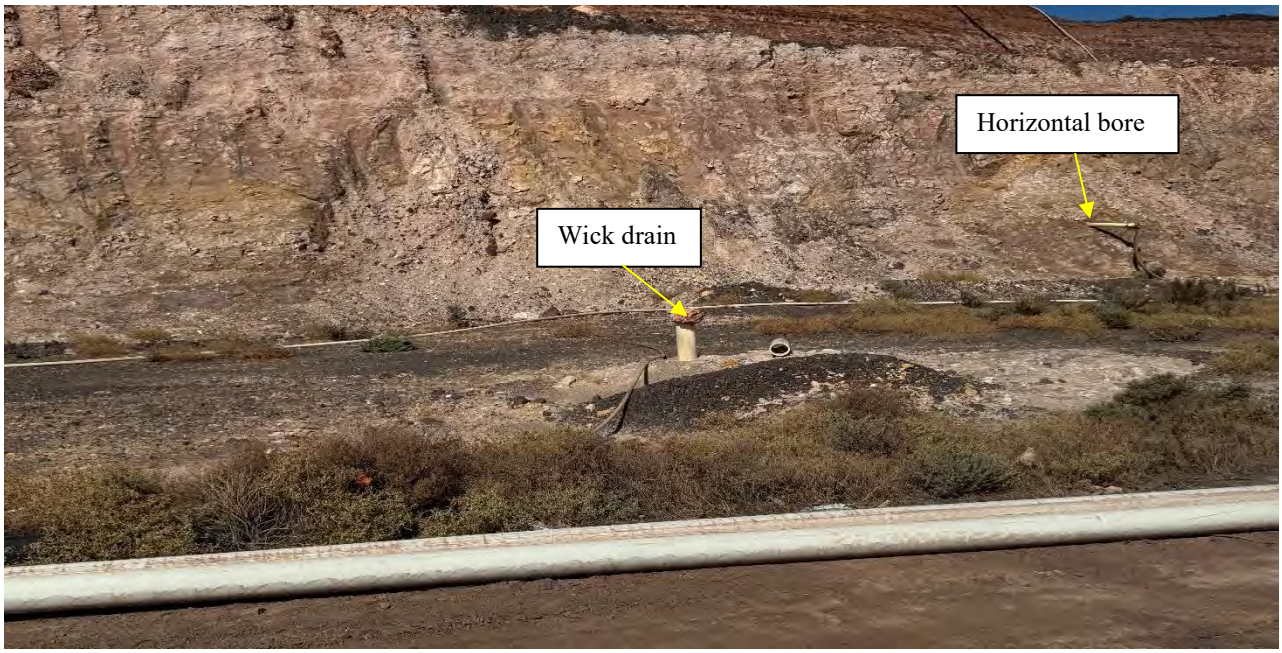


Figure 3.11 Example of a horizontal bore at the first bench of the open pit

Figure 3.12 Damp spots on the face of the open pit, near the seepage collection sump

3.6 Raw Water Dam and Enviro Dam

A visual inspection of the Raw Water Dam was conducted. We noted the following:

- The Raw Water Dam is quite full, and based on our discussions with BHP, is generally operated this way.
- The spillway on the Raw Water Dam is shown in Figure 3.13 and Figure 3.14. It is uncertain whether the spillway meets the design requirements of current ANCOLD guidelines and we recommend this should be checked. The recommendations in Section 7 suggest a staged approach to this check.
- A pipe was discharging water onto the crest of the Raw Water Dam, as shown in Figure 3.15. BHP indicated that the pipe was to be extended further into the pond.

A visual inspection of the Enviro Dam was conducted. We noted the following:

- Some white patches were observed on the ground surface on the western side of the pond, as shown in Figure 3.16. It appears that surface water has been flowing into the pond (right to left in the photograph), which BHP indicated was from various overflowing events in the processing plant.
- The Enviro Dam appeared to have well managed freeboard.

For both ponds, their respective liner systems have been in continual use since construction in 2007. An initial assessment of the remaining service live of the geomembrane liners in both ponds was undertaken by WSP in 2024 [12]. BHP has agreed to sample the liners at an annual frequency to continue to check the performance of the geomembrane to predict when a new lining system is required.

These ponds are important appurtenant structures to the TSF. Recommendations have been included in Section 7 to improve the understanding of these ponds within the water management system at site. The initial task is to use the survey drone (refer Section 3.3) to take monthly survey of the ponds for measurement of the water level, for use in an updated water balance, and to use as the basis of calculations for management of storm events.

Figure 3.13 Raw Water Dam spillway invert

Figure 3.14 Raw Water dam spillway chute

Figure 3.15 Discharge of water from the TSF into the Raw Water Dam

Figure 3.16 Condition of the Enviro Dam

3.7 Return water dam

The former return water dam, located to the east of the TSF, was decommissioned in 2018 but has been inspected during annual inspections completed since due to the limited documentation available relating to these works. The ponding observed during the 2023 annual inspection was not observed during the site visit, as highlighted in Figure 3.17. This suggests ponding observed during the previous site visit was likely due to surface water ponding and not TSF seepage.

Notwithstanding, we recommend continuing to observe the valve pit and the depression in the footprint of the decommissioned return water dam during future annual inspections.

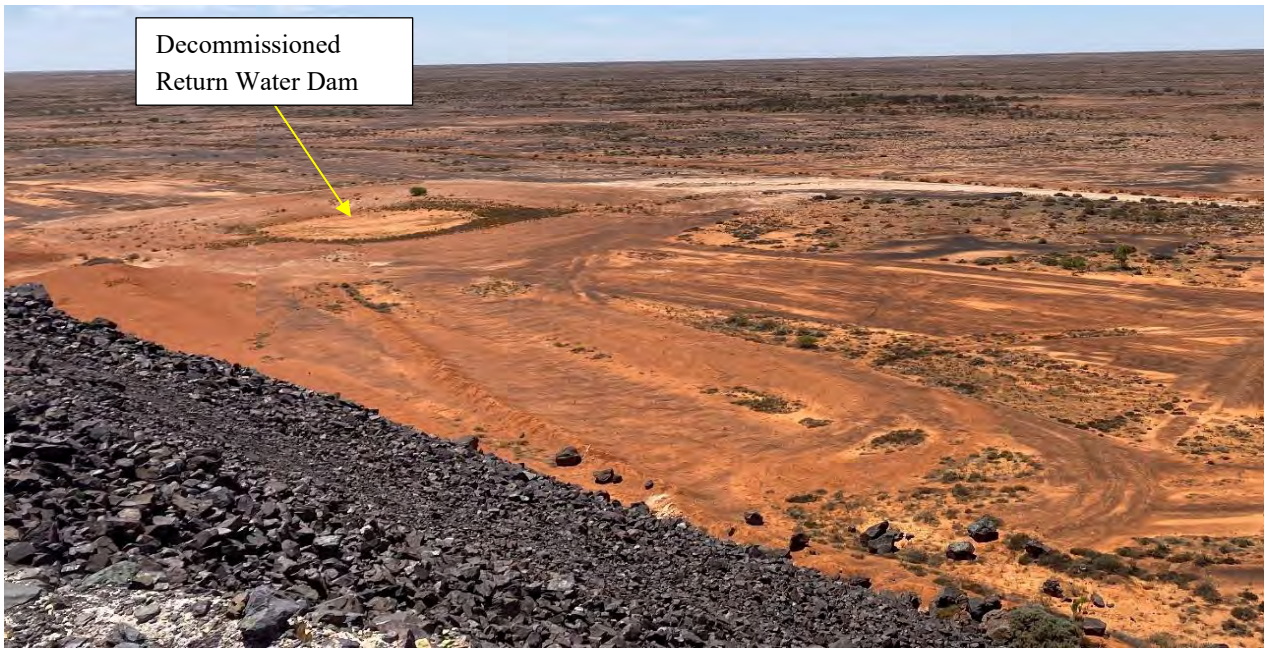


Figure 3.17 Former return water dam area

4 Monitoring data review

4.1 Water balance

4.1.1 Water recovery

BHP maintains records on the quantity of tailings deposited into the TSF, the density of the tailings slurry being deposited, and the volumes of water recovered via the decant and dewatering systems. This information, combined with the climatic data for the site, is used by BHP to create a model to estimate the water balance for the TSF. Data summarising the annual summary of the water balance results since 2020 is included in Figure 4.1, with a summary of monthly data presented in Figure 4.2 throughout 2024.

A key feature of the water balance is the performance of the water return system. BHP water recovery records for the period 2020 to 2024 is presented in Figure 4.3.

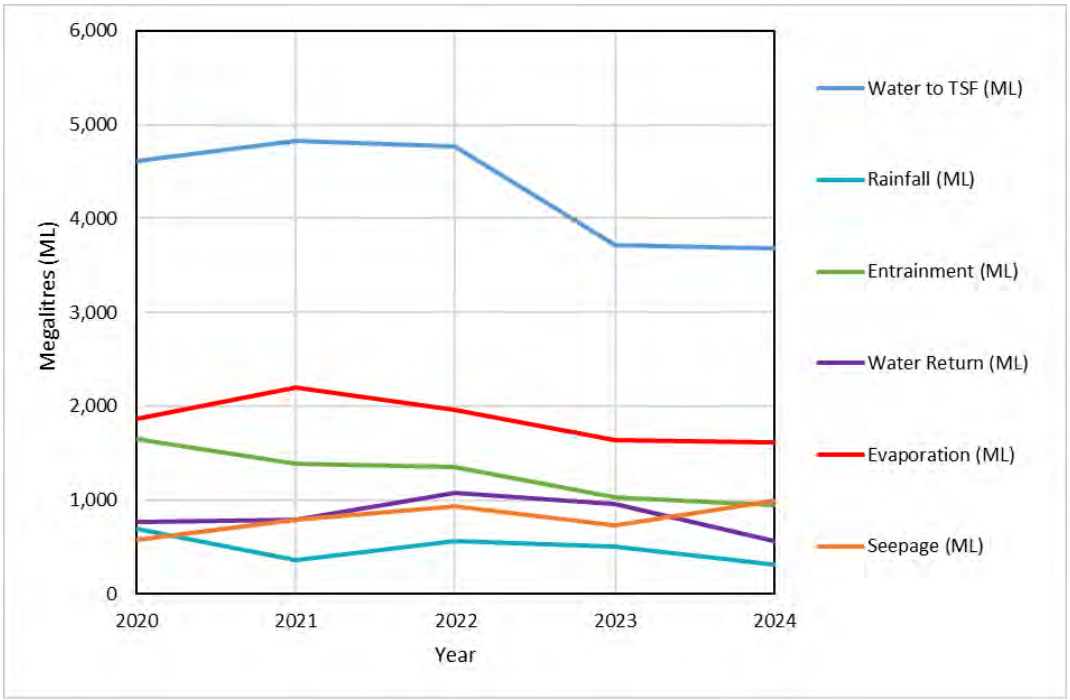


Figure 4.1 TSF annual water balance results 2020 to 2024 (source BHP)

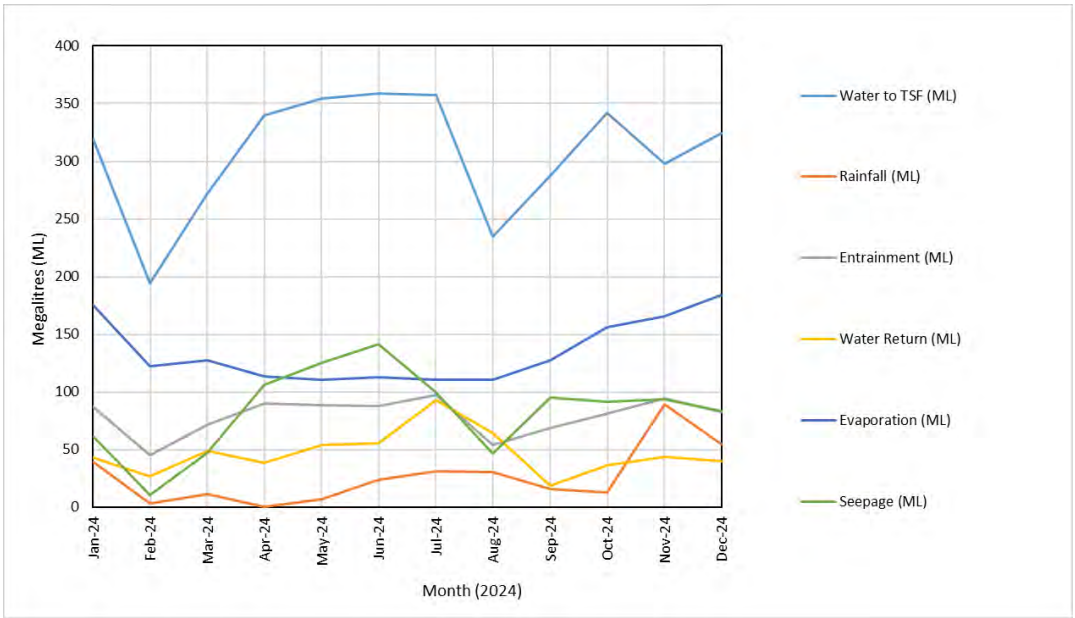


Figure 4.2 TSF monthly water balance results 2024 (source BHP)

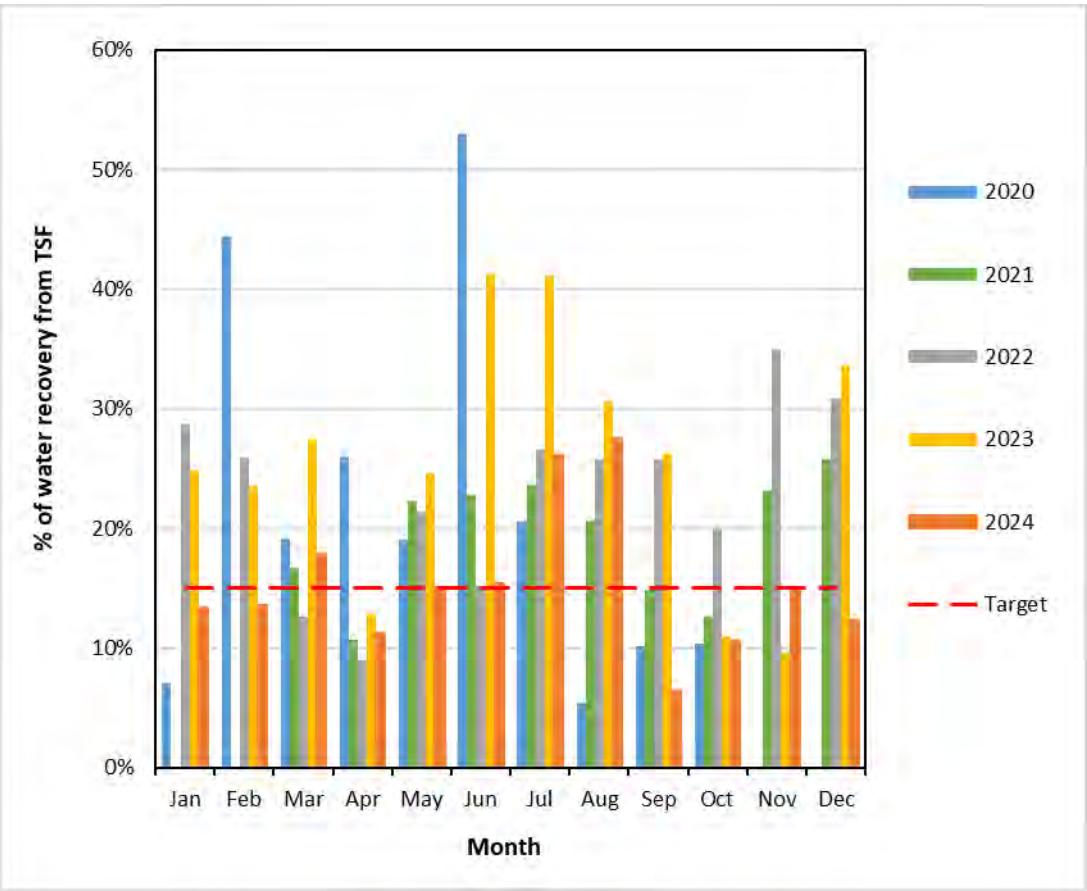


Figure 4.3: Monthly water recovery from the TSF 2020 to 2024 (source BHP)

4.1.2 *Water extracted from bores*

Water extracted from vertical and horizontal bores installed in the vicinity of the TSF is summarised in Table 4.1. These monthly average flow rates indicate the following:

1 Seepage collected by the horizontal bores was typically within the normal operating zone, with lower than expected seepage flows collected in December.

2 Seepage collected by the vertical bores varied throughout the year. The lower than normal seepage flows in the middle of the year are attributed to a failure of the dewatering system, advised by BHP. The system was temporarily fixed by resulted in flows that were not metered.

BHP advised that:

- The values presented in Table 4.1 have issues such as poor data recording and are potentially unreliable. For example, the 'zero' values for Rosegrove Road airwells are because of loss of power at the telemetry system.
- It has requested internal funding to install additional horizontal bores to complement the existing system.
- It intends to audit and overhaul the water balance recording following completion of Stage 6 embankment construction.

Table 4.1 Water extracted from vertical and horizontal bores throughout 2024

Location	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24	Sep-24	Oct-24	Nov-24	Dec-24
Days in month	31	28	31	30	31	30	31	31	30	31	30	31
Water in tailings (ML)	319	194	272	340	354	359	357	234	288	342	297	324
Flushing water (ML)	8.9	6.9	11.2	7.9	16.6	14.4	12.4	10.6	5.9	9.7	10.8	10.8
Rainfall volume (ML)	38.9	2.9	11.2	0	6.8	23.8	31.1	30.1	16.0	13	89	54
Decant return water (ML)	32.6	16.9	39.6	29.8	43.6	51.2	84.5	58.0	12.8	26.5	35.6	28.6
TSF Airwells	10.1	9.5	9.1	8.5	10.0	4.1	8.7	6.4	5.6	9.5	8.2	11.4
Rosegrove Road	2.5	2.7	1.9	0.0	0.0	2.6	0.0	0.8	2.4	1.4	0.6	2.0
South Pit	0.6	0.5	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.4	0.3
South West Pit	0.5	0.4	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.1	0.4	0.5
South East Pit	0.3	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.3
Horizontal Drains (ML)	29.3	30.6	29.6	28.8	27.9	32.5	28.1	29.1	27.7	27.3	27.3	17.8
TSF Airwells (Telemetry) flow rate per day	0.33	0.34	0.29	0.28	0.32	0.14	0.28	0.21	0.19	0.31	0.27	0.37
Combined vertical bores flow rate per day	0.13	0.14	0.09	0.03	0.03	0.11	0.02	0.04	0.10	0.06	0.05	0.10
Horizontal Drains (ML) flow rate per day	0.95	1.09	0.95	0.96	0.90	1.08	0.91	0.94	0.92	0.88	0.91	0.57

4.1.3 Water balance model

TSF inflows and outflows are summarised in Table 4.2 based on data provided by BHP including the percentage of seepage that is currently collected. A percentage of the uncollected seepage may be redirected to the Cadna Owie sands by vertical wick drains located to the south of the open pit.

A GoldSim water balance model was developed by WSP in 2024 [13] based on historic data and predicted future inflows. The model developed as part of these works was calibrated based on observations between 1 January 2009 and 31 December 2023 and used to predict the pond size and decant requirements until 2036, which was the predicted mine closure date at the time. The site water balance predictions acknowledged uncertainty associated with climate change.

A comparison between the site data and the GoldSim water balance modelling highlights that TSF inflows are typically driven by processing water reporting to the TSF. The main outflow in both modelling and in data captured was evaporation, while the magnitude of seepage flows estimated by modelling correlate well with the flow volumes presented in BHP's water balance spreadsheet.

We recommend undertaking a 2D seepage model to inform prediction of the seepage flux from the TSF and to revise the GoldSim water balance. The GoldSim water balance was undertaken for a specific reason (decant pond size) and should be modified in the future to include the elements indicated in the rows of Table 4.2.

Table 4.2 Summary of water balance data

Inflow	BHP 2024 water balance data		GoldSim water balance model (Expected 2024 flows)	
	Water inflow (Mm^3)	Water inflow (%)	Water inflow (Mm^3)	Water inflow (%)
Water in tailings slurry	3.68	89	2.52	98
Rainfall	0.32	8	0.06	2
Flushing water	0.13	3	-	-
Total	**4.12**	**100**	**2.58**	**100**
Actual outflow	**Water outflow (Mm^3)**	**Water outflow (%)**	**Water outflow (Mm^3)**	**Water outflow (%)**
Entrainment	0.95	23	-	-
Decant water return	0.56	11	0.18	7
Evaporation	1.62	39	1.44	56
Seepage collected (note)	0.46	11	-	-
Seepage lost (by net difference)	0.54	13	0.97	37
Total	**4.13**	**100**	**2.59**	**100**

Note, seepage collected by TSF bores has been included in this row.

4.2 Groundwater monitoring

4.2.1 Overview

Monitoring of groundwater at Prominent Hill comprises a combination of groundwater levels and water quality. A description of the data measured at each location is summarised in Table 4.3. Monitoring undertaken as part of environmental compliance is described in Section 4.2.2, while complementary systems intended to support dam safety are included in Section 4.2.3.

Table 4.3 Groundwater monitoring instrumentation installed relating to the TSF

Installation purpose	Instrumentation	Naming convention	Monitoring completed
Environmental monitoring	Vertical monitoring bores	TSF-A, TSF-B, etc.	Groundwater level & water quality
Pit stability monitoring	VWPs	P001(geological unit), P002(geological unit), etc.	Pore pressure measurements
Redirecting seepage	Vertical wick drains	Not known	Not applicable
Seepage collection	Horizontal bores	Not known	Seepage flows (refer Section 4.1.2)
Seepage collection	Vertical monitoring bores	Based on road installed	Seepage flows (refer Section 4.1.2)
IWL stability monitoring	Vertical monitoring bores	Borehole No. on cross-sections used to inform stability assessments (BHB-02, BHD-02 & BHC-02)	Groundwater level & water quality
IWL stability monitoring	VWPs	Borehole No. on cross-sections used to inform stability assessments (BHB-01, BHD-01, BHD-03 & BHC-01).	Pore pressure measurements

4.2.2 Environmental monitoring

4.2.2.1 Groundwater levels

Monitoring of groundwater at Prominent Hill consists of monitoring both groundwater levels and water quality at the locations shown in Figure 4.4. To monitor groundwater levels, six monitoring bores were installed around the TSF perimeter as part of the initial TSF construction works in 2008 (referred to as TSF-1 to 6), with four additional groundwater monitoring wells constructed since 2012 to supplement/replace the existing network. Data is currently recorded on a quarterly basis, and is typically collected in March, June, September, and December.

Historical water levels in the TSF groundwater monitoring bores date back to 2008 and are shown in Figure 4.5 to Figure 4.7 for monitoring bores TSF-1, 2 and A to E. Note that the dashed lines indicate the pre-2012 constructed bores that were taken out of service and replaced with new bores, indicated in the solid lines, where applicable. The following commentary is based on data collected to date:

1 Significant drawdown of the groundwater table is observed at TSF-2 following the implementation of water recovery at the southern pit wall. Commentary from BHP pit specialists suggest that a turkeys nest previously existed near the TSF-2 location but has since been decommissioned, with limited records available of decommissioning works. Fluctuations in groundwater have since been attributed to infiltration following rainfall through high permeability fill used as backfill.

2 Elevated groundwater levels were observed during Stage 5 construction at TSF-1. It is not clear if elevated groundwater levels historically coincided with construction of the northern embankment, or using the CL2 stockpile (immediately north-west of the TSF) as a source of fill during construction. About 35 mm of rainfall occurred in early October 2020, which may also have contributed to this increase noting site feedback that surface run-off collects in this area.

3 Similar trends of groundwater level development can be observed during 2024 across the monitoring data. A slight decrease is shown in TSF-S2 and TSF-A groundwater level, with less than 0.2 m decrease. Groundwater level at TSF-D has kept increasing with a similar trend since 2013 to approximately RL 10,119 m.

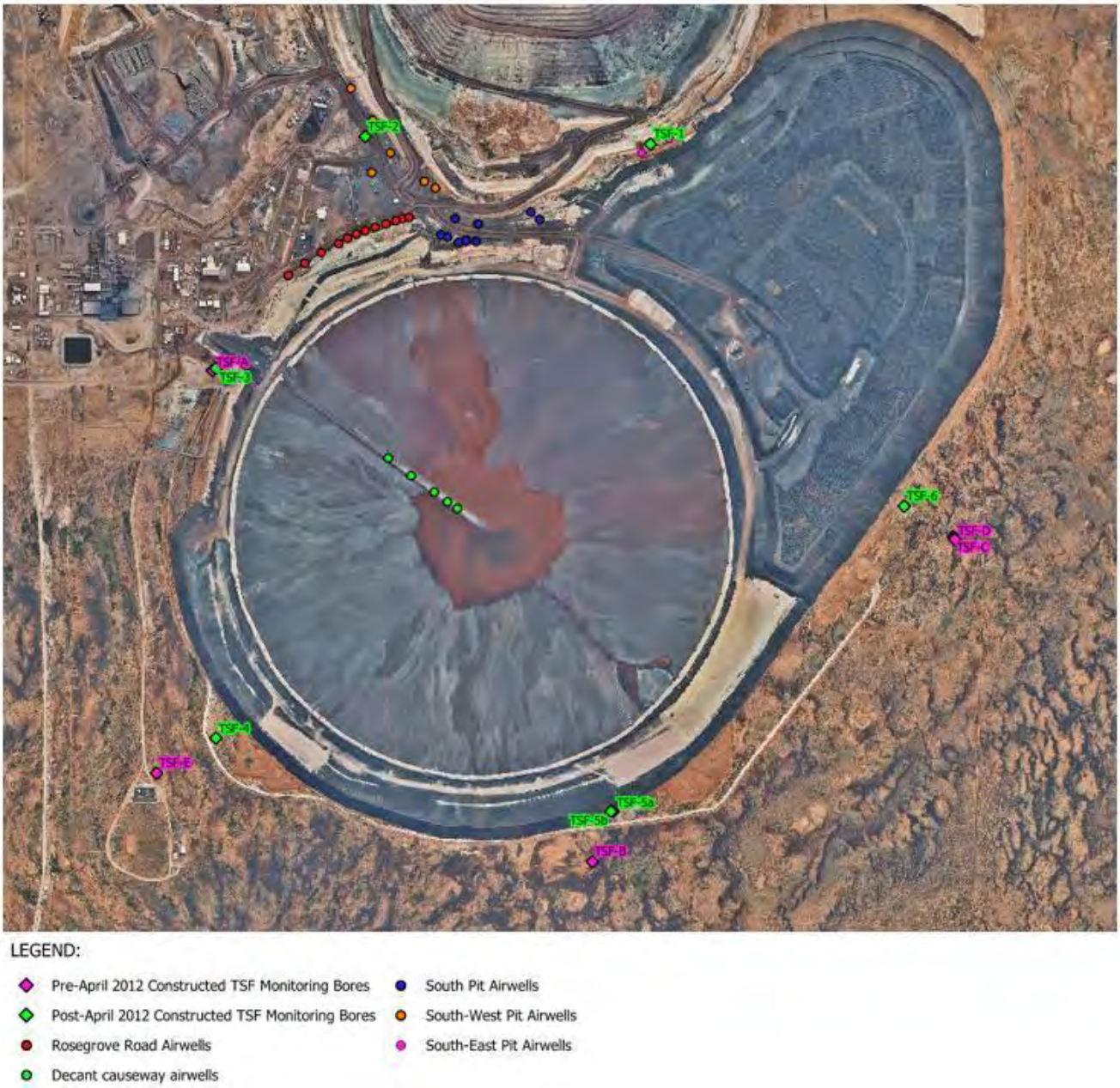


Figure 4.4 Locations of monitoring bores and dewatering wells at Prominent Hill TSF

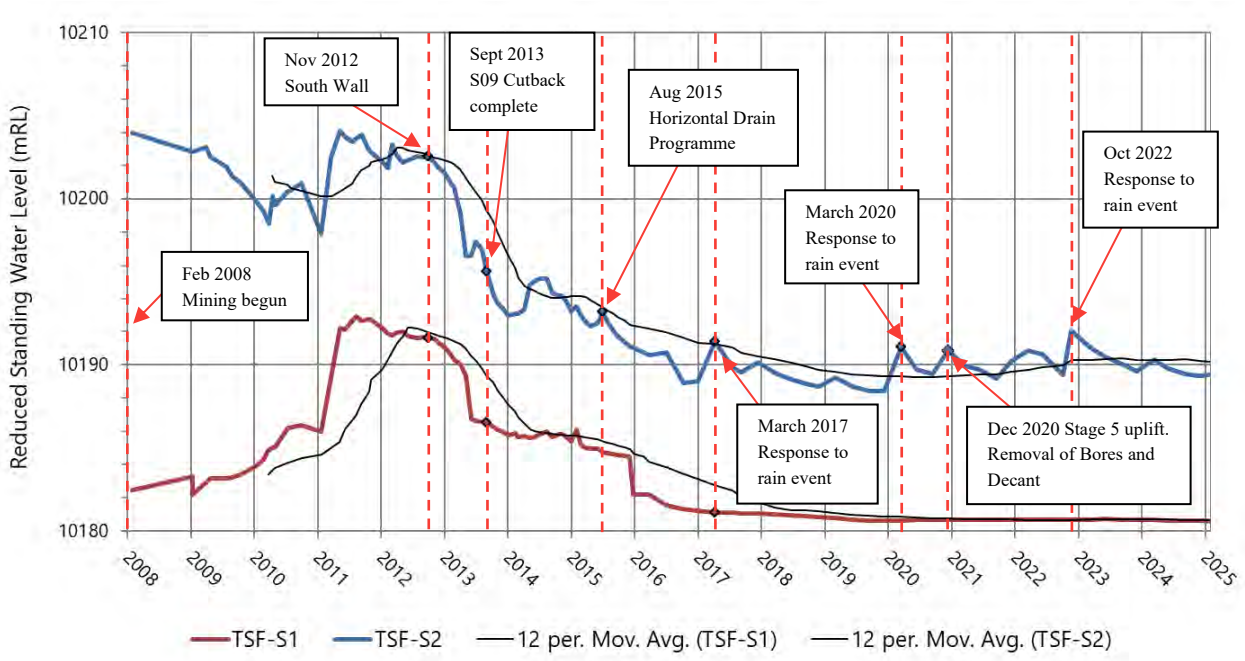


Figure 4.5 Historical water levels in groundwater monitoring bores TSF-1 & TSF-2 (Source BHP)

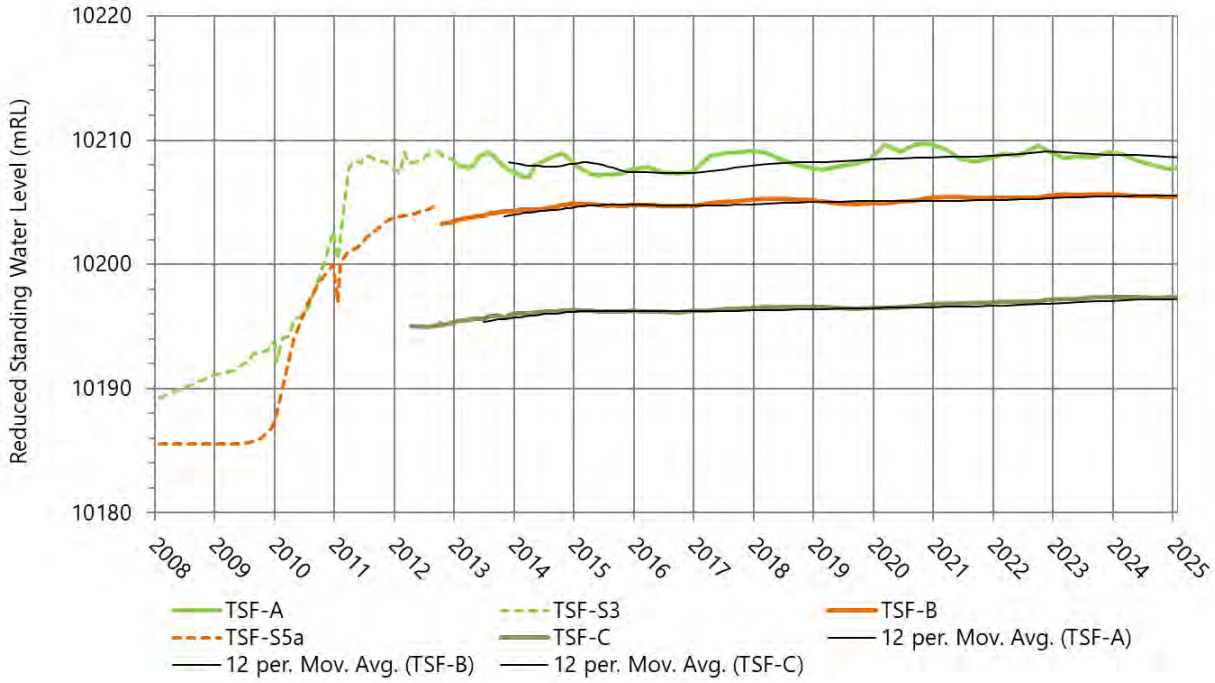


Figure 4.6 Historical water levels in the groundwater monitoring bores TSF-A, TSF-B, TSF-C, TSF-3, & TSF-5a (Source BHP)

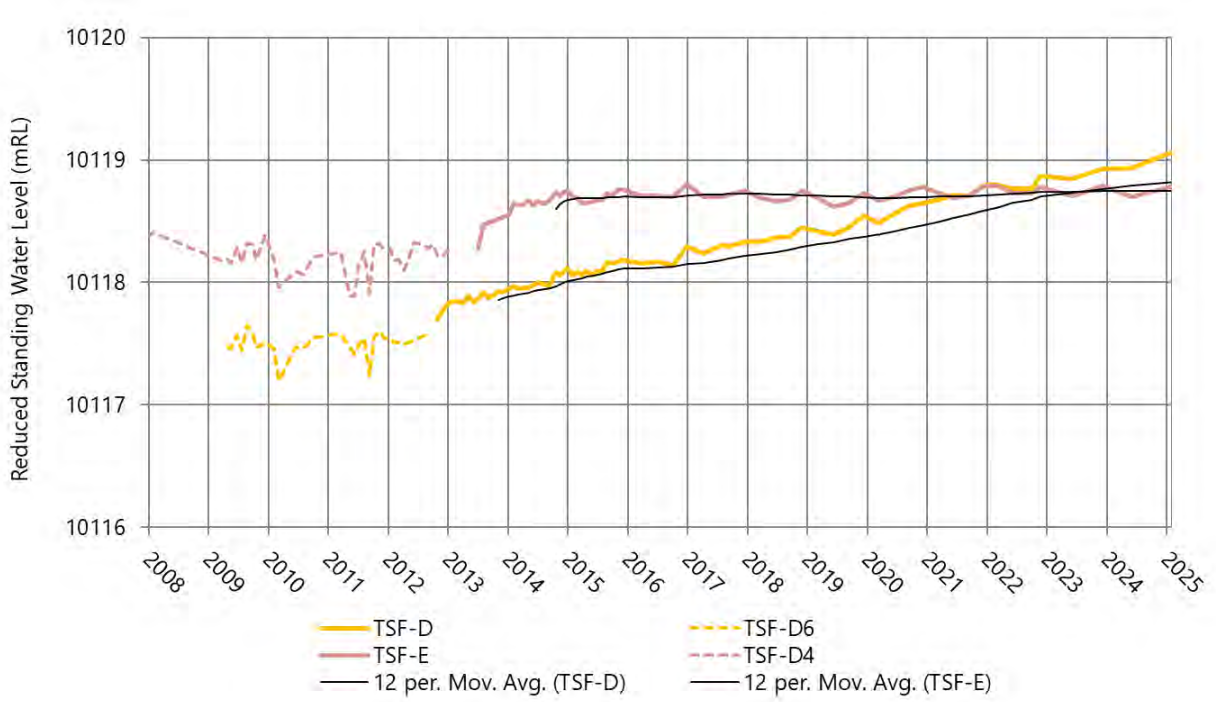


Figure 4.7 Historical water levels in groundwater monitoring bores TSF-D, TSF-E, TSF-D4 & TSF-D6 (Source BHP)

The groundwater bores TSF-D and TSF-E are screened in the basement rock units, ~80 m beneath the TSF. The data plotted in Figure 4.7 uses a different scale for this reason.

4.2.2.2 Groundwater quality

BHP undertakes groundwater sampling and analytical laboratory testing from monitoring bores TSF-A, B, C, D, E, 1 and 2 to measure the concentration of sodium, copper, and pH levels. Data is collected quarterly or six-monthly, and results from March, June, September, and December 2024 were reviewed in conjunction with data from previous years.

Graphs documenting chemistry data collected are provided in Appendix E and repeated in Figure 4.8 to Figure 4.12. Specific assessments have previously been undertaken due to the fluctuation in copper and sodium concentrations observed at TSF-A. A report by LWC indicated that the longer-term trends for copper and sodium appear to be associated with rainfall infiltration rather than seepage from the TSF or issues attributed to well installation [14]. WSP have added rainfall data from the Coober Pedy Airport onto Figure 4.8 and Figure 4.11, with a box annotated over rainfall events that have occurred during the period of variability. BHP's representatives have also suggested fluctuations observed in data collected at TSF-A could be attributed to the proximity of the washdown bay.

Data is still being collected irrespective of these findings. Groundwater samples could be used to improve confidence in TSF stability due to changes in the salinity of surficial soil units.

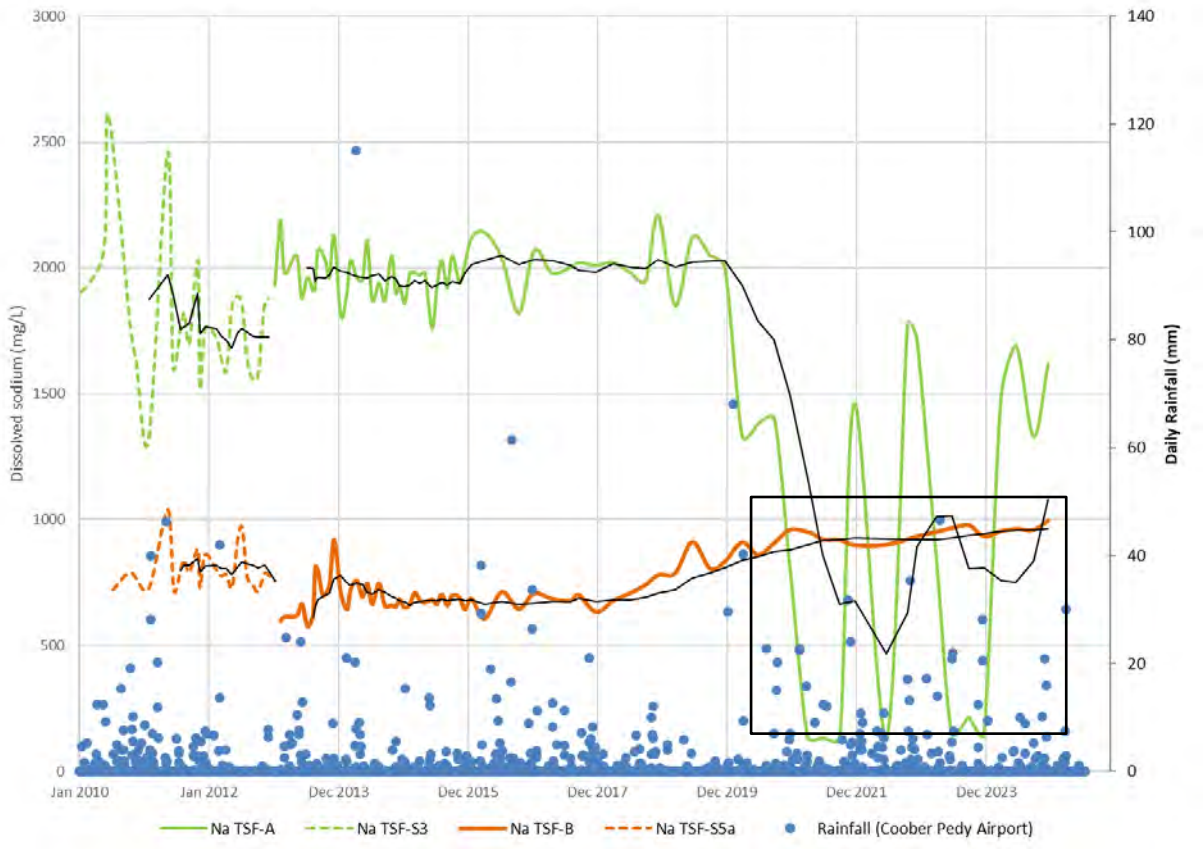


Figure 4.8 Historical levels of dissolved sodium in TSF-A & B (Source BHP)

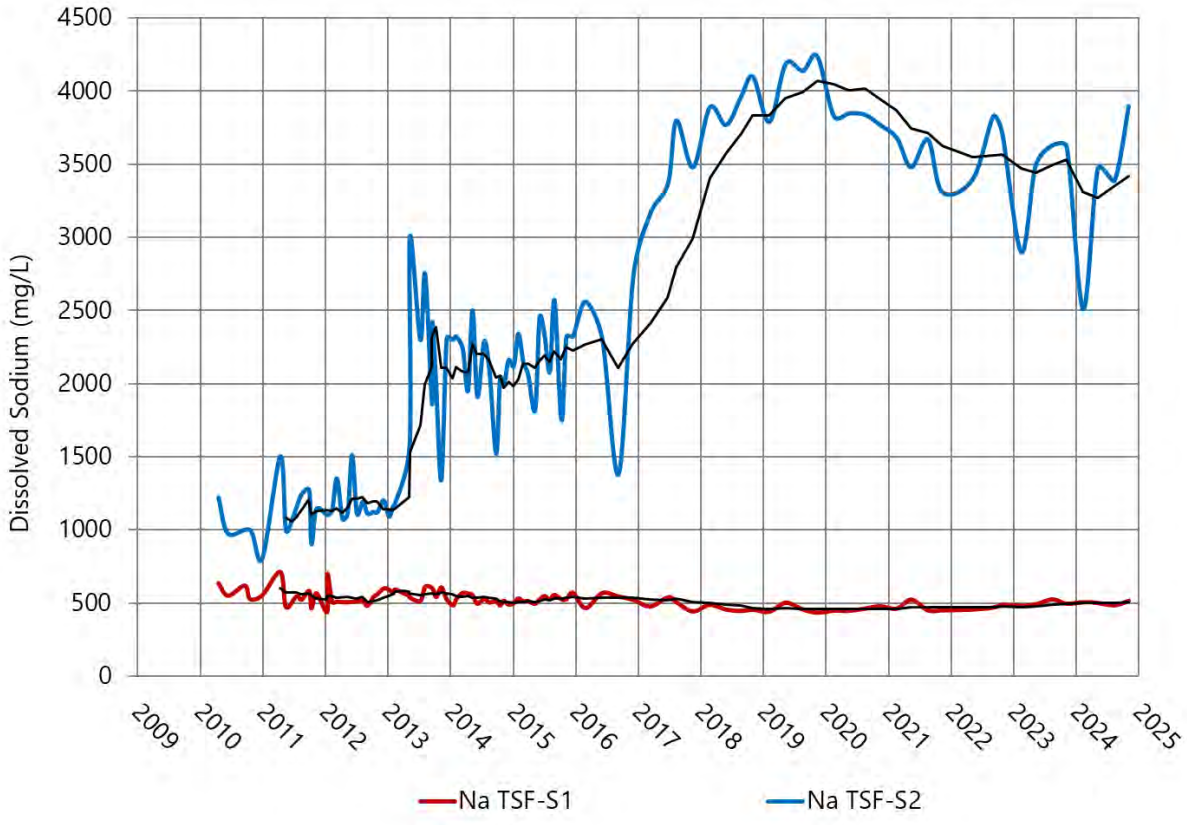


Figure 4.9 Historical levels of dissolved sodium in TSF-S1 & S2 (Source BHP)

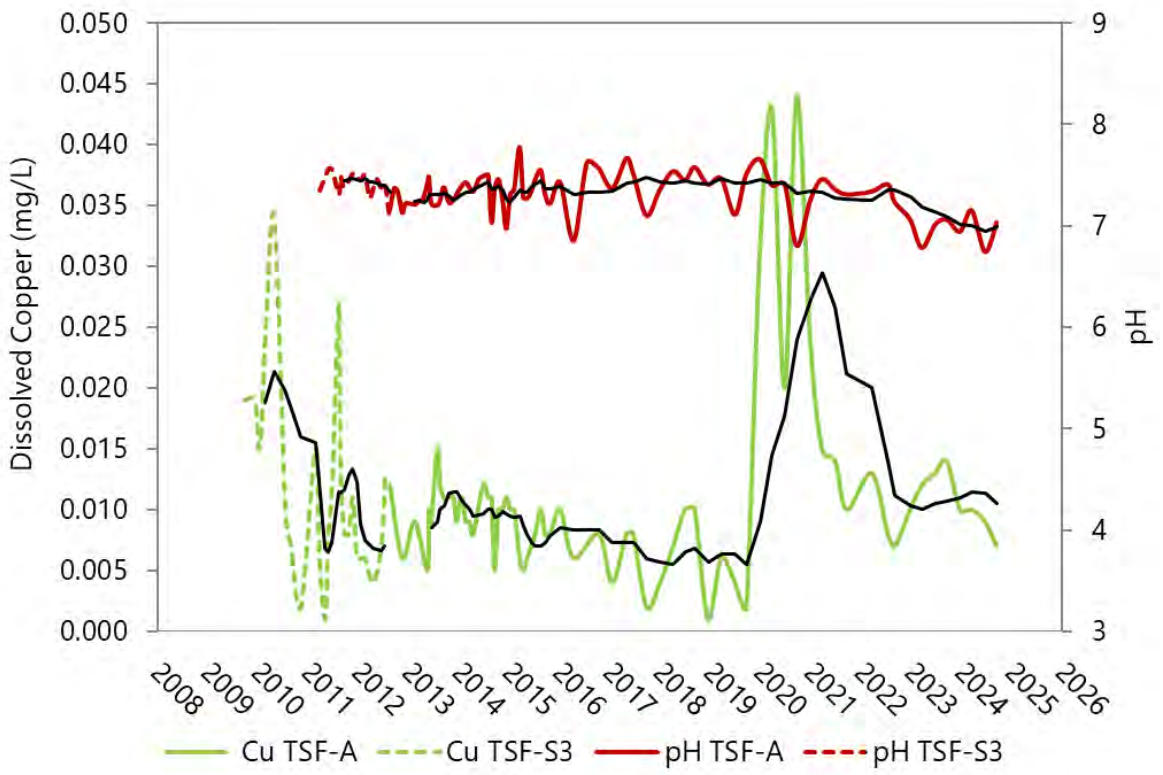


Figure 4.10 Historical levels of dissolved copper and pH in TSF-A (Source BHP)

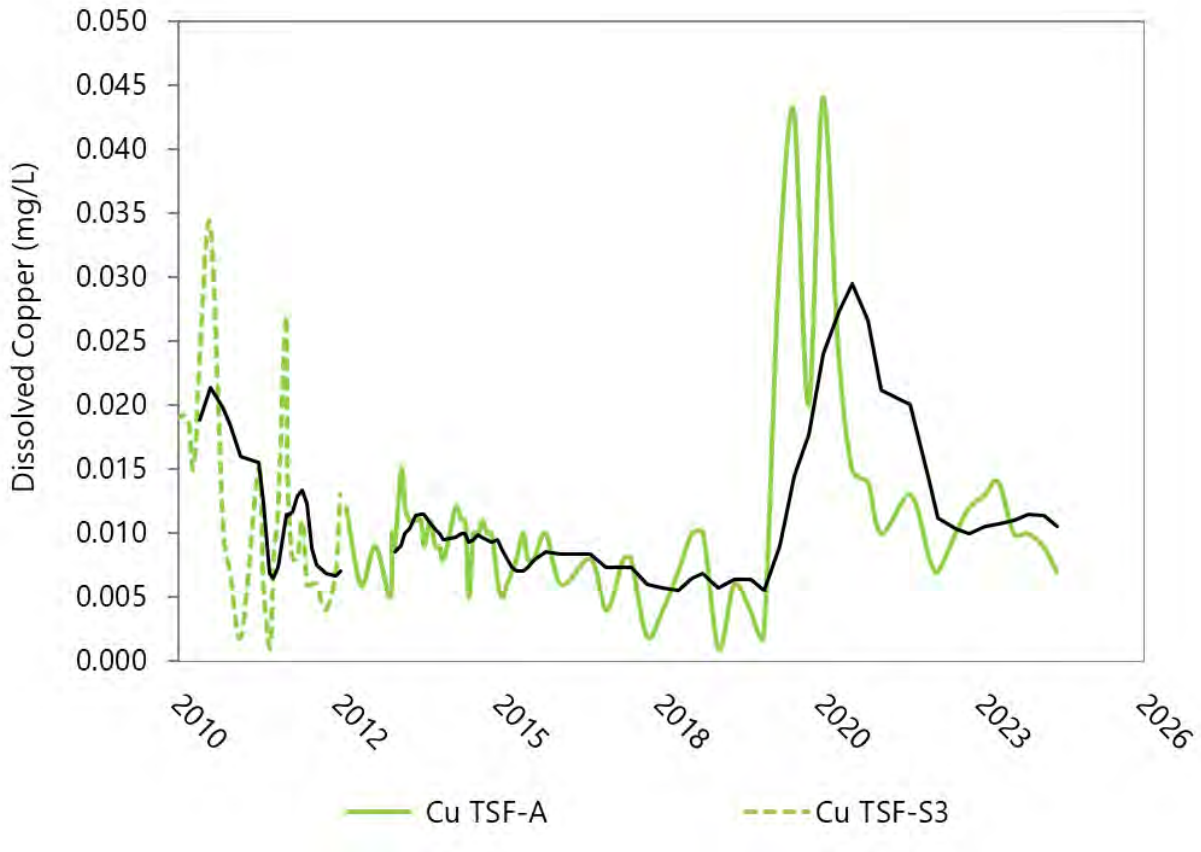


Figure 4.11 Historical levels of dissolved copper at TSF-A (Source BHP)

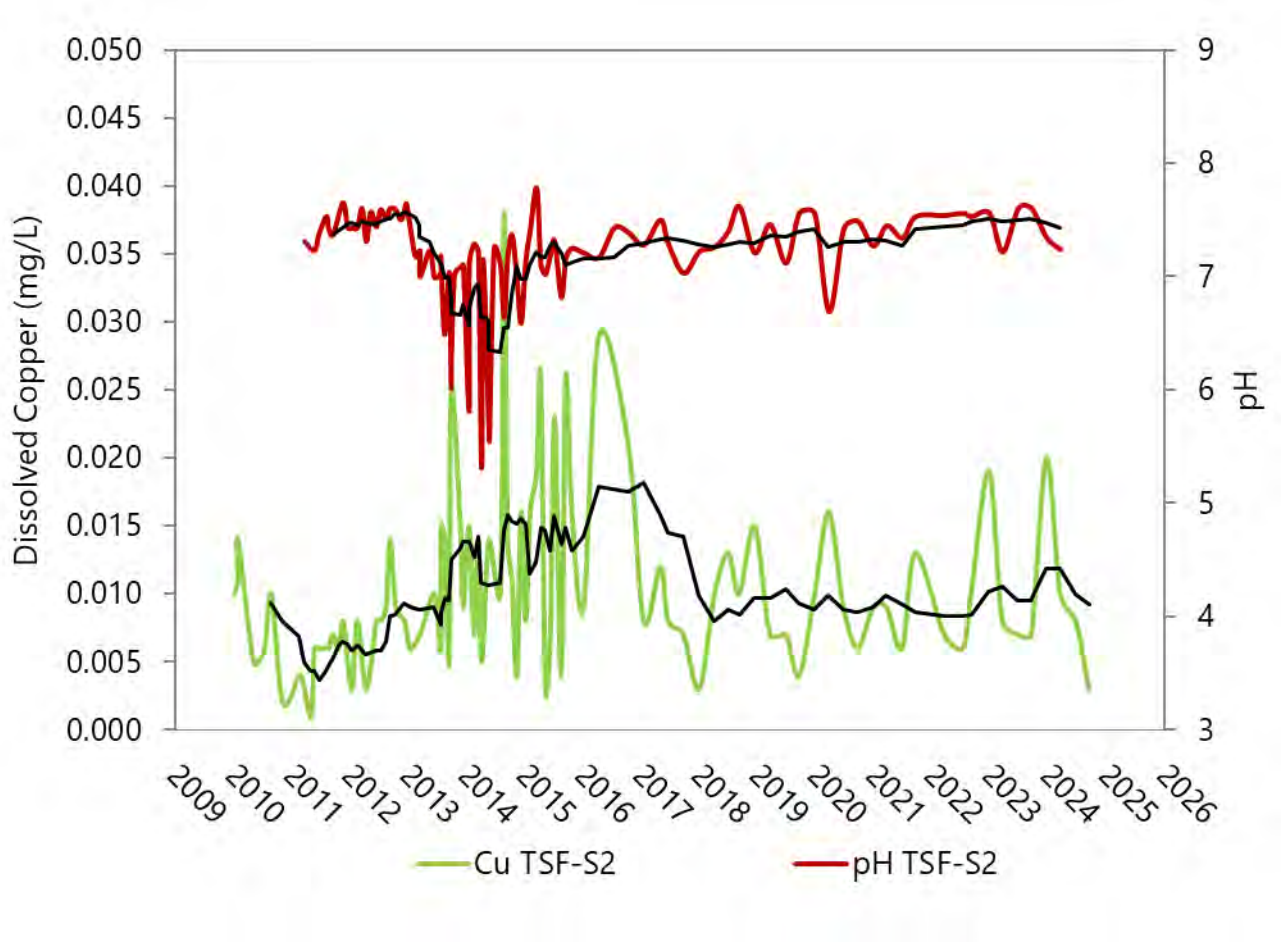


Figure 4.12 Historical levels of dissolved copper and pH in TSF-2 (Source BHP)

4.2.3 *Pore pressure data*

Pore pressure data from instruments installed during the Stage 6 Geotechnical Investigation is now available in BHP's Beyond Monitoring system, with test locations shown in Figure 4.13. Data available up to 7 February 2025 has been exported based on the geological unit the instrumentation was installed in and is available in Appendix C-1.

Figure 4.13 VWP borehole locations

The current pore pressure and maximum pressure measured by each instrument has been documented in Appendix C-2 and reviewed against trigger values developed for the Stage 6 TSF embankment. This data indicates that only the instrument installed in the Oxide Bulldog Shale at P008 triggered a level outside of the normal operating zone based in October 2024, which is in the troubleshooting zone in the Trigger Action Response Plam (TARP). BHP is following the action and response plan in the OMS manual.

4.3 Displacement

4.3.1 Overview

Displacement monitoring is implemented to identify early stages of movement associated with either the TSF embankment or open pit. The monitoring considered in this annual review is described below:

1. Displacement prisms installed on the walls of the open pit.
2. Displacement prisms monitoring the downstream slope of the Southern WRD.
3. In place inclinometers installed at two locations on the southern wall of the open pit.
4. Manual inclinometer data collected at the crest of the Southern WRD encompassing the TSF.

The various sources of raw displacement data are included in Appendix D.

4.3.2 Open pit

Displacement monitoring prisms have been installed on the face of the open pit adjacent to the TSF, with data collected at more than 500 prisms used by BHP's Pit Specialists to generate the plots presented in Figure 4.14 and Figure 4.15. The following commentary relates to the development of these plots and observations from the data collected:

1. Movement of less than 0.5 mm per day is considered negligible by BHP.
2. The majority of prisms have moved between 0 mm to 15 mm over the year, which is less than the limit described above.
3. Two zones of relatively high movement are visible in Figure 4.14, near the access road at the top of the pit (south of the pit) and the red zone on the western face of the pit. Both have been attributed to loose instruments that may have been knocked during the period. BHP advised that the zone to the south of the red coloured area is anomalous movement and will be a target area for future horizontal drainage bores.
4. The trend of inwards movement at the pit is described as consistent with historic observations.

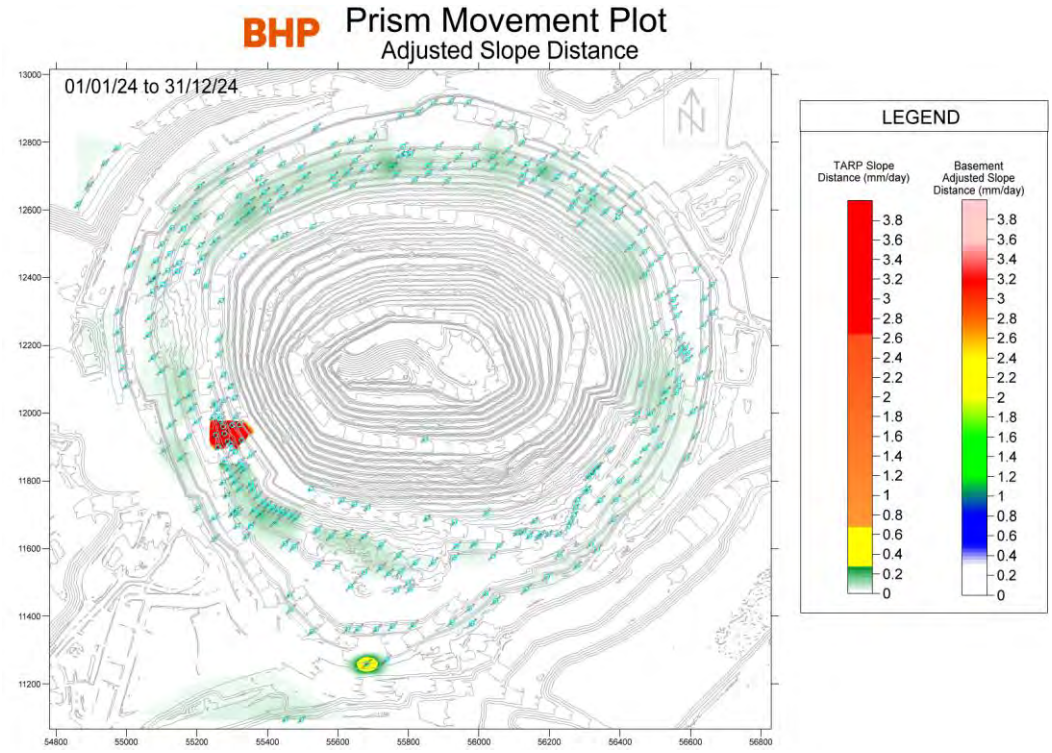


Figure 4.14 Average open pit movement between 1 January and 31 December 2024 (Source BHP)

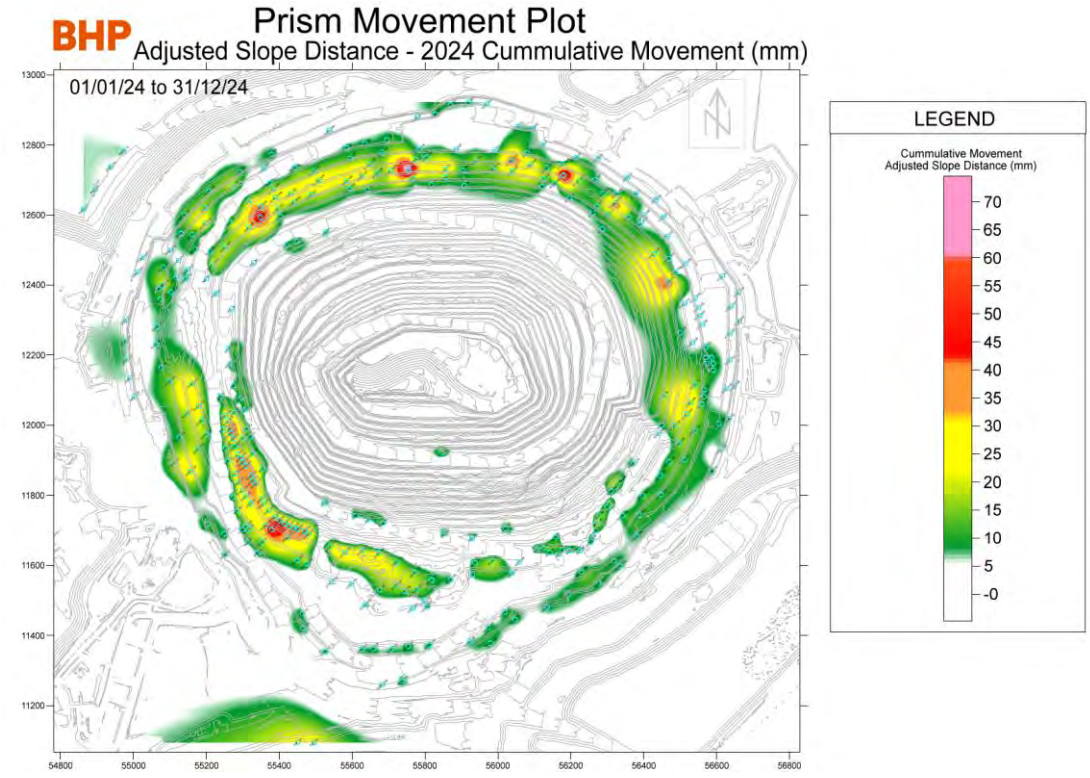


Figure 4.15 Cumulative open pit movement between 1 January and 31 December 2024 (Source BHP)

4.3.3 *Perimeter embankment movement monitoring*

Displacement data collected by prisms near the TSF is provided by BHP for 2024 is presented in Figure 4.16, with negligible movement observed.

BHP set the trigger values presented in Stage 5 operating TARPs based on half of the pit wall movement triggers. The movements for 2024 are within the normal operating conditions. WSP has recommended a deformation model is developed to justify these values.

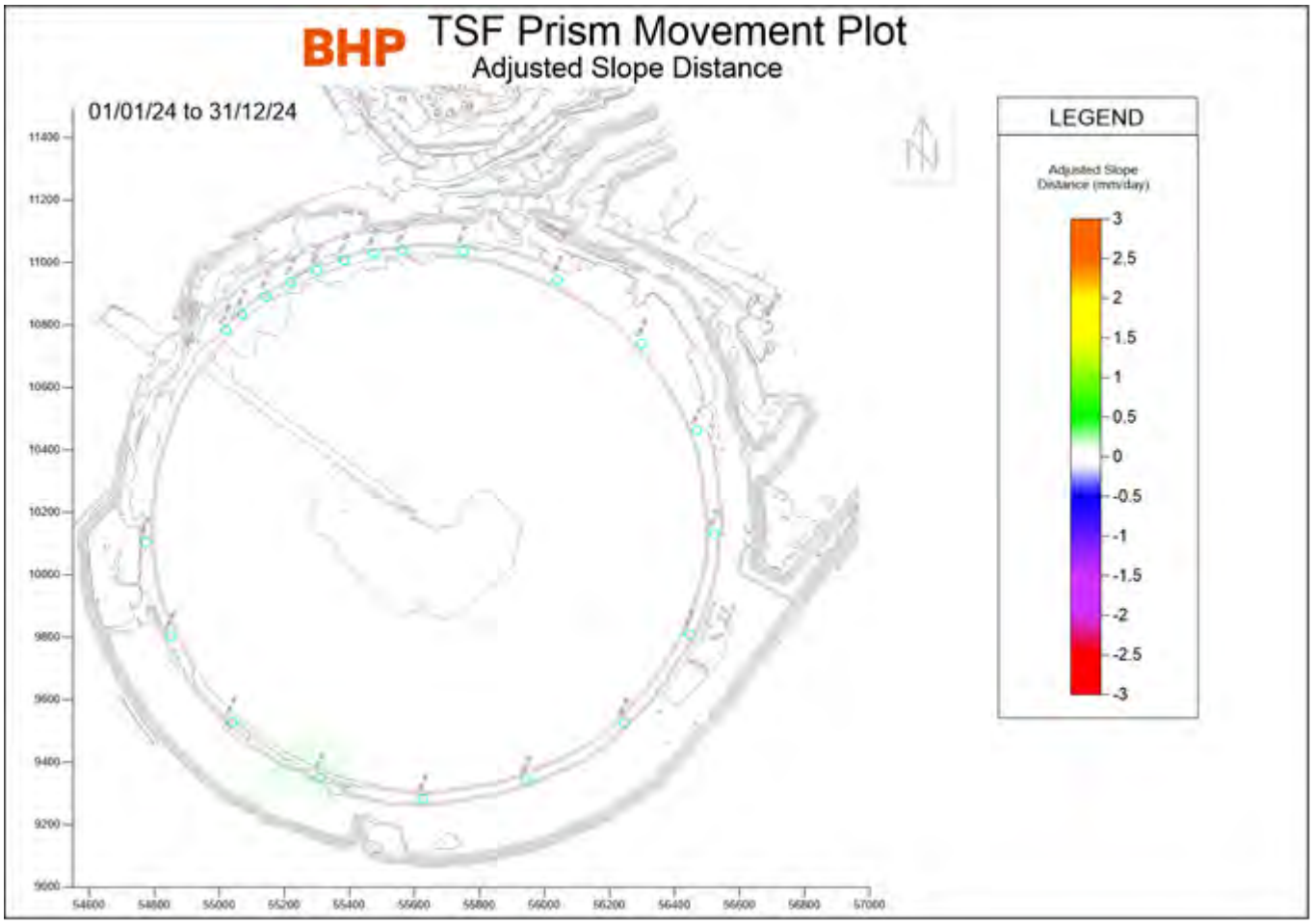


Figure 4.16 Prism movement in the TSF in Q4 2023 (Source BHP)

4.3.4 Inclinometer data

In place inclinometers were installed at two locations in the southern wall of the open pit during the Stage 6 geotechnical investigation, undertaken in 2024 [8]. The casing has been oriented so the A positive axis is generally facing towards the open pit, as shown in Figure 4.17. IPI instruments installed in BHB-04 and BHB-06 casing have since been connected to the Beyond Monitoring system, with raw data presented in Appendix D-1.

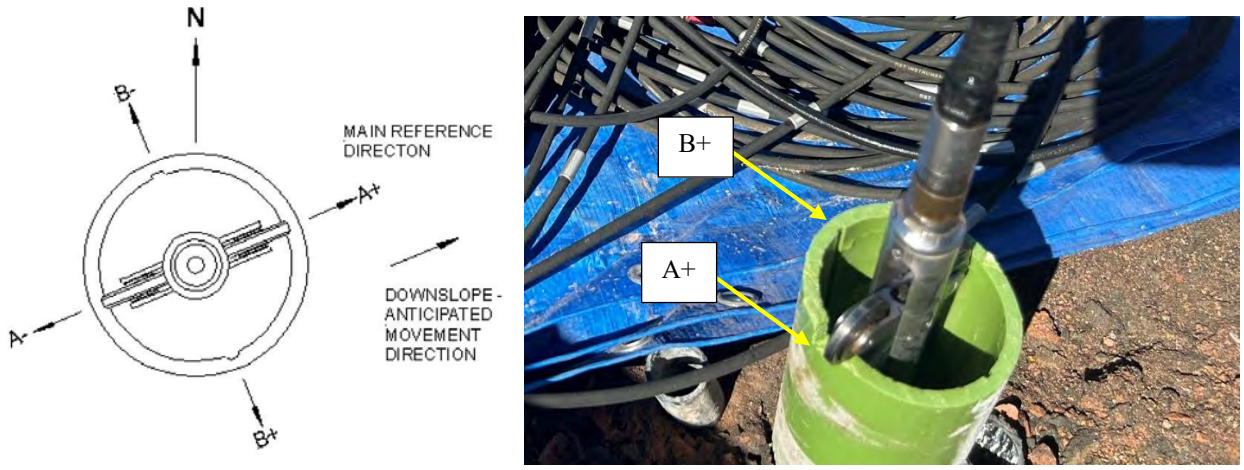


Figure 4.17 Probe orientation, with a saw cut indicating A positive direction (example from BHB-03)

A manual inclinometer survey was completed on 30 January 2025 at the BHB-03 location, with data presented in Appendix D-2. Check sums profiles are included and are used to assess the quality of data collected.

Cumulative displacement profiles from manual readings indicate there was less than 3 mm of movement between surveys, indicating no statistically significant movement occurred during the period.

4.3.5 Displacement summary

Given the extent of current monitoring, it is likely early stages of pit failure would be identified before movement progressed. The operational review processes completed by pit specialists is considered a very high priority to manage risks associated with TSF failure.

5 Design reconciliation

5.1 Tailings properties

Laboratory testing is currently being undertaken as part of the 2025 Engineer of Record (EoR) services. Recent scopes of laboratory testing are presented in Table 5.1 and Table 5.2. The reader is referred to the 2023 annual inspection for commentary summarising historic data collected [15].

Table 5.1 Summary of geotechnical classification test results

Description	2018 CPTu investigation	Sample March 2022	2022 CPTu investigation	Sample August 2023
% passing 300 microns	-	100	-	99
% passing 150 microns	-	94	-	89
% passing 75 microns	65 to 77 (average 70)	83	65 to 72 (average 68)	72
% passing 2 microns	10 to 14 (average 12)	23	15 to 16	11
Particle density	3.16 to 3.54 (average 3.32)	3.22	3.24 to 3.44 (average 3.36)	3.36
Liquid Limit (%)	16 to 17	24	18 to 20	19
Plastic Limit (%)	13	16	12 to 14	Non-plastic
Plasticity Index (%)	3 to 4	8	5 to 6	Non-plastic
Linear Shrinkage (%)	1.5	4.0	1.0 to 2.5	1.0
Unified soil classification system description	-	(CL) Silty CLAY, with sand, low plasticity, reddish brown, fine to medium grained sand	-	(ML) SILT, non-plastic, red brown, with fine to medium grained sand

Table 5.2 Summary of dry density laboratory test results

Description	2018 CPTu investigation	Sample March 2022	2022 CPTu investigation	Sample August 2023
Dry density at ~zero vertical effective pressure (t/m^3)	-	-	-	1.29
Settled dry density (t/m^3)	-	1.21	-	1.53
Shrinkage limit density (t/m^3)	-	1.97	-	2.03
Dry density at 200 kPa vertical effective pressure (t/m^3)	-	-	-	2.08
Dry density from undisturbed tube samples collected from within the TSF (t/m^3)	2.10 to 2.36 (average 2.23)	-	2.12 to 2.36 (average 2.21)	-

5.2 Tailings production

The historical tailings deposition data from 2009 until end of 2024 is presented in Table 5.3. A detailed summary of production data from 2024 is provided in Appendix E.

Table 5.3 Total tailings production for the period 2009 to 2024

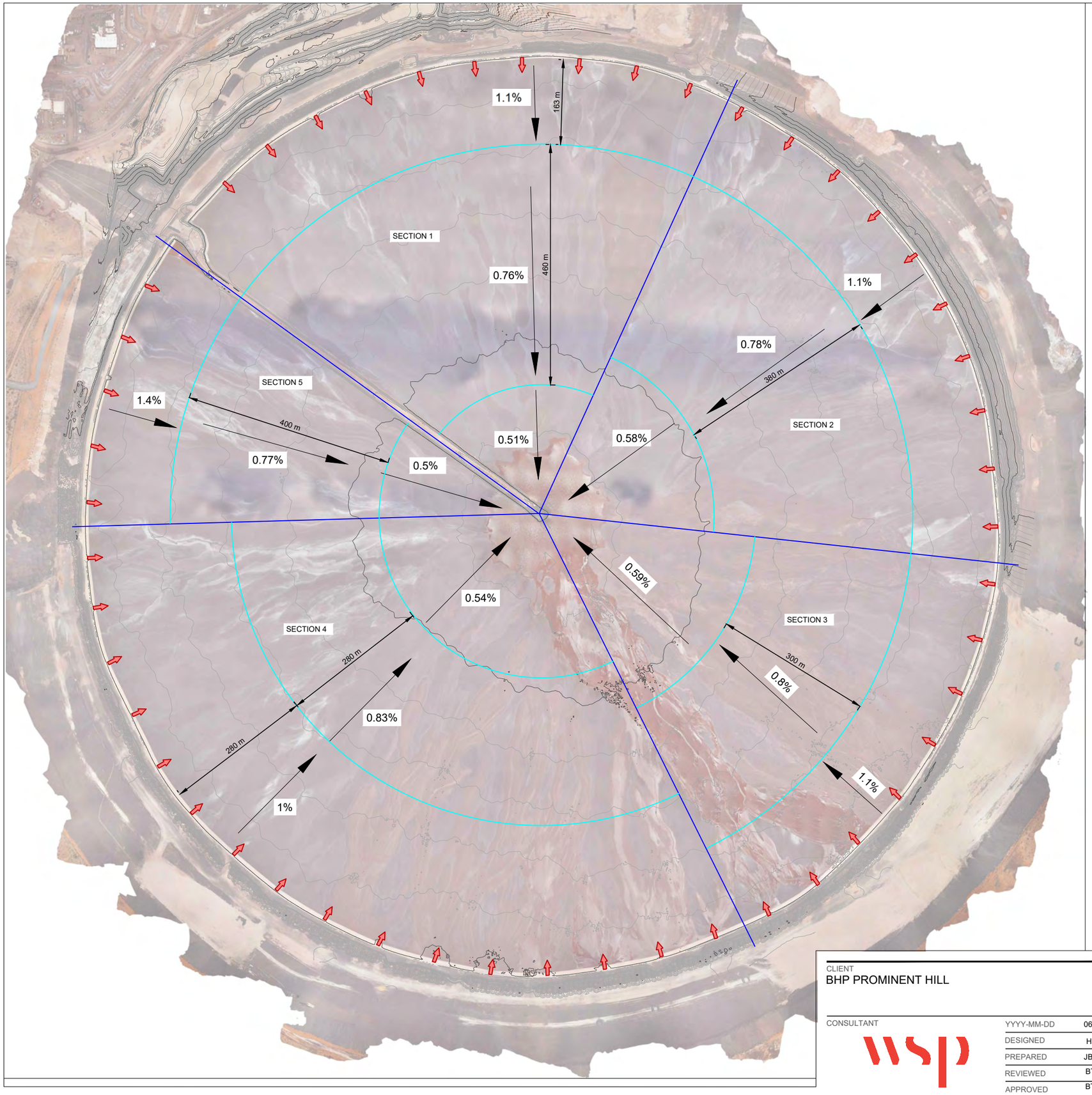
Year	Annual tailings placement (t)	Cumulative tailings placement (t)
2009	6,360,209	6,360,209
2010	8,999,655	15,359,864
2011	9,687,595	25,047,459
2012	9,445,970	34,493,429
2013	9,321,906	43,815,335
2014	9,386,150	53,201,485
2015	10,004,455	63,205,940
2016	8,254,879	71,460,819
2017	8,338,646	79,799,465
2018	8,125,163	87,924,628
2019	8,167,262	96,091,890
2020	7,478,308	103,570,198
2021	6,923,986	110,494,184
2022	6,835,369	117,329,553
2023	5,243,524	122,483,077
2024	4,760,470	127,243,547

5.3 Tailings beach monitoring

Survey of the tailings beach surface was collected in December 2024, with aerial imagery presented in Figure 5.1. The beach has been split into zones of varying size based on visual assessment, with the approximated beach slopes presented in Table 5.4. The remaining Stage 5 storage assessment, presented in Section 5.5, was estimated based on the weighted average beach slope included in Table 5.4.

Table 5.4: December 2024 tailings beach slope summary

Segment	Portion of beach surface	First beach portion		Second beach portion		Slope of remaining beach portion (%)
		Length (m)	Slope (%)	Length (m)	Slope (%)	
Segment 1	23%	163	1.10	460	0.76	0.51
Segment 2	20%	163	1.10	380	0.78	0.58
Segment 3	12%	163	1.10	300	0.80	0.59
Segment 4	35%	280	1.00	280	0.83	0.54
Segment 5	10%	163	1.40	400	0.77	0.50
Weighted Average	-	**200**	**1.10**	**356**	**0.79**	**0.54**



NOTE(S)

1. SURVEY PROVIDED BY BHP DATED 07/12/2024.

CLIENT
BHP PROMINENT HILL

CONSULTANT
wsp

YYYY-MM-DD	06/02/2025
DESIGNED	HL
PREPARED	JB
REVIEWED	BT
APPROVED	BT

PROJECT
PROMINENT HILL ANNUAL REVIW

TITLE
BEACH SLOPE ASSESSMENT
DECEMBER 2024 SURVEY

PROJECT NO.	DOC	REV.	FIGURE
217796	0001	1	5-01

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ISO A3

25 mm

0

5.4 In situ tailings density

A reconciliation of the in-situ density of the tailings within the TSF is presented based on tailings production data provided by BHP and will be included in Table 5.5. These calculations indicate the reconciled stored density of the tailings varies between 2.14 t/m^3 to 2.56 t/m^3, highlighting the variable nature of the tailings stored density. Based on the values presented in Table 5.5, the average stored dry density consistently exceeds 2.2 t/m^3, other than the 2.14 t/m^3 reported in April 2020.

Table 5.5 Summary of reconciled in-situ dry densities (source BHP)

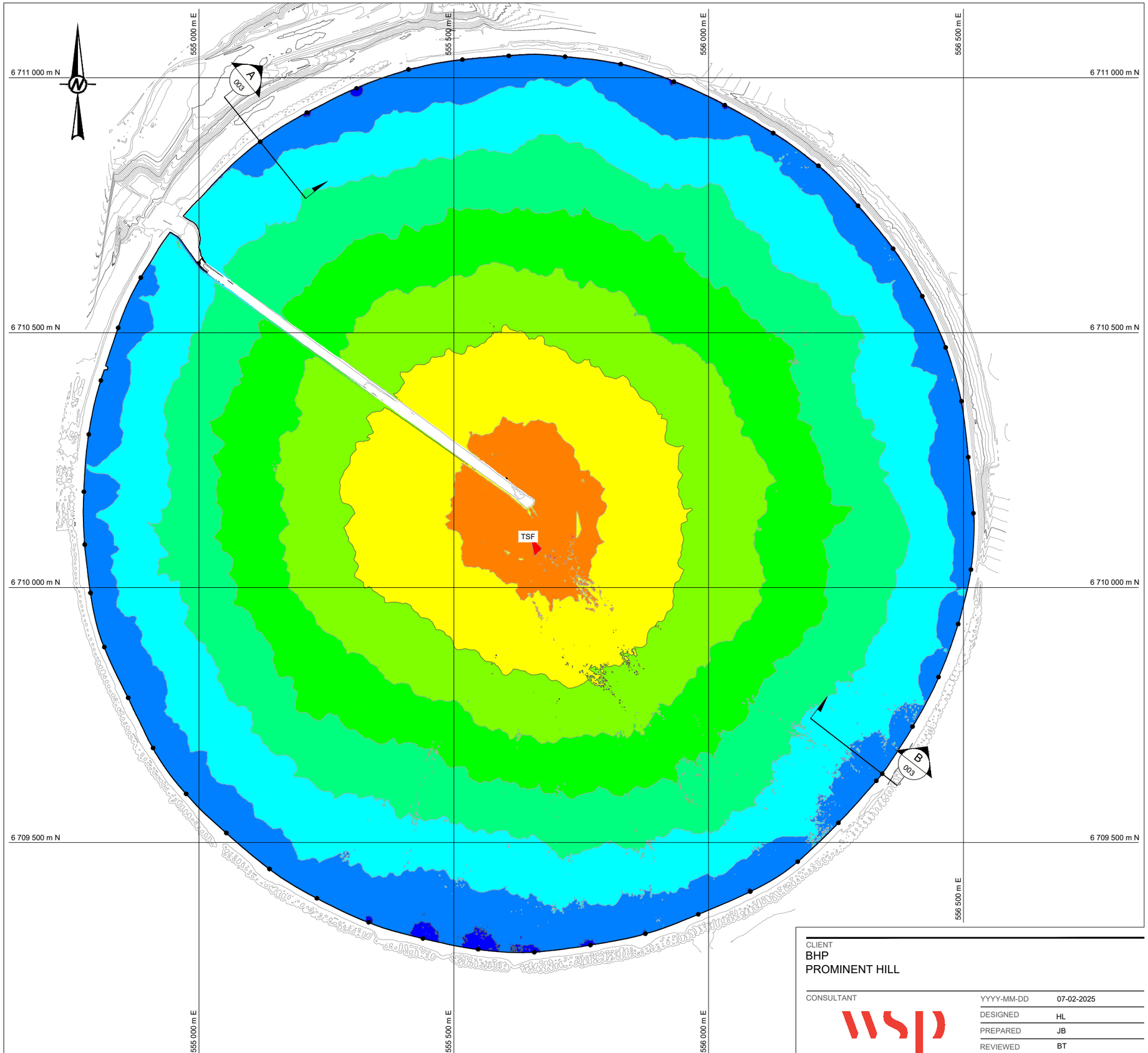
Date	Storage capacity reduction (Mm^3)	Tailings solids (Mt)	Reconciled stored density (t/m^3)
October 2017	3.57	8.40	2.36
May 2018	2.12	5.23	2.46
May 2019	3.17	7.20	2.27
April 2020	4.16	8.88	2.14
April 2021	2.66	6.82	2.56
June 2022	3.57	8.40	2.36
June 2023	2.12	5.23	2.46
June 2024	2.20	4.76	2.16

The tube density samples collected throughout the TSF in the 2018 and 2022 CPTu investigations indicate an average stored dry density between 2.23 t/m^3 and 2.21 t/m^3 (individual samples ranging from 2.10 to 2.36 t/m^3). WSP supports the practice of scheduling frequent laboratory testing to revisit assumptions relating to the density of tailings deposited in the Prominent Hill TSF.

5.5 Remaining Stage 5 storage

WSP prepared the contour map presented in Figure 5.2 based on the December 2024 survey. The survey indicates the elevation of the tailings beach surface was at about or above RL 10,240 m, indicating there is consistently less than 1 m of storage capacity available for Stage 5 TSF operations.

The remaining storage is estimated to be about 726,000 m^3, as shown in Figure 5.3. Based on current tailings forecasts and assuming a stored tailings density of 2.2 t/m^3 is achieved, the remaining capacity is likely to be exhausted by June 2025. Some of the remaining storage on the southern embankment may result in exceeding capacity earlier, given the southern tailings delivery pipeline was removed to allow Stage 6 construction to commence. Representative cross-sections are included in Figure 5.4 for additional context.



GENERAL NOTE(S)

1. SURVEY PROVIDED BY BHP DATED DECEMBER 2024

DECEMBER 2024 STORAGE CAPACITY		
ELEVATION	AREA	COLOR
10232.00 TO 10233.00	433	
10233.00 TO 10234.00	75843	
10234.00 TO 10235.00	259521	
10235.00 TO 10236.00	334852	
10236.00 TO 10237.00	399160	
10237.00 TO 10238.00	476594	
10238.00 TO 10239.00	520185	
10239.00 TO 10240.00	316033	
10240.00 TO 10241.00	5999	
10241.00 TO 10242.00	0	
10242.00 TO 10243.00	0	
10243.00 TO 10245.00	0	

0 125 250
1:7,500 METRES

CLIENT
BHP
PROMINENT HILL

CONSULTANT
wsp

YYYY-MM-DD	07-02-2025
DESIGNED	HL
PREPARED	JB
REVIEWED	BT
APPROVED	BT

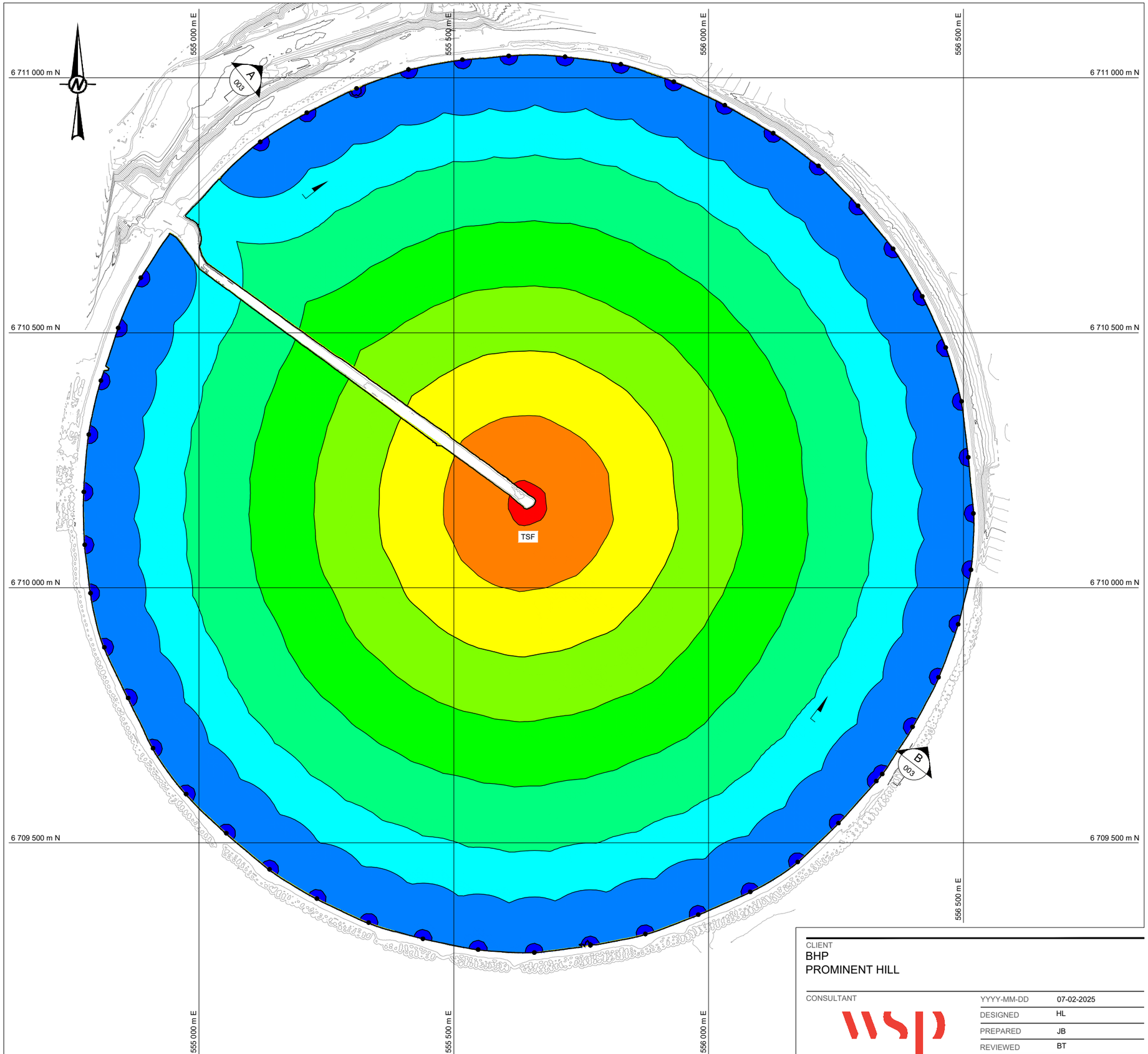
PROJECT
DECEMBER 2024 STORAGE CAPACITY ASSESSMENT

TITLE
PLAN VIEW DECEMBER 2024 SURVEY

PROJECT NO.	DOC	REV.	FIGURE
217796	0001	1	5-02

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3
0 25 mm

Path: \\corp.pbwan.net\ANZ\Transition\Golder\AU_VD\Adelaide\Geomatics\OZ_MINERALS_LTD\Prominent_Hill\10_CADD\CIVIL\3D\TSF_Storage Capacity_12-2024\ | File Name: TSF_Storage Capacity_12-2024\ | Last Edited By: gld_jbarth Date: 2025-02-06 Time:12:34:41 PM | Printed By: gld_jbarth Date: 2025-02-06 Time:12:38:10 PM



GENERAL NOTE(S)

1. SURVEY PROVIDED BY BHP DATED DECEMBER 2024
2. FILL VOLUME TO RL 10240.2 m IS 726,689 m³

DECEMBER 2024 STORAGE CAPACITY		
ELEVATION	AREA	COLOR
10232.00 TO 10233.00	0	
10233.00 TO 10234.00	31795	
10234.00 TO 10235.00	132255	
10235.00 TO 10236.00	233803	
10236.00 TO 10237.00	335772	
10237.00 TO 10238.00	434836	
10238.00 TO 10239.00	467821	
10239.00 TO 10240.00	464390	
10240.00 TO 10241.00	280273	
10241.00 TO 10242.00	0	
10242.00 TO 10243.00	0	
10243.00 TO 10244.00	0	

0 125 250
1:7,500 METRES

CLIENT
BHP
PROMINENT HILL

CONSULTANT
wsp

YYYY-MM-DD	07-02-2025
DESIGNED	HL
PREPARED	JB
REVIEWED	BT
APPROVED	BT

PROJECT
DECEMBER 2024 STORAGE CAPACITY ASSESSMENT

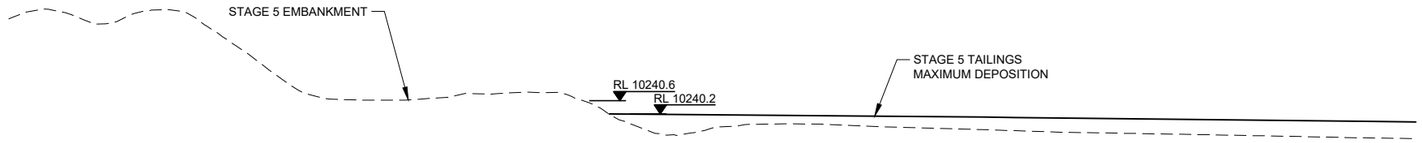
TITLE
PLAN VIEW STAGE 5 MAX CAPACITY AT RL 10240.2 m

PROJECT NO.	DOC	REV.	FIGURE
217796	0001	A	5-03

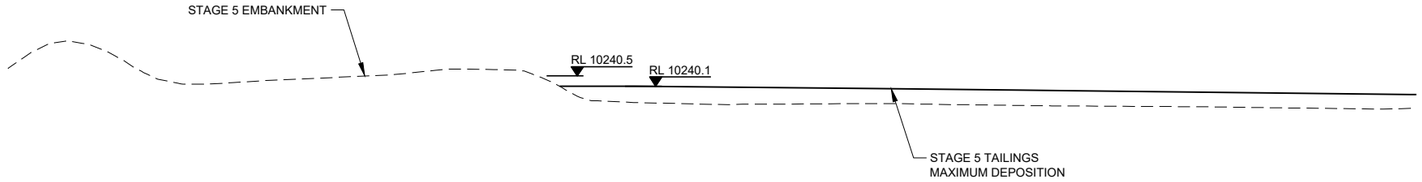
IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3
25 mm
0

LEGEND

- EXISTING SURVEY FROM DECEMBER 2024
- DESIGN STAGE 5 TAILINGS



SCALE 1:200 — A / F001 — STAGE 5 TSF EMBANKMENT SECTION



SCALE 1:200 — B / F001 — STAGE 5 TSF EMBANKMENT SECTION

0 5 10
1:200 METRES

CLIENT
BHP
PROMINENT HILL

CONSULTANT
wsp

YYYY-MM-DD	07-02-2025
DESIGNED	HL
PREPARED	JB
REVIEWED	BT
APPROVED	BT

PROJECT
DECEMBER 2024 STORAGE CAPACITY ASSESSMENT

TITLE
RESPRESENTATIVE SECTIONS THROUGH THE TAILINGS BEACH SURFACE

PROJECT NO.	DOC	REV.	FIGURE
217796	0001	1	5-04

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM: ISO A3
25 mm
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5.6 Flood storage capacity

Two storm events, described in Table 5.6, are modelled on the December 2024 tailings beach to highlight the available flood storage capacity. The modelling presented in Figure 5.5 indicates the pond would be more than 200 m from the perimeter embankment if the 72-hour duration probable maximum flood event was to occur. The 100 year flood event would sit within the 'troubleshooting' zone based on the values presented in Section 6. The PMP would be within the 'buffer' zone.

Table 5.6 Summary of runoff volumes

Storm Event	Colour	Rainfall Depth (mm)	Pond area (ha)	Reporting Volume (Mm^3)
PMP, 72-hour		810	124	1.9
1 in 100 AEP, 72-hour		186	55	0.4

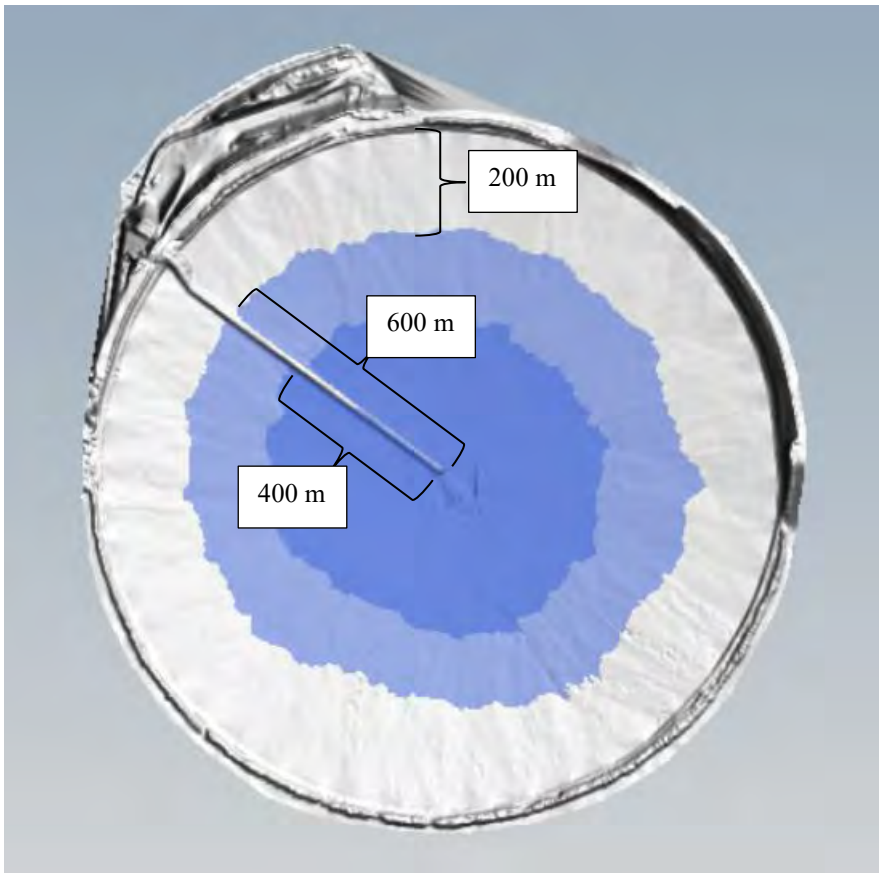


Figure 5.5 TSF flood capacity using aerial survey data from December 2024

6 Trigger action response plan review

BHP has developed TARPs, appended to their OMS Manual. This document highlights critical operating parameters (COPs) that have been identified for the TSF and indicate ranges associated with normal, troubleshooting, buffer and unsafe zones. The data provided by BHP has been judged against these trigger values, as shown in Table 6.1. The zone that each critical operating parameter has typically been operating within has been highlighted. Pale colours have been applied to cells where a COP has operated within a zone for a smaller portion of time.

Table 6.1 BHP Operating Limits and Triggers

Critical operating parameter	Trigger level				
	Normal Operating Zone	**Troubleshooting Zone**	**Buffer Zone**	**Unsafe Zone**	**WSP comment on compliance**
Operations					
TSF Pond Size and Rainfall	**Pond Size** is less than 25 ha. **Rainfall** less than 120 mm over a 72 hr period.	**Pond Size** is between 25 and 140 ha. **Rainfall** less than 120 mm over a 72 hr period.	**Pond Size** is between 140 and 200 ha. **Rainfall** less than 192 mm over a 72 hr period.	**Pond Size** is greater than 200 ha. **Rainfall** greater than 192 mm over a 72 hr period.	Decant pond size well controlled in 2024
TSF Operational Freeboard	Greater than 1.5 m freeboard	Between 1.5 m and 0.5 m of TSF freeboard	Between 0.5 m and 0.3 m of TSF freeboard	Less than 0.3 m of TSF freeboard	Freeboard kept reducing during 2024, planned for embankment raise commencing in early 2025.
Visual Failure Signs	No changes to previous week of • Differential settlement • Slumping • Washout • Cracking (Longitudinal/ Transverse) • Discolouring or staining on outer walls or toe of embankment • Dark or damp areas • Visible seepage • Erosion • Observation of a potential karst feature	• Differential settlement • Slumping • Washout • Cracking (Longitudinal/ Transverse) • Discolouring or staining on outer walls or toe of embankment • Dark or damp areas • Visible seepage • Erosion • Observation of a potential karst feature	• Seepage rates observed (~ garden hose sized flow) • New seepage and/or discolouration on walls • Cracking / erosion with slight movement/displacement between cracks of the embankment • Dark or damp areas extend or become darker • Erosion or washouts impact the structure of the TSF • Continuation of slumping	• Seepage increasing further (~100mm pipe sized flow) • Seepage or discoloration increasing with the level of solids contained in seepage • Evidence of Piping failure – internal erosion of embankment or foundation due to seepage • Pipe burst causing erosion of embankment • Slope failure (upstream or downstream) • Cracking or erosion worsening and embankment moving • Rapid reduction in crest height at any point along embankment • Mine-induced seismicity or earthquake event	No reported issues by BHP. The wet patches and vegetation observed in the vicinity of horizontal bores in the open pit were also observed during the 2023 annual review and could indicate some TSF seepage is acting on the face of the open pit. This area should continue to be monitored closely.
Decant Pump Flow Rate	Greater than 1.5 ML/day	Between 0.7 to 1.5 ML/day	Between 0.4 to 0.7 ML/day	Less than 0.4 ML/day	Five months of the year in Normal, 6 months in Troubleshooting, 1 month in Buffer – refer Figure 4.2.
Tailings Slurry % solids	Final Tailings density 1-month average greater than 55% solids	Final Tailings density 1-month average between 50% and 50% solids	Final Tailings density 1-month average between 45% and 50% solids	Final Tailings Density 1-month average less than 45% solids	Nine out of 12 months over 55%, three out of 12 months at 53 to 54%, no cause for concern.
Responsible Tailings Facility Engineer / Geotechnical Engineers					
Horizontal Drain Flow Rate	Between 0.8 to 1.5 ML/ day	Between 1.5 and 2.5 ML/day **or** Between 0.58 to 0.8 ML/day	Between 2.5 to 5 ML/day **or** Between 0.29 to 0.58 ML/day	Above 5 ML/day **or** less than 0.29 ML/day	11 out of 12 months above 0.8 ML/day, December 2024 reduced to 0.6 ML/day.
TSF Prism Movement (Three of more adjacent prisms)	<2 mm/day	2-3 mm/day	3-10 mm/day	>10 mm/day	-
TSF Inclinometer Movement	<2 mm/day	2-3 mm/day	3-10 mm/day	>10 mm/day	-
Piezometers and Monitoring Bores Limits	Refer to Table 4-3 of the OMS manual	Refer to Table 4-3 of OMS manual	Refer to Table 4-3 of OMS manual	Refer to Table 4-3 of OMS manual	VWPs in normal zone for the review period.

7 Recommendations

Recommendations have been provided as part of historic annual reviews undertaken by WSP. A list of the recommendations included in the 2023 annual review is included in Table 7.1, with their status and additional comments as required. For simplicity, recommendations from the 2024 Annual Review have also been included in Table 7.1. Open recommendations from 2023 are considered to be relevant in this review period.

Table 7.1 Status of recommendations included in the 2023 Annual Review and new recommendations

Item	Recommendation	Status	Additional comments
2023_01	Undertake a geotechnical investigation to improve estimates of factor of safety for slope stability.	Closed	-
2023_02	Complete the installation of flow meters on the horizontal bores to monitor flow on individual drains. Flow data could be reconciled against deposition records and available decant pond data.	Open	Flow meters not yet installed. To be undertaken in 2025.
2023_03	Prepare an internal BHP work instruction for tailings testwork to be undertaken two-yearly. The next testwork program should be undertaken in 2025.	Closed	Work instruction completed.
2023_04	Follow up on groundwater well TSF-A to understand the cause of erratic sodium and copper concentrations, and the high groundwater level.	Closed	-

Item	Recommendation	Status	Additional comments
2024_01	Collect daily decant pond data throughout Stage 6 operations. We expect this would include both the area of the decant pond and the proximity to the nearest embankment based on Rocket DNA survey.	Actioned	BHP has commenced data collection in mid-2025.
2024_02	Develop a plan to store tailings for the remaining life of mine based on current tailings generation forecasts.	Actioned	Study has already commenced.
2024_03	Collect monthly water level data for the Enviro and Raw Water Dams. This recommendation is linked to recommendation 2024_04.	Open	-
2024_04	Assess the flood capacity of the Enviro and Raw Water Dams in the context of their design intent and the planned life of mine. WSP recommends a staged approach: — Stage 1: Review existing conditions of the ponds, which includes a general water balance to understand/confirm the inflows and outflows and general fluxes. Undertake a hydrologic and hydraulic assessment to estimate: — The current (baseline) hydraulic capacity of the spillway in the Raw Water Dam and to understand the degree of erosion resistance in its current form. — The risk of overtopping in the Enviro Dam. — Stage 2: Undertake a subsequent hydrologic and hydraulic assessment at each pond to estimate the minimum required spillway size to comply with current ANCOLD guidelines (and other relevant regulatory guidance documents) with baseline and climate change scenario to time horizon (2040/2050) design storm events. — Stage 3: If required, undertake a civil design where the spillway invert and downstream erosion control measures are redesigned to manage the updated hydraulic regime as assessed in Stage 2.	Open	-
2024_05	Update relevant operating documents prior to commissioning Stage 6 TSF operations. We expect this would include the OMS, TMS and EPRP.	Open	-
2024_06	Prepare the Stage 6 Construction Records Report and comment on design intent verification.	Open	To be prepared following Stage 6 TSF construction. BHP has engaged WSP to do this.
2024_07	Undertake a CPTu investigation during early stages of Stage 6 operation, in accordance with the TMS.	Open	Fieldwork following Stage 6 TSF construction. Draft scope of work issued.
2024_08	Undertake a drilling investigation to improve the quality of hydrogeological data available, and to inform other studies (refer Item no. 2024_010). Groundwater water samples could be collected to support the testing described in Item no. 2024_009.	Open	Fieldwork following Stage 6 TSF construction. Draft scope of work issued.

Item	Recommendation	Status	Additional comments
2024_09	Undertake laboratory testing on Sandy Clay/Clayey Sand samples, to assess the impact of saline groundwater on material strength. Commentary on chemicals present in groundwater and tailings samples should be included in these works. This task is also from the 2024 ITRB recommendations.	Open	Fieldwork following Stage 6 TSF construction. Draft scope of work issued.
2024_10	Revise the TSF water balance with improved instrumentation/measurement of the individual components of flow (horizontal drains, TSF airwells, pit airwells etc.) The GoldSim water balance developed by WSP should be revisited with the improved metered flows to use as a predictive tool for TSF performance, instead of the BHP spreadsheets.	Open	BHP advised it would commence this task following Stage 6 embankment construction.
2024_11	Develop a 2D seepage model (for example in Seep/W) to focus on the interface between the TSF and the Open Pit. The models should compare expected seepage volumes and volumes currently collected by horizontal and vertical bores. The model could also be used to predict future development of pore pressure conditions within the TSF and review existing TARP seepage values. The GoldSim model should be updated following these works.	Open	Should not occur before the site investigation recommendations 2024_07 and 2024_08 are completed.
2024_12	Undertake a 2D deformation model (for example using FLAC) to review the TSF displacement trigger values.	Open	-

8 Summary

In general, WSP is satisfied that the Prominent Hill TSF met the tailings storage requirements of the processing plant in 2024. The recommendations described in the previous section have been proposed to improve confidence the TSF will be operated in accordance with the design intent going forwards.

9 Limitations

This report summarises the 2024 operational review of the Prominent Hill TSF. The reader's attention is drawn to the Limitation Statement presented in Appendix F of this report.

10 References

[1] OZ Minerals, "Prominent Hill Program for Environment Protection and Rehabilitation," 2022.

[2] ICMM, Global Industry Standard on Tailings Management, International Council on Mining and Metals, 2020.

[3] BHP, Tailings Management System - Technical Specification, Document No. PH-2630-PRO-REG-0001, 2024.

[4] WSP, Prominent Hill Tailings Storage Facility - Probabilistic Seismic Hazard Assessment, Report Ref. PS204162-WSP-ADL-MNG-LTR-00002, 2024.

[5] WSP, Prominent Hill Climate Change Assessment, WSP Report Ref. PS207017-WSP-PER-HYD-REP-0013, 2024.

[6] WSP, Prominent Hill Tailings Storage Facility, Stage 6 Dam Break Assessment, WSP report ref. PS135398-WSP-ADL-MNG-REP-0031, 2024.

[7] WSP, Prominent Hill Tailings Storage Facility – Stage 6 Layout Consequence Category Assessment, PS214975-WSP-ADL-MNG-REP-0002, 2024.

[8] WSP, Prominent Hill Tailings Storage Facility - Stage 6 Geotechnical Investigation, WSP report ref. PS210590-WSP-ADL-MNG-REP-0001 Rev0, 2024.

[9] WSP, Prominent Hill Tailings Storage Facility - Stage 6 Design Report, PS214975-WSP-ADL-MNG-REP-0007, 2024.

[10] WSP, Prominent Hill Tailings Storage Facility - Stage 5 and Stage 6 Quantitative Risk Assessment, PS214975-WSP-ADL-MNG-REP-0008, 2025.

[11] WSP, Prominent Hill Tailings Storage Facility - As Low As Reasonably Practicable memorandum, Report ref. PS214975-WSP-MNG-MEM-0022 Rev0, 2025.

[12] WSP, Geomembrane Sampling and Operational Life Assessment Report, WSP Report Ref PS200859-WSP-ADL-CIV-REP-0001 Rev0, 2025.

[13] WSP, Prominent Hill Tailings Storage Facility Integrated Water Balance Model, WSP Report Ref. PS207017-WSP-PER-MNG-REP-0001 Rev1, 2024.

[14] Land and Water Consulting (LWC), Groundwater Quality Assessment - Prominent Hill Mine, South Australia, 2023.

[15] WSP, Tailings Storage Facility 2023 Operational Review - Prominent Hill Operations, WSP Report Ref. PS209546-WSP-ADL-MNG-REP-0001 Rev1, 2024.

[16] WSP, Prominent Hill Tailings Storage Facility - Stage 6 Deviance Accountability Report, WSP Report Ref. PS214975-WSP-ADL-MNG-REP-0018, 2024.

[17] WSP, Prominent Hill Tailings Storage Facility - Integrated Knowledge Base and Design Basis Report, WSP Report Ref. PS214975-WSP-ADL-MNG-REP-0012, 2025.

[18] WSP, Prominent Hill Tailings Storage Facility - Stage 6 Basis of Design, WSP report ref. PS214975-WSP-ADL-MNG-REP-0003, 2024.

[19] WSP, Prominent Hill Tailings Storage Facility - Stage 6 Multi Criteria Assessment, Report ref PS214975-WSP-ADL-MNG-REP-0001 Rev0, 2024.

[20] WSP, Prominent Hill Integrated Waste Landform – Stage 6 Consequence Category Assessment, report reference PS214975-WSP-ADL-MNG-MEM-0002 Rev1, 2024.

[21] WSP, Prominent Hill Tailings Storage Facility - Geophysical Investigation, WSP Report ref. PS210590-WSP-ADL-MNG-REP-0003, 2024.

[22] WSP, Prominent Hill Tailings Storage Facility – Stage 5 and Stage 6 triggers for vibrating wire piezometers and monitoring bores, WSP report ref. PS214975-WSP-ADL-MNG-0014, 2024.

[23] Golder, Cone Penetrometer Testing and Liquefaction Assessment Report - Prominent Hill Tailings Storage Facility, Golder Report Ref. 18106032-002-R-Rev0, 2019.

[24] BHP, Prominent Hill Tailings Storage Facility (TSF) Operation, Maintenance and Surveillance (OMS) Manual, 2024.

[25] BHP, TSF Emergency Preparedness and Response Plan, Ref PH-3630-PRO-PRO-0001, 2024.

[26] WSP, Prominent Hill Tailings Storage Facility - 2025 Geotechnical Investigation Scope of Work, PP222649-WSP-ADL-MNG-PRP-0001 RevA, 2025.

Appendix A

PEPR – Mine Leases and Outcome Measurement Criteria (OMC)

The Prominent Hill mine, covering an area of approximately 78.5 km^2, operates under the Mining Lease (ML) 6228, which was granted by the Department of Primary Industries and Resources of South Australia (now Department for Energy and Mining) in August 2006. Supporting infrastructure and associated construction and maintenance operations, were obtained under various Miscellaneous Purpose Licenses (MPLs) and Extractive Mineral Leases (EMLs) under the mining Act 1971 (SA).

A condition of the ML required the Prominent Hill mine to operate in accordance with an approved Mining and Rehabilitation Program (MARP) of 2006 and its update in 2009 to include the development and operation of an underground mine. An amendment to the Mining Act of 1 July 2011 removed the reference to MARPs and introduced the Program for the Environment Protection and Rehabilitation (PEPR) in 2017. OZ Minerals prepared a PEPR in accordance with the Ministerial Determination 005.

A summary of TSF compliance against the PEPR 2022 is provided in Table A.1. A list of 2022 PEPR conditions and the assessment criteria are presented within this appendix.

Table A.1 TSF requirement compliance against PEPR 2022

Grouped condition no.	Grouped lease condition	Comment based on review
GC15	The Lessee must, in constructing, operating and post mine closure ensure no long-term adverse effect on aquatic fauna and habitat biodiversity (including riparian vegetation) due to seepage from Tailings Storage Facility.	Expect this is based on groundwater monitoring undertaken by BHP's environmental team. Not within WSP scope to provide comment.
GC22	The Lessee must control erosion on the external slopes of the Integrated Waste Landform (IWL).	Rock in place around full perimeter. No evidence of erosion observed during the site visit.
GC23	The Lessee must ensure that the slopes of the perimeter embankment on the Integrated Waste Landform (IWL) are stable post-closure even under seismic conditions.	Stage 6 design report includes current assessments. Post-closure scenarios to be included in future studies.
GC24	The Lessee must take responsibility for the Integrated Waste Landform (IWL) (including the tailings) until such time that it can be demonstrated that the waste is in a form that is safe, non-polluting, and stable post-closure, and will not cause any impacts to the surrounding environment or create potential legacy issues for future generations.	Ongoing
GC25	The Lessee must undertake revegetation trials and if successful, incorporate revegetation of the Integrated Waste Landform (IWL) into the MARP closure plan.	Planned to be undertaken as part of closure planning
GC26	The Integrated Waste Landform (IWL) must be designed, constructed, operated, and decommissioned in accordance with Tailings Management Guidelines as approved from time to time by the Chief Inspector of Mines in consultation with the Environment Protection Authority.	Design intent commentary in Section 8. Construction Records Report to be prepared following completion of Stage 6 TSF Construction.
GC29	The Lessee/Licensee must provide to the Director of Mines a Mining and Rehabilitation Compliance Report (MARCR) on operations carried out on the Lease/Licence and compliance with the approved PEPR. The MARCR must be submitted every year, within 2 months after the anniversary of the date the Lease/Licence was granted, or at some time agreed with the Director of Mines in accordance with guidelines approved by the Director of Mines. The Lessee/Licensee agrees that the MARCR will be made available to the public in a manner and form as determined by the Director of Mines. The MARCR must include a geotechnical and operational audit of the Integrated Waste Landform undertaken by an independent certified geotechnical engineer.	This report forms an interim report, as part of BHP governance process

Appendix B

GISTM documentation

Table B.1 Key reference documents relating to the Prominent Hill TSF

Element	Item	Document Reference	Date of issue	Reference
GISTM documentation	Deviance Accountability Report	PS214975-WSP-ADL-MNG-REP-0018 Rev0	11 February 2025	[16]
	Integrated knowledge base & design basis report	PS214975-WSP-ADL-MNG-REP-0012 Rev0	17 April 2025	[17]
Stage 6 basis of design	Climate change assessment	PS207017-WSP-PER-HYD-REP-0013 Rev0	21 August 2024	[13]
	Probabilistic seismic hazard assessment	PS204162-WSP-ADL-MNG-LTR-0002 Rev1	22 July 2024	[4]
	Stage 6 basis of design	PS214975-WSP-ADL-MNG-REP-0003 Rev0	24 October 2024	[18]
	Multi criteria assessment	PS214975-WSP-ADL-MNG-REP-0001 Rev0	24 October 2024	[19]
	Dam break assessment	PS135398-WSP-MNG-ADL-REP-0031 Rev0	24 October 2024	[6]
	Consequence Category assessment	PS214975-WSP-ADL-MNG-REP-0002 Rev0	24 October 2024	[20]
Stage 6 design and interpretation	Stage 6 factual geotechnical investigation report	PS210590-WSP-ADL-MNG-REP-0001 Rev0	19 July 2024	[8]
	Geophysical investigation	PS210590-WSP-ADL-MNG-REP-0003 RevA	22 May 2024	[21]
	Stage 6 design report	PS214975-WSP-ADL-MNG-REP-0007 Rev0	5 March 2025	[9]
	Stage 5 and Stage 6 VWP trigger levels	PS214975-WSP-ADL-MNG-REP-0014 Rev0	5 December 2024	[22]
	Stage 5 and Stage 6 Quantitative Risk Assessment	PS214975-WSP-ADL-MNG-REP-0008 Rev0	21 March 2025	[10]
	As Low As Reasonably Practicable memorandum	PS214975-WSP-ADL-MNG-REP-0022 Rev0	9 April 2025	[11]
Stage 6 detailed design documents	Issued for Construction (IFC) Drawings	PS214975-WSP-ADL-MNG-DWG-0004 Rev0	17 December 2024	[23]
	Technical Specification	PS214975-WSP-ADL-MNG-SPC-0005 Rev0	17 December 2024	[23]

Element	Item	Document Reference	Date of issue	Reference
TSF operating documents	Tailings Management System	PH-2360-PRO-REG-00001	3 July 2024	[3]
	Operations, Maintenance and Surveillance (OMS) Manual	PH-3630-PRO-MAN-0002	10 June 2024	[24]
	Emergency Preparedness and Response Plan	PH-3630-PRO-PRO-0001	16 April 2024	[25]

Appendix C

VWP data

APPENDIX C-1
Raw data plots

Project: **Prominent Hill Mine**

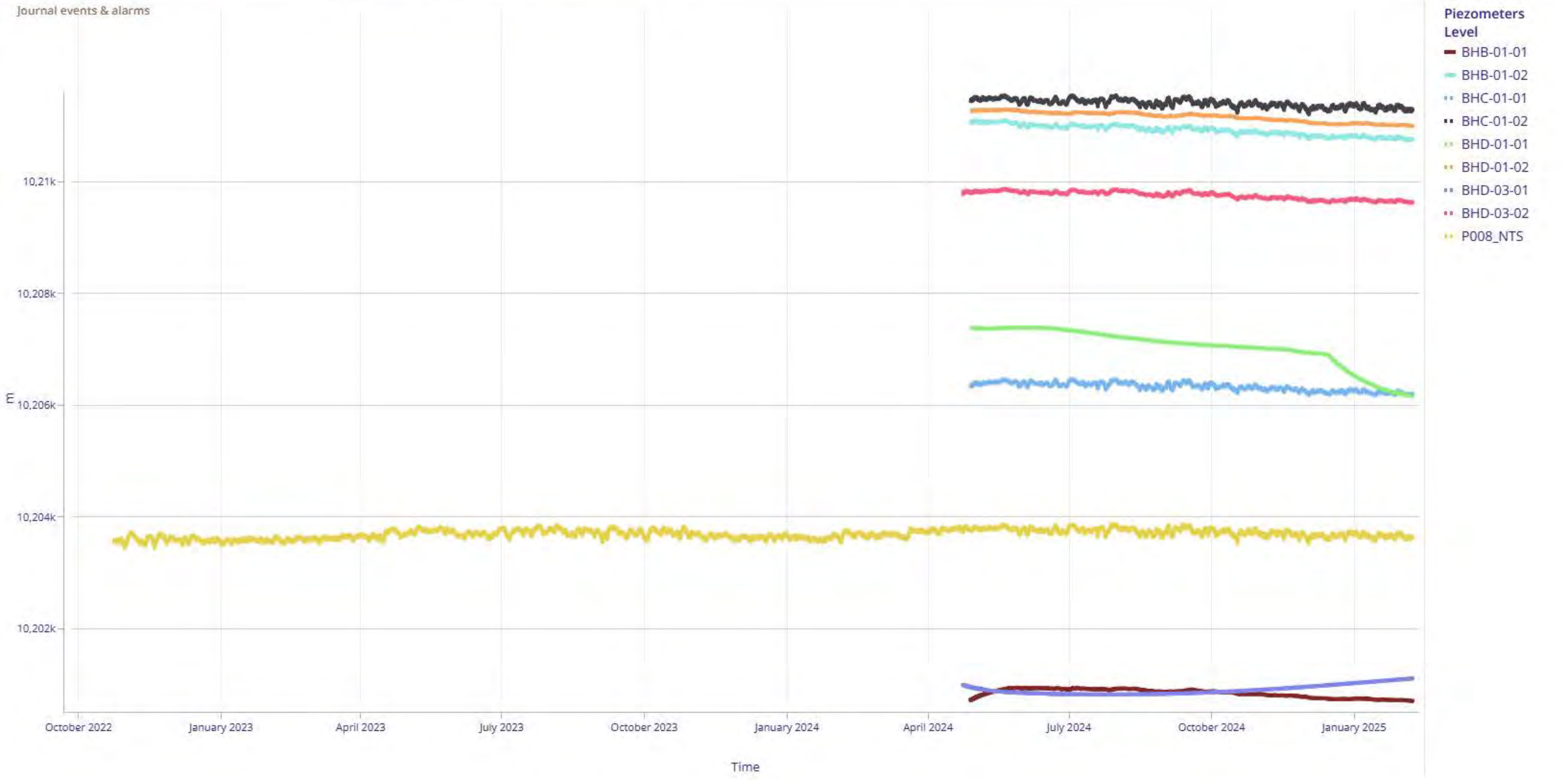
IWL VWPs

Graph period: 01/10/2022 12:00 am - 07/02/2025 04:08 pm

Project: **Prominent Hill Mine**

IWL VWPs

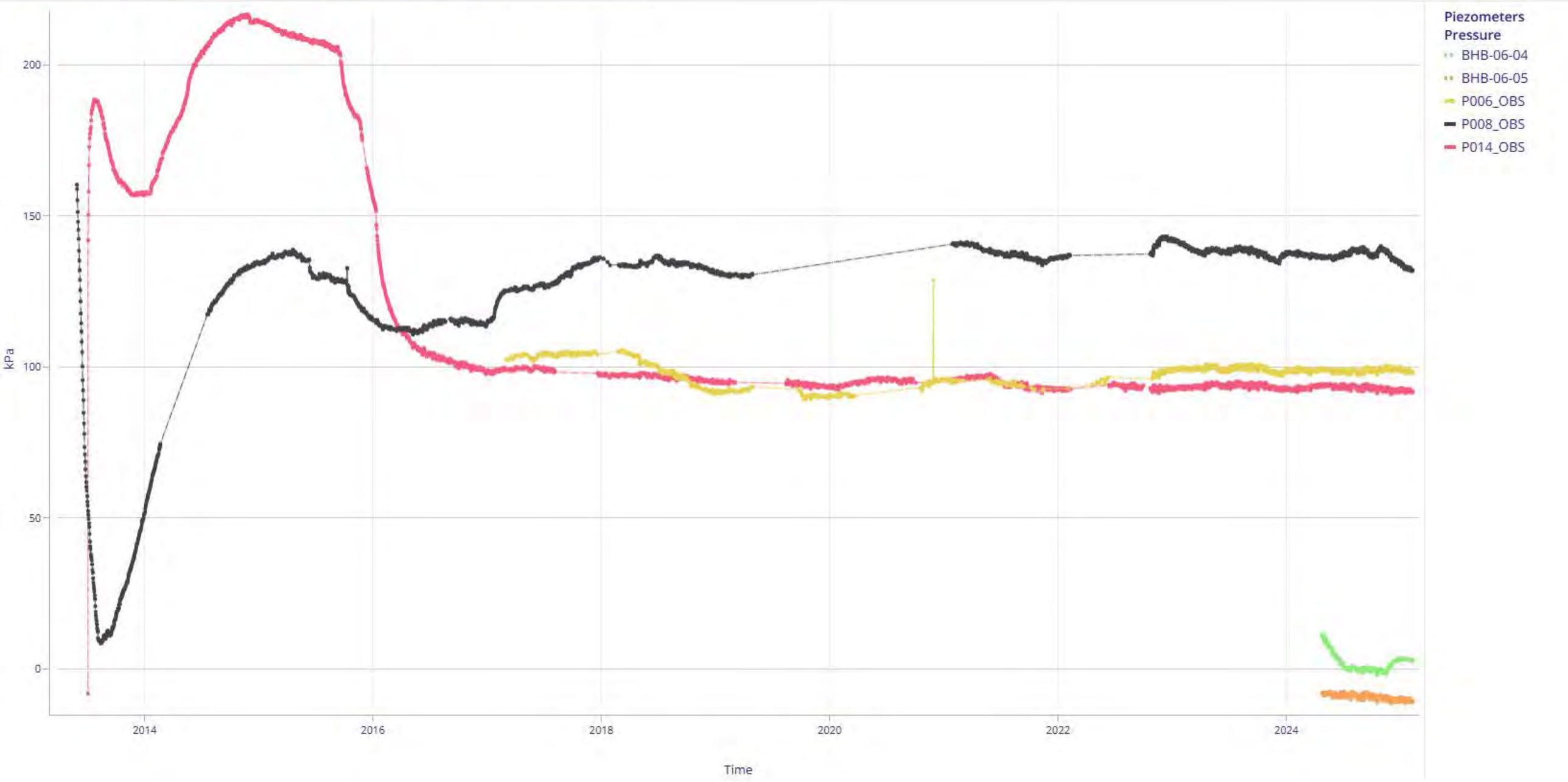
Graph period: 01/10/2022 12:00 am - 07/02/2025 04:08 pm



Project: **Prominent Hill Mine**

Section B VWP instruments

Graph period: 19/04/2013 12:00 am - 07/02/2025 04:05 pm



Project: **Prominent Hill Mine**

Section B VWP instruments

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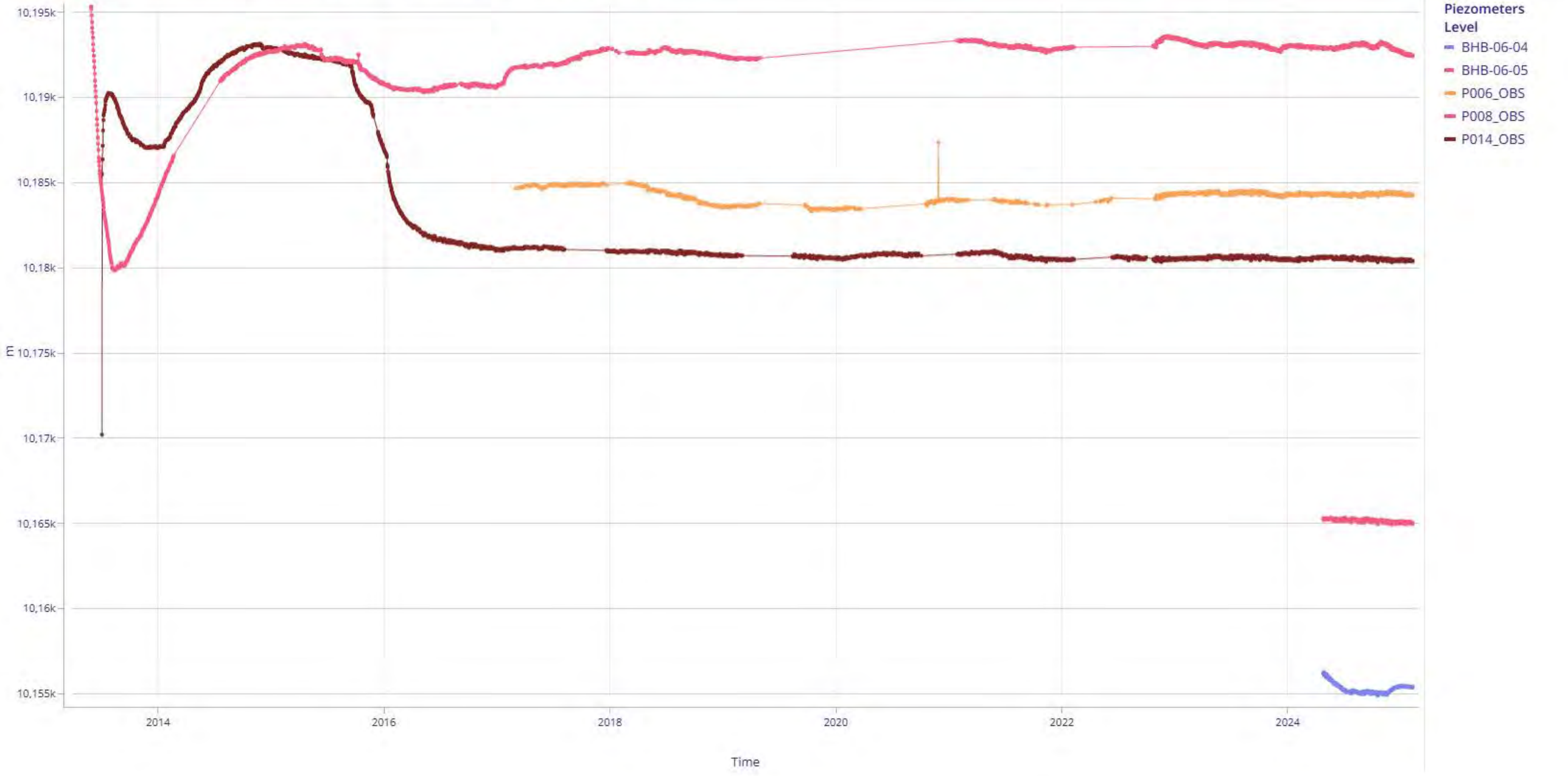
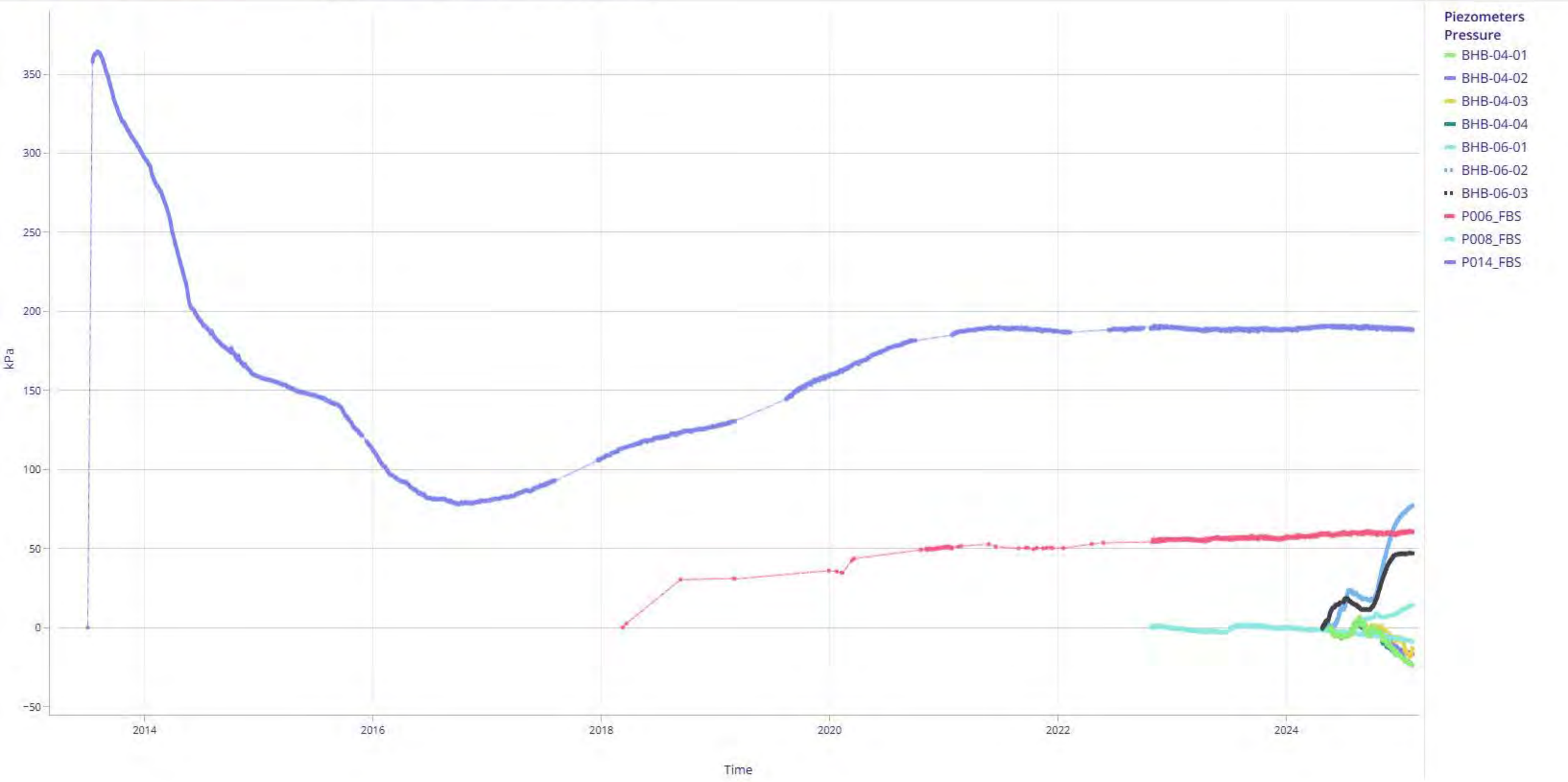


Project: **Prominent Hill Mine**

Section B VWP instruments

Graph period: 19/04/2013 12:00 am - 07/02/2025 03:54 pm



Project: **Prominent Hill Mine**

Section B VWP instruments

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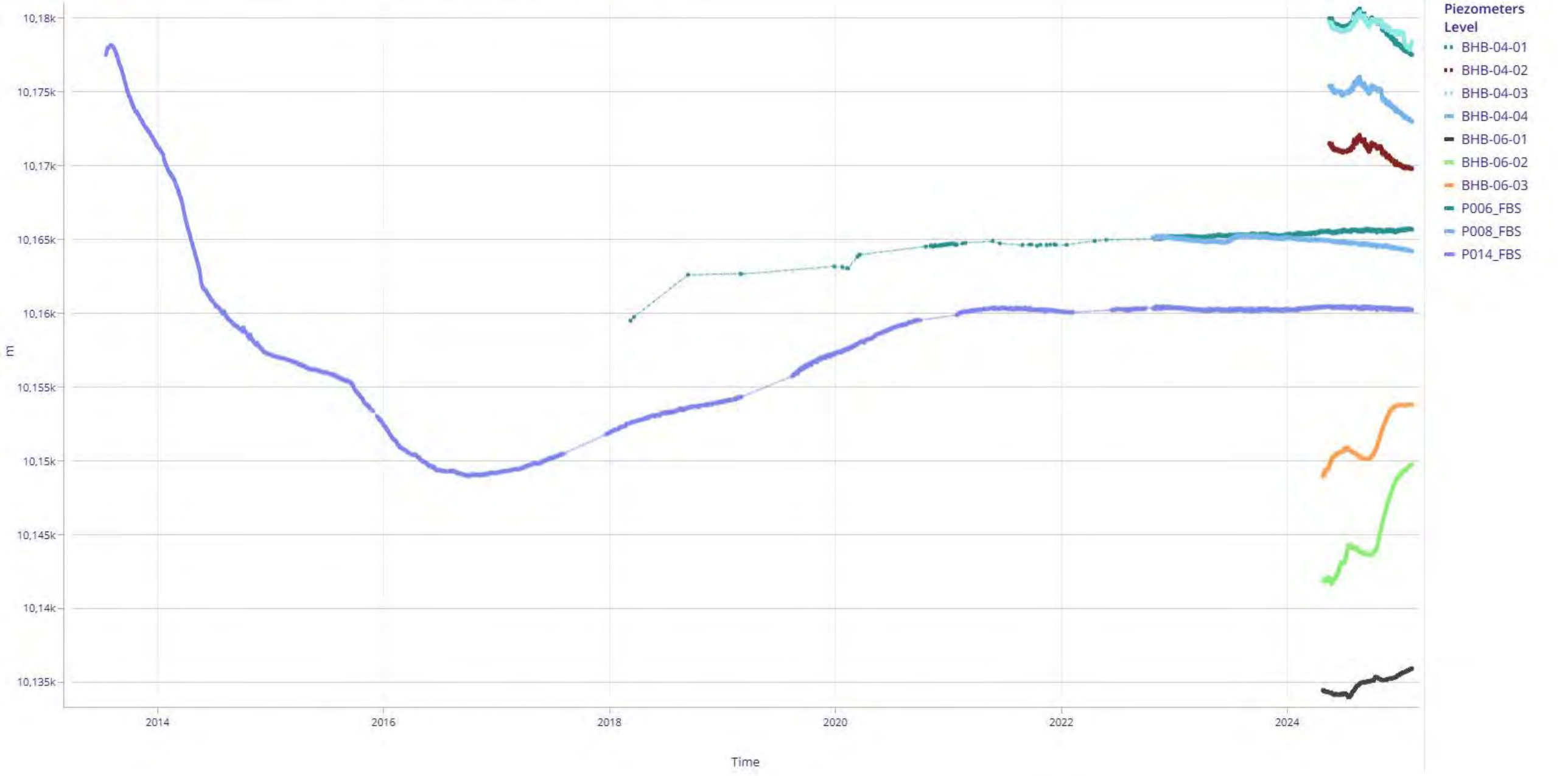
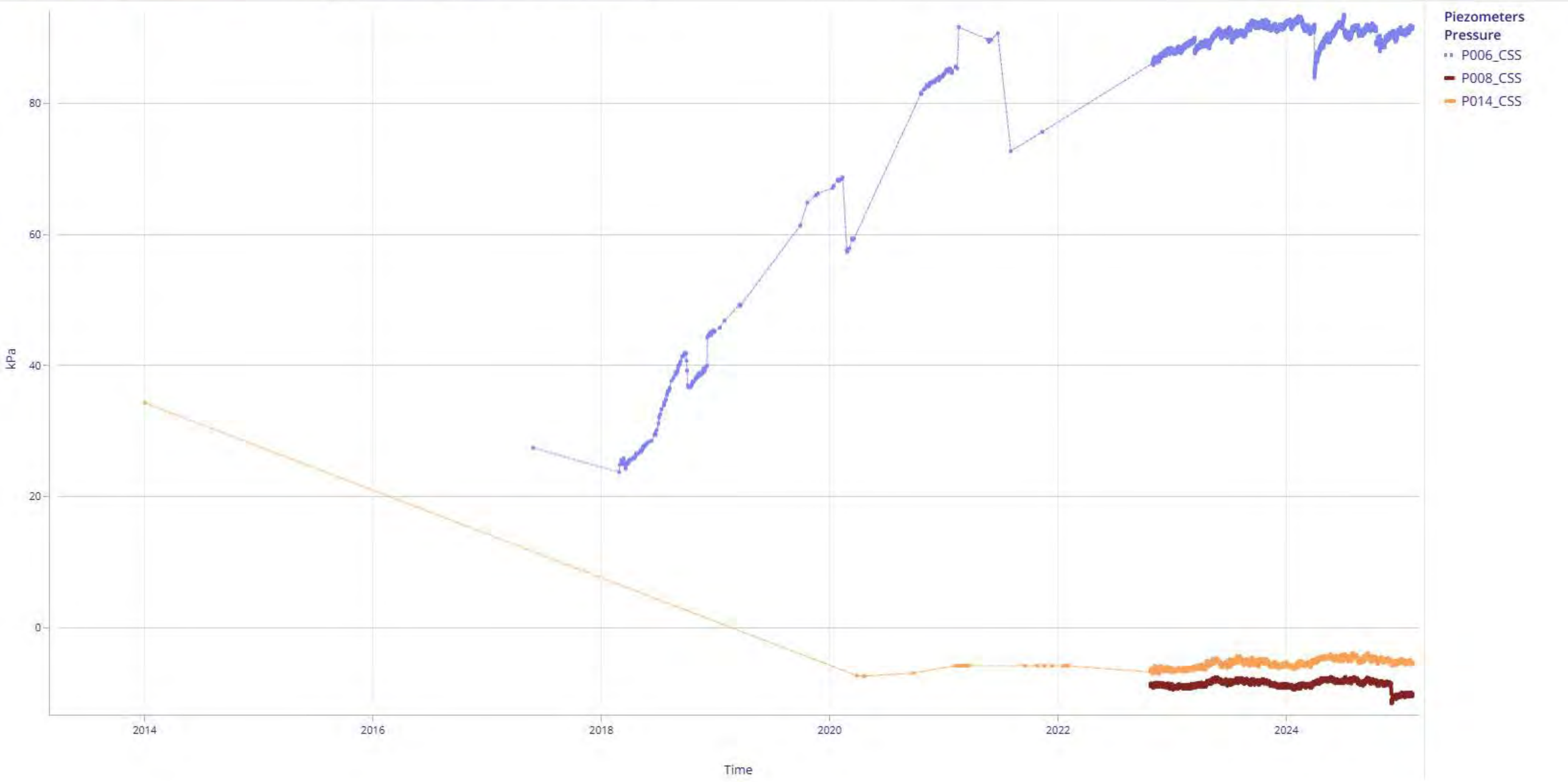


Project: **Prominent Hill Mine**

Section B VWP instruments

Graph period: 19/04/2013 12:00 am - 07/02/2025 03:41 pm



Project: **Prominent Hill Mine**

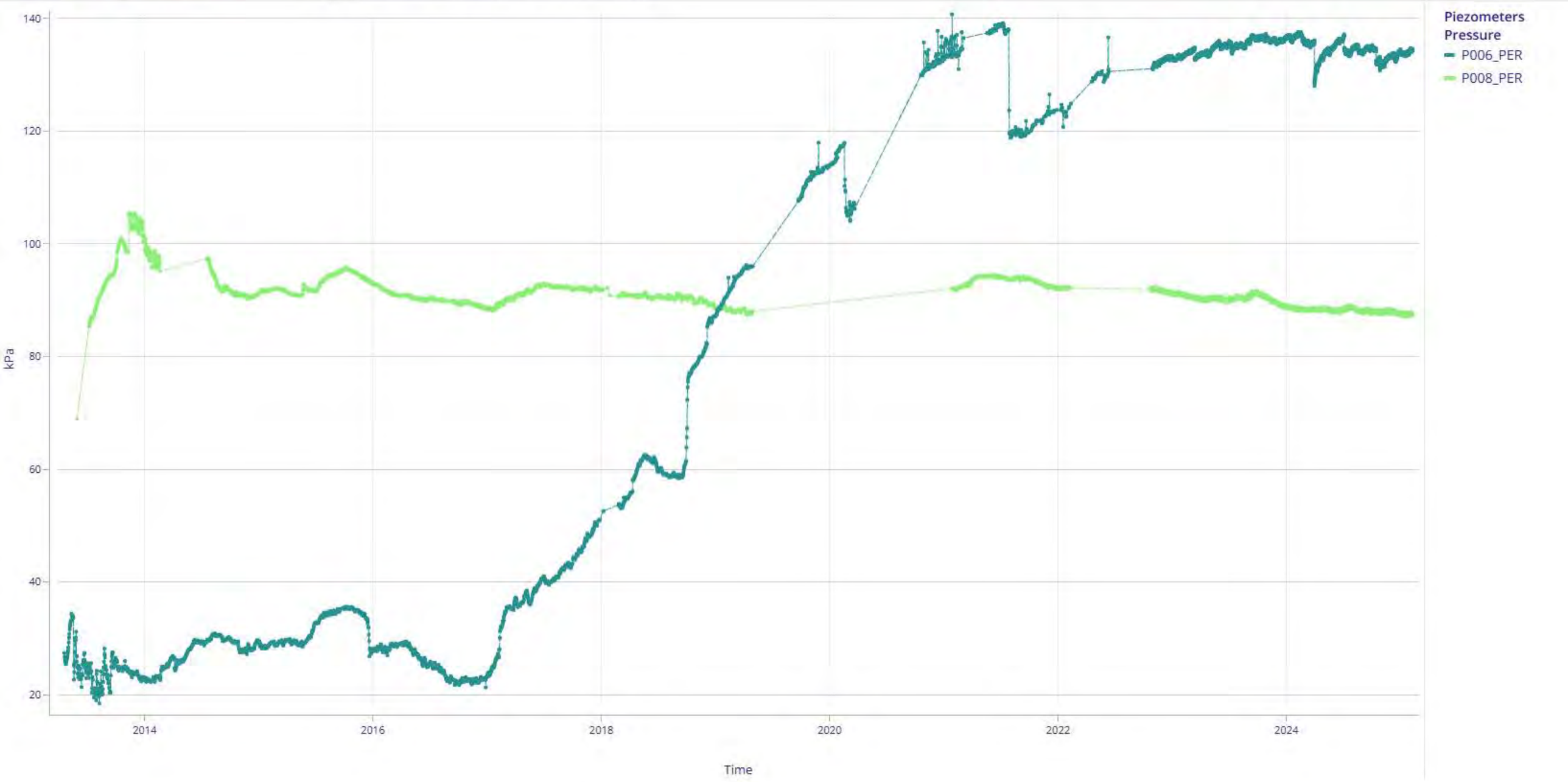
Section B VWP instruments

Graph period: 19/04/2013 12:00 am - 07/02/2025 03:43 pm

Project: **Prominent Hill Mine**

Section B VWP instruments

Graph period: 19/04/2013 12:00 am - 07/02/2025 04:00 pm



Project: **Prominent Hill Mine**

Section B VWP instruments

Graph period: 19/04/2013 12:00 am - 07/02/2025 03:59 pm

APPENDIX C-2
Stage 5 trigger review

Table 1 Summary of VWP pore pressures at Section B

Instrument ID	Install elevation (RL m)	Latest reading (7 February 2025, RL m)	Highest reading during review period (RL m)	Date of highest reading during the review period	Operating zone
BHB-01 VWP1	10201.0	10200.7	10200.95	28 May 2024	Normal
BHB-01 VWP2	10211.0	10210.8	10211.10	1 May 2024	Normal
BHB-04 VWP1	10147.5	10177.5	10180.64	21 August 2024	Normal
BHB-04 VWP2	10153.5	10169.8	10172.09	22 August 2024	Normal
BHB-04 VWP3	10158.0	10178.4	10180.45	22 August 2024	Normal
BHB-04 VWP4	10161.5	10173.0	10176.04	22 August 2024	Normal
BHB-06 VWP1	10134.6	10135.9	10135.94	5 February 2025	Normal
BHB-06 VWP2	10140.1	10149.8	10149.77	7 February 2025	Normal
BHB-06 VWP3	10145.1	10153.8	10153.85	29 January 2025	Normal
BHB-06 VWP4	10155.1	10155.4	10156.27	26 April 2024	Normal
BHB-06 VWP5	10166.1	10165.0	10165.33	2 June 2024	Normal
P006 (PER)		10138.0	10138.28	8 February 2024	Normal
P006 (CSS)	10130.0	10139.6	10139.79	3 July 2024	Normal
P006 (FBS)	10145.0	10165.7	10165.76	29 January 2025	Normal
P006 (OBS)	10174.0	10184.2	10184.49	18 November 2024	Normal
P008 (CSS)	10126.0	10125.0	10125.22	21 May 2024	Normal
P008 (FBS)	10149.0	10164.2	10165.16	1 January 2024	Normal
P008 (OBS)		*10192.4*	*10193.26*	*29 October 2024*	*N/A (Note 1)*
P008 (NTS)		-	-	-	N/A (Note 2)
P014 (CSS)	10123.0	10122.5	10122.64	31 July 2024	Normal
P014 (FBS)	10141.0	10160.2	10160.50	18 May 2024	Normal
P014 (OBS)	10171.0	10180.4	10180.67	25 April 2024	Normal

Table 2 Summary of monitoring bore levels at Section B

Instrument ID	Install elevation (RL m)	Latest reading (7 February 2025, RL m)	Highest reading during review period (RL m)	Date of highest reading during the review period	Operating zone
BHB-02	10200.8	< 10200.8	< 10200.8	N/A	Normal
TSF-S1	10161.5	< 10161.5	< 10161.5	N/A	Normal
TSF-S2	10163.5	< 10163.5	< 10163.5	N/A	Normal

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Adelaide SA 5000
GPO Box 398
Adelaide SA 5001

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www.wsp.com

Table 3 Summary of VWP pore pressures at Section D

Instrument ID	Install elevation (RL m)	Latest reading (7 February 2025, RL m)	Highest reading during review period (RL m)	Date of highest reading during the review period	Operating zone
BHD-01 VWP1	10206.3	10206.2	10207.4	18 May 2024	Normal
BHD-01 VWP2	10211.3	10211.0	10211.3	21 May 2024	Normal
BHD-03 VWP1	10204.8	10201.1	10201.1	06 February 2025	Normal
BHD-03 VWP2	10209.8	10209.6	10209.9	31 July 2024	Normal

Table 4 Summary of monitoring bore levels at Section D

Instrument ID	Install elevation (RL m)	Latest reading (7 February 2025, RL m)	Highest reading during review period (RL m)	Date of highest reading during the review period	Operating zone
BHD-02	10199.3	< 10199.3 (dry)	< 10199.3	N/A	Normal
TSF-A	10170.0	< 10170.0 (dry)	< 10170.0	N/A	Normal

Table 5 Summary of VWP pore pressures at Section C

Instrument ID	Install elevation (RL m)	Latest reading (7 February 2025, RL m)	Highest reading during review period (RL m)	Date of highest reading during the review period	Operating zone
BHC-01 VWP1	10206.5	10206.2	10206.47	03/07/2024	N/A (Note 1)
BHC-01 VWP2	10211.5	10211.3	10211.55	20/05/2024	N/A (Note 1)

Note:

1. Trigger levels were not provided at the Section C alignment as target FoS criteria could not be achieved during stability modelling completed by WSP[1].

Table 6 Summary of monitoring bore levels at Section C

Instrument ID	Install elevation (RL m)	Latest reading (7 February 2025, RL m)	Highest reading during review period (RL m)	Date of highest reading during the review period	Operating zone
BHC-02	10197.4	< 10197.4	< 10197.4	N/A	N/A (Note 1)
TSF-E	10214.6	< 10214.6	< 10214.6	N/A	N/A (Note 1)

Notes:

1. This instrument is plotted in the Sixsense system but the installation depth is not known and therefore it does not have a trigger.
2. Trigger levels were not provided at the Section C alignment as target FoS criteria could not be achieved during stability modelling completed by WSP[1].

[1] Prominent Hill Tailings Storage Facility – Stage 5 & Stage 6 triggers for vibrating wire piezometers and monitoring bores, WSP report ref. PS214975-WSP-ADL-MNG-MEM-0014 Rev0

Appendix D

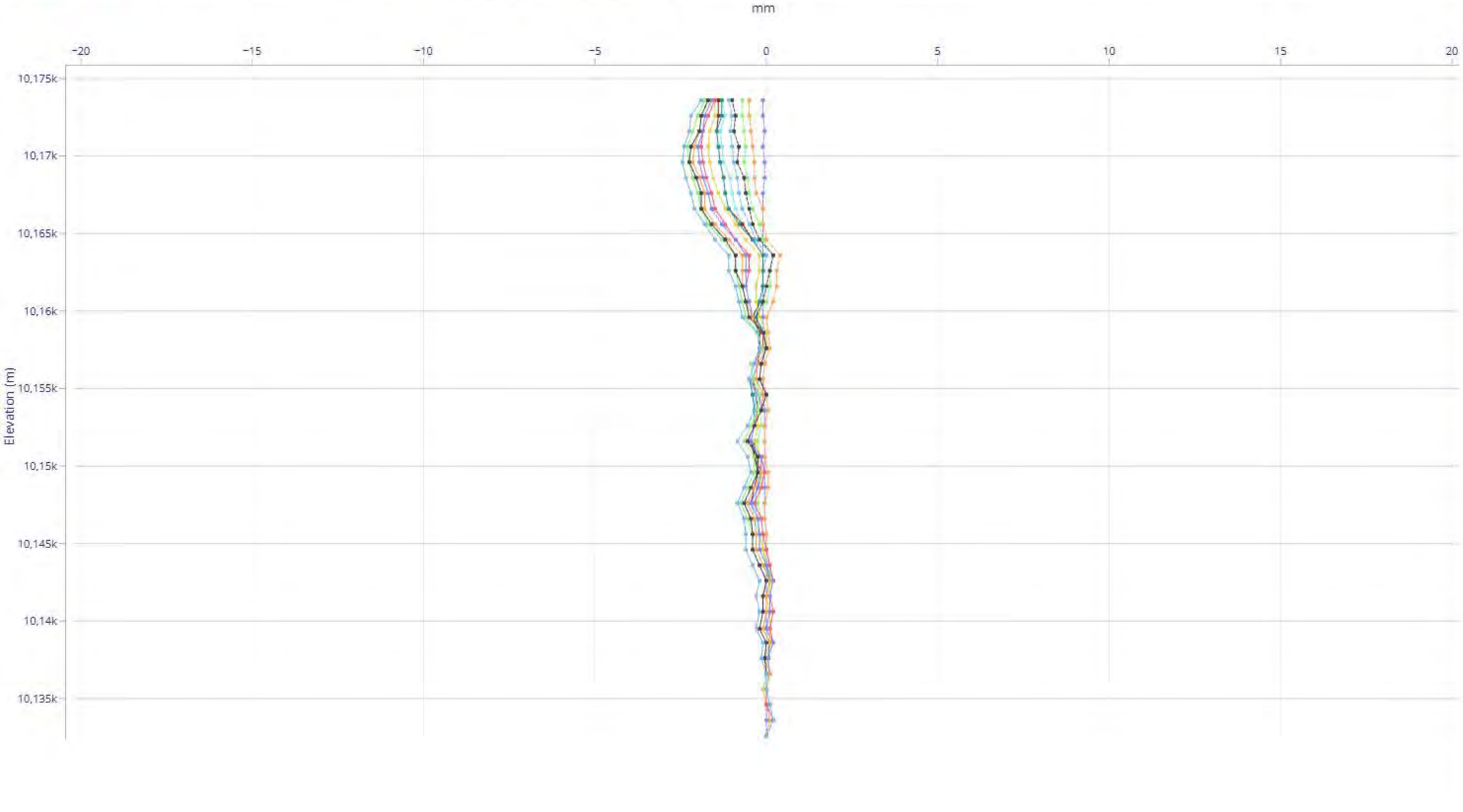
Displacement data

APPENDIX D-1
In Place Inclinometer data

Project: **Prominent Hill Mine**

IPI BHB 07 Position Graph - A Cumulatives

Graph period: 26/04/2024 03:30 pm - 07/02/2025 04:14 pm



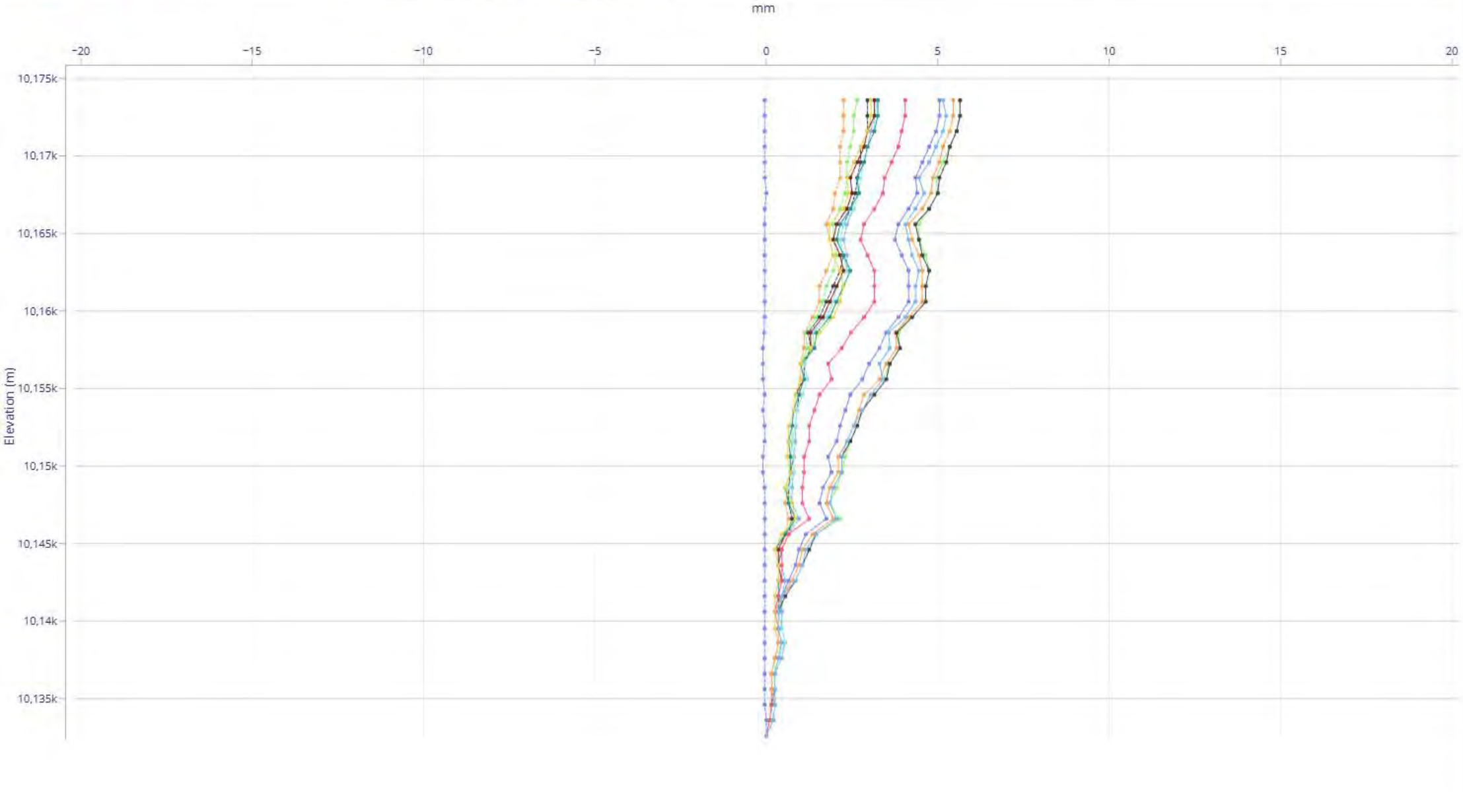
In place inclinometers (IPI) A Cumulative (Δ):

- 07/02/2025 - 02:30 pm
- 18/01/2025 - 02:30 am
- 28/12/2024 - 02:30 pm
- 08/12/2024 - 02:30 am
- 17/11/2024 - 02:30 pm
- 28/10/2024 - 02:30 am
- 07/10/2024 - 02:30 pm
- 17/09/2024 - 01:30 am
- 27/08/2024 - 01:30 pm
- 07/08/2024 - 01:30 am
- 17/07/2024 - 01:30 pm
- 27/06/2024 - 01:30 am
- 06/06/2024 - 01:30 pm
- 17/05/2024 - 01:30 am
- 26/04/2024 - 03:30 pm

Project: **Prominent Hill Mine**

IPI BHB 07 Position Graph - B Cumulatives

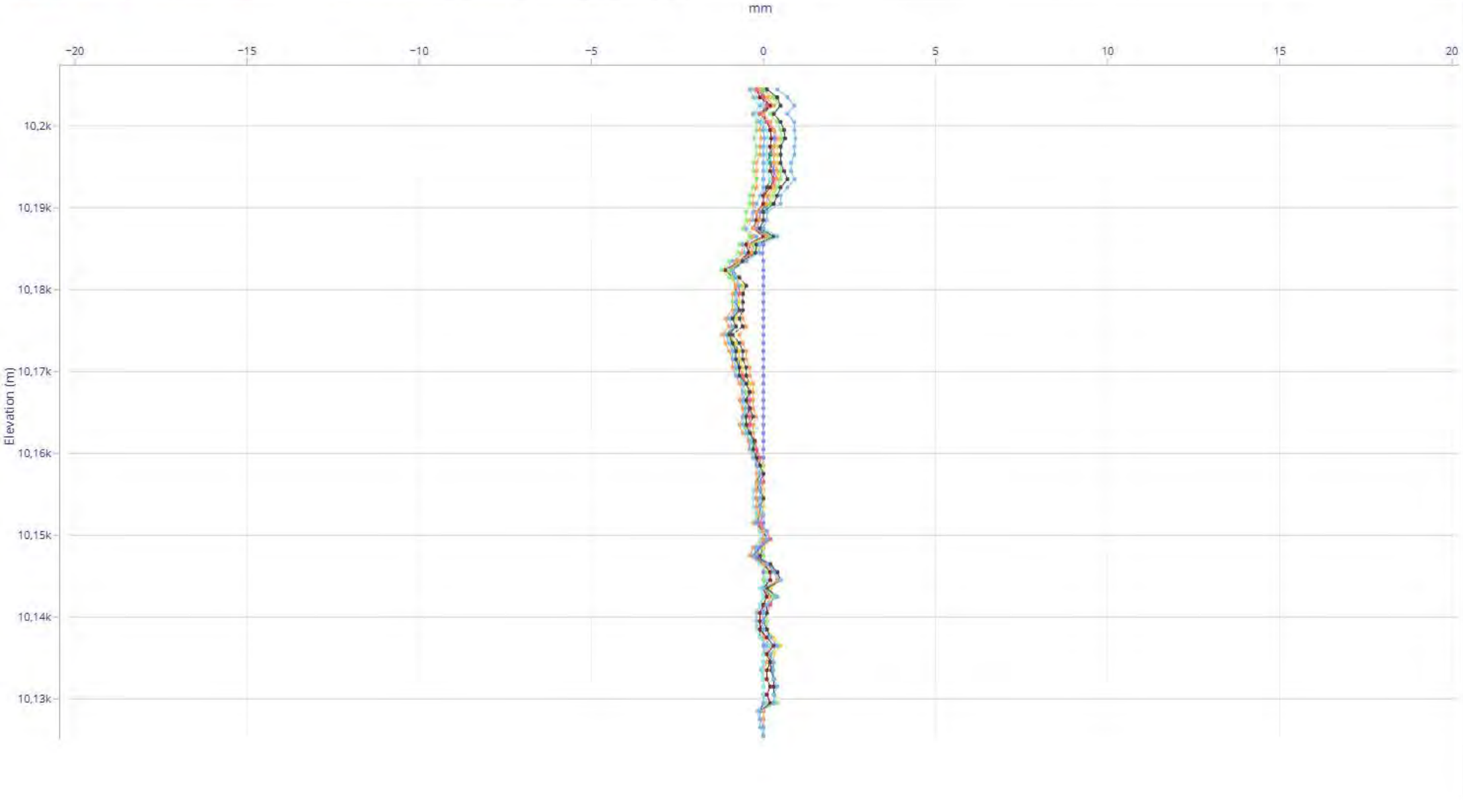
Graph period: 26/04/2024 03:30 pm - 07/02/2025 04:14 pm



Project: **Prominent Hill Mine**

IPI BHB 05 Position Graph, A Cumulatives

Graph period: 26/04/2024 09:30 pm - 07/02/2025 04:13 pm



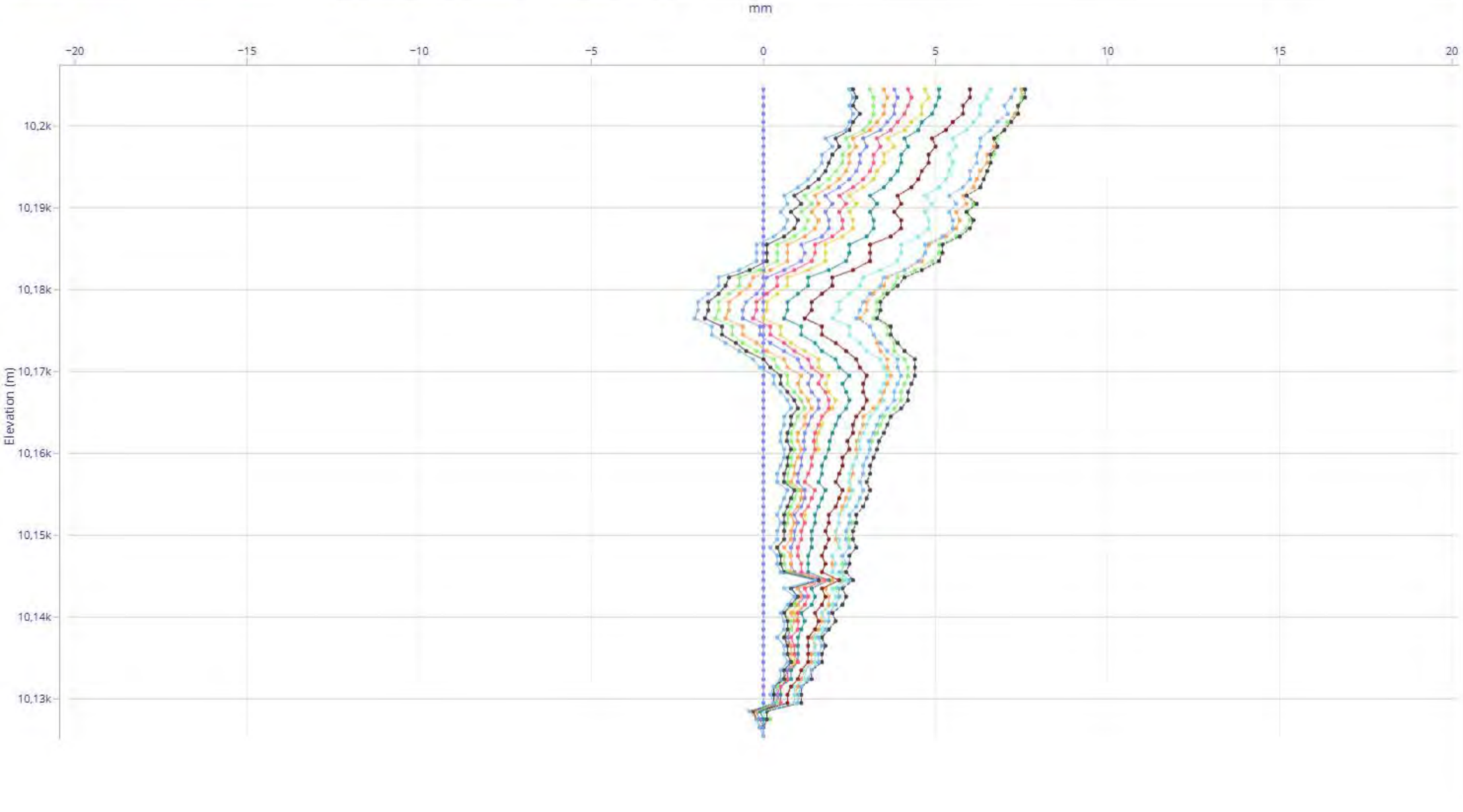
In place inclinometers (IPI) A Cumulative (Δ):

- 07/02/2025 - 02:30 pm
- 18/01/2025 - 02:30 am
- 28/12/2024 - 02:30 pm
- 07/12/2024 - 10:30 pm
- 17/11/2024 - 02:30 pm
- 28/10/2024 - 02:30 am
- 07/10/2024 - 06:30 pm
- 17/09/2024 - 05:30 am
- 27/08/2024 - 05:30 pm
- 06/08/2024 - 09:30 pm
- 17/07/2024 - 05:30 pm
- 27/06/2024 - 05:30 am
- 06/06/2024 - 05:30 pm
- 17/05/2024 - 05:30 am
- 26/04/2024 - 09:30 pm

Project: **Prominent Hill Mine**

IPI BHB 05 Position Graph, B Cumulatives

Graph period: 26/04/2024 09:30 pm - 07/02/2025 04:13 pm



APPENDIX D-2
Manual inclinometer data

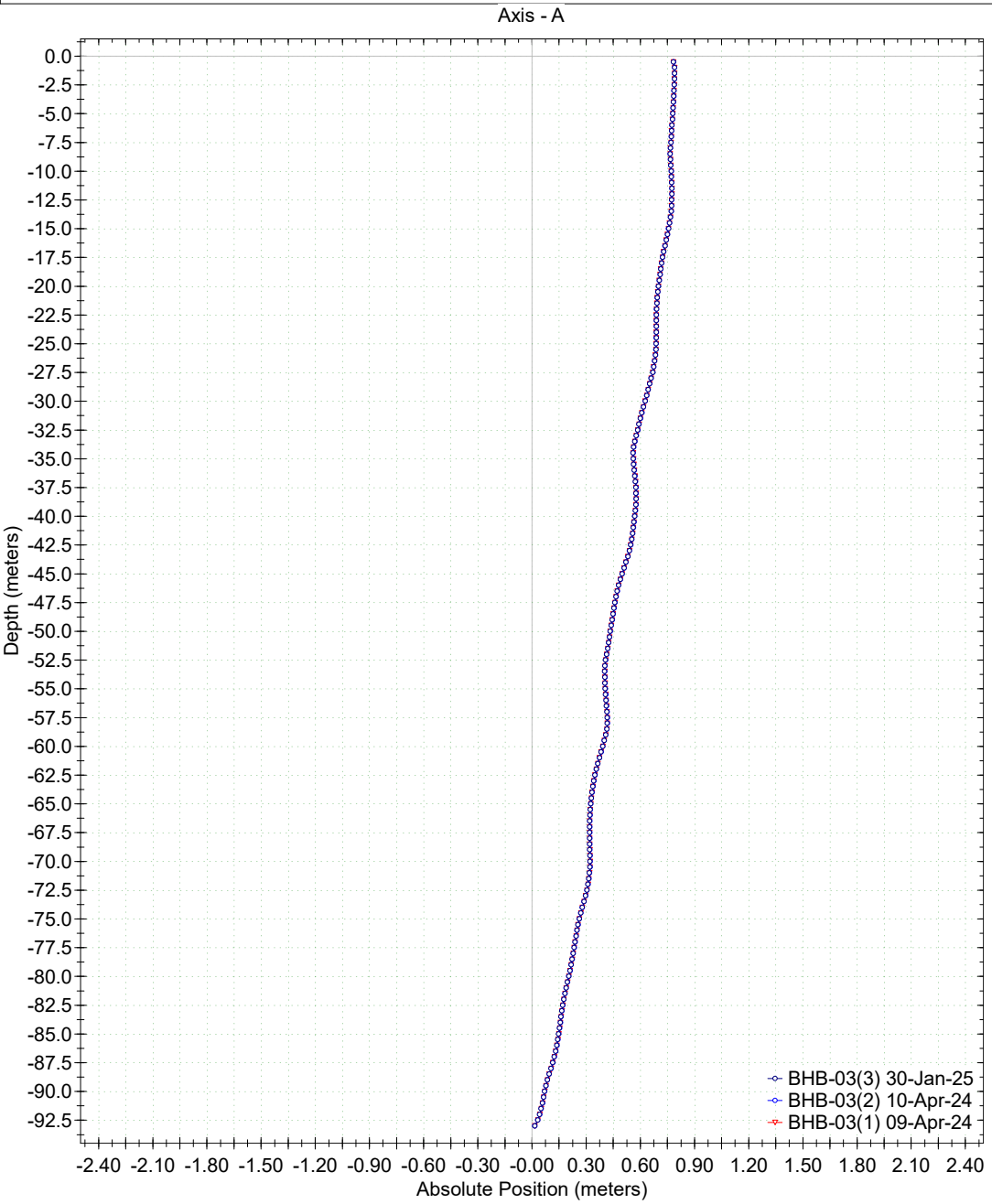
RST Instruments Ltd.

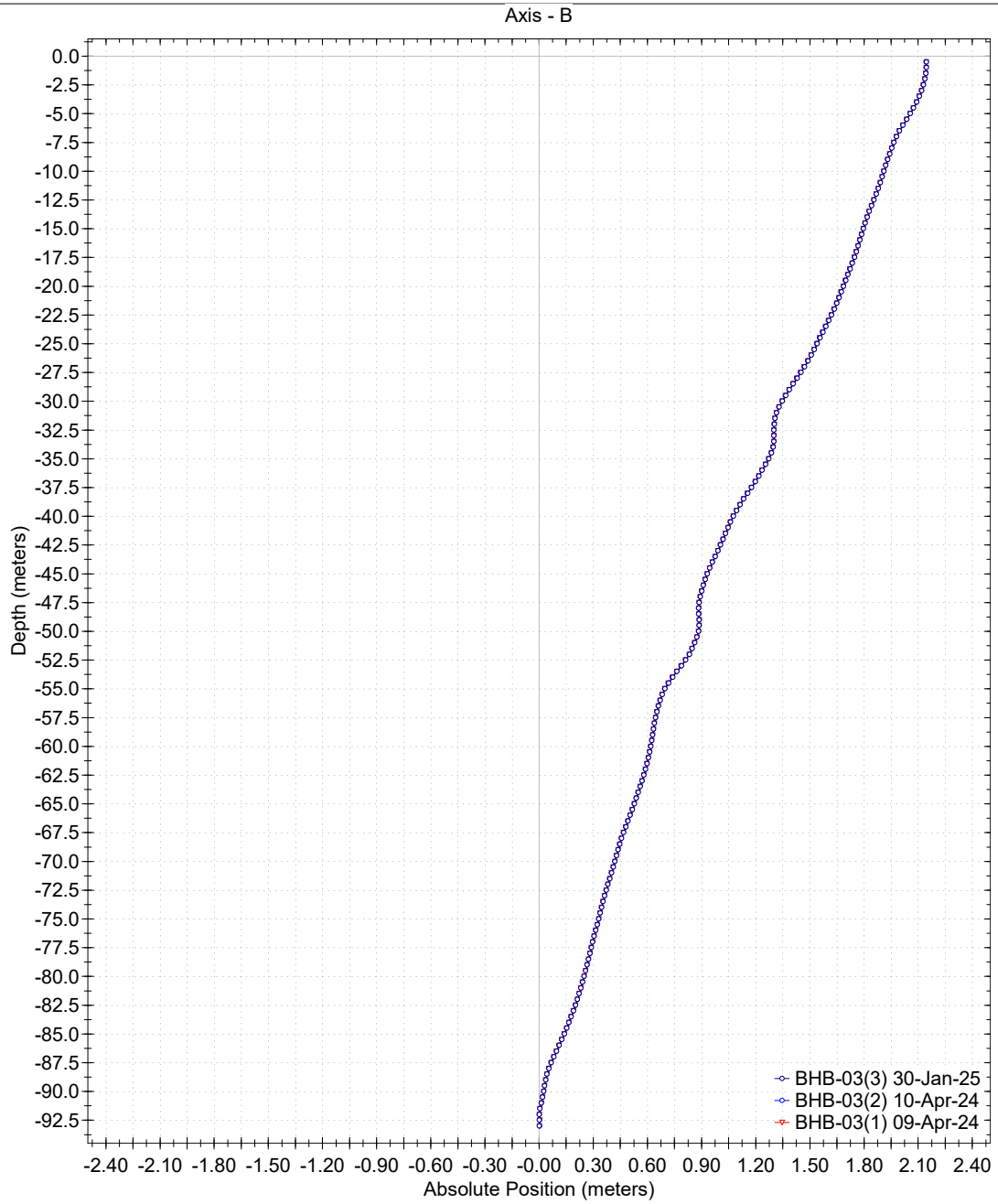
ABSOLUTE POSITION

Inclinalysis v. 2.4.9.1

Borehole : BHB-03
Project : Prom Hill
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 93.0 meters
A+ Groove Azimuth :
Base Reading : 2024 Apr 09 13:13
Applied Azimuth : 0.0 degrees





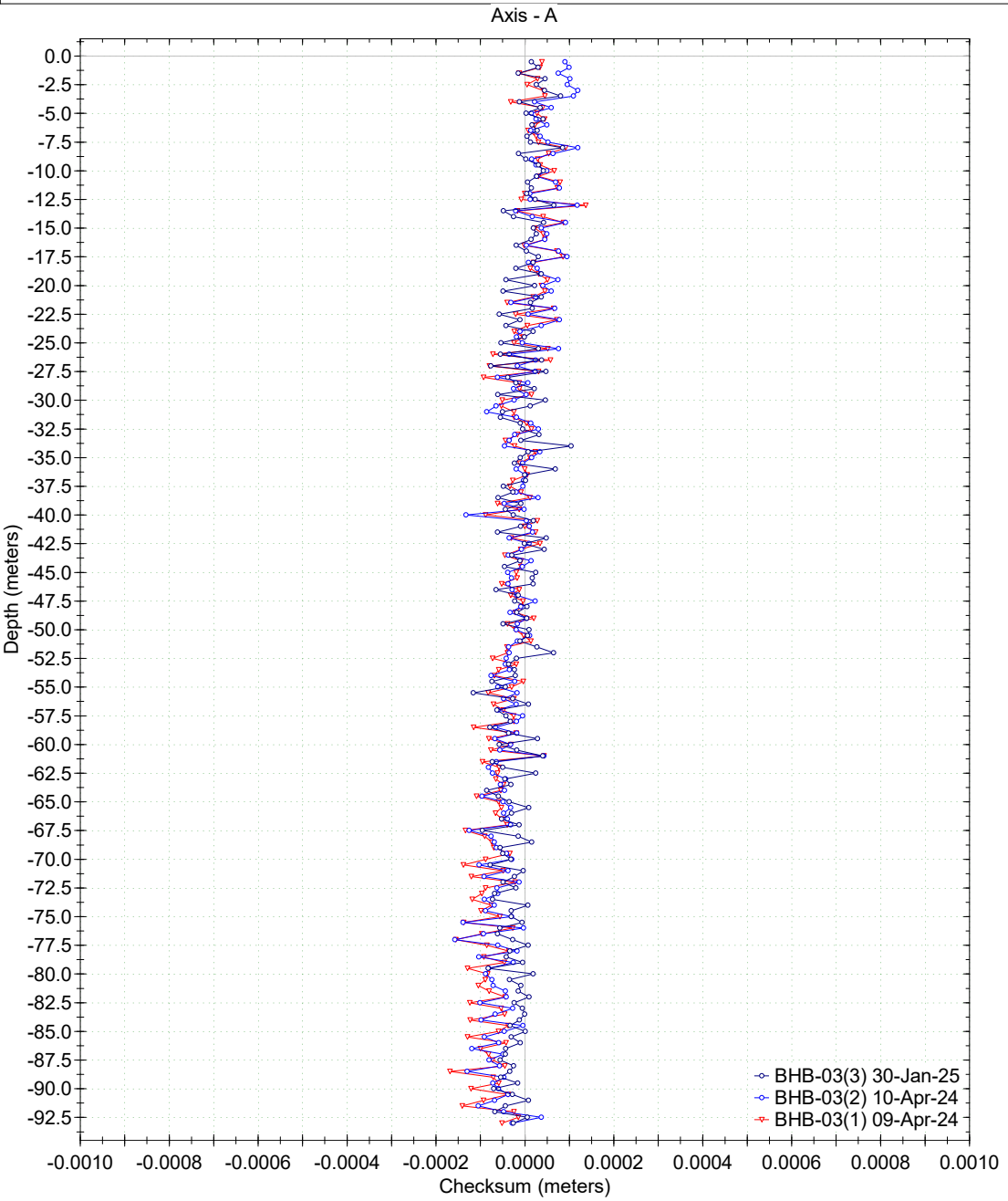
RST Instruments Ltd.

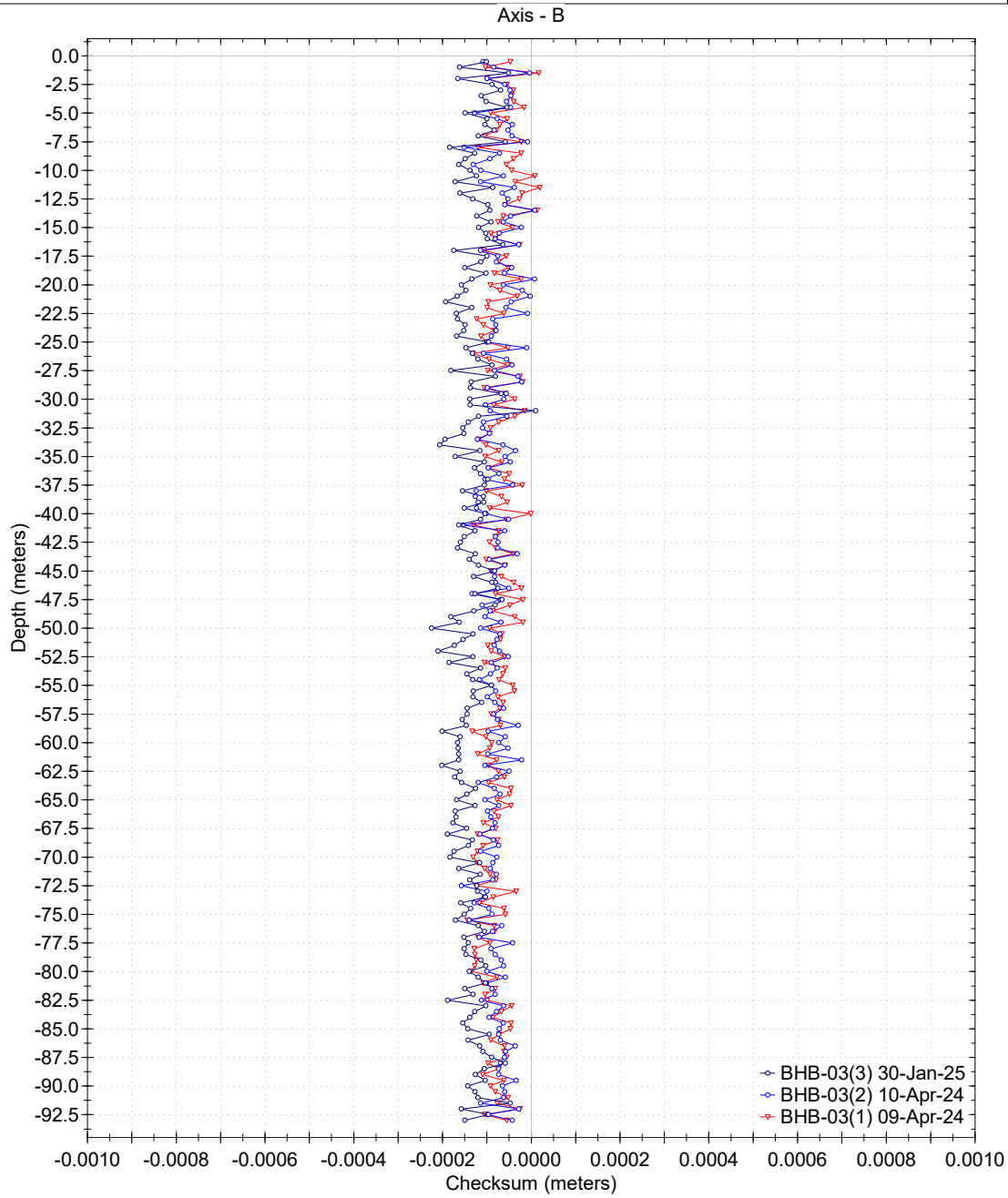
CHECKSUM

Inclinalysis v. 2.4.9.1

Borehole : BHB-03
Project : Prom Hill
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 93.0 meters
A+ Groove Azimuth :
Base Reading : 2024 Apr 09 13:13
Applied Azimuth : 0.0 degrees





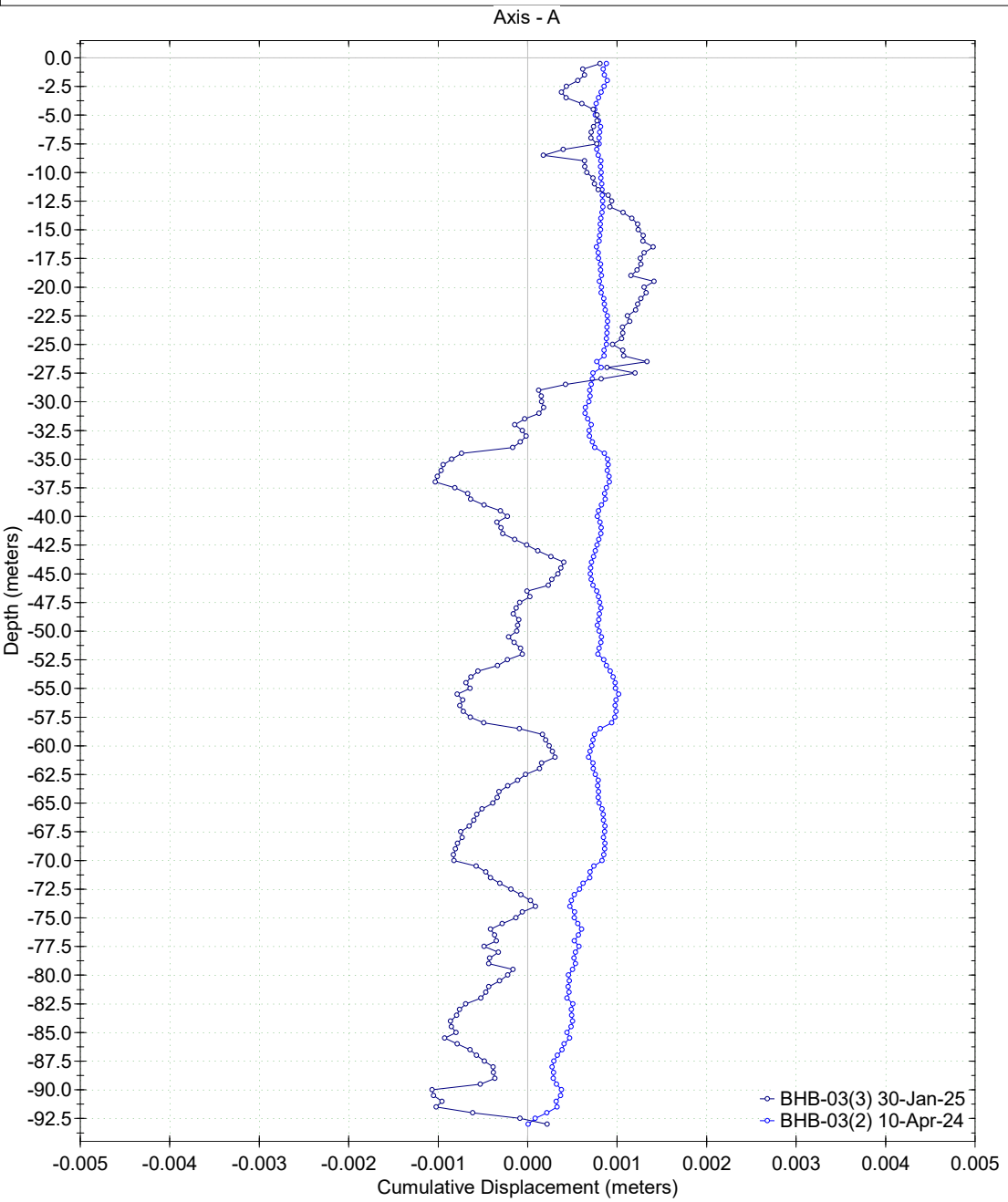
RST Instruments Ltd.

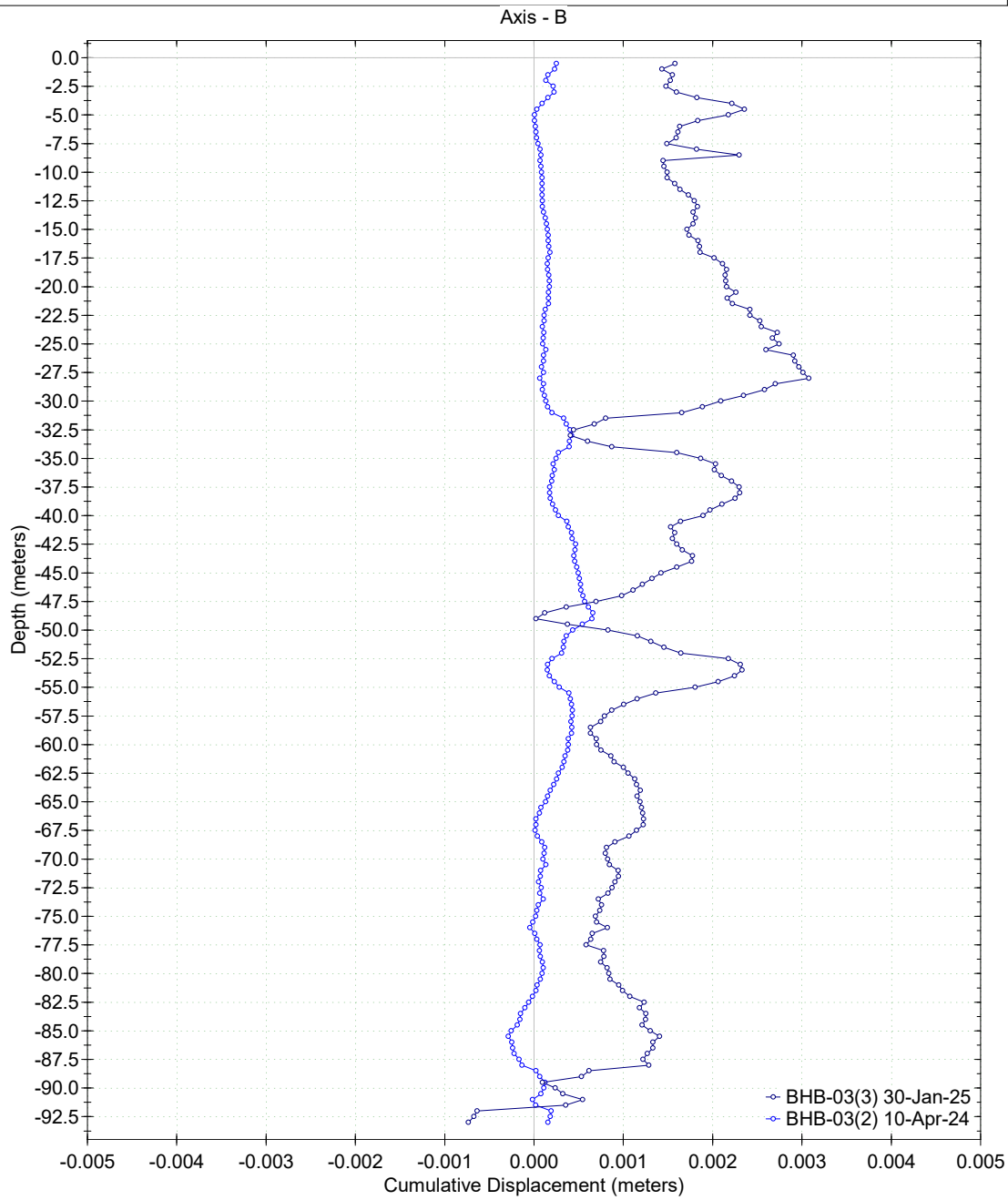
CUMULATIVE DISPLACEMENT

Inclinalysis v. 2.4.9.1

Borehole : BHB-03
Project : Prom Hill
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 93.0 meters
A+ Groove Azimuth :
Base Reading : 2024 Apr 09 13:13
Applied Azimuth : 0.0 degrees





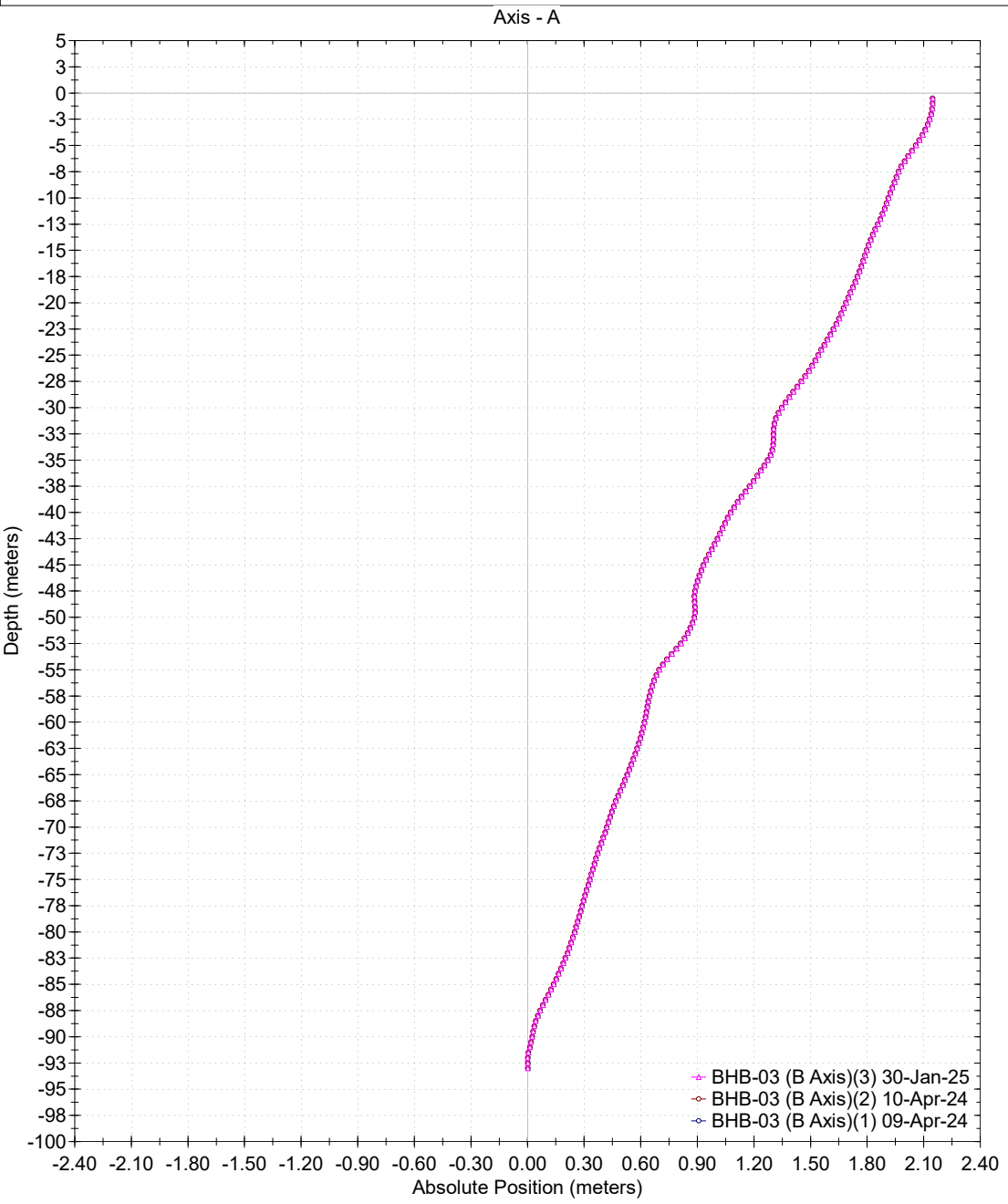
RST Instruments Ltd.

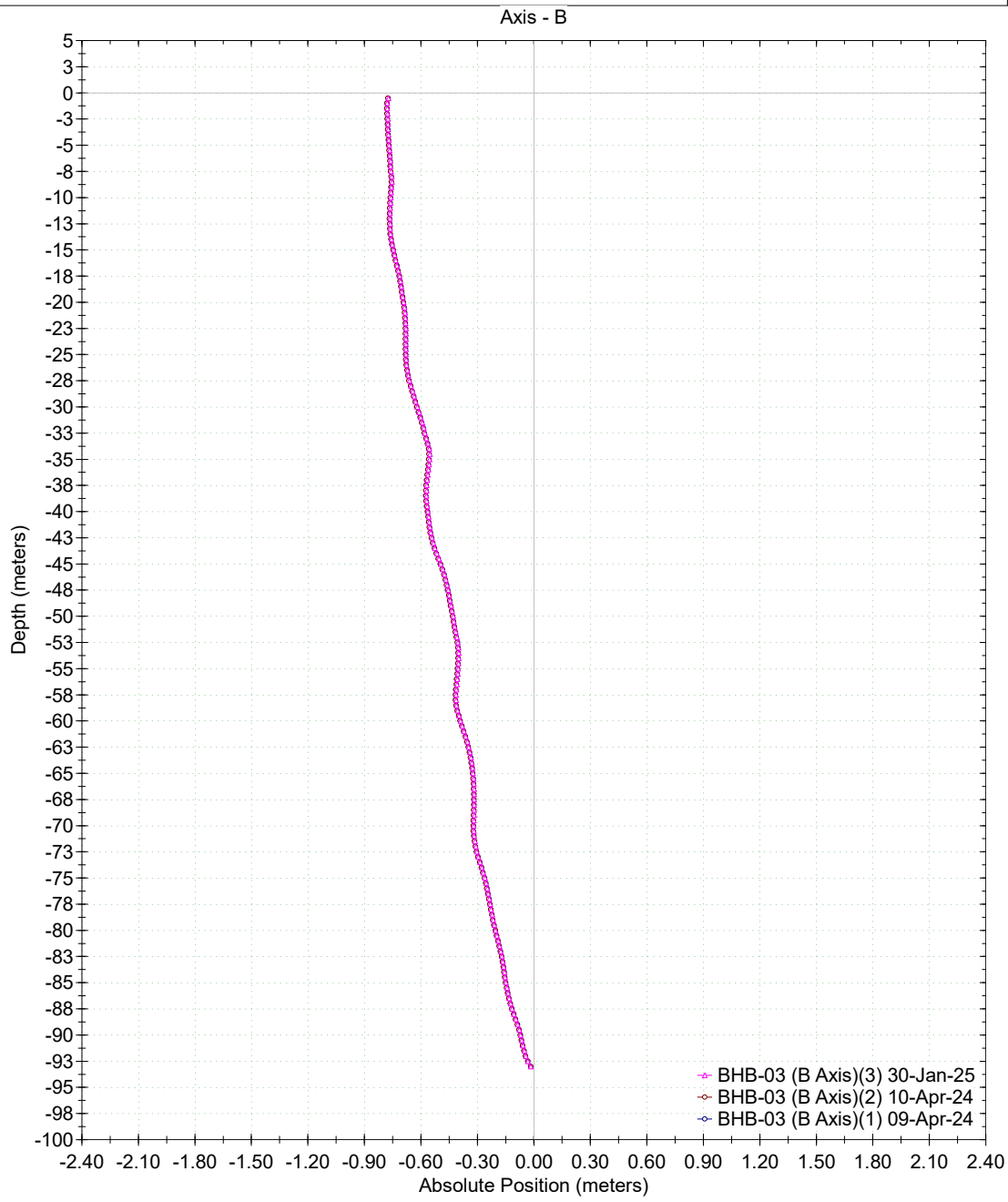
ABSOLUTE POSITION

Inclinalysis v. 2.4.9.1

Borehole : BHB-03B
Project : Prom Hill
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 93.0 meters
A+ Groove Azimuth :
Base Reading : 2024 Apr 09 14:42
Applied Azimuth : 0.0 degrees





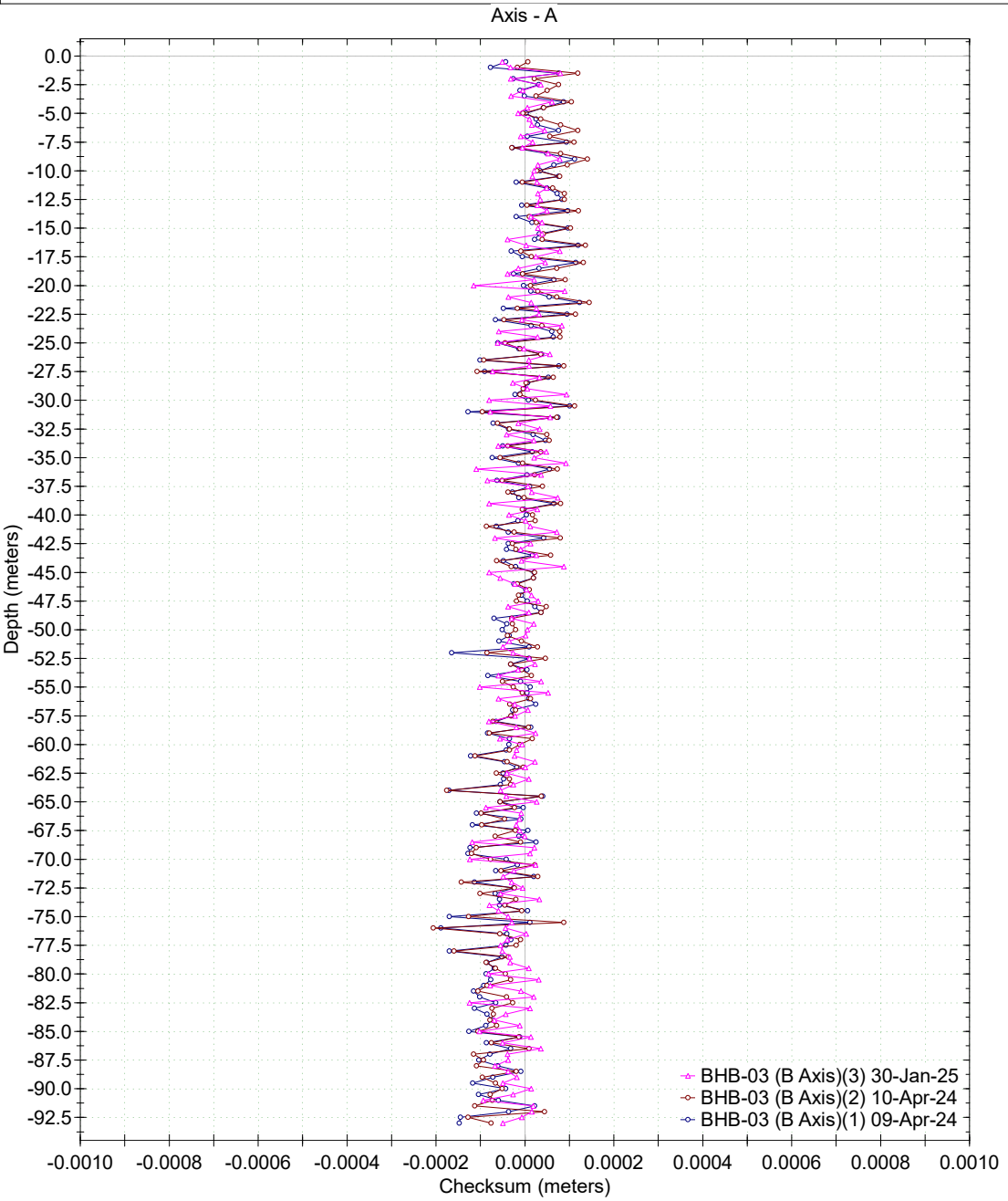
RST Instruments Ltd.

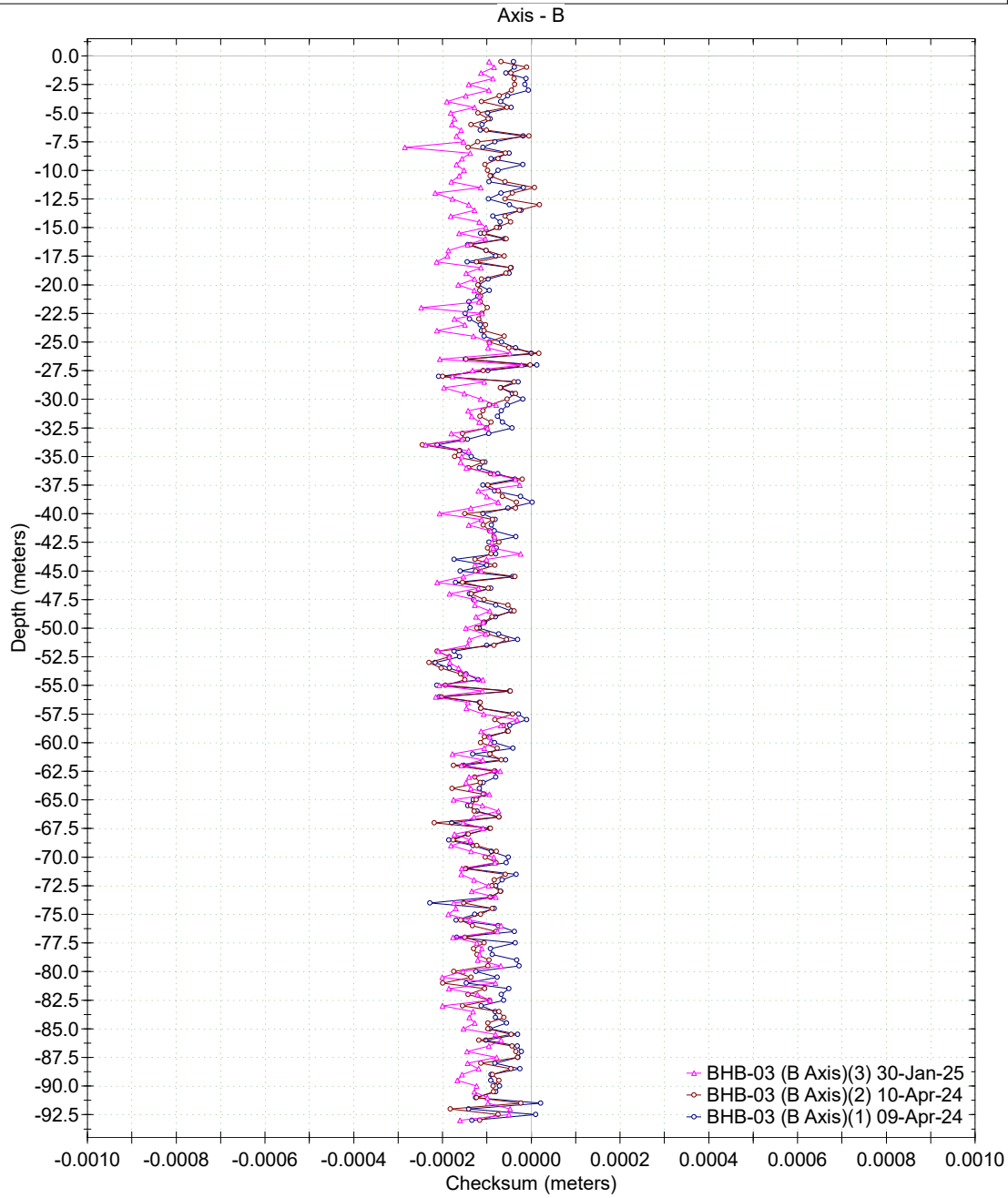
CHECKSUM

Inclinalysis v. 2.4.9.1

Borehole : BHB-03B
Project : Prom Hill
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 93.0 meters
A+ Groove Azimuth :
Base Reading : 2024 Apr 09 14:42
Applied Azimuth : 0.0 degrees





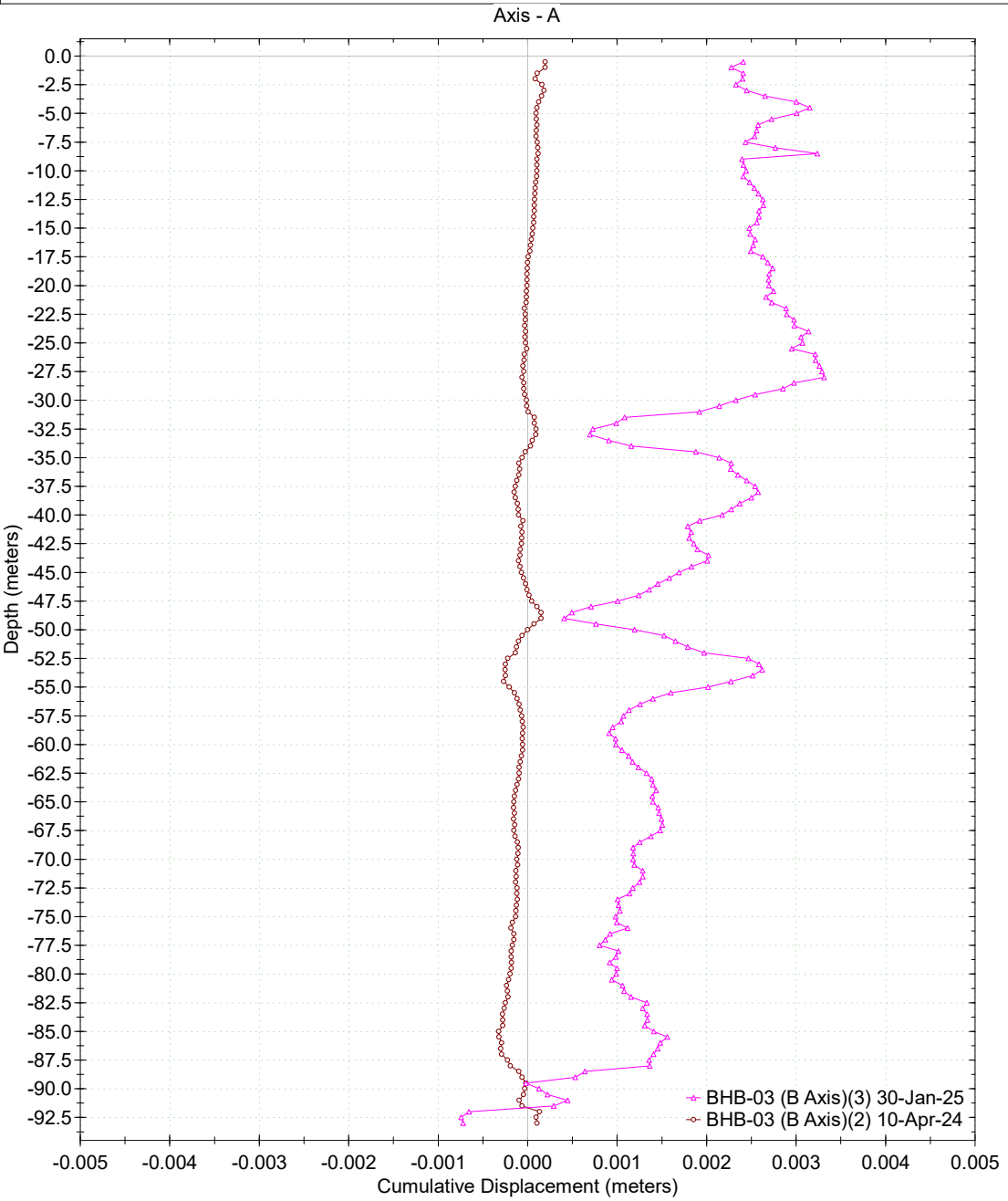
RST Instruments Ltd.

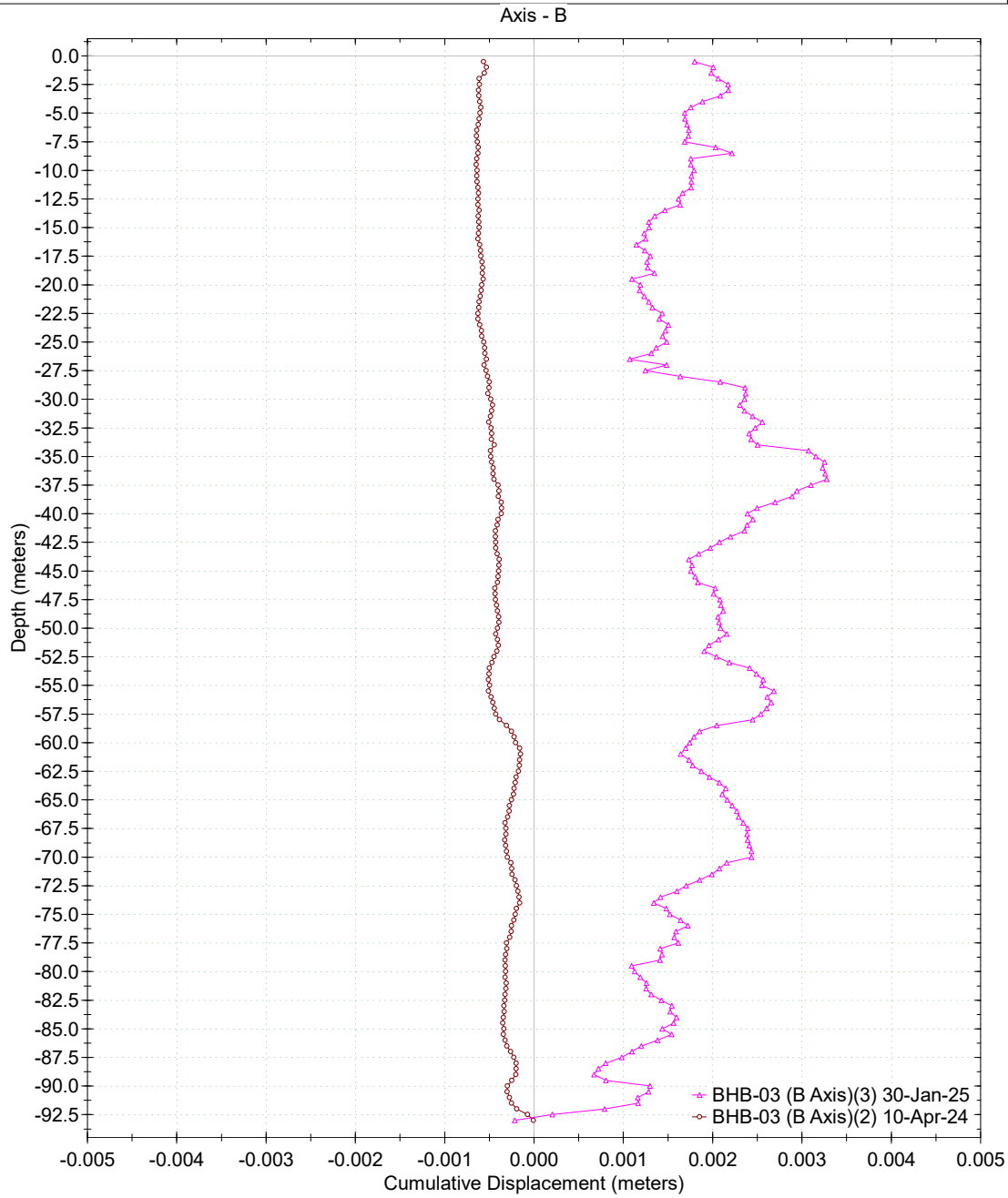
CUMULATIVE DISPLACEMENT

Inclinalysis v. 2.4.9.1

Borehole : BHB-03B
Project : Prom Hill
Location :
Northing :
Easting :
Collar :

Spiral Correction : N/A
Collar Elevation : 0.00 meters
Reading Depth : 93.0 meters
A+ Groove Azimuth :
Base Reading : 2024 Apr 09 14:42
Applied Azimuth : 0.0 degrees





Appendix E

2024 production and operational data

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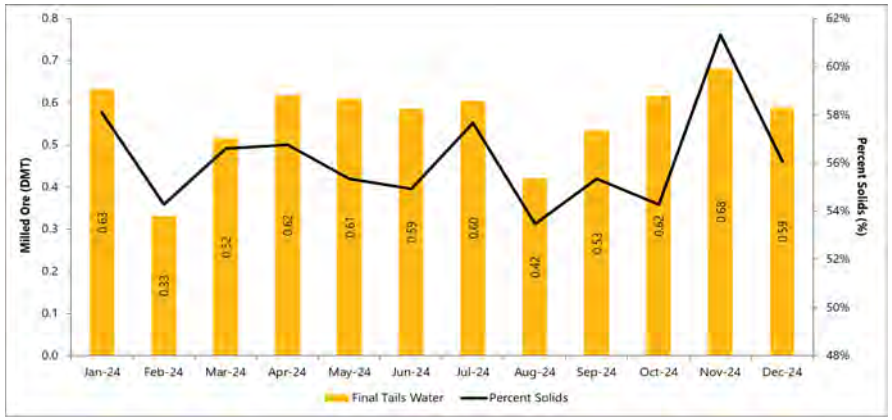

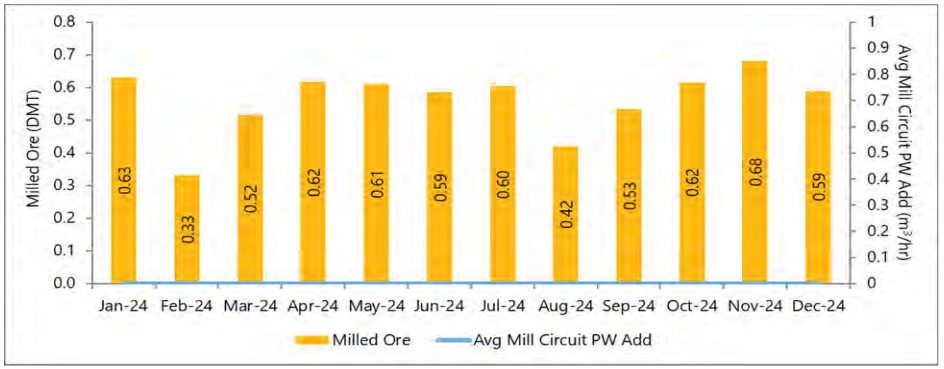

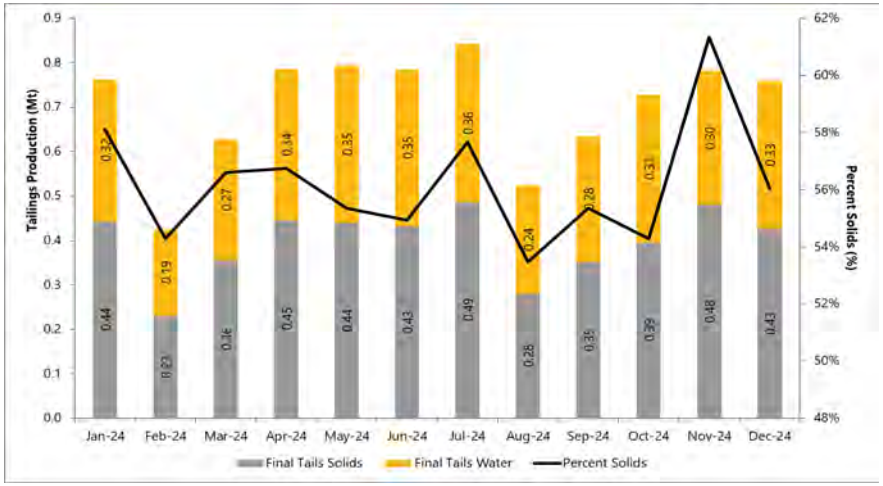

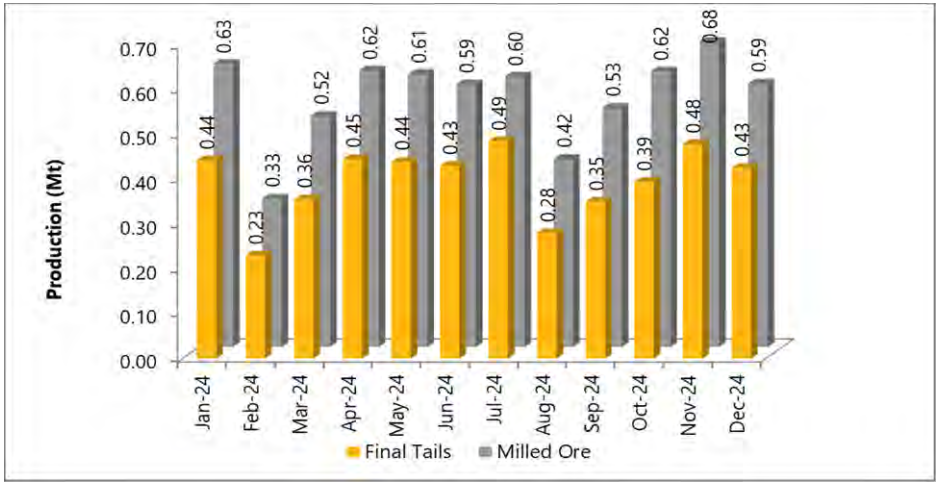

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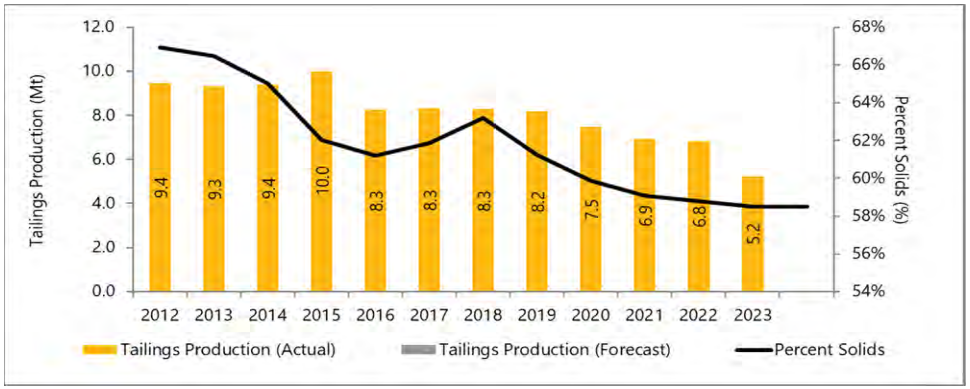

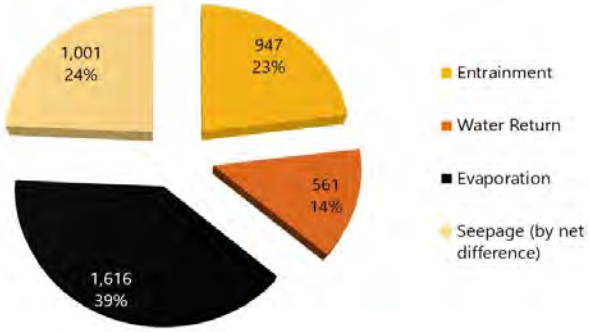

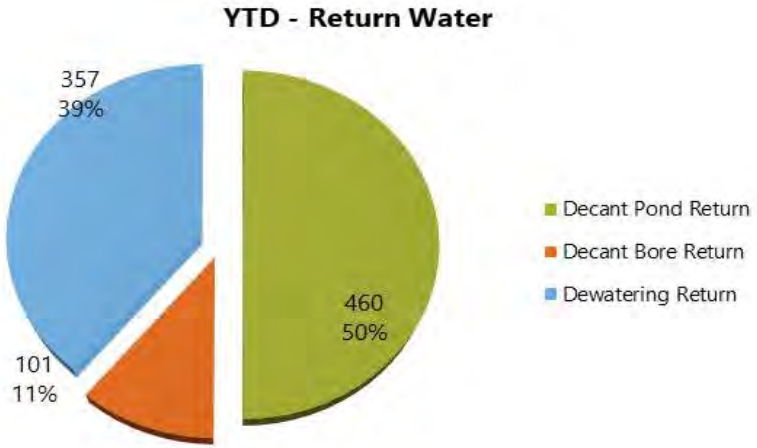

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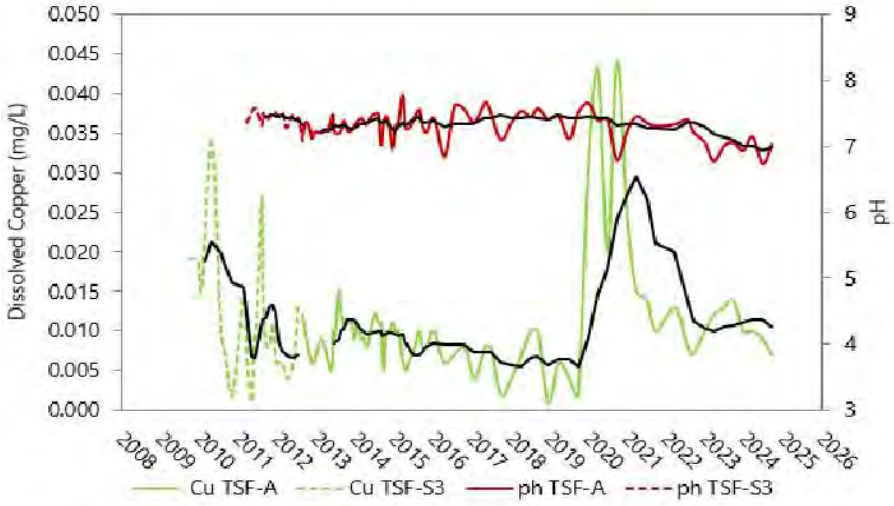

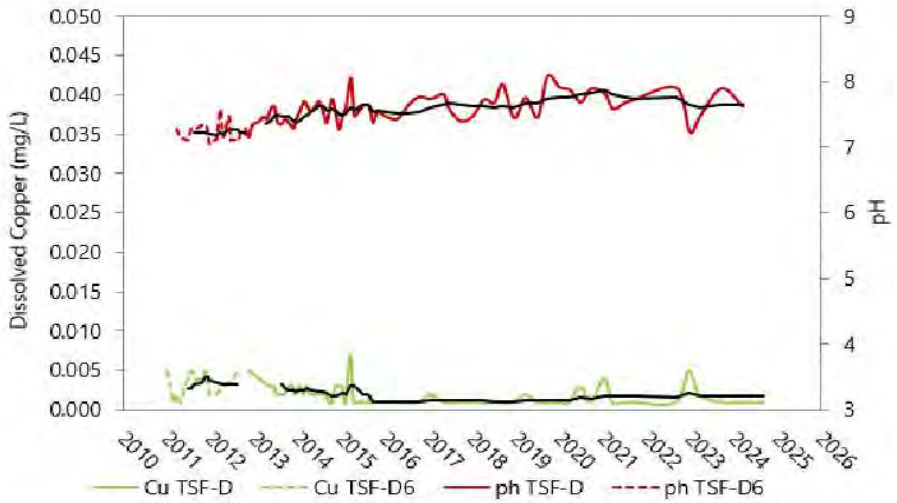

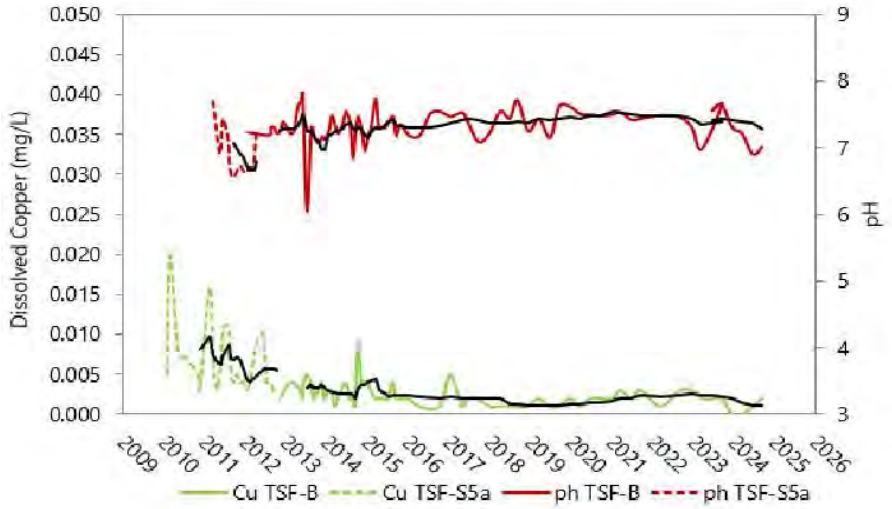

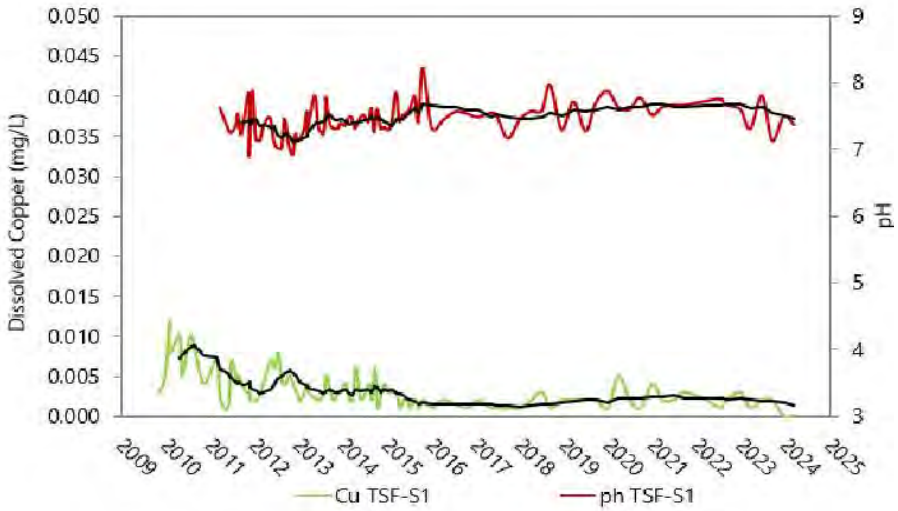

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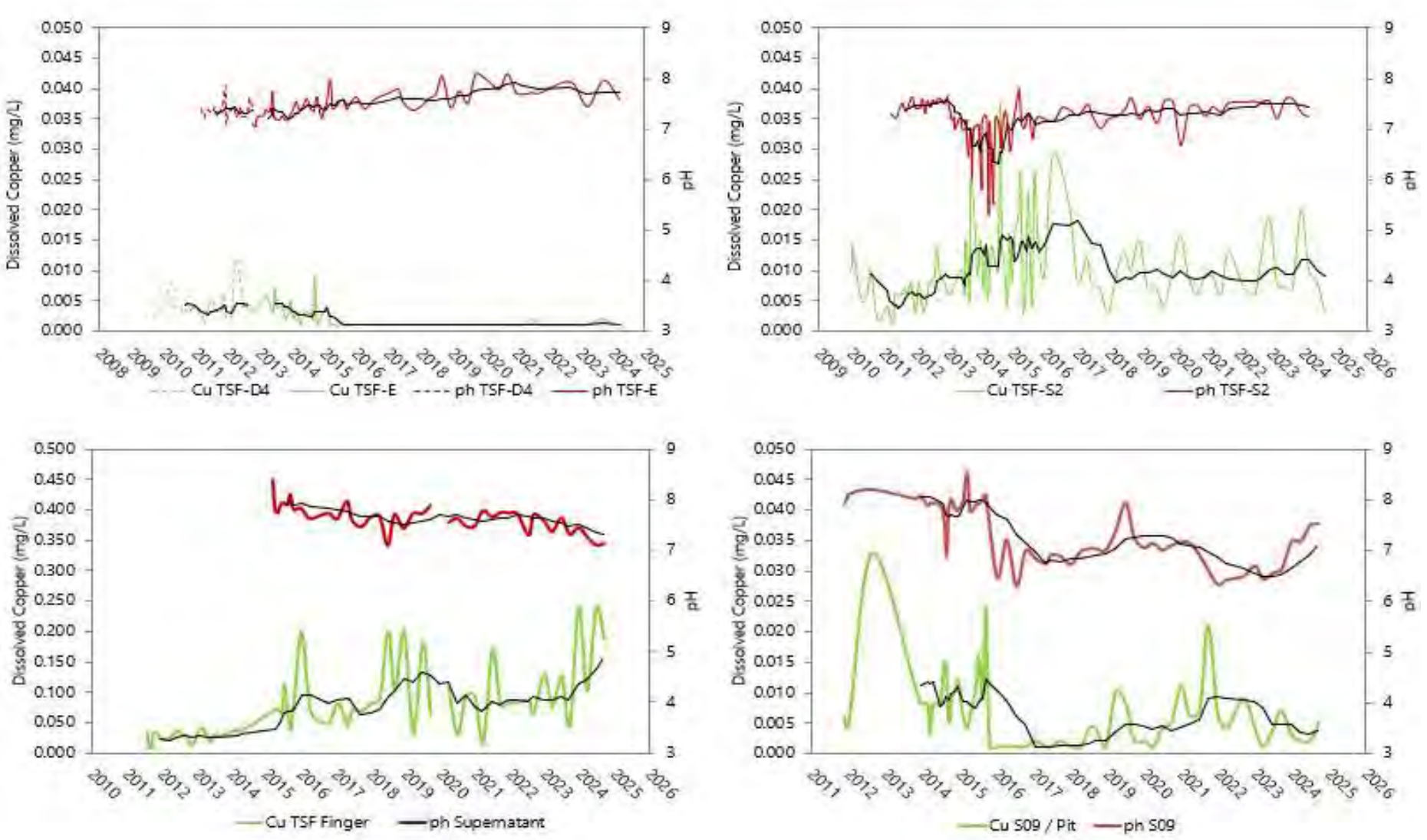

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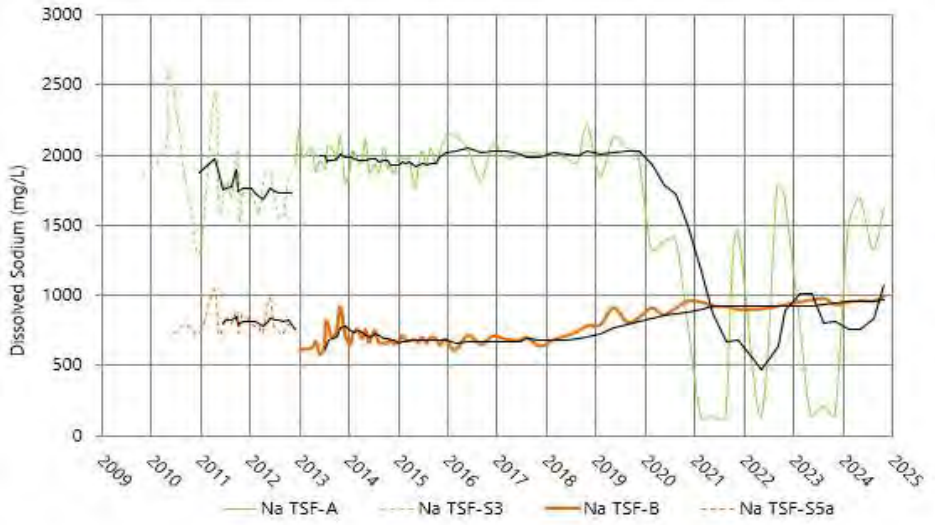

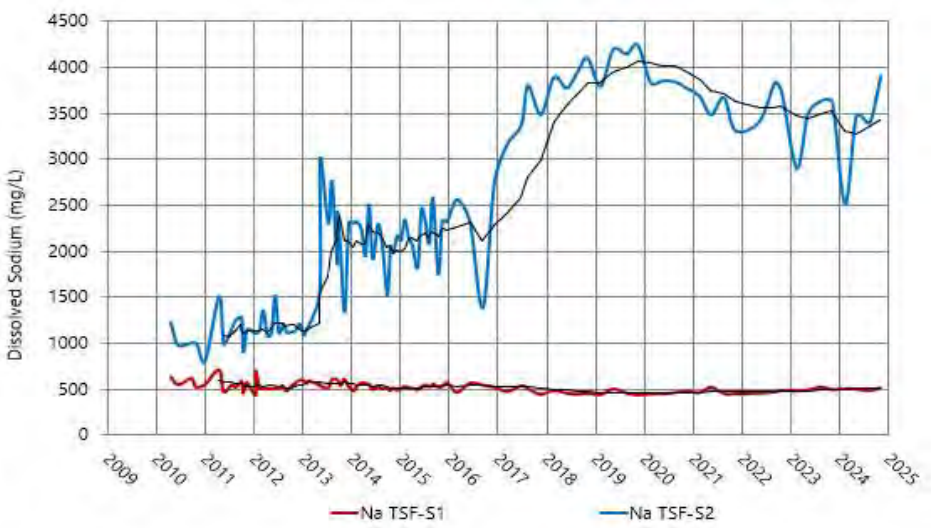

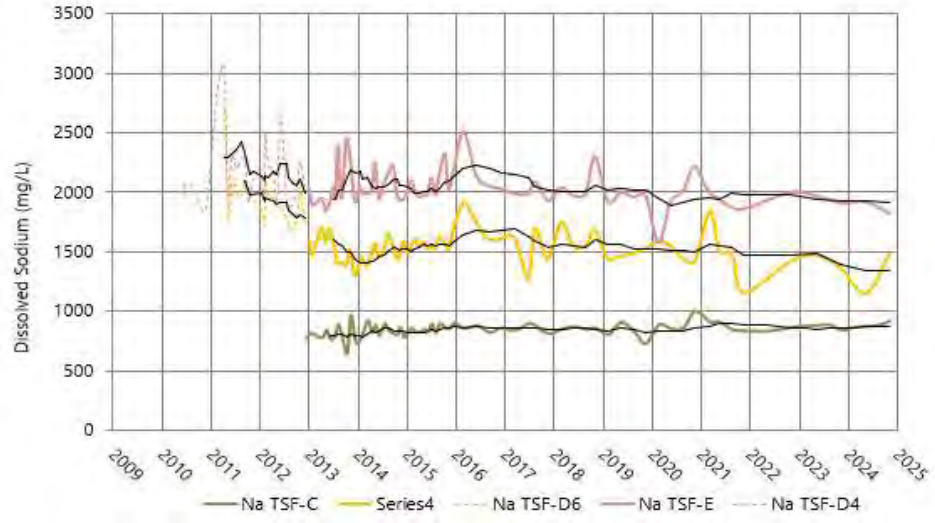

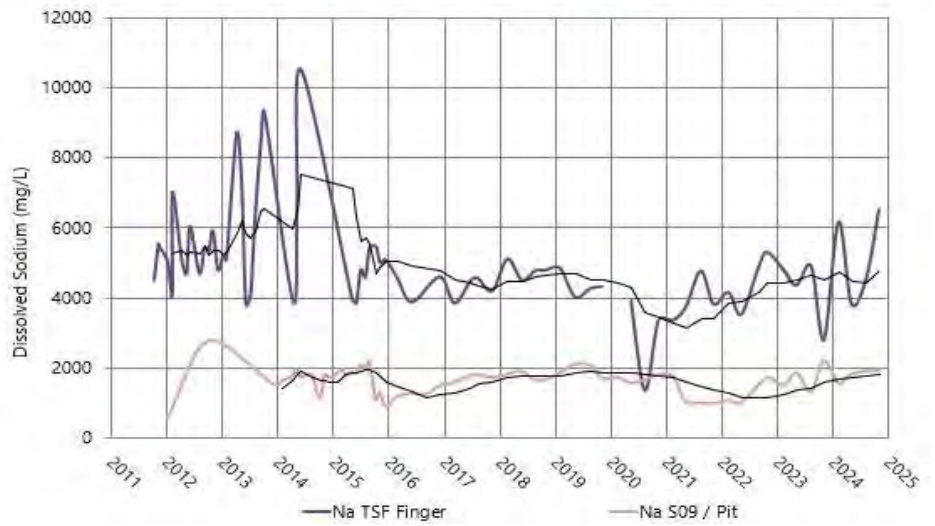

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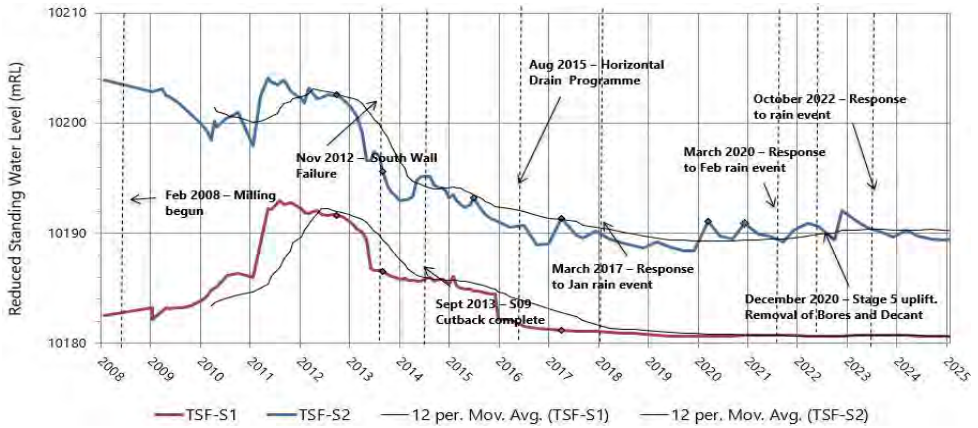
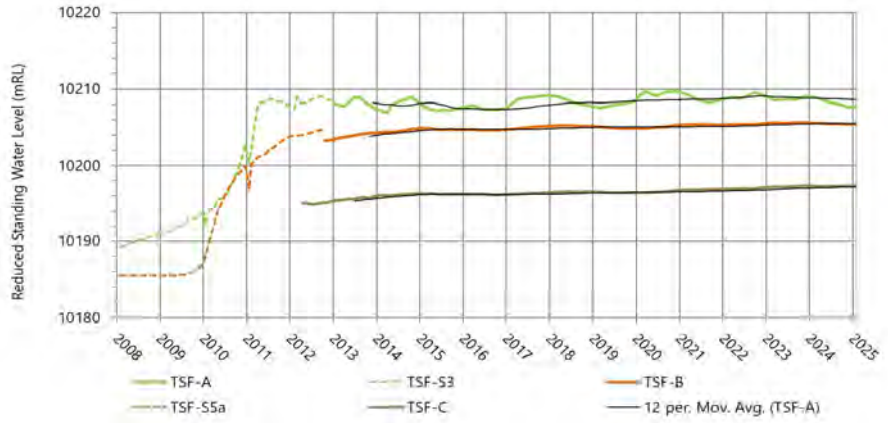
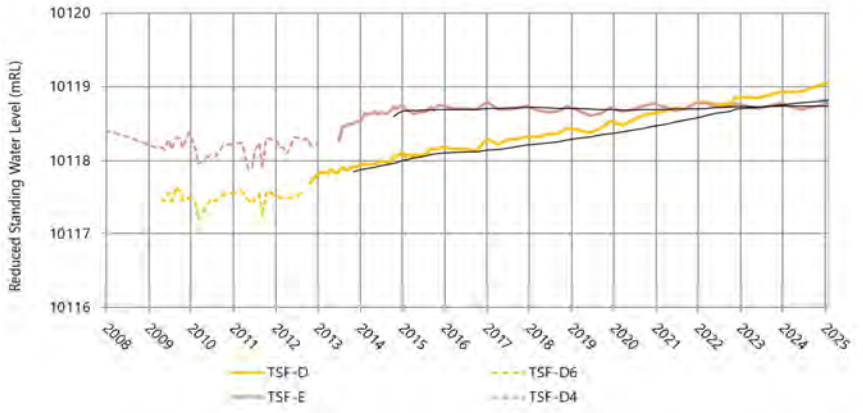


Post-April 2012 Constructed TSF Monitoring Bores

Pre-April 2012 Constructed TSF Monitoring Bores





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Appendix F

Limitation Statement

Limitation Statement

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Appendix E Prominent Hill Aerial Imagery 2025


Prominent Hill - June 2025

Appendix F 2025 Compliance Report – Water Resource Works Approval 396907 Prominent Hill (Ecological Australia 2025)

Appendix G TSF Groundwater Quality Report 2025 (Land Water Consulting 2025)

Appendix H Environmental Radiation Monitoring Report Prominent Hill January 2024 – December 2024 (BHP 2025)

BHP

Environmental Radiation Monitoring Report January 2024 to December 2024 Prominent Hill

1 September 2025

Contents

Introduction

Prominent Hill Operations

BHP own and operate the Prominent Hill copper-gold mining operation which is located in northern South Australia, 650km north-west of Adelaide. The Prominent Hill Operation (PHO) consists of an open pit mine (now completed), two underground mines, crushing and grinding mills and a flotation circuit which produces a high grade copper concentrate containing gold. In addition to the copper and gold mineralisation in the ore, uranium is also present at varying concentrations, at an average of approximately 100ppm.

A dedicated Environmental Radiation Monitoring program commenced in March 2015, and the latest results of this monitoring are reported in this document.

Overview of naturally occurring radiation

Radioactive materials exists naturally in soil, water and the air, and are responsible for the naturally occurring radiation known as ‘background radiation’. Naturally occurring background radiation is variable, depending largely on the environment, the underlying geology and meteorological conditions. Naturally occurring background radiation causes radiation exposure to people everywhere on Earth.

‘Radiation’ is a term used to describe the movement or transfer of energy through space or through a medium. Radiation that has enough energy to ionize atoms and potentially cause DNA damage due to this ionization is called ‘ionizing radiation’. Ionizing radiation occurs when unstable atoms (isotopes) give off the radiation (alpha, beta, gamma) to move to a lower energy state. These unstable isotopes are known as ‘radionuclides’. A number of radionuclides are found in the natural environment, occurring in rock, soil, water, air, plants and animals.

Environmental radiation monitoring

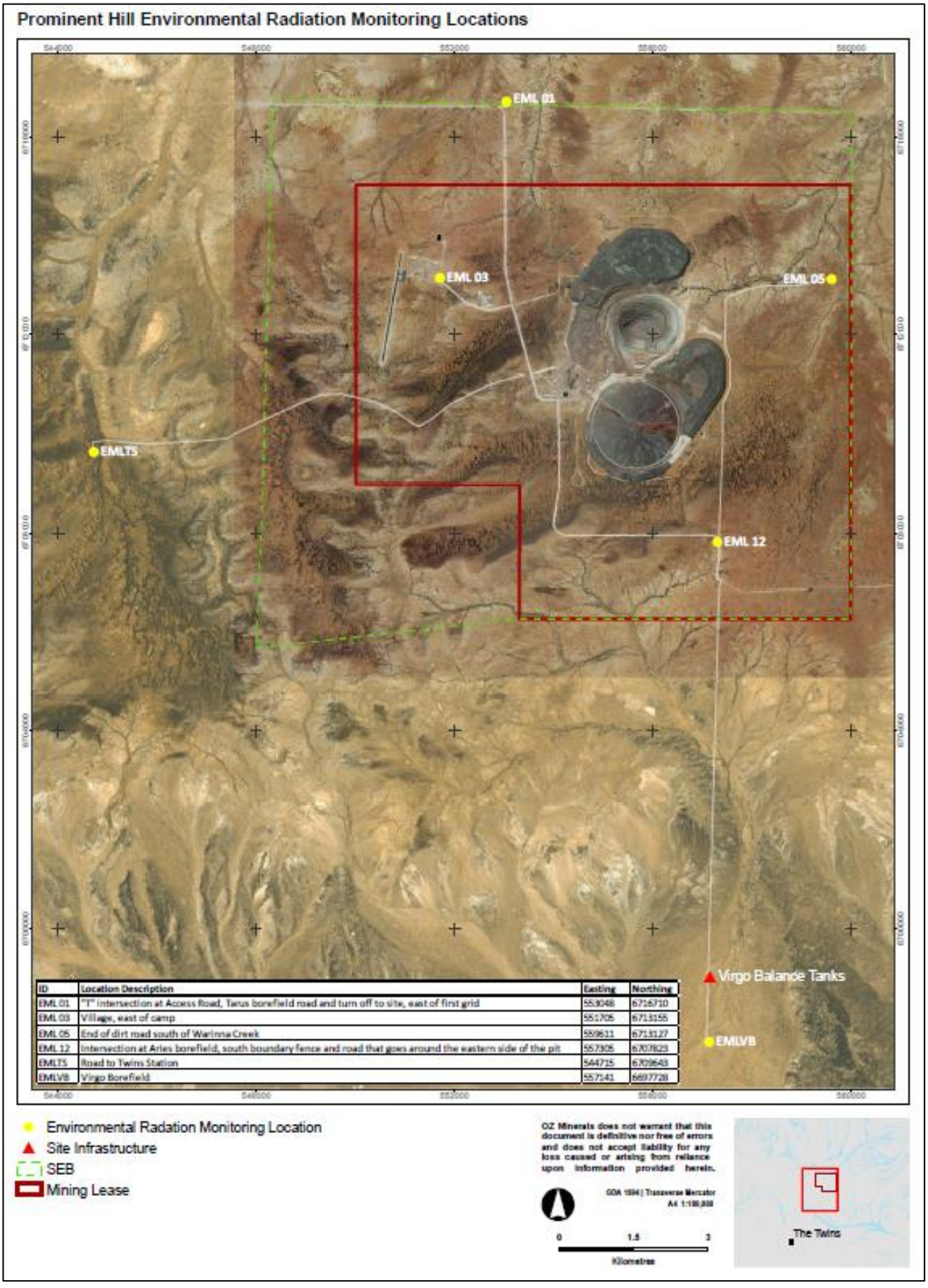
Environmental radiation monitoring locations

During March 2015, seven Environmental Radiation Monitoring Locations (ERMLs) were established within the PHO mining lease and in the surrounding region.

The location of the ERMLs are detailed in Figure 1 (with geographical information), and shown in Table 1.

Table 1: Geographical detail and description for the PHO ERMLs

Site ID	GPS Site Coordinates for Dust, Gamma & Rn monitoring (Zone 53)		Description
	Easting (m)	Northing (m)	
ERML 01	553,048	6,716,710	"T" intersection at access road, Taurus borefield road and turn off to site, east of first grid.
ERML 03	551,705	6,713,155	Village, east of camp.
ERML 05	559,611	6,713,127	End of dirt road south of Warinna Creek.
ERML 12	557,305	6,707,823	Intersection at Aries borefield, south boundary fence and road that goes around eastern side of pit.
ERML TS	544,715	6,709,643	Road to Twins Station.
ERML VB	557,141	6,697,728	Virgo borefield.



ID	Location Description	Easting	Northing
EML 01	"T" intersection at Access Road, Tarcus borefield road and turn off to site, east of first grid	553048	6716710
EML 03	Village, east of camp	551705	6713155
EML 05	End of dirt road south of Warinna Creek	559611	6713127
EML 12	Intersection at Aries borefield, south boundary fence and road that goes around the eastern side of the pit	557305	6707823
EMLTS	Road to Twins Station	544715	6709643
EMLVB	Virgo Borefield	557141	6697728

Figure 1: Prominent Hill monitoring locations

Environmental radiation monitoring program

The Environmental Radiation Monitoring program consists of continuous passive monitoring, i.e. the monitors and samplers are continuously in the field, and the reported results are the totals for the entire monitoring period, reported as hourly, monthly or annual averages.

The radiation monitoring is the same at each ERML and is detailed below in Table 2.

Table 2: ERML monitoring program

Type of monitoring	Monitoring method	Rotation period	Analysis period
Gamma radiation	OSLD (Optically Stimulated Luminescence Dosimeter) badge – passive and continuous	Quarterly, approximately every three months	At the end of each rotation
Radon concentration in air	Radtrak2 α-track detector with thoron filter – passive and continuous		
Radionuclides in dust (which deposits naturally from the air)	Collection of dust for later elemental and radionuclide analysis – passive and continuous		Annual site composite

The current monitoring equipment setup and detailed images of an OSLD badge and radon detector are shown in Figure 2.

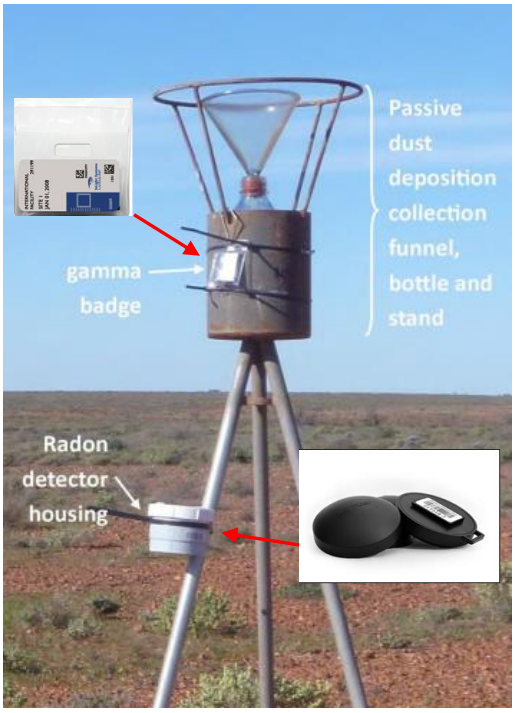


Figure 2: Radiation monitoring equipment

Environmental radiation monitoring results

Monitoring for this report began on the 5th of December 2023 and concluded on the 3rd of January 2025. The sampling period comprised of 4 sampling periods (quarters). At the end of each quarter, monitoring and sampling equipment is collected and replaced with new equipment. The results for 2024 are summarised below.

Gamma radiation

Background gamma radiation levels vary widely as they depend primarily on the natural levels of radionuclides in soil. A portion of the background gamma levels also comes from cosmic radiation.

OSLD badges are used to determine an average hourly gamma dose rate (above the control badge, which accounts for background and transit dose). The gamma results for 2024 are summarised in Table 3.

Table 3: Gamma dose rates 2024

Site ID	Gamma (µSv/h) above background		
	Minimum	Maximum	Average
ERML 01	0.00	0.00	0.00
ERML 03	0.00	0.05	0.03
ERML 05	0.00	0.11	0.05
ERML 12	0.00	0.07	0.03
ERML TS	0.05	0.05	0.05
ERML VB	0.00	0.06	0.03
All sites (2024)	**0.00**	**0.11**	**0.03**

To compare to other locations in Australia, it is necessary to include the background with the dose rate. The background is estimated by measuring the dose rate in the location of the control badge over a period of 24 hours (an average of 0.056 µSv/h was measured in the Environment Lab). With background included, doses range from 0.056 to 0.156 µSv/h.

The gamma radiation levels measured at all of the ERMLs are comparable to typical background gamma levels in Australia, as detailed in Table 4. The dose rates are similar to dose rates measured during previous monitoring periods.

Table 4: Gamma radiation levels across Australia

Location	Gamma Levels (µSv/h)	Reference
Typical for Australia	0.02 - 0.1	Mudd (2002)
Melville Island, NT – undisturbed areas	0.06 (avg)	Matilda Minerals (2005)
Australian Average	0.07	Inferred from ARPANSA (2005)
Centipede Deposit, WA – over deposit	0.07 - 0.86 (avg 0.17)	TORO (2010)
Centipede Deposit, WA – sand dune areas	0.10	
Central South Australia	0.1	BHP Billiton (2009)
REX Hillside Project, SA – Background 5 km from project	0.11 - 0.16 (avg 0.12)	Trevlyn Radiation & Environment (2013)
Prominent Hill ERMLs (2023)	**0.00 - 0.11 (avg 0.03)**	

Radionuclides in airborne dust

Soils, which contain naturally occurring radioactive materials, can become airborne and form dusts. Airborne dust can be collected via active and passive air sampling techniques. At the PHO ERMLs, dust is collected by passive dust sampling where dusts and particulates settle naturally from the air and are collected in sampling apparatus as shown in Figure 2.

Analysis of passive dust samples enables quantification of the activity the radionuclides depositing in the environment to be determined, with result being reported in units of Bq/m^2/month. Dust samples have previously been analysed for the 'long-lived' radionuclides of the uranium and thorium decay chains;

- U^{238}, Th^{230}, Ra^{226}, Pb^{210}, Po^{210}, Th^{232} and Th^{228}

This has given a reasonable understanding of the radionuclide deposition rates that may be impacted by operational activities. Monitoring data has indicated that the sites that are closer to operational activities (EML 1, 3, 5 and 12) have not had significantly different activity deposition rates or activity concentrations compared to sites furthest away from operational activities (EML TS and EML VB) for any radionuclides, with the exception of U^{238}, particularly for EML 1 and EML 3 (which has been elevated by up to 2x previously). All other radionuclides have not had significant activity deposition variations between sites closer to operational activities and further away from operational activities, suggesting that any fluctuations are not due to operations. Analysis of 2024 dust has therefore been conducted for U (to estimate head of chain U^{238} activity concentrations), and Th (to estimate head of chain Th^{232} activity concentration) via ICP-MS.

The quarterly mass deposition data is detailed below in Table 5. During 2024, pastoral access issues prevented collection at ERML01 and ERMLTS for quarter 2 and quarter 3. These samples were collected at the end of quarter 4. As such the annual results are still correct, although the quarterly averages are slightly compromised.

Table 5: Quarterly dust mass deposition data

Site ID	Mass dust deposited (g)				Total mass dust per site (g)	Sampling period (days)
	Sampling Period					
	Q1	Q2	Q3	Q4		
ERML 01	0.170			0.158	0.328	395
ERML 03	0.188	0.258	0.401	0.328	1.175	395
ERML 05	0.293	0.775	0.143	0.081	1.292	395
ERML 12	0.125	0.335	0.24	0.592	1.292	395
ERML TS	0.075			0.041	0.116	395
ERML VB	0.253	0.07	0.069	0.093	0.485	395
Average	**0.184**	**0.360**	**0.213**	**0.216**	**0.781**	**395**

Note: The mass of dust is calculated by subtracting the mass of copper sulphate (algaecide) from the mass of the collected sample

The Q4 samples were lost by the analysis vendor prior to creating the composite for radionuclide analysis. The radionuclide analysis has been adjusted to estimate the annual results form the samples available. The concentrations of radionuclides in the dust collected for 2024 are shown in Table 6. Dust and estimated radionuclide deposition rates for the passive dust samples are detailed in Table 7.

Although some locations showed spikes in dust mass due to different local conditions, none of the dust contained elevated uranium concentrations.

Table 6: Radionuclide concentrations in deposited dust

Site ID	Mass dust deposited (g)	Concentration of deposited dust (mg/kg)		Approximate radionuclide concentration of deposited dust (Bq/g)	
		Uranium	Thorium	U^{238}	Th^{232}
ERML 01	0.328	32.2	9.93	0.40	0.04
ERML 03	1.175	10.9	7.33	0.13	0.03
ERML 05	1.292	1.67	3	0.02	0.01
ERML 12	1.292	3.44	4.47	0.04	0.02
ERML TS	0.116	4.41	11.4	0.05	0.05
ERML VB	0.485	1.31	4.74	0.02	0.02

Dust uranium concentrations at 4 of the locations are typical of normal soil, with the worldwide average being approximately 3 ppm (UNSCEAR 2000), equivalent to 3 mg/kg. However ERML1 and ERML3 dust uranium concentrations are elevated this year.

Table 7: Radionuclide deposition rates

Site ID	Dust Deposition Rate (g/m^2/month)	Approximate radionuclide deposition rate (Bq/m^2/month)	
		U^{238}	Th^{232}
ERML 01	1.43	0.57	0.06
ERML 03	5.12	0.69	0.15
ERML 05	5.63	0.12	0.07
ERML 12	5.63	0.24	0.10
ERML TS	0.51	0.03	0.02
ERML VB	2.11	0.03	0.04

Note: The dust deposition rate is based on the entire sample period dust deposition mass

U^{238} deposition rates were elevated this year compared to baseline studies conducted in Australia, shown in Table 8, however it is possible that the missing final annual sample is biasing the annual results. The results are similar to previous historic results in 2019 (see figure 3).

Table 8: Dust deposition comparison to other Australian sites

Location	Average U^{238} Deposition (Bq/m^2/month)	Reference
Lake Maitland, WA, Australia	0.05	TORO Energy (2016)
Nolans Bore, NT, Australia	0.06	Derived from Arafura Resources (2016)
Kiggavik Project, NU, Canada	0.16	Derived from AREVA Resources Canada Inc. (2014)
Prominent Hill ERMLs 2023	**0.03 – 0.69 (average 0.28)**	

Thorium dust deposition is consistently low over all ERMLs, and the thorium dust concentrations are below typical worldwide average soil concentration ranges, with the worldwide average being approximately 7 ppm (UNSCEAR 2000), equivalent to 7 mg/kg.

Radon in air

Radon (Rn) is a naturally occurring inert radioactive gas with a number of isotopes. Radon is present in varying concentrations everywhere in the atmosphere. Radon is produced when its parent radium decays. Radium occurs naturally in rocks, soils and water. The Rn^{222} isotope, a daughter in the uranium decay chain, is measured at the ERMLs. Results of the radon monitoring for 2024 are summarised below in Table 9.

Table 9: Radon concentration results

Site ID	Average Radon concentration over exposure period, Rn^{222} (Bq/m^3)				
	Q1	Q2	Q3	Q4	Annual Average
ERML 01	< 15	< 7			5
ERML 03	33 ± 6	17 ± 8	17 ± 10	< 15	19
ERML 05	< 15	< 27	< 17	< 15	9
ERML 12	< 15	< 27	< 15	< 21	9
ERML TS	15 ± 4	16 ± 4			14
ERML VB	< 15	26 ± 8	< 29	< 15	16
Site Average					12

Note: Values below the detection limit have been substituted with half the detection limit when calculating the average

Radon levels at Prominent Hill are consistent with average radon concentrations recorded at other similar locations around Australia as detailed in Table 10.

Table 10: Radon concentrations compared to other Australian sites

Location	Long-term Average Rn^{222} Concentration (Bq/m^3)	Reference
Honeymoon, Yarramba Homestead	30	Honeymoon (2006)
BHP - Olympic Dam Village	30	BHP Billiton (2009)
BHP – Regional monitoring (Darwin and Alice Springs)	28	
Toro Energy – Wiluna WA	39	TORO Energy (2016)
REX – Hillside	18.7	Trevlyn Radiation and Environment (2013)
Prominent Hill ERMLs 2024	**12**	

Summary

The monitoring results for 2023, are consolidated into Table 11.

Table 11 Annual summary of environmental radiation results at Prominent Hill

Site ID	Gamma		Passive Dust			Radon
	Dose rate µSv/h (including background)		Dust Deposition Rate (g/m^2/month)	Approximate radionuclide deposition rate (Bq/m^2/month)		Rn^{222} concentration (Bq/m^3)
	Range	Average		U^{238}	Th^{232}	
ERML 01	0.00	0.00	1.43	0.57	0.06	5
ERML 03	0.00 – 0.05	0.03	5.12	0.69	0.15	19
ERML 05	0.00 – 0.11	0.05	5.63	0.12	0.07	9
ERML 12	0.00 – 0.07	0.03	5.63	0.24	0.10	9
ERML TS	0.05	0.05	0.51	0.03	0.02	14
ERML VB	0.00 – 0.06	0.03	2.11	0.03	0.04	16

Comparison to previous monitoring periods

All monitored parameters can be compared to previous monitoring periods in Figure 3, Figure 4, and Figure 5.

Average gamma dose rates remained comparable. Average dust deposition was greater for all sites, indicating that the amount of dust deposition was likely due to regional weather conditions, rather than dependant on site activities. Radon concentrations remain below detectable limits for half of all measurements. Concentrations often being below detectable limits has been the case since the inception of the monitoring program.

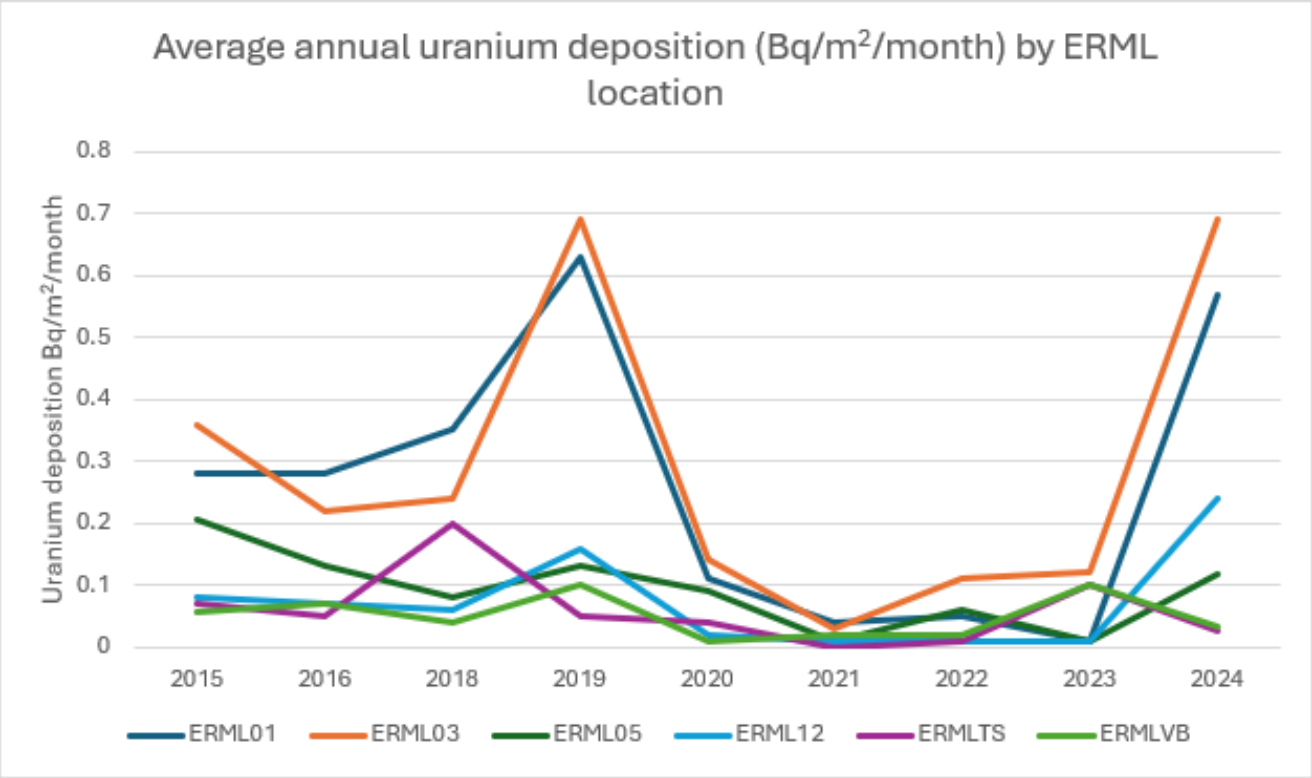


Figure 3: Average U^{238} deposition (g/m²/month) at each ERML results comparison

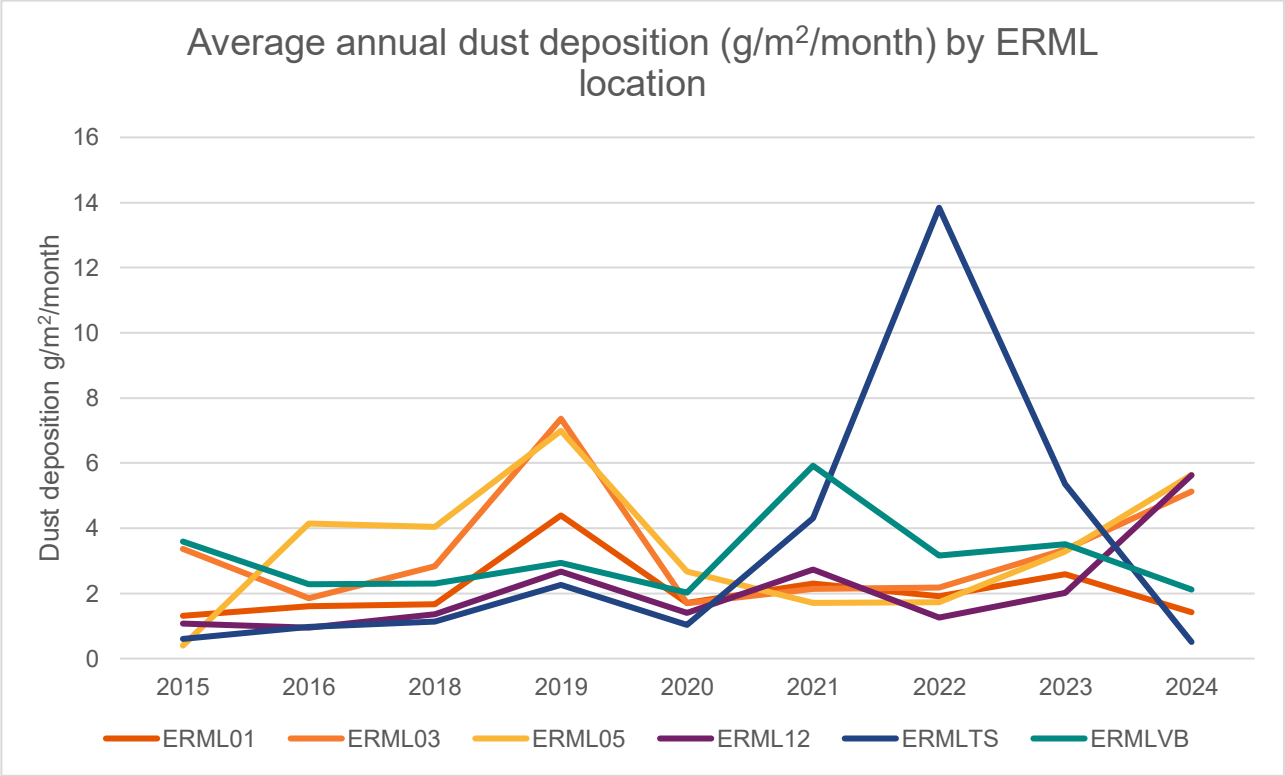


Figure 4: Average dust deposition (g/m²/month) at each ERML results comparison

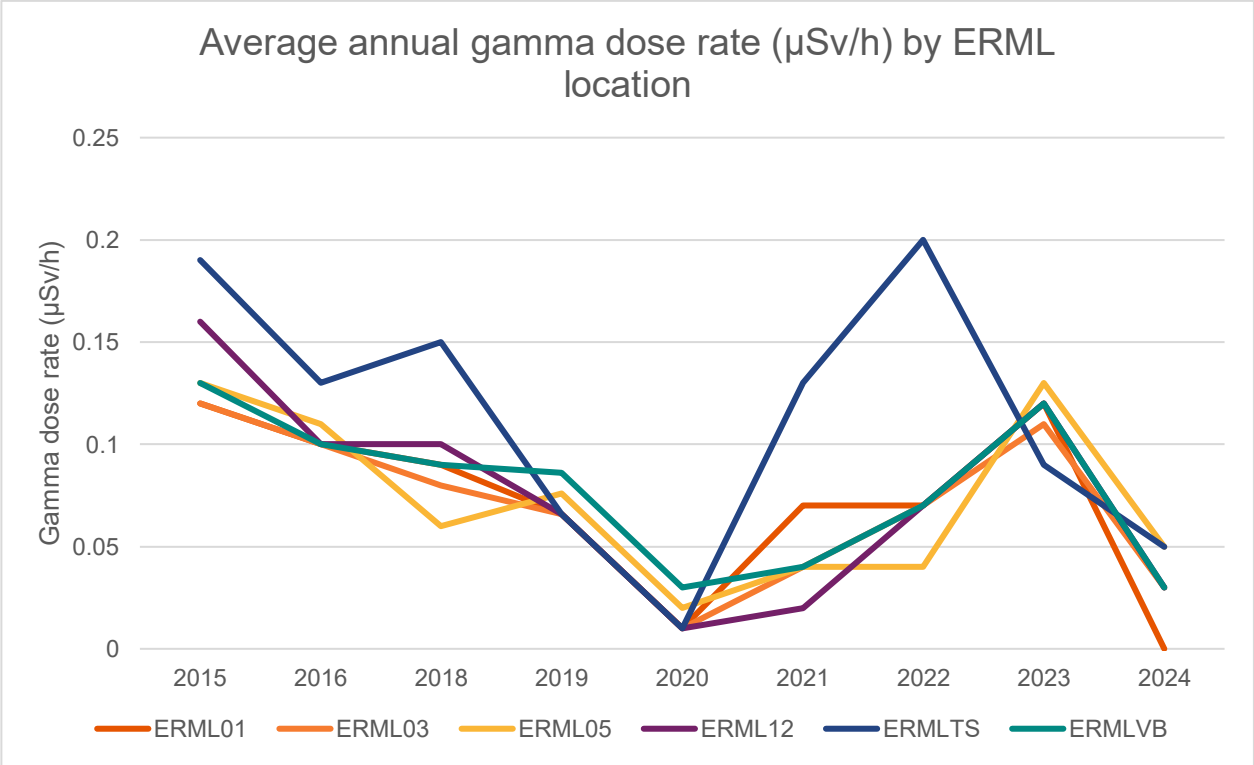


Figure 5: Average gamma dose rate (µSv/h) at each ERML results comparison

Conclusions

Results from the 2024 period of environmental radiation monitoring show the following:

- variation across the monitoring sites for all monitored parameters
- variation across the monitoring quarters for all monitored parameters
- Elevated depostion of uranium in dust at two monitroing sites (similar to 2019), with the remaining monitoring locations at or below typical worldwide averages.
- gamma levels comparable to reported Australian naturally occurring levels
- radon levels comparable with worldwide average radon concentrations, and slightly lower than other similar Australian locations
- all monitored parameters are comparable to the data collected in previous monitoring years

On-going environmental radiation monitoring will enable more detailed analysis of results over the long term and a more comprehensive understanding of the radiological environment in the vicinity of the Prominent Hill Operation, with results able to be utilized in an ERICA assessment or similar. Any changes to the radiological environment due to the mining of stopes with increasingly higher uranium grades can be captured with continued monitoring.

Appendix A: Glossary

Becquerel (Bq) - The Standard International (SI) unit of measurement of radioactive activity defined as one radioactive disintegration per second.

Decay Chain - The name given to the progression of naturally occurring radionuclides that occur as a result of radioactive decays.

Decay Product - The product of the spontaneous radioactive decay of a nuclide (a type of atom). A nuclide such as U238 decays through a sequence of steps and has a number of successive decay products associated with it in a decay series.

Gamma radiation - A form of electromagnetic radiation similar to light or x-rays, distinguished by its high energy and penetrating power.

Isotope - Forms of a chemical element having the same number of protons but different numbers of neutrons.

Radiation - Electromagnetic waves or quanta, and atomic or sub-atomic particles, propagated through space or through a material medium.

Radionuclide - Any nuclide (isotope of an atom) which is unstable and undergoes natural radioactive decay.

Sievert (Sv) - The SI derived unit of dose equivalent, relating to the biological effects of radiation as opposed to the physical aspects.

Appendix B: Referenced Documents

ARPANSA (2005)	Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing. Radiation Protection Series. Canberra, Australian Radiation Protection and Nuclear Safety Agency. 9
BHP Billiton (2009)	Olympic Dam Expansion Draft Environmental Impact Statement 2009
Mudd, GM (2002)	Uranium Mining in Australia: Environmental Impact, Radiation Releases and Rehabilitation. Invited presentation at SPEIR3, Darwin NT July 2002
Matilda Minerals (2005)	Radiation Management Plan, Andranangoo Creek West And Lethbridge Bay West Projects
Toro Energy (2010)	Wiluna Uranium Project – Environmental Scoping Document
Trevlyn Radiation & Environment (2013)	Radiological Assessment of REX Minerals Hillside Project
Honeymoon (2006)	Honeymoon Uranium Project Environmental Impact Statement
Toro Energy (2016)	PER Environmental Radiation Baseline Review
Arafura Resources (2016)	Nolans Project Environmental Impact Statement
AREVA Resources Canada Inc. (2014)	Kiggavik Project FEIS
UNSCEAR (2000)	Volume I: Sources. United Nations Scientific Committee on the Effects of Atomic Radiation. UNSCEAR 2000 Report to the General Assembly, with scientific annexes

BHP