RioTinto

Environment Protection and Biodiversity Conservation Act 1999
Annual Compliance Report

EPBC Approval: 2017/8017

Project: Develop the Mesa H Iron Ore Mining Operations 16 km SW Pannawonica, WA

Report period: 1 January – 31 December 2024

This document has been prepared for Robe River Mining Co. Pty. Ltd. (RRMC) in its capacity as manager and agent for and on behalf of the participants of the Robe River Iron Associates joint venture (Robe JV).

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1 Description of activities

EPBC approval number:	2017/8017
Project name:	Develop the Mesa H Iron Ore Mining Operations 16 km SW Pannawonica, WA
Approval holder:	Robe River Mining Co. Pty. Ltd.
Approval holder's Australian Business Number:	71 008 694 246
Approved action:	To extend the existing Robe Valley mining operations at Mesa J, by developing an open cut mine at the adjacent iron ore deposit at Mesa H, approximately 16 kilometres southwest of Pannawonica WA, through additional mine pits, mineral waste dumps and associated infrastructure, processing facilities and water management infrastructure.
Location of the project:	16 km southwest of Pannawonica WA
Reporting period:	1 January 2024 to 31 December 2024
Report preparation date:	30 April 2025
Implementation phase(s) during reporting period:	Operational

2 Audit table

Details of compliance with each condition under EPBC approval 2017/8017 are presented in Table 1.

Table 1: EPBC Approval Conditions Compliance Table – EPBC 2017/8017 – Develop the Mesa H Iron Ore Mining Operations 16 km SW Pannawonica, WA

Condition Number	Condition	Compliance status	Evidence/Comments
1	To minimise impacts to the **Blind Cave Eel**, **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat** the approval holder must not: a. clear more than 2,200 ha of vegetation within the Development Envelope, including no more than 132 ha within the Mesa H Mining Exclusion Zone (MEZ) as shown in Attachments A and B. b. abstract more than 30 GL/annum of groundwater.	Compliant	Aerial photography was collected during the reporting period to reconcile ground disturbance and the prescribed clearing limits were not exceeded. Combined clearing within the EPBC Development Envelope totalled: • 482.3 ha** within the Development Envelope, with 62.0ha disturbed in 2024. • 10.1 ha** within the Mesa H MEZ, with 2.4ha disturbed in 2024 **Clearing reported in the 2022 and 2023 Annual Compliance Reports for EPBC 2017/8017 was overestimated due to a miscalculation, and was inclusive of clearing completed previously under Native Vegetation Clearing Permits The approval holder abstracted 0.9GL of groundwater from within the Development Envelope during the reporting period.
2	To minimise impacts to the **Blind Cave Eel**, **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat**, the approval holder must comply with all specifications of the following conditions of the **EPA Report and Recommendations** that are consequential for these species: a. Condition 5 (Condition Environmental Management Plan(s)), b. Condition 6 (Inland Waters and Vegetation), c. Condition 8 (Terrestrial Fauna Habitat – Conservation Significant Fauna Species: Northern Quoll (*Dasyurus hallucatus*), Ghost Bat (*Macroderma giga*) and Pilbara Leaf-Nosed Bat (*Rhinonicteris aurantia* – Pilbara form)).	Compliant	Condition 5: The Mesa J and H (Mesa J Hub) Environmental Management Plan (EMP) (our ref: RTIO-HSE-0349253) was approved by DWER in September 2024 and implemented thereafter. Condition 6: No irreversible impact to the health of the Robe River and Jimmawurrada Creek ecosystems was identified during the reporting period. Condition 8: No irreversible impact occurred to 'breakaways and gullies' habitat retained within the Mesa H MEZ during the reporting period, other than existing and authorised disturbance.

Condition Number	Condition	Compliance status	Evidence/Comments
3	To minimise impacts to the **Blind Cave Eel**, **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat**, the Condition Environmental Management Plan(s) specified under Condition 5 of the **EPA Report and Recommendations**, must (where relevant to **Blind Cave Eel**, **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat**) specify environmental outcomes or objectives related to the mitigation and management of the following key threatening processes: a. fire. b. vehicle and machinery movements. c. fauna encounters and sightings. d. weed management. e. feral animal control. f. noise and vibration; and g. dust and light. For 3.f. noise and vibration, the Condition Environmental Management Plan(s) must include monitoring of the **Ghost bat** and include management targets(s) to ensure that the approved action does not result in significant long term decline in the **Ghost Bat** population.	Compliant	The EMP (our ref: RTIO-HSE-0349253) contains the required environmental outcomes and objectives. The EMP was approved by DWER in September 2024 and implemented thereafter. Monitoring of the Ghost Bat during 2024 indicated that the habitat across the Robe Valley is providing suitable roosting conditions to support the long-term persistence of the species long-term and did not identify any decline in Ghost Bat population attributable to the proposal.
4	To minimise impacts to **Ghost Bat**, that approval holder must implement a Mining Exclusion Zone and blast management to minimise potential impacts to **Ghost Bat** roosts from noise and vibration associated with mining activities. The Condition Environmental Management Plan specified under Condition 5 of the **EPA Report and Recommendations** must include and justify appropriate management, avoidance and mitigation measures and may specify different measures for diurnal and nocturnal **Ghost Bat** roosts. If the action results in permanent significant structural damage to a **Ghost Bat** roost which cannot be remedied, or a failure to meet the management targets required under Condition 3, the proponent must submit a plan in writing within two months of the occurrence to the **Minister** for approval. This plan must justify and specify how the impact will be rectified or offset.	Compliant	The Mining Exclusion Zones at Mesa H and RTIO Blast Management Plan were implemented as appropriate throughout the reporting period. A management target was established in the EMP (our ref: RTIO-HSE-0349253) to ensure that the approved action does not result in significant long-term decline in the Ghost Bat population. The EMP was approved September 2024. Blasting activities occurred within 300m of potential maternal or diurnal Ghost Bat roosts JN and MH15_34. No structural damage to Ghost Bat roosts was recorded in the reporting period.

Condition Number	Condition	Compliance status	Evidence/Comments
5	To minimise the impacts to the **Blind Cave Eel** and its habitat the approval holder must ensure that, as a result of the action: a. there is no significant change to groundwater quality detrimental to the **Blind Cave Eel** within its known habitat; and b. groundwater drawdown in the known **pre-mining** saturated **Blind Cave Eel habitat** within the Jimmawurrada Creek alluvial aquifer must not exceed 10 metres in depth below the **minimum recorded wet season groundwater level**.	Compliant	No significant changes in groundwater quality detrimental to the Blind Cave Eel were identified, see section 4.1. Groundwater drawdown did not exceed 10 metres in depth below the minimum recorded wet season groundwater level, see section 4.3.
6	The approval holder must submit an Action Management Plan that specifies how the approval holder will achieve the outcomes specified in Condition 5 for approval by the **Minister**. The approval holder must not commence **abstraction** activities that are part of the action unless the **Minister** has approved the Action Management Plan in writing. The approved Action Management Plan must be implemented. The Action Management Plan must: a. justify and specify the definition of the significant change to groundwater quality detrimental to the **Blind Cave Eel habitat**. b. provide detail of the method(s) to be used within appropriate justification and relevant case studies (noting that method(s) may include but need not be restricted to managed aquifer recharge); c. specify threshold criteria exceedance of which presents a risk of breaching condition 5 and commit to not exceeding those criteria; d. specify trigger criteria that provide an early warning that the threshold criteria could be exceeded; e. specify monitoring capable of determining if trigger criteria and threshold criteria are exceeded; f. include an **isopach map** illustrating the alluvial thickness in the known **pre-mining** saturated **Blind Cave Eel habitat** within the Jimmawurrada Creek alluvial aquifer. The **isopach map** must: I. show the location of the groundwater monitoring bore(s) for which the **minimum recorded wet season groundwater level** has been measured;	Compliant	The Blind Cave Eel Action Management Plan was submitted as part of the EMP (our ref: RTIO-HSE-0349253), addressing the required outcomes and objectives listed under Condition 6. The Action Management Plan was acknowledged as compliant by DWER in September 2024, and by DCCEEW in December 2024. Abstraction activities at Mesa H have not yet commenced.

Condition Number	Condition	Compliance status	Evidence/Comments
	II. show the extent of the saturated alluvial thickness which does not exceed 10 metres in depth below the **minimum recorded wet season groundwater level**; III. identify which bores will be used for compliance monitoring to ensure that the 10 metres in depth below the **minimum recorded wet season groundwater level** does not occur; IV. include the approval holder's commitment to reporting significant damage or loss of any bore(s) used for compliance monitoring in writing to the **Department** within seven (7) days of becoming aware of the damage, and the replacement of any bore used for compliance monitoring within three (3) months of the damage occurring, or another period as agreed in writing by the **Minister**. g. specify actions to be implemented in the event that the trigger criteria have been exceeded; h. specify threshold contingency actions to be implemented in the event that the threshold criteria are exceeded (these may include but need not be limited to ceasing groundwater **abstraction**); and i. provide the format and timing for the reporting of monitoring results against trigger criteria and threshold criteria to demonstrate that Condition 5 is being met.		
7	In the event that monitoring, tests, surveys or investigations indicate exceedance of threshold criteria specified in the Action Management Plan, the approval holder must: a. report the exceedance in writing to the **Department** within seven days of becoming aware of the exceedance; b. commence implementing the threshold contingency actions specified in the Action Management Plan within 24 hours of becoming aware of the exceedance and continue implementation of those actions until the **Department** has confirmed by notice in writing that the approval holder has demonstrated that the threshold contingency actions are no longer required;	Compliant	No threshold criteria were exceeded during the reporting period.

Condition Number	Condition	Compliance status	Evidence/Comments
	c. investigate to determine the cause of the threshold criteria being exceeded; d. undertake investigation to provide the **Department** with adequate information for it to determine what, if any, harm or alteration of the environment that may affect **protected matters** occurred due to threshold criteria being exceeded; and e. provide a report to the **Department** within twenty-one days of the exceedance being reported as required by Condition 7.a, or another time as agreed in writing by the **Minister**, the report must include: I. details of threshold contingency actions implemented; II. the effectiveness of the threshold contingency actions implemented, against the threshold criteria; III. the findings of the investigations required by Conditions 7.c. and 7.d.; IV. measures to prevent the threshold criteria being exceeded in the future; V. measures to prevent, mitigate and remedy the environmental harm which may have occurred; and VI. justification of the threshold remaining, or being adjusted based on better understanding, demonstrating that outcomes specified at Condition 5 will continue to be met.		
8	Groundwater management and monitoring must continue until the **Minister** agrees in writing that the outcomes specified at Condition 5 can be met without active management of groundwater levels by the approval holder.	Compliant	Management and monitoring of groundwater was undertaken during the reporting period.
9	To demonstrate the effectiveness of the Action Management Plan the approval holder must undertake monitoring, using best available methods (noting these may evolve over time) to determine the presence of the **Blind Cave Eel** within the known **pre-mining** distribution within Jimmawurrada Creek alluvial aquifer prior to every five years from the anniversary of the date of this approval until the end date of this approval (or the end date of the action as agreed in writing from the **Minister**). Results of the monitoring must be provided to the **Department**. The complete findings of each program of monitoring must be	Compliant	Findings of the annual Blind Cave Eel monitoring program is reported annually in the EPBC compliance report for 2017/8017. See section 4.

Condition Number	Condition	Compliance status	Evidence/Comments
	provided to the **Department** in the first annual **compliance report** submitted after each five-year anniversary of the date of this approval.		
10	To compensate for the residual significant impacts to **Ghost Bat**, **Northern Quoll**, **Olive Python**, **Pilbara leaf-nosed bat** and the **Blind Cave Eel**, the approval holder must within fifteen months of the date of this approval, submit an Offset Strategy for the **Minister's** written approval. The Offset Strategy must: a. specify the approach and priorities for providing offsets for the clearing of habitat for **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat**; b. specify the approach and priorities for providing offsets as a result of groundwater drawdown for the **Blind Cave Eel**; c. identify threats for the **Ghost Bat**, **Northern Quoll**, **Olive Python**, **Pilbara leaf-nosed bat** and the **Blind Cave Eel**; d. nominate detailed offset projects that will realise a conservation benefit for the **Ghost Bat**, **Northern Quoll**, **Olive Python**, **Pilbara leaf-nosed bat** and **Blind Cave Eel** in accordance with relevant approved **conservation advice**, **recovery plans** and **threat abatement plans** and regional conservation plans; e. if the proposed Offset Strategy includes offset(s) that do not provide specified site(s) for permanent conservation purposes: I. specify a **financial commitment** of at least $3,000 AUD (exclusive of GST) per hectare **cleared** in **Area B**, and in addition, at least $833.00 AUD (exclusive of GST) per hectare **cleared** in **Area A**. The **financial commitment** must be adjusted in accordance with the **CPI** released in each calendar year from the date of this approval decision until the date on which any payment is made; II. provide a **financial commitment** of at least $1,000,000 AUD (exclusive of GST) to support research priorities addressing current knowledge gaps that will significantly contribute to long term conservation outcomes for the **Blind Cave Eel**. f. specify the party to be responsible for implementing the proposed offsets; where appropriate the location and nature of each proposed	Compliant	The Impact Reconciliation Procedure (IRP) (our ref: RTIO-HSE-0354024) was submitted to DWER on 30 November 2021, approved by DWER on 18 August 2022 (our ref: RTIO-0210501; DWER ref: DWERT5635). The Impact Reconciliation Report (IRR) for the 2022 – 2023 period was submitted on 29 April 2024 (our ref: RTIO-1027571).

Condition Number	Condition	Compliance status	Evidence/Comments
	offset project, along with detailed objectives, budget, timeframes, performance and completion criteria for evaluating conservation or research outcomes, monitoring and reporting requirements; g. specify how research findings will be published; h. include a description of the potential risks to the successful implementation of each proposed offset (including but not limited to environmental, administrative, financial, and governance risks); i. include a description of the measures that will be implemented to mitigate risks associated with each proposed offset and a description of the contingency measures that will be implemented if triggers arise or completion criteria are not met; j. include processes to **adaptively manage** proposed offsets; k. explain how the proposed offsets meet the **EPBC Act Environmental Offsets Policy**; and l. ensure the measures that will be implemented as part of the Offset Strategy have no detrimental impact on listed threatened species under the **EPBC Act**. The approval holder must implement the approved Offset Strategy. The approval holder must commence implementation of the offsets specified in the approved Offset Strategy within two months of the approval of the Offset Strategy, or another time as agreed in writing by the **Minister**. The approved Offset Strategy may be varied within the written approval of the **Minister**. If that variation to the Offset Strategy is approved by the **Minister**, the varied Offset Strategy must be implemented from the date of approval of the varied Offset Strategy.		
11	Subject to Condition 12, within eight months of approval of the Offset Strategy by the **Minister**, the approval holder must submit a report to the **Department** detailing the extent of **Ghost Bat**, **Northern Quoll**, **Olive Python**, and **Pilbara leaf-nosed bat** habitat **cleared**, and the total amount of **financial commitments** that have been made (including for the **Blind Cave Eel**), as provided for in Condition 10.e, to offset projects in the approved Offset Strategy and detail the implementation of offset projects. Subsequent reports must be	Compliant	The IRP (our ref: RTIO-HSE-0354024) was submitted to DWER on 30 November 2021, approved by DWER on 18 August 2022 (our ref: RTIO-0210501; DWER ref: DWERT5635). The IRR for the 2022 – 2023 period was submitted on 29 April 2024 (our ref: RTIO-1027571).

Condition Number	Condition	Compliance status	Evidence/Comments
	provided biennially, with each report due by 30 April in the year following the two-year reporting period. The second report must be provided by 30 April for a period not exceeding two years from the provision of the first report.		
12	If a **Conservation Offset Fund** has been established by the Western Australian Government, and approved the **Minister** in writing, then Conditions 10 and 11 may not apply (or may cease to be applied) with respect to the offset for each of the **Blind Cave Eel**, **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat** with the agreement by the **Minister** in writing. Where agreed by the **Minister** in writing, the approval holder must provide funds biennially to the **Conservation Offset Fund**. For the **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat** the amount of funds provided biennially is to be based on the area of habitat of each species **cleared** in the biennial reporting period. The funding amounts must be at least $3,000 AUD (exclusive of GST) per hectare **cleared** in **Area B**; and at least $833.00 AUD (exclusive of GST) per hectare **cleared** in **Area A**. For the **Blind Cave Eel,** the amount will be a payment of at least $1 million AUD (exclusive of GST) to contribute to long term conservation outcomes for that species. All funds to be paid must be equivalent to the 2019 value of the above amounts by the application of the **CPI** in each calendar year from the date of this approval decision until the date on which any payment is made. Biennial reporting periods will be based on calendar years with the first biennial reporting period being inclusive of the calendar year in which **commencement of the action** occurs and the following calendar year. Biennial reports must be submitted to the **Department** by 30 April following the end of each biennial reporting period.	Not applicable	The approval holder requested approval from DAWE on 7 June 2021 to use the Pilbara Environmental Offset Fund established by the Western Australian Government (our ref: RTIO-HSE-0353523) in relation to meeting EPBC offsets requirements for the Northern Quoll, Ghost Bat, Pilbara Leaf-nosed Bat, Pilbara Olive Python and the Blind Cave Eel. The Federal Environment Minister has not yet approved this request. The IRP (our ref: RTIO-HSE-0354024) was submitted to DWER on 30 November 2021, approved by DWER on 18 August 2022 (our ref: RTIO-0210501; DWER ref: DWERT5635).
13	Prior to making the payment required by Condition 12, the approval holder must submit written evidence to the **Department** of the total area, including **shapefiles**, of **Ghost Bat**, **Northern Quoll**, **Olive Python** and **Pilbara leaf-nosed bat** habitat **cleared** during the most recently ended biennial reporting period and the calculation (including working out) of the amount of funding that is required to be contributed to the **Conservation Offset Fund** for that biennial	Compliant	The IRR (our ref: RTIO-1027571) for 2022-2023, inclusive of shapefiles, was submitted to DWER and DCCEEW on 29 April 2024.

Condition Number	Condition	Compliance status	Evidence/Comments
	reporting period. Within 48 hours of the payment into the **Conservation Offset Fund**, evidence of these payments must be provided to the **Department** in writing.		
14	The approval holder must notify the **Department** in writing of the date of **commencement of the action** within 10 **business days** after the date of **commencement of the action**.	Compliant	Notification of commencement of the action was submitted on 25 September 2020 (our ref: RTIO-HSE-0345996) and acknowledged by DAWE on 30 September 2020 (our ref: RTIO-HSE-0347236).
15	The approval holder must maintain accurate and complete **compliance records**.	Compliant	Records associated with or relevant to the conditions of this approval are maintained within the Rio Tinto Iron Ore Information Management System.
16	If the **Department** makes a request in writing, the approval holder must provide electronic copies of **compliance records** to the **Department** within the timeframe specified in the request.	Not applicable	No requests received during the reporting period.
17	The approval holder must: a. submit **plans** electronically to the **Department** for approval by the **Minister**; b. publish each **plan** on the **website** within 20 **business days** of the date the **plan** is approved by the **Minister** or of the date a revised action management plan is submitted to the **Minister** or the **Department**, unless otherwise agreed to in writing by the **Minister**; c. exclude or redact **sensitive ecological data** from **plans** published on the **website** or provided to a member of the public; and d. keep **plans** published on the **website** until the end date of this approval.	Non-Compliant	A revised version of the Mesa J Hub EMP (our ref: RTIO-HSE-0349253) was submitted 31 July 2024 electronically. The EMP was approved by DWER 3 September 2024 and AMP approved by DCCEEW on 9 December 2024. The EMP (inclusive of the AMP) was not published on Rio Tinto's website within the required 20 business days of the plan being approved. The non-compliance with Condition 17 was identified during the annual reporting process on 13 February 2025, and the Plan was published on Rio Tinto's website on 14 February 2025 (45 days after the plan was approved). A letter (our ref: RTIO-1102576) notifying DCCEEW of the non-compliance was sent 21 February 2025.

Condition Number	Condition	Compliance status	Evidence/Comments
18	The approval holder must ensure that any **monitoring data** (including **sensitive ecological data**), surveys, maps, and other spatial and metadata required under a **plan**, is prepared in accordance with the **Department's** *Guidelines for biological survey and mapped data* (2018) and submitted electronically to the **Department** in accordance with the requirements of the plan.	Compliant	There was no requirement during the reporting period to submit data to the Department in accordance with Mesa H Environmental Management Plan (our ref: RTIO-HSE-0349253).
19	Following **commencement of the action**, the approval holder must prepare a **compliance report** for each previous 12 month calendar year period. The approval holder must: a. publish each **compliance report** on the **website** on 30 April for the previous 12 month calendar year period; b. notify the **Department** by email that a **compliance report** has been published on the **website** within five **business days** of the date of publication; c. keep all **compliance reports** publicly available on the **website** until this approval expires; d. exclude or redact **sensitive ecological data** from **compliance reports** published on the **website**; and e. where any **sensitive ecological data** has been excluded from the version published, submit the full **compliance report** to the **Department** within 5 **business days** of publication.	Compliant	2023 Annual Compliance Report submitted to the Department and published on Rio Tinto's website on 30 April 2024 (our ref: RTIO-1020594).
20	The approval holder must notify the **Department** in writing of any: **incident**; non-compliance with the conditions; or non-compliance with the commitments made in **plans**. The notification must be given as soon as practicable, and no later than seven **business days** after becoming aware of the **incident** or non-compliance. The notification must specify: a. any condition which is or may be in breach; b. a short description of the **incident** and/or non-compliance; and c. the location (including co-ordinates), date, and time of the **incident** (or the date the incident became known of) and/or non-compliance. In the	Compliant	A non-compliance with Condition 17 (b) (detailed above) was identified 13 February 2025. The notification (our ref: RTIO-1102576) to DCCEEW was provided 21 February 2025, seven business days after becoming aware of the incident. The notification specified the condition in breach and a short description of the incident, as required.

Condition Number	Condition	Compliance status	Evidence/Comments
	event the exact information cannot be provided, provide the best information available.		
21	The approval holder must provide to the **Department** the details of any **incident** or non-compliance with the conditions or commitments made in **plans** as soon as practicable and no later than 21 **business days** after becoming aware of the **incident** or non-compliance, specifying: a. any corrective action or investigation which the approval holder has already taken or intends to take in the immediate future; b. the potential impacts of the **incident** or non-compliance; and c. the method and timing of any remedial action that will be undertaken by the approval holder.	Compliant	A non-compliance with Condition 17 (b) (detailed above) was identified 13 February 2025. The notification and details of the incident (our ref: RTIO-1102576) to DCCEEW was provided 21 February 2025, within 21 business days after becoming aware of the incident. To prevent re-occurrence, the Approval Holder has committed to update internal governance processes to ensure future plans are published on the website in accordance with EPBC conditions. Given there are no potential or known impacts, and corrective action has been taken, no further mitigation or reporting was proposed.
22	The approval holder must ensure that **independent audits** of compliance with the conditions of this approval are conducted as requested in writing by the **Minister**.	Not applicable	There were no audits requested during the reporting period.
23	For each **independent audit**, the approval holder must: a. provide the name and qualifications of the independent auditor and the draft audit criteria to the **Department**; b. only commence the **independent audit** once the audit criteria have been approved in writing by the **Department**; and c. submit an audit report to the **Department** within the timeframe specified in the approved audit criteria.	Not applicable	There were no audits requested during the reporting period.
24	The approval holder must publish the audit report on the **website** within 10 **business days** of receiving the **Department's** approval of the audit report and keep the audit report published on the **website** until the end date of this approval.	Not applicable	There were no audits requested during the reporting period.
25	The approval holder may, at any time, apply to the **Minister** for a variation to an action management plan approved by the **Minister** by submitting an application	Not applicable	The Blind Cave Eel Action Management Plan was submitted as part of the Mesa J Hub EMP (our ref:

Condition Number	Condition	Compliance status	Evidence/Comments
	in accordance with the requirements of section 143A of the **EPBC Act**. If the **Minister** approves a revised action management plan (RAMP) then, from the date specified, the approval holder must implement the RAMP in place of the previously approved action management plan.		RTIO-HSE-0349253) and approved in 2024. No further request for variation was submitted during the reporting period.
26	Within 30 days after the **completion of the action**, the approval holder must notify the **Department** in writing and provide **completion data**.	Not applicable	Implementation of the action is ongoing.

3 Non-Compliances

3.1 Details of non-compliance(s)

Which implementation condition or procedure was non-compliant?	
Condition 17b states "17. *The approval holder must…(b) publish each plan on the website within 20 business days of the date the* ***plan*** *is approved by the Minister or of the date a revised action plan management plan is submitted to the Minister or the Department, unless otherwise agreed to in writing by the Minister".*	
Who detected the non-compliance?	
The approval holder.	
On what date(s) did the non-compliance occur (if applicable)?	
A revised version of the Mesa J Hub EMP (our ref: RTIO-HSE-0349253) was submitted 31 July 2024 electronically. The EMP was approved by DWER 3 September 2024 and AMP approved by DCCEEW on 9 December 2024. The EMP (inclusive of the AMP) was not published on Rio Tinto's website within the required 20 business days of the plan being approved (nominally by 13 January 2025). The non-compliance with Condition 17 was identified on 13 February 2025.	
Was this non-compliance reported to the Department?	
☒ Yes ☐ Reported to DoE verbally Date: ☒ Reported to DoE in writing Date: 21 February 2025 DoE ref: 2017/8017 Our ref: RTIO-1102576	☐ No
What correction measure(s), if any, were taken or are proposed to be taken in response to the non-compliance?	
The Blind Cave Eel Action Management Plan was published on the website the day after the non-compliance was identified, on 14 February 2025 (i.e. 45 business days after the Plan was approved). The plan can be found on the Rio Tinto Iron Ore website under the 'Iron Ore Western Australia Downloads' section, accessible here: https://www.riotinto.com/en/operations/australia/iron-ore-western-australia	
Who was/is responsible for correcting the non-compliance?	
The Approval Holder.	
What date did/will the correction measures commence and/or be completed or the time frame for correction?	
The Plan was published on the website on 14 February 2025.	
What measures, if any, are in place to prevent re-occurrence of the non-compliance?	
To prevent re-occurrence, the proponent has committed to update internal governance processes to ensure future plans are published on the website in accordance with EPBC conditions. Given there are no potential or known impacts, and corrective action has been taken, no further mitigation or reporting was proposed.	

4 Blind Cave Eel Action Management Plan

Action Management Plan requirements for the Blind Cave Eel as per Condition 5 and Condition 6 are incorporated into the Inland Waters and Subterranean Fauna Management Provisions of the Mesa J/H EMP (our ref: RTIO-HSE-0349253).

Table 2: Environmental management commitments

Key environmental factor : Blind Cave Eel Habitat Quality Management Zone	
EPBC Decision Notice 2017/8017 Condition 5a. *there is no significant change to groundwater quality detrimental to the Blind Cave Eel within its known habitat*. **Outcome:** Ensure no significant change to groundwater quality detrimental to the Blind Cave Eel within its known habitat associated with implementation of the Action.	
Environmental criteria	**Reporting period 1 January – 31 December 2024**
Early response criteria:	**Status Report**
1. Water quality in any key Robe River surface water pool exceeds Tier 1 SSGV	Early response criterion exceeded. See section 4.1.1 for discussion.
2. Groundwater physicochemical quality in Jimmawurrada Bores exceeds Tier 1 SSGV	Early response criterion not exceeded.
Trigger criteria:	**Status Report**
1. Water quality in any key Robe River surface water pool exceeds Tier 2 SSGV	Trigger criterion not exceeded.
2. Groundwater physiochemical quality in Jimmawurrada Bores exceeds Tier 2 SSGV	Trigger criterion exceeded.
Threshold criteria:	**Status Report**
1. Water quality in any two or more compliance groundwater bores or key Robe River surface water pool exceeds Tier 2 SSGV for two consecutive sampling events with a causal relationship to the Proposal	Threshold criterion not exceeded.
AND 2. Ecological Effects Assessment shows a declining trend in aquatic and stygofauna diversity or change to assemblage structure and absence of Blind Cave Eel records (specimen or eDNA) with a causal relationship to the Proposal and effects persisting for a three (3) year rolling window.	Threshold criterion not exceeded.
Key environmental factor : Jimmawurrada Creek Alluvial Aquifer Drawdown Management Zone	
EPBC Decision Notice 2017/8017 Condition 5b. *groundwater drawdown in the known pre-mining saturated Blind Cave Eel habitat within the Jimmawurrada Creek alluvial aquifer must not exceed 10 metres in depth below the minimum recorded wet season groundwater level*. **Outcome:** Ensure groundwater drawdown in the known pre-mining saturated Blind Cave Eel habitat within the Jimmawurrada Creek alluvial aquifer does not exceed 10 metres in depth below the minimum recorded wet season groundwater level.	

Environmental criteria	Reporting period 1 January – 31 December 2024
Early response criteria:	**Status Report**
1. Groundwater drawdown within the Jimmawurrada Creek alluvial aquifer exceeds 8 metres in depth below the minimum recorded wet season groundwater level in four groundwater bores for two consecutive monitoring events.	Early response criterion not exceeded.
Trigger criteria:	**Status Report**
1. Groundwater drawdown within the Jimmawurrada Creek alluvial aquifer exceeds 9 metres in depth below the minimum recorded wet season groundwater level in any one groundwater bore for two consecutive monitoring events.	Trigger criterion not exceeded.
2. Modelling predicts groundwater drawdown will exceed 10 metres in depth below the minimum recorded wet season groundwater level in any one monitored groundwater bore.	Trigger criterion not exceeded.
Threshold criteria:	**Status Report**
1. Groundwater drawdown within the Jimmawurrada Creek alluvial aquifer exceeds 10 metres in depth below the minimum recorded wet season groundwater level with a causal relationship to the Proposal in two or more monitored groundwater bores for a single monitoring event.	Threshold criterion not exceeded.
AND 2. Ecological Effects Assessment shows a declining trend in aquatic and stygofauna diversity or change to assemblage structure and absence of Blind Cave Eel records (specimen or eDNA) with a causal relationship to the Proposal and effects persisting for a three (3) year rolling window.	Threshold criterion not exceeded.

4.1 Water quality comparison to SSGVs

4.1.1 Robe River surface water pools

Water quality was monitored quarterly for the key pools of the Robe River during the reporting period (Q3 and Q4). Several water quality exceedances occurred for the early warning (Tier 1) Site Specific Guideline Values (SSGVs). The results from the pool water quality monitoring are provided in Appendix 1, with specific exceedance details outlined in Table 3. Biennial sediment sampling was carried out in 2024, supporting the water quality assessment in the pools as required.

Table 3: Exceedances of Tier 1 or Tier 2 SSGVs at the Robe River pools

Indicators	SSGV (Tier 1)	SSGV (Tier 2)	Quarter 3		Quarter 4	
Nitrate as N (mg/L)	Nitrate as N Benchmark Max	15	SW16MEH0003	0.03	SW16MEH0003	0.06*
Chlorophyll a (mg/L)	>0.01	N/A	RRU4	0.574	N/A	
			Paturarr	0.114		
			Watpari	0.022		

*Exceeded for two or more monitoring events per annum during the reporting period.

Total recoverable hydrocarbons (TRH) were detected in the third quarter by water quality monitoring at RRU4 which is a reference location upstream of the mine. 0.49 mg/L TRH (C10-C40) was recorded at pool RRU4, however, TRH was not detected in any of the other pools, refer to Appendix 1.

Early warning triggers (Tier 1) for pool water quality were exceeded in Q3 and Q4 for nitrate as N (nitrate) and chlorophyll a levels. For a detailed comparison of the results to the individually set early warning trigger criteria for each pool, refer to Appendix 1.

At downstream reference pool SW16MEH0003, the nitrate SSGV (site specific benchmark maximum) was exceeded for two monitoring events during the reporting period, recording 0.03 mg/L and 0.06 mg/L in Q3 and Q4 respectively, compared to a SSGV of 0.01 mg/L. Resampling efforts to verify the nitrate exceedance were conducted as soon as practicable and SW16MEH0003 was observed to have insufficient water to sample. Observations included drying pool, a significant amount of mud and high levels of cattle activity.

Three chlorophyll a exceedances were recorded in Q3: 0.0574 mg/L at RRU4, 0.114 mg/L at Paturarr, and 0.022 mg/L at Watpari. Resampling to verify these exceedances was carried out as soon as practicable, and all three pools were found to be dry and could not be resampled.

The early warning triggers (Tier 1) were investigated, and it was determined that the exceedances were likely attributed to factors such as low rainfall during the reporting period (241.6mm, Figure 1), a significant reduction in pool sizes, no mine dewatering discharges (no risk of impacting pool water quality) and an observation of significant cattle activity at the pools, in particular at pools which were not dry in Q4. Once the results of the biannual aquatic fauna monitoring and subterranean (stygofauna) monitoring were made available, a review was conducted to assess if there was any evidence suggesting an impact on diversity or composition of aquatic invertebrates or fish. There were no adverse effects on aquatic fauna and stygofauna diversity and composition as a result from mining operations. Further discussion on the aquatic fauna and stygofauna monitoring results can be found in Section 4.2.

4.1.2 Jimmawurrada Bores

Groundwater samples were collected and analysed from four monitoring bores within Jimmawurrada Creek: PZ09MEJ004, JWO21, JWO23, and JWO29. The groundwater quality results for Q3 and Q4 are detailed in Appendix 3, along with the Site-Specific Water Quality Values (SSGVs), where applicable.

The Zinc SSGV was exceeded at PZ09MEJ004 for the first time in the Q4 2024 sampling, recording 0.015 mg/L. However, when adjusting for water hardness as measured at the time of sampling, due to the extreme hardness of the water (>400mg/L as $CaCO_3$), this result did not exceed the hardness adjusted Tier 1 (0.072mg/L) or Tier 2 (0.072mg/L) trigger values. No other SSGVs were exceeded at any of the bores.

Table 4: Quarterly water quality results for the Jimmawurrada groundwater monitoring bores

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	PZ09MEJ004		JWO21		JWO23		JWO29	
				Q3	Q4	Q3	Q4	Q3	Q4	Q3	Q4
				29/08/2024	6/11/2024	30/08/2024	7/11/2024	30/08/2024	7/11/2024	30/08/2024	7/11/2024
Total Alkalinity ($CaCO_3$)	mg/L	N/A	N/A	287	295	203	208	226	240	276	278
Electrical Conductivity	µS/cm	N/A	N/A	1325	1613	655	671	822	836	846	854
Total Hardness ($CaCO_3$)	mg/L	N/A	N/A	450	428	204	212	245	266	284	295
pH	pH units	<6.5 or >8	<6.5 or >8.3	7.08	7.22	7.09	7.1	7.05	7.1	7.02	7.03
TDS	mg/L	N/A	N/A	766	1048	370	378	462	472	482	484
Temperature	Degrees Celsius	N/A	N/A	23.5	28.6	30.7	33.5	31.9	33.7	29.7	33.7
TSS	mg/L	N/A	N/A	<5	13	8	<5	6	109	20	10
Aluminium	mg/L	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Arsenic	mg/L	N/A	N/A	0.002	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	0.0702	0.0803	0.028	0.026	0.012	0.011	0.028	0.03	0.022	0.021
Boron	mg/L	N/A	N/A	0.35	0.35	0.22	0.22	0.24	0.24	0.25	0.25
Cadmium	mg/L	N/A	N/A	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Calcium	mg/L	N/A	N/A	91	84	34	34	40	44	48	49
Chloride	mg/L	N/A	N/A	232	260	79	66	108	87	97	79
Chromium	mg/L	N/A	N/A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Cobalt	mg/L	N/A	N/A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Copper	mg/L	0.001	0.0014	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Iron	mg/L	N/A	N/A	0.91	0.38	<0.05	<0.05	<0.05	0.07	<0.05	<0.05
Lead	mg/L	N/A	N/A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/L	N/A	N/A	54	53	29	31	34	38	40	42
Manganese	mg/L	N/A	N/A	0.17	0.139	<0.001	<0.001	0.004	0.013	<0.001	0.002

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	PZ09MEJ004		JWO21		JWO23		JWO29	
				Q3	Q4	Q3	Q4	Q3	Q4	Q3	Q4
				29/08/2024	6/11/2024	30/08/2024	7/11/2024	30/08/2024	7/11/2024	30/08/2024	7/11/2024
Mercury	mg/L	N/A	N/A	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001
Molybdenum	mg/L	N/A	N/A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nickel	mg/L	N/A	N/A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Nitrate as N	mg/L	N/A[1]	15	0.01	0.09	0.38	0.53	0.13	0.06	0.31	0.48
Nitrite and N	mg/L	N/A	N/A	<0.01	<0.01	<0.01	<0.01	0.02	<0.01	<0.01	<0.01
Total Nitrogen	mg/L	N/A	N/A	0.2	0.4	0.5	0.7	2.9	3.5	0.3	0.6
Dissolved Oxygen	mg/L	N/A	N/A	6.1	6.1	7.7	7.1	5.7	1.7	7.2	6.7
Total Phosphorus	mg/L	N/A	N/A	0.03	0.07	<0.01	<0.01	0.43	0.57	0.02	<0.01
Potassium	mg/L	N/A	N/A	7	6	5	5	8	8	7	6
Selenium	mg/L	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Sodium	mg/L	N/A	N/A	90	92	48	51	65	73	59	62
Strontium	mg/L	1	2.5	0.353	0.339	0.158	0.152	0.191	0.196	0.233	0.219
Sulphate	mg/L	N/A	N/A	48	50	22	23	38	38	40	38
Sulphur	mg/L	N/A	N/A	16	20	7	8	15	13	12	13
Uranium	mg/L	N/A	N/A	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
Vanadium	mg/L	N/A	N/A	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Zinc	mg/L	0.00248*	0.008*	<0.005	**0.015**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Dissolved Organic Carbon	mg/L	N/A	N/A	<1	1	<1	<1	2	4	<1	2

*SSGVs presented in the table have not been adjusted for hardness at the time of sampling. Any exceedances are then reviewed and compared to hardness adapted triggers, and discussed in section 4.1.2.

4.2 Aquatic fauna and stygofauna diversity

4.2.1 Aquatic fauna

During the reporting period, a comprehensive analysis was conducted on the aquatic fauna of the Robe River pools in 2024, following surveys undertaken at 19 pools in May and August 2024. This included species-level information on phytoplankton, microinvertebrates, hyporheos fauna, macroinvertebrates, and fish collected from both reference sites and exposed areas (zone 1 and zone 2). The data was analysed using both univariate and multivariate techniques.

Spatial and temporal differences in habitat conditions, sediment, and water quality were noted across the Robe River catchment, but these differences were not found to be caused by mining operations. Instead, they reflect broader catchment effects attributable to drought conditions, evapoconcentration, alluvial groundwater throughflow, and localized impacts from unrestricted livestock access, such as eutrophication. No significant differences in the diversity of hyporheos fauna, microinvertebrates, macroinvertebrate, or fish communities were found along the Robe River main channel or compared to upstream control reference conditions.

4.2.2 Stygofauna (including Blind Cave Eel)

An abundant and diverse stygofauna assemblage was recorded from 19 sites (13 impact and six reference) during 2024 Mesa J Hub stygofauna monitoring survey. A total of 2,097 stygofauna specimens were collected, including 39 species / operational taxonomic units (OTUs), representing ten orders and 16 families, as well as 45 indeterminate, higher-level identifications.

As part of the 2024 targeted blind cave eel (*Ophisternon candidum*, BCE) survey environmental DNA (eDNA) sampling was conducted at 33 sites (18 bores and 15 surface water pools), including seven sites from within the modelled extent of the Mesa H groundwater drawdown (noting that abstraction has not yet commenced at Mesa H). BCE eDNA was detected from 17 sites, including two of the seven sites within the modelled drawdown area, which was an increase from previous monitoring in 2023 (Figure 1). Including results from previous survey efforts, the BCE has now been detected at 47 sites in the Robe River, Peter Creek and Fortescue River catchments. This indicates that the BCE currently persists within the Robe River catchment (over a linear distance of 150 km) and specifically within the Mesa H modelled drawdown area.

The results of the 2024 stygofauna and targeted BCE monitoring broadly demonstrates the persistence of stygofauna communities, including BCE, and their habitats in compliance with the threshold criteria in the Action Management Plan.

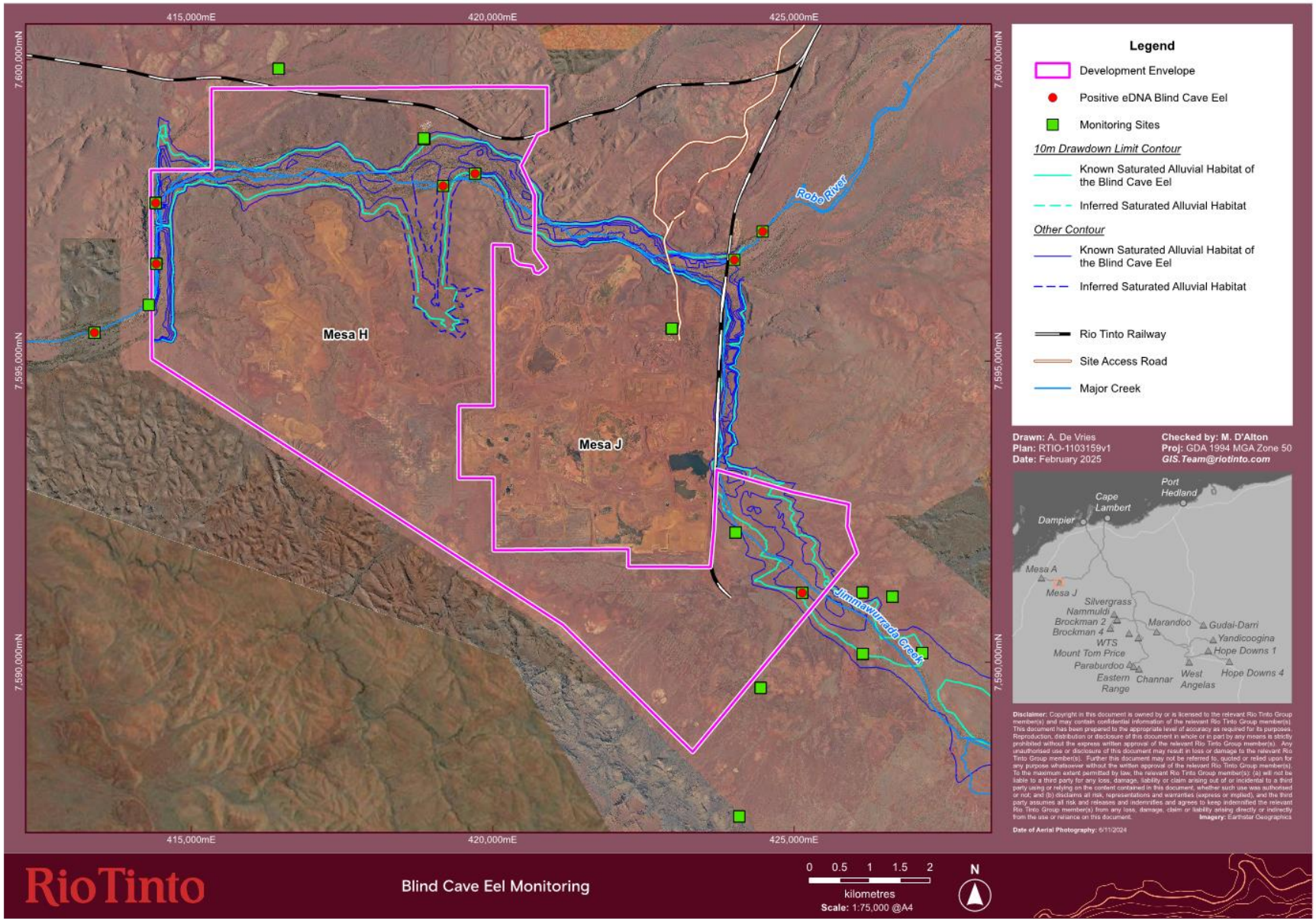

Figure 1: Blind Cave Eel monitoring sites, indicating positive eDNA hits

4.3 Groundwater drawdown

Groundwater levels declined in all monitoring points during 2024 (Figure 2), however the early warning, trigger or threshold criteria were not exceeded at any of the monitoring bores during 2024. Decline was in line with the seasonal conditions; rainfall recorded at the Mesa J Weather Station in 2024 was 241.6 mm, far below the long-term average recorded at the Pannawonica BOM Weather Station of 409.2 mm. 61.4 mm of rainfall was recorded towards the end of December 2024, and a slight increase in water level was observed at the groundwater bores with telemetered water level loggers (JWO21, JWO23, PZ10BUN041). Modelling has not predicted an exceedance of the 10 m drawdown threshold in any of the monitored groundwater bores.

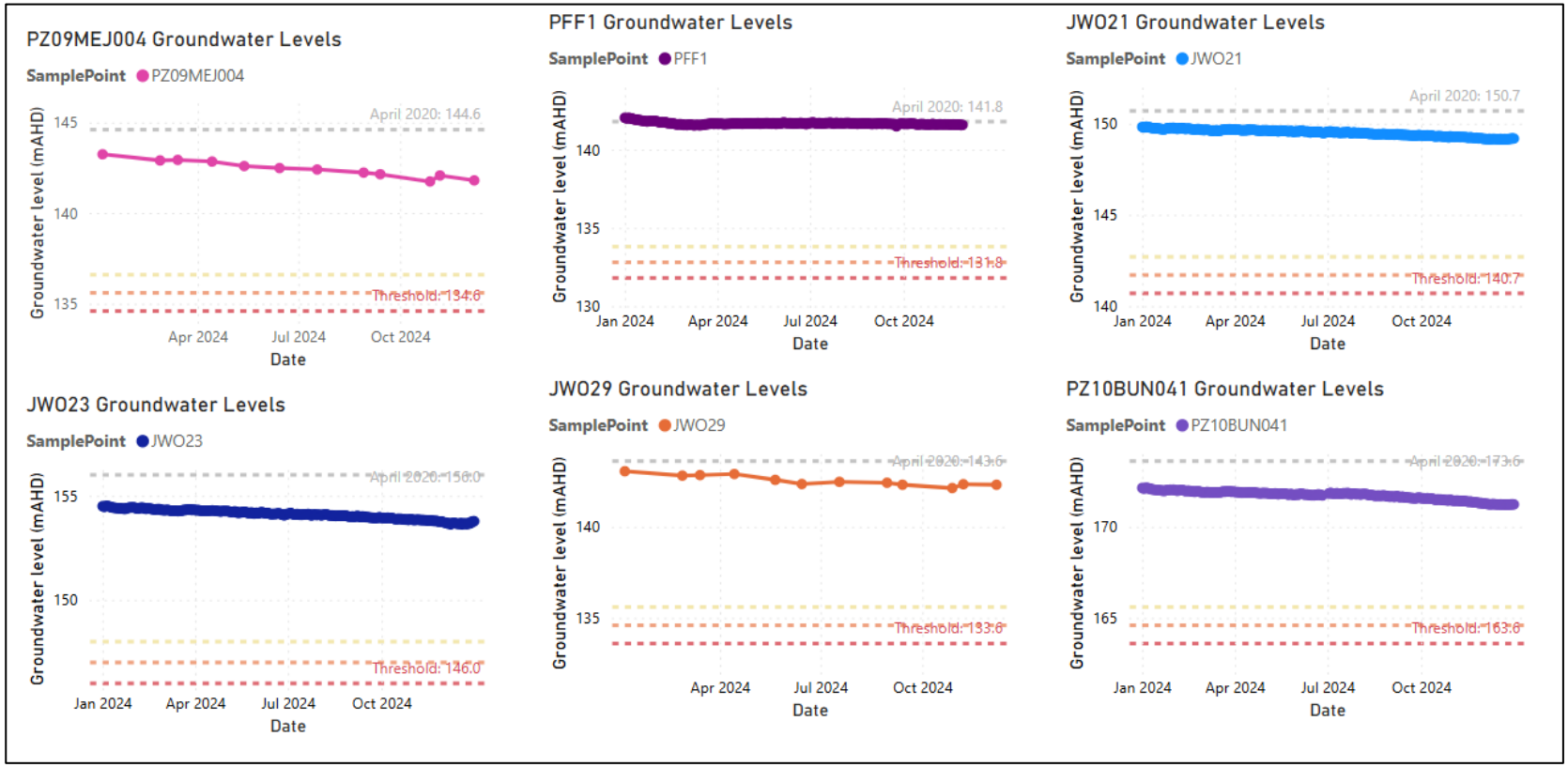

Figure 2: Groundwater levels (mAHD) at the 6 Jimmawurrada Creek groundwater monitoring bores

5 New environmental risks

There are no new environmental risks that have become apparent during the reporting period.

6 Declaration of accuracy

In making this declaration, I am aware that sections 490 and 491 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed: [redacted]

Full name:

Position:

Organisation:

Date:

7 Appendices

Appendix 1: Quarterly water quality results for the Robe River pools and comparison to Tier 1 and Tier 2 SSGVs

Table 5: Quarterly water quality for RRU3 and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	RRU3	RRU3
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	216	Dry
Electrical Conductivity	µS/cm	900	1000	1081*	Dry
Total Hardness (CaCO3)	mg/L	N/A	N/A	262	Dry
pH	pH units	<6.5 or >8	<6.5 or >8.4	7.14	Dry
TDS	mg/L	N/A	N/A	461	Dry
Temperature	ºC	N/A	N/A	24.3	Dry
TSS	mg/L	N/A	N/A	<5	Dry
Turbidity	NTU	N/A	N/A	3.4	Dry
Aluminium	mg/L	N/A	N/A	<0.005	Dry
Arsenic	mg/L	N/A	N/A	0.0003	Dry
Total Arsenic	mg/L	N/A	N/A	0.0003	Dry
Barium	mg/L	0.0702	0.0803	0.069	Dry
Boron	mg/L	N/A	N/A	0.231	Dry
Cadmium	mg/L	N/A	N/A	<0.00005	Dry
Calcium	mg/L	N/A	N/A	53.7	Dry
Chloride	mg/L	N/A	N/A	124	Dry
Chromium	mg/L	N/A	N/A	<0.0002	Dry
Total Chromium	mg/L	N/A	N/A	<0.0002	Dry
Cobalt	mg/L	N/A	N/A	0.0007	Dry
Copper	mg/L	0.001	0.0014	<0.0005	Dry
Iron	mg/L	N/A	N/A	0.175	Dry
Lead	mg/L	N/A	N/A	<0.0001	Dry
Magnesium	mg/L	N/A	N/A	31	Dry
Manganese	mg/L	N/A	N/A	0.276	Dry
Mercury	mg/L	N/A	N/A	<0.0004	Dry
Molybdenum	mg/L	N/A	N/A	0.0002	Dry
Nickel	mg/L	N/A	N/A	<0.0005	Dry
Ammonia Nitrogen	mg/L	N/A	N/A	0.1	Dry
Nitrate as N	mg/L	0.02	15	0.01	Dry
Nitrite and N	mg/L	N/A	N/A	<0.01	Dry
Total Nitrogen	mg/L	N/A	N/A	0.2	Dry
Dissolved Oxygen	mg/L	N/A	N/A	3.73	Dry
Total Phosphorus	mg/L	N/A	N/A	<0.01	Dry
Potassium	mg/L	N/A	N/A	7.2	Dry
Selenium	mg/L	N/A	N/A	<0.0002	Dry
Total Selenium	mg/L	N/A	N/A	<0.0002	Dry
Silicon (SiO2)	mg/L	N/A	N/A	41.1	Dry
Sodium	mg/L	N/A	N/A	69.6	Dry
Strontium	mg/L	1	2.5	0.244	Dry
Sulphate	mg/L	N/A	N/A	33	Dry
Sulphur	mg/L	N/A	N/A	12	Dry
Uranium	mg/L	N/A	N/A	0.00017	Dry
Vanadium	mg/L	N/A	N/A	<0.0002	Dry
Zinc	mg/L	0.00248	0.008	<0.001	Dry
Chlorophyll a	mg/L	>0.01	N/A	0.003	Dry
Dissolved Organic Carbon	mg/L	N/A	N/A	2	Dry
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	Dry

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 6: Quarterly water quality for RRU4 and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	RRU4	RRU4
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	260	Dry
Electrical Conductivity	µS/cm	900	1000	1478*	Dry
Total Hardness (CaCO3)	mg/L	N/A	N/A	427	Dry
pH	pH units	<6.5 or >8	<6.5 or >8.4	7.87	Dry
TDS	mg/L	N/A	N/A	775	Dry
Temperature	ºC	N/A	N/A	16.7	Dry
TSS	mg/L	N/A	N/A	560	Dry
Turbidity	NTU	N/A	N/A	100	Dry
Aluminium	mg/L	N/A	N/A	<0.005	Dry
Arsenic	mg/L	N/A	N/A	0.001	Dry
Total Arsenic	mg/L	N/A	N/A	0.0011	Dry
Barium	mg/L	0.0702	0.0803	0.0666	Dry
Boron	mg/L	N/A	N/A	0.234	Dry
Cadmium	mg/L	N/A	N/A	<0.00005	Dry
Calcium	mg/L	N/A	N/A	69	Dry
Chloride	mg/L	N/A	N/A	164	Dry
Chromium	mg/L	N/A	N/A	<0.0002	Dry
Total Chromium	mg/L	N/A	N/A	0.0002	Dry
Cobalt	mg/L	N/A	N/A	0.0003	Dry
Copper	mg/L	0.001	0.0014	<0.0005	Dry
Iron	mg/L	N/A	N/A	0.412	Dry
Lead	mg/L	N/A	N/A	<0.0001	Dry
Magnesium	mg/L	N/A	N/A	61.8	Dry
Manganese	mg/L	N/A	N/A	0.102	Dry
Mercury	mg/L	N/A	N/A	<0.00004	Dry
Molybdenum	mg/L	N/A	N/A	0.0015	Dry
Nickel	mg/L	N/A	N/A	0.0007	Dry
Ammonia Nitrogen	mg/L	N/A	N/A	1.19	Dry
Nitrate as N	mg/L	0.03	15	0.27*	Dry
Nitrite and N	mg/L	N/A	N/A	<0.01	Dry
Total Nitrogen	mg/L	N/A	N/A	3.7	Dry
Dissolved Oxygen	mg/L	N/A	N/A	3.52	Dry
Total Phosphorus	mg/L	N/A	N/A	0.21	Dry
Potassium	mg/L	N/A	N/A	21.6	Dry
Selenium	mg/L	N/A	N/A	0.0003	Dry
Total Selenium	mg/L	N/A	N/A	0.0003	Dry
Silicon (SiO2)	mg/L	N/A	N/A	14.9	Dry
Sodium	mg/L	N/A	N/A	88.3	Dry
Strontium	mg/L	1	2.5	0.32	Dry
Sulphate	mg/L	N/A	N/A	184	Dry
Sulphur	mg/L	N/A	N/A	55	Dry
Uranium	mg/L	N/A	N/A	0.00197	Dry
Vanadium	mg/L	N/A	N/A	0.0006	Dry
Zinc	mg/L	0.00248	0.008	<0.001	Dry
Chlorophyll a	mg/L	>0.01	N/A	0.574	Dry
Dissolved Organic Carbon	mg/L	N/A	N/A	14	Dry
TRH (C10-C40)	mg/L	N/A	N/A	0.49	Dry

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 7: Quarterly water quality for Medawandy and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Medawandy	Medawandy
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	200	217
Electrical Conductivity	µS/cm	900	1000	1120*	835
Total Hardness (CaCO3)	mg/L	N/A	N/A	258	244
pH	pH units	<6.5 or >8	<6.5 or >8.4	7.36	6.55
TDS	mg/L	N/A	N/A	443	474
Temperature	ºC	N/A	N/A	25.5	27.3
TSS	mg/L	N/A	N/A	<5	<5
Turbidity	NTU	N/A	N/A	1.2	1.1
Aluminium	mg/L	N/A	N/A	0.009	<0.005
Arsenic	mg/L	N/A	N/A	<0.0002	0.0003
Total Arsenic	mg/L	N/A	N/A	<0.0002	0.0003
Barium	mg/L	0.0702	0.0803	0.0532	0.0577
Boron	mg/L	N/A	N/A	0.22	0.17
Cadmium	mg/L	N/A	N/A	<0.00005	<0.00005
Calcium	mg/L	N/A	N/A	52.1	47.5
Chloride	mg/L	N/A	N/A	125	117
Chromium	mg/L	N/A	N/A	<0.0002	<0.0002
Total Chromium	mg/L	N/A	N/A	<0.0002	<0.0002
Cobalt	mg/L	N/A	N/A	<0.0001	<0.0001
Copper	mg/L	0.001	0.0014	<0.0005	<0.0005
Iron	mg/L	N/A	N/A	0.093	0.066
Lead	mg/L	N/A	N/A	<0.0001	<0.0001
Magnesium	mg/L	N/A	N/A	31.1	30.5
Manganese	mg/L	N/A	N/A	0.0035	0.0379
Mercury	mg/L	N/A	N/A	<0.00004	<0.00004
Molybdenum	mg/L	N/A	N/A	0.0002	0.0003
Nickel	mg/L	N/A	N/A	<0.0005	<0.0005
Ammonia Nitrogen	mg/L	N/A	N/A	0.02	<0.01
Nitrate as N	mg/L	0.02	15	0.07*	<0.01
Nitrite and N	mg/L	N/A	N/A	<0.01	<0.01
Total Nitrogen	mg/L	N/A	N/A	<0.1	0.2
Dissolved Oxygen	mg/L	N/A	N/A	6.14	3.31
Total Phosphorus	mg/L	N/A	N/A	0.01	0.02
Potassium	mg/L	N/A	N/A	7.2	7.9
Selenium	mg/L	N/A	N/A	0.0006	0.0004
Total Selenium	mg/L	N/A	N/A	0.0004	0.0004
Silicon (SiO2)	mg/L	N/A	N/A	40.2	38.8
Sodium	mg/L	N/A	N/A	62.6	61.6
Strontium	mg/L	1	2.5	0.22	0.248
Sulphate	mg/L	N/A	N/A	32	33
Sulphur	mg/L	N/A	N/A	12	11
Uranium	mg/L	N/A	N/A	0.00025	0.00032
Vanadium	mg/L	N/A	N/A	0.0016	0.0012
Zinc	mg/L	0.00248	0.008	<0.001	<0.001
Chlorophyll a	mg/L	>0.01	N/A	0.003	0.002
Dissolved Organic Carbon	mg/L	N/A	N/A	<1	2
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	<0.1

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 8: Quarterly water quality for Robe River 3 and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Robe River 3	Robe River 3
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	196	NS
Electrical Conductivity	µS/cm	900	1000	1130*	NS
Total Hardness (CaCO3)	mg/L	N/A	N/A	292	NS
pH	pH units	<6.5 or >8	<6.5 or >8.4	7.9	NS
TDS	mg/L	N/A	N/A	512	NS
Temperature	ºC	N/A	N/A	22.2	NS
TSS	mg/L	N/A	N/A	<5	NS
Turbidity	NTU	N/A	N/A	1.9	NS
Aluminium	mg/L	N/A	N/A	<0.005	NS
Arsenic	mg/L	N/A	N/A	0.0003	NS
Total Arsenic	mg/L	N/A	N/A	0.0003	NS
Barium	mg/L	0.0702	0.0803	0.0667	NS
Boron	mg/L	N/A	N/A	0.206	NS
Cadmium	mg/L	N/A	N/A	<0.00005	NS
Calcium	mg/L	N/A	N/A	55.8	NS
Chloride	mg/L	N/A	N/A	152	NS
Chromium	mg/L	N/A	N/A	<0.0002	NS
Total Chromium	mg/L	N/A	N/A	<0.0002	NS
Cobalt	mg/L	N/A	N/A	<0.0001	NS
Copper	mg/L	0.001	0.0014	<0.0005	NS
Iron	mg/L	N/A	N/A	0.046	NS
Lead	mg/L	N/A	N/A	<0.0001	NS
Magnesium	mg/L	N/A	N/A	37.2	NS
Manganese	mg/L	N/A	N/A	0.0158	NS
Mercury	mg/L	N/A	N/A	<0.00004	NS
Molybdenum	mg/L	N/A	N/A	0.0004	NS
Nickel	mg/L	N/A	N/A	<0.0005	NS
Ammonia Nitrogen	mg/L	N/A	N/A	0.01	NS
Nitrate as N	mg/L	0.34	15	0.01	NS
Nitrite and N	mg/L	N/A	N/A	<0.01	NS
Total Nitrogen	mg/L	N/A	N/A	0.1	NS
Dissolved Oxygen	mg/L	N/A	N/A	10.45	NS
Total Phosphorus	mg/L	N/A	N/A	<0.01	NS
Potassium	mg/L	N/A	N/A	7.7	NS
Selenium	mg/L	N/A	N/A	<0.0002	NS
Total Selenium	mg/L	N/A	N/A	<0.0002	NS
Silicon (SiO2)	mg/L	N/A	N/A	35.6	NS
Sodium	mg/L	N/A	N/A	68.2	NS
Strontium	mg/L	1	2.5	0.27	NS
Sulphate	mg/L	N/A	N/A	34	NS
Sulphur	mg/L	N/A	N/A	14	NS
Uranium	mg/L	N/A	N/A	0.00043	NS
Vanadium	mg/L	N/A	N/A	0.0013	NS
Zinc	mg/L	0.00248	0.008	<0.001	NS
Chlorophyll a	mg/L	>0.01	N/A	0.002	NS
Dissolved Organic Carbon	mg/L	N/A	N/A	1	NS
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	NS

NS – No access due to heritage concerns. Access to be reinstated early 2025.

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 9: Quarterly water quality for Japanese Pool and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Japanese Pool	Japanese Pool
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	Dry	Dry
Electrical Conductivity	µS/cm	1100	1300	Dry	Dry
Total Hardness (CaCO3)	mg/L	N/A	N/A	Dry	Dry
pH	pH units	<6.5 or >8	<6.5 or >8.3	Dry	Dry
TDS	mg/L	N/A	N/A	Dry	Dry
Temperature	ºC	N/A	N/A	Dry	Dry
TSS	mg/L	N/A	N/A	Dry	Dry
Turbidity	NTU	N/A	N/A	Dry	Dry
Aluminium	mg/L	N/A	N/A	Dry	Dry
Arsenic	mg/L	N/A	N/A	Dry	Dry
Total Arsenic	mg/L	N/A	N/A	Dry	Dry
Barium	mg/L	0.0702	0.0803	Dry	Dry
Boron	mg/L	N/A	N/A	Dry	Dry
Cadmium	mg/L	N/A	N/A	Dry	Dry
Calcium	mg/L	N/A	N/A	Dry	Dry
Chloride	mg/L	N/A	N/A	Dry	Dry
Chromium	mg/L	N/A	N/A	Dry	Dry
Total Chromium	mg/L	N/A	N/A	Dry	Dry
Cobalt	mg/L	N/A	N/A	Dry	Dry
Copper	mg/L	0.001	0.0014	Dry	Dry
Iron	mg/L	N/A	N/A	Dry	Dry
Lead	mg/L	N/A	N/A	Dry	Dry
Magnesium	mg/L	N/A	N/A	Dry	Dry
Manganese	mg/L	N/A	N/A	Dry	Dry
Mercury	mg/L	N/A	N/A	Dry	Dry
Molybdenum	mg/L	N/A	N/A	Dry	Dry
Nickel	mg/L	N/A	N/A	Dry	Dry
Ammonia Nitrogen	mg/L	N/A	N/A	Dry	Dry
Nitrate as N	mg/L	9.42	15	Dry	Dry
Nitrite and N	mg/L	N/A	N/A	Dry	Dry
Total Nitrogen	mg/L	N/A	N/A	Dry	Dry
Dissolved Oxygen	mg/L	N/A	N/A	Dry	Dry
Total Phosphorus	mg/L	N/A	N/A	Dry	Dry
Potassium	mg/L	N/A	N/A	Dry	Dry
Selenium	mg/L	N/A	N/A	Dry	Dry
Total Selenium	mg/L	N/A	N/A	Dry	Dry
Silicon (SiO2)	mg/L	N/A	N/A	Dry	Dry
Sodium	mg/L	N/A	N/A	Dry	Dry
Strontium	mg/L	1	2.5	Dry	Dry
Sulphate	mg/L	N/A	N/A	Dry	Dry
Sulphur	mg/L	N/A	N/A	Dry	Dry
Uranium	mg/L	N/A	N/A	Dry	Dry
Vanadium	mg/L	N/A	N/A	Dry	Dry
Zinc	mg/L	0.00248	0.008	Dry	Dry
Chlorophyll a	mg/L	>0.01	N/A	Dry	Dry
Dissolved Organic Carbon	mg/L	N/A	N/A	Dry	Dry
TRH (C10-C40)	mg/L	N/A	N/A	Dry	Dry

Table 10: Quarterly water quality for Martangkuna and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Martangkuna	Martangkuna
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	Dry	Dry
Electrical Conductivity	µS/cm	1100	1300	Dry	Dry
Total Hardness (CaCO3)	mg/L	N/A	N/A	Dry	Dry
pH	pH units	<6.5 or >8	<6.5 or >8.3	Dry	Dry
TDS	mg/L	N/A	N/A	Dry	Dry
Temperature	ºC	N/A	N/A	Dry	Dry
TSS	mg/L	N/A	N/A	Dry	Dry
Turbidity	NTU	N/A	N/A	Dry	Dry
Aluminium	mg/L	N/A	N/A	Dry	Dry
Arsenic	mg/L	N/A	N/A	Dry	Dry
Total Arsenic	mg/L	N/A	N/A	Dry	Dry
Barium	mg/L	0.0702	0.0803	Dry	Dry
Boron	mg/L	N/A	N/A	Dry	Dry
Cadmium	mg/L	N/A	N/A	Dry	Dry
Calcium	mg/L	N/A	N/A	Dry	Dry
Chloride	mg/L	N/A	N/A	Dry	Dry
Chromium	mg/L	N/A	N/A	Dry	Dry
Total Chromium	mg/L	N/A	N/A	Dry	Dry
Cobalt	mg/L	N/A	N/A	Dry	Dry
Copper	mg/L	0.001	0.0014	Dry	Dry
Iron	mg/L	N/A	N/A	Dry	Dry
Lead	mg/L	N/A	N/A	Dry	Dry
Magnesium	mg/L	N/A	N/A	Dry	Dry
Manganese	mg/L	N/A	N/A	Dry	Dry
Mercury	mg/L	N/A	N/A	Dry	Dry
Molybdenum	mg/L	N/A	N/A	Dry	Dry
Nickel	mg/L	N/A	N/A	Dry	Dry
Ammonia Nitrogen	mg/L	N/A	N/A	Dry	Dry
Nitrate as N	mg/L	5.20	15	Dry	Dry
Nitrite and N	mg/L	N/A	N/A	Dry	Dry
Total Nitrogen	mg/L	N/A	N/A	Dry	Dry
Dissolved Oxygen	mg/L	N/A	N/A	Dry	Dry
Total Phosphorus	mg/L	N/A	N/A	Dry	Dry
Potassium	mg/L	N/A	N/A	Dry	Dry
Selenium	mg/L	N/A	N/A	Dry	Dry
Total Selenium	mg/L	N/A	N/A	Dry	Dry
Silicon (SiO2)	mg/L	N/A	N/A	Dry	Dry
Sodium	mg/L	N/A	N/A	Dry	Dry
Strontium	mg/L	1	2.5	Dry	Dry
Sulphate	mg/L	N/A	N/A	Dry	Dry
Sulphur	mg/L	N/A	N/A	Dry	Dry
Uranium	mg/L	N/A	N/A	Dry	Dry
Vanadium	mg/L	N/A	N/A	Dry	Dry
Zinc	mg/L	0.00248	0.008	Dry	Dry
Chlorophyll a	mg/L	>0.01	N/A	Dry	Dry
Dissolved Organic Carbon	mg/L	N/A	N/A	Dry	Dry
TRH (C10-C40)	mg/L	N/A	N/A	Dry	Dry

Table 11: Quarterly water quality for Paturarr and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Paturarr	Paturarr
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	205	Dry
Electrical Conductivity	µS/cm	1100	1300	1342*	Dry
Total Hardness (CaCO3)	mg/L	N/A	N/A	355	Dry
pH	pH units	<6.5 or >8	<6.5 or >8.3	7.81	Dry
TDS	mg/L	N/A	N/A	600	Dry
Temperature	ºC	N/A	N/A	17.4	Dry
TSS	mg/L	N/A	N/A	57	Dry
Turbidity	NTU	N/A	N/A	50	Dry
Aluminium	mg/L	N/A	N/A	0.011	Dry
Arsenic	mg/L	N/A	N/A	0.0006	Dry
Total Arsenic	mg/L	N/A	N/A	0.0007	Dry
Barium	mg/L	0.0702	0.0803	0.0339	Dry
Boron	mg/L	N/A	N/A	0.269	Dry
Cadmium	mg/L	N/A	N/A	<0.00005	Dry
Calcium	mg/L	N/A	N/A	54.4	Dry
Chloride	mg/L	N/A	N/A	188	Dry
Chromium	mg/L	N/A	N/A	<0.0002	Dry
Total Chromium	mg/L	N/A	N/A	0.0003	Dry
Cobalt	mg/L	N/A	N/A	0.0002	Dry
Copper	mg/L	0.001	0.0014	<0.0005	Dry
Iron	mg/L	N/A	N/A	0.065	Dry
Lead	mg/L	N/A	N/A	<0.0001	Dry
Magnesium	mg/L	N/A	N/A	53.3	Dry
Manganese	mg/L	N/A	N/A	0.0037	Dry
Mercury	mg/L	N/A	N/A	<0.00004	Dry
Molybdenum	mg/L	N/A	N/A	0.0006	Dry
Nickel	mg/L	N/A	N/A	<0.0005	Dry
Ammonia Nitrogen	mg/L	N/A	N/A	0.04	Dry
Nitrate as N	mg/L	2.80	15	0.64	Dry
Nitrite and N	mg/L	N/A	N/A	0.03	Dry
Total Nitrogen	mg/L	N/A	N/A	2.7	Dry
Dissolved Oxygen	mg/L	N/A	N/A	8.56	Dry
Total Phosphorus	mg/L	N/A	N/A	0.12	Dry
Potassium	mg/L	N/A	N/A	11.5	Dry
Selenium	mg/L	N/A	N/A	0.0014	Dry
Total Selenium	mg/L	N/A	N/A	0.0016	Dry
Silicon (SiO2)	mg/L	N/A	N/A	46.8	Dry
Sodium	mg/L	N/A	N/A	82.8	Dry
Strontium	mg/L	1	2.5	0.282	Dry
Sulphate	mg/L	N/A	N/A	78	Dry
Sulphur	mg/L	N/A	N/A	27	Dry
Uranium	mg/L	N/A	N/A	0.00098	Dry
Vanadium	mg/L	N/A	N/A	0.0052	Dry
Zinc	mg/L	0.00248	0.008	<0.001	Dry
Chlorophyll a	mg/L	>0.01	N/A	0.114	Dry
Dissolved Organic Carbon	mg/L	N/A	N/A	4	Dry
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	Dry

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 12: Quarterly water quality for Watpari and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Watpari	Watpari
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	286	Dry
Electrical Conductivity	µS/cm	1100	1300	1423*	Dry
Total Hardness (CaCO3)	mg/L	N/A	N/A	408	Dry
pH	pH units	<6.5 or >8	<6.5 or >8.3	7.49	Dry
TDS	mg/L	N/A	N/A	662	Dry
Temperature	ºC	N/A	N/A	19.7	Dry
TSS	mg/L	N/A	N/A	6	Dry
Turbidity	NTU	N/A	N/A	5.3	Dry
Aluminium	mg/L	N/A	N/A	<0.005	Dry
Arsenic	mg/L	N/A	N/A	0.0005	Dry
Total Arsenic	mg/L	N/A	N/A	0.0006	Dry
Barium	mg/L	0.0702	0.0803	0.0606	Dry
Boron	mg/L	N/A	N/A	0.286	Dry
Cadmium	mg/L	N/A	N/A	<0.00005	Dry
Calcium	mg/L	N/A	N/A	74.8	Dry
Chloride	mg/L	N/A	N/A	182	Dry
Chromium	mg/L	N/A	N/A	<0.0002	Dry
Total Chromium	mg/L	N/A	N/A	0.0002	Dry
Cobalt	mg/L	N/A	N/A	0.0002	Dry
Copper	mg/L	0.001	0.0014	<0.0005	Dry
Iron	mg/L	N/A	N/A	0.067	Dry
Lead	mg/L	N/A	N/A	<0.0001	Dry
Magnesium	mg/L	N/A	N/A	53.7	Dry
Manganese	mg/L	N/A	N/A	0.0467	Dry
Mercury	mg/L	N/A	N/A	<0.00004	Dry
Molybdenum	mg/L	N/A	N/A	0.0004	Dry
Nickel	mg/L	N/A	N/A	<0.0005	Dry
Ammonia Nitrogen	mg/L	N/A	N/A	0.21	Dry
Nitrate as N	mg/L	3.50	15	0.66	Dry
Nitrite and N	mg/L	N/A	N/A	0.02	Dry
Total Nitrogen	mg/L	N/A	N/A	1.2	Dry
Dissolved Oxygen	mg/L	N/A	N/A	3.28	Dry
Total Phosphorus	mg/L	N/A	N/A	0.03	Dry
Potassium	mg/L	N/A	N/A	10.9	Dry
Selenium	mg/L	N/A	N/A	0.0007	Dry
Total Selenium	mg/L	N/A	N/A	0.0007	Dry
Silicon (SiO2)	mg/L	N/A	N/A	54	Dry
Sodium	mg/L	N/A	N/A	82.1	Dry
Strontium	mg/L	1	2.5	0.362	Dry
Sulphate	mg/L	N/A	N/A	70	Dry
Sulphur	mg/L	N/A	N/A	22	Dry
Uranium	mg/L	N/A	N/A	0.0007	Dry
Vanadium	mg/L	N/A	N/A	0.001	Dry
Zinc	mg/L	0.00248	0.008	<0.001	Dry
Chlorophyll a	mg/L	>0.01	N/A	0.022	Dry
Dissolved Organic Carbon	mg/L	N/A	N/A	1	Dry
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	Dry

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 13: Quarterly water quality for RRD4 and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	RRD4	RRD4
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	294	282
Electrical Conductivity	µS/cm	1300	1500	1402*	1121
Total Hardness (CaCO3)	mg/L	N/A	N/A	402	345
pH	pH units	<6.5 or >8	<6.5 or >8.2	7.41	7.56
TDS	mg/L	N/A	N/A	670	641
Temperature	ºC	N/A	N/A	27.1	28.4
TSS	mg/L	N/A	N/A	<5	<5
Turbidity	NTU	N/A	N/A	0.4	0.7
Aluminium	mg/L	N/A	N/A	<0.005	<0.005
Arsenic	mg/L	N/A	N/A	0.0004	0.0004
Total Arsenic	mg/L	N/A	N/A	0.0004	0.0005
Barium	mg/L	0.0702	0.0803	0.0532	0.0548
Boron	mg/L	N/A	N/A	0.357	0.275
Cadmium	mg/L	N/A	N/A	<0.00005	<0.00005
Calcium	mg/L	N/A	N/A	70.5	61.2
Chloride	mg/L	N/A	N/A	175	184
Chromium	mg/L	N/A	N/A	<0.0002	<0.0002
Total Chromium	mg/L	N/A	N/A	<0.0002	<0.0002
Cobalt	mg/L	N/A	N/A	<0.0001	<0.0001
Copper	mg/L	0.001	0.0014	<0.0005	<0.0005
Iron	mg/L	N/A	N/A	<0.002	0.016
Lead	mg/L	N/A	N/A	<0.0001	<0.0001
Magnesium	mg/L	N/A	N/A	55	46.7
Manganese	mg/L	N/A	N/A	<0.0005	0.0007
Mercury	mg/L	N/A	N/A	<0.00004	<0.00004
Molybdenum	mg/L	N/A	N/A	0.0005	0.0004
Nickel	mg/L	N/A	N/A	<0.0005	<0.0005
Ammonia Nitrogen	mg/L	N/A	N/A	0.01	0.05
Nitrate as N	mg/L	1.60	15	0.84	0.62
Nitrite and N	mg/L	N/A	N/A	<0.01	0.02
Total Nitrogen	mg/L	N/A	N/A	1	0.8
Dissolved Oxygen	mg/L	N/A	N/A	4.81	4.24
Total Phosphorus	mg/L	N/A	N/A	0.02	<0.01
Potassium	mg/L	N/A	N/A	9.8	10.1
Selenium	mg/L	N/A	N/A	0.0017	0.0016
Total Selenium	mg/L	N/A	N/A	0.0014	0.0015
Silicon (SiO2)	mg/L	N/A	N/A	52.7	50.3
Sodium	mg/L	N/A	N/A	88.5	80.6
Strontium	mg/L	1	2.5	0.349	0.329
Sulphate	mg/L	N/A	N/A	71	59
Sulphur	mg/L	N/A	N/A	24	22
Uranium	mg/L	N/A	N/A	0.0009	0.00063
Vanadium	mg/L	N/A	N/A	0.0028	0.0026
Zinc	mg/L	0.00248	0.008	<0.001	<0.001
Chlorophyll a	mg/L	>0.01	N/A	<0.001	0.002
Dissolved Organic Carbon	mg/L	N/A	N/A	2	3
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	<0.1

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 14: Quarterly water quality for Yeera Bluff and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Yeera Bluff	Yeera Bluff
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	349	357
Electrical Conductivity	µS/cm	1300	1500	1524*	1279
Total Hardness (CaCO3)	mg/L	N/A	N/A	461	403
pH	pH units	<6.5 or >8	<6.5 or >8.2	7.41	7.81
TDS	mg/L	N/A	N/A	738	664
Temperature	ºC	N/A	N/A	23.7	26.7
TSS	mg/L	N/A	N/A	<5	<5
Turbidity	NTU	N/A	N/A	0.6	0.8
Aluminium	mg/L	N/A	N/A	<0.005	<0.005
Arsenic	mg/L	N/A	N/A	0.0003	0.0005
Total Arsenic	mg/L	N/A	N/A	0.0003	0.0005
Barium	mg/L	0.0702	0.0803	0.0627	0.0608
Boron	mg/L	N/A	N/A	0.361	0.32
Cadmium	mg/L	N/A	N/A	<0.00005	<0.00005
Calcium	mg/L	N/A	N/A	84.5	64.4
Chloride	mg/L	N/A	N/A	178	207
Chromium	mg/L	N/A	N/A	<0.0002	<0.0002
Total Chromium	mg/L	N/A	N/A	<0.0002	<0.0002
Cobalt	mg/L	N/A	N/A	<0.0001	<0.0001
Copper	mg/L	0.001	0.0014	<0.0005	<0.0005
Iron	mg/L	N/A	N/A	0.025	0.073
Lead	mg/L	N/A	N/A	<0.0001	<0.0001
Magnesium	mg/L	N/A	N/A	60.7	58.9
Manganese	mg/L	N/A	N/A	0.0064	0.01
Mercury	mg/L	N/A	N/A	<0.00004	<0.00004
Molybdenum	mg/L	N/A	N/A	0.0003	0.0003
Nickel	mg/L	N/A	N/A	<0.0005	<0.0005
Ammonia Nitrogen	mg/L	N/A	N/A	0.01	0.03
Nitrate as N	mg/L	0.27	15	0.1	<0.01
Nitrite and N	mg/L	N/A	N/A	<0.01	<0.01
Total Nitrogen	mg/L	N/A	N/A	0.1	0.2
Dissolved Oxygen	mg/L	N/A	N/A	3.37	5.33
Total Phosphorus	mg/L	N/A	N/A	<0.01	<0.01
Potassium	mg/L	N/A	N/A	10.7	11.5
Selenium	mg/L	N/A	N/A	0.0011	0.0011
Total Selenium	mg/L	N/A	N/A	0.0011	0.001
Silicon (SiO2)	mg/L	N/A	N/A	48	45.3
Sodium	mg/L	N/A	N/A	88.4	89
Strontium	mg/L	1	2.5	0.397	0.382
Sulphate	mg/L	N/A	N/A	69	58
Sulphur	mg/L	N/A	N/A	23	21
Uranium	mg/L	N/A	N/A	0.00092	0.0008
Vanadium	mg/L	N/A	N/A	0.0018	0.0024
Zinc	mg/L	0.00248	0.008	<0.001	0.015*
Chlorophyll a	mg/L	>0.01	N/A	<0.001	0.002
Dissolved Organic Carbon	mg/L	N/A	N/A	2	2
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	<0.1

*Did not exceed for two or more monitoring events per annum during the reporting period.

Table 15: Quarterly water quality for Nyiryinmaru and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	Nyiryinmaru	Nyiryinmaru
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	Dry	Dry
Electrical Conductivity	µS/cm	1400	1600	Dry	Dry
Total Hardness (CaCO3)	mg/L	N/A	N/A	Dry	Dry
pH	pH units	<6.5 or >8	<6.5 or >8.2	Dry	Dry
TDS	mg/L	N/A	N/A	Dry	Dry
Temperature	ºC	N/A	N/A	Dry	Dry
TSS	mg/L	N/A	N/A	Dry	Dry
Turbidity	NTU	N/A	N/A	Dry	Dry
Aluminium	mg/L	N/A	N/A	Dry	Dry
Arsenic	mg/L	N/A	N/A	Dry	Dry
Total Arsenic	mg/L	N/A	N/A	Dry	Dry
Barium	mg/L	0.0702	0.0803	Dry	Dry
Boron	mg/L	N/A	N/A	Dry	Dry
Cadmium	mg/L	N/A	N/A	Dry	Dry
Calcium	mg/L	N/A	N/A	Dry	Dry
Chloride	mg/L	N/A	N/A	Dry	Dry
Chromium	mg/L	N/A	N/A	Dry	Dry
Total Chromium	mg/L	N/A	N/A	Dry	Dry
Cobalt	mg/L	N/A	N/A	Dry	Dry
Copper	mg/L	0.001	0.0014	Dry	Dry
Iron	mg/L	N/A	N/A	Dry	Dry
Lead	mg/L	N/A	N/A	Dry	Dry
Magnesium	mg/L	N/A	N/A	Dry	Dry
Manganese	mg/L	N/A	N/A	Dry	Dry
Mercury	mg/L	N/A	N/A	Dry	Dry
Molybdenum	mg/L	N/A	N/A	Dry	Dry
Nickel	mg/L	N/A	N/A	Dry	Dry
Ammonia Nitrogen	mg/L	N/A	N/A	Dry	Dry
Nitrate as N	mg/L	0.16	15	Dry	Dry
Nitrite and N	mg/L	N/A	N/A	Dry	Dry
Total Nitrogen	mg/L	N/A	N/A	Dry	Dry
Dissolved Oxygen	mg/L	N/A	N/A	Dry	Dry
Total Phosphorus	mg/L	N/A	N/A	Dry	Dry
Potassium	mg/L	N/A	N/A	Dry	Dry
Selenium	mg/L	N/A	N/A	Dry	Dry
Total Selenium	mg/L	N/A	N/A	Dry	Dry
Silicon (SiO2)	mg/L	N/A	N/A	Dry	Dry
Sodium	mg/L	N/A	N/A	Dry	Dry
Strontium	mg/L	1	2.5	Dry	Dry
Sulphate	mg/L	N/A	N/A	Dry	Dry
Sulphur	mg/L	N/A	N/A	Dry	Dry
Uranium	mg/L	N/A	N/A	Dry	Dry
Vanadium	mg/L	N/A	N/A	Dry	Dry
Zinc	mg/L	0.00248	0.008	Dry	Dry
Chlorophyll a	mg/L	>0.01	N/A	Dry	Dry
Dissolved Organic Carbon	mg/L	N/A	N/A	Dry	Dry
TRH (C10-C40)	mg/L	N/A	N/A	Dry	Dry

Table 16: Quarterly water quality for SW16MEH0003 and comparison to Tier 1 and Tier 2 SSGV

Parameter	Unit	SSGV: Early Response Criteria (Tier 1)	SSGV: Trigger Criteria (Tier 2)	SW16MEH0003	SW16MEH0003
Date	N/A	N/A	N/A	Q3 2024	Q4 2024
Total Alkalinity (CaCO3)	mg/L	N/A	N/A	286	296
Electrical Conductivity	µS/cm	1400	1600	1356	1157
Total Hardness (CaCO3)	mg/L	N/A	N/A	369	352
pH	pH units	<6.5 or >8	<6.5 or >8.2	7.94	7.92
TDS	mg/L	N/A	N/A	624	631
Temperature	^{o}C	N/A	N/A	19.7	32.8
TSS	mg/L	N/A	N/A	<5	35
Turbidity	NTU	N/A	N/A	1.6	30.8
Aluminium	mg/L	N/A	N/A	<0.005	<0.005
Arsenic	mg/L	N/A	N/A	0.0009	0.0036
Total Arsenic	mg/L	N/A	N/A	0.0009	0.0043
Barium	mg/L	0.0702	0.0803	0.0519	0.0608
Boron	mg/L	N/A	N/A	0.314	0.269
Cadmium	mg/L	N/A	N/A	<0.00005	<0.00005
Calcium	mg/L	N/A	N/A	69.4	63.2
Chloride	mg/L	N/A	N/A	162	192
Chromium	mg/L	N/A	N/A	<0.0002	<0.0002
Total Chromium	mg/L	N/A	N/A	<0.0002	0.0005
Cobalt	mg/L	N/A	N/A	0.0001	<0.0001
Copper	mg/L	0.001	0.0014	<0.0005	<0.0005
Iron	mg/L	N/A	N/A	0.11	0.056
Lead	mg/L	N/A	N/A	<0.0001	<0.0001
Magnesium	mg/L	N/A	N/A	47.6	47.3
Manganese	mg/L	N/A	N/A	0.0204	0.0202
Mercury	mg/L	N/A	N/A	<0.00004	<0.00004
Molybdenum	mg/L	N/A	N/A	0.0007	0.002
Nickel	mg/L	N/A	N/A	<0.0005	<0.0005
Ammonia Nitrogen	mg/L	N/A	N/A	0.64	0.68
Nitrate as N	mg/L	0.01	15	0.03	0.06
Nitrite and N	mg/L	N/A	N/A	<0.01	0.02
Total Nitrogen	mg/L	N/A	N/A	0.6	1.6
Dissolved Oxygen	mg/L	N/A	N/A	3.88	4.73
Total Phosphorus	mg/L	N/A	N/A	<0.01	0.11
Potassium	mg/L	N/A	N/A	10.1	11.5
Selenium	mg/L	N/A	N/A	0.0004	0.001
Total Selenium	mg/L	N/A	N/A	0.0004	0.0011
Silicon (SiO2)	mg/L	N/A	N/A	46.1	47.2
Sodium	mg/L	N/A	N/A	81.3	82.4
Strontium	mg/L	1	2.5	0.312	0.332
Sulphate	mg/L	N/A	N/A	47	80
Sulphur	mg/L	N/A	N/A	20	24
Uranium	mg/L	N/A	N/A	0.00114	0.00381
Vanadium	mg/L	N/A	N/A	0.0025	0.0181
Zinc	mg/L	0.00248	0.008	<0.001	<0.001
Chlorophyll a	mg/L	>0.01	N/A	0.004	0.007
Dissolved Organic Carbon	mg/L	N/A	N/A	2	6
TRH (C10-C40)	mg/L	N/A	N/A	<0.1	<0.1