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Response to submissions – Addendum - Email Requests and Responses

# West Angelas Revised Proposal

Assessment Number: 2290

RTIO-1095514

## Disclaimer and Limitation

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Addendum Document Status						
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## 1 Introduction

Robe River Mining Co. Pty. Ltd. as manager of the Robe River Joint Venture (the Proponent), propose to develop the West Angelas Revised Proposal (the Proposal). The Proposal was referred to the Environmental Protection Authority (EPA) under Section 38 of the *Environmental Protection Act 1986* (EP Act) on 23 March 2021. On 22 April 2021, the EPA determined the Proposal would be formally assessed (assessment number 2290) under Part IV of the EP Act, with the level of assessment set as Public Environmental Review (PER) with public consultation required (eight-week period). The Proponent prepared an Environmental Scoping Document (ESD) to define the form, content, timing and procedure of the Environmental Review Document (ERD) which was approved by the EPA on 20 February 2023.

The EPA identified the key environmental factors for the Proposal being Inland Waters, Flora and Vegetation, Terrestrial Fauna, Subterranean Fauna, Greenhouse Gas Emissions and Social surroundings. The ERD was prepared in accordance with EPA guidance to report on the Proposal's potential environmental impacts and their mitigation. The ERD was available for public review for a period of eight (8) weeks from 8 January 2024 to 6 March 2024.

The EPA provided via correspondence dated 1 May 2024 a summary of submissions following the public review period, and the Proponent responded with submission of the response to submissions package on 19 July 2024. Following submission and review of the above documentation (Rio Tinto, 2024), the EPA provided correspondence in a letter date 1 November 2024 to provide further comment on some Proponent responses where it was considered further explanation may be required (the second RTS). The Proponent provided responses to these comments in an Addendum to the second RTS on 14 November 2024.

Since the RTS, the Proponent submitted a request to change the key characteristics of the Proposal under section 43A of the EP Act on 7 November 2024. The proposed amendment updated the Proposal Content Document (PCD) to reflect the greenhouse gas emissions calculations in the West Angelas Revised Proposal Greenhouse Gas Management Plan and a minor administrative change.

The Proponent met with the EPA for a workshop on 28 November 2024 and received requests for additional information to be provided in an email on 29 November 2024. This responses to the additional request were provided to EPA on 2 December 2024.

The Proponent received additional requests for information, via email, between 3-6 December 2024. This document provides the Proponent's responses, previously provided via email, to the additional requests and should be considered an Addendum to the RTS.

## 2 Email Responses to Additional Information Requests

The below provides the EPA questions (Q) and Proponent's answers (A), in order by date. All of the Proponent's responses are provided in blue text.

### 2.1 3 December 2024

The following was provided to EPA on 3 December (**Appendix 1**) in addition to the RTS provided on 2 December 2024 (RTIO-1094643).

- Additional Priority Flora spatial data and Priority Flora proposed MEZ (Additional data.zip)
- Consolidated MEZ/MRZ for the Proposal (GDA2020.gdb.zip).

### 2.2 4 December 2024

The following information was requested by EPA on 4 December 2024 and the responses provided 4 December 2024.

#### Greenhouse gas Emissions

**Q: Due to the updated WA Government's greenhouse gas emissions policy for major projects, the EPA is unable to provide a transitional approach in this circumstance, please provide the information below for the EPA to undertake its assessment (which is it still required to do under the EP Act no matter what the WA Government's policy is):**

**Provide an updated Table 3-6 with scope 1 emissions combined of all emissions from all deposits associated with 'the proposal', 'the revised proposal', and the 'Greater West Angelas Hub' to demonstrate required information of the emissions reductions pathway over the life of the proposal, to align with the EPA's GHG Environmental Factor Guidance (2024)**

**A:** The Proponent notes that under the new EPA GHG guidance cumulative emissions reduction is covered by new safeguard requirements. The Proponent has updated Table 3-6 as requested and notes that the Cumulative GHG emissions reduction commitments provided are aligned with the methodology used in the GHG EMP and are not required under GHG guidance so are for comparison purposes only. The Proponent notes that this is not the methodology required under the November 2024 GHG Guidance.

The current life of project Greater West Angelas Hub Scope 1 emissions reduction as per the updated Table 3-6 is **34%**.

The indicative life of project Safeguard Mechanism emissions reduction for the West Angelas facility based on the calculated baseline is estimated as **61%**.

**Table 36 West Angelas estimated annual and total Scope 1 emissions (without abatement) with 5 yearly cumulative totals and reduction commitments**

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Year	Scope 1 GHG emissions (diesel) t CO2-e	Scope 1 GHG emissions (land clearing) t CO2-e	Cumulative total GHG emissions 5 yearly t CO2-e	Cumulative GHG emissions reduction commitments t CO2-e	Cumulative net emissions t CO2-e
2019	248,358	261	521,148	-	521,148
2020	272,446	83			
2021	262,670	105	1,403,343	210,501	1,192,841
2022	277,345	3,149			
2023	292,618	2,564			
2024	259,663	78			
2025	300,269	4,881			
2026	354,231	6,367	1,405,803	702,901	702,901
2027	283,911	996			
2028	256,829	4,508			
2029	259,592	-			
2030	239,334	36			
2031	255,531	225	713,938	186,762	527,176
2032	167,576	-			
2033	119,422	-			
2034	90,925	624			
2035	78,950	685			
2036	98,859	-	437,124	85,674	351,451
2037	88,544	-			
2038	85,041	-			
2039	75,991	407			
2040	88,282	-			
2041	93,443	-	339,582	163,857	175,725
2042	88,101	-			

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2043	65,611	208			
2044	48,558	-			
2045	43,660	-			
2046	53,517	-			
2047	34,095	-			
2048	28,759	-	141,758	141,758	-
2049	19,621	-			
2050	5,767	-			
2051	2,656	-	2,656	2,656	-
<b>Total</b>	<b>4,940,175</b>	<b>25,177</b>	<b>4,965,352</b>	<b>1,494,109</b>	<b>3,471,243</b>

**Q: Clarify when deposits are operational or not operational (and how this relates to emissions) as this will explain the sources of emissions over time and whether emissions from some deposits are no longer relevant from 2025 onwards**

**A:** Emissions calculations are derived from the mine plan for the Proposal. Deposits that contribute to the Proposal are scheduled to commence construction in 2025, with the scheduled used for the GHG EMP scheduling mining through to 2045. Deposits that contribute to the Revised Proposal started construction in 2019 within mining commencing in 2020 and scheduled through to 2045. Existing approved deposits that contribute to the Greater West Angelas Hub are currently scheduled through to 2051.

**Q: Clarify clarification of which emissions are covered under the safeguard mechanism and those not (such as land clearing)**

**A:** The updated Table 3-6 above shows the emissions that are covered under the Safeguard Mechanism, namely diesel emissions, and forecast to total 4,940,175 t CO<sub>2</sub>-e over the life of the West Angelas mine.

**Q: Advise which years carbon offsets are proposed to be surrendered for more than 30% of the proposal's expected baseline scope 1 emissions.**

**A:** TBA (response subsequently provided in response to queries raised on 6 December)

**Q: Provide a of a summary of where scope 3 emissions will be emitted, and clarify which are domestic.**

**A:** The Proponent has provided Scope 3 emissions forecast in the GHG EMP focusing on processing of iron ore to steel as this represents over 97% of Scope 3 emissions from the Proposal.

**Table 11 West Angelas Hub Scope 3 emissions breakdown**



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Scope 3 Category	Emissions location
Upstream Scope 3 (Cat 1-3,5-7)	Domestic
Marine transport (Scope 3, Cat 4&9)	Internationally
Logistics transport (Scope 3, Cat 4&9)	-
Processing of sold products (Scope 3)	Internationally

## Inland Waters

**Q: Please provide a shapefile of the Heritage site exclusion areas, specifically for pools WB-WAJ1, WB-WAJ2 and WB-WAH1 (Deposit H Waterhole) –**

**A:** Please find attached (**Appendix 2**) spatial data with the location of the Deposit H Waterhole (WB-WAH1) and Mt Ella East pools (WB-WAJ1, WB-WAJ2 - as one data point as they are located adjacent to each other). The referenced pools sit within heritage protection areas that include other sites of cultural heritage, as such the boundaries are greater to protect all heritage aspects, and are not necessarily required for the ephemeral pools. The Proponent notes that the heritage buffers are applied under the AH Act 1972.

**Q: Please confirm whether the tables below are the maximum drawdown limits at Western Hill and Deposit H. Please provide a shapefile and excel spreadsheet with coords of these monitoring bores. If these aren't the relevant bores, please provide all the requested information for the correct monitoring bores.**

**From table 3-2 of the Deposit H Hydrological Impact Assessment (Updated) in Appendix 9 of the RTS):**

Table 3-2: Constant Rate Test (CRT) drawdown summary.

Pumping Bore Name	CRT duration (hours)	CRT Rate (L/s)	Monitoring Bore ID	Direction from Prod. Bore	Distance from Prod. Bore	Screened Unit	Maximum Observed Drawdown (m)
WB20WAH0001	72	17	WB20WAH0001	Pumping bore		Mount Newman Member	27.4
			MB19WAH0002	South-east	10		8.60
			MB19WAH0001	North-west	722		0.10
WB21WAH0001	6.5	20	WB21WAH0001	Pumping bore			49.6
			MB19WAH0001	North	10	2.89	
			MB19WAH0002	East	800	0.02	
			MB21WAH0001	West	670	0.29	
WB21WAH0002	No CRT was performed due to approval limitations.						

## From Appendix C4 of the ERD:

Table 5: CRT Drawdown results for Western Hill.

Bore ID	Duration (days)	CRT Rate (L/s)	Monitoring Point	Aquifer Screened	Direction from PB	Dist. from PB (m)	SWL Start Test (mbTOC)	Max Drawdown (m)
WB18WAW0001	10	50	WB18WAW0001	Brockman	-	-	80.26	30.07
			MB18WAW0002	Brockman	S	11	80.13	8.48
			MB18WAW0006	Brockman	SW	108	76.77	0.95
			MB18WAW0007	Brockman	S/SW	800	75.9	0.75
			MB18WAW0003	Wittenoorn	NW	1506	47.25	no response
			MB17WAW0001	Brockman	W	3025	67.88	no response
			MB18WAW0005	Wittenoorn	S/SW	1224	46.67	no response
			MB18WAW0004	Wittenoorn	SW	1911	38.16	no response
WB19WAW0001	10	40	WB19WAW0001	Brockman	-	-	85.11	20.14
			MB19WAW0001	Brockman	SW	10	84.77	12.82
			MB19WAW0002	Brockman	SE	360	81.38	0.78
			MB19WAW0004	Brockman	NW	100	88.22	9.03
			RC18WAW0462	Brockman	NW	1000	66.22	0.16
			RC18WAW0463	Brockman	E	70	86.90	5.56
			RC18WAW0302	Brockman	E	825	95.32	0.14

## A:

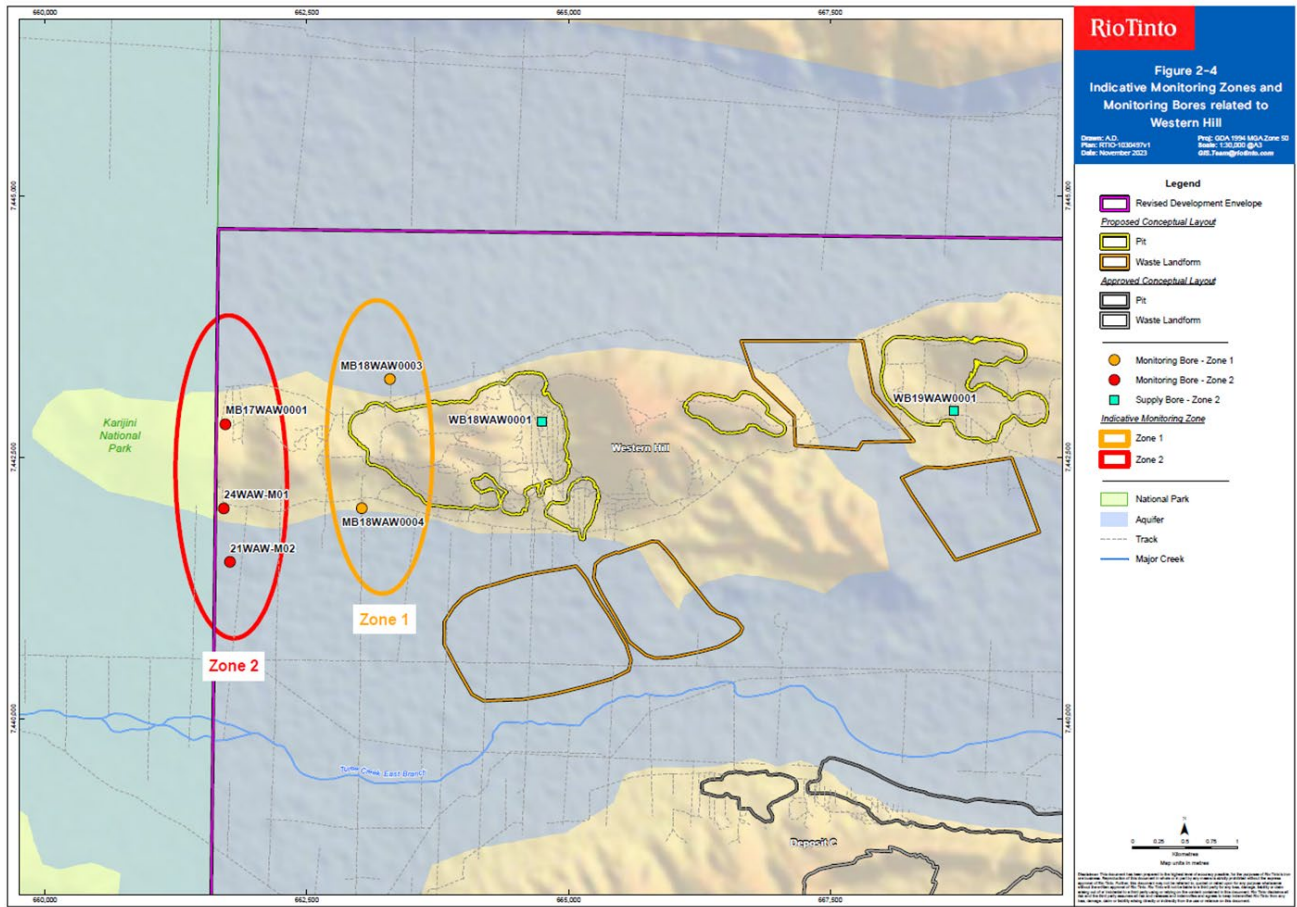
- The Proponent has already proposed an environmental outcome: 'no drawdown at the boundary or within Karijini National Park, and no change to water quality at the boundary of or within Karijini National Park'.
- The outcome will be managed via implementation of the West Angelas Groundwater Environmental Management Plan (Appendix A.9 of the published ERD). The Groundwater EMP includes robust monitoring and management to provide assurance and demonstrate compliance with this outcome. No maximum drawdown limits are proposed.
- Zone 1 (early warning and trigger) and zone 2 (boundary bores) locations have associated early warning indicators, trigger levels and thresholds and are shown on Figure 2-4 of the GEMP (and below).

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- Coordinates for monitoring bores are provided in the table below. Note that excerpts provided in your request email are not correct bores as they relate to test pumping.
- These activities will be subject to the relevant provisions under Part V of the EP Act and the Rights in Water and Irrigation Act 1914 (RiWI Act)

### Western Hill Monitoring Bores (Groundwater EMP Appendix A.9 of published ERD)

Monitoring Bore	Easting	Northing
<b>Zone 1</b>		
MB18WAW0003	663297.893	7443245.255
MB18WAW0004	663028.68	7442010.536
<b>Zone 2</b>		
MB17WAW0001	661724.66	7442812.18
26WAW-M20 (replaces 24WAW-M01)	661734.8	7442028.3
21WAW-M02	661792.6	7441515



Deposit H - Response to Information Request

- The Proponent has proposed environmental outcomes for key sensitive values; Deposit H Waterhole and Turtle Pool, adjacent to the Deposit H mining area. No maximum drawdown limits are proposed for Deposit H.
- Potential impacts will be managed via implementation of the West Angelas Environmental Management Plan (Appendix 1 of the RTS). The EMP has early indicators, trigger and threshold values in monitoring bores to monitor potential impacts from drawdown from sump pumping at Deposit H. Proposed monitoring bore locations, which include early warning indicators, trigger levels and thresholds are provided below. Note that excerpts provided in your request email are not correct bores as they relate to test pumping.

Deposit H Monitoring Bores (WAN EMP Appendix A.8 of published ERD)

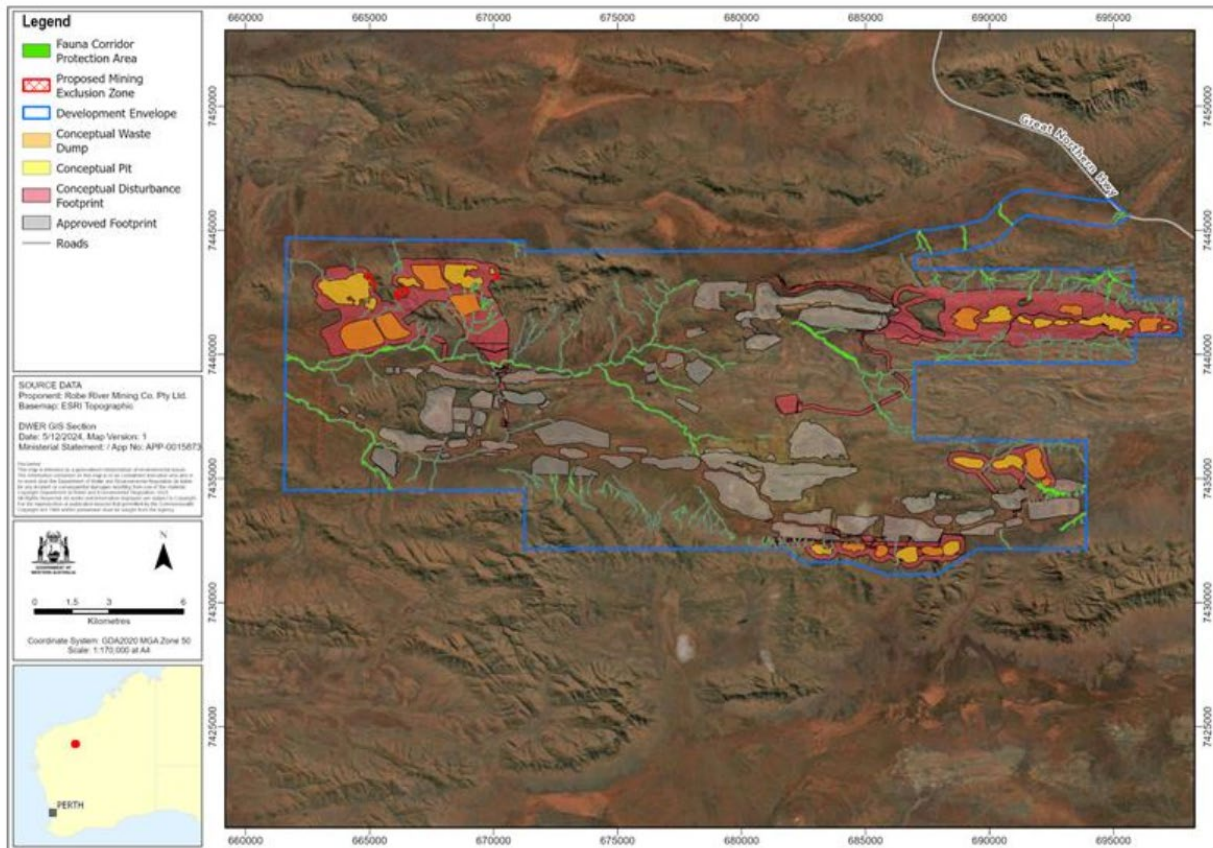
Monitoring Bore	Easting	Northing
WAH-M003	697201	7441535

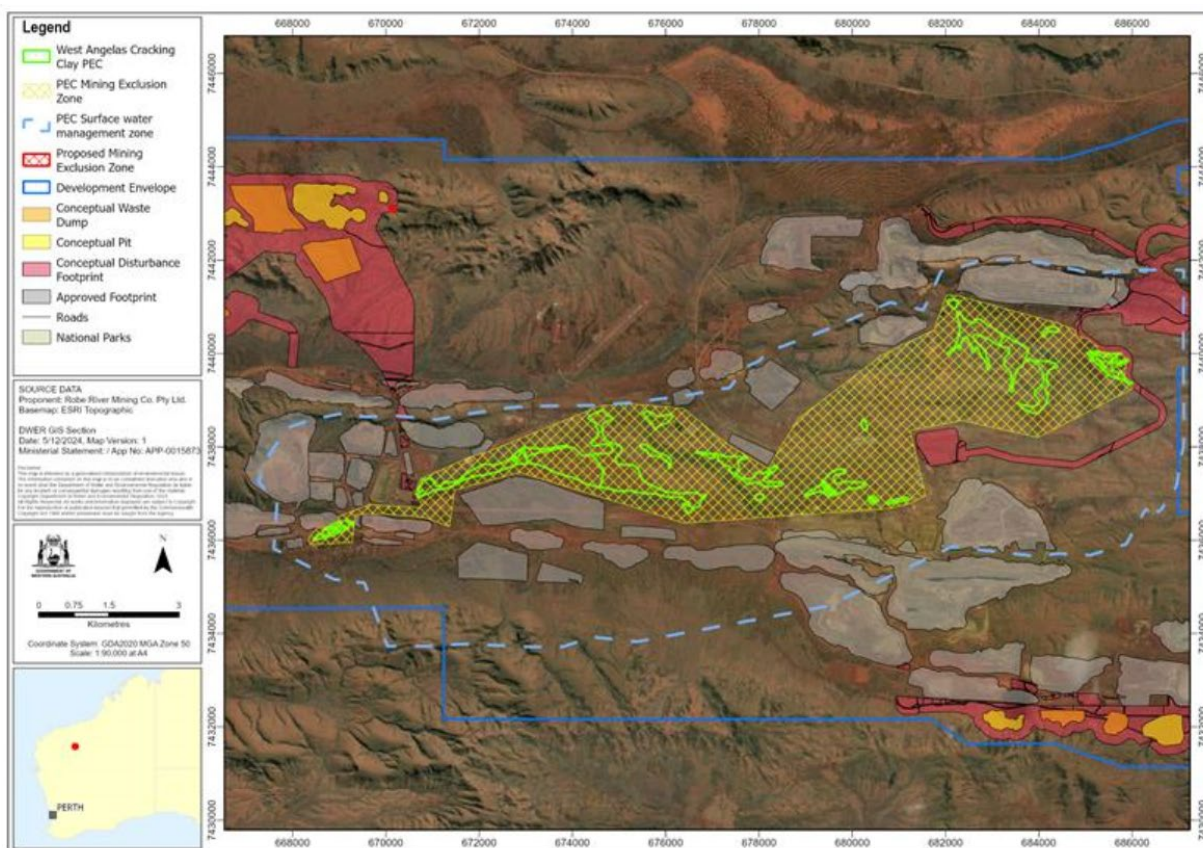
## 2.3 5 December 2024

**Q:** In addressing gaps for items FV1 and TF1 in the Response to Submission Addendum provided on 2 December, we (EPA) are proposing a PEC MEZ for the West Angelas Cracking Clay PEC and a Surface Water Management Zone (in attached map) to ensure surface water flow and quality are maintained for the viability of the PEC.

We (EPA) are also proposing a Fauna Protection Corridor Area (in attached map) to maintain ecological connectivity for significant fauna species within the development envelope.

Please provide any further response to the proposed PEC MEZ and management zone and the Fauna Protection Corridor Areas by close of business today.





**A:** Please see comments on the EPA proposed PEC MEZ and surface water protection zone:

- The Proponent proposed a MEZ and surface water protection area MRZ for the large intact expression of the Cracking Clay PEC 2015-5.
- The Proponent cannot accept such a large exclusion area as proposed by the EPA over an existing approved mining area. The EPA proposed MEZ and surface water protection zone impacts the ability of the Proponent to implement the approved existing operation and the Proposal due to its large extent and coverage of non PEC vegetation types that are currently authorised to clear under MS 1113.
- Changes have already been made within the proposed PEC surface water management zone as a result of the approved operations from rail, road and other infrastructure such that the proposed EPA surface water management zone would not add any additional protection to the PEC, i.e. PECs are not connected and are naturally discrete expressions of the PEC.
- The EPA proposed PEC MEZ excludes multiple vegetation types, not just the Cracking Clay PEC and is much larger than is required to protect the PEC from fragmentation and edge effects.
- The EPA proposed MEZ is located over an existing approved development envelope of an operational mine and infrastructure may be required to be located within this area.
- The PEC surface water management zone extends outside the Development Envelope and the Proponent cannot manage these areas.

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- As noted in the ERD, the Proponent has authority under the existing approval (MS 1113) for clearing of up to 20 ha and requires up to 2 ha of clearing within the PEC for infrastructure related to the Proposal.

EPA proposed Fauna Protection Corridor Areas:

- The Proponent does not consider the proposed fauna protection corridor as provided by the EPA to be required and the Proponent considers that this matter can be managed adequately through similar conditioning to BSP in relation to fauna dispersal at Western Hill and Deposit H.
- The proposed EPA fauna protection corridor areas would impact the ability of the Proponent to implement the approved existing operation as infrastructure may be required to be located within this area.
- The Proponent will design the Proposal to avoid and minimise fragmentation including ensuring natural dispersal corridors within drainage line and creeks are retained at key locations through the appropriate placement and design of linear infrastructure to achieve the outcome of not impeding water or fauna dispersal.

### 2.4 6 December 2024

The following information was requested by EPA on 6 December 2024 via email. The answers below are provided in response.

#### **PEC MEZ and surface water protection zone**

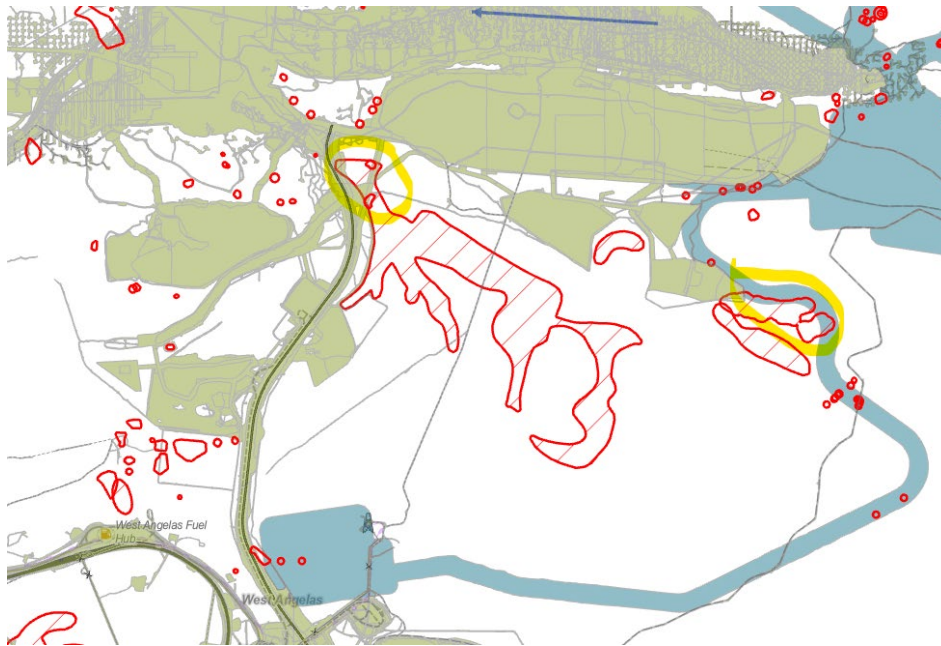
**Q: Provide locations of where the 20 ha of the PEC has been cleared under MS 1113 and the 2 ha is proposed to be cleared under the significant amendment.**

**A:** The PEC is managed by the use of a clearing limit of 20ha and can be undertaken in any location other than the defined protection area under MS 1113. To date 18.5 ha has been cleared of the 20ha limit. The majority of clearing of the PEC has been undertaken in the small area to the south west of the large 2015-15 expression. Limited clearing has been carried out in other areas of the PEC. The remaining clearing for the Approved Proposal under the current MS 1113 limit cannot be specified, the approved proposal has a remaining mine life that spans several years and the exact location of infrastructure for the Approved Proposal is not known currently. The Proponent commits to avoiding and minimising impacts to the PEC as far as practicable for the Approved Proposal within the 20 ha approved limit.

**Q: Provide the areas proposed to be cleared under MS 1113 within the EPA proposed MEZ.**

**A:** The additional 2ha of clearing of the PEC for the Proposal is proposed to be managed by a limit as it could be either undertaken within the northern area of the PEC expression to the south of the existing Deposit B, which has been cleared by current operational activities to aim to minimise impacts through use of existing cleared areas (with widening of existing roads required) or within the eastern most expression of the PEC in the Development envelope, after completion of detailed engineering for the haul road. The Proponent notes that the use of a limit and internal exclusion zones through the Proponent's Ground disturbance system has been effective at limiting clearing and that the remaining PEC is still functioning as a PEC.

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### Greenhouse Gas

**Q: Advise which years carbon offsets are proposed to be surrendered for more than 30% of the proposal's expected baseline scope 1 emissions.**

**A:** Currently the Proponent forecasts, under a business-as-usual scenario, the use of carbon offsets to cover more than 30% of the West Angelas expected baseline Scope 1 emissions from FY2026-27. Rio Tinto is working to progress renewable energy projects, advance mobile fleet electrification to the required scale and exploring alternative fuels to complement electrification (such as low carbon renewable diesel) to meet emissions reduction targets. Rio Tinto will continue to update the forecast as this work matures and anticipate that the use of carbon offsets to meet any Safeguard Mechanism liability will reduce in line with the deployment of these technologies.

Rio Tinto remains committed to Group-level Scope 1 and 2 emissions reduction targets of 50% by 2030 and net zero by 2050. The majority of emissions from Rio Tinto's Pilbara Iron Ore operations are from diesel used to run our trucks, and gas-fired electricity to power our operations. We are undertaking trials of battery electric haul trucks to assess their suitability for Pilbara conditions and are studying more than 2GW of renewable wind and solar energy projects in the Pilbara to reduce gas consumption and support future energy demand growth. These projects will be pivotal in enabling fleet electrification and reducing diesel use, however we are not expecting mass deployment of battery electric haul trucks throughout our operations, and subsequent significant reduction in haul truck emissions, before 2030.

### Inland Waters

**Q: Provide groundwater quality information for Groundwater at Deposit F-North.**

**A:** Groundwater in the West Angelas mining area is neutral to mildly alkaline with field pH ranging from 6.1 to 8.9. Groundwater is generally fresh (<1500 mg/L total dissolved solids (TDS)) and is most fresh in Deposit E and F bores which has median TDS <500 mg/L (RTIO 2019). The Piper plot (Figure 3-1) displays major



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ions for Greater West Angelas showing that waters are generally classified as calcium sulphate and calcium Bicarbonate waters. There is no water quality data specifically for the Deposit F North aquifer however it is assumed to be similar to that of the regional West Angelas water quality.

### **Social Surroundings**

**Q: Please note we are still awaiting on internal advice regarding dust emissions.**

**A:** [Noted.](#)

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## **Appendices**

## **Appendix 1: Spatial data provided 3 December**

(Provided Separately)

- Additional Priority Flora spatial data and Priority Flora proposed MEZ (Additional data.zip)
- Consolidated MEZ/MRZ for the Proposal (GDA2020.gdb.zip).

## **Appendix 2: Spatial data provided 4 December 2024**

(Provided Separately)

- Location of the Deposit H Waterhole (WB-WAH1) and Mt Ella East pools (WB-WAJ1, WB-WAJ2)