

Notice

Environmental Protection Act 1994

Information request

This information request is issued by the administering authority under section 140 of the Environmental Protection Act 1994 to request further information needed to assess an application for a proposed PRC plan.

To: Jubilee Metals Ltd
Suite 606, Level 6, 10 Market Street
Brisbane QLD 4000

ATTN: Allison Siddaway
Email: asiddaway@epicenvironmental.com.au

Your reference: EPML00950913/ 101/0008688-001

Further information is required to assess an application for a PRCP schedule

1. Application details

The application for a proposed PRC plan was received by the administering authority on 21 March 2023.

Land description: Mining lease (ML) 5248.

2. Information request

The administering authority has considered the abovementioned application and is writing to inform you that further information is required to assess the application (an information request).

The information requested is specified in Attachment 1 to this notice.

3. Actions

The abovementioned application will lapse unless you respond by giving the administering authority -

- all of the information requested; or
- part of the information requested together with a written notice asking the authority to proceed with the assessment of the application; or
- a written notice –
 - stating that you do not intend to supply any of the information requested; and
 - asking the administering authority to proceed with the assessment of the application.

A response to the information requested must be provided by **13 November 2023** (the information response period). If you wish to extend the information response period, a request to extend the period must be made at least 10 business days before the last day of the information response period.

The response to this information request or a request to extend the information response period can be submitted to the administering authority by email to ESCairns@des.qld.gov.au.

If the information provided in response to this information request is still not adequate for the administering authority to make a decision, your application may be refused as a result of section 176 of the *Environmental Protection Act 1994*, where the administering authority must have regard to any response given for an information request.

4. Human rights

A human rights assessment was carried out in relation to this decision, and it was determined that the decision is compatible with human rights.

If you require more information, contact Marina Gibson, Senior Environmental Officer, on the telephone number listed below.

Alison O'Brien

Signature

8/5/2023

Date

Alison O'Brien
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Minerals Business Centre
PO Box 7230, Cairns QLD 4870
Phone: (07) 4222 5352
Email: ESCairns@des.qld.gov.au

Attachments

Attachment 1: Additional information requested for proposed PRC plan - Jubilee Metals Ltd.

Attachment 1: Additional information requested for proposed PRC plan – Jubilee Metals Ltd.

Item	Relevant section (proposed PRC plan and/or PRCP Guideline)	Matter	Information Request
Rehabilitation Planning Part			
1	Section 5 of the proposed PRC plan	The PRC plan contained limited information regarding: • water quality of the water which will be released; • dilution factors and • factor of safety (FoS) for each NUMA. In accordance with section 126C and 126D of the EP Act and further detailed in section 6.3.2 of the PRCP Guideline, the PRC plan must provide information regarding how Non-Use Management Areas (NUMAs) will be managed in way that achieves best practice management, minimises risks to the environment and ensures that there are no environmental impacts beyond the tenure boundary.	Provide an updated PRC plan with an assessment of each possible spill/over topping event, identified via modelling, including: • analysis of the water quality with and without dilution, • potential environmental impact from the event, • mitigation measures and, • area to be affected by the spill or overtopping event.
2	Section 2.4.8.1 Mining Pits, Section 7.1.7.7 Water Balance Assessment (2020), Appendix G RGS Summary Report on Goldsim Modelling and Appendix H Croydon Gold Mine Water	Pit void water balance modelling suggested overtopping of Content Pit could occur. Proposed mitigation strategies include transfer of water from Content to Golden Butterfly Pits and extending the abandonment bund of Content Pit to reduce surface water inflow. No information on the effectiveness of this bund on Content Pit inflow was presented within the PRC plan. This information is required to understand whether further works are required on the bund and if further works could be conducted to minimise water inflow to the Pit. Furthermore, lime treatment of the acidic Content Pit water is proposed to allow intermittent water extraction by local council and landholders. The transfer of water between pits and offsite use of Content Pit water does not represent a long term	Provide an updated PRC plan with: • detailed information on management strategies to address potential over-topping of the 4 pits, noting that reliance on pumping and offsite use is not acceptable within PRCP. • analysis of the effectiveness of surface water management strategies on reducing water inflows into the pits, with particular focus on Content Pit. • modelling, conducted as per the Office of the Queensland Mine Rehabilitation Commissioner's best practice modelling methods, of overtopping

	Management Strategy of the proposed PRC plan	(i.e., 200 years) effective management strategy, suitable for PRCP. Pit void water balance modelling provided within the PRC plan ceased at 2025. This modelling period does not adequately demonstrate whether overtopping may still occur during and following (i.e., 200 years) the PRCP period. Reference is made to revising the current Stage 2 model to a Stage 3 level of development (Appendix G). This modelling has been scoped but not yet undertaken. This modelling is required to: • more accurately describe the pit water balances throughout and following (i.e., 200 years) the PRCP period, and • employ best-practice mine void modelling as recommended by The Office of the Queensland Mine Rehabilitation Commissioner.	events throughout and post (200 years) the PRCP period. • the Stage 3 model (if separate to the above model) with detailed information on how this meets or exceeds the Office of the Queensland Mine Rehabilitation Commissioner's best practice modelling methodology.
3	Appendix H Croydon Gold Mine Water Management Strategy and Appendix L Annual Groundwater Monitoring Report 2014 of the proposed PRC plan	Water quality data from the pits, surface water and groundwater monitoring sites presented in the PRC plan covers the period from 1995-2014. No water quality data post 2014 was provided. Analysis of water quality data, to date, for each of the four pits and surface and groundwater monitoring sites is required to demonstrate current and expected water quality. Section 2.3 Surface Hydrology of the PRC plan states that the conceptual hydrogeological model for the Content Pit and Lady Isabella Pit inadequately describes the physical situation. Section 6 recommends additional hydrological data be collected and modelling undertaken to provide a validated predictive representation of the Content Pit and Lady Isabella Pit. Evidence of this additional work is not	Provide an updated PRC plan with: • a complete dataset of all water quality monitoring results between 1995 and 2023 (inclusive) • an analysis of water quality data between 1995 and 2023 (inclusive) detailing trends in the chemical composition of each monitoring location • modelling showing expected water quality for all monitoring locations throughout and following (i.e. 200 years) the PRCP period • a conceptual hydrogeological model of the pits that reflects the current physical situation • a detailed analysis of site hydraulic interactions that determines the following as a minimum whether:

		provided in the proposed PRC plan and is necessary to inform and validate management options.	▪ a hydraulic connection exists between Content and Lady Isabella Pits (as per p.499 of the proposed PRC plan). ▪ the water quality between these two pits is a result of this connection or, from the surrounding geology. ▪ this hydraulic connection will contribute to overtopping of Content Pit. ▪ there a hydraulic connection between the waste rock dumps and pits.
4	7.1.1.3 Groundwater Management Requirements, Appendix D Final Rehabilitation Report and Appendix E Post Mine Landuse Plan of proposed PRC plan	The PRC plan (p. 51, p. 291, 305 and p. 415) refers to historical acid mine drainage issues and presence of potentially acid forming (PAF) material on the project area. Sections 2.4.9 Contaminated Land, 7.1.3, Soil and Capping Material Assessment and 7.1.4, Waste Characterisation, of the PRC plan do not address presence or absence of PAF materials. Additional information is required to better understand the extent of any acid generation and its onsite management.	Provide an updated PRC plan detailing any acid mine drainage issues and presence of potentially acid generating materials on the project area via a report/s and assessment conducted by an appropriately qualified person (AQP) (as defined in the EA).
5	Section 8.2 Risk Treatment of the proposed PRC plan	Table 16. Qualitative Risk Assessment of the PRC plan does not consider all risks associated with: • achieving final post-mining land use i.e., safe and non-polluting, • not meeting rehabilitation milestones and criteria and, • overtopping of the pits (particularly Content Pit) despite the potential for this to occur and to have impacts on the surrounding environment.	Revise the risk assessment (Table 16) to include risks and mitigation strategies relevant to: • overtopping and poor water quality impacting the receiving environment (onsite and offsite), • achieving a stable and non-polluting landform as per stated milestone criteria, and • achieving the milestone criteria by the proposed dates in the schedule.

6	Section 7.1.5 Landform design of the proposed PRC plan	In accordance with PRCP Guideline section 3.6.1 Landform design, the PRC plan requires the following information: - the stability of the final landform for all areas not nominated as NUMAs, - investigations regarding the stability of all slopes throughout and post (i.e., 200 years) the PRCP period and, - design plans of the final landform, informed by modelling and assessment of limitations. This information is required to demonstrate the proposed landforms will achieve a stable condition.	Provide an updated PRC plan that: - includes proposed landform designs, - demonstrates the proposed landform designs will achieve a stable condition, and - presents the conclusions and assumptions of modelling and investigations regarding the stability of proposed slopes, including runoff velocities, FoS and erosion potential.
7	Section 7.1.12 Built infrastructure of the proposed PRC plan and section 126C(1)(e), (i) and (j) of the EP Act	Section 7.1.12 of the PRC plan states that no built infrastructure will remain onsite. However, there are references to pumps, roads and reticulation systems throughout the proposed PRC plan. Additional information of built infrastructure and its final outcome is required including: - pump/s and associated pipes and generator or power supply (p. 41). - roads and access tracks (section 2.4.8.7). - reticulation systems (p. 296).	Provide an updated PRC plan that details the infrastructure proposed to remain after mine closure and: - for infrastructure to remain, a landholder agreement and milestone criteria regarding the state of infrastructure, - for infrastructure to be removed, a description of how the infrastructure will be decommissioned and milestone criteria regarding decommissioning, removal. Note that the PRCP schedule and milestones may need to be updated to reflect this activity.
PRCP schedule			
8	Rehabilitation Area (RA) 1-6	As per section 126D(1) and (4) of the EP Act, each area identified within the PRC plan must propose <u>one</u> post-mining land use. The proposed PRCP schedule listed a post-mining land use of "Low Intensity Grazing/ Disturbed Native Habitat" for all the proposed RAs. This is not a single land use. A single post-mining mining land use is	Provide an updated PRCP schedule, milestone criteria and PRC plan with one post-mining land use nominated for each proposed RA. Provide clarification on the selection of this land use, compared with the other, alternative land use for each RA.

	Section 3 of the proposed PRC plan	required to enable the rehabilitation milestone criteria to be targeted to ensure a self-sustaining (150 years plus) post-mine land use is achieved. Note that this may also trigger additional community consultation requirements. Section 3 of the PRC plan will need to be updated with relevant details of engagement that has occurred with relevant stakeholders, including the underlying landholders.	Provide an updated PRC plan with details of the community consultation conducted and how the proposed post-mining land use aligns with the consultation outcomes.
9	RA1, 2, 3, 5 and 6	All these proposed RAs have the final milestone as RM6, corresponding to investigation and/or remediation of contaminated land. This milestone may require the disturbance of areas considered to be rehabilitated. The timing of this milestone does not seem logical or appropriate as the final milestone.	Provide an updated PRC plan with justification for the proposed timelines for RM6. An updated PRCP schedule may be required if the proposed timeline is updated.
10	RA1	It is unclear why RM5 is not required	Provide an updated PRC plan that includes achieving land to a stable condition in this RA, noting that an updated PRCP schedule may be submitted.
11	RA1, 2, 3	It is unclear why a 10-year timeframe was proposed considering the PRC plan (p. 27, 29, 33, 319, 405, 408) provided information that rehabilitation of these RAs are completed. The proposed timing does not appear to reflect the requirement of being undertaken as soon as practicable after the land becomes available, as required under section 126D(4) of the EP Act.	Provide an updated PRC plan that complies with section 126D(4) of the EP Act and provides justification for the proposed timing. An updated PRCP schedule may be submitted if required.
12	Improvement area (IA) 1-4	It is unclear why a 12-year timeframe was proposed as the PRC plan provided information that these IAs had already completed rehabilitation.	Provide an updated PRC plan with information demonstrating the proposed 12-year timeframe is required. An updated PRCP schedule may be submitted if required.
Rehabilitation Milestones (RM), Criteria, Justification and Outcomes			

13	Table 17 of the proposed PRC plan; PRCP Guideline, Section 4.1 Steps for developing a PRCP schedule, Step 5 Develop site-specific milestone criteria	To provide ease of interpretation it is preferable to have unique identifiers for each criterion. Many criteria are not SMART, such as: 1. All RM – References to ‘a suitably qualified engineer’ and ‘a suitably qualified person’ do not have definitions. 2. RM1 criteria 1 and 2, relating to erosion and subsidence, are not sufficiently specific or measurable to demonstrate achievement of the required outcome. 3. RM3 criterion 1, relating to application of seed mix, is not sufficiently specific or measurable to demonstrate achievement of the desired outcome. Seed mix that will be used relates to 1996 but no comment on the suitability of this seed mix for the current RAs and IAs is provided. 4. RM4 criteria 1-6, relating to ecosystem functions, are not sufficiently specific or measurable to demonstrate achievement of the desired outcome. Some criteria refer to control sites whilst others refer to surrounding regional ecosystems and they do not include all necessary criteria including habitat complexity and vegetation dynamics. It was noted that the PRC plan referred to annual rehabilitation monitoring and reporting (p. 579) which is also a condition of the EA (C3-1). However, the 2022 report was not provided with the PRC plan. This is required to understand the current status of the site and to determine if additional milestone criteria need to be included into RAs.	Provide an updated PRCP Schedule that: 1. Provide further clarity on these terms, noting that a footnote may be inserted into the PRC schedule. 2. Provides further clarity regarding how erosion and subsidence will be measured and classified to demonstrate that the landform is safe, stable and non-polluting, noting that a footnote may be inserted into the PRC schedule. 3. Provide a list of the seed species and seeding rate to be used with an explanation in the PRC plan detailing the reasoning for the seed mix, noting that the species may need to be varied across the different RA/IA and that a table/s will need to be inserted as a footnote into the PRC schedule. 4. Provide further clarity on the criteria, noting that, a table or similar, quantifying these outcomes could be inserted as a footnote into the PRC schedule. All criteria should refer to either the reference site or regional ecosystem. Include all necessary criteria to determine ecosystem functionality in terms of demonstrating a safe, stable and non-polluting outcome. Provide an updated PRC plan with the 2022 rehabilitation report with an analysis of rehabilitation trends since 1997. 5. Provide additional milestones or criteria to demonstrate the NUMAs can achieve best practice management of the area and minimise risks to the environment. For example: a. Highwall treatment and fencing.
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		5. The milestone reference is not sufficient to demonstrate achievement of sufficient improvement for the NUMAs.	b. Slope stability analysis. c. Water quality of the pits does not exceed pre-determined/approved trigger levels based on void modelling. d. Adaptive management criteria to ensure long term pit water volumes and quality will be managed to avoid uncontrolled release and environmental impacts.
14	RM5 – Achievement of post-mining land use to stable condition	Criteria for this milestone is not SMART in terms of evaluating achieving a non-polluting stable condition. The criteria must be quantitative and measurable where appropriate, such as: 1. Final landform will achieve a FoS determined by an AQP. 2. No surface erosion will be evident following completion of rehabilitation for a minimum time period of 5 years, particularly in areas of low intensity grazing. 3. Rehabilitation monitoring will be undertaken by an AQP and rehabilitation performance evaluated against approved targets (e.g. reference site or benchmarking) 4. Landform/pit design and civil engineering works avoids over-topping and offsite water. 5. Water quality objectives listed in the EA relate to operational objectives and may not be appropriate within PRCP. Include ground and surface water quality criteria suitable and applicable to PRCP,	Provide an updated PRCP schedule that includes criteria that meet SMART principles and are supported by information in the Rehabilitation Planning Part.

		noting that site specific data could be used to determine these criteria. Table/s may be inserted into the schedule or as a footnote in the schedule. 6. Indicators of natural recruitment occurring and maintaining the specified species mix for the PMLU. 7. Indicators used to demonstrate the post-mine land suitability classification has been achieved.	
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