

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 PRCP schedule.

To: Idemitsu Australia Resources Pty
Ltd, Bligh Coal Ltd, Bowen
Investment (Australia) Pty Ltd
GPO Box 301
Brisbane QLD 4001

ATTN: Neil Dale

Neil.Dale@Ensham.com.au.

Our reference: EPML00732813

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

1. Application details

The application for a PRCP schedule was received by the administering authority on 29 April 2021.

Environmental authority: EPML00732813

Land description: ML7459, ML7460, ML70049, ML70326, ML70365, ML70366, ML70367.

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 -

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

- ii. asking the administering authority to proceed with the assessment of the application.

A response to the information requested must be provided by **17 January 2022** (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 CRMining@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/action and it was determined that no human rights are engaged by this action.

If you require more information, please contact Kylie Catterall on the telephone number listed below.



Signature

12/07/2021

Date

Chris Wake
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Business Centre (Coal)
PO Box 3028, Emerald QLD 4720
Phone: (07) 4987 9320
Email: CRMining@des.qld.gov.au

Attachments

Attachment 1: Information requested.

Attachment 1: Information requested

Item	Relevant Section (proposed PRC Plan and PRCP guideline)	Matter	Information Request
Rehabilitation Planning Part			
1	General	A number of technical reports are provided as attachments to the PRC plan. However, the naming convention for some of these reports is not consistent between that referred to in the rehabilitation planning part and the file name given in the Technical Reports file. For example, Cote (2020) is referred to in the PRC plan, but titled the Summary of water studies in the Technical Reports file. There is an expectation that key supporting documents referred to in the PRC Plan are provided with the PRCP application. For example, there are a number of waste characterisation reports referred to in section 5.3.2.1, some of which it is assumed provide key recommendations which support the proposed rehabilitation methodologies.	The information and conclusions drawn from management plans or other technical reports must be transferred into the planning part and discussed in sufficient detail to provide the context necessary to understand the proposed milestones and milestone criteria provided in the PRCP Schedule. The naming convention applied in the PRC Plan must be consistent with the references provided. Ensure all key supporting documents referred to in the PRC Plan are provided.
2	Section 2.2 of PRCP Plan Section 2.2.2.5	The statement 'Option 2 was not supported by DES and the ultimate outcome was a modified Option 1 with potential for future beneficial use and water storage' is not correct.	Provide a revised PRC Plan to ensure statements made in Section 2.2.22.5 are accurate. This must include: <i>'Option 2 was not supported by DAF, DNRME and DES. The outcome was a modified Option 1 with the retention of high walls to maximise the area of land suitable for grazing on the low walls. There is no potential for future beneficial use of the residual voids as water storages.'</i>
3	Spatial Information Section 3.1 of the PRCP Guideline.	The spatial data provided in the PRCP application did not appear to contain sensitive receptors as required by the <i>Spatial Information Submission Guideline</i> (ESR/2018/4337) and the approved form (<i>Application Form</i> (ESR/2019/4964)) including the schema as	Provide spatial information which includes sensitive receptors (e.g., landholders and ecological values) that has been prepared and submitted in accordance with the <i>Spatial Information Submission Guideline</i> (ESR/2018/4337) and the approved form (<i>Application Form</i> (ESR/2019/4964)) including the schema as outlined

		outlined in the Attachment 1 – Spatial data requirements for a PRC Plan. The PRCP Guideline (page 19) outlines that spatial information must show the locations of the rehabilitation and improvement areas for a 10-year period (minimum). It is not apparent that this requirement has been met.	in the Attachment 1 – Spatial data requirements for a PRC Plan. Provide clarification that rehabilitation and improvement areas displayed in the spatial information meets the minimum 10-year period required by the PRCP Guideline.
4	Rehabilitation and Management Methodology Section 5.0 of the PRC Plan. Section 3.6 of the PRCP Guideline.	Section 5.0 of the proposed PRC Plan includes some information regarding the proposed methods and techniques for rehabilitating the land to a stable condition. However, information is limited in some respects and there is also a lack of detail provided to support the timeframes proposed for achieving the rehabilitation milestones in the PRCP Schedule. Additional information is requested to support the department's assessment in this area. A more detailed explanation is required particularly in relation to the rehabilitation methods that will be implemented to achieve the grazing post mining land use and native bushland corridor (PMLUS) with special emphasis on areas with final landform slopes over 20%. An explanation of how these methods have been planned to be implemented with reference to the PRCP schedule milestones is also required. The <i>Environmental Protection Regulation 2019</i> includes the following rehabilitation objective and performance outcomes which are relevant – PRCP Objective Rehabilitation of land to a stable condition will be achieved progressively during the life of the mine. PRCP Performance Outcomes 1. Rehabilitation areas are planned in a way that maximises achieving progressive rehabilitation for the post-mining land use.	Provide a revised PRC Plan that includes the following: a) For each proposed post-mining land use (i.e., grazing, native bushland corridor etc.), provide detailed information relating to the proposed methods and techniques for rehabilitating the land to a stable condition (for both geotechnical and erosional stability) in a way that supports the rehabilitation milestones under the proposed PRCP Schedule. b) Clarify methodology utilised for mitigating potential erosion in areas where water will shed or come into contact with rehabilitation areas that occur above groundwater daylighting areas. c) Based on the expected slope length, clarify the stability risks associated with achieving a stable final landform design. d) Clarify the risks of achieving a stable condition and proposed control measures associated with establishing native vegetation on benches where the proposed methodology is about establishing vegetation directly on spoil. e) For rehabilitation improvement areas, state the proposed methodology for achieving best practice management of the area to support the management milestones under the proposed PRCP Schedule for the area.

		2. The first rehabilitation milestone for a rehabilitation area will start as soon as practicable after the land in the area becomes available for rehabilitation for section 126D(4) of the <i>EP Act</i> by, for example, starting within 6 months after the area becomes available for rehabilitation. 3. The time frame mentioned in section 126D(4) of the <i>EP Act</i> for achieving each rehabilitation milestone has regard to the risks identified in the PRC plan for the land under section 126C(1)(f) of the Act. 4. The time frame mentioned in section 126D(4) of the <i>EP Act</i> within which the land will be rehabilitated to a stable condition has regard to any time frames agreed to during consultation with the community about the PRC plan.	Based on the additional information to be provided above, revise the Risk Assessment (Section 6.0 of the proposed PRC Plan) and the PRCP Schedule. This must include additional management strategies identified above to ensure consistency with the rehabilitation milestones. The timeframes proposed in the PRCP schedule must have regard to the risks identified and the relationship between the rehabilitation methods proposed, the relevant risks to achieving stable condition and the timeframes for achieving each rehabilitation milestone should be explained in the PRC Plan.
5	Voids Sections 4.1, 5.1 and 5.9 of the PRC Plan. Section 3.6 of the PRCP Guideline.	Sections 4.1, 5.1 and 5.9 detail the proposed methodology for achieving best practice management of non-use management areas (NUMA) to support the management milestones under the proposed PRCP Schedule for the area. However, upon review of these sections, further information to clarify how the proposed methodologies will achieve best practice is required. Highwall long-term stability outcomes outlined in Section 5.9.1 of the proposed PRC Plan are not included in the risk assessment or the PRCP Schedule. For example, it is stated that a proposed mitigation measure to be considered if the slope geometries cannot be achieved is to partially backfill the voids to buttress walls with spoil. The proposed PRC Plan did not include a risk assessment of the proposed NUMAs which is required per section 126C(1)(j) of the <i>EP Act</i> (page 36 of the PRCP Guideline). The risk assessment must be carried out to identify the risks of the NUMA causing environmental harm and not being safe and structurally stable and detail how the applicant intends to manage and minimise the identified risks. The risk assessment provided in Table 6.1 of the proposed PRC Plan does not include a detailed risk assessment for the	Provide a revised PRC Plan (within Section 6.0 - Risk Assessment) that accounts for risks associated with high wall stability and proposed management actions to mitigate these risks. It is recommended that the PRCP Schedule is revised to include outcomes specified in Section 5.9.1 of the proposed PRC Plan (e.g., if slope geometries cannot be achieved, partially backfilling of voids to buttress walls with spoil could be considered). Provide a revised PRC Plan that includes a risk assessment for achieving management milestones for improvement areas.

		improvement area management milestones. (This is addressed in Matter 12 below).	
6	Hydrology Sections 5.1 and 5.9 of the PRC Plan. Section 3.6.1 of the PRCP Guideline.	A number of supporting technical studies are provided in conjunction with Section 5.1 of the proposed PRC Plan. However, information and conclusions drawn from management plans or technical reports must be transferred into the PRC Plan and discussed in sufficient detail to provide the context necessary to understand the proposed milestones and milestone criteria proposed in the PRCP Schedule. It is noted that Figure 5-1 (Cross section of Nogoia River and Pits A and B (north to south) is included in Section 5.1 of the proposed PRC Plan. However, it appears that this Figure is not referred to or discussed within the proposed PRC Plan. Section 5.1.2 provides an overview of modelled water quality and predicted groundwater equilibrium levels. It is stated that '<i>some of the rehabilitated open cut mining areas will maintain a permanent water body</i>'. For clarity, these daylighting areas must be clearly defined and demonstrative of being consistent with the current EA and proposed PRC Plan and Schedule. Further clarity is also required around the proposed rehabilitation methods that will ensure E Pit will not have daylighting groundwater areas.	Provide a revised PRC Plan that is consistent with the PRC Guideline (Section 3.6.1) information requirements for the entire approved project. This must include an assessment of the hydrogeology of the site and all connected strata, as well as a conceptual model of the mine site's groundwater systems. Relevant conclusions and recommendations from technical reports and studies must be discussed in the PRC Plan, and in sufficient detail that the actions proposed in the PRCP Schedule are justified. Provide a revised PRC Plan that clarifies the inclusion of Figure 5-1. Include other relevant figures to provide a complete understanding of the mine site (i.e., not just a cross section of A and B pits) including predicted groundwater flow direction. Provide a revised PRC Plan that clarifies that the statements and conclusions outlined in Sections 5.1, 5.1.1 and 5.1.2 are consistent with the approved rehabilitation outcomes for the Ensham Coal Mine.
7	Flooding Section 5.2 of the PRC Plan. Section 3.6.1 of the PRCP Guideline.	The intent of section 3.6.1 Flooding of the PRCP Guideline is to require the EA holder to assess flood susceptibility and influence on the final rehabilitated landform.	The WRM 2019 report is required to be provided as it is relied upon by the PRC Plan. Provide a revised PRC Plan that includes further information in relation to flood susceptibility and influence across the entire site (i.e., not limited to the pits). Further clarify and information is also required regarding: • Model flood levels (including probable maximum flood levels) for a range of design storm events; and • Flooding risk profile.

8	Soil and Capping Material Section 6.3.1.3 of the PRC Plan. Section 3.6.1 of the PRCP Guideline.	Section 6.3.1.3 contains limited information and quantitative data to support the statement that Ensham Coal Mine has approximately 2.2 Mm³ good/very good topsoil. Page 29 of the PRCP Guideline outlines that a soil assessment must be carried out. However, the information presented in Section 6.3.1.3 does not include all the minimum information requirements such as: • The quality of topsoil; • An assessment to determine the need for ameliorants and fertilisers; and • The relationship between soils and vegetation ecosystems for the PMLU and rehabilitation methodology. The PRCP Schedule does not contain rehabilitation milestones that meet the SMART (i.e. Specific, Measurable, Achievable, Relevant and Time-specific) criteria.	Provide a revised PRC Plan that includes: • The quality of all topsoil on site to be used to complete the target rehabilitation methodology; • An assessment to determine the need for ameliorants and fertilisers; • The relationship between soils and vegetation ecosystems for the PMLU and rehabilitation methodology. Update the milestone criteria to specifically require topsoil quality management strategies. Expected inclusions are: • Additional milestone criterion for soil health assessment is included in the PRCP schedule for RM4. • Additional milestone criteria that ensure the quality of topsoil is consistent with that required to complete the target rehabilitation methodology. • Additional milestone criteria that include the management strategy for the topsoil deficit.
9	Waste Characterisation Section 5.3.2.1 of the PRC Plan. Section 3.6.1 of the PRCP Guideline.	A number of technical reports are cited in Section 5.3.2.1 (e.g., Loch 2015 URS 2005, URS 2015 and CMLR 2005), however it is not clear if these studies demonstrate that the sampling regime meets best practice standards, is spatially representative of all material being mined (e.g., waste rock) and representative of all lithologies. The information and conclusions drawn from management plans or other technical reports must be transferred into the PRC Plan and discussed in sufficient detail to provide the context necessary to understand the proposed milestones and milestone criteria proposed in the PRCP Schedule. All references referred to in the PRC Plan must be included in the application documents. It noted in Section 5.3.2.1 of the proposed PRC Plan that the geochemistry of spoils mapped throughout the mine is well	Provide a revised PRCP Schedule that that outlines key milestone criteria for each spoil type presented in Section 5.3.2.1 of the PRC Plan. Expected inclusions are: • Include the management of preferred placement of Permian material and rock directly beneath topsoil on the final landform. • Include sufficient criteria for the assurance that selection placement ensures that dispersive spoil does not report to the surface of the landform. • Include sufficient criteria for the native bush corridor domain where planting occurs directly on spoil (benches).

		understood and that salinity and sodicity are the principal limitations to plant growth and stability in rehabilitation. However, management strategies outlined as suitable controls to manage the effects of sodicity and salinity are not contained with sufficient and specific detail within the relevant milestone criteria. This is important as the achievement of the management strategies underpins the environmental risk posed by the mining waste.	• Include more specific criteria (RM4) regarding application ameliorants for hostile spoil at the time of sowing. • Include more specific criteria (RM4) regarding application of hay mulch over dispersive spoil at the time of sowing.
10	Landform Design Section 5.4 'Landform' of the PRC Plan. Section 3.6.1 of the PRCP Guideline.	It is stated in Section 5.4.1 that a study conducted by Carroll <i>et al</i> (2001) identified that groundcover can take longer to establish on steeper slopes thus extending the window of erosion risk when the landform can fail. However, limited information is provided in Section 5.4 regarding how erosion risk will be managed for vegetated slopes. Furthermore, Section 5.4.1 provides limited justification that the proposed typical design objectives for slopes will ensure a stable final landform. Included in Section 5.4.3 is the 3D final landform. However, limited information was presented to demonstrate that the land will be safe and structurally stable based on the factors (e.g., landform evolution modelling) described in the PRCP Guideline (page 31).	Provided a revised PRC Plan that includes the following information and analysis: • Method of determining landform design; • Modelling predicting the long-term stability of the final landform design; • Method of construction; • Quality Assurance / Quality Control (QA/QC) requirements; • Trial methodology to verify the predicted success of the final landform design; and • Limitations and assumptions of the landform design. Where relevant, key considerations of the landform design report outlined on page 31 of the PRCP Guideline must also be included. Provide a revised PRC Plan that justifies the proposed typical design objectives for slopes will ensure a stable final landform. Provide a revised PRC Plan that is demonstrative that the final landform will be safe and structurally stable based on the factors (e.g., landform evolution modelling) described in the PRCP Guideline (page 31).
11	Underground Mining Section 5.10 of the PRC Plan and	Information on underground mining is discussed in section 5.10 of the PRC Plan. A subsidence report has also been attached (Gordon, Geotechniques, 2020) to the proposed PRC Plan.	Provide a revised PRC Plan that details how potential entries to underground workings will be sealed.

	Technical Report: Gordon 2020. Section 3.6.4 of the PRCP Guideline.	Further information about how potential entries to underground workings will be sealed is required to be detailed within the proposed PRC Plan.	
12	Built Infrastructure Section 3.1.2 and 5.11 of the PRC Plan. Section 3.6.5 of the PRCP Guideline.	Section 3.1.2 outlines that as per written agreements, some mining infrastructure will be retained by background landholders. However, no evidence of landholder agreement(s) was provided in the PRCP application documents. It is unclear if the landholder retained infrastructure outlined in Section 3.1.2 is a complete inventory. For example, fences are not listed as retained infrastructure despite the PRCP referencing fencing as a milestone criterion for the improvement areas.	Provide evidence of agreement (e.g., landholder agreement) for all infrastructure that will have ownership transferred. Provide a revised PRC Plan that includes identification all retained infrastructure (e.g., fencing). Identification of all infrastructure that will be decommissioned and methods for decommissioning.
13	Risk Assessment Section 6.0 of the PRC Plan. Section 3.7 of the PRCP Guideline.	A risk assessment is provided in Section 6.0 of the proposed PRC plan. Limited information is provided regarding the process of undertaking the assessment including the scoring matrices and methodology. This is required to understand the risk assessment provided. The provided risk assessment is incomplete as it does not contain performances measures and constraints, reporting and monitoring requirements as well as timing and scheduling. Further information is required in relation to the risks associated with achieving stable landforms. The Risk Assessment presented in Table 6.1 does not include RM8 – RM11 (inclusive). These milestones are required to be included in the risk assessment as they relate to achieving stable condition all proposed PMLUs. The identified '<i>descriptions of unwanted event</i>' listed in Table 6.1 of the proposed PRC Plan are not consistent with the potential risks identified in the planning part of the PRC Plan. For example, Section 5.3.1.3 outlines that Ensham Coal Mine has a good quality	Provide a revised risk assessment and supporting information in the proposed PRC Plan that: • Include a completed risk assessment to ensure all columns of Table 6.1 within the PRC Plan are adequately addressed. • Include specific details regarding the risk assessment methodology utilised. • Include a risk assessment of all process steps including RM8 to RM11 (inclusive). • Ensure risks identified and addressed are consistent with actual and/or potential risks identified in the PRC Plan (e.g., dispersive growth media topsoil, subsoil, and spoil). • Assess the risks associated with achieving a stable landform (e.g., final landforms that exceed slopes of 20% or landforms with slopes under 20% with water bodies at the base of the landform). • Incorporate risk management strategies and methodologies identified in the PRC Plan.

		topsoil deficit of 1.2 Mm³. However, Table 6.1 does not address this risk and proposed management actions. Section 5.3.2.1 outlines that Quaternary, Tertiary and Permian spoil at the Ensham Coal Mine can have saline, sodic and dispersive characteristics. However, the risk assessment presented in Table 6.1 does not include an assessment of the risks associated with rehabilitation activities incorporating dispersive spoil. Consideration of the risk of failure that may occur to certain PMLUs is also not adequately assessed. For example: • incorrect slope for rehabilitation in accordance with criteria has been assigned a 'minor' consequence; and • unsuitable soil in accordance with specifications has been assigned a minor consequence. Further clarity is also required regarding the management of change review that is required to control the risk '<i>...unconventional topsoil depth does not support vegetation growth...</i>' (page 104 of the PRC Plan).	• Clarify risk of failure of 'unwanted events' to ensure the risk score is reflective of the actual risk and consistent risks identified within the PRC Plan. • '<i>Unable to supply the volume of rock mulch</i>' is assessed as an unmitigated critical risk and a low residual risk. However, the planning part of the PRC Plan does not include detailed rehabilitation methodologies related to the use of rock mulch and suitable alternatives or trials that support the residual risk reduction. • Clarify the management of change review that is required to control the risk '<i>...unconventional topsoil depth does not support vegetation growth...</i>' (page 104 of the PRC Plan).
13	Monitoring and Maintenance Program Section 7.0 of the PRC Plan. Section 3.8 of the PRCP Guideline.	A Monitoring and Maintenance Program is provided in Section 7.0 of the proposed PRC Plan. The PRCP Guideline (Section 3.8) states that the rehabilitation planning part must contain a monitoring and maintenance program that identifies and describes the monitoring systems that will be carried out in order to demonstrate a milestone and milestone criteria have been achieved. Further site-specific detail is required to describe the timing and proposed methodology of monitoring in addition to the identification of suitable reference/analogue sites. References regarding cattle grazing should be removed for the boggy creek diversion (Section 8.1.9.1) and native bushland corridor (Section 8.1.10.1) PMLUs as these appear to be incorrect.	Provide a revised PRC Plan which includes a Monitoring and Maintenance Program that is consistent with the information requirements outlined in Section 3.8 of the PRCP Guideline. This must include: • A clear Monitoring and Maintenance Program that would be repeatable based on the information provided. • Detailed site-specific monitoring and measurement methodologies which are supported by collection of statistically valid data and quantitative analysis. • Detail specificity of the monitoring proposed to be undertaken, the methodology (with references) to ensure repeatable monitoring, the attributes to be

		The proposed Monitoring and Maintenance Program did not contain sufficient information relating to the following rehabilitation milestone criteria: • Subsidence; • Groundwater quality; and • Stable landform. There are no monitoring and maintenance methods described for Improvement Area Management Milestones.	monitored and the timeframes for which this monitoring is to be undertaken. • Detail of how QA/QC techniques will be incorporated into the monitoring methodology. • Specific details of proposed corrective actions if monitoring data indicates milestone criteria are not being met. • Provide monitoring and maintenance methods described for Improvement Area Management Milestones.
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Item	PRCP Schedule Reference	Matter	Information Request
PRCP Schedule			
1	Final Site Design	Numerous maps and figures are included in the PRP Plan relating to rehabilitation areas and PMLUs. However, a clear final site design figure/s was not included. Section 4.1, Step 1 of the PRCP Guideline outlines the requirements for a final site design.	Provide a revised PRCP Schedule that includes a final site design map(s) at an appropriate scale which includes the following: • The maximum disturbance footprint; • Resource tenure boundaries; • PMLU(s) and NUMA(s) for the land within the resource tenure(s).
2	RM1	RM1 milestone criteria is not consistent with the current EA. Specifically, when the underlying landholder is the EA holder, the administering authority must give consent to the retainment of infrastructure, constructed by or for the environmental authority holder as a result of the authorised mining activities.	Provide a revised PRCP Schedule that is consistent with the current EA Conditions H12-14 (inclusive) and approved rehabilitation success criteria outlined in Appendix 3. For example, this must include infrastructure to be retained is either by a legally binding agreement or by consent with the administering authority where the landholder is also the environmental authority holder.
3	RM7 - RM11 (Inclusive)	Milestone Criteria are required to be written in a manner that delivers on SMART principles, as per section 4.1 Step 4 of the PRCP Guideline. RM7- RM11 specify the following matters in the criteria: • The RA is safe; • Safety hazards in rehabilitation are similar to surrounding unmined landscapes; • There is no environmental harm being cause by anything or in the RA; and • The RA can sustain a PMLU. These criteria do not meet the SMART principles.	Revise the criteria of RM7 – RM11 to ensure the achievement of SMART principles. Include relevant EA conditions in to the PRCP Schedule. This must as minimum include: • 0 (zero) significant difference as defined in <i>AS/NZS ISO 31000:2009 Risk Management</i>. RM11 must also include the following milestone criteria in accordance with the EA: • Permanent flood structure in place.

		Additionally, the milestone criteria are not consistent with all authorised rehabilitation outcomes in the current EA.	Floodplain width re-instated. Minimum 2km width between the northern section of B Pit and the southern section of C Pit as located generally in accordance with Appendix 5. It is noted that the above rehabilitation milestones (i.e. RM11) are not clearly discussed in the planning part of the PRC Plan. It is a requirement that all rehabilitation aspects are described in sufficient detail within the proposed PRC Plan.
4	RM11	Rehabilitation area milestone 11 ('RM11') is missing from the references.	Provide a revised PRCP Schedule with RM11 documented in the reference column within the rehabilitation area milestone tab.