

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: Peabody (Burton) Pty Ltd
100 Melbourne Street
South Brisbane, QLD, 4101

By email transmission only

Email: Tenements@peabodyenergy.com

Attention: Brian Neilsen

Our reference: EPML00879213

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 10 June 2022.

The application reference number is: **C-EATPRCP-100136913**

Land description: ML70252, ML70256, ML70258, ML70259, MDL308

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 attached in **Appendix 1**.

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 **10 February 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 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 the decision is compatible with human rights.

If you require more information, please contact Coal Business Centre on the telephone number listed below.



Signature

5/08/2022

Date

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

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

Appendix 1

Provide a revised PRC plan (including PRCP schedule) that addresses the following matters:

Item	Relevant section (proposed PRC plan and/or PRCP Guideline)	Matter	Information Request
PRC Plan - Rehabilitation Planning Part			
1	3.1.4.3 Baseline Information	<p>The land stability section within baseline information provides Figure 9 showing the pre-mining RUSLE mapping. It is assumed the mapping is showing the soil erodibility of the site.</p> <p>It is not clear if any other factors have been considered in assessing land stability including the level of degradation and erosion that currently exists or pre-existed prior to mining. Further details are not provided about the site's predisposition to ongoing stability issues.</p>	Provide a discussion of Figure 9 explaining what the RUSLE mapping means for the site's pre-disposition to erosion and stability issues.
2	3.2 PMLU	<p>Currently, the PRC plan does not describe which of the various disturbance types (i.e., domains) across the mine are contained within proposed Rehabilitation Areas. For example, RA1 covers an area of 694.7ha with a described relevant activity of 'Existing Rehabilitation South', however it is difficult to determine which areas as described by Tables F1 and F2 of EPML00879213 are captured within RA1.</p> <p>This is necessary to demonstrate the proposed PMLUs are the same or substantially similar to the pre-approved outcomes as identified by EPML00879213.</p>	Include a table in Section 3.2 of the Rehabilitation planning part that links the various domains referred to in the EA, with the relevant Rehabilitation Area proposed by the PRCP Schedule, and comparing the proposed PMLU for each against the pre-approved outcome identified in the EA

3	3.2 PMLU	<p>Section 3.2 indicates that the PMLU of 'grazing with areas of bushland habitat' will be the outcome for most of the final landscape.</p> <p>Limited information is provided in the PRC plan to explain how both a grazing and bushland habitat outcome will be achieved for the designated areas.</p> <p>The objective of having collocated grazing and bushland habitat is not clear. It is not explained whether there will be distinctly different portions of the broader rehabilitation areas that are aligned towards each use and if each use will support the other. The pre-approved outcomes provided by EPML00879213 require bushland as a separate final land use for some areas where the final landform will not be suitable for grazing.</p> <p>The purpose of establishing the bushland habitat itself also requires further explanation, in terms of what habitat values will be provided, and any wider benefits to the ecosystem.</p>	<p>Provide further explanation about how the PMLU of 'grazing with bushland habitat' is substantially similar to the pre-approved outcomes detailed in the land outcome documents. Provide further detail about how the PMLU will be established in each relevant rehabilitation area and include details about whether there are preferential areas that will be aligned to grazing versus bushland habitat.</p> <p>Provide further details to justify having collocated grazing and bushland habitat areas and the beneficial use or environmental benefit this post mining land use will achieve.</p>
4	3.2 PMLU	<p>[To be read in conjunction with Item 2]</p> <p>Table F1 of the EA outlines which areas are suitable for grazing.</p> <p>The PRC plan proposes grazing with areas of bushland habitat as the PMLU for RA1 to RA8.</p> <p>The PRC plan mentions in Appendix F section 1.2.2.3 that the proposed PMLU comprises:</p> <ul style="list-style-type: none"> - water management; 	<p>Ensure the proposed final land uses are consistent with the land use in Table F1 of EPML00879213.</p> <p>Alternatively, provide information to justify any proposed changes to the pre-approved outcomes (refer to Section 3.2 of the PRCP Guideline for further guidance) and/or to demonstrate that any changes are still substantially similar to the pre-approved outcomes.</p> <p>Explain why the pits in appendix F are defined as PMLU and in the plan as NUMA.</p>

		<ul style="list-style-type: none"> - pit water storage (pits including Broadmeadow pit, Plumtree pit, Bullock Creek pit, Wallanbah pit and farm dams); grazing; - bushland (disturbed and undisturbed areas); - riparian (riparian areas along Bullock Creek and Spade Creek diversions); - infrastructure (including laydowns, hardstands, roads and loading ramps); and - undisturbed ((pre-existing land uses). <p>Currently, it appears that proposed PMLU is inconsistent with the proposed land use in Table F1 of EPML00879213. For example, ramps are not considered to be suitable for grazing.</p> <p>At this point, it is not possible to derive from the Rehabilitation Areas in the schedule if grazing is proposed on ramp sites. The same applies for the other disturbance types listed in Table F1.</p>	
5	3.6 Rehabilitation management methodology	Section 3.6.3.10 describes 129ha of backfilled area associated with the Plumtree void as being rehabilitated to grazing until long term water levels are reached. Based upon the total size of 75.4ha allocated in the PRCP schedule for IA5 Plumtree Void, it is assumed that the backfilled area returned to grazing has been incorporated into one of the Rehabilitation Areas. Further information to demonstrate that this portion of land can sustain a grazing outcome, beyond the period when long term water levels are reached is required.	Provide further information to demonstrate the 129ha of void area backfilled to a grazing outcome will achieve a PMLU that is sustainable beyond the period when long term water levels are reached.
6	3.6.1.2 Flooding	Appendix N Broadmeadow Pit Final Void Geotechnical Assessment – section 9 states:	Provide further information to demonstrate that all operational levees will be/have been designed and

		<p><i>"A levee system is proposed along both the northern and southern endwall and the lowwall, to mitigate flooding of the void during the 1:1000 - year flood event. These structures must be RPEQ certified as required under the site's environmental authority. Given future landholders may not be amenable to maintaining the levee as a certified structure, options for closure may involve negating the need for the levee system by either backfilling the void, or modifying the levee to create a final landform that meets the rehabilitation goals. In this case, the final landform should be higher than the Probable Maximum Flood (PMF) with dimensions that can withstand the effects of weathering and erosion in perpetuity."</i></p> <p>Further information regarding the necessary modifications to convert operational levees into permanent landforms is required to demonstrate these structures can achieve stable condition. This also includes studies or technical recommendations to demonstrate the proposed 1:5 slope gradients are suited to the purpose of a permanent landform, the dimensions of the landforms (e.g. base, height, crest width) and clarification that all will be designed and constructed to withstand PMF events (not just 0.01%AEP). This information should also be supported by a map(s) to indicate the final location of the levees.</p>	modified to become permanent landforms that achieve stable condition. Include maps that locate each of the final levee landforms.
7	3.6.1.2 Flooding	<p><u>Appendix D 'Flood risk assessment' (March 2013)</u></p> <p>The flood risk assessment for Bullock Creek showed that the removal of the haul road crossing and restoration to natural surface is an option (and is most preferred by Burton Mine) to reduce the flood risk.</p>	Provide further information to explain how the results of this flood mitigation assessment have informed the PRC plan and schedule.

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8	3.6.1.8 Revegetation	<p>Table 28 of the PRC plan shows the riparian seed mix. Table 29 shows the seed mix for self-sustaining native vegetation.</p> <p>RA9 and RA10 are both described as riparian and self-sustaining native vegetation.</p> <p>Table 18 'PMLU' refers to self-sustaining native vegetation for Bullock Creek and riparian for Spade Creek.</p>	<p>The terminology riparian and self-sustaining are not consistently used throughout the planning part and schedule. Please adjust where necessary.</p>
9	3.6.1.8 Revegetation	<p>Table 28 and 29 in the PRC plan propose non-native crop species to initiate groundcover. Non-native species should be avoided for the rehabilitation of native ecosystems.</p>	<p>Consider if there is a native alternative to these non-native cover crop species or provide additional information to demonstrate that any risks relating to the use of non-native species as part of the rehabilitation to a native ecosystem outcome have been considered.</p>
10	3.6.3.9 Water balance and long-term water quality.	<p>Based on information provided in Section 3.6.3.9 e) there is a risk of seepage from Plumtree void via shallow aquifers if simulated long-term water levels reach above the maximum operational level (i.e., control level). Further investigation of this matter is identified.</p>	<p>Provide updated information to present the conclusions reached by the further investigation at Plumtree Void. This includes:</p> <ul style="list-style-type: none"> • confirmation the wind monitoring stations were relocated to Plumtree void. • confirm sufficient data to nominate a suitable evaporation rate for use in water balance modelling were collected • the conclusions of updated water balance modelling with regards to the risk of seepage from Plumtree void after modelling the updated evaporation rate.
11	3.7.3 Risk Evaluation, Table 32	<p>Table 32 – Risk identification, analysis and evaluation – PMLU, indicates that grazing trials will be undertaken in relation to RM3 -landform reshaping and final contouring.</p> <p>It is understood that some grazing trials have been undertaken on rehabilitated land at Burton. It is unclear</p>	<p>Provide details on any future grazing trials to be undertaken as a proposed control to mitigate the risk of landform shaping being unsuitable for grazing.</p>

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		<p>from the Table whether the plan includes further trials to be undertaken as a proposed control, or whether the previous trials have informed the landform slopes.</p>	
12	3.8.4.1 Reference Sites 3.6.7.8 Riparian areas	<p>Section 3.6.7.8 of the Rehabilitation Planning part states revegetation works around Spade Creek will be carried out in accordance with the Spade Creek Diversion Project – Revegetation Plan (Appendix H).</p> <p>The revegetation plan proposes to combine Regional Ecosystem (RE) 11.3.25 (biodiversity status = of concern) and 11.5.9c/11.5.3 (biodiversity status = no concern at present) for the rehabilitation of the Spade Creek area, in order to provide the opportunity for greater diversity and increase the likelihood of successful vegetation establishment. However, it appears that neither of these REs are represented in the Vegetation reference monitoring sites (Table 37).</p>	<p>Update Table 37 to include the location of reference sites for monitoring revegetation of Spade Creek. Revise the relevant criterion in Rehabilitation Milestone (RM11) to identify the relevant reference site(s) for Spade Creek (RA10).</p>
PRCP Schedule			
13	RA4 Infrastructure South, RA8 Infrastructure North, IA3 Wallanbah Void	<p>Section 3.1.7 of the PRC plan indicates that production at the mine ceased in 2016 and since then the site has been progressively rehabilitating disturbed land.</p> <p>Section A.2 provides a schedule of land availability which indicates all land is available for rehabilitation / improvement with the exception of RA4, RA8 and IA3.</p> <p>The PRCP schedule must provide for each rehabilitation milestone to be achieved as soon as practicable after the land to which it relates becomes 'available for rehabilitation' as defined in section 126D of the EP Act.</p> <p>Given the site ceased production in 2016 and rehabilitation activities have been occurring since that time, it is unclear why there is a delay in the above-</p>	<p>To justify the timeframes in the PRCP schedule, further detail is requested to detail the constraints preventing these areas from being currently available for rehabilitation and improvement.</p>

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		mentioned areas being available for rehabilitation or improvement.	
14	RA2 OB Dumps and topsoil south	<p>RA2 indicates that the 95.6ha area becomes available for rehabilitation on 10/12/2022. It also indicates that RM1 and RM2 will both be completed by 10/12/2022.</p> <p>The availability date for the area, and completion date for the initial milestones cannot coincide.</p>	Update the Schedule to ensure the 'Date area is available' and 'Milestone completed by' dates are not the same. If the area is predicted to become available earlier than 10/12/2022 to allow activities related to RM1 and RM2 to commence, facilitating achievement of the milestones by 10/12/2022, the PRCP schedule must reflect this.
15	RA9 Riparian Vegetation Bullock Creek	<p>RA9 shows that RM10 will be completed in 2041.</p> <p>Given that RM10 is relevant to areas with a PMLU of grazing and bushland, it is assumed that the correct milestone reference in this instance is RM11 (Achievement of PMLU to a stable condition (riparian and self-sustaining native vegetation)).</p>	Consider the matter raised and if appropriate revise the Schedule to refer instead to RM11.
16	RA10 Riparian Vegetation Spade Creek	<p>According to the PRC schedule RA10 – with PMLU 'self-sustaining native vegetation' - will achieve milestone RM10.</p> <p>RM10 is for the achievement of PMLU for grazing with areas of bushland habitat.</p> <p>It is assumed that RM11 which is specific to riparian and self-sustaining native vegetation is the relevant milestone for RA10.</p>	Consider the matter raised and if appropriate revise the Schedule to refer instead to RM11.
17	RM4 Surface Preparation	<p>The surface preparation milestone criteria include 'remediate excessive erosion or subsidence'.</p> <p>The PRCP plan provides limited information to what extent subsidence is a risk for the achievement of the PMLU's for the site. The plan does not identify the locations onsite which are at risk of subsiding, and what</p>	<p>Provide details on any risk that subsidence poses for the achievement of the post mining land use, identify features and areas which are at risk on the site.</p> <p>Provide information about the rehabilitation actions required for subsidence in relation to RM4.</p>

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		rehabilitation actions will be required to remediate the subsidence to achieve a stable condition of the land.	
18	RM5 Revegetation (grazing with areas of bushland habitat)	The first criterion in RM5 refers to completion of seeding activities in accordance with 'the revegetation plan'. It is recommended that the specific tables provided in Section 3.6.1.8 are referenced as part of this criterion.	Update RM5 to ensure the relevant tables which outline seed mixes and seeding rates are referenced by the milestone criterion.
19	RM7 Achievement of surface requirements (riparian)	RM7 is not allocated against any rehabilitation Areas. To adequately demonstrate that surface requirements for riparian vegetation are met, it is anticipated that criteria regarding vegetative composition and groundcover, and resilience to disturbance are assigned against RM7.	Update the PRCP schedule to ensure RM7 is allocated against the relevant RA. Update RM7 to include criteria that adequately demonstrate surface requirements are met.
20	RM8 Achievement of surface requirements (grazing with areas of bushland habitat)	A criterion which states 'erosion gullies are less than or equal to 1m deep' has been proposed. The department's preference is that no active gully erosion is present.	Update RM8 to include demonstration that no active gullies are present in rehabilitated areas.
21	RM9 Achievement of surface requirements (self-sustaining native vegetation)	To adequately demonstrate that surface requirements for self-sustaining native vegetation are met, it is anticipated that criteria regarding vegetative composition and groundcover, and resilience to disturbance are assigned against RM9.	Update RM9 to include criteria that adequately demonstrate surface requirements are met.
22	RM10 Achievement of PMLU to a stable condition (grazing with areas of bushland habitat)	RM10 includes the criteria 'Certification from an AQP that the landform has achieved an acceptable factor of safety.' The acceptable factor of safety for the final landform is not identified in the rehabilitation planning part.	Provide detail on the proposed factor of safety for the final landform and explanation of the how the factor of safety has been developed and how it is determined that it is acceptable.
23	RM10 Achievement of PMLU to a stable condition (grazing with areas of bushland habitat)	RM10 does not appear to include criteria that are relevant to, or support the development of, bushland habitat for the PMLU areas.	Develop SMART criteria specific for the bushland habitat aspect of RM10.

		<p>It is not clear from the milestone what parameters are specific to bushland habitat creation, and how the successful establishment of bushland creation will be measured and confirmed.</p>	
24	RM10 Achievement of PMLU to a stable condition (grazing with areas of bushland habitat)	<p>The average erosion rate is set at an appropriate level (5 t/ha/yr) however this criterion does not limit specific locations where rill or gully erosion may be active and destabilising rehabilitation (particularly on constructed landforms).</p>	<p>It is recommended that an additional criterion is included against RM10 to demonstrate no areas of active erosion are present.</p>
25	RM11 Achievement of PMLU to a stable condition (riparian and self-sustaining native vegetation)	<p>As evidenced by the range of criteria proposed against RM10 (and also in the example provided at Attachment 2 of the PRCP Guideline), it is anticipated that in order to demonstrate land has achieved stable condition, a variety of criteria that cover surface water, groundwater (if relevant), erosional stability, weed and pest species presence/absence, groundcover and vegetation composition are provided against the final Rehabilitation Milestone. This is a requirement of the PRCP schedule (refer to Section 4.1, Step 5 of the PRCP Guideline).</p> <p>For example, the revegetation plan for Spade Creek mentions an objective to achieve at least 80% of the species listed but is not provided as a final criterion.</p> <p>The department recommends that criteria are included that specifically demonstrate completion of rehabilitation in accordance with the conditions of the Water Licences for the Bullock Creek and Spade Creek diversions. This is an important aspect necessary to demonstrate these areas can sustain their proposed PMLUs.</p>	<p>Update RM11 to include criteria sufficient to demonstrate achievement of the various elements of stable condition.</p>
26	IA3 Wallanbah Void Lowwall	<p>Section 3.3.2.3 described that the NUMA at the Wallanbah Void will be inclusive of the pit lake, highwall, end wall, low wall and bunding. The Wallanbah void low wall has been allocated as a separate improvement area</p>	<p>Provide additional milestone criteria to demonstrate that specific works required for IA3 have been completed.</p>

		<p>(IA3) as the works required for stabilisation are significantly different to those required for the void itself.</p> <p>The PRCP Schedule does not appear to include any specific management milestones or criteria for IA3 that differentiate the improvement activities for the Wallanbah void low wall from the other NUMA's.</p> <p>Information is provided in Section 3.6.3.10 of the Rehabilitation Planning Part that describes the methodology for the low wall remediation. These actions have not been translated as criteria in the Schedule.</p>	
27	MM1 Wall treatments	<p>MM1 contains a single criterion which states “walls / slopes assessed as stable by an appropriately qualified person (AQP) (geotechnical engineer) and consistent with EA conditions.”</p> <p>Table F1 of the EA states ‘high walls will be assessed on an individual basis. Some will be backfilled and other associated with final voids left at 65 degrees in competent rock or blasted to less than 17 degrees in non competent rock. Table F1 is silent on any criteria for low wall or end walls.</p> <p>Section 3.6.3.4 of the Rehabilitation Planning Part outlines the preferred void treatments and section 3.6.3.6 describes recommendations for each residual void regarding the final void geometry and treatments necessary to stabilise the landforms.</p> <p>As proposed, the schedule does not provide specific design criteria for the high, low and end walls of each proposed NUMA to demonstrate treatments have been completed in accordance with the recommendations outlined in the Rehabilitation Planning Part.</p>	Develop SMART criteria for the void wall treatments for inclusion in MM1.

28	MM2 Achievement of surface requirements / access controls	<p>Section 3.3.5.1 of the Rehabilitation Planning part states that a short section of the Plumtree end wall will have an alternative bunding arrangement provided, such as a steel guard rail. It is recommended that an additional milestone criterion is included to demonstrate the construction of the alternate structure.</p>	Update MM2 to include reference to the alternate safety bund that is required for the Plumtree void.
29	MM3 Achievement of sufficient improvement	<p>The time needed to achieve MM3, after completing MM2, is respectively 18 (IA1 and IA2), 19 (IA4 and IA5) and 13 (IA3) years according to the PRC schedule.</p> <p>No information is presented in the Rehabilitation Planning Part to explain the periods of time necessary to demonstrate achievement of the various milestones. This information is important to demonstrate that the Schedule achieves improvement of the residual voids as soon as practicable.</p>	Provide additional information in the PRC plan to justify the time frames provided for achieving sufficient improvement for each Improvement Area.
Spatial data			
30		<p>The spatial data has some inconsistencies. There are areas classified as 'EX_REH' and 'PMLU', which are not considered in the 'maximum disturbance footprint' layer</p>	Please provide justification for this matter and ensure that figure 34, 35 and 36 and the spatial data are consistent.
31	RA10	<p>RA10 appears to correspond with site_id 121 and 71 of the spatial data. Site 121 represents 10.8 ha and site 71 represents 1.8 ha. This corresponds with the 12.6 ha in the schedule for RA10.</p> <p>The schedule indicates that all the land (12.6 ha) will be available in 2023.</p>	Site 121 is already classified as 'rehab complete'. Please correct the schedule and/or spatial data so that the information is not contradictory.
32		<p>It is not possible to identify the different rehabilitation areas and improvement areas in the spatial data.</p>	<p>Referring to figure 35 and 36 in the PRC plan.</p> <p>Please transfer across the different rehabilitation areas and improvement areas as defined in the schedule, in the spatial data.</p>

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33		It is unclear where the final levees will be situated.	Provide a map (and spatial data) where the final levees will be situated.
34		The polygons corresponding with site_id 121 and 71 (Spade Creek) have 'Other' as PMLU type.	Provide information why this PMLU is not classified as 'Native ecosystem', in accordance with RA10.
35		The spatial data shows that the PMLU type 'grazing' is overlapping the other PMLU types.	Make sure that the different PMLU types are not overlapping in the spatial data.
36		The PMLU type provided by Peabody identifies 4 different categories: <ul style="list-style-type: none">- Grazing- Native ecosystem- NUMA- Other	A NUMA is not a PMLU type, please correct this. The PMLU type 'other' is according to the schedule also a 'native ecosystem'. Please correct the spatial data accordingly.
37		The data shows that the area with reference site_id 120, was an overburden bump before, whereas figure 3 shows that the area is already rehabilitated at this time. The polygon is classified as PMLU and not 'ex_reh' which appears contradictory.	Please adjust the spatial data and/or figures where necessary.
38		The polygon with site_id 61 is classified as PMLU 'native ecosystem'.	Consider if site_id 61 should be included in RA9