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: Coking Coal One Pty Ltd
4/167 Eagle Street
BRISBANE QLD 4000
By email transmission only

ATTN: Mark Ruston

Email: mruston@bowencokingcoal.com

Our reference: EA0002465 (Broadmeadow East Coal Mine)

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 29 September 2023.

The application reference number is: **C-EATPRCP-100514634**

Land description: ML70257

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 provided in **Appendix 1** below.

3. Actions

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

(a) all of the information requested; or

Queensland Government

(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.

Should the information request require an EIS process or applicant to submit a progressive rehabilitation and closure (PRC) plan then it must be completed and submitted.

A response to the information requested must be provided by 25 November 2024 (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 the decision.**

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

Alison O'Brien	22/11/2023
Signature	Date

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

Enquiries:
Business Centre Coal
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Appendix 1: Additional information required for proposed PRC plan (Broadmeadow East Coal Mine)

Item	Relevant section (Proposed PRC plan and or PRCP Guideline)	Matter	Information Request
PRCP rehabilitation planning part			
1	**General**	***Missing documents referenced in PRCP*** Throughout the Progressive Rehabilitation and Closure (PRC) plan, references have been made to different plans such as the: 1. BME Biodiversity Management Plan (BMP), 2. BME Weed and Pest Management Plan, 3. BME Species Management Plan (SMP) 4. BME Protected Plant Impact Management Plan (PPIMP), 5. Water Management Plan, and 6. Cultural Heritage Management Plan (CHMP). These documents have not been provided with or summarised within, the current PRC plan. This information is required by DES to demonstrate the applicability of the Plans to the overall PRC plan.	Revise the current PRC plan to include all documents and to ensure all documents are provided in reference list, and Appendices.
2		***Attachment I – Risk Assessment*** The document contains text that has been struck through. It is not clear if that text is part of the document or does not need to be considered.	Revise Attachment I – Risk Assessment to remove all "strike through" text or any other confusing symbology/formatting.
3	**3.1.1.4 Site Hydrology and Fluvial Networks**	***Surface Water Quality*** The section identifies the relevant waterways and their environmental values. No receiving environment water quality data has been provided in the PRC plan. The PRCP guideline section 3.1 requires the EA holder to provide baseline information with respect to site hydrology and fluvial networks. Background surface water quality data is important as it helps to determine the water quality limits, suitability of monitoring locations to demonstrate the stability and non-polluting state of the final rehabilitated landform.	Provide an updated PRC plan that includes background/ baseline receiving environment water quality monitoring data.
4	**3.1.1.6 Soil Types, Properties, and Productivity**	***Land Suitability*** The PRC plan says: *"Approximately 91.1% of the ML is classed as Class 4 land, with nutrient deficiency as the limiting factor*."	Provide further information that demonstrates the PMLU of grazing is sustainable on the land

		Section 3.3.1 (Nominated PMLUs) of the PRC plan says that: *"Grazing will be returned to 'Class 4' Land suitability*." The recent technical paper published by the Queensland Mine Rehabilitation Commissioner 'Rehabilitated mined land suitability for beef cattle grazing in the Bowen Basin' states: "*Land suitability assessment is used to evaluate these land use limitations and rank rehabilitation as suitable (Class 1, Class 2, and Class 3) or unsuitable (Class 4 and Class 5) for beef cattle grazing according to the severity of limitations…the Class 3/Class 4 boundary is the most important threshold, because it separates land that is suitable for a specific land use from land that is not (Queensland Government, 2015)*."	without severe limitations and management requirements.
5	**3.5.1.1 Hydrogeology**	***Groundwater Quality*** The PRC Plan says that: "*Table D2 from EA0002465 contains the groundwater trigger limits applicable to operations that will continue to be the case for post-closure monitoring*." The groundwater limits and triggers in EA may not be relevant to PRCP as they are applicable to mining operations and not post mining conditions. Aquatic ecosystems are a scheduled environmental value for the receiving environment; therefore, this must be considered. The water quality criteria should be based on Water Quality Objectives (WQOs), aquatic ecosystem guidelines and background data for the receiving environment. For groundwater, the 95th percentile of baseline (ideally pre mining) data can be used to determine site-specific limits for all indicators. See DES 2021 Groundwater Guideline - https://www.publications.qld.gov.au/dataset/groundwater-quality-assessment-guideline/resource/472cc88a-000a-4bb8-a60d-204cfe7e0238.	Provide an updated PRC plan that includes: 1. SMART groundwater trigger limits applicable to post-closure monitoring; and 2. Demonstrate how the Water quality objectives and the ANZG 2018 guidelines have been considered. Alternately, provide justification as to why trigger values in Table D2 from EA0002465 is suitable for post-closure.
6	**3.5.1.1 Hydrogeology**	Attachment D Table 3.2 lists the bores making up the groundwater monitoring network. However, Table 3-21 (Section 3.5.1.1) of PRCP identifies some of these bores are decommissioned. It is unclear if the decommissioned bores were used to calibrate the groundwater model. Clarification is required to demonstrate the model reflects the site hydrogeology.	Clarify if the decommissioned bores were used to calibrate the groundwater model. Include additional text confirming the decommissioned bores do not influence

			hydrogeological modelling outcomes.
7	**3.5.1.3 Soil and Capping Material Assessment**	***Quantity (of available resources)*** Table 3-28 Soil Stripping Depths and Material Balance states the total topsoil and subsoil volume available. However, it does not state how much volume of topsoil and or subsoil is needed for rehabilitation activities. Furthermore, this section of PRC plan also does not state how much of available topsoil and/or subsoil is of rehabilitative value (i.e., suitable). This information will help assess any potential topsoil deficit and develop appropriate management actions.	Provide an updated PRC plan that states the amount of suitable topsoil and/or subsoil needed for rehabilitation activities.
8		The PRC plan says that in case of topsoil deficiency, contingency measures including (A) shallow topsoil spreading (b) substituting topsoil with subsoil and (c) using soil additives (i.e., fertilisers). The plan also says that if these contingency measures are implemented, completion criteria may take longer to be reached. The completion criteria are legally enforceable commitments once the PRCP schedule is approved and as such must be written in a manner to deliver on SMART principal meaning it is clear when the milestone criteria will be achieved.	Provide an updated PRC plan that takes into account the risks associated with topsoil deficiencies and how landform stability may be affected if topsoil characteristics are unable to support the required vegetation cover to minimise erosion.
9		The contingency measures for topsoil deficiency also include varying topsoil application depth for low intensity grazing on native pastures PMLU (0.2m) and woodland PMLU (0.3m). There is lack of details for proposing varying topsoil application depths in native pasture and woodland.	Provide an updated PRC plan with details relating to varying soil application depths for low intensity grazing in native pastures (0.2m) and woodland (0.3m) in case of topsoil deficit and achieving final PMLU end use.
10		There are different topsoil application depths in the PRC plan. Section 3.5.1.3 of the PRC plan states: "*Erosion modelling conducted to support this PRCP has recommended topsoil thicknesses of approximately **0.5m** to be applied to rehabilitated landforms*." The same section also states: "*Generally, all soil will be applied to a thickness of **0.3m** to provide enough depth for ripping and plant growth*."	Provide an updated PRC plan that clearly and consistently defines topsoil application depths throughout the document. This depth must reflect findings from landform evolution modelling specific to topsoil depths required

		Topsoil depth of 0.3 m has also been provided in the PRCP schedule (excel file). Section 3.5.1.6 states that rejects within OOPDs were sheeted with **0.2m** of topsoil. PAF materials are also proposed to be covered with 0.2 m of topsoil after being encapsulated (6m of inter-burden).	to maximise groundcover for final PMLU landforms.
11	**3.5.1.7 Water Management**	***Infiltration and seepage intervention and collection controls*** The PRC plan states that potential seepage sources include rehabilitated out of pit dumps (OOPDs – West and East) and sediment dams and that these sources are not considered significant enough to warrant the establishment of post closure seepage controls. The PRC plan lacks details of the decision-making process to reach this conclusion. Moreover, within the same section the PRC plan (*Infiltration and seepage intervention and collection controls*) states: "*Any potential seepage issues associated with this (West OOPD) will be captured in post closure monitoring activities*…." This statement is self-contradictory to statement above i.e., no need to establish seepage control measures. Clarification is required to demonstrate the milestone and completion criteria for the OOPDS will be achieved.	Revise the PRC plan to provide more details about why seepage controls are not required. The updated PRC plan must also clarify the contradiction for the need for seepage controls.
12	**3.5.3 Voids**	The proposed slope for the south void pit floor (Table 3-13) is not stated and is contradictory within the PRC plan. For instance, Section 3.5.3.8 (Rehabilitation Strategies) states: **"***The void pit floor slopes range from 15-30%*....." While at all other places within PRC plan (for example sections (e.g., sections 3.5.3.1, Table 3-13) a definite "*15% slope*" has been mentioned. This information is required to satisfy that the completion criteria relevant to the final landform will be able to sustain the nominated PMLU.	Provide an updated PRC plan that states consistent percent slope (e.g., "15% slope") that will be used as milestone or completion criteria for south void.
13	**3.5.3.2 Pit wall stability**	In the PRC plan, a preliminary (in 2021) geotechnical assessment of samples obtained from one partially cored geotechnical borehole showed potential for instability (i.e., steep joints into the eastern highwall).	Provide an updated PRC plan that includes the site-specific geotechnical assessment for wall

		Due to the limited sample size the South Pit design recommendations for operations were pre-dominantly made on the Bowen Basin experience with similar material characteristics and not the site-specific geotechnical studies. This information is required to satisfy that the completion criteria relevant to the final landform/PMLU will be safe, stable and self-sustaining.	stability of southern void.
14		The PRC plan states: "*The bulk of the final pit voids walls are assumed to be dominated by NAF overburden, with potential for AMD from areas of residual exposed coal before they are covered at closure in compliance with relevant EA criteria*." It is unclear which EA criteria for covering the exposed coal seams is being referred to. More importantly, the proposed cover is not supported by monitoring data confirming that it will effectively reduce water or air ingress to minimise AMD generation. This information is required to satisfy that the completion criteria relevant to the final landform/PMLU will be non-polluting.	Provide an updated PRC plan that includes all data and details demonstrating air water dynamics of cover material for Pit walls and its efficacy in reducing generation of AMD issues.
15	**3.5.3.3 Void Hydrology**	The final void water balance model (WBM - **Attachment F**) reported that: "*The salinity of the Southern void lake is forecast to continue to increase over time*…." with "….*lake water EC over 10,000 µS/cm within 70 years of closure*." The following issues have been identified: 1. Firstly, all inputs to residual void modelling need to be properly described to avoid reporting results that are not fit for purpose (QMRC, 2023). However, the WBM key assumptions (**Table 3.2 Attachment F)** only considered EC of Rangal Coal measures (1500µS/cm) and not Rewan Coal measures (48,540µS/cm – **Table 1-2 Attachment D**) whereby the latter is also going to affect the mining activities (**Figure 3-39**). 2. Secondly, water held in residual mine voids must be of sufficient quality to support a post-mining land use in the long term (QMRC, 2023). The water stored in south void has PMLU of stock watering (**Table 3-12**). However, based on WBM results (i.e., EC over 10,000 µS/cm within 70 years of closure) south void pit lake is not suitable	Provide an updated WBM that considers groundwater quality results from all hydro-stratigraphic unit(s) with potential to impact mining activities. Based on the results of the updated WBM, provide an updated PRC plan with appropriate end use for south void and/or water held within it.

		for stock watering in the long term (Australian and New Zealand Guidelines for Fresh and Marine Water Quality). This information is required to satisfy that the completion criteria relevant to the final landform will be able to sustain a nominated PMLU of water storage for stock watering.	
16	**3.5.1.8 Revegetation**	The PRC plan states: "*To ensure growth media will sustain the PMLU, mine material characterisation will be continually assessed throughout the mine life as will the analysis of soils prior to rehabilitation to determine if soil amendments (ameliorants or fertilisers) are required*." The effectiveness of these soil amendments heavily relies on the application method (i.e., mixing) and the depth of soil treated. There is a lack of detail on site preparation in terms of application and incorporation of ameliorants (i.e., gypsum) and fertilizers.	Provide an updated Rehabilitation Planning Part that includes details on site preparation for all areas regarding profiles, depth, sources of materials etc. Provide an updated Rehabilitation Planning Part that includes details on seed mixes, sources, and how germinating plants and young growing plants will be managed and protected.
17		There is a lack of detail for weed management. The PRC plan has identified two (2) weeds of management concern across the ML. The plan states that weeds will be proactively managed as per BME Weed and Pest Management Plan. However, this Weed plan has neither been summarised nor been provided along with the PRCP application. Weed management details are required to demonstrate that the land is suitable for the PMLU.	Provide an updated Rehabilitation Planning Part that includes details on weed management strategies.
PRCP Schedule			
18	**Completion criteria**	Not all completion criteria are SMART. The completion criteria are legally enforceable commitments once the PRCP schedule is approved and as such must be written in a manner to deliver on SMART principals.	Provide an updated PRCP schedule that includes criteria which align with SMART principles. This will also require an update of the Rehabilitation Planning Part to ensure consistency between the documents.

19	**General (inconsistency)**	For RA6 PMLU, there is inconsistency between rehabilitation planning part (water storage) and PRCP schedule (grazing).	Provide an updated PRCP Schedule that addresses the inconsistency for RA6 PMLU between rehabilitation planning part (water storage) and PRCP schedule (grazing).
20		For total area disturbed and rehabbed, there is inconsistency between rehabilitation planning part (424ha) and PRCP schedule (422ha).	Provide an updated PRCP Schedule that addresses the inconsistency for total area rehabbed between rehabilitation planning part (424ha) and PRCP schedule (422ha).
21	**RM1**	More specific criteria are required to demonstrate that all the infrastructure, other than those agreed to be retained by the landholder, has been decommissioned and removed.	Provide an updated PRCP Schedule that includes SMART decommissioning and removal criteria. Signed landholder agreement(s) to be provided where the application proposes retained infrastructure.
22	**RM4**	Topsoil suitability criteria have not been provided. Topsoil criteria are required to demonstrate that land is stable, non-polluting and will sustain PMLU.	Provide an updated PRCP Schedule to include SMART criteria regarding topsoil quality and its suitability for rehabilitation activities.
23	**RM5**	Revegetation criteria are not SMART and lack details such as fencing, seed species to be used, application methods (e.g., tillage, ripping), evidence of natural recruitment, application of soil.	Provide an updated PRCP Schedule to include SMART revegetation criteria.
24	**RM6**	Criteria for achievement of surface requirements are not SMART and lack details about groundcover (including low wall), erosion (rate and classification), soil suitability, water quality, weed management.	Provide an updated PRCP Schedule to include SMART criteria for '*achievement of surface requirements.'*

		Erosion criteria are required to demonstrate that land is stable and non-polluting. The purpose of the water quality criteria here is to demonstrate any short /medium term effects from the land surface on the receiving environment surface water.	
25	**RM7**	Weed criteria have not been provided. Weed criteria are required to demonstrate that the land is suitable for the PMLU. Weeds should include more than just declared weeds.	Provide an updated PRCP Schedule to include SMART weed criteria.
26		The criteria propose land class suitability of class 4. This land class is not suitable for grazing and is not necessarily able to sustain grazing in the long term (refer to item 4 above for further detail).	Provide an updated PRCP Schedule to ensure the land suitability class is able to support the PMLU proposed and include information in the Rehabilitation Planning Part to support this.
27		Soil suitability criteria (e.g., root zone EC) have not been provided. Soil suitability criteria are required to demonstrate that land is stable, non-polluting and will sustain the PMLU.	Provide an updated PRCP Schedule to include SMART criteria regarding soil suitability and indicator parameters for soil monitoring.
28		Surface water quality criteria is lacking details on monitoring locations, and frequency. Therefore, the criteria are not measurable. Water quality monitoring is required to demonstrate the land has achieved a stable condition and is non-polluting.	Provide an updated PRCP Schedule with revised water quality criteria to include surface water monitoring locations, and frequency.
29		Groundwater monitoring criteria is lacking details on locations, frequency, CoC and limits. Making reference to the '*water management plan*' does not make the criteria measurable.	Provide an updated PRCP Schedule with revised criteria to include groundwater monitoring details (e.g. locations, frequency, quality characteristics and limits). PRCP schedule conditions and criteria

			should be separate from the EA.
30		Surface water receiving environment water quality monitoring has not been included. Water quality monitoring is required to demonstrate the land has achieved a stable condition and is non-polluting.	Provide an updated PRCP Schedule to include surface water receiving water quality criteria including monitoring locations, quality characteristics, limits and frequency of monitoring.
31	**RM8**	Water storage criteria for stock watering are not SMART. For instance, the criteria states: "*Water Quality meets the relevant Water Quality Objectives (WQO) Guidelines*." Such language does not make the criteria measurable. There should be reference to specific guidelines, or a Table listing quality characteristics to be measured/monitored to make sure stored water can sustain PMLU (i.e., stock watering). Moreover, it lacks details about monitoring duration (i.e., 5 consecutive years) for which the stored water must meet Guideline values.	Provide an updated PRCP Schedule to include SMART water storage criteria to sustain PMLU.
Note that the milestone criteria will be further considered throughout the PRCP process.			