

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 site-specific environmental authority and proposed PRC plan.

To: Coking Coal One Pty Ltd
Level 19, Waterfront Place
1 Eagle Street
BRISBANE QLD 4000

ATTN: Mark Imber
imbers@cdmsmith.com

Our reference: APP0060905; MLA700062; MLA700063

Further information is required to assess an application for a site-specific environmental authority and proposed PRC plan

1. Application details

The application for a site-specific environmental authority and proposed PRC plan was received by the administering authority on 7 October 2020.

The application reference number is: **APP0060905**

Land description: MLA 700062; MLA 700063

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 A attached.

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 –

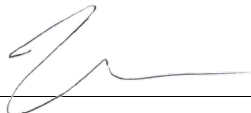
- i. stating that you do not intend to supply any of the information requested; and
- ii. asking the administering authority to proceed with the assessment of the application.

A response to the information requested must be provided by **31 December 2021** (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.

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



Signature

17/12/2020

Date

Juliana McCosker
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: (07) 4987 9320
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Attachments

Appendix A: Information request

Information sheet: Internal review and appeals (ESR/2015/1742)

Appendix A Information Request

Appendix A Information request

General		
Section	Comment	Requirement
EA application supporting documentation	Additional mapping would provide for a better understanding and allow for streamlining during the EA development process.	Provide mapping of proposed MLs, disturbance footprint and monitoring, gauging stations and release point locations for inclusion in the EA.
Supporting information and appendices	Ensure all details updated through this information request are updated in the EA application supporting documentation and appendices.	Ensure consistency between supporting document and appendices following Information Request (IR) updates.
Surface Water		
Section	Comment	Requirement
EA Application supporting documentation Section 6 Surface Water Table 6-2, 6-6, 6-7, 6-8	Environmental values and default guidelines Given the environmental values (EVs) identified for the region, the omission of human drinking water guidelines are notable in the various comparison tables. In particular, for those indicators which in fact have more stringent total metals guidelines for drinking than those adopted within the application from irrigation and stock watering.	Review and update application material to include human drinking water guidelines where applicable.
EA Application supporting documentation Section 6 Surface Water Table 6-5 Regional water quality monitoring data summary	Water quality objectives The surface water regional water quality monitoring data comparison to water quality objectives (WQOs) are incorrectly undertaken. Key concerns include: - The use of “Red Hill Mining Lease – Lower Isaac River” monitoring data and “Isaac River at Deverill” unspecified data sets for appraisal of the relevance of scheduled of regional WQOs is incorrect. These monitoring points are coal mine impacted monitoring locations and the data collection period may include coal mine discharge periods. - No information is provided regarding the number of data points, data collection period, and the statistical treatment of the “regional water quality” data. The report states “some readings at the Red Hill Mining Lease are at or above the regional	Review and update the water quality objectives identified within the EA application supporting documentation to include all identified concerns documented in the comments section.

	WQOs” (pg. 248). Methods for comparing data to WQOs are outlined in the QWQGs and should be followed. • Following review of the available data it was unable to be determined if the data utilised was raw data. The use of ‘maximums’ for example is not the correct method for statistical comparison to WQOs. • Many of the WQOs presented in Table 6-2 WQOs and EVs relevant to the Project (pages 234-235) have not been included in Table 6-5 for comparison. • Aluminium – Total value “triggers” the drinking and stock watering guideline yet this is not highlighted within the application. Note. The department requires comparison of any locally collected data to WQOs be accompanied with all meta-data of measured data, including; min concentration, max concentration, detection limit, median concentration, 80th percentile concentration (and 20th for pH, DO), 75th percentile for EC, 95th percentile concentration, number of samples (n=) etc. Importantly, only data that can be established as non-impacted “background” water quality data is used in comparisons aimed at establishing locally relevant guidelines.	
EA Application supporting documentation Section 6 Surface Water Section 6.5.4.1 Figure 6-16	Water quality objectives There appears to be inconsistencies in the use of methods of the comparison of water quality monitoring data and WQOs. Figure 6-12 Turbidity Regional Water Quality Data, Figure 6-16 Total Nitrogen Regional Water Quality and Figure 6-18 Total Phosphorus Regional Water Quality depict that SW1 has, in fact, met the relevant WQO (from the data presented). However in the text it states that this graphing justifies the need for a locally derived water quality guideline. Refer to the QLD water quality guidelines to ensure accurate understanding of the statistical derivation process for WQOs and statistical methods for appraising compliance with WQOs.	Review the QLD water quality guideline and review and update the EA application supporting documentation ensuring consistency between figures and statements made.

EA Application supporting documentation	Surface water management and the application for a no discharge mine affected water (MAW) site	Review the site water balance model relating specifically for site discharge and MAW. Provide the below as a minimum:
Section 6 Surface Water	The application states “the main aim for the Project is for no actual or potential discharge to waters of contaminants that may cause an adverse effect on an EV from the operation of the Project” (pg. 232). The application requests no end of pipe conditions in terms of MAW discharges flow, timing, quality, or monitoring requirements. Rather, a sediment dam system has been proposed with limited conditioning.	- Provide a more detailed Site Water Balance Model. - Provide data and justification of groundwater infiltration volumes detailing how the site will achieve ‘complete evaporation in a timely manner’.
Section 6.2.2		- Detailed hydrogeological modelling is required to be presented as for example groundwater infiltration can not be supported with the present information available.
Section 6.6.3	Following review of the application documentation it has been identified that there is insufficient justification presented for a no release approach based on the provided preliminary site water balance and definitions of water types. The balance assumes that all groundwater infiltration volumes will be completely evaporated in a timely manner, however no data is presented. Also, an assumed low rate of groundwater infiltration (<0.1ML/day) has not been supported with hydrogeological modelling or any quantitative estimates. Rather a general assertion that surrounding coal mines have already impacted and reduced groundwater flows in the Rangal Coal Measures is the main justification provided that no MAW release conditions are proposed. Limited discussion is presented regarding the possibility of groundwater infiltration which may increase subsequent to sustained wet weather periods and this possible variability has not been included in the GoldSim preliminary site water balance (though the application suggests that further site water balance modelling is to occur post EA approval). The application document discusses ceasing pit operations (active mining) if MAW levels become higher than anticipated yet this is not reflected within any of the proposed EA conditions, hence there is less certainty of the long-term commitment of this strategy. In addition, the definition of waste rock run-off as sediment only has not been supported with any data or estimates. Note. The department would advise the EA application should include site specific MAW discharge conditions. Even if these release conditions are never needed, it would be better to have planned for MAW discharges, if it is required. In particular, if the waste rock run-off should be characterised as MAW (until future evidence adequately assess otherwise), the	- Provide further detail and justification on how groundwater infiltration may be impacted following sustained wet weather periods. - Include point above into the GoldSim preliminary site water balance model. - Review proposed conditions to ensure conditions reflect the requirement to cease pit operations (active mining) if MAW levels become higher than anticipated. Provide further justification and detail around this requirement including levels etc within the supporting documentation. - Provide further details and justification on how the waste rock dump run off water can be classified as ‘sediment only runoff’. If no evidence is available for this classification then including the waste rock dump area within the MAW footprint area is recommended. - Further clarification is required on the management of the MAW dam. Ensure contingency planning is included if all MAW cannot be reused on-site i.e. during long periods of wet weather when use for dust suppression is not appropriate.

	volumes of MAW originally considered in the preliminary site water balance will be required to be increased and may alter the dam and release designs. Note. Release limits and receiving environment trigger values are required. Until these are established no release to surface water can be authorised. For receiving environments to determine the site-specific trigger value, the 80th percentile of base flow background data at the upstream monitoring point should be calculated. If a minimum of 8 samples collected over at least 12 months (preferably 24 months) as per the Queensland Water Guidelines (2013) have not been collected, then the most relevant Department of Resources (DoR) gauging station would be more appropriate to determine site specific release trigger values based on regional data.	
EA Application supporting documentation Section 6 Surface Water Section 6.5 Section 6.7	It is acknowledged that the proposed project has no authorised release of MAW, however the application is proposing to release water from the onsite sediment dams. Receiving water trigger limits are required to monitor the release to the receiving environment. It has been noted in the supporting documentation that the catchment of North Creek includes allowed releases from Moorvale Mine, therefore further detail is required on cumulative impacts and how this will impact on how release water quality indicators will be derived. This would affect baseline data and be required to ensure an understanding of the upstream and receiving environment. Note. According to RIVERS Carborough Downs Coal Mine also releases to North Creek.	Review and provide further detail on: - The upstream environment data; - The receiving environment data; - The receiving water trigger limits and monitoring locations; - Cumulative impacts caused by the proposed introduction of this greenfield mines release water; and - Ensure all potential impacts upstream have been included in the assessment and justification.
EA Application supporting documentation Section 6 Surface Water Section 6.5	The absence of rainfall during the study period (April 2019 – November 2019) has meant that baseline data for the receiving environment for North Creek is not available. Given that appropriate baseline data is unavailable it is suggested that regional and or WQO/ANG are applied.	Collect ongoing additional baseline data to ensure adequate data is provided to assess the potential impacts of release of waters to the system. If no additional information is available, referring back to the WQO/ANG will need to be updated within the documentation including justification on how these criteria would be able to be achieved.

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EA Application supporting documentation Section 6 Surface Water Section 6.5.3	Data included from Olive Downs EIS for some downstream sampling points has been utilised, however it was noted that, 'The EIS for Olive Downs notes some of the samples were taken from pooled water as no flow was present at the time of sampling; however, there is no indication as to which samples this is relevant to' (pg. 249).	Review and provide further detail on whether this information is appropriate to be included in the assessment.
EA Application supporting documentation Section 6 Surface Water Section 6.6	The discussion section relating to flooding is limited. The supporting documentation discusses that flooding may occur from North Creek but no stream gauge is installed in this tributary with 'reasonable to expect' characteristics described. It was detailed that 'there is absence of site-based rainfall or flow records' and therefore parameter validation for continuous simulation not deemed applicable (Supporting documentation pg. 263). The document appears to lack confidence in the outcomes of the modelling and impacts on surface water quality. Additionally, pg. 270 discusses reduced flow due to the project.	Further clarification is required to understand the potential outcomes of flooding.
EA Application supporting documentation Section 6 Surface Water Section 6.7	Further clarification is required on the management of the sediment dams in particular Sediment Dam 1 and the management of releases.	- Further clarity/detail to ensure the water is determined to be adequately treated through the proposed methods. - Clarify how the sediment dam's water will be 'treated' if the SD1 is full and it is raining. - Clarify what conditions are required before releases are predicted. - Clarify if releases proposed are only when North Creek is in flow, at a specific flow. - Clarify if there is the ability to stop the release. Include justification for this including how the EVs potentially impacted will be protected. - Identify if there are flow gauges on the release proposed to determine the volume that is released.

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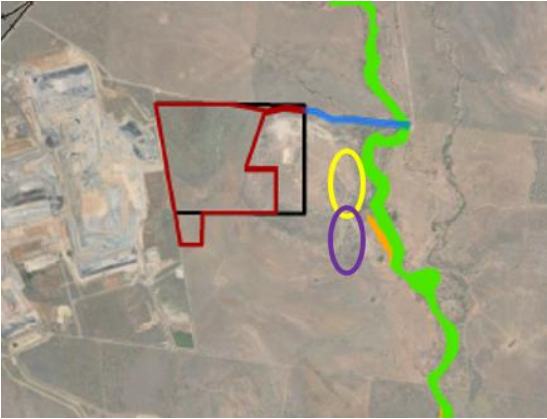
		- Identify if modelling has been conducted to determine the likely contamination from releases during different events. - Provide additional details regarding the design of 'treatment' dams and how releases will occur including modelling to justify how releases will not cause impacts. - It is stated that SD1 meets requirements however is close to but potentially smaller than the optimum size (pg. 306). Provide details on why the dam has not been designed and assessed for operational/optimum size.
Groundwater		
Section	Comment	Requirement
EA Application supporting documentation Section 7	Site specific groundwater monitoring program: characterising variability It was noted that recent site-specific groundwater monitoring included 8 groundwater bores sampled on 2-3 occasions each, with 5-8 months interspacing each event. All monitoring bores are listed as broadly targeting the "Rangal Coal Measures" (apart for Bore 11 which is missing details of bore characteristics and screening). Establishing baseline data that captures as much natural variability as possible, provides the optimised dataset for establishing site specific triggers and limits for future environmental assessment. Also, the influence of wetter vs. drier years is also important to investigate for this greenfield location. Note. The department recommends ongoing monitoring and highlights the opportunity to monitor ground water quality during the upcoming predicted La Nina for summer/autumn 2020/2021, as well as beyond.	- Review and update bore information with any further data collection as available. - Further characterise groundwater variability including seasonality (as we note that sampling has occurred primarily in winter and spring to date). - Complete ongoing groundwater monitoring (the upcoming predicted La Nina for summer/autumn 2020/2021 may provide excellent opportunity).

EA Application supporting documentation Section 7	Site specific groundwater monitoring program: Alluvium Hydro-geologically, the reports identify the local “Alluvial deposits proximal to waterways” (but off-site) as the main aquifers of note in the region. However, no baseline monitoring data is presented for these groundwater aquifers, therefore defaulting to the Groundwater Management Area (GMA) Groundwater Unit 1 WQOs. It is unclear if monitoring data presented from Bore 11 represents alluvium as it is not mentioned in the reporting. Hence the department is unable to verify if local alluvium water quality is represented by the suggested Unit 1 WQOs. Note. The department recommends that future planned comprehensive alluvium baseline monitoring as per the proposed EA conditions (and refer to the comments below in relation to the ideal positioning of these future bores) is established.	Review and update documentation, ensuring alluvium baseline monitoring has been comprehensively included.
EA Application supporting documentation Section 7 Figure 7-14 to 7-17	Site specific groundwater monitoring program: Bore grouping and utilising bore monitoring data for either site specific limit derivation or regional assessments The department has suggested some potential grouping of bores, however it should be highlighted that all but 2 of the listed bores will be replaced by the officially proposed reference and compliance bores which are listed within proposed EA conditions (and for which no monitoring data is available to date, hence the department cannot reliably appraise this suggested approach – given appropriate reference bores are difficult to find). This proposed replacement of bores is partially because mine infrastructure construction will interfere with original bore locations. It does appear that PPD001A & B may continue within the future monitoring program (re-labelled CB07 & CB08), however this is not explicitly discussed. If using site specific groundwater limits then the referential approach may not be appropriate contextually. Monitoring of up gradient bores can provide context and be used to interpret results from compliance bores. The process of gathering WQ datasets with the goal of determining site-specific groundwater limits/triggers from baseline data is complex. It is important to highlight that	If the application is anticipating utilising site-specific limits extensive groundwater bore monitoring and data collection and analysis is required to be completed.

	any trigger/limit derived is specific not only to the mine site, but also the type of groundwater targeted and/or particular bore/s. Screening details from current monitoring bores, are suggested to fall broadly into 3 Groups (A, B, C) from the departments preliminary analysis. This has been based on the piper plots (Figure 7-14 to Figure 7-17) and on observations of boxplots for water quality indicators. Water types within Bore 11 and WW04A contain variable water quality to each other as well as to all the PPD-labelled bores (n=6). Appropriately grouping similar groundwater bores together before undertaking summary statistics is necessary. For Bore 11 and WW04A, as an example, these should be compared to guidelines separately. Additional data characterising the local Alluvium is also a key data gap from this assessment. It has been identified that all the bores listed in Table 1 were grouped into one group (Section 7.4.8.3), and then statistical analysis was undertaken (50th, 80th percentile etc) for comparison to WQOs. This approach of indiscriminate grouping is not supported as a conditioning or environmental appraisal approach. To determine site-specific groundwater limits/triggers from baseline data, full consideration of bore grouping and QA/QC of data will be necessary (refer to the Groundwater Guidelines (DSITI 2017) for specific criteria and methodology). Careful consideration of the applicability of recent monitoring bore data to future planned monitoring bores (CB01-CB08) will also be required, given the nature of variability in groundwater. The department supports the plan to acquire more bore specific data from the future proposed monitoring bores before activities commence.	
EA Application supporting documentation Section 7	Site specific groundwater monitoring program: Bore grouping and utilising bore monitoring program for either site specific limit derivation or regional assessments The application has requested to apply the regionally specific WQOs for groundwater as part of the EA condition limits (for EC etc), however for certain indicators the WQO listed in regional specific documents are much higher than those observed to date for the site specific monitoring. It is not the intention to contaminate groundwater, hence where possible site-specific information regarding groundwater quality should be utilised.	- Where available from collected groundwater monitoring site-specific EA condition limits are required. Update and provide justification where site-specific data collected has identified levels lower than the WQOs. - Ensure ongoing groundwater monitoring is completed to ensure a rigorous baseline dataset is collected and provided to inform groundwater condition limits.

	As an example, it is not supported that future alluvial monitoring bores are considered in compliance if they are observed to degrade to any EC value up to 8,910 uS/cm (shallow groundwater WQO). The application document mentions that “much fresher” water quality is found in the local alluvium. However, no baseline data for the adjacent alluvium has been presented in the application to justify the use of this trigger level as being protective of this valuable water. The “deep” groundwater WQO suggested as the ongoing trigger in the EA in compliance bores is higher than all monitoring data presented to date (WQO:16,000 µS/cm as compared to maximum observed from all site specific bores on all occasions of 13,000 µS/cm). There is insufficient local data to date (as per other comments) to undertake a detailed statistical analysis of the possible triggers from our preliminary suggested bore groupings. It is recommended that further data is collected to ensure a robust limit/trigger calculation process. The preliminary 80th percentile for EC at the Group C bores (target coal seam bores) is 9,560 µS/cm (n=9) (95th percentile: 12,500 µS/cm). More data points would be required to reliably calculate a 95th percentile (once sufficient data is collected) this could be used to compare to 3 consecutive exceedances as a noncompliance (with quarterly monitoring) (as per the approach discussed in Groundwater Guideline). Again, remembering this would need to be on a bore (or bore group) specific basis. This approach has the advantage of identifying upwards trends more rapidly, without unnecessarily triggering exceedances due to natural variability. In summary, the department advise that the current proposed triggers are not supported in their current presentation. Using an approach of triggering at livestock WQO is not considered scientifically justified as a compliance approach given the site-specific data returns a somewhat better water quality for many parameters. In particular, the department strongly advises against the proposal to compare median of 8 test data at compliance bores against these suggested triggers (and we wish to highlight that will take 4 years before compliance will be tested at the proposed monitoring frequency). Given the mine life	
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	is proposed for 5 years, this effectively means almost no or little compliance opportunities for GW across the mine-life if the proposed conditions are accepted in this form. Even when compliance calculation commences in 4 years, licensing which permits exceeding stock guidelines 50% of the time is not supported as providing suitable protection for groundwater. Further work and justifications are still required in terms of the licensing conditions for groundwater. It should be noted that 'TBA' in approval conditions are not supported in general.	
EA Application supporting documentation Section 7 Figure 7.21, 7.8	Location of future proposed bores Waste rock storage areas may be associated with seepage into subsurface groundwater flows, and for coal mine waste rock this can include declines in water quality for EC, sulphate, and pH. Similarly, for wastewater dams require seepage monitoring downgradient of the structures. Typically, seepage monitoring programs are designed to monitor for potential subsurface impacts for areas down gradient of the proposed waste rock storage and/or industrial dams (and other relevant potential contaminant sources). The proposed monitoring design for groundwater includes Bore CB05 and CB06 as shallow groundwater monitoring locations. However, the department notes that CB05 does not appear to be clearly downgradient from Sediment Dam 1 (SD1) on the basis of the projected flow gradients (presented in Figure 7.8). CB05 appears adjacent to SD1 rather than down gradient (from Figure 7.21) and further clarity is requested in relation to the justification for the monitoring bore proposed location for CB05, and in general for others, in particular in relation to the proponents presentation of predicted groundwater flow directions. This is required to ensure that the monitoring program design commences as fit-for-purpose. Seepage monitoring in subsurface/shallow groundwater flow for areas downgradient of the proposed waste rock storage, and various dams requires further consideration and clarification as part of this proposal.	- Review and provide justification on where the groundwater bore locations are proposed in relation to groundwater flow gradients i.e. CB05. - Ensure the application provides justification of groundwater bore locations in relation to potential impacts i.e. sediment dams, waste rock dumps etc.
EA Application supporting documentation Section 7	Future Alluvial monitoring design Ongoing, long term monitoring at alluvium targeted locations CB02 and CB03 is supported by the department and should include both water quality and water level given the relative proximity to the high potential groundwater dependent ecosystems (GDEs) located to the east of the proposed project area beside North Creek. Discussion and justification should	Explanation and justification for the reference condition of RB02 should be presented. It is not clear if the reference bores are influenced by other mines in the region.

	be provided regarding the certainty related to groundwater flow direction and for the selection of the locations in relation to anticipated groundwater directional flows. For example, in addition to CB02 and CB03 (approximately within the yellow circle indicated below), an additional monitoring bore within the purple circle (further south) is recommended. 	
EA application form – section 17 EA Application supporting documentation Section 7	Section 17 of the 'draft' application form has selected 'Yes' within attached supporting documentation, however the information provided within the EA application supporting documentation does not provide enough details regarding Section 17 of the application form.	Provide further clarification for the following points: - Further detail is required for the areas in which underground water rights are proposed to be exercised. - More detailed description required of the aquifer(s) likely to be affected by the exercise of underground water rights. - Additional information required to provide analysis of the movement of underground water to and from the aquifer. This includes how the aquifers interacts with other aquifers and surface water i.e. Rangal Coal Measures with alluvium etc.

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		- Further detail regarding the area of the aquifer where the water level is predicted to decline because of the exercise of underground water rights. - It has been detailed the volume of groundwater that is predicted to be dewatered as being 0.1ML/day however further clarity and justification of how that figure has been sourced is required. - More detailed information is required on the EVs that will or may be affected by exercising underground water rights and the extent of the impacts. - Further details are required on the assessment of the quality of groundwater that will or may result from the exercise of groundwater rights.
EA Application supporting documentation Section 7	Seven groundwater bores drilled in 2019 (with 6 of those being paired together) do not provide enough detail to have an understanding of the groundwater system (quality, flow, drawdown etc.). Utilising groundwater information from a 'nearby' site can be used for some interpretation but more rigorous monitoring is required on the site and be specifically designed for the interpretation of the project. In addition, comments relating to these 'nearby' groundwater bores indicate that important information is unknown including if pumping from the bore occurred and if the bore is actually representative for the Project (pg. 349). Furthermore pg. 352 details groundwater quality with seven bores being sampled only twice with one of the bores providing vastly different results i.e. EC ranges 8000 to 12000uS/cm for 6 bores and 600 to 1600uS/cm for the one bore. Further data is required to be able to interpret the ranges in groundwater water quality.	Groundwater modelling and justification provided in the supporting document requires further information.
EA Application supporting documentation Section 7	Section 7.1.7 details that there are two groundwater resources identified within a distance of 5km to the Project including shallow groundwater localised in the alluvial sediment deposits along North Creek, the Isaac River and groundwater in the Rangal Coal Measures. It is noted that the alluvial sediments are outside the Project.	Further detail is required to determine that the Project will not impact on these alluvial resources including whether they are outside the project area.

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Section 7.1.7		
EA Application supporting documentation Section 7 Section 7.5.12	Section 7.5.12 details that local dewatering of the Rangal Coal Measures and Fort Cooper Coal Measures will occur.	Detailed modelling must be provided with justification of how the modelling details that it will only occur locally. Include the potential impacts that may occur from the dewatering of the coal measures and surrounding groundwater.
EA Application supporting documentation Section 7 Section 7.5.13 Section 5.6.4	Section 7.5.1.3 details that contamination may occur from the waste rock dumps and sediment dams. In addition, section 5.6.4 also details that studies indicated a potential for leachate from interburden and overburden waste including elevated concentrations of boron, iron, manganese, aluminium and uranium.	Further details on additional groundwater monitoring locations is recommended to ensure all possible contamination is identified and mitigated. Further hydrological modelling and potential impacts are required including justification and mitigation measures.
EA Application supporting documentation Section 7 Section 7.5.1.5	Section 7.5.1.5 details that there is little potential for the mining development to affect the water courses.	Provide evidence including modelling that demonstrates that they will not be impacted and how monitoring will occur to ensure this does not occur. The wording utilised in the EA documentation being 'little potential' is not a definitive outcome. Provide details regarding how it may be impacted including mitigation measures.
Groundwater Dependent Ecosystems		
Section	Comment	Requirement

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EA Application supporting documentation Section 7 Section 7.1.7	Pg. 335 of the supporting documentation details 'it is very unlikely that there will be any interaction with any surface watercourses or associated GDEs due to dewatering of the proposed pit' and 'dewatering volumes from the mine pit will be small and will have little impact on the groundwater environment and associated GDEs, being restricted to the area close to the pit'.	Provide further details including modelling results of drawdown contours that quantify these broad statements of no impacts to GDEs.
EA Application supporting documentation Section 7 Section 7.4.10	The supporting documentation details that desktop investigations were completed to assess the location of potential GDEs in the vicinity of the study area. Field investigations presented were in broader regions of Olive Downs South MLa700032 and MLa700033 and Willunga MLa700034.	Provide details of whether there has been any field GDE studies completed for the actual study area specific to this project. More detail is required including the presence/absence of GDEs following ground truthing verification by an appropriately quality person.
Soil and Land Use		
Section	Comment	Requirement
EA Application supporting documentation Section 4	The supporting documentation discusses land suitability classification referencing LSAT Guidelines (Department of Mines and Energy (DME) (1995). Technical Guidelines for the Environmental Management of Exploration and Mining in Queensland, Department of Minerals and Energy Queensland Government).	It is recommended that the land suitability assessment utilises the latest Guideline for Agricultural Land Evaluation in Queensland 2015 for up to date information and the assessment is presented.
EA Application supporting documentation Section 4 Section 4.3.4.3	Acid sulfate soil sampling has not been undertaken. Section 4.3.4.3 of the EA supporting documentation states 'The CSIRO National ASS mapping illustrates that the bulk of the Project area is described as having an extremely low probability of containing ASS. Given the Project is located between approximately 230m Australian Height Datum (AHD) and 240m AHD with exception of the eastern side of the project area where two small hills rise to up to 270m AHD, the presence of ASS is considered extremely low and as such, specific ASS sampling has not been undertaken' (pg. 166).	It is recommended that sampling is undertaken to ensure adequate evidence to confirm statements made within the EA supporting documentation.

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	Page 175 of the EA supporting documentation also states 'no potential for ASS has been found'.	
EA Application supporting documentation Section 4 Section 4.3.4.3 Section 4.4.1.2	Page 149 (section 4.3.4.3) details an average of 0.2m topsoil thickness, whereas section 4.4.1.2 details 0.3m topsoil depth. Note. Ensure there is information on the topsoil and overburden placement as it appears that flora growth will be inhibited by zinc levels in interburden and overburden (pg. 208)	Provide further details regarding topsoil volume estimations and whether a topsoil deficit is likely. Include consistent topsoil depth stripping and rehabilitation across sections (0.2m or 0.3m are both discussed).
EA Application supporting documentation Section 5 Section 5.6.3	Section 5.6.3 (pg. 208) of the EA application supporting documentation has detailed that metals present within interburden and overburden sampling may present a risk to fauna and flora growth.	Complete additional sampling and provide details and assessment regarding the risk to rehabilitation from the potential metals within the interburden and overburden material. Include mitigation measures including the identified suggestion that further monitoring may be required throughout the program (pg. 208).
EA Application supporting documentation General	It is recommended that the application material includes discussions around landform slopes and design including 15% max slope for grazing. It has been noted that there is a lack of detail regarding inward facing maximum slope angles of locations that water storages will be placed.	Update and include within the EA application documentation landform slope design or reference to location within PRCP documentation.
Terrestrial Ecology		
Section	Comment	Requirement
EA Application supporting documentation Sections 4, 6, 10 Section 6.3.1.2, 6.11.1	The disturbance footprint is mapped in the documentation as not disturbing remnant vegetation. For example, page 473 of the of the EA application supporting documentation states, 'This community is approximately 37 ha (approximately 11 % of MLa 700062) in size and occurs in the south eastern corner of MLa 700062 and <u>outside of the Project's disturbance footprint</u> '. Section 6 Surface Water of the EA application supporting documentation details that 'no increase to the existing disturbance footprint of the access road within the mapped remnant	Further clarification is required in the application material on whether any 'edge effects' may occur to the remnant vegetation from the proposed disturbance activities.

Section 10.4.4.1	vegetation in the vicinity of the mapped watercourses is proposed and as such no new impacts to regulated vegetation intersecting a watercourse is likely to occur' (pg. 236). Section 10.4.4.1 of the EA application supporting documentation details that CDM Smith adopted a conservative approach when considering conservation significant fauna species within the impact assessment (pg. 455).	
Aquatic Ecology		
Section	Comment	Requirement
EA Application supporting documentation Sections 6, 10, 12, 14	Section 6.3.1.1 (pg. 236) of the supporting documentation identifies wetlands including a High Ecological Significant wetland located 9km west of MLa700062. Two artificially created wetland areas a 'turkey nest' style dam and drainage line are located within the south-west portion of the study area that may have the potential to provide habitat. It was detailed that there are no predicted impacts from the project to wetlands. Section 12.4.2.4 also states 'there are no wetlands of high ecological significance on the Project site. Dipperu National Park is the nearest National Park, located approximately 35 km west, northwest of the site'. Section 14 (pg. 634) 'The mapped terrestrial vegetation and a number of small wetlands along the Isaac River and North Creek have a high or moderate potential for groundwater dependence'.	The supporting documentation discusses a number of potential wetlands in the study area however it is unclear and not consistent throughout the document. Further justification is required on how it was assessed that no impacts to wetlands are predicted, including groundwater interaction through modelling.
Stygofauna		
Section	Comment	Requirement
EA Application supporting documentation Sections 7	The documentation has identified GDEs through desktop evaluation and reviewing information from other sites including Olive Downs with the statement, 'both studies investigated the potential for stygofauna in these regions' (pg. 375).	As the EA supporting documentation appears to base the information on desktop and literature review evidence, it is recommended that additional information/sampling and justification be provided to determine the potential for stygofauna (whilst considering the above comments and requirements regarding GDEs).

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		Provide further detailed justification of groundwater sampling evidence (number of samples, locations, seasons etc.).
Air Quality		
Section	Comment	Requirement
EA application supporting document	The EA application supporting documentation details that background air quality levels were adopted from a number of sources including ambient air quality data from the DES Moranbah station and literature values sourced from recent coal mining EIS studies.	Review the background air quality levels to ensure adjacent mining air quality has been included in the cumulative impact assessment. Provide clear details and justification detailing how the significant mining activity adjacent to the proposed activity has been included in the adopted background air quality values.
Section 5.4.3 Section 8. Air Quality and Greenhouse Gas Emissions. Appendix B	A cumulative impact assessment was prepared on the basis that the adopted background air quality levels represented existing mining impacts. However, the pollution contour figures provided at Appendix B show significant mining activity adjacent to the proposed project. It is not clear how the adopted background air quality values could represent the impacts associated with the adjacent mining activities. Background values based on existing mining operation air quality monitoring would give a more reliable representation.	If available obtain additional background values based on existing mining operation air quality monitoring to give a more reliable representation.
EA application Supporting documentation	24-hour average PM10: the maximum predicted 24-hour average PM10 ground-level concentration for sensitive receptor R5 was 45 micrograms per cubic metre, stated to be “below the 50 microgram per cubic metre criterion”.	Review and provide further details as the maximum 24-hour average PM10 at sensitive receptor R5 is close to the criterion provided within the documentation.
Section 14 Conclusion (pg. 635)	Annual average PM10: the maximum predicted annual average PM10 concentration was 22.9 micrograms per cubic metre, which approximates the 25 microgram per cubic metre criterion. The background value of 22.5 microgram per cubic metre was adopted from the DES Moranbah station – indicating that regional PM10 is already elevated.	Review and provide further details as the maximum predicted annual average PM10 concentration is close to the criterion provided within the documentation. As the DES Moranbah station indicates regional PM10 already being elevated, provide further details to justify the use of the DES Moranbah station for the background value.
Waste		
Section	Comment	Requirement
EA application supporting document	Section 5.4.5 Ecology provides details on the ecology of the site however does not state how Ecology may be impacted by waste.	Detail how waste disposed of on site may impact the Ecology EV including mitigation and management.

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Section 5.4.5		
EA application supporting document Section 5.3.2 Section 5.6	Mineral Waste 12 samples were analysed for acid generation potential however a large portion of the supporting documents waste section on acid generation discusses Olive Downs. It is recommended that the application material discusses other sites that are within the region but the overall understanding of the acid generation potential needs to be drawn from the onsite sampling and results.	Provide addition details, sampling, data and justification on management of mineral waste specific to the site.
EA application supporting document Section 5.6	Page 202 of the EA application supporting documentation states '12 samples of overburden and interburden material were tested for geochemical parameters'. It is unclear where these 12 samples were from (i.e. interburden or overburden), therefore, the department is unable to understand whether the risk is across the both interburden and overburden. Page 204 provides separation of the samples within the Olive Downs information and highlight two samples that are uncertain and classified as PAF. As such, a more detailed information and justification is required.	Provide further details including which samples were from the interburden and which samples were the overburden including results detailing the differences.
EA application supporting document Section 5.6.4	It is stated that there is 'limited data' (pg. 208) which may indicate the need for further investigation or justification.	Provide additional investigations and data to further justify interpretation of results for mineral waste potential to impact EV. Or provide justification as to why no further investigation and data is required.
EA application supporting document Section 5.10.2	Page 221 details saline drainage potential and potential to be highly sodic. It also identifies a very low potential for leachate from extracted waste rock to enter local waters and degrade water quality.	Provide further justification on why it is unlikely to affect waterways and water quality (including groundwater).
EA application supporting document	Non mineral Waste The application includes ancillary ERA 620 Waste disposal however it appears a full assessment of the potential impacts of the waste expected to be disposed of and mitigation and management has not been included. For example waste tyres and contaminated soil.	Provide a full assessment of the potential impacts of non-mineral waste stored and disposed of on site.

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Section 5.3.1		
EA application supporting document	Section 5.4.1 Land states that 'no non-mineral waste will be permanently disposed onsite, which reduces the risk of contaminants affecting the quality of the land'.	Provide details of where non-mineral waste is to be disposed; of on-site or not.
Section 5.4.1 Table 5-3	Table 5-3 Waste inventory, characterisation and management methods states: - 'earthmoving tyres will be disposed of in pit'; and - 'contaminated soil onsite remediation or disposal within mine pit'.	Provide details on the potential impacts including management and mitigation relating to disposing of non-mineral waste on site for example waste tyres and contaminated soil.
Progressive Rehabilitation and Closure Plan (PRCP)		
Section	Comment	Requirement
PRCP Application Supporting Document Section 3.2.1 Community consultation register	This section provides views from community members regarding the project. However, there is no indication how the community member is relevant to the project (adjacent landholder, downstream landholder). Also, this part indicates the underlying landholder is seeking a stock watering outcome for the residual void. It is unclear if this outcome will be achieved in the long term and whether groundwater will occur in the void from time to time and decreased water quality in the void will not suit stock watering 50 years after mining ceases.	Provide further information regarding how views of the underlying landholder and other stakeholders have been addressed by the rehabilitation strategy particularly relating to the quantity, quality and permanency of water in the residual void.
PRCP Application Supporting Document Section 3.2.2 community consultation plan	The guideline requires the PRC Planning part to provide specific information regarding future consultation. This section provides generic information only and does not provide the required information (including how and when stakeholders will be informed and what information will be released).	Provide detailed information regarding planned future community consultation required by the PRC Guideline.
PRCP Application	This section provides an assessment of alternative PMLUs and notes that the land "has been assessed as not suitable for pasture grazing due to low fertility" (pg. 70). However,	Dealt with further below under Section 3.5.4.8. Please address these inconsistent statements.

Supporting Document Section 3.3.1.2 WRD1 and other features, Section 3.5.4.8 How the rehabilitation method supports the rehabilitation milestones	Section 3.5.4.8 advises that fertility and dispersibility is acceptable for rehabilitation without amelioration (pg. 108).	
PRCP Application Supporting Document Section 3.3.2.1 (b) limiting factors	This section acknowledges that suitability for grazing is dependent on the open cut not holding permanent water and this is repeated throughout the document. The EA application states that groundwater levels in the area of the void are currently around 39m below ground level (around 180 – 184m AHD) based on limited monitoring undertaken during the dry season. The design of the void says the pit is around 28m deep at 190m AHD. Void water modelling provided in the void management plan indicates water levels will remain around 200m AHD for the median long-term prediction. The data provided indicates that the base of the void may be within 6-10m of the water table during the dry season but the void may retain surface water. There is no explanation regarding the interaction of surface and groundwater, and groundwater fluctuations that provide certainty that there will not be permanent water at the base of the void.	Provide groundwater monitoring data demonstrating potential seasonal variation in water level and quality. Provide detailed information regarding how void water level modelling provided in the void management plan will not result in permanent water body at the base of the void taking into consideration the dry season groundwater level appears to be 6-10m below the final void level.
PRCP Application Supporting Document Section 3.5.1.3(e) Vs Section	The first section notes that fertiliser is unlikely to be necessary for rehabilitation (pg. 89). The second section notes that overburden and interburden are strongly sodic which often have unbalanced nutrient ratios and may need to be corrected with added fertilisers (pg. 95). The LEM report demonstrates that 80% vegetation cover must be achieved to reduce erosion to “acceptable” rates.	Provide advice regarding what soil nutrients will be required to support vegetation growth necessary to achieve rehabilitation to a stable condition.

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3.5.1.4 (saline and sodic drainage potential)		
PRCP Application Supporting Document Section 3.5.1.4 Table 42 and discussion	Appendix C of the EA application provides geochemical analysis which indicates some samples may be PAF.	Include data from all geochemical analysis undertaken. Provide information about geochemical sampling regime during operation and how this will be used to inform mine development/management.
PRCP Application Supporting Document Section 3.5.1.4 saline and sodic drainage potential and section 7.1 of the mineral waste characterisation report (Appendix E).	This section notes that ESP can reach 61% and strongly sodic overburden and interburden is likely to have structural stability problems. It is unclear throughout the document how ongoing waste characterisation will identify the extremely sodic material so that it can be selectively placed at the bottom of the WRD or pit.	Provide further information about the ongoing monitoring and analysis to identify extremely sodic overburden and management measures proposed for the management of this material.
PRCP Application Supporting Document	The design plan is for all embankments/slopes will be battered to 15% or less with the intent to create a gentle sloping landform to facilitate grazing ingress. The cross sections presented in the void management plan demonstrates that the elevation difference	Provide justification that the nominated slope angle will be able to support the movement of grazing species and that the ingress/egress is viable.

Section 3.5.1.5 (a) Design plans	between the top of the void and the void floor is on average approximately 25m. There is a risk that the slope angle may not be viable for grazing animals to access.	
PRCP Application Supporting Document Section 3.5.1.5(b) Method for determining final landform design	Backfilling to 200RL within the LHD Pit is based on the assumption that groundwater occurrence is ~195RL in order to avoid long term ponding of runoff water in the bottom of the pit void. However, there is no information provided that verifies the occurrence of groundwater in the vicinity of this RL, nor is the seasonal variation of groundwater considered.	Details are required to verify the presence of groundwater within aquifers that can potentially ingress into the void. Provide a robust dataset that considers the seasonal variation of groundwater and impacts of groundwater recharge from localised dewatering ceasing at closure.
PRCP Application Supporting Document Section 3.5.1.5 (c) Key considerations	The guideline requires information about what QA/QC measures will be put in place to ensure the landform conforms with the proposed design. This section states “monitoring of all control measures will be performed”.	Provide further information about what QA/QC methods will be used to ensure the landform is constructed as designed.
PRCP Application Supporting Document Section 3.5.1.5 (d)	It is stated that landform evolution modelling was undertaken, however what is presented in this section are results from WEPP. LEMs allow the landscape surface to demonstrate change through time, which is not a function of WEPP. Although demonstration of stability through the use of a LEM is not mandatory according to the PRCP Guideline, it is necessary that trials are carried out during the rehabilitation planning stage to confirm the design predications prior to construction of the final site design.	Rephrase to portray and detail the type of modelling that was undertaken.
PRCP Application	This section acknowledges that erosion modelling demonstrates erosion rates will be acceptable once vegetation cover reaches 80%. It is not presented what would happen in	Provide detailed information regarding how erosion control will be undertaken in early stages of rehabilitation to ensure growth media remains on slopes.

Supporting Document Section 3.5.1.5 (f) Methodology to verify predicted success	the meantime and what measures will be put in place to ensure the topsoil stays in situ while vegetation is growing.	
PRCP Application Supporting Document Section 3.5.1.5 (f) Methodology to verify predicted success	This section references that the LEM (WEPP) will be calibrated and that successful rehabilitation of the final landform will be assessed through completion criteria and monitoring following the plan described in Section 3.7, which is validation of a model. However, the calibration of the model is not reflected in any completion criteria presented in Section 3.7.7.	Consider the calibration of erosion models as a demonstratable activity to be achieved in the completion criteria.
PRCP Application Supporting Document Section 3.5.1.7 Water Management	It is stated that the design for WRD1 will store rainfall and release it as evapotranspiration, however the final landform visualisation presented in the Void management plan does not show where water may be temporary stored, nor does the cover design specify the competency of the subgrade material to prevent surface infiltration of water.	Provide confirmation as to whether the landform is water retaining or water shedding. Provide further information on whether the WRD landform is to be internally draining or externally draining and what hydrological assumptions have been developed to mitigate ingress of surface water into the WRD.
PRCP Application Supporting Document	This section has considered the potential impacts of the WRD seeping into groundwater however given the topographical differences between the WRD and the proposed water storages within the final void, there is no consideration for surface water seepage.	Consider and provide details regarding the potential migration of WRD seepage water into the void.

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Section 3.5.1.7 Water Management		
PRCP Application Supporting Document Section 3.5.3.2 Infrastructure and buildings	This section proposes to dispose of infrastructure into the backfilled open cut. It is possible this material will be below groundwater level. There is no assessment about the risks and potential impacts associated with this activity.	Provide further information regarding the specific types and expected quantities of waste to be disposed of in the open cut from the mine infrastructure. Provide information regarding how the final landform will not result in ongoing contamination of the receiving environment from the infrastructure disposal.
PRCP Application Supporting Document Section 3.5.4.1 Voids	This section outlines how the open cut will be rehabilitated. However, timeframes for undertaking, completing the work and monitoring proposed to ensure the landform will comply with the concept design provided in the PRCP have not been provided.	Provide detailed information regarding the timeframes for reshaping of the open cut pit and QA/QC monitoring to ensure the landform complies with proposed design.
PRCP Application Supporting Document Section 3.5.4.1 Voids	The ability for the voids to sustain a PMLU is largely dependent on the hydrological regime and whether flooding can occur via groundwater recharge or surface infiltration. There are numerous statements in this section regarding groundwater characteristics when dewatering is occurring and how groundwater levels will respond when dewatering ceases, however there is no supporting numerical information to validate.	Provide validation around groundwater behaviour and interaction with the voids with reference to site-specific data, modelling and discussion around uncertainty.
PRCP Application Supporting Document	This section provides a description of how the rehabilitation method relates to milestones. However, specific monitoring methods to ensure rehabilitation is implemented according to the PRCP have not been provided.	Provide detailed information regarding the monitoring methods that will be implemented to ensure the landform will meet the design specified in the PRCP.

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Section 3.5.4.8		
PRCP Application Supporting Document	This section provides contradictory information regarding whether amelioration is required for soils. Soil analyses provided in Tables 15 and 16 indicate that addition of gypsum and fertilisers will be required to achieve a stable landform and LEM indicates that acceptable erosion rates would only be achieved with 80% vegetation cover.	Provide further information demonstrating the overburden material will remain stable and what ameliorants will be used to ensure a sustainable land use. Provide information demonstrating sufficient vegetation cover will be achieved to minimise erosion rates to those reflected in the LEM provided in Appendix F. Provide information regarding predicted erosion rates with vegetation cover $\geq 80\%$ compared to analogue sites. Provide information regarding how landform surfaces will be protected from erosion during the initial stages of plant growth and establishment to ensure a stable landform.
Section 3.5.4.8	This section also proposes for revegetation to meet $\geq 80\%$ compared to analogue sites. The LEM specifically requires 80% groundcover.	
PRCP Application Supporting Document	The risk assessment tables (49 and 50) contradict the risk treatment table (51).	Provide a risk assessment and risk treatment plan that are consistent and meet the requirements of the PRCP Guideline.
Section 3.6.3 Risk assessment. Tables 49 and 50 Vs table 51.		
PRCP Application Supporting Document	The body of the PRC Planning part provides contradictory advice to the Rehabilitation Plan attached as Appendix H.	Update the PRCP to reflect the mitigation measures outlined in the Rehabilitation Plan provided in Appendix H.
Appendix H		
PRCP Application	The rehabilitation criteria provides a target erosion rate of $<10\text{t/ha/yr}$ but the LEM advocates 6t/ha/yr . There is no information regarding erosion rates in the surrounding environment.	Provide information demonstrating an erosion rate of $<10\text{t/ha/yr}$ constitutes a stable landform where the pre-mining erosion rate had a median value of 1.1 t/ha/yr .

Supporting Document Section 3.1.3.7 Land stability and Rehab criteria		
PRCP Application Supporting Document Table 34 Completion criteria	The LEM report concludes that 80% cover (as vegetation) is required to achieve acceptable erosion rates. The completion criteria proposes revegetation $\geq 80\%$ compared to analogue sites.	Provide clear revegetation completion criteria.
PRCP Application Supporting Document Appendix I	It is stated in the Geotechnical report that all excavated slopes would be buttressed by fill material. However, the rationale is not explained in the PRCP and the material balance hasn't considered this scenario. As this statement appears in the geotechnical report and may have implications for a stable landform it is not considered to be erroneous.	Provide further information regarding the proposed buttressing of the excavated slopes.
PRCP Application Supporting Document Appendix I - Void Closure Plan Section 8.6	Figure 8-5 indicates that long-term water quality simulations show a trend of increasing salinity for final void water quality. A statement is made in section 8.6 that 'salinity in the final void is expected to increase over time' and this is supported by the trend demonstrated in Figure 8-5. Based on the simulated trend in the void closure plan, salinity levels of the stored water will not be suitable for use by stock or native fauna within a 100 year period. The cross sections provided in Figure 4-2 and Figure 4-3 indicates these water storages are steep sided and when viewed in conjunction with the final void configuration (Figure 4-1), and are located in relatively inaccessible areas of the final landform. No discussion is	Provide further information to demonstrate that the temporary water storages will provide safe and accessible stock watering points and are able to sustain the proposed post mining land use and that no harm will be caused by their presence on or in the land.

	found in the proposed PRCP to demonstrate that cattle will be able to safely access these temporary water storages. The PRCP needs to demonstrate that in the first instance these features will provide safe and accessible stock watering points, that after these features cease to hold water suitable for stock watering, they can sustain a PMLU and demonstrate no harm is being caused by their presence on or in the land.	
PRCP Schedule RM1 Section 3.5.4.8 How the rehabilitation method supports the rehabilitation milestones	Section 3.5.4.8 states that as part of RM1, the SD1, SD2, SD3 and MW1 will be desilted and backfilled using their embankments. This represents particular tasks necessary to achieved RM1 and is a measurable outcome which should be used to demonstrate successful completion of the milestone.	Update the Milestone Criteria for RM1 in the proposed PRCP schedule to verify SD1, SD2, SD3 and MW1 have been desilted and backfilled.
PRCP Schedule RM4 Section 3.1.4.2 Size, shape and design of mine features	Section 3.1.4.2 states the OCI design will include backfilling the LHD pit to 200RL to avoid long-term ponding of runoff water and to reduce the size of WRD1. This specification is necessary to ensure impacts to EVs are mitigated and the area achieves the final outcome of 'land in a stable condition'. The department requires this specification to be included as a milestone criteria for RM4 in the PRCP schedule.	Update the Milestone Criteria for RM4 in the proposed PRCP schedule to include the backfill specification outlined in Section 3.1.4.2.
PRCP Schedule RM4 Section 3.5.4 Methods to rehabilitate land	Section 3.5.4.1. states highwall portals will be sealed with none accessible from the final landform surface. This is an important action and measurable criteria to ensure the final landform will be safe and structurally stable.	Update the Milestone Criteria for RM4 in the proposed PRCP schedule to verify highwall portals have been sealed and none are accessible from the final landform surface.

to a stable condition 3.5.4.1 Voids		
PRCP Schedule RM4 Section 3.5.4.8 How the rehabilitation method supports the rehabilitation milestones	Table 46 describes how modifications to landforms or structures to improve management of surface water runoff will be undertaken as part of landform development and reshaping/re-profiling works. Currently, the criteria for RM4 does not include criteria to demonstrate the final landform has been developed to meet site drainage specifications.	Update the Milestone Criteria for RM4 in the proposed PRCP schedule to include a measure to verify the landform has been constructed to meet site drainage specifications.
PRCP Schedule RM6 Section 3.5.1.3 Soil and capping material assessment	Part f of section 3.5.1.3 lists a number of measures proposed to minimise the loss of soil during respreading and promote successful revegetation. These are important and measurable actions which should be included as milestone criteria for RM6.	Update the Milestone Criteria for RM6 in the proposed PRCP schedule to require a minimum 0.2m topsoil application, light scarification on the contour, and installation of appropriate erosion and sediment controls.
PRCP Schedule RM7 Section 3.5.1.8 Revegetation Appendix H – Revegetation Plan for the Isaac Coking Coal Project.	To ensure the proposed criteria for RM7 is specific, it should refer to the Revegetation Plan.	Update the Milestone Criteria for RM7 to state seeding is completed in accordance with Revegetation Plan for the Isaac Coking Coal Project CDM Smith (16 Nov 2020).

PRCP Schedule RM9 Appendix G – Landform Evolution Modelling Isaac River Coking Coal Project	Appendix G, Section 2.4 Target erosion rate states: “Regarding the pre-mining erosion rates and the studies mentioned above, a target average erosion rate of <5 t/ha/y has been adopted with the maximum erosion rate at any point on the landform of <10 t/ha/y.” Currently, the milestone criteria for RM9 is proposed as ‘maximum erosion rate of <10t/ha/yr’. To ensure this criteria meets SMART principles, it should be revised to accurately reflect the adopted rates used to inform the landform design.	Update the Milestone Criteria for RM9 to reflect the adopted rates used to inform the landform design.
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