



ATTN: Alison Cummings

Manager
Department of Environment and Science
Coal and Central Compliance

Email: Alison.Cummings@des.qld.gov.au

12 October 2023

Dear Alison,

Re: Spring Creek North Continuation Project Information Request Response – Response 2 of 2

1 Request for Information Summary

This letter has been prepared to address the Department's request for information (RFI) to assess the application to amend environmental authority EPML00370013 (application reference A-EA-AMD-100430427), issued to Rolleston Coal Holdings Pty Ltd (RCH) on 19th July 2023.

Table 1 of this letter contains the RFI as provided by the Department, and the relevant response from RCH, incorporating information and advice from technical specialists. Section 2 contains additional supporting information, referenced within the **Table 1** responses. A number of technical reports are also appended to this response. An Appendix list is provided in **Section 4** on page 18.

As agreed with the department, this letter provides the second part of a two-part response, with the first response issued to the department on 29th August 2023. Information request line items that were addressed in the first submission are clearly identified in **Table 1** below.

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Table 1 RFI Table

Item	Issue	Request	Response
1	<p>Offsets</p> <p>Section 5.4.1 of the supporting information document states that “In order to facilitate the Project, RCH will require the clearing of all land and flora species within the Project area (592.2 ha).” Additionally, section 5.4.14.3 states “It is likely that approval for the project will be conditional on the provision of offsets in accordance with the EPBC Act and/or the Queensland framework.”. Further, section 5.4.15 discusses the ‘Mitigation Measures’ and references ‘a number of management plans’ which will need to be updated.</p> <p>However, under section 14 of the Environmental Offsets Act 2014 (Offsets Act), ‘The administering agency may impose the offset condition only if satisfied ...(b) all reasonable on-site mitigation measures for the prescribed activity have been, or will be, undertaken.’ An on-site mitigation measure means a measure undertaken to avoid or minimise significant adverse impacts on prescribed environmental matters.</p> <p>Given the substantial area of approved mining to the west and south of the current mining areas, which are yet to be mined/impacted, it’s unclear to the department why the area subject to the application is currently required for mining. Specifically, the opportunity to ‘avoid’ the impacts under the principles of the Offsets Act, have not been clearly demonstrated.</p>	<p>To satisfy the requirements of the Offsets Act and the department’s consideration to impose an offset condition on the EA, provide further justification regarding the need for the project in consideration of the current authorised mining extent at Rolleston Mine.</p>	<p>Response provided to the department in first submission of RFI to the department on 29th August 2023.</p>

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2	<p>Accommodation Camp</p> <p>Section 3.1 of the application’s supporting information document states “The north- eastern corner of the proposed Project pit footprint overlaps with the existing ROC accommodation camp, located within the north-eastern area of ML70415. The section of pit which overlaps with the camp is not currently scheduled to be mined until around 13 years into mining activities within the Project pit. Alternative accommodation options are being considered and approval will be sought through a separate specific approval process, as required”.</p> <p>Additionally, after the site visit undertaken on 21 June 2023, the department understands that any impacts from the project on the accommodation camp are likely to minimal, as the impacts will occur when the camp is considerably reduced in numbers/beds – i.e.: towards to end of the mine’s life.</p>	<p>Provide further information regarding the timing and scale of impacts on the accommodation camp and an assessment of the potential social impacts, if the workforce is relocated to neighbouring communities. The department notes the commitments made in the 2016 EIS regarding social impacts, which may require re-evaluation, depending on the extent of workforce rehousing required.</p>	<p>Response provided to the department in first RFI response submission on 29th August 2023.</p>
3	<p>Great Barrier Reef</p> <p>The department acknowledges section 5.2 of the supporting information document, and its reference to the Environmental Protection (Water and Wetland Biodiversity) Policy 2019 (the ‘EPP Water’). However, there is no reference or consideration of the EPP water’s ‘Great Barrier Reef River Basins End-of-Basin Load Water Quality Objectives ’.</p> <p>While Appendix A, Surface Water Assessment, identifies that the ‘catchment areas of Bootes Creek</p>	<p>Provide further information regarding the total volumes of fine sediment, and dissolved inorganic nitrogen, which will be released from the proposed project. The following guidance material will assist:</p> <p>Reef discharge standards for industrial activities</p>	<p>Response provided to the department in first RFI response submission on 29th August 2023.</p>

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	<p>and Meteor Creek will be reduced by 4.5% and 0.9% respectively', no other information regarding the total contribution, or reduction, in sediment and nutrient loads to the GBR catchment has been provided.</p> <p>In deciding the application, the department must comply with (amongst others) section 41AA of the Environmental Protection Regulation 2019 (EP Regulation). In short, the application must be refused if the activity will, or may, have a residual impact; and the residual impact will not be adequately counterbalanced by offset measures for the relevant activity. The application has not provided sufficient information allow the department to address this requirement.</p>	<p>Point Source Water Quality Offsets Policy 2019</p>	
4	<p>Air and Noise</p> <p>The supporting information document relies on the outcomes of the 2013 Air and Noise assessments. The relevance of these assessments is unclear to the department, given the proposed activity for this application will extend closer to some sensitive places.</p> <p>Additionally, the 2013 assessments would have predated the neighbouring Meteor Down South (MDS) Mine and associated rail loadout facility. Therefore, an assessment and consideration of the cumulative impacts of the proposed activity, along with the MDS activities, is necessary to better understand the potential impacts and satisfy the requirements under Schedule 8 of the EP Regulation.</p>	<p>Either (1) provide the 2013 air and noise assessments and clarify their appropriateness/relevance for the proposed project, or (2) provide updated modelling that incorporates the proposed project and any additional noise generating activities since the 2013 assessments.</p> <p>The following guidance material may assist:</p> <p>Guideline Application requirements for activities with impacts to air</p>	<p>Updated Air Quality and Noise Assessments, incorporating emissions from MDS, are provided in Appendix A and B, respectively.</p>

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		Guideline Application requirements for activities with noise impacts	
5	<p>Air and Noise</p> <p>a) Table 24 in the supporting information document shows a list of ‘nominated’ sensitive receptors. It’s unclear if this table represents all identified sensitive or commercial places that could be impacted by the proposed project.</p> <p>b) It’s also noted that Albinia National Park is not listed in table. A ‘National park’ meets the definition of ‘sensitive place’ under the EA “a protected area under the Nature Conservation Act 1992, the Marine Parks Act 1992 or a World Heritage Area”, and therefore must be considered in the air and noise assessment for this amendment application.</p>	<p>a) Confirm if table 24 represents all identified sensitive or commercial places that could be impacted by the proposed project, and update as necessary.</p> <p>b) Advise to the extent Albinia National Park has been considered in the air and noise assessments.</p>	<p>The updated Air Quality and Noise Assessments (Appendix A and B, respectively), include updated sensitive receptor lists, including Albinia National Park. This receptor list is replicated in Section 2.1 below for reference. Potential impacts on all sensitive receptors have been assessed in the updated assessment reports.</p>
6	<p>Rehabilitation and Final Landform</p> <p>Section 6 of the supporting information document states that “Upon approval of the proposed Project, the Rehabilitation Management Plan (Glencore Coal Assets Australia (GCAA), 2020) will be updated to include the strategy for the rehabilitation of the Project area.” Although a final land use of grazing is indicated, no specific rehabilitation completion criteria has been proposed.</p> <p>Additionally, ‘Figure 5.2: SCN Final Void Catchment’ in the supporting information document (surface water assessment) indicates two final voids may be present in the post mining landform. However,</p>	<p>Further information regarding the proposed final rehabilitation criteria, including the post mining land use, is necessary to allow the department to address the requirements in Schedule 8 (Environmental objective assessment) of the EP Regulation.</p> <p>Any response should consider the PRCP guideline requirements, as this reflects the department’s standards regarding the</p>	<p>ROC conduct all rehabilitation as per the ROC Rehabilitation Management Plan (Appendix C). This Plan has been prepared in accordance with Environmental Authority EPML00370013 (EA) Conditions G1 & G2 and Glencore Coal Assets Australia (GCAA) <i>GCAA-625378177-10241 Rehabilitation Management Protocol</i>. The Rehabilitation Management Plan has been reviewed by the DES and is a Land Outcome Document with respect to the PRCP.</p> <p>The purpose of the plan is stated as:</p> <p>“Upon mine closure, ROC aims to achieve a rehabilitated landscape supporting a healthy and sustainable ecosystem capable of similar land use (i.e., extensive grazing) as the surrounding landscape. The Plan’s objectives include:</p> <p>a) A stable, self-sustaining, safe and non-polluting environment,</p>

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	<p>section 5.5.1.1 and Figure 5.20 in the Umwelt groundwater assessment indicates that four voids (Voids 7,8,9, and 10) may be present.</p>	<p>rehabilitation of mining activities in Queensland.</p>	<p>b) An environment/ landscape that is free from liabilities for future stakeholders, and</p> <p>c) Final rehabilitation that is compliant with the agreed post-mining land use within each identified domain”.</p> <p>The Plan applies to all land rehabilitation works at ROC, which shall include the SCNCP, once approval has been secured.</p> <p>Closure criteria for ROC rehabilitation domains can be found within Section 7 of the ROC Rehabilitation Management Plan. The final land use for the SCNCP area will be grazing as per the EA amendment supporting information document Section 6.</p> <p>An administrative update will be required to include the SCNCP within maps and the updated Life of Mine plan within the ROC Rehabilitation Management Plan, however this can only be undertaken once approval has been secured.</p> <p>Minor depressions were named voids 9 & 10 for modelling purposes only. Due to the high level of the topography modelling of the final landform these depressions will not be retained and are therefore not referred to as voids within Figure 5.2 of the EA Amendment Supporting Information Document.</p> <p>References to Voids 9 & 10 have been removed from updated documentation.</p>
7	<p>Offsets</p> <p>Table 22 ‘Summary of SIA for MNES and MSES occurring within the Project area (E2M, 2023)’ in the supporting information document identifies that there will be a significant residual impact to 20.5ha of ‘Prescribed REs within a defined distance from the defining banks of a relevant watercourse’. However, a breakdown of the specific regional ecosystems</p>	<p>Provide a breakdown of the 20.5ha of “prescribed REs within a defined distance from the defining banks of a relevant watercourse”.</p>	<p>Response provided to the department in first RFI response submission on 29th August 2023.</p>

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	(REs) is not provided. This information will be necessary to amend Table K1 in the EA, if the application is approved.		
8	<p>Sodium Trigger</p> <p>a) Section 3.2 of the supporting information document seeks to amend the trigger investigation levels of sodium within table D3 (Release contaminant trigger investigation levels) of the EA. It's recognised that the EA, via table D2 (Mine affected water release limits), contains release limits for Electrical conductivity (EC), and EC could be considered an appropriate analyte for sodium where a sufficient historical correlation can be made. This could result in the removal of sodium from table D3.</p> <p>b) There is also inconsistencies regarding the proposed trigger for sodium. Some sections of the supporting information document states 264,000µg/L, while other areas seek 300,000µg/L.</p>	<p>a) Provide a detailed summary of, and all raw historic data, relating to mine water releases for sodium and EC, including a correlation analysis.</p> <p>b) Pending the outcome of item a) above, clarify if the sodium trigger value sought from the amendment is appropriate when compared to the maximum release EC of 1,800 µS/cm.</p>	Response provided to the department in first RFI response submission on 29 th August 2023.
9	<p>Groundwater - Transient Model Calibration 2001 to 2022</p> <p>a) The report identifies how the spoil was represented in the predictive modelling, but it is not clear if it was represented in the calibration model. Appendix B Figures 3.19 and 3.21 demonstrate significant areas of spoil currently existing at the mine.</p> <p>b) It is also not clear if the Meteor Downs South (MDS) mine was represented in the</p>	<p>a) Clarify whether the spoil was represented in the model calibration and if not, the reasoning.</p> <p>b) Clarify whether the mining at Meteor Downs South was represented in the model calibration and if not, the reasoning.</p> <p>c) Clarify if the MDS groundwater bores have</p>	Response provided to the department in first RFI response submission on 29 th August 2023.

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	<p>model calibration given its proximity to Rolleston Coal Mine and in particular the proposed project area. Appendix B Section 3.3.2 notes that some of the basalt monitoring bores at Rolleston Coal mine are being impacted by Meteor Downs South mining.</p> <p>c) It's noted there is a licence at MDS to take 300 ML/year from basalt bores for construction purposes. These bores (believed to be 165503 PB02, 165502 PB01, 165504, PB03) don't appear to be identified in Appendix B section 3.5.1 groundwater users.</p> <p>d) Appendix B Section 3.1 presents water level data from geotechnical holes in existing spoil areas (PZ holes) but these holes don't appear to have been used in the calibration.</p>	<p>been considered in the modelling and if not, the reasoning.</p> <p>d) Clarify whether these geotechnical holes have been used in the model calibration and if not, the reasoning.</p>	
10	<p>Groundwater - Final Voids Modelling</p> <p>a) Appendix B, Section 5.5.1 states: "Recharge to the final voids was increased to 150% of annual rainfall to account for overland flow plus surface water diversion." However, it's unclear what surface water assessment was utilised to investigate and assess catchment size and run off to support the assumptions made.</p> <p>b) Section 5.3.10.2 of the supporting information document states: "Water quality within the final voids will change over time with groundwater inflows, spoil recharge and evaporative processes. However, as discussed in Section 5.3.5, unlike other areas in the Bowen Basin,</p>	<p>a) Justify using the figure of 150% and clarify the surface water assessment undertaken to support the final void modelling, including the proportion attributable to the proposed amendment.</p> <p>b) Provide an assessment of the water quality to remain in any final void/s.</p> <p>c) Present each void in figure 5.19 on an individual graph and compare to the predicted groundwater levels at each location.</p>	<p>a) A summarised Final Void Assessment has been prepared and is provided in Appendix D. A specific response to item 10 a) is provided on page 5 of Appendix D.</p> <p>b) A summarised Final Void Assessment has been prepared and is provided in Appendix D. A specific response to item 10 b) is provided on page 7 of Appendix D.</p> <p>c) Each void is presented with an individual graph in Umwelt (2023) Figure 5.25 to Figure 5.29 for the voids within the SCNCP. The graphs include the predicted groundwater levels in the void area under the base case scenario, plus the range in predicted groundwater levels in the void area for the sensitivity scenarios. Further details on all site voids within ROC are included in Section 2.2. Individual graphs for each site voids (Void 1 to Void 8) showing</p>

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	<p>groundwater within the Study area is generally of good quality, with fresh to brackish salinity. The periodic recharge events associated with La Niña episodes would also contribute fresh water.” However, an assessment of final void water quality has not been provided.</p> <p>c) Appendix B Figure 5.19 provides predicted long term water level elevations in the final voids, all on one graph, for the base case. It would be beneficial if these voids could be presented on individual graphs and compared to the predicted groundwater levels at those locations to clearly demonstrate the likely source or sink attributes of each final void. This is particularly the case when the predicted water levels in the voids appear to be very similar to predicted long term groundwater levels.</p>		<p>the groundwater levels for the base case and sensitivity analysis are also included in Section 2.2.</p>
11	<p>Groundwater - Elevation Contours</p> <p>Appendix B Figures 4.1 to 4.10 provide predicted water level elevations in various layers at the end of mining, are presented at 50 m contour intervals and at a scale difficult to interpret around the mine and void areas.</p>	<p>Provide more detailed maps to allow the department to better understand the predicted groundwater level elevations at the end of mining.</p>	<p>Response provided to the department in first RFI response submission on 29th August 2023.</p>
12	<p>Greenhouse gas emissions</p> <p>No information regarding the project’s greenhouse gas emissions has been provided, and as a result it’s unclear how the proposed project will contribute to</p>	<p>Provide further information regarding the project’s projected greenhouse gas emissions, specifically:</p> <ul style="list-style-type: none"> • Provide an inventory of projected annual Scope 1 	<p>A Projected Greenhouse Gas Emissions Assessment has been prepared and is provided in Appendix E. The assessment provides estimates of scope 1, 2 and 3 emissions and discusses relevant emissions management initiatives.</p>

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	<p>the climate targets outlined in the Queensland Climate Action Plan 2020-2030.</p>	<p>and Scope 2 emissions for each greenhouse gas over the life of the project;</p> <ul style="list-style-type: none"> • Provide an estimate of annual Scope 3 greenhouse gas emissions for the life of the project; • Provide a plan that outlines the avoidance, mitigation or offsets measures that will be implemented, and how these measures will contribute to Queensland’s climate targets. 	
<p>13</p>	<p>Determining Offsets as a Suitable Outcome</p> <p>Pending the response to item 1, should a significant residual impact remain for any prescribed environmental matters (PEMs), it must be demonstrated that an offset is a ‘suitable outcome’. As per section 3.6 of the General guide for the Queensland Environmental Offsets Framework the department must have a high level of confidence that a suitable offset can be selected, designed and managed, to achieve a conservation outcome and maintain the viability of the PEMs to be offset.</p>	<p>a) Provide additional details of the availability and viability of land-based offsets for each impacted matter to deliver a conservation outcome. Please note that an available offset area must demonstrate the known sightings of the species and that the landholder is willing and able to implement conservation management to improve the conservation outcome for the species population</p>	<p>Response provided to the department in first RFI response submission on 29th August 2023.</p>

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		<p>within the proposed offset area.</p> <p>b) Pending the response to (a), provide an assessment of the area in hectares (ha) of each PEM which is available to be used as an offset in the bioregion and subregion.</p> <p>Areas available for offsets include those which contain the PEM in question, are on freehold or leasehold land, are not already protected, are not at risk from completing land uses (e.g. mining, quarrying or forestry) and are not otherwise inappropriate for use as an offset area.</p> <p>The assessment must include a spreadsheet and shapefiles of lot-on-plans identified as suitable for offsets and available to deliver a conservation outcome.</p>	

2 Further Details

2.1 Updated Sensitive Receptors List

Table 2 provides an updated list of sensitive receptors relevant to the proposed SCNCP.

Table 2 – Sensitive Receptor List

Noise Sensitive Receiver	Distance from Project (km)	UTM Coordinates X	UTM Coordinates Y
Meteor Downs	5.5	635124	7302750
Albinia Downs	5.7	650271	7298160
Inderi	7.3	644889	7308673
Croydon Hills	10.6	630818	7305673
Springwood	17.4	634445	7283926
Bottle Tree Downs	14.4	650168	7287015
Belmundi	12.3	634426	7312367
Maria Downs	13	633990	7312989
Myrtle Vale	14.6	634474	7314944
Canopus Park	10.4	638217	7311895
Orana Downs	14.1	639828	7315824
Wandana	14	640337	7315780
Starlee	12	656300	7306109
Karonga	9.9	643371	7311792
Cambridge Downs	13	645299	7314743
Maxmoor	14.7	650490	7315396
Carnarvan View	14.7	659268	7297067
The Pocket	14.3	655717	7290964
Albinia National Park	9.5	652317	7293882

2.2 Final Void Predictions

Summary details on each void is provided in Table 3. This includes the minimum surface elevation at each void and the predicted groundwater level within the void area. The recovered groundwater level in the voids is above the void surface, meaning expression of water at surface. It should be noted that the original report by Umwelt (2023) referred to Void 9 and Void 10 in relation to the model setup. These are excluded here as they are only small depressions in the final landform where the groundwater levels remain below surface and are therefore not final voids for the purposes of this assessment.

A graph showing the predicted groundwater elevation at each void area over time is also provided in **Figure 1**. Individual graphs for each void, showing the variability in predicted groundwater levels in the void areas for the sensitivity scenarios are shown in **Figure 2** to **Figure 9**.

Table 3 Final Void Areas

Void	Location	Void Area (ha)	Void Minimum Surface Elevation (mAHD)	Basecase Model Predicted Void Water Level (mAHD)
Void 1	RW2	210.4	185	222.0
Void 2	RW1	90.9	216	234.6
Void 3	RW1	57.4	238	246.7
Void 4	Gibbs Gully Pit	419.3	170	215.3
Void 5	Meteor South Pit	326.2	154	194.3
Void 6	Spring Creek Pit	22.0	214	223.5
Void 7	Spring Creek North Pit	71.7	212	226.1
Void 8	Spring Creek North Pit	166.2	20	224.3

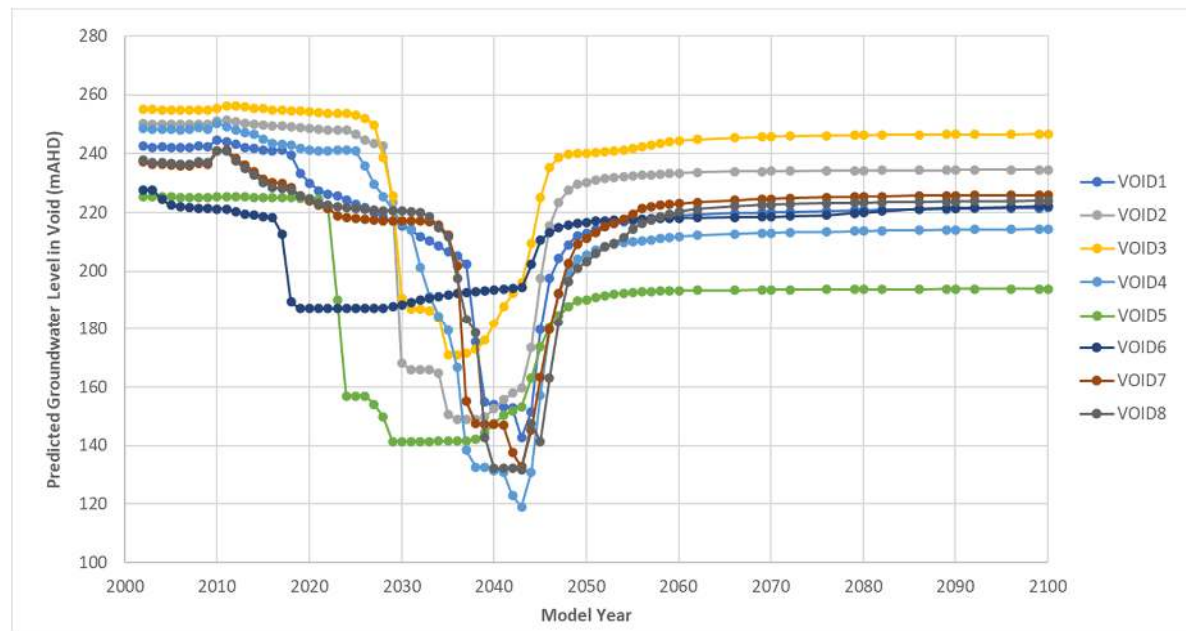


Figure 1 Post Closure Scenario Analysis – All Voids Base Case Levels

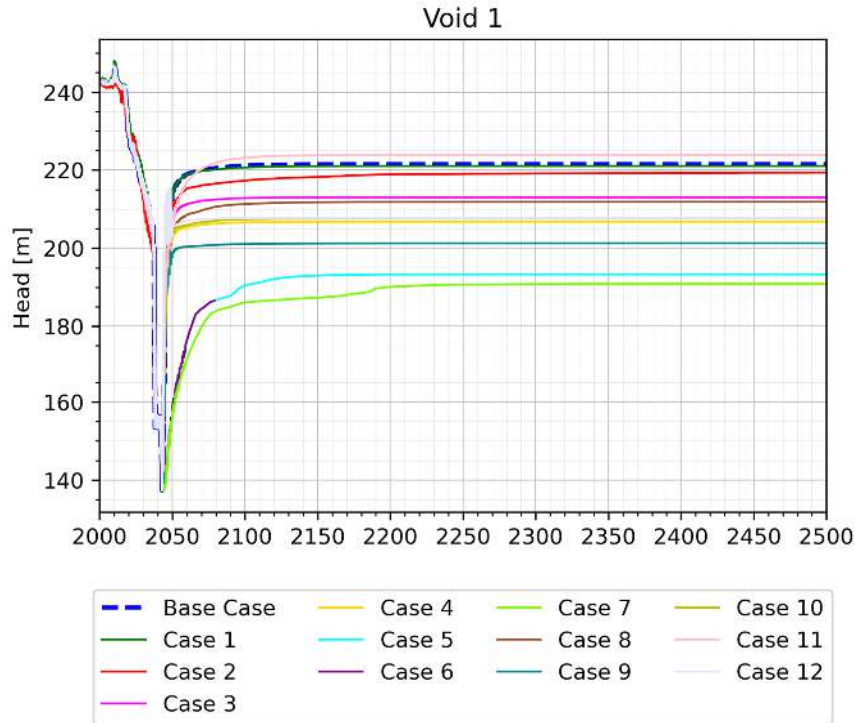


Figure 2 Post Closure Scenario Analysis – Void 1 (W2)

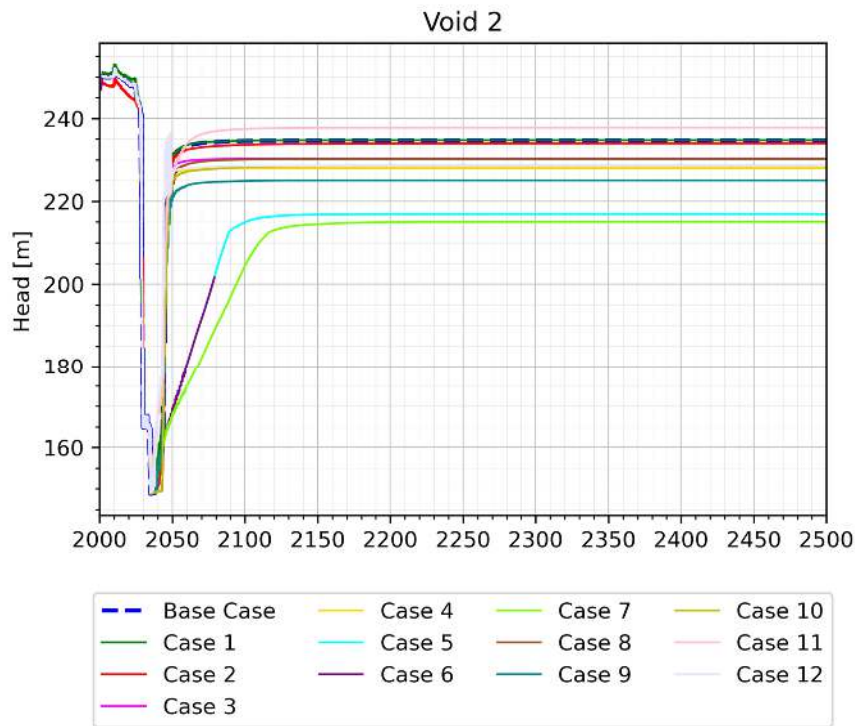


Figure 3 Post Closure Scenario Analysis – Void 2 (W1)

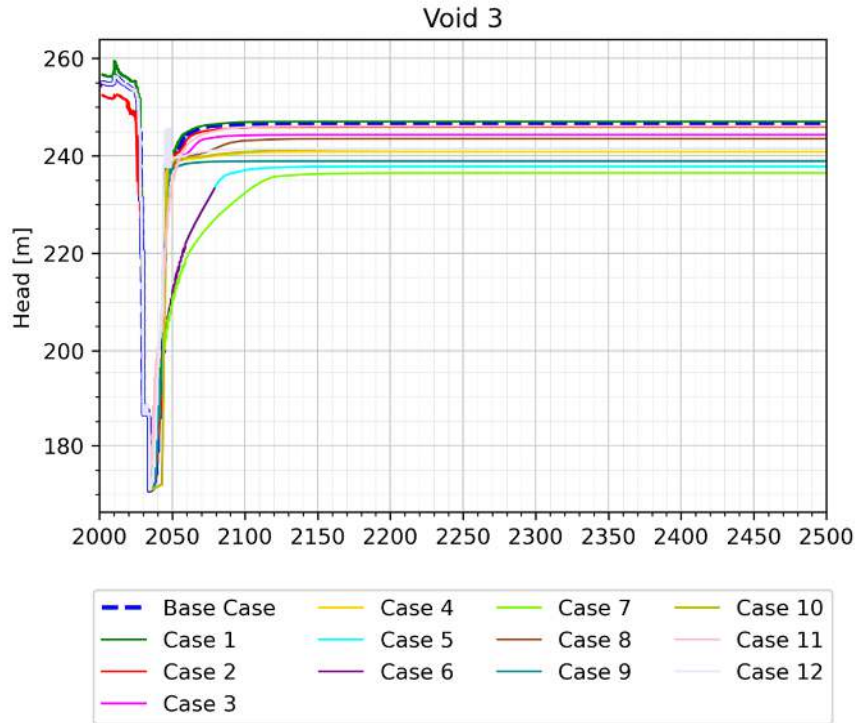


Figure 4 Post Closure Scenario Analysis – Void 3 (W1)

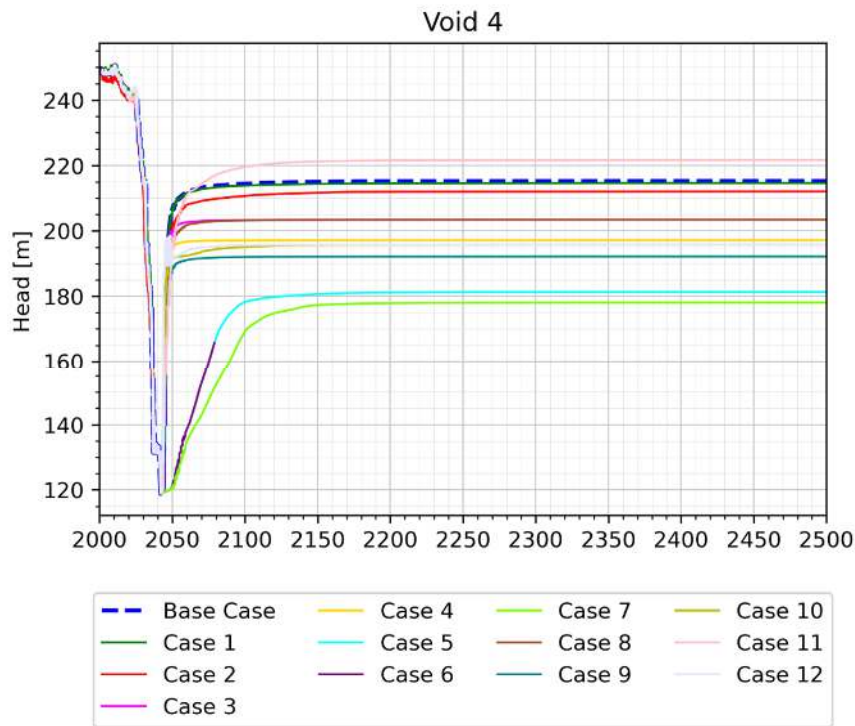


Figure 5 Post Closure Scenario Analysis – Void 4 (Gibbs Gully Pit)

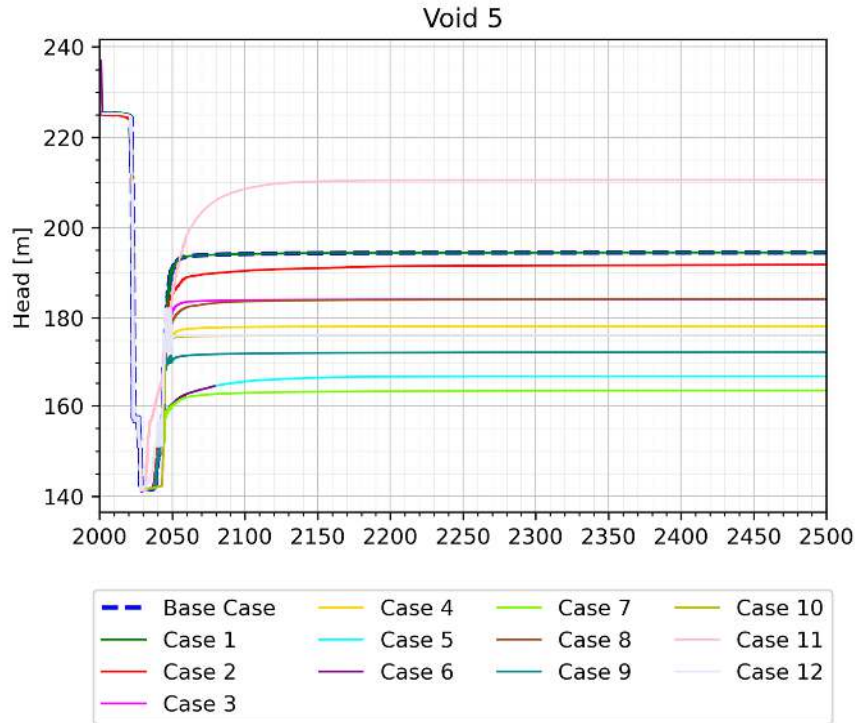


Figure 6 Post Closure Scenario Analysis – Void 5 (Meteor South Pit)

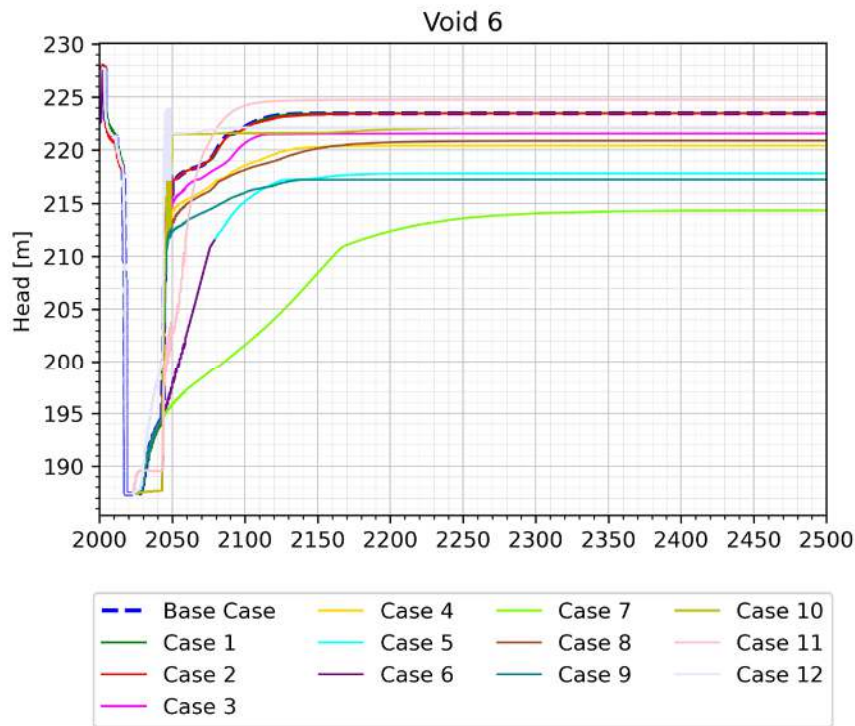


Figure 7 Post Closure Scenario Analysis – Void 6 (Spring Creek Pit)

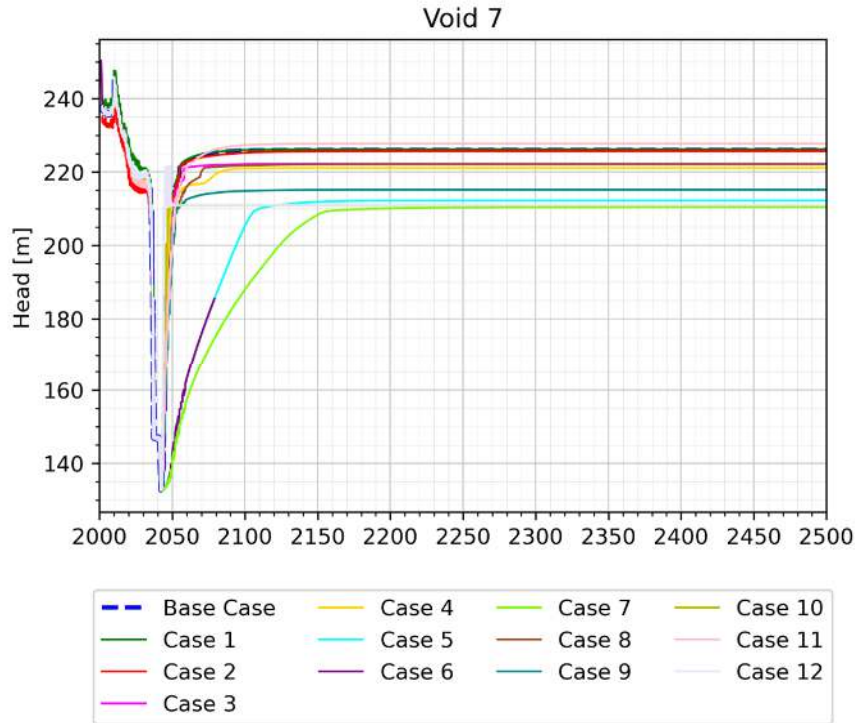


Figure 8 Post Closure Scenario Analysis – Void 7 (SCNCP)

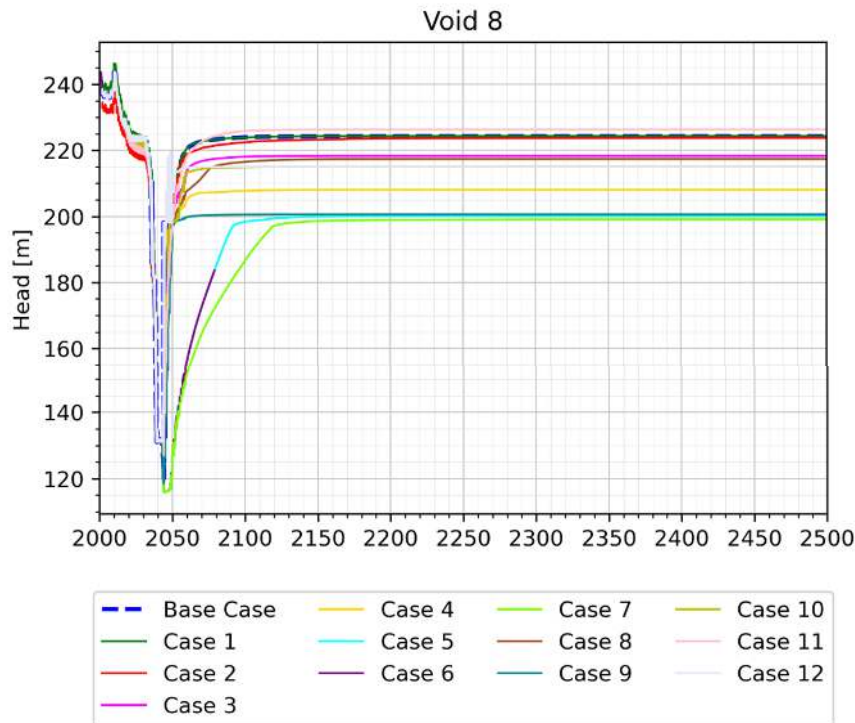


Figure 9 Post Closure Scenario Analysis – Void 8 (SCNCP)

3 References

METServe (2023), Supporting Information for Application for Amendment to EPML00370013, Prepared for Rolleston Coal Holdings Pty Ltd, May 2023.

Umwelt (2023), Spring Creek North Continuation Project Groundwater Assessment, prepared for Glencore, May 2023.

4 Appendices

The follow appendices are provided as separate files:

Appendix A - SCNCP Air Quality Assessment

Appendix B - SCNCP Noise Assessment

Appendix C – ROC Rehabilitation Management Plan

Appendix D – SCNCP Final Void Assessment Summary

Appendix E – SCNCP Projected Greenhouse Gas Assessment