

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 amendment application for a site-specific environmental authority.

To: Capricorn Copper Pty Ltd
Level 3, 232 Adelaide Street
Brisbane City, QLD 4000

ATTN: Geraldine McGuire
Email: Geraldine.mcguire@29metals.com

Your reference: EPML00911413
Our reference: 101/0008746; A-EA-AMD-100915844

Further information is required to assess an amendment application for environmental authority

1. Application details

The amendment application for a site-specific environmental authority was received by the administering authority on 31 July 2025.

The application reference number is: A-EA-AMD-100915844

Land description: Mining Lease (ML) 5407, ML5412, ML5413, ML5418, ML5419, ML5420, ML5429, ML5430, ML5441, ML5442, ML5443, ML5444, ML5451, ML5454, ML5457, ML5459, ML5467, ML5485, ML5486, ML5489, ML5500, ML5548, ML5549, ML5550, ML5562, ML5563, ML90180, ML90181 and ML90182.

2. Information request

The administering authority has considered the abovementioned application and is writing to inform you that further information is required to assess the application (an information request).

The information requested is specified in attachment 1 to this notice.

3. Actions

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



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

A response to the information requested must be provided by **23 October 2026** (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 ESCairns@detsi.qld.gov.au.

If the information provided in response to this information request is still not adequate for the administering authority to make a decision, your application may be refused as a result of section 176 of the *Environmental Protection Act 1994*, where the administering authority must have regard to any response given for an information request.

4. Human rights

A human rights assessment was carried out in relation to this decision and it was determined that **the decision is compatible with human rights**.

If you require more information, please contact the administering authority on the telephone number listed below.



Signature

21 October 2025

Date

Rebecca McAuley
Department of the Environment, Tourism Science
and Innovation
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Minerals Business Centre
PO Box 7230, Cairns QLD 4870
Phone: (07) 4222 5253
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Attachments

Attachment 1: Information Request.

Attachment 1. Information Request

Item	Description	Information Requested
1	Proposed amendments The application material (RPS 2025)¹ lacks a clear understanding of the proposed amendments to environmental authority EPML00911413 (the EA), including the intention and specifics, locations and proposed disturbance footprints.	Provide revised application material which: a) Itemises and includes a description of each proposed amendment. b) Provides a description of the location, including maps, GPS co-ordinates and total disturbance area in hectares (ha). Information should be provided in the same format as Schedule A – Table 1 (Authorised disturbance) of the EA.
2	Groundwater dependent ecosystems (GDEs) The groundwater impact assessment (Engeny 2025)² confirms the entire footprint and surrounds of the proposed tailings storage facility (TSF3) is mapped as moderate potential for terrestrial GDEs with Gunpowder Creek adjacent and downstream of the mine mapped as high potential for terrestrial GDE and low to moderate aquatic GDE. Although field surveys to confirm the presence of GDEs are recommended (Engeny 2025), this has not been undertaken and the potential risks and impacts via changes in groundwater levels and quality has not been detailed. Based on Queensland Government Mapping, groundwater dependent vegetation exists to the south and east of the proposed activity, specifically regulated vegetation intersecting a	Provide revised application material which: a) Determines the spatial extent of impact from the proposed activity on mapped GDEs. b) Confirms that mapped GDEs within and surrounding the proposed activity (extent of impact zone), have been ground truthed. In the absence of ground truthed information, the application assessment in relation to consideration of the significance of impacts to the receiving environment will assume that mapped GDEs are present (based on the current mapping available). c) Based on the information developed in relation to item (b), provide:

¹ RPS, Environmental Assessment Report Capricorn Copper, 31 July 2025 (including all appendices)

² Engeny, Capricorn Copper Pty Ltd, Groundwater Impact Assessment, 29 July 2025

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	watercourse which is defined as a matter of state environmental significance (MSES) under the <i>Environmental Offsets Act 2014</i> . The potential risks and impacts to these sensitive features due to the proposed activity has not been discussed.	i. The baseline conditions of all GDEs that have the potential to be impacted by the proposed amendments, or otherwise indirectly impacted. ii. A description of any potential risks and impacts to all GDEs to be impacted or likely to be impacted by the proposed activity. This must include potential changes to groundwater level and quality, including the expected locality and extent of the groundwater level and quality changes. iii. Proposed management and monitoring strategies and/or program to detect potential impact on GDEs and any corrective action(s) if impacts are detected. iv. Update numerical groundwater modelling accordingly to reflect field data of GDEs. d) Revise the consequence category assessment with consideration of the information requested above.
3	Matters of National Environmental Significance (MNES) In accordance with section 68 of the <i>Environmental Protection and Biodiversity Conservation Act 1999</i> (EPBC Act), it is the proponent's responsibility to determine whether their proposed activity is likely to have a significant impact on MNES. This obligation requires any person proposing an action that may significantly impact MNES to refer the proposal to the Federal Minister for assessment. The self-assessment within the flora	In the absence of an EPBC Act referral or requirements for offsets under Commonwealth legislation, an assessment must be undertaken to address the potential impact to these species as they are considered prescribed environmental matters under the <i>Environmental Offsets Regulation 2014</i>. Provide a significant residual impact assessment in accordance with the SRI Guideline⁴ for the Carpentaria Grasswren and Northern Blue tongue Skink.

⁴ Queensland Government, Queensland Environmental Offsets Policy, Significant Residual Impact Guideline, December 2014

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	and fauna report (KG Environmental 2025) ³ confirms the Carpentaria Grasswren and Northern Blue tongue Skink are expected to meet the significant impact criterion. At the time of this assessment, it is unclear if a referral has been made.	
4	Environmental Offsets Act 2014 - Matters of State Environmental Significance (MSES) Calculations provided in the flora and fauna report (KG Environmental 2025) regarding mapped regulated vegetation intersecting a watercourse cannot be validated to confirm the proposed disturbance is below the significant residual impact (SRI) thresholds described in the SRI Guideline.	Provide revised application material that includes: a) Clear and demonstrable evidence regarding the field validated extent of the MSES, including a detailed map. b) Clarify the field surveys undertaken including what was being verified to confirm the presence, type and extent of MSES. c) Clarify the calculations provided to confirm the impact is below the SRI thresholds.
5	Purple necked rock wallaby (PNRW) An SRI assessment was undertaken for the PNRW, however, the size and extent of the local PNRW population was not documented or known. The potential impacts to PNRW at the local level have not been addressed and it cannot be confirmed if impacts are expected to exceed SRI thresholds. It is understood a species management plan is proposed for the PNRW, however, there is no understanding on the intention.	Provide revised application material (and SRI assessment undertaken in accordance with the SRI Guideline) on the PNRW which confirms the local PNRW size and extent and confirms SRI thresholds are not exceeded at the local level as per <i>Queensland Environmental Offsets Policy Significant Residual Impact Guideline</i>. Clarify the intention of the species management plan.
6	Rehabilitation The application lacks detailed rehabilitation information on features proposed to be utilised, or indirectly utilised, as part of the proposed activity. This includes but is not limited to the	Provide revised application material which includes: a) Comprehensive rehabilitation strategy for site features (proposed or existing) to be utilised as part of the proposed TSF.

³ KG Environmental, TSF3 Flora and Fauna Assessment, 21 May 2025

Item	Description	Information Requested
	Esperanza waste rock dump (EWRD), Upper Esperanza Diversion Dam (UEDD) and Esperanza Pit (EPit).	b) Outcomes of closure scenarios in the numerical groundwater model to assess the long-term risks to groundwater.
7	Numerical groundwater modelling Impacts to groundwater are not yet reasonably understood and are subject to the completion of the numerical groundwater model.	Along with the recommendations stated in the groundwater impact assessment (Engeny 2025), provide a numerical groundwater model which incorporates the proposed TSF3 and must include: a) Steady-state and transient calibration (with sufficient monitoring points surrounding the proposed TSF3). It must be demonstrated the model area extent is sufficient, particularly to the south of the facility which is currently depicted as a no flow boundary which must also be justified. b) An operational scenario which reflects the proposed design of the TSF (including expected foundation conditions and any other design elements that could influence impact to groundwater). c) Closure modelling up to a point at which groundwater levels have reached equilibrium and represent the current closure plan. d) Particle tracking around the perimeter for the proposed TSF3 to assess potential pathways. e) Sensitivity and uncertainty modelling to provide an indication of the potential risk to groundwater receptors. f) Cumulative assessment of risk to groundwater from all infrastructure including the current and proposed TSFs. g) Contaminant transport modelling to determine potential plume pathways and concentrations.

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		h) A comprehensive report of the model, including information on the statistics from the transient calibration. The consequence category assessment for seepage must be reviewed once these assessments are complete, and the design developed accordingly and provided to the department.
8	Drainage to EPit A key design assumption (RPS 2025) is that all potential seepage from TSF3 will be captured in EPit. This assumption must be supported with predictive scenarios. The groundwater model must provide confidence that all potential seepage from the proposed TSF3 is captured by EPit, or other mitigation solutions through operations and closure.	Undertake and provide the results of further revised groundwater modelling, as requested in Item 8, to confirm the assumption that all seepage will be captured in EPit. If this assumption cannot be confirmed, the key design assumption is incorrect, and the application material, including the TSF3 design, must be revised accordingly.
9	Independent review of numerical groundwater model It is understood that an independent review of the numerical groundwater model has been conducted, however, a detailed report outlining the findings of this review, along with evidence of communication and advice from the independent reviewer has not yet been provided.	Provide: a) A comprehensive report summarising the independent reviewer findings. b) Evidence of correspondence with the independent reviewer, including their assessment of the responses to the review comments. c) A clear and detailed explanation of how the identified issues have been addressed and incorporated into the numerical groundwater model.
10	Consequence Category Assessment (CCA) The following is identified in the CCA/s (Engeny 2025b)⁵:	Provide revised application material which:

⁵ Engeny, Capricorn Copper Pty Ltd, TSF3 Preliminary Consequence Category Assessment, 18 July 2025

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	a) Inconsistent information: i. the CCA appointed the seepage risk as “significant”, however, several appendices appoint the seepage risk as “low”. ii. Dam break scenarios refer to the temporary diversion embankment, however, the dam break scenarios in the ANCOLD assessment (appendix A of Engeny 2025b) refer to a “future” gravity diversion. b) A future gravity diversion is proposed for the Snakeskin Valley (the Clean Water Diversion Channel (CWDD)), and it is assumed to be in place to future protect the design of TSF3 should the CWDD be constructed. No further information is provided. The surface water assessment (Engeny 2025c)⁶ states any overflows from TSF3 will be directed towards EPit with all water to be contained within the existing water management systems. This conflicts with the above information which is based on future clean water diversion/s resulting in potential overflows directed away from EPit and into the receiving environment. Although it is acknowledged future site changes such as this are not yet confirmed, their design/alignment must be provided if they form part of the assessment. As per the “significant” rating for seepage in the <i>Manual for assessing consequence categories and hydraulic performance</i>	a) Clarifies the CCA outcomes via updated documentation and ensure consistency in all revised material. b) Clarifies if the TSF3 design is contingent on the future gravity CWDD. If future site changes might influence overflow flow paths and potential containment conditions, provide the design/alignment and evidence the design has been assessed to accommodate the potential impacts to the receiving environment. c) Provide justification and demonstration how the existing approach to seepage management from the TSF3 floor meets the requirements of the Manual, and justification why no further control measures for the TSF3 floor will be required.

⁶ Engeny, Capricorn Copper Pty Ltd, Surface Water Impact Assessment, 14 April 2025

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	<i>of structures (ESR/2016/1933) (Manual), a TSF must be designed to minimise (or reduce) seepage from the floor of the facility. Several data gaps still exist to allow for a detailed design of TSF3, with limited justification demonstrating the existing approach meets the requirements of the Manual.</i>	
11	Cumulative risk assessment The CCA (Engeny 2025b) states TSF3 will not be contributing new contaminants to the groundwater system but will add to the contaminant load. An assessment of the cumulative impacts to groundwater has not been provided.	Provide a quantitative assessment to assess the new contaminant load on groundwater and the impacts. For example, this includes but is not limited to: a) Anticipated changes in EPit water quality. b) Impacts to groundwater quality if all flows do not report to EPit. c) Assessment on the pathways from EPit and impacts to the receiving environment. d) Demonstration that the existing controls to prevent impacts to Gunpowder Creek are sufficient for the additional contaminant load and are fully operational and working to design.
12	Acid-metalliferous drainage (AMD) and Neutral Mine Drainage (NMD) Seepage through the EWRD has the potential to transport AMD or elevated contaminants of concern under neutral conditions to the receiving environment and/or EPit. This represents an increased risk of AMD and NMD and deterioration of existing water quality that has not been assessed.	Provide revised application material which includes: a) Geochemical assessment to assess the risk of AMD and NMD that has the potential to be generated by the proposed activity. The assessment must include but is not limited to the potential to change water quality in EPit or other receptors. b) An assessment on the sufficiency of current mitigation and control systems to contain the additional risk.

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13	Basal Seepage The application material (RPS 2025) states groundwater quality is not expected to be impacted by the proposed TSF3, provided the liner is installed and the base of the structure is demonstrated to have low permeability. Evidence to verify the permeability of the base of the structure has not been confirmed.	Provide revised application material which: a) Provides evidence to confirm the hydraulic permeability of the base of TSF3 to support the adjacent statement identified in the application material. b) Confirms the permeability of the base of TSF3 is accurately represented in the numerical model.
14	Groundwater Flow Mapping The current groundwater monitoring network is insufficient around the perimeter of the proposed TSF3 and there are data gaps to the east/south and south/east of the proposed facility. In the absence of this data the groundwater baseline cannot be reasonably understood and predictions from the model in this area are likely to be poorly calibrated and unreliable. The application material indicates there may be new flow directions due to the increased head of TSF3, however, this has not yet been assessed. Further, the groundwater impact assessment (Engeny 2025) indicates TSF3 is expected to change groundwater flow to the west, with this being investigated via the numerical groundwater model.	To address existing data gaps, revise the application material and include: a) Additional groundwater level data must be collected in the east/south and south/east of the proposed TSF3 facility. The water level data obtained from this area must be evaluated against the current model calibration and the model recalibrated if they do not align, followed by predictive modelling to refine the projections. b) Investigation into the geology of the natural abutment and the potential for seepage to push through to the west and down towards Gunpowder Creek. This must include an assessment on all potential seepage pathways from TSF3 and the risks to the receptors and management measures.
15	Southern Embankment The following is identified for the southern embankment/UEDD: a) The southern embankment crest is nominated as 317 m AHD and the smaller southwest embankment nominated as 321 m AHD (Engeny 2025d)⁷. No justification is given	Provide revised application material which: a) Clarifies the 4 m differential between the south and southwest embankments. If this is a result of operational risk design (i.e., surface waters overtopping), provide

⁷ Engeny, 29 Metals Capricorn Copper Mine, Tailings Storage Facility, Preliminary Design Report, 30 July 2025

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	for the 4 metre (m) differential and it is not clear if this is due to potential overtopping risks. b) The landform stability assessment (Engeny 2025e)⁸ states the batter of TSF3 (southern embankment) is 26 m high, however, the preliminary design report (Engeny 2025d) states southern embankment height is 32 m. c) The application material suggests both embankments of the proposed TSF will be lined, however it is not clear in the figures provided where the High-Density Polyethylene (HPDE) liner is proposed to be installed on the southern embankment. The Seep/W model indicates there is a potential for seepage to flow south, further demonstrating the need for design mitigation measures, however, no assessment on the potential receptors and impacts has been conducted.	documentation that assesses and demonstrates how spills and ingress risks are managed. b) Clarify the proposed height of the southern embankment. c) Provide advice on where the liner is installed on the southern embankment and an assessment on the potential for seepage to the south of the facility and discussion on the receptors and impacts.
16	Surface hydrology The application lacks an integrated assessment on the potential impacts and risks on hydraulically connected site features directly and/or indirectly impacted by the amendment. Flood modelling (Engeny 2025f)⁹ was applied exclusively to the UEDD and is not consistent with previous flood model results. Despite being hydraulically connected, the diversion drain, temporary diversion, ESS zone and Gunpowder Creek are excluded from the results.	Provide revised application material which: a) Comprehensive assessment on the surface hydrology including UEDD, diversion drain, temporary diversion, ESS zone and Gunpowder Creek. This includes the expected interaction, potential impacts and risks and proposes management measures. b) For the off-lease ponding, discussion on if the area is authorised to be impacted by the inundation, and the risks

⁸ Engeny, 29 Metals Capricorn Copper PRCP, Landform Stability Assessment, 30 July 2025

⁹ Engeny, Memorandum, Tailings Storage Facility 3 Hydraulic Modelling Assessment, 13 May 2025

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	The southern embankment flood results indicate significant off lease ponding under certain events, however, no discussion on the implications or management of environmental values is provided. The southern embankment preliminary design drawings state “external flood level (PMF) RL 315.0 m AHD to be confirmed”. It is unclear if probable maximum flood (PMF) risks have been assessed sufficiently to confirm and inform embankment design heights.	and impacts to the environmental values (i.e., MSES, GDEs), and management required. c) Clarify that PMF modelling is confirmed and supports the embankments design heights.
17	Design Storage Allowance (DSA) An assumption relied upon for the design storage allowance (DSA) assessment (Engeny 2025g)¹⁰ assumes six (6) evaporators operating at 69% availability, with a total feed rate of 100 litres per second (L/s) (16.7 L/s per unit). Previous applications utilising evaporators were assessed with a total feed rate of 118 L/s (8.4 L/s per unit). This suggests the current evaporators are approximately twice as effective at evaporating water compared to earlier assessments. However, no evidence has been provided to justify this improved performance.	Provide updated modelling which: a) Provide the updated data and model calibration to support the changes to mechanical evaporator performance. b) Provide advice if the model calibration has been extended to include the previous year (or so) of time that the evaporators have been functioning and demonstrate they have performed as modelled. c) Provide a case where the evaporators are switched off once the water management system is returned to the normal operating range to assess the DSA and water management system performance. d) Provide the updated comprehensive water balance model report detailing the model set up, calibration, assumptions and model output and Goldsim model which forms that basis of the DSA assessment.

¹⁰ Engeny, Memorandum, TSF3 Preliminary DSA and MRL Assessment, 9 May 2025

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18	Evaporators Impacts via evaporator spray drift are identified via spatial imagery. This drift may cause accumulation of contaminants in catchments, potentially where runoff is not captured.	With the proposed use of evaporators provide information on: a) The location of all evaporators and the associated fallout from spray drift. b) How spray drift will be managed to prevent contamination of the environment. c) Rehabilitation proposed for areas affected by spray drift.
19	Groundwater amendments The following is identified in the groundwater impact assessment (Engeny 2025) and groundwater monitoring and management plan (Engeny 2025h)¹¹: a) Amendment to the groundwater quality has been derived utilising one (1) reference bore as per the current EA framework. The use of GWMB38 to assess compliance for all bores in the monitoring network is not supported. b) The description of the groundwater monitoring bores and their positioning relative to TSF3 requires revision. The directions of east and west have been incorrectly referenced in the material with information presented not accurate. c) There is limited evidence to suggest the proposed background groundwater monitoring bores (GWMB80, GWMB81, GWMB82) are suitable background/baseline	DES (2021)¹² supports reference bores that are specific to geological units, and for which baseline data is available to demonstrate their relevance to each compliance bore that they correspond to. As the geology at the Capricorn Copper Mine is complex with identified presence of mine impacted groundwater, groundwater monitoring bores and quality amendments are required to be revised as follows: a) Define bore-specific triggers and limits (or geology-specific triggers and limits that may apply to a group of bores contained in a similar geological unit) based on existing unimpacted data collected to date. This may require additional groundwater monitoring bores to be implemented. Further, provide revised application material which includes: a) Clear description and justification of all proposed amendments to groundwater. b) Revised material to ensure positioning relative to TSF3 and geology of groundwater monitoring bores is accurate.

¹¹ Engeny, 29 Metals, Groundwater Monitoring and Management Plan, 29 July 2025

¹² DES (2021). Using monitoring data to assess groundwater quality and potential environmental impacts. Version 2. Department of Environment and Science (DES), Queensland Government, Brisbane.

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	bores. It is stated GWBM82 quality concentrations identifies the presence of mine affected groundwater. d) No justification is provided for the amendment to the frequency of groundwater levels to quarterly. e) Discrepancies regarding the geology corresponding to GWMB78.	d) Clear and demonstrable evidence regarding the proposed background groundwater monitoring bores are suitable baseline bores. e) Information that demonstrates that all geological units the proposed TSF3 overlaps are monitored to detect any potential influence from TSF3 (i.e., interpretation bore and compliance bore).
20	Integrated water management Given the significant proposed changes to the integrated water management system and the identified groundwater quality concerns a comprehensive understanding is required on the sites water management systems.	Provide further details on the whole of site integrated water management, including: a) Current onsite contaminated water inventory, including the contemporary volumes for EPit, Esperanza Underground and Mill Creek Dam, as well as all water storages across the site. b) Volume of contaminated water from underground workings, seepages, and contaminated surface runoff under normal site operating conditions. c) Location and capacity for any potential additional contaminated water storages that could support contaminated water capture and/or water treatment on site to limit the reliance on EPit. d) Water treatment options for current and future contaminated water inventory on site, including details and implementation timeframes for options including but not limited to water treatment plants. e) A long-term water management plan for maintaining compliance with the integrated containment system DSA/s

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		across the site and in accordance with the environmental authority.
When preparing a response to this information request, where applicable, existing reports must be revised and supported with additional tracked changed documents. Further, a summary document that references this information request and indicates where relevant sections of supporting reports address each of the items requested must be provided.		