# Information request 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: Graymont (Calliope) Pty Ltd
Level 9, 118 Mount Street
NORHT SYDNEY NSW 2060

ATTN: Vicki Robins
Email: vicki.robins@graymont.com

Your Reference: A-EA-AMD-100720573 | EPML00969013
Our reference: C-EA-100720590 | 101/0000001

## 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 10 September 2024.

The application reference number is: A-EA-AMD-100720573

Land description: Mining Lease (ML) 3594, ML3595, ML3596, ML3597, ML3598, ML3599, ML3600, ML3602, ML3603, ML3604, ML3605, ML3606, ML3608, ML3609, ML80036, ML80189, ML80190, ML80191, ML80192.

### 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 Appendix 1, attached 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.

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

A response to the information requested must be provided by 12 May 2025 (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@des.qld.gov.au.

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

## 4. Human rights

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

If you require more information, please contact the department on the details listed below.

| T.Gibbs | 13 November 2024 |
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| Signature | Date |

Teale Gibbs
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 5352
Email: ESCairns@des.qld.gov.au

**Attachments**

Appendix 1: Additional information required for major amendment application EA EPML00969013 Graymont Calliope Pty Ltd

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| Item | Reference | Matter | Information Request |
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| 1 | Section 6.2 | The application proposes to change the post mine land use (PMLU) for Pit 1 from water reserve to low intensity grazing. The pit is proposed to be backfilled using material from the northern waste rock dump.<br><br>The application provides an assessment of PMLU options for all activities in section 9.2 of the supporting document and refers to the assessment requirements and consistency with the Environmental Authority (EA). The application does not provide a detailed assessment and justification for the changed PMLU of Pit 1 that considers the regulatory requirements prescribed in Schedule 8 of the Environmental Protection Regulation 2019 (EP Reg). | Provide an environmental assessment for the performance objectives for land regarding the criteria for rehabilitation for the proposed PMLU for Pit 1 to justify the change as per Schedule 8 of the EP Reg. |
| 2 | Section 6.2 | Section 6.2 of the supporting document identifies that Pit 1 sits above the water table however, section 2.2 of Appendix F states, '*anecdotal evidence of hydraulic connection between mining pit 2 and pit 1*' and as such a potential pathway for contaminants to enter the groundwater. The application identifies that there will be contaminated land investigations undertaken in the base of Pit 1 throughout the backfilling process however no details have been provided on the parameters of the proposed investigations.<br><br>In addition, section 6.2 states '*The backfilling activity is further described in the geotechnical assessment provided in Appendix D*' however, while appendix D provided an assessment on pits 2, 3 and 4 no details have been included on the proposed methodology for backfilling Pit 1 to achieve a safe and stable condition. | Provide an assessment on the potential for the release of contaminants from pit 1.<br><br>Provide an assessment and details on the methodology used to backfill the pit to achieve a safe, stable and non-polluting PMLU. |
| 3 | Appendix G Final Landform Design Report | Environmental relevant activity (ERA) 60 is required by an environmental authority (EA) holder for the disposal of waste material including inert waste. However, Schedule 2, Part 12, Section 60, subsection (2) of the EP Reg provides that an ERA 60 does not apply to using clean earth as fill.<br><br>The EP reg further defines clean earth as *'any natural substance found in the earth that is not contaminated with waste or a hazardous contaminant*' and inert waste *as 'bricks, pavers, ceramics, concrete, glass or steel; or similar general waste that does not biodegrade or decompose'.* | Provide clarification on whether the material proposed for use as backfill of Pit 1 consists of only clean earth or whether it will include inert or waste production material. |

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| | | The *Waste Reduction and Recycling Act 2011* (WRR Act) EP identifies waste material includes anything that –<br><br>(a) is left over, or is an unwanted by-product, from an industrial, commercial, domestic or other activity; or<br>(b) is surplus to the industrial, commercial, domestic or other activity generating the waste.<br><br>The application proposes the backfilling Pit 1 and Section 2.2 of Appendix G identifies that Pit 1 will be backfilled with a combination of waste material from operations and from the existing Northern WRD. In addition, section 6 of Appendix G final landform design identifies the pit will be filled with material from overburden dump 1 and other '*residual waste from mining and processing operations*'.<br><br>If the material proposed for backfilling Pit 1 contains inert material or waste from the processing operations, ERA 60 will be required to undertake the activity. | |
| 4 | Section 4.1.1 | Section 4.1.1 of the application supporting document reports that the 2011 flood waters rose and inundated the project site and section 2.9.1 of Appendix E -Hydrogeological Assessment identified that the highest Awoonga Dam levels were reported in January 2013. Although Appendix E identified that the levee banks were not breached during the 2013, where the highest Awoonga Dam levels were recorded, no details were provided on depth and velocities of the flood waters on site during either event.<br><br>Section 3.6 of Appendix I - Sediment and Erosion Management Plan identifies that a sediment dam is '*currently in place to capture and treat runoff collected from the Process Area of the site'* and runoff from the majority of disturbed areas flows into the pits. The proposed amendment includes changes to activities that will potentially alter flow paths and sediment movement including the removal of the northern waste rock dump, backfilling of Pit 1 and changes to roads. Although the Erosion and Sediment Control Plan, Appendix I provides for mitigating activities to reduce erosion and sediment movement, no discussion has been provided on changes to flow paths or the ability of the sediment dams to capture any sediment laden water. The plan identifies that the sediment basin needs to be updated as per section 3.5.3 (not included, assumed section 3.2.2) however, the report lacks information on the site catchment that includes | Provide an assessment that considers changes to the site landform and flow paths resulting from the amendment and the capacity of existing water structures to limit sediment releases during rainfall events.<br><br>Provide the details of the site catchment in regard to areas reporting to the Pits of the sediment basin and include the appendices omitted from the report.<br><br>Provide an assessment to demonstrate there will be no residual impact from the activity in accordance with the section 41AA requirements set out in the EP Reg. |

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| | | details the areas reporting to the sediment dam or those diverted to the Pits. In addition, the Appendices, including the sediment basin calculations, have not been included in the report to support the plan.<br><br>The waste characterisation identifies that there were no materials likely to generate acid identified during testing and section 7.2 of the supporting document identifies that *'impacts to water quality from potential uncontrolled releases is anticipated to be limited to localised increase to turbidity, suspended solids and nutrients'*.<br><br>The Calliope limestone project is located within the Great Barrier Reef catchment and as such is subject to legislation aimed at the improvement of water quality entering the Great Barrier Reef through the reduction suspended solids, chemicals and nutrients. The department must consider section 41AA of the EP Reg, including a must refuse provision, in making its decision if the supporting information does not demonstrate that the amendment does not result in a residual impact. | |
| 5 | Section 10.2 Department Interest: Land | The application proposes to amend Table 8 - Final land use and rehabilitation approval schedule of EA EPML00969013 to identify the authorised disturbance areas for operations until end of mine life (EOML) and the post mine land use for each activity. Table 8 includes 121.18 ha for Open Pit (Voids) however, the authorised area includes the Pit 1 that will be back filled and is proposed to form part of the infrastructure and plant area at EOML.<br><br>The application identifies that due to the combining of Pit 3 and Pit 4 there will be changes to in the current activities occurring across the site (e.g. waste rock dump/spoil area) however limited information has been provided that identifies the current sizes of these areas or the transition of these activities.<br><br>Given the transitional nature of the activities proposed through the amendment, it is not clear how the EA will provide for regulation to authorise transitioning activities. | Provide a revised Table 8 that includes the existing and proposed activities and the proposed transitioning timeframes. The table will need to identify proposed disturbance areas and existing disturbance areas including areas where transitioning has commenced (e.g. Pit 1 disturbance area prior to backfilling). The table should contemplate a framework that allows for a clear authorisation for transitioning activities. |
| 6 | Appendix E Hydrogeological Report | The application provided a hydrogeological assessment for the site however the analytical modelling is based on the limited available groundwater data and did not consider the complexity of the geology associated with the site. | Provide a numerical hydrogeological model which considers the complexity of the mining site including but not limited to: |

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| | | Section 3.4 states, 's*pecific lithological boundaries are not necessarily constraining the flow of groundwater and hence a lithostratigraphic boundary for the aquifer is not appropriate'* however, there is no discussion on the likely groundwater connectivity between Calliope beds and the other nearby geological formations and as such this statement appears unsupported by data. The interaction between the geological formations is critical for understanding potential impacts of mining and how modelling of the mining impacts should be undertaken.<br><br>The application identifies that the groundwater flows eastward from the Boyne Range State Forest towards Lake Awoonga, however any recharge from this area may have limited impacts on the mining area given the faulting between the Rockhampton Beds and the Calliope Beds. The only certain groundwater gradient currently proven is from north to south from FM6 to FM5 and recharge in the area may be attributed to the elevated areas in the north (in the Calliope Beds) and draining south. It is also noted from the water level plots provided for FM6 and FM5/5B that groundwater levels in these bores appear to respond to high rainfall events. Potentially then, there is recharge occurring across the Calliope Beds outcrop from diffuse recharge. However, there is no indication that recharge is applied to the analytical groundwater model that has been used.<br><br>The assessment lacks consistency and clarity on the limestone resource in relation to the site hydrogeology. Section 1.2 of the report gives the appearance that the limestone extends to 8 m below the surface by identifying that grey limestone with clay filled cavities is present to a depth of between 5 to 8 meters however, section 2.3.2 assumes that the void will be approximately 100 m below the natural surface. In addition, cross sections which would provide clarification on the extent of the limestone resource in comparison to the final void levels are not provided in the assessment.<br><br>The analytical modelling presented in section 2.10 appears to contain a number of simplifications and limitations as follows which is considered inappropriate to model a complex groundwater system such as that at the Calliope Limestone mine:<br><br>• The inadequate groundwater monitoring network provides a significant limitation to modelling in its inability to provide an initial understanding of the groundwater levels and flow direction. | • Inclusion of cross section for all voids that identifies the limestone resource in comparison to the final projected void levels.<br>• Consideration of:<br>– adjacent geological formations and faulting<br>– recharge to the groundwater system through north-south groundwater gradient and rainfall<br>– hydraulic connectivity that considers changing ground elevation<br>– connectivity to Awoonga Dam and changes to water levels over time<br>– clarification of the limestone resource and final water bodies<br>– the influence of all voids when determining the impacts to groundwater and the inclusion of a map identifying the location of each pit.<br>– limitations associated with this monitoring network and potential limitations that this places on the groundwater modelling |

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| | | • The modelling does not consider the impacts to groundwater flow from the various geological formations and faulting close to the mine.<br>• The model assumes constant hydraulic conductivity in all directions in what appears to be a single layer model which potentially does also not account for changing ground level elevations.<br>• It does not appear to consider the connection with Awoonga dam including the significant seepage that can occur at times from Awoonga dam to the pit/s or the changing water levels over time in Awoonga dam and how that is impacting groundwater.<br>• Appendix 6 Figure 2 appears to indicate that the proposed future combined pit 3 and pit 4 has been represented by two extraction points. This does not appear to be representative of the full pit area or any impacts that pit 2 may be continuing to have. | |
| 7 | Appendix E Hydrogeological report | Section 2.4.1 identifies that hydrogeological information from a search of bores in a 9 km radius is limited and *'water level data is sporadic, and no continuous data exists to derive trends for water levels or water quality'.* It appears that groundwater levels are based on the two monitoring bores onsite which is inadequate for understanding the groundwater system at the site and therefore potential impacts. The report identifies that Pit 2 is providing hydraulic pressure to monitoring bore FM6 however there is no monitoring of water levels in other directions from the pit and while the report provides details on the geology of the Calliope Beds there appears to be no consideration given to the influence that the adjacent geology has on the groundwater system. Both of these considerations will have implications on how the system should be modelled. | Provide an updated hydrogeological report that provides clearer demonstration of the existing groundwater system with consideration on the expansion of the monitoring network to provide greater spatial coverage in both the Calliope Beds and the Rockhampton Beds. |
| 8 | Appendix J Landholder Statement | The application supporting document identifies that the eastern and western levees and all access tracks will be retained to allow access for the Gladstone Area Water Board (GAWB) for monitoring and maintenance purposes. The retention of this infrastructure is supported by a landholder's agreement where Graymont (NSW) Pty Ltd has accepted responsibility for these areas.<br><br>Condition F14 of EA EPML00969013 states *'All infrastructure constructed by or for the environmental authority holder during the licensed activities including water storage structures, must be removed from the site prior to surrender, except where agreed in writing by the post mining landowner/holder'*. However, condition F14 contains a note that '*this is not* | Provide details on the roads/levees required by the GAWB and include these as part of the revised table 8 that clearly identifies all tracks and levees to be retained. |

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| | | *applicable where the landowner/holder is also the environmental authority holder'* in reference to agreement by the landowner/holder.<br><br>To allow for the retention of the infrastructure required for access and maintenance the designated roads and levees are required to be clearly identified in Table 8 as areas retained for GAWB access. Currently the table identifies roads however the levees have not included as required for clarification on retained activities. | |