

Mining, Exploration & Geoscience Secretary's Environmental Assessment Requirements

for proposed significant state development applications requiring consultation
under Schedule 2 Part 2(3) of the Environmental Planning & Assessment Regulation 2000

Project	Copi Mineral Sands Project
Reference Number:	OUT22/5083
Issue date of SEARs:	3 May 2022
Type of Approval:	Mining operation - open cut
Proponent:	RZ Resources Limited
DA Number:	SSD-41294067
LGA:	Wentworth Local Government
Mineral:	Ilmenite, zircon, rutile and leucoxene

In preparing the environmental assessment requirements concerning an application for Significant State Development, the Planning Secretary must consult relevant public authorities and have regard to the need for the requirements to assess any key issues raised by those public authorities.

This development may require approval under the *Mining Act 1992* to be issued by the Department of Regional NSW – Mining, Exploration & Geoscience (MEG). The proponent must apply to MEG for the relevant approval (mining lease) during the development assessment process, or once consent has been granted, and before the commencement of any mining or ancillary activity.

A development application under the *Environmental Planning and Assessment Act 1979* must be approved before a mining lease can be granted. A mining lease will only be granted for activities specified in the development consent.

Environmental Impact Statement (EIS) requirements for mining

1. Project description

The proponent is to supply a comprehensive overview and description of all aspects of the project, including:

- location map showing the project area, mining titles, nearest town/s, major roads etc
- status of all existing titles (including mining and exploration), and development consents in place and/or a timeline to obtain necessary approvals
- any relationships between the resource and existing mines or other infrastructure
- nature of the operation (for example, underground block caving) and ore mineral/s to be extracted.

2. Geology

The Proponent is to supply a summary of the geological components of the mineral resource, including:

- a description of the local and regional geology including supporting maps and diagrams

- a summary of the stratigraphic unit or units within which the resource is located and relationships or conflicts between mineralisation controls (lithology, structure, rheology, local/regional faults)
- a description of the physical characteristics and dimensions of the mineral resource, with representative plans and cross-sections including each ore body/lens (if appropriate), drill holes and the area proposed for extraction. Drill logs should be included or appended
- details of the ore and waste rock, including mineralogy and deleterious elements
- evidence of geological and grade (or quality) continuity of mineralisation in the deposit such as
 - contaminants and/or ore specifications
 - model grade domains
 - an independent audit of the model
 - details of assumptions that have been used for converting resources to reserves.

3. Mineral Resources and Ore Reserves

The Proponent is to supply the most recent resource and reserve statement. The Proponent should also provide a summary of the mineral resource classifications and justification for each category.

- Include a full and updated resource/reserve statement that has been prepared in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves of the Joint Ore Reserves Committee (the JORC code). It is preferred that a significant amount of the resources are estimated to at least indicated or equivalent high-level of confidence.

MEG understands that it may not be feasible to convert all Inferred Resources to Indicated (or higher) level of confidence. However, the Proponent needs to demonstrate that there are sufficient resources to support the majority of the initial life of mine production schedule. Any contribution from Inferred Resources to the schedule needs to be justified.

4. Resource recovery and mine design

The Proponent is to supply evidence that the resource extraction is sustainable and maximised. Such evidence will include:

- a summary of resources that may be sterilised or excluded, with justification. Where the proposed mining/production scheme excludes resources that would normally be regarded as potentially economic by current industry standards, MEG requires appropriate economic and/or technical justification for the proposed mining/production scheme
- a description of how the proposed mine plan and extraction method maximises resource recovery and is achievable and consistent with current industry best practice.
- specify why the mine design has been chosen (noting resource, design, commercial/economic constraints) and why this is the best outcome; detailing the options considered in arriving at the final landform design
- a summary of the processing and recovery methods including equipment and mining loss and dilution
- all economic, environmental, geological, geotechnical and other constraints to the recovery of the resource/reserve impacting the project.

5. Life of mine schedule

The proponent must supply a life of mine production schedule for each year of operation of the mine and for the life of the project. The production schedule is to include:

- details of run-of-mine and product metal (tonnes/ounces), low-grade ore-mineralised waste and waste rock tonnage planned to be extracted for each year and for the life of the project, and an estimate of the saleable product produced for each year and the life of the project
- in terms of text, plans or charts, show the proposed extent and sequence of the development
- life of mine schedule should include estimates of non-acid forming (NAF) and potentially acid forming (PAF) material in waste/tailings. projections of handling and placement should be provided, including maps and diagrams. Tonnages of limestone, lime and any other material required for acid neutralisation should be included.

6. Project economics, royalty and target market

The proponent is to supply an assessment of project economics including:

- price forecasts by product type used by the proponent. MEG requires these forecasts to analyse the proponent's calculations of royalty value and export value
- CAPEX & OPEX necessary for the project broken down into the various sub-categories and equipment types. Include any changes that the project will have on existing mine infrastructure and broader mine infrastructure - rail, processing plant etc
- estimates of employment generation broken down into direct & indirect, ongoing & construction and operator & contract workers as full-time equivalent (FTE) roles
- total royalty generated annually and over the life of the project
- relationship and interaction with other mines and detail the project impacts on the existing mine and surrounding mines
- year-by-year production schedule and why this is the optimum schedule
- project funding source and assurance of ongoing project and operations funding from the proponent or parent. MEG is seeking the proponent's commitment to advancing the project.
- transport types and routes from site to market.

7. Rehabilitation and final landform

The proponent must supply an analysis of the proposed rehabilitation and final landform including:

- rehabilitation methodology, objectives and outcomes, including life-of-mine tailings management strategy
- conceptual final landform design (including any voids) accounting for mine design, engineering feasibility, economic feasibility and balance of environmental and social outcomes
- post-mining land use and barriers or limitations to effective rehabilitation.

It should be noted that rehabilitation is assessed by the Resources Regulator. The Regulator does not provide any endorsement of the proposed rehabilitation methodologies presented in the EIS or MRT. Under the conditions of a mining authority granted under the *Mining Act 1992* and conditions of the Mining Amendment (Standard Conditions of Mining Leases—Rehabilitation) Regulation 2021, the Resources Regulator requires an authority holder to adopt a risk-based approach to achieving the required rehabilitation outcomes.

A detailed rehabilitation strategy is to be presented to the Rehabilitation & Securities Panel (RASP). See the section below for further information on RASP.

For further information on mine rehabilitation follow this [link](#).

8. Spatial Data

The Proponent is to supply the following shapefile(s) and/or coordinates to enable MEG's internal mapping and assessment of the project:

- The project/development application area(s).
- Discreet features within the project area, for example mine extraction area/pit, ventilation shafts, underground entry portal/box cut, mine infrastructure area, rail loop, ancillary water storage dam(s), tailings dam(s).

Discreet project features must be in separate files and labelled clearly to demarcate from the main project area. Data must be supplied in GDA 1994 MGA coordinate system, UTM projection and shape files in ESRI shape file format.

Spatial data is to be sent to mining.concierge@regional.nsw.gov.au on submission of the EIS or MRT.

All above information should be summarised in the EIS, with full documentation appended. If deemed commercial-in-confidence, the resource summary included in the EIS must commit to providing MEG with full resource documentation via MEG's Resource and Economic Assessment process.

Additional matters for attention

Resource and Economic Assessment

Before any determination by the relevant consent authority, MEG is responsible for ensuring the efficient and optimised development of the resource.

This is assessed by undertaking a Resource & Economic Assessment (REA), as part of MEG's review process at the Environmental Impact Statement or Modification Report stage. The REA allows detailed assessment of the resource/reserve estimates and social and economic benefits to NSW as stated in the project and supporting material.

MEG's analysis concentrates on geological, mining and economic aspects of the project and will confirm if the production schedule and economics are considered feasible.

The REA should take place approximately six weeks before submission of the EIS or Modification Report.

The REA can be arranged by contacting the Industry Advisory & Mining Concierge Unit on 02 4063 6860 or via email at mining.concierge@regional.nsw.gov.au

Biodiversity offsets

MEG requests that the Proponent consider potential resource sterilisation in relation to any proposed biodiversity offsets areas. Biodiversity offsets have the potential to preclude access for future resource discovery and extraction and could also potentially permanently sterilise access to mineral resources.

The EIS must therefore clearly illustrate the location (including offsite locations) of any biodiversity offsets being considered for the project and their spatial relationship to known and potential mineral and construction material resources and existing mining & exploration titles.

MEG requests consultation with both the Geological Survey of NSW – Land Use Assessment team and holders of existing mining and exploration authorities affected by planned biodiversity offsets. Evidence of consultation should be included in the EIS.

Mining Titles

The mineral sand assemblage is dominated by ilmenite, zircon, rutile and leucoxene which are prescribed minerals under the *Mining Act 1992*, therefore the Proponent is required to hold appropriate mining titles from MEG in order to mine these minerals.

A development application under the *Environmental Planning and Assessment Act 1979* must be approved before a mining lease can be granted. A mining lease will only be granted for activities specified in the development consent.

Where a proposal includes Crown Land the proponent is required to comply with the Commonwealth *Native Title Act 1993* and undertake the right to negotiate process for the Crown Lands within the current exploration licence area(s) if proof of extinguishment cannot be determined.

For ancillary mining activities a proponent holding a mining lease granted in respect of mineral/s may, in accordance with the lease conditions, carry out any ancillary mining activity on that land (see definition of ancillary mining activity in clause 7 of the Mining Regulations 2016).

There is a subset of ancillary mining activity that the legislation defines as ‘designated ancillary mining activity’ (defined in section 6(6) of the *Mining Act 1992*).

A proponent seeking to undertake designated ancillary mining activity on land inside the mining area must ensure that the mining lease granted in respect of mineral/s contains a condition allowing undertaking of this designated ancillary mining activity (Section 6(1) of the *Mining Act 1992*).

A proponent seeking to undertake a designated ancillary mining activity outside a mining area, but in the immediate vicinity of and that directly facilitates the mining lease in respect of mineral(s), must apply for one of the following:

1. A separate mining lease for the designated ancillary mining activity which authorises the carrying out of the activity. (This provides the holder with the right to access the mining area to undertake the ancillary mining activity, however does not provide the holder with the right to mine).
2. A condition on an existing mining lease that regulates the carrying out of the designated ancillary mining activity in an off-title area. (See section 6(2) of the *Mining Act 1992*). The ancillary mining activity condition will include the survey plan of the designated ancillary mining activity area on which the designated ancillary mining activity is (or is proposed to be) located.

The EIS for a project should clearly identify existing mineral titles, mineral title applications and the final proposed mining lease area(s) for the project site and areas surrounding the proposed project area and address the environmental impacts and management measures for the mining and mining purpose activities as licensed under the *Mining Act 1992*.

Approvals

Position	Approval	Date
Endorsing Officer: Adam W. Banister Senior Advisor Industry Advisory & Mining Concierge Industry Development (02) 4063 6534	Endorsed in CM9	2 May 2022
Approving Officer: Scott Anson Manager Industry Advisory & Mining Concierge Industry Development (02) 4063 6972	Approved in CM9	3 May 2022