

Division of Resources & 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	Hawsons Iron Ore
Reference Number:	DOC19/976297
Issue date of SEARs:	11 November 2019
Type of Approval:	Mining operation - open cut
Proponent:	Carpentaria Resources Limited
DA Number:	SSD-5537
LGA:	Western Unincorporated
Mineral:	Iron minerals

In preparing the environmental assessment requirements with respect to an application for State significant 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 an approval under the *Mining Act 1992* to be issued by the Division of Resources & Geoscience. The proponent must apply to the Division 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:

- (a) Location map showing the project area, mining titles, nearest town/s, major roads etc.
- (b) Status of all titles (including mining and exploration), and development consents in place and/or timeline to obtain necessary approvals.
- (c) Any relationships between the resource and existing mines or other infrastructure.
- (d) Nature of operation (e.g. underground, open cut) 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) A brief description of the regional geology including a supporting map.

- (b) 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).
- (c) 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.
- (d) Details of the ore and waste rock, including mineralogy and deleterious elements.
- (e) Provide evidence of geological and grade (or quality) continuity of mineralisation in the deposit including:
 - contaminants and/or ore specifications
 - model grade domains
 - 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.

- (a) 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) to a minimum of Indicated Resource level of confidence. It is preferred that a significant amount of the resources are estimated to at least indicated or equivalent high-level of confidence.

The Division 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 extraction

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

- (a) A summary of resources that may be sterilised or excluded, with justification.
- (b) A description of how the proposed mine plan and extraction method maximises resource recovery. Specify why the mine design has been chosen (noting other resource, design, commercial/economic constraints) and why this is the best outcome; detailing the options considered in arriving at the final landform design.
- (c) A summary of the processing and recovery methods including equipment and mining loss and dilution.
- (d) List all economic, environmental, geological, geotechnical and other constraints to the recovery of the resource/reserve impacting the Project.

5. Geotechnical design assessment

The Proponent is to supply evidence of geotechnical investigations that support mine design including:

- (a) The general characteristics of surface and subsurface features that may be affected by subsidence caused by the proposed mining.
- (b) The proposed strategies to manage subsidence risks to surface or sub-surface features that are considered to have significant economic, social, cultural or environmental value.

6. 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:

- (a) Details of run-of-mine ore, 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.
- (b) In terms of text, plans or charts, the EIS must clearly show the proposed extent and sequence of the development.

7. Project economics and target market

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

- (a) Price forecasts by product type used by the Proponent. The Division requires these forecasts to analyse the Proponent's calculations of royalty value and export value.
- (b) Product tonnages split into market segment. These estimates are necessary to arrive at total revenue value and royalty calculations. Include justification for market segment based on quality parameters.
- (c) CAPEX & OPEX necessary for the Project broken down into the various sub-categories and equipment type. Include any changes that the Project will have on existing mine infrastructure and broader ex-mine infrastructure - rail, CHPP etc.
- (d) Estimates of employment generation broken down into direct, indirect, ongoing, construction and contract workers.
- (e) Total royalty generated over the life of the Project.
- (f) Relationship and interaction with other mines. Detailing the Project impacts on the existing mine and surrounding mines.
- (g) Details on derivation/analysis of Run-of-Mine (ROM) production rate; to answer why this the optimum rate.
- (h) Provide project funding source and assurance of ongoing project and operations funding from the proponent or parent. The Division is seeking the proponent's commitment to advancing this project.

The Division understands that an estimate of product split into individual market segments is difficult to estimate at a point in time and is dependent on market conditions as the life of the Project progresses. The Division requires the Proponent to provide its best estimate of their market mix at the initial stages of the Project.

The 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 the Division with full resource documentation via the Division's Resource and Economic Assessment process.

Additional matters for attention

Resource and Economic Assessment

The Resource and Economic Assessment (REA) is designed to review the resource/reserve estimates stated in the submitted EIS and supporting material. The REA also examines whether the project will deliver significant social and economic benefits to NSW from the efficient development of the resource, by optimising resource recovery and mine design and minimising waste. It also aims to ensure an appropriate return to the state from developing the resource. This process is to begin two months prior to lodgement of the EIS, with the proponent to contact the Assessment Coordination Unit to commence.

Biodiversity offsets

The Division 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.

The Division 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

As Iron minerals are prescribed minerals under the *Mining Act 1992*, the Proponent is required to hold an appropriate mining title(s) from the Division in order to mine the minerals.

For ancillary mining activities as, in so far as the ancillary activities are to be carried out in connection with and in the immediate vicinity of a mining lease in respect of a mineral, the proponent is required to hold a Mining Lease for ancillary mining activities or an 'off title' designated ancillary mining activity as defined by clause 7 of the Mining Regulation 2016 (the Regulation).

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*.

The Division requires consultation with all title holders intersected by the water pipeline, slurry pipeline and transmission line components of the project. The proponent can find the location of current exploration and mining titles in NSW using the following online tool:

<https://resourcesandgeoscience.nsw.gov.au/miners-and-explorers/geoscience-information/services/online-services/minview>

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.

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.

Position	Approval	Date
Approving Officer: Adam W. Banister Senior Advisor Assessment Coordination Resource Operations (02) 4063 6534	Approved in CM9	11 November 2019
Endorsing Officer: Scott Anson Manager Assessment Coordination Resource Operations (02) 4063 6972	Approved in CM9	12 November 2019