

Environmental Protection Act 1986

Section 43A

**NOTICE OF DECISION TO CONSENT TO CHANGE TO PROPOSAL DURING
ASSESSMENT**

PERSON TO WHOM THIS NOTICE IS GIVEN

Sheffield Resources Limited (ACN: 125 811 083)
Level 2, 41-47 Colin St
WEST PERTH WA 6005

PROPOSAL TO WHICH THIS NOTICE RELATES:

Thunderbird Mineral Sands Project
Assessment No. 2073

Pursuant to section 43A of the *Environmental Protection Act 1986* (EP Act), the Environmental Protection Authority consents to the proponent making the following changes to the proposal during assessment without a revised proposal being referred:

Decreasing the total infrastructure clearing from 645 ha to 326.1 ha being

- Processing infrastructure increasing from 40 to 60 ha (with the increase also including the power station footprint previously included in Other Supporting Infrastructure).
- Borefield increasing from 15 ha to 33.5 ha.
- Tailings Storage Facility increasing from 110 ha to 134 ha.
- Other supporting infrastructure decreasing from 320 ha to 68.6 ha.
- Site Access Road from 230 ha to 30 ha.

The revised conceptual mine site layout and mine site development envelope are shown in Figure 1 attached

EFFECT OF THIS NOTICE:

1. The proponent may change the proposal as provided for in this notice.

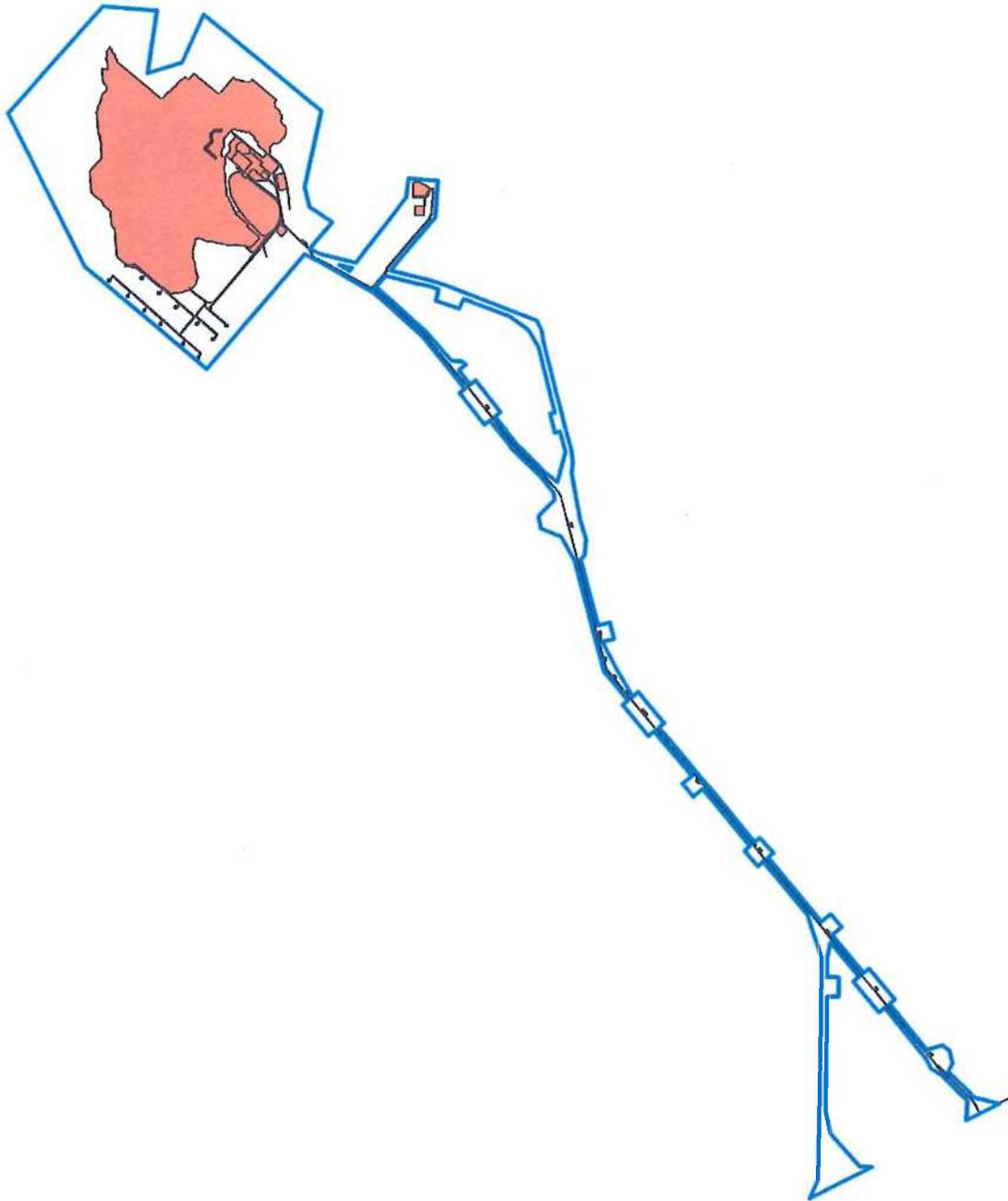
RIGHTS OF APPEAL:

There are no rights of appeal under the EP Act in respect of this decision.



Dr Tom Hatton
Delegate of the Environmental Protection Authority
CHAIRMAN

14 September 2017



LEGEND

- Thunderbird Minesite Development Envelope
- Revised Conceptual Site Layout

SOURCE DATA
 Proponent: Sheffield Resources
 Basemap: ESRI

DWER GIS Section
 Date: 14/09/2017, Map Version: 1
 File No: 2015_1448006322921

Disclaimer:
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Projection: Map Grid of Australia Zone 50
 Datum: Geocentric Datum of Australia, 1994
 Scale: 1:150,000 at A4

LOCALITY MAP



Environmental Protection Act 1986

Section 43A

STATEMENT OF REASONS

CONSENT TO CHANGE PROPOSAL DURING ASSESSMENT

Proposal: Thunderbird Mineral Sands Project

Proponent: Sheffield Resources Limited

Decision

For the reasons outlined below, the EPA has determined to consent to the Proponent changing the Proposal outlined in Schedule 1 attached to this Statement of Reasons.

Background

On 20 November 2015, Sheffield Resources Limited referred the Proposal to the Environmental Protection Authority (EPA) under section 38 of the *Environmental Protection Act 1986* (EP Act). The Proposal is to mine, process and export mineral sands at the Thunderbird Mineral Sands Project on the Dampier Peninsula and export the product from the ports of Broome and Derby.

The EPA determined to assess the Proposal at the level of Public Environmental Review on 15 December 2015.

In advance of the EPA preparing a report on the outcome of its assessment of the Proposal, the Proponent has sought the EPA's consent for a change to the Proposal.

Relevant Statutory and Administrative Provisions

Section 3.8 of the Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual 2016 guides what information the EPA requires from a person wanting to change its proposal during assessment.

In considering the request for consent, the EPA considered the:

- details of the proposed change
- statement of the significance of the change and
- rationale for the change.

Materials considered in making this decision

In determining whether to consent to the proponent changing the proposal the EPA has considered the following:

1. the proponent's application change to the proposal during assessment (September 2017),

2. the Public Environmental Review document for the Proposal (January 2017).
3. consultation, including information obtained during consultation as part of the site visit (May 2017),
4. public submissions and the proponent's response to submissions (May 2017),

Consideration

1. Nature of the proposed change

The change being sought is a decrease in the total disturbance required for the construction of processing and other infrastructure for the proposal. The change does not include any change in the nature of the activities required for the proposal to proceed. The decrease in infrastructure clearing is 318.9 hectares, which is a decrease of approximately 14% of the total clearing required for the proposal.

In summary the changes are:

- Processing infrastructure increasing from 40 to 60 ha (with the increase also including the power station footprint previously included in Other Supporting Infrastructure).
- Borefield increasing from 15 ha to 33.5 ha.
- Tailings Storage Facility increasing from 110 ha to 134 ha.
- Other supporting infrastructure decreasing from 320 ha to 68.6 ha.
- Site Access Road decreasing from 230 ha to 30 ha.

The change includes an increase in the size of tailings storage facility by 24 hectares. The assessment of the tailings facility has sought to restrict the total volume of tailings disposed into the tailings storage facility (45 million tonnes) as this is what is considered most relevant to the environmental impact. The increase in area of tailings will not result in the disturbance of additional conservation significant flora and vegetation and forms part of the net reduction of area required to be disturbed for the proposal.

The Mine Site Development Envelope would also be reduced from 5,875 ha to 5,648 ha to reflect the changes to the proposal.

2. Stage of the assessment process

The Public Environmental Review has been undertaken, the Response to Submissions finalised, and the EPA Report has been endorsed by the EPA Members. As part of the condition consultation process the proponent has indicated that it has undertaken ongoing design work to reduce the project footprint and wishes to amend the proposal under s43A of the EPA Act to ensure the quantification of the significant residual impact reflects this ongoing work.

3. Currency, relevance and reliability of the information, including submissions

The EPA considers the currency, relevance, and reliability of the information provided in support of the application to change the proposal to be satisfactory. In addition the public environmental review document and response to submissions were finalised in 2017 and therefore the information in these documents is considered current.

4. Community engagement

There has been a number of different steps undertaken to seek community input into the assessment of the Thunderbird Project. These include by the EPA, through the Public Environmental Review process and meetings with community members during a site visit in May 2017, and by the Proponent through targeted stakeholder engagement and public meetings in Broome and Derby.

5. Level of public concern

Significant public interest has been shown as evidenced by the EPA receiving 52 submissions during the Public Environmental Review Period. Of these submissions, 30 were in support of the Project going ahead.

Consideration of Whether the Change is Unlikely to Significantly Increase Any Impact that the Proposal May Have on the Environment

The following were considered:

a) Values, sensitivity and the quality of the environment which is likely to be impacted

The EPA Chairman's determination identified the preliminary environmental factors for the original proposal as:

- Flora and Vegetation;
- Terrestrial Fauna;
- Hydrological Processes;
- Inland Waters Environmental Quality;
- Amenity (now considered under Social Surroundings);
- Heritage (now considered under Social Surroundings);
- Marine Environmental Quality;
- Offsets (now considered under Flora and Vegetation and Terrestrial Fauna);
- and
- Rehabilitation and Decommissioning (now considered under Flora and Vegetation and Terrestrial Fauna).

The change gives no cause for additional environmental factors to be considered key environmental factors for the purposes of the assessment.

The region is known to contain threatened fauna species, in particular the Greater Bilby, however the changed proposal is unlikely to have a significant environmental impact that is additional to, or different from the original proposal as the impact on flora and vegetation and fauna habitat is reduced due to lowering disturbance required for the changed proposal.

b) Extent (intensity, duration, magnitude and geographic footprint) of the likely impacts

The magnitude and geographic footprint of the likely impacts have reduced as a result of the change to proposal. The intensity and duration will remain unchanged over the projects 42 year life.

c) Consequence of the likely impacts (or change)

The change represent a 14% reduction in the total clearing required for the proposal. The reduction in impacts of clearing for infrastructure will reduce the fragmentation of habitat in the local area as well as reduce the overall impact of the proposal.

d) Resilience of the environment to cope with the impacts or change

The EPA considers the resilience of the environment to cope with the changed proposal remains unchanged from that of the original proposal, should it be implemented.

e) Cumulative impacts with other projects

Cumulative impacts were be considered in the EPA's assessment of the proposal. The change represents a decrease in total clearing required for the Thunderbird Project and which means that change would decrease the potential for cumulative development pressures from the proposal.

f) Connections and interactions between parts of the environment to inform holistic view of impacts of the whole environment

The impacts of the proposal were considered in the assessment report that has been endorsed by EPA Members. The change to the proposal is not considered to change the outcomes of this consideration as it does not change the impacts at a regional scale.

g) Public interest about the likely effect of the proposal, if implemented, on the environment, and public information that informs the EPA's assessment

As noted, 52 submissions were received on the Public Environmental Review document, indicating significant public interest in the proposal. The level of public interest is not expected to change given the nature of the proposed changes to the proposal.

Schedule 1 Change to Proposal

Summary of the Proposal			
Proposal Title	Thunderbird Mineral Sands Project		
Proponent Name	Sheffield Resources Limited		
Short Description	<p>The project is located approximately 95 km northeast of Broome and 75 km west of Derby in Western Australia. The project includes heavy mineral sands mining above and below the water table, dewatering within the Broome Sandstone Aquifer, onsite mineral processing, transport of bulk mineral sands products to Derby Port and transshipping bulk product via King Sound using new and existing infrastructure at Derby Port and transport of packaged products to the Port of Broome for export using existing infrastructure. The project includes:</p> <ul style="list-style-type: none"> • Mining up to a depth of approximately 100 m below ground level. • Processing of heavy mineral sands including use of a tailings storage facility. • Progressive backfilling of the mine pit and rehabilitation of backfilled areas. • Upgrade and extension of an existing road, and construction of a new road, to provide an approximately 30 km long Site Access Road linking the project to the Great Northern Highway. • Groundwater abstraction from and reinjection to the Broome Sandstone Aquifer. • Supporting infrastructure including internal roadways, accommodation camp, power plant, workshops, offices and landfill. • Storage and export of bulk mineral sands products from Derby Port and export of packaged products from the Port of Broome. 		
Physical Aspects			
Aspect	Location	Proposed Extent Authorised*	
Mine Site Development Envelope			
		Current Wording	Changed Wording
Mining Excavation		<p>Clearing and mining of no more than 1,635 ha within a 5,648 ha Mine Site Development Envelope.</p> <p>No more than 200 ha of active mine pit will be open at any one time, excluding areas being cleared in preparation of mining or areas being rehabilitated post-mining.</p>	No change.
Processing and Supporting Infrastructure, Including the Tailing Storage Facility, Site Access Road, Borefield, Accommodation, and Other Mine Site Supporting Infrastructure	Figure 1	Clearing of no more than 645 ha within a 5,648 ha Development Envelope.	Clearing of no more than 326.1 ha within a 5,648 ha Development Envelope.
Derby Port Storage and Export Facility		Construction and Operation of storage/export facility on previously disturbed land on Derby port land.	No change.

* Note there is no change to any of the operational elements in the key characteristics table so operational elements have not been included in this version of the table