Environmental Protection Act 1986

Section 41A(3)

NOTICE OF DECISION TO CONSENT TO MINOR OR PRELIMINARY WORKS

PERSON TO WHOM THIS NOTICE IS GIVEN:

(a) Sheffield Resources Limited
   Level 2, 41-47 Colin Street
   WEST PERTH WA 6005

(b) Relevant Decision-Making Authorities, see Attachment 1

PROPOSAL TO WHICH THIS NOTICE RELATES:
Thunderbird Mineral Sands Project – Minor or Preliminary Works
Assessment No. 2073

Pursuant to section 41A(3) of the Environmental Protection Act 1986 (EP Act), the Environmental Protection Authority consents to the proponent undertaking the minor or preliminary works detailed in Schedule 1.

EFFECT OF THIS NOTICE:

1. The prohibition provided by sections 41(2), 41(3) and 41A(1) of the EP Act do not apply to implementing the minor or preliminary works consented to in this Notice.

2. It is an offence under s41A(1) of the EP Act, with a maximum penalty of $125,000 for a body corporate and $62,500 for an individual, to do anything to implement the proposal other than the minor or preliminary works consented to in this Notice.

3. Relevant decision-making authorities may make decisions that would cause or allow the doing of the minor or preliminary works listed in Schedule 1 of this Notice.

RIGHTS OF APPEAL:

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

Dr Tom Hatton
Delegate of the Environmental Protection Authority
CHAIRMAN
27 July 2017
Environmental Protection Act 1986

Section 41A(3)

STATEMENT OF REASONS

CONSENT TO UNDERTAKE MINOR or PRELIMINARY WORKS

Proposal: Thunderbird Mineral Sands Project – Minor or Preliminary Works

Proponent: Sheffield Resources Limited

Decision

For the reasons outlined below, I, as a delegate of the Environmental Protection Authority (EPA), have determined to consent to the minor or preliminary works outlined in Schedule 1 attached to this Statement of Reasons.

Background

On 20 November 2015, the Sheffield Resources Limited referred the Thunderbird Mineral Sands Project (the Proposal) to the EPA under section 38 of the Environmental Protection Act 1986 (EP Act). The Proposal includes the mining of mineral sands above and below the water table, onsite processing of mineral sands, export of bulk products via Derby Port through King Sound (using new and existing infrastructure), and export of packaged products via the Port of Broome (using existing infrastructure).

The EPA determined to assess the Proposal at the level of Public Environmental Review on 21 December 2015 and is yet to publish its assessment report.

In advance of a decision or agreement in relation to whether or not the Proposal may be implementation under section 45 of the EP Act, the Proponent has sought the EPA’s consent to undertake minor or preliminary works related to the Proposal.

Relevant Statutory and Administrative Provisions

After the EPA decides to assess a Proposal, and before a decision or agreement is made under s45 of the EP Act, all persons are prohibited from implementing a proposal, and relevant decision making authorities are prohibited from making a decision which would allow the proposal to be implemented, except in relation to minor or preliminary works which the EPA has consented may be implemented – see sections 41(4) and 41A(3) of the EP Act.
If the EPA consents to the minor or preliminary works being done, the person proposing to undertake those works may still need to obtain other authorisations from other decision making authorities.

Section 3.5 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 undertake minor or preliminary works.

In considering the request for consent, I considered whether the:

- work is associated with the implementation of the proposal
- potential environmental impacts of the work are significant
- work would constitute the irreversible and substantial implementation of the proposal, and
- work is justified.

**Materials considered in making this decision**

In determining whether to consent to the minor or preliminary works I have considered the following:

1. the document *Sheffield Resources Limited, Thunderbird Mineral Sands Project Approval – Minor or Preliminary, 24 April 2017*, MBS Environmental (hereafter called the supporting documentation) that provided;
   - the location, scope and methodology of the proposed work
   - the relationship of the proposed work to the proposal
   - details of the potential environmental impacts caused or likely to be caused by the work and how the potential impacts will be managed
   - details of decommissioning and rehabilitation works which would be carried out should the overall proposal not be implemented, and
   - information explaining how the impact from proposed works would be reversed if the proposal is not implemented.

2. comments received from the Department of Aboriginal Affairs (now Department of Planning, Lands and Heritage) (dated 14 June 2017);

3. follow-up consultation with the proponent regarding the proposed minor or preliminary works potential; encroachment into the heritage exclusion zones;

4. spatial data provided by the proponent displaying the proposed works in relation to Greater Bilby recordings and heritage exclusion zones;

5. public comments received during the seven day public consultation process; and

6. the Commonwealth’s Department of Environment and Energy (DoEE) determination under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) to not assess the proposed works.
Consideration

1. **Proposed work associated with the implementation of the proposal**

The minor and preliminary works (proposed works) involve excavating geotechnical trenches to advance the proponent’s understanding of the site’s geotechnical characteristics. Results from these minor works will inform mine design (i.e. safe pit wall angles), equipment selection, and suitability of mine waste for construction materials.

To facilitate the geotechnical assessment, the proponent proposes to construct a temporary accommodation village and associated infrastructure, including a wastewater treatment plant, spray field and access roads. The total proposed disturbance area is no more than 22 hectares (ha). All proposed works will be undertaken within the Development Envelope of the Proposal which was defined in the assessment stage of the EPA’s assessment process (Figure 1).

I, as the delegate of the EPA, consider the proposed works are associated with the implementation of the proposal currently being assessed by the EPA.

2. **Significance of the potential environmental impacts**

The EPA set level of assessment for the Proposal at Public Environmental Review on 21 December 2015. The EPA identified a number of key environmental factors that required evaluation during the assessment process, including Flora and Vegetation, Terrestrial Fauna, Social Surroundings, Hydrological Processes, Inland Waters Environmental Quality, and Marine Environmental Quality. Two of the seven environmental factors were identified to be at risk from the implementation of the proposed works, including:

- **Terrestrial Fauna** – clearing of 22 hectares of fauna habitat, including habitat for the Greater Bilby (*Macrotis lagotis*) which is listed as threatened fauna.

- **Social Surroundings** – Development Envelope includes areas identified as Aboriginal Sites of Significance.

I had regard for the following when considering the significance of the potential environmental impacts to these factors, and have concluded that the proposed works are unlikely to result in significant environmental impacts, nor would they likely amount to irreversible impacts or environmental harm.

**Terrestrial Fauna**

The proposed works will result in the clearing and disturbance of up to 22 ha within the proposal’s Development Envelope. Of particular concern is the impact to the Greater Bilby resulting from direct mortalities from vehicle strikes, or indirect impacts from clearing of breeding and foraging habitat.

The significance of the Greater Bilby population and habitat was identified in the public submissions, and concerns were raised regarding the adequacy of the proponent’s survey work within the specified disturbance areas. In considering these concerns, it
was noted that survey work for flora and vegetation, and fauna was undertaken during the assessment stage of the Proposal to the requirements of the EPA, and occurred across the entire development envelope (including the sites identified for the proposed works). Furthermore, spatial imagery of Greater Bilby sightings and locations have been provided by the proponent (Figure 2) and demonstrate that the species occurs throughout the wider locality. Noting this, it is unlikely that this species is restricted to the proposed work’s disturbance area and therefore implementing the proposed works will not result in substantial habitat loss or a significant decline in the local population of the Greater Bilby.

To mitigate the potential localised impacts, the proponent proposes to undertake pre-clearing monitoring, installing egress ramps from the trenches, trapping and relocation activities, and restricting speed limits to minimise the risk of vehicle strikes to the species. The implementation of these management actions are considered sufficient to minimise direct and indirect impacts to this species.

Furthermore, the Commonwealth’s DoEE determined the proposed works to be ‘Not a Controlled Action’ under the EPBC Act on 10 July 2017. The decision to not assess the proposed works was based on the small scale nature of clearing, the lack of Greater Bilby burrows present within the footprint, and the management actions committed to by the proponent. These conclusions are support and were reached during the assessment of the proposed minor and preliminary works.

Social Surroundings

A 2016 closed heritage survey was undertaken within the proposal’s Development Envelope and wider locality, resulting in the delineation of heritage exclusion zones surrounding sites of significance. The specific locations and nature of these sites have been kept confidential at the request of local indigenous groups and are not documented nor registered with the Department of Planning, Lands and Heritage (DPLH) (formerly the Department of Aboriginal Affairs).

The DPLH was consulted regarding the proposed works and noted that at one site, proposed for geotechnical trenching, the work’s appeared to encroach into the heritage buffer zone creating concern that these zones could be unintentionally compromised as a result of the activities. The proponent has supplied the EPA with spatial imagery that defined the footprint of the proposed works in relation to the heritage exclusion zones (Figure 3). The spatial mapping did confirm DPLH’s concerns (Figure 3a), but the proponent has confirmed in writing that the discrepancy related to the accuracy of the mapping data and has committed to ensure the on-ground works do not encroach into these exclusion zones.

Considering the above, I have concluded that impacts associated with the works can be avoided if the heritage exclusion zones and buffer areas are not intersected by the proposed works.
3. Proposed work would constitute irreversible substantial implementation of the proposal

Considering the limited disturbance associated with the proposed works (22 ha) when compared to the development of the current proposal (1,635 ha), as well as the proponent’s commitment to remove infrastructure and undertake rehabilitation activities, the proposed works are not considered to constitute irreversible substantial implementation of the proposal.

The proponent has submitted a Mining Proposal to Department of Mines, Industry, Regulation and Safety to obtain approval for the accommodation village under the Mining Act 1978. Decommissioning and rehabilitation of the proposed works has been addressed within this application and will require the proponent to undertake rehabilitate activities should the proposal not proceed.

4. Proposed work is justified in extent and timing

The proposed work is limited in its nature (22 ha) and involves minor geotechnical investigations that will inform future mine design, equipment selection, and suitability of mine waste for construction materials, and is therefore justified in extent. The proponent requires the works to commence prior to the 2017 wet season or access to the work and accommodation area will be extremely difficult and unpredictable. The road upgrades will be the priority work item to allow wet weather access. Considering these constraints, the proposed works are considered justified in their extent and timing.
Schedule 1

Minor or Preliminary Works
### Table 1: Summary of the Proposal

<table>
<thead>
<tr>
<th>Proposal Title</th>
<th>Thunderbird Mineral Sands Project – Minor or Preliminary Works</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Short Description</strong></td>
<td>Pursuant to section 41A(3) of the <em>Environmental Protection Act 1986</em>, the EPA consents to Sheffield Resources Limited undertaking minor or preliminary works within the assessed development envelope for the purposes of undertaking geotechnical investigative works, including the construction of an accommodation village and associated infrastructure (waste-water treatment facility, spray field and access tracks and upgrades).</td>
</tr>
</tbody>
</table>

### Table 2: Location and authorised extent of physical and operational elements

<table>
<thead>
<tr>
<th>Element</th>
<th>Location</th>
<th>Authorised Extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geotechnical trenches and infrastructure</td>
<td>Figure 1</td>
<td>Clearing no more than 10 ha of vegetation within the 5,648 ha mine Development Envelope.</td>
</tr>
<tr>
<td>Accommodation village</td>
<td>Figure 1</td>
<td>Clearing no more than 4 ha vegetation within the 5,648 ha mine Development Envelope.</td>
</tr>
<tr>
<td>Waste-water treatment facility and spray field</td>
<td>Figure 1</td>
<td>Clearing no more than 2 ha vegetation within the 5,648 ha mine Development Envelope.</td>
</tr>
<tr>
<td>Access tracks and upgrades</td>
<td>Figure 1</td>
<td>Clearing no more than 6 ha vegetation within the 5,648 ha mine Development Envelope.</td>
</tr>
</tbody>
</table>
Figure 1 – Minor or Preliminary Works Layout
Figure 2 – Greater Bilby Survey Results
Figure 3 – Heritage Exclusion Zone
Figure 3a – Potential Encroachment into Heritage Exclusion Zone