



**EPBC 2016/7648**  
**Annual Compliance Report**  
**July 1 2023 – June 30 2024**

**Thunderbird Mineral Sands Project**

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AUTHORISATION

Revision Number	Reason for Issue	Prepared	Approved	Date
1	Requirement under EPBC	Molly Ahern/Micaela Green	Mitchell Duley	20/06/2024
2	Requirement under EPBC			

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## 1. INTRODUCTION

### 1.1 Project Overview

Kimberley Mineral Sands (KMS) is a 50:50 Joint Venture between Sheffield Resources Ltd (SFX) and YGH Australia Investment Pty Ltd (Yansteel) for the development of the Thunderbird Mineral Sands Project ('Thunderbird') in the West Kimberley.

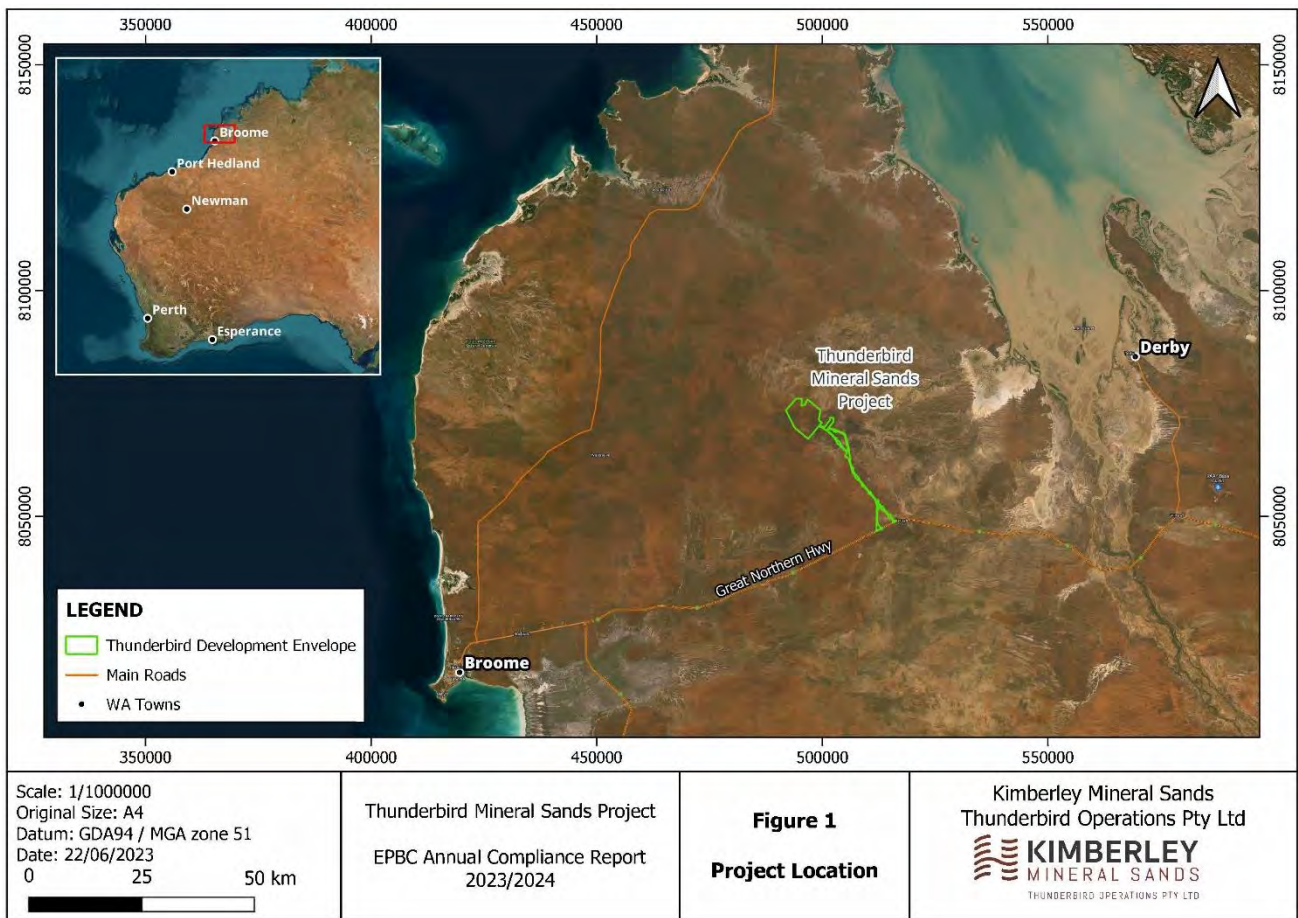
Thunderbird is one of the largest and highest-grade zircon mineral sands deposits in the world and contains valuable minerals including ilmenite, zircon, leucoxene, and rutile, which are extracted and exported via the Port of Broome to our global offtake partners.

Thunderbird is located on the Dampier Peninsula within the west Kimberley region of Western Australia (Figure 1), approximately 75 km west southwest of Derby and 95 km northeast of Broome. It is accessed from the Great Northern Highway via a 30 km long Site Access Road.

The project is located within the Mt Jowlaenga Pastoral Lease currently held by the Yeeda Pastoral Company Pty Ltd. The Site is situated within the Joombarn-buru native title determination. The Site Access Road intersects the Great Northern Highway approximately halfway between Broome and Derby..

Thunderbird was developed on a greenfield site and comprises:

- Mining of heavy mineral sands over a 36 plus year period from the Thunderbird deposit
- Onsite primary and secondary processing of heavy mineral sands to produce a range of saleable products
- Abstraction and reinjection of groundwater from the Broome Sandstone Aquifer to allow mining and supply ore processing needs
- Project infrastructure including power generation facilities, accommodation village, administration and maintenance buildings, internal roads, communications infrastructure, and waste storage and disposal facilities
- A 30km site access road from the Great Northern Highway towards the mine site
- Transport of mineral sands products from the mine site via the Site Access Road and Great Northern Highway to the Port of Broome for storage prior to export
- Export of bulk mineral sands products from the Port to international customers



**Figure 1. Locality Map**

## 1.2 Objective

This report addresses condition 8 of EPBC 2016/7648, as stipulated:

By 30 June of each year after the commencement of the action, the approval holder must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of approved plans or strategies specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the Minister at the same time as the compliance report is published.

The Project commenced the action on 11 August 2021. The Department was notified of commencement of the action on 16 December 2021. As of Q1 2024 the Project is in the operational phase, with the first shipment of product sent on 28 January 2024.

## 1.3 Scope

This report details the commitments outlined within EPBC 2016/7648 (issued on 27 September 2018) and assessment of compliance against conditions 1-12 for the reporting period 1 July 2023 to 30 June 2024.

## 2. STATEMENT OF COMPLIANCE

### 2.1 Proposal and Proponent

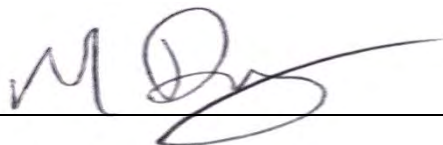
Table 1. Company and Proposal Details

Proposal Title	Thunderbird Mineral Sands Project
Location of the Project	Kimberley Region, approximately 75 km west southwest of Derby and 95 km northeast of Broome. It is accessed from the Great Northern Highway via a 30 km long Site Access Road.
Approved Action Number	EPBC 2016/7648
Proponent Name	Thunderbird Operations PTY LTD
Proponent's Australian Company Number (where relevant)	611 351 743

### 2.2 Proponent Declaration

In making this declaration, I am aware that section 490 and 491 of the Environmental Protection and Biodiversity Conservation Act 1999 (Cth) (EPBC Act) make it an offence in certain circumstances to knowingly provide false or misleading information or documents. The offence is punishable on conviction by imprisonment or a fine, or both. I declare that all the information and documentation supporting this compliance report is true and correct in every particular. I am authorised to bind the approval holder to this declaration and that I have no knowledge of that authorisation being revoked at the time of making this declaration.

Signed



Full Name (please print)

Mitchell Duley

Position (please print)

Environmental Superintendent

Organisation (please print including ABN/ACN if applicable)

Thunderbird Operations PTY LTD ACN 611 351 743  
Kimberley Mineral Sands ABN 11 611 351 743

Date

20/06/2024

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### 3. DESIGNATIONS TO RECORD FINDINGS

#### 3.1 Assessment of Compliance

The terminology used to record findings in the compliance report (Table 2) is consistent with that used by the DCCEEW Annual Compliance Report Guidelines (2014).

**Table 2. Compliance Status Terminology**

Status	Description
<b>Compliant</b>	'Compliance' is achieved when all the requirements of a condition have been met, including the implementation of management plans or other measures required by those conditions.
<b>Non-compliant</b>	A designation of 'non-compliance' should be given where the requirements of a condition or elements of a condition, including the implementation of management plans and other measures, have not been met.
<b>Not Applicable</b>	A designation of 'not applicable' should be given where the requirements of a condition or elements of a condition fall outside of the scope of the current reporting period. For example, a condition which apprise to an activity that has not yet commenced.

## 4. COMPLIANCE ASSESSMENT

### 4.1 Audit Assessment

In accordance with condition 8 of the EPBC Act approval (Approval Reference EPBC 2016-7648), this report provides an update of Thunderbird's compliance against the relevant approval conditions (Table 3).

**Table 3. Thunderbird Mineral Sands Project EPBC 2016/7648 Audit Assessment**

EPBC 2016/7648			
Condition Number	Condition	Compliant/Non-Compliant/Not Applicable	Evidence/Comments
1	For the protection of the <b>Greater Bilby</b> , the approval holder must not <b>clear</b> more than 1,961.1 ha and must not <b>clear</b> any area outside the <b>development envelope</b> .	Compliant	<p>At the time of reporting, a total 509.7 ha of land across the Thunderbird Development Envelope had been cleared (see <b>Appendix A</b> and <b>B</b>).</p> <p>Records are maintained via an 'Area of Disturbance' database which is regularly updated (<b>Appendix C</b>). Supporting survey and spatial data is retained as part of the assurance procedure to verify compliance against State and Commonwealth clearing allocations.</p> <p>No clearing occurred outside of the development envelope during the reporting period.</p> <p><i>Supporting Documents:</i></p> <p><i>Appendix A; Disturbance Areas Site Plan</i></p> <p><i>Appendix B; Thunderbird Mine Site Development Envelope Site Plan</i></p> <p><i>Appendix C; Thunderbird Operations - Area of Disturbance Records</i></p>
2	<p>For the protection of the <b>Greater Bilby</b>, the approval holder must submit a Terrestrial Fauna Environmental Management Plan (TFEMP) to the <b>Minister</b> for approval. The TFEMP must:</p> <p>a) Detail the protocol/s that will be implemented during pre-clearance surveys, including to identify <b>Greater Bilby</b> burrows and for Greater Bilby capture and translocation into suitable habitat; and</p>	Compliant	<p>The Terrestrial Fauna Environmental Management Plan for The Thunderbird Mineral Sands Project dated 24 October 2018 was approved by the Minister on 20 November 2018 (<b>Appendix D</b>). All clearing was conducted using internal permit to clear procedures (<b>Appendix E</b>), and in accordance with the Greater Bilby disturbance protocols stipulated within the Terrestrial Fauna Environmental Management Plan. All Greater Bilby activity</p>



	<p>b) Comply with conditions 6-1,6-2,6-3,6-4,6-5,6-6,6-7 and 6-8 of the <b>Western Australian Approval</b>.</p> <p>The approval holder must not <b>commence</b> the action until the <b>Minister</b> has approved the TFEMP. The approved TFEMP must be implemented.</p>		<p>was recorded and documented in the internal Greater Bilby survey database (<b>Appendix F</b>) and through GIS Database.</p> <p><i>Supporting Documents:</i></p> <p><i>Appendix D; Thunderbird Mineral Sands Project (EPBC 2016/7648): Terrestrial Fauna Environmental Management Plan and Offset Strategy Approval Letter (2018)</i></p> <p><i>Appendix E; Permit to Clear Example</i></p> <p><i>Appendix F; Greater Bilby Survey Summary</i></p>
3	<p>The approval holder must within twelve months of the date of this approval submit to the <b>Minister</b> for approval an Offset Strategy that will compensate for the residual impacts to the <b>Greater Bilby</b>. The Offset Strategy must be consistent with the principles of the <b>EPBC Act Environmental Offsets Policy</b>, and must:</p> <ul style="list-style-type: none"> <li>a) Provide offsets for 1,961.1 ha of <b>Greater Bilby</b> habitat to be <b>cleared</b> as a result of the action;</li> <li>b) Prioritise land management activities with direct benefit for <b>Greater Bilby</b> habitat over research activities;</li> <li>c) Consistently with relevant approved <b>conservation advice, recovery plans</b> and <b>threat abatement plans</b> and/or regional conservation plans, identify threats to <b>Greater Bilby</b>, and nominate priorities for offset projects that are likely to realise a conservation benefit for <b>Greater Bilby</b>;</li> <li>d) Specify a financial commitment to offset projects based on a rate of at least \$2,500 (excluding GST) per hectare of <b>Greater Bilby</b> habitat <b>cleared</b>. The contributions rate must be amended quarterly to match inflation measured through <b>CPI</b>, taking the date of this approval as the starting point for adjustments;</li> <li>e) Specify milestones for <b>Greater Bilby</b> habitat <b>clearing</b> and for expenditure on offset projects, with a staged process for developing and submitting offset projects for approval by the <b>Department</b>;</li> <li>f) Specify the process for reporting on expenditure on offset projects, and conservation outcomes achieved; and</li> <li>g) Outline the circumstances whereby the approval holder may request from the <b>Minister</b> an <b>acquittal</b> of a portion of the area of <b>Greater Bilby</b> habitat specified in Condition 3(a) as a result of implementing rehabilitation activities.</li> </ul> <p>The approval holder must not <b>commence</b> the action until the <b>Minister</b> has approved the Offset Strategy. The approval holder must implement the approved Offset Strategy.</p>	Compliant	<p>The Offset Strategy for The Thunderbird Mineral Sands Project dated 13 October 2018 was approved by the Minister on 20 November 2018 (<b>Appendix D</b>). A revision to the Offset Strategy was approved on 7 October 2020 (<b>Appendix G</b>).</p> <p>A Subsequent revision to the Offset Strategy was submitted on 17 April 2023, the approval process for this document was ongoing at the time of reporting (<b>Appendix H</b>). This revision of the Offset Strategy is subject to Bilateral assessment by the Western Australian Department of Water and Environmental Regulation (DWER) as well as DCCEEW. The requirement for bilateral assessment is prompted by the amalgamation of the Greater Bilby Research and Conservation Plan (GBRCP) into the Offset Strategy. The GBRCP is a requirement of Condition 10 of WA EPA Ministerial Statement 1080, as such, assessment of the revised Offset Strategy will be coordinated by DWER with DCCEEW to align approval for the purposes of both Ministerial Statement 1080 and EPBC Act Approval 2016/70648.</p> <p>Thunderbird notified commencement of offset payments for the entirety of clearing related to the project on 16 December 2021. The first payment was then processed on 1 June 2022.</p> <p>At the time of reporting, offsets had been paid up until the end of Q1 2024 – accounting for 468.25 cleared hectares (<b>Appendix I</b>).</p> <p><i>Supporting Documents:</i></p> <p><i>Appendix D; Thunderbird Mineral Sands Project (EPBC 2016/7648): Terrestrial Fauna Environmental Management Plan and Offset Strategy Approval Letter (2018)</i></p> <p><i>Appendix G; Thunderbird Mineral Sands Project (EPBC 2016/7648) – revised Offset Strategy Approval Letter (2020)</i></p> <p><i>Appendix H; Ministerial Statement 1080 Thunderbird Mineral Sands Project, Condition 10 – Greater Bilby Research and Conservation Plan Submission</i></p>

			Appendix I; Example Proof of Payment to Greater Bilby Offset Fund
4	<p>Offset project proposals submitted for approval in accordance with Condition 3(e) must:</p> <ul style="list-style-type: none"> <li>a) Specify the location and nature of offset project activities;</li> <li>b) Include project goal/s, budget, and a detailed offset project description, including timeframes for implementing the offset project, and reporting and publishing offset project results;</li> <li>c) Identify and manage all risks (including but not limited to environmental, administrative, financial, and governance risks) associated with implementing the offset project;</li> <li>d) Demonstrate how the offset project is consistent with the Offset Strategy;</li> <li>e) Outline consultations associated with developing the offset project, including the outcomes of those consultations; and</li> <li>f) Outline how the offset project complies with the principles of the <b>EPBC Act Environmental Offsets Policy</b> and, if relevant, how the offset project meets the criteria for research and educational programs identified in Appendix A of the <b>EPBC Act Environmental Offsets Policy</b>.</li> </ul> <p>The approval holder must not undertake, begin to undertake, or commit to a third party to undertake, an offset project until that offset project has been approved in writing by the <b>Department</b>. The approved offset project must be implemented unless otherwise agreed in writing by the <b>Department</b>.</p>	Not Applicable	<p>The GBRCP/Offset Strategy revision highlighted the most significant threats to the Greater Bilby population within The Dampier Peninsula. The priorities with regards to conservation and management were also discussed, with this information being used as a benchmark to assess potential offset projects that would have the greatest impact on the future Bilby population.</p> <p>The most beneficial of the proposed offset projects was targeted at feral cat control and fire management across the Dampier Peninsula.</p> <p>Submission of Offset projects will occur following approval of the revised Offset Strategy/GBRCP.</p>
5	<p>To protect Humpback Whales (<i>Megaptera novaeangliae</i>), the approval holder must ensure that shipping vessels it controls, and those which are under commercial arrangement between the approval holder and other parties, must:</p> <ul style="list-style-type: none"> <li>a) Comply with Part 8, Division 8.01, Regulations 8.05 and 8.06 of the <b>EPBC Regulations</b>, and implement all mitigation and management measures specified therein; and</li> <li>b) Within State coastal waters, operate as though the mitigation and management measures specified in Part 8, Division 8.01, Regulations 8.05 and 8.06 of the EPBC Regulations apply, and comply with and implement those measures, as per Condition 5(a).</li> </ul>	Compliant	<p>The project progressed from the construction phase to the operational phase in October 2023, with the first production from the process plant on the 18 October. The first shipment of product occurred on the 28 January 2024 and since that time a total of 5 vessels have sailed from Broome Port.</p> <p>KMS contracted vessels trafficking the Port of Broome are under the direct operational control of the Kimberley Ports Authority (KPA). Upon entering port waters, vessels are piloted by an experienced Captain, as stipulated by the KPA.</p> <p>KPA has policies in place to ensure the protection of cetaceans and directs piloted vessels to take all safe and practicable steps to minimise impact to the surrounding environment. Under KPA standards and procedures all impacts to marine life are to be reported through their Safety Management System. To date, there have been no reported fauna strikes in Broome Port Waters by KPA or KMS contracted vessels.</p> <p><i>Supporting Evidence:</i></p>

			<p><i>Appendix K; Kimberley Mineral Sands – EPBC Reporting; Kimberley Ports Authority Letter</i></p> <p><i>Appendix L; Humpback Whale Migration – July to October; Kimberley Ports Authority Environment Bulletin</i></p>
6	<p>Within 30 days after the <b>commencement</b> of the action, the approval holder must advise the <b>Minister</b> in writing of the actual date of <b>commencement</b>.</p>	Non-Compliant	<p>Commencement was notified on 16 December 2021, however the action had officially commenced on 11 August 2021, therefore exceeding the 30 day notification period (<b>Appendix J</b>).</p> <p>This has been addressed in previous compliance reports.</p> <p><i>Supporting Documents:</i></p> <p><i>Appendix J; Commencement of the Action – Thunderbird Mineral Sands Project, WA, EPBC 2016/7648</i></p>
7	<p>The approval holder must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the strategy and plans required by this approval, and make them available upon request to the <b>Minister</b>. Such records may be subject to audit by the <b>Minister</b> or an independent auditor in accordance with section 458 of the <b>EPBC Act</b>, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the <b>Department's</b> website. The results of audits may also be publicised through the general media.</p>	Compliant	<p>Thorough record keeping and data management practices are maintained in order to satisfy compliance with approval conditions on the Thunderbird Mineral Sands Project. The 'Permit to Clear', documents compliance actions completed for each area prior to clearing (<b>Appendix E</b>). Supporting survey and spatial data is retained as part of the assurance procedure to verify compliance against clearing allocations. Post clearance survey data is collected for each area of disturbance with records being maintained via an 'Area of Disturbance' database that is regularly updated (<b>Appendix C</b>). This ensures appropriate implementation of the TFEMP and accurate tracking of Offset payments.</p> <p>All database and records in relation to compliance to the conditions stated in this approval are available upon request.</p> <p><i>Supporting Documents:</i></p> <p><i>Appendix E; Permit to Clear Example</i></p> <p><i>Appendix C; Thunderbird Operations - Area of Disturbance Records</i></p>
8	<p>By 30 June of each year after the <b>commencement</b> of the action, the approval holder must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of approved plans or strategies specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the <b>Minister</b> at the same time as the compliance report is published.</p>	Compliant	<p>Publication of this report on or before 30 June 2024 represents compliance with condition 8 of EPBC 2016/7648.</p>

9	Upon the direction of the <b>Minister</b> , the approval holder must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the <b>Minister</b> . The independent auditor must be approved by the <b>Minister</b> prior to the <b>commencement</b> of the audit. Audit criteria must be agreed to by the <b>Minister</b> and the audit report must address the criteria to the satisfaction of the <b>Minister</b> .	Not Applicable	No independent audit has been requested by the minister.
10	If, at any time after five years from the date of this approval, the approval holder has not <b>commenced</b> the action, then the approval holder must not commence the action without the written agreement of the <b>Minister</b> .	Compliant	The action has commenced ( <b>Appendix J</b> ).  <i>Supporting Documents:</i>  <i>Appendix J; Commencement of the Action – Thunderbird Mineral Sands Project, WA, EPBC 2016/7648</i>
11	The approval holder may choose to revise the plan approved by the <b>Minister</b> under Condition 2 without submitting it for approval under section 143A of the EPBC Act, if the taking of the action in accordance with the revised plan would not be likely to have a <b>new or increased impact</b> . If the approval holder makes this choice they must notify the <b>Department</b> in writing that the approved plan has been revised and provide the <b>Department</b> , at least four weeks before implementing the revised plan, with: <ul style="list-style-type: none"> <li>a) An electronic copy of the revised plan;</li> <li>b) An explanation of the differences between the revised plan and the approved plan; and</li> <li>c) The reasons the approval holder considers that the taking of the action in accordance with the revised plan would not be likely to have a new or increased impact.</li> </ul>	Not Applicable	No revision to the approved plan has been made to date.
11A	The approval holder may revoke its choice under Condition 11 at any time by giving written notice to the <b>Department</b> . If the approval holder revokes the choice to implement the revised plan, without approval under section 143A of the <b>EPBC Act</b> , the plan approved by the <b>Minister</b> must be implemented.	Not Applicable	No revision to the approved plan has been made to date.
11B	If the <b>Minister</b> gives a notice to the approval holder that the <b>Minister</b> is satisfied that the taking of the action in accordance with the revised plan would be likely to have a new or increased impact, then: <ul style="list-style-type: none"> <li>a) Condition 11 does not apply, or ceases to apply, in relation to the revised plan; and</li> <li>b) The approval holder must implement the plan approved by the <b>Minister</b>.</li> </ul>	Not Applicable	No revision to the approved plan has been made to date.

	<p>To avoid any doubt, this condition does not affect any operation of Conditions 11 and 11A in the period before the day the notice is given.</p> <p>At the time of giving the notice, the <b>Minister</b> may also notify that for a specified period of time Condition 11 does not apply for the plan required under the approval.</p> <p>Conditions 11, 11A and 11B are not intended to limit the operation of section 143A of the EPBC Act which allows the approval holder to submit a revised plan to the <b>Minister</b> for approval.</p>		
12	<p>If the approval holder wishes to carry out the action otherwise than in accordance with the Offset Strategy approved by the <b>Minister</b> under Condition 3, the approval holder may submit a revised Offset Strategy for the <b>Minister's</b> approval. If the <b>Minister</b> approves the revised Offset Strategy, the approval holder must implement that strategy instead of the Offset Strategy as originally approved.</p>	Compliant	<p>The latest approved revision of the Offset Strategy was formally accepted on 8 September 2020 (<b>Appendix G</b>). A revision to the approved strategy was submitted on 17 April 2023 and, at the time of writing this report, was awaiting approval (<b>Appendix H</b>). The later revision of the Offset Strategy is to wait approval prior to implementation.</p> <p><i>Supporting Documents:</i></p> <p><i>Appendix G; Thunderbird Mineral Sands Project (EPBC 2016/7648) – revised Offset Strategy Approval Letter (2020)</i></p> <p><i>Appendix H; Ministerial Statement 1080 Thunderbird Mineral Sands Project, Condition 10 – Greater Bilby Research and Conservation Plan Submission</i></p>
13	<p>Unless otherwise agreed to in writing by the <b>Minister</b>, the approval holder must publish the plan or strategy referred to in these conditions of approval on their website. Each plan or strategy must be published on the website within 1 month of being approved by the <b>Minister</b> or from expiry of the four-week period in Condition 11.</p>	Compliant	<p>Both the Terrestrial Fauna Environmental Management Plan and Offset Strategy are available on the Kimberley Mineral Sands Website.</p> <p><i>Evidence:</i></p> <p><a href="https://www.kmsands.com.au/site/esg/environment">https://www.kmsands.com.au/site/esg/environment</a></p>

## 4.2 Definitions

<b>Acquittal</b>	Means reduction in the amount payable for the offset.
<b>Clear/Cleared/Clearing</b>	Means the cutting down, felling, thinning, logging, removing, killing, destroying, poisoning, ringbarking, uprooting or burning of native vegetation, but does not include measures for weed and pest management.
<b>Construction</b>	Includes any preparatory works required to be undertaken including clearing vegetation, the erection of any onsite temporary structures and the use of heavy-duty equipment for the purpose of breaking the ground for buildings or infrastructure.
<b>Commence, commenced or commencement</b>	The first instance of any construction works for any infrastructure, excluding fences and signage, associated with the proposed action.
<b>CPI</b>	'Consumer Price Index' (or successor index) as a measure of inflation in Australia, as measured by the Reserve Bank of Australia.
<b>Department ('s)</b>	The Australian Government Department or any other agency administering the EPBC Act from time to time.
<b>Development Envelope</b>	The Boundary of the action as defined in Appendix B, where it is depicted as 'Thunderbird Minesite Development Envelope' and marked with a blue outline.
<b>EPBC Act</b>	The Environment Protection and Biodiversity Conservation Act 1999 (Cth).
<b>EPBC Act Environmental Offsets Policy</b>	The Environment Protection and Biodiversity Conservation Act 1999 Environmental Offsets Policy (October 2012), or subsequent revision, including the Offsets Assessment Guide. Available at: <a href="http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy">http://www.environment.gov.au/epbc/publications/epbc-act-environmental-offsets-policy</a>
<b>EPBC Regulations</b>	The Environment Protections and Biodiversity Conservation Regulations 2000 (Cth).
<b>Greater Bilby</b>	The EPBC Act listed Greater Bilby ( <i>Macrotis lagotis</i> ).
<b>Independent expert</b>	A scientist with relevant qualifications and expertise appointed and funded by the approval holder whose appointment is approved by the Department.
<b>Mine pits</b>	As defined in Appendix B, where it is depicted as 'mine pits' and highlighted in orange.
<b>Minister</b>	The Minister administering the EPBC Act and includes a delegate of the Minister.
<b>Plan(s)</b>	All plans specified in these conditions and/or those defined in the Offset Strategy.
<b>Recovery Plan/s</b>	A recovery plan made or adopted by the Minister under the EPBC Act.

<b>Threat abatement plans</b>	A threat abatement plan made or adopted by the Minister under the EPBC Act.
<b>Western Australian Approval</b>	Ministerial Statement No.1080 - Thunderbird Mineral Sands Project published on 10 August 2018 under the Environmental Protections Act 1986 (WA).

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## 5. REFERENCES

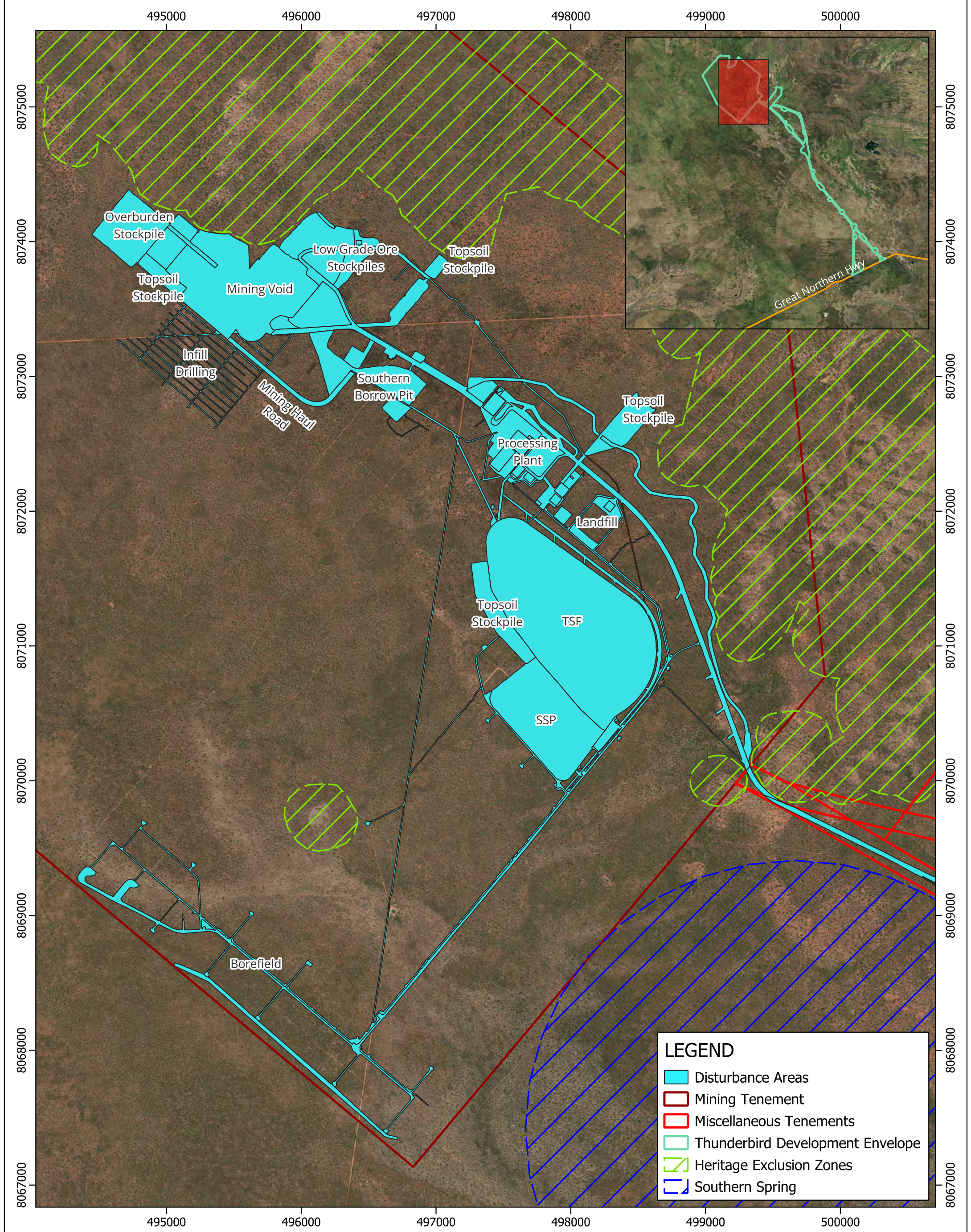
Department of Agriculture, Water and the Environment. 2014. *Annual Compliance Report Guidelines*.  
Department of Environment, Canberra ACT. 2014.

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## 6. APPENDICES

### 6.1 Appendix A: Disturbance Areas Site Plan

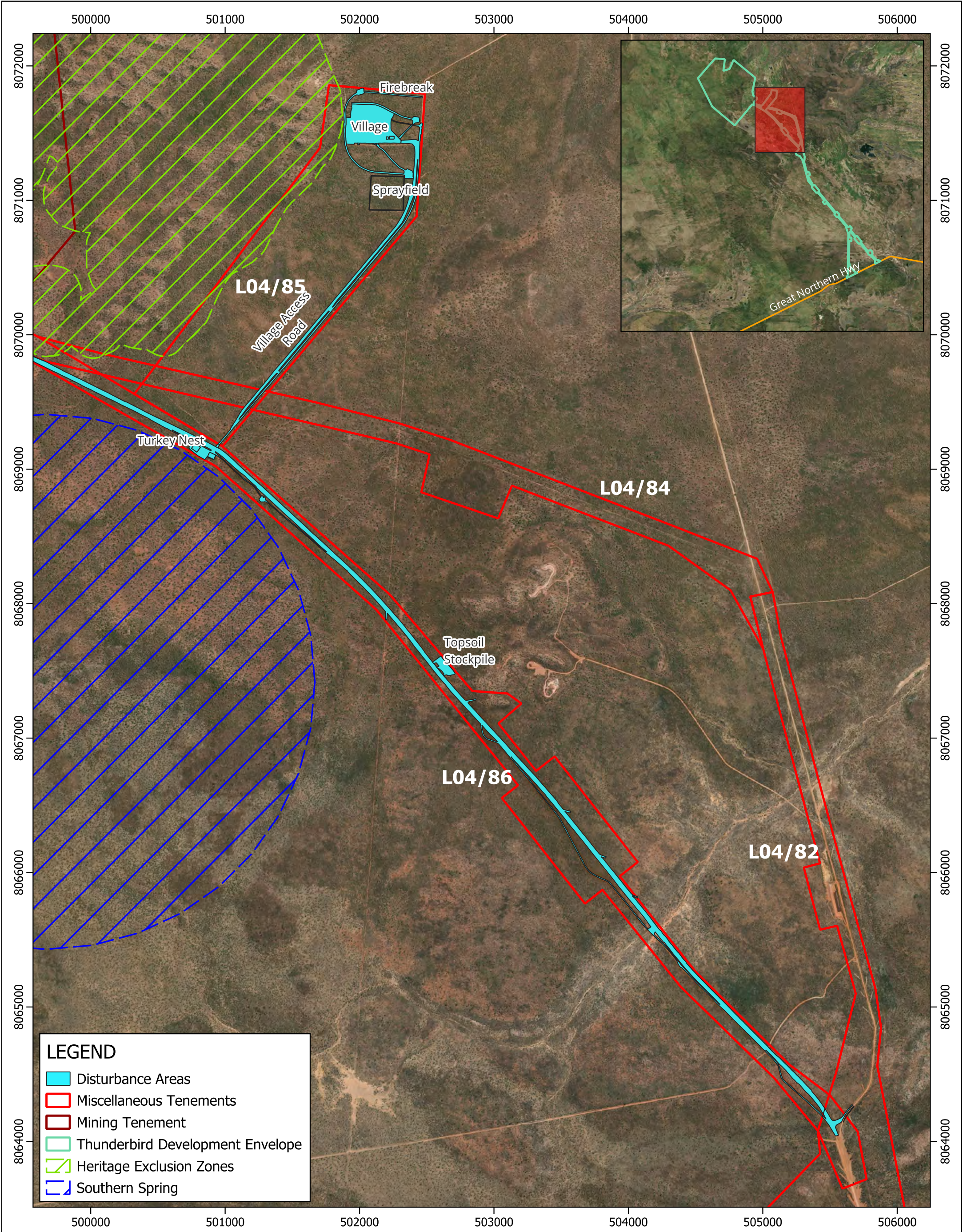






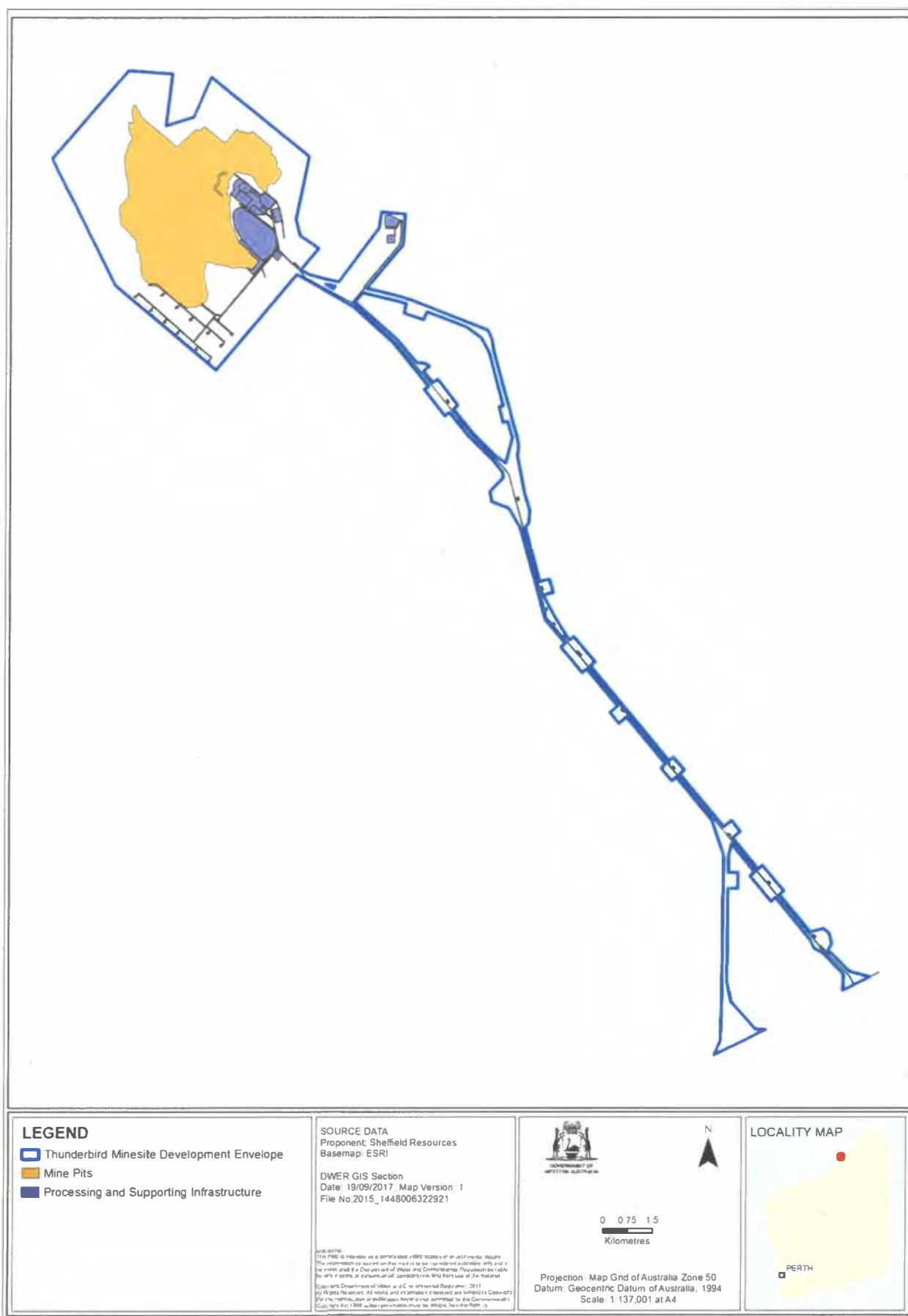








## 6.2 Appendix B: Thunderbird Minesite Development Envelope Site Plan



### 6.3 Appendix C: Thunderbird Operations - Area of Disturbance Records

PTC #	Date Cleared	Tenement	Site Description	Permit Area (ha)	L04/R2	L04/R3	L04/R4	L04/R5	L04/R6	L04/R92	L04/R93	M04/459 Infrastructure	M04/459 Mining Area	E04/129	Permit ADO Total	POW ADO Total
Surveyed Areas (ha)																
POW #18560	24/02/2016	L04/R6	Drill Access Track (Original MAR)	N/A	2.220											8.016
POW #18560	24/02/2016	M04/459	Drill Access Track (Original MAR)		2.746											
PTC007 Audit	1/07/2023	L04/R2	Mine Access Road (MAR) - 2023 Audit	N/A	0.172										2.496	
PTC007 Audit	1/07/2023	L04/R6							2.324							
POW # PTC0001	1/12/2017	L04/R5	60 person Village - Stage 1	10				2.516								2.614
POW # PTC0002	1/12/2017	L04/R5	60 person Village - Stage 1	N/A				0.121								0.121
POW # PTC0003	1/11/2017	L04/R5	Village Road - Stage 1 - POW					2.86								2.84
PTC0003 Audit	1/07/2023	L04/R5	Village Road - Stage 1 - 2023 Audit	N/A				0.797							0.922	
PTC0003 Audit	1/07/2023	L04/R6	Village Road - Stage 1 - 2023 Audit						0.125							
POW # PTC0004	1/04/2018	L04/R6	MAR Turkey Nest 1	N/A				0.202								0.202
POW # PTC0005	1/04/2018	L04/R6	MAR Turkey Nest 2					0.1								0.1
PTC0005	1/07/2023	L04/R6	MAR Turkey Nest 2 - 2023 Audit	N/A				0.111							0.111	
POW # PTC0006	1/04/2018	L04/R6	Mine Access Road (MAR) turn around	N/A				0.11								0.1
POW # PTC0006	1/07/2023	L04/R6	Mine Access Road (MAR) turn around - 2023 Audit					0.004							0.004	
PTC0008	1/07/2018	L04/R6	Borrow Pit 1	0.65				0.492							0.492	
PTC0009	28/08/2018	L04/R6	Laydown area for mobile batching plant	0.69					0.751						0.751	
PTC0010	1/09/2018	L04/R5	WWTP Sprayfield fence boundary	0.5				0.4							0.4	
PTC0011	4/09/2018	L04/R6	Extension to Borrow pit 1	0.5					0.473						0.473	
PTC0012	10/06/2018	L04/R6	Checking for gravel along MAR	Unknown											0	
PTC0013	9/10/2020	M04/459	Trail mining programme safety bunds	9.74									8.636		8.636	
PTC0014	20/10/2020	L04/R6	Gravel Investigations	0.67					0						0	
PTC0015	30/10/2020	L04/R6	Spoon drains for MAR	Unknown					0						0	
PTC0016	1/06/2021	M04/459	Trail Mining V2	5.96									5.769		5.769	
PTC0017	22/07/2021	L04/R2	Re-clear of mine access road	N/A re-clear	0											
PTC0018	NOT ISSUED	L04/R6	MAR S-Bands	0				0				0			0	
PTC0019	NOT ISSUED	L04/R5	Village Access Road	0				0							0	
PTC0020	11/08/2021	L04/R2	New MAR alignment Y junction to Fraser	8.2	0.553										6.645	
PTC0020	11/08/2021	L04/R6	New MAR alignment Y junction to Fraser					6.092								
PTC0021	7/08/2021	M04/459	S ways to Killo fire break maintenance	N/A re-clear								0			0	
PTC0022	5/08/2021	M04/459	Northern Bore of fire break maintenance	N/A re-clear								0			0	
PTC0023	4/08/2021	L04/R5	Existing road from homestead to village fire break maintenance	N/A re-clear				0							0	
PTC0024	9/08/2021	L04/R5	Village Fire Break Maintenance	N/A re-clear				0							0	
PTC0025	15/08/2021	L04/R6	New MAR Alignment Fraser river to village	18					15.579						15.579	
PTC0026	18/08/2021	L04/R4	New MAR Alignment Village road to plant site				1.11									
PTC0026	18/08/2021	L04/R6	New MAR Alignment Village road to plant site	16.7					4.466						15.467	
PTC0026	18/08/2021	M04/459	New MAR Alignment Village road to plant site									9.891				
PTC0027	NOT ISSUED	M04/459	Start of Bonfield Track	0								0			0	
PTC0028	NOT ISSUED	M04/459	Bonfield Track - MAR to Central Rd	0								0			0	
PTC0029	18/09/2021	M04/459	Access track for production bore TPB03 and 15 and monitoring bore TMB11 and 12	1.6								0			0	
PTC0030	18/09/2021	M04/459	Drill pads for production bore TPB03 and 15 and monitoring bore TMB11 and 22	0.3								0.269			0.269	
PTC0031	8/09/2021	M04/459	Topsoil storage area and access track	3.1								3.067			3.067	
PTC0032	4/09/2021	M04/459	Vegetation stockpile area within the TSF footprint to store vegetation from roads	1.1								1.098			1.098	
PTC0033	9/10/2021	M04/459	Partial clearing of the plant site and access	11								9.989			9.989	
PTC0034	16/10/2021	M04/459	Northern gravel occurrence. Soil investigation using 22 test pits to a maximum of 2.5 mBSL	0.2								0			0	
PTC0035	22/10/2021	M04/459	Northern gravel occurrence. Progressive excavation of pindan and gravel for MAR construction	0								6.172			6.172	
PTC0036	17/10/2021	M04/459	Diversion bund part 1 of 2 for site drainage	11								9.252			9.252	
PTC0037	19/10/2021	L04/R6	MBE road clearing connecting mesotone zone to new MAR	0.088					0.086						0.086	
PTC0038	21/10/2021	L04/R6	Fraser river laydown area for culvert installation	0.16					0.124						0.124	
PTC0039	29/10/2021	M04/459	Diversion bund part 2 of 2 for site drainage	1.48								1.426			1.426	
PTC0040	28/10/2021	M04/459	Northern gravel occurrence. Progressive excavation of pindan and gravel for MAR construction	6.91	*Combine with PTC0035											0
PTC0041	29/10/2021	M04/459	Spoon drains along MAR	0.7								0.497			0.497	
PTC0042	6/11/2021	L04/R5	300 person village	10.9				8.887							8.887	
PTC0043	10/11/2021	M04/459	Extension to existing topsoil storage area (PTC0031) for additional topsoil storage capacity	6								5.826			5.826	
PTC0044	10/11/2021	M04/459	Northern gravel occurrence. Progressive excavation of pindan and gravel for MAR construction	6.8									6.118		6.118	
PTC0045	30/11/2021	M04/459	Construction water pipeline and access track	8.23								8.499			8.499	
PTC0046	NOT ISSUED	M04/459	Bonfield Pipeline Road	0											0	
PTC0047	18/11/2021	L04/R2	Lague Culvert Stream Training	0	0											
PTC0047	18/11/2021	L04/R6	Fraser Culvert Stream Training	0					0						0	
PTC0048	17/12/2021	L04/R6	Spoon drains along MAR	0.37					0.22						0.22	
PTC0049	10/01/2022	M04/459	Extension to Turkey nest area for machine access and fire break	0.1								0.141			0.141	
PTC0050	9/02/2022	L04/R6	Extension to existing KMS gravel pit to win gravel for village construction	0.037					0.11						0.11	
PTC0051	10/02/2022	M04/459	Diversion of existing water corridor due to TSF design change	0.74								0.77			0.77	
PTC0052	22/02/2022	M04/459	Plant site cement tower	0.48								0.412			0.412	
PTC0053	22/02/2022	M04/459	LOM Landfill	8.73								3.997			3.997	
PTC0054	10/03/2022	M04/459	Southern Gravel Borrow pit, stage 1 clearing	6.98									6.871		6.871	
PTC0055	22/03/2022	L04/R5	Linen shed, dry mess maintenance track, drains and north pad extension	0.898				0.706							0.706	
PTC0056	22/03/2022	M04/459	Create 1 way track between southern occurrence and plant	1								0.186	0.925		1.111	
PTC0057	22/03/2022	L04/R5	Access track to village WWTP	0.223				0.208							0.208	
PTC0058	8/04/2022	M04/459	Southern Gravel Borrow pit, stage 2 clearing	8.49									8.439		8.439	
PTC0059	25/10/2022	M04/459	Southern Gravel Stage 3	2.17									2.126		2.126	
PTC0060	26/04/2022	M04/459	Process Plant Extension B	14.36								14.652			14.652	
PTC0061	18/04/2022	L04/R2	Upgrade Mt Jobsana intersection	0.46	0.425										0.425	
PTC0062	18/03/2022	L04/R5	Village culvert realignment	0.0166				0.019							0.019	
PTC0063	18/05/2022	L04/R5	New Village access road	5.7				5.415							5.415	
PTC0064	25/04/2022	L04/R2	Haul Road main gate turnaround	N/A re-clear	0										0	
PTC0065	18/05/2022	M04/459	Bonfield road extension and pad installation	4.458								3.33			3.33	
PTC0066	11/05/2022	M04/459	Required to construct separated road for heavy access to southern occurrence	0.1									0.054		0.054	
PTC0067	28/07/2022	M04/459	Process Plant Extension C	8.08								7.154				
PTC0067rev1	29/07/2022	M04/459	Process Plant Extension C	2.1								1.491			8.645	
PTC0068	31/05/2022	L04/R5	Village sediment traps and drainage	1.33				0.381							0.381	
PTC0069	05/06/2022	L04/R5	New Village road culvert installation	0.14				0.125							0.125	
PTC0070	17/06/2022	M04/459	TSF Stage 1, fence line, bore access and stockpile area	10.02								9.661			9.661	
PTC0071	21/06/2022	M04/459	TSF construction and access roads	10.3								9.878			9.878	
PTC0072	29/06/2022	M04/459	SSP construction	12.2								11.658			11.658	
PTC0073	6/07/2022	M04/459	Bonfield realignment for flood mitigation	5.66								5.306			5.306	
PTC0074	8/07/2022	M04/459	SW portion of SSP	12.4								12.384			12.384	
PTC0075	8/07/2022	M04/459	TSF construction offices and laydown yard	1.87								1.738			1.738	
PTC0076	25/07/2022	M04/459	Clearing for grade control drilling	14.3									13.778		13.778	
PTC0077	5/08/2022	E04/129	Jillau Ridge Fire Breaks	1.18										1.045		

PTC0078	15/07/2022	MDA/459	Re-alignment of borefield road	2.68										2.307				2.307	
PTC0079	15/07/2022	MDA/459	NE SSP Clearing	14.9										15.216				15.216	
PTC0080	15/07/2022	MDA/459	NE corner of TSF	12.8										12.776				12.776	
PTC0081	15/07/2022	MDA/459	NW corner of TSF	16.2										16.283				16.283	
PTC0082	26/07/2022	MDA/459	Centre Portion of TSF	39.8										39.767				39.767	
PTC0083	28/07/2022	MDA/459	Widening Borefield road	1.49										1.484				1.484	
PTC0084	28/07/2022	LO4/95	Culverts installation	0.132						0.187								0.187	
PTC0085	NOT ISSUED	MDA/459	Process Plant Spray Field	0										0				0	
PTC0086	15/08/2022	MDA/459	Borefield Southern Diversion Drain	6.1										5.949				5.949	
PTC0087	5/08/2022	MDA/459	South eastern corner of TSF	12.8										12.788				12.788	
PTC0088	5/08/2022	LO4/95	Village culvert and additional VAR clearing	0.056						0.11								0.11	
PTC0089	23/08/2022	MDA/459	TSF Diversion Drain	6.93										6.443				6.443	
PTC0090	23/08/2022	MDA/459	TSF stage 11 embankments	3.89										3.889				3.889	
PTC0091	8/09/2022	MDA/459	Plant Site to TSF Corridor	0.61										0.574				0.574	
PTC0092	8/09/2022	MDA/459	Temporary access corridor through TSF stage 11	0.23										0.178				0.178	
PTC0093	13/09/2022	MDA/459	Borefield Pad Drainage	0.47										0.423				0.423	
PTC0094	13/09/2022	MDA/459	Stage 1 of MLUP road	0.61										0.427	0.105			0.532	
PTC0095	5/10/2022	MDA/459	Borefield RMLU Pads	0.28										0.312				0.312	
PTC0096	13/10/2022	MDA/459	TSF Monitoring Bore Pads	0.3										0.252				0.252	
PTC0097	14/10/2022	MDA/459	Northern Diversion Drain Stilling Basin	0.73										0.687	0.030			0.6964	
PTC0098	20/11/2022	MDA/459	Work zones around SSP walls	1										0.904				0.904	
PTC0099	15/10/2022	MDA/459	MLUP road stage 2	0.84											0.861			0.861	
PTC0099 rev1	20/01/2023	MDA/459	MLUP Road Stage 2b	0.1											0.059			0.059	
PTC0100	11/11/2022	MDA/459	MLUP road stage 3	4.93										0.098	4.525			4.623	
PTC0101	24/10/2022	MDA/459	Southern Occurrence stage 4 test pits	0.47											0.349			0.349	
PTC0102	11/11/2022	MDA/459	One way track SO to TSF	1.27										0.66	0.571			1.231	
PTC0103	25/11/2022	MDA/459	Stage 11 of TSF	14.4										15.467				15.467	
PTC0104	20/01/2023	MDA/459	MLUP Stage 4	0.37											0.402			0.402	
PTC0105	27/03/2023	MDA/459	TSF Skid Pad	0.068										0.067				0.067	
PTC0106	30/03/2023	MDA/459	MLUP Booster Pad & Corner Ext	0.332											0.229			0.229	
PTC0107	6/04/2023	MDA/459	MLUP Booster Pad Extension	0.020										0.003	0.017			0.02	
PTC0108	4/05/2023	MDA/459	MLUP RMLU Pad	0.001											0.001			0.001	
PTC0109	2/06/2023	MDA/459	Caney Mining Week 1 - Stockpile and Access	10.53											10.25			10.25	
PTC0110	13/06/2023	MDA/459	Caney Mining Week 2 - Access Road and Starter Pit	7.584											7.285			7.285	
PTC0111	15/06/2023	MDA/459	TSF Skid Pad Extension	0.072										0.07				0.07	
PTC0112	21/07/2023	MDA/459	Caney Mining Week 3 - Pit and Topsoil Dumps #2	2.344											1.972			1.972	
PTC0113	20/07/2023	MDA/459	Caney Laydown	2.194										2.033	0.006			2.039	
PTC0114	16/07/2023	LO4/92	GNH Intersection Upgrade	0.608	0.608													0.608	
PTC0115	18/09/2023	MDA/459	SO Access Road Widening	0.353											0.347			0.347	
PTC0116	30/08/2023	MDA/459	MLUP Services Infrastructure	0.832											0.752			0.752	
PTC0117	7/09/2023	MDA/459	Turkey Nest piping and Road corridor	1.111										1.056				1.056	
WX580	13/09/2023	LO4/95	Diesel Spill Cleanup	N/A						0.021								0.021	
PTC0119	4/10/2023	MDA/459	T1 Oversized Stockpile	1.84											1.84			1.84	
PTC0118	11/10/2023	MDA/459	Power Station & Landfill fire breaks	1.472										1.383				1.8	
PTC0118	12/10/2023	LO4/95	Village and Sprayfield fire breaks	1.236						0.417									
WX730	18/10/2023	MDA/459	Fire Breaks	N/A										9.818	0.271			10.091	
PTC0122	30/10/2023	MDA/459	MLUP Turkey Nest	0.225											0.201			0.201	
PTC0120	18/12/2023	MDA/459	Oversized Stockpiles	7.774											7.362			7.362	
PTC0121	21/12/2023	MDA/459	North Pit	3.25											0.82			0.82	
PTC0121 v2	4/01/2023	MDA/459	North Pit v2	2.435											2.435			2.435	
PTC0123	4/02/2024	MDA/459	Mining Topsoil Blocks 2	12.577											12.105			12.105	
PTC0124	11/02/2024	MDA/459	Mining Blocks	10.328											10.062			10.062	
PTC0125	FUTURE	MDA/459	Landfill Stage 2	4.716										4.716				4.716	
PTC0126	NOT ISSUED	LO4/98	Village T Junction	0.387														0	
PTC0127	3/05/2024	MDA/459	Oversized North	17.7											17.085			17.085	
PTC0128	24/04/2024	MDA/459	Mining Haul Road	7.04											6.781			6.781	
PTC0129	19/04/2024	MDA/459	Mining Block Stage 4	8.67											8.542			8.542	
PTC0130	29/04/2024	MDA/459	Exploration Drilling Tracks	12											9.666			9.666	
PTC0131	13/05/2024	MDA/459	North Pit	6.07											5.923			5.923	
PTC0128 v2		MDA/459	Haul Road extension	0.0139														0	
PTC0132																			
PTC0133																			
PTC0134																		0	
				1.76	0	1.11	21.25	36.64	0	0	291.35	169.60	1.05	523.71	14.00				
				ADD Total (minus POW's)												598.70			



**6.4 Appendix D: Thunderbird Mineral Sands Project (EPBC 2016/7648): Terrestrial Fauna Environmental Management Plan and Offset Strategy Approval Letter (2018)**



Mr Wayne Groeneveld  
Sustainability Manager  
Thunderbird Operations Pty Ltd  
PO Box 205  
WEST PERTH WA 6872

**Thunderbird Mineral Sands Project (EPBC 2016/7648): *Terrestrial Fauna Environmental Management Plan and Offset Strategy***

Dear Mr Groeneveld

Thank you for submitting the Terrestrial Fauna Environmental Management Plan and Offset Strategy in accordance with Conditions 2 and 3 of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval for EPBC 2016/7648.

Officers of this Department have advised me on the above, and the requirements of Conditions 2 and 3 of the approval for EPBC 2016/7648. On this basis, and as a delegate of the Minister for the Environment and Energy, I have decided to approve:

- the *Terrestrial Fauna Environmental Management Plan*, Version 5, dated 24 October 2018 as meeting the requirements of Condition 2 of the approval; and
- the *Offset Strategy*, dated 13 November 2018 as meeting the requirements of Condition 3 of the approval.

The approved Plan and Strategy must now be implemented.

Please note that the conditions of approval for EPBC 2016/7648 require, unless otherwise agreed in writing by the Minister, that the approved Plan and Strategy be published on your website within one month of the date of this approval.

The Department has an active monitoring program which includes monitoring inspections, and desktop document reviews and audits. Please ensure that you maintain accurate records of all activities associated with the conditions of approval, including implementation of the approved Plan and Strategy, so that they can be made available to the Department on request.

Should you require further information regarding my decision please contact Vaughn Cox on 02 6274 2005, or by email: [post.approvals@environment.gov.au](mailto:post.approvals@environment.gov.au).

Yours sincerely

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Greg Manning  
Assistant Secretary  
Assessments (WA, SA, NT) & Post Approvals Branch  
Environment Standards Division

20 November 2018

## 6.5 Appendix E: Permit to Clear Example



# TOPL PERMIT TO CLEAR

This form must be completed by the Permit Owner, signed by the Site Senior Executive or delegate and then emailed to the Environmental Team along with the clearing JHA before any area of soil or vegetation is disturbed. Once clearing has finished, permits must be completed and hard copies given to the Environmental Team for filing. **PTC #0123**

Issued Date: <b>21/01/24</b> Permit Expiry Date: <b>04/02/24</b>	Permit Owner (KMS): <b>Mark Bevan A. DUREAU</b>
Description of location and tenement: <b>Attach Map Northwest of the Current Mining Area</b>	Location Grid Co-ordinates (GDA only): <b>495017 mE 8073956 mN</b>
Purpose of the clearing: <b>Clear space for the topsoil and vegetation stockpile</b>	Temporary (<3 months) or Permanent (>3 months): <b>Permanent</b>
Current clearing on tenement (ha): <b>175.13</b>	Approved clearing allowance on tenement (ha): <b>233.46</b>
Land use: <b>Topsoil Stockpiles &amp; Transport</b>	Is this land use approved on this tenement? <b>Yes</b>
Estimated area to be cleared (ha): <b>12.58</b>	Actual area cleared (ha): <b>12.105</b>
Proposed start date: <b>22/01/24</b> Proposed completion date: <b>29/01/24</b>	Actual start date: <b>1/2/24</b> Actual completion date: <b>4/2/24</b>
Topsoil volume (m³): <b>25160</b> 2000 m³ per ha	How will the area be marked out prior to clearing? <b>GPS in machinery, survey to flag boundary, continuous flags at corners at min.</b>

CHECKS PRIOR TO COMMENCING				CLEARING PROCEDURE
ITEM	✓	ITEM	✓	
Has <b>TOPL-ENV-PRO Land Clearing Procedure</b> been referred to and followed?	<input checked="" type="checkbox"/>	Has proposed clearing been kept to a minimum and avoided marked trees?	<input checked="" type="checkbox"/>	<ul style="list-style-type: none"><li>Take photos of area PRE-CLEARANCE for rehabilitation purposes</li><li>Check topsoil is dry and mark out area</li><li>Complete a JHA</li><li>Walk the dozer around any boundaries</li><li>Clear and stockpile vegetation</li><li>Clear and stockpile topsoil (up to 2 m high, single level, paddock dumped stockpiles)</li><li>Store stockpiles away from traffic for rehabilitation purposes</li><li>To reduce weed invasion, ensure that no weed affected soil, mulch or fill is introduced</li></ul>
Has the proposed clearing area been compared against tenement boundaries, development envelope and clearing allowances?	<input checked="" type="checkbox"/>	Has the permit been signed and approved prior to commencing clearing?	<input checked="" type="checkbox"/>	
Is the Bilby pre-clearance survey completed for this area? <b>Attach evidence</b>	<input checked="" type="checkbox"/>	Has the area been clearly marked out prior to clearing?	<input checked="" type="checkbox"/>	
Have Heritage Monitors completed a pre-clearance survey? <b>Attach evidence</b>	<input checked="" type="checkbox"/>	Do operators understand the clearing required?	<input checked="" type="checkbox"/>	

Please answer these questions:

Where will the topsoil be stockpiled?

**No topsoil removal from stockpile areas, topsoil from road clearing will be placed on topsoil location cleared in this permit**

**Topsoil to be removed and stockpiled (paddock dumped) no greater than 2m high. DO NOT DRIVE ON TOPSOIL STOCKPILES.**

Where will the vegetation be stockpiled?

**Vegetation stockpiles placed on stockpile areas clearing within this permit**

**Separate vegetation and topsoil stockpiles.**

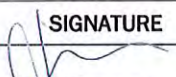
Cost \$\$ - Have you considered the rehabilitation and ongoing costs to Thunderbird and whether this clearing necessary?

**~\$48,000 to \$1,350,000 per hectare to rehabilitate cleared land at Thunderbird. Ongoing MRF Annual Levy cost of \$200/hectare.**





Permit to Clear Conditions/Comments:

**A Heritage Exclusion Zone is present to the north of the clearing boundary - 20m at the closest point. Extreme caution is to be taken with the clearing of this permit, to such a point that a spotter must be present during clearing along the northern edge. GPS file must be loaded into the machine prior to clearing and calibrated/checked prior to commencement. Permit Owner must walk entire clearing boundary and all sign-offs completed beforehand. No vegetation is to be pushed outside of clearing boundary. Continuous flagging installed at corners at minimum. Bilby pre-clearance completed on the 20/01/24, this permit expires on the 04/02/24.**

Bilby and Heritage Pre-Clearance Survey Evidence Attached:

ROLE	FULL NAME	SIGNATURE	DATE
<b>Environmental Advisor</b>	<b>Molly Ahern</b>		<b>21/01/2024</b>

Approvals to be signed **PRIOR** to clearing

ROLE	FULL NAME	SIGNATURE	DATE
Permit Owner	<b>Mark Bevan A. DUREAU</b>		<b>1/2/24</b>
Machinery Operator #1	<b>WALTER SCOTT</b>		<b>1/2/24</b>
Machinery Operator #2			
Contractor Superintendent	<b>A. DUREAU</b>		<b>1/2/24</b>
Site Senior Executive	<b>Shaun Higgins</b>		<b>1/2/24</b>

## 6.6 Appendix F: Greater Bilby Survey Summary



Survey Area	Associated PTC	Survey Date	Survey Coordinates		Area to Clear (ha)	Area Surveyed (ha)	Habitat Surveys Complete	Fauna Recording Complete	Bilby Activity Observed
			Easting	Northing					
Mining Wk 1	PTC0109	2/06/2023	496456	8073486	10.38	15.20	YES	YES	NO
Mining Schedule Wk1-3	PTC0110	9/06/2023	495872	8073500	5.52	12.70	YES	YES	NO
TSF Skid Pad Ext	PTC0111	9/06/2023	497415	8071907	0.07	0.50	YES	YES	NO
Mining Topsoil Stockpiles 2	PTC0112	9/07/2023	496965	8073777	2.24	4.50	YES	YES	NO
Carey Laydown	PTC0113	9/07/2023	497355	8072895	2.24	2.50	YES	YES	NO
GNH Upgrade	PTC0114	11/07/2023	515606	8048568	3.29	11.80	YES	YES	NO
MUP Turkey Nest	PTC0117	25/08/2023	497049	8073013	0.84	1.37	YES	YES	NO
M2 Road	PTC0116	27/08/2023	495873	8073372	0.75	0.75	YES	YES	NO
MUP Turkey Nest	PTC0117	3/09/2023	496993	8073054	1.11	2.01	YES	YES	NO
SO Widening	PTC0115	17/09/2023	495931	8073322	0.35	0.68	YES	YES	NO
SO Widening	PTC0115	17/09/2023	495931	8073322	0.35	0.68	YES	YES	NO
T1 Oversized	PTC0119	2/10/2023	496170	8073791	1.84	1.84	YES	YES	NO
Oversized Stockpile	PTC0120	12/10/2023	496044	8074053	7.77	9.50	YES	YES	NO
MUP Turkey Nest Ext.	PTC0122	23/10/2023	496870	8073157	0.23	0.50	YES	YES	NO
Landfill Firebreak	PTC0118	9/11/2023	498219	8071954	1.15	2.68	YES	YES	NO
Power Plant Firebreak	PTC0118	9/11/2023	497685	8072212	0.33	0.79	YES	YES	NO
Village Firebreak	PTC0118	11/11/2023	502252	8071787	0.53	1.36	YES	YES	NO
Oversized Stockpile	PTC0120	17/12/2023	496044	8074053	7.77	9.77	YES	YES	NO
North Pit	PTC0121	17/12/2023	495812	8073864	3.25	3.85	YES	YES	NO
North Pit v2	PT0121 v2	4/01/2024	495814	8073870	2.44	2.44	YES	YES	NO
Mining Topsoil Block 2	PTC0123	20/01/2024	495033	8073912	12.58	18.52	YES	YES	NO
Mining Blocks	PTC0124	7/02/2024	495375	8073645	15.39	18.20	YES	YES	NO

**6.7 Appendix G: Thunderbird Mineral Sands Project (EPBC 2016/7648) – revised Offset Strategy Approval Letter (2020)**



Australian Government

Department of Agriculture, Water and the Environment

Mr Stuart Pether  
Chief Operating Officer  
Thunderbird Operations Pty Ltd  
PO Box 205  
WEST PERTH WA 6872

**Thunderbird Mineral Sands Project (EPBC 2016/7648) – revised Offset Strategy**

Dear Mr Pether

Thank you for submitting the revised Offset Strategy for approval in accordance with condition 11C of the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval EPBC 2016/7648.

Officers of the Department have advised me on the revised strategy and on the requirements of the EPBC Act conditions of approval for this project. On this basis, and as a delegate of the Minister for the Environment, I have decided to approve the Offset Strategy, Rev 1, dated 8 September 2020. The approved strategy must now be implemented in place of the strategy originally approved on 20 November 2018.

As you are aware, the Department has an active monitoring program which includes monitoring inspections, desk top document reviews and audits. Please ensure that you maintain accurate records of all activities associated with, or relevant to, the conditions of approval including the implementation of the approved Offset Strategy, so that they may be made available to the Department on request.

Should you require any further information please contact Thomas Smith at [Thomas.Smith@awe.gov.au](mailto:Thomas.Smith@awe.gov.au) or [postapproval@awe.gov.au](mailto:postapproval@awe.gov.au).

Yours sincerely

Dwaine McMaugh  
Director, Post Approvals  
Environment Assessments (Vic, Tas) and Post Approvals Branch

7 October 2020



**6.8 Appendix H: Ministerial Statement 1080 Thunderbird Mineral Sands Project, Condition 10 – Greater Bilby Research and Conservation Plan Submission**

17 April 2023

Senior Manager  
Environmental Compliance  
Compliance and Enforcement  
Department of Water and Environmental Regulation

By email: [compliance@dwer.wa.gov.au](mailto:compliance@dwer.wa.gov.au)

Attention: Senior Manager, Environmental Compliance

**RE: Ministerial Statement 1080 THUNDERBIRD MINERAL SANDS PROJECT, Condition 10 – Greater Bilby Research and Conservation Plan Submission**

On behalf of Thunderbird Operations Pty Ltd ('TOPL'), I am writing to formally submit the Greater Bilby Research and Conservation Plan ('GBRCP') in accordance with Condition 10 of Ministerial Statement 1080 (MS1080).

TOPL's correspondence to the Department of Water and Environmental Regulation (DWER) on 8 November 2022, provided an update on the Thunderbird Mineral Sands Project ('the Project') and confirmed the 'substantial commencement' date for the purposes of MS1080 of 7 October 2022 being the date the Financial Investment Decision for the Project was announced. Further to this correspondence, a meeting was then held with representatives of DWER and the Department of Climate Change, Energy, the Environment and Water (DCCEEW) and TOPL via Teams on 16 March 2023. The purpose of the meeting was to specifically discuss the GBRCP and its interrelationship with Greater Bilby offset requirements under EPBC Act Approval 2016/7648 for the Project.

The GBRCP has been prepared in accordance with the outcomes of this meeting. In short, it was agreed that due to the need to further revise the already approved Offset Strategy under EPBC Act Approval 2016/7648, the revised Offset Strategy would satisfy the MS1080 condition 10 requirement for a GBRCP. The Offset Strategy was originally approved on 12 September 2018 with a revised version approved on 7 October 2020. The combining of the Offset Strategy and GBRCP is also in the interests of harmonisation of the ongoing implementation of approval conditions, consistent with the principles of the Bilateral Assessment undertaken for the Project. It was also agreed in the meeting that in TOPL submitting the combined GBRCP/revised Offset Strategy to DWER, copy DCCEEW, that DWER would also coordinate with DCCEEW to align approval of the document for the purposes of both MS1080 and EPBC Act Approval 2016/70648.

TOPL subsequently advised via email on 27 March 2023 that due to the timing of availability of revised mine plan information, the GBRCP would instead be submitted on 17 April 2023 rather than the previously advised date of early April 2023.

If you have any questions regarding this letter and the attached GBRCP, please do not hesitate to contact Gayle Williams on 043 8189 286 or [gayle@envirominded.pro](mailto:gayle@envirominded.pro).

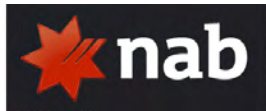
Yours sincerely



Michael Rose  
Chief Operating Officer  
Kimberley Mineral Sands

Cc: DCCEEW – Director, Post Approvals Section

## 6.9 Appendix I: Example Proof of Payment to Greater Bilby Offset Fund



## NAB Business Cash Maximiser

For further information call 13 22 65 for Personal  
Accounts or 13 10 12 for Business Accounts.



/007325

THUNDERBIRD OPERATIONS PTY LTD  
PO BOX 205  
WEST PERTH WA 6872

### Account Balance Summary

Opening balance	
Total credits	\$5,939.03
Total debits	\$0.00
<b>Closing balance</b>	

**Statement starts 1 March 2024**  
**Statement ends 28 March 2024**

### Outlet Details

Murray Street  
Murray Street Mall, 239 Murray Street Mall  
Perth WA 6000

### Account Details

THUNDERBIRD OPERATIONS PTY LTD  
BUS CASH MAXIMISER

BSB number

### Transaction Details

Date	Particulars	Debits	Credits	Balance
1 Mar 2024	Brought forward			
1 Mar 2024	As At 01/03/2024 Your Variable Cr Interest Rate Is 1.800% When Your Balance Is \$10,000 or More			
27 Mar 2024	Jan-Mar Bilby Offs T Hunder Oper.....		4,567.50	
28 Mar 2024	Interest.....		1,371.53	

### Summary of Government Charges

	From 1 July to date	Last year to 30 June
<b>Government</b>		
Withholding tax	\$0.00	\$0.00
Bank Account Debit (BAD) tax	\$0.00	\$0.00

Bank Accounts Debits (BAD) Tax or State Debits Duty has been  
abolished for all states & territories effective 1/7/2005. Any amount shown  
on this statement applies to debits processed on or before 30/06/2005.

For further information on any applicable rebates, fees or government  
charges, please refer to the NAB's "A Guide to Fees & Charges" booklet.  
Please retain this statement for taxation purposes

### Explanatory Notes

*Please check all entries and report any apparent error or possible  
unauthorised transaction immediately.*

*We may subsequently adjust debits and credits, which may result  
in a change to your account balance to accurately reflect the  
obligations between us.*

*For information on resolving problems or disputes, contact us on 1800  
152 015, or ask at any NAB branch.*



## NAB Business Cash Maximiser

For further information call 13 22 65 for Personal  
Accounts or 13 10 12 for Business Accounts.



/007325

THUNDERBIRD OPERATIONS PTY LTD  
PO BOX 205  
WEST PERTH WA 6872

### Account Balance Summary

Opening balance	
Total credits	\$77,767.63
Total debits	\$0.00
<b>Closing balance</b>	

**Statement starts 1 March 2024**  
**Statement ends 28 March 2024**

### Outlet Details

Murray Street  
Murray Street Mall, 239 Murray Street Mall  
Perth WA 6000

### Account Details

THUNDERBIRD OPERATIONS PTY LTD  
BUS CASH MAXIMISER

BSB number

### Transaction Details

Date	Particulars	Debits	Credits	Balance
1 Mar 2024	Brought forward			
1 Mar 2024	As At 01/03/2024 Your Variable Cr Interest Rate Is 1.800% When Your Balance Is \$10,000 or More			
27 Mar 2024	Jan-Mar Bilbygntee T Hunder Oper .....		77,404.98	
28 Mar 2024	Interest.....		362.65	

### Summary of Government Charges

	From 1 July to date	Last year to 30 June
<b>Government</b>		
Withholding tax	\$0.00	\$0.00
Bank Account Debit (BAD) tax	\$0.00	\$0.00
Bank Accounts Debits (BAD) Tax or State Debits Duty has been abolished for all states & territories effective 1/7/2005. Any amount shown on this statement applies to debits processed on or before 30/06/2005.		
For further information on any applicable rebates, fees or government charges, please refer to the NAB's "A Guide to Fees & Charges" booklet. Please retain this statement for taxation purposes		

### Explanatory Notes

Please check all entries and report any apparent error or possible  
unauthorised transaction immediately.

We may subsequently adjust debits and credits, which may result  
in a change to your account balance to accurately reflect the  
obligations between us.

For information on resolving problems or disputes, contact us on 1800  
152 015, or ask at any NAB branch.

088456168036 / E-7325 S-13147 F-26293

**6.10 Appendix J: Commencement of the Action – Thunderbird Mineral Sands Project, WA, EPBC 2016/7648**



**Australian Government**  
**Department of Agriculture,  
Water and the Environment**

Ref: EPBC 2016/7648  
Email: [epbcmonitoring@awe.gov.au](mailto:epbcmonitoring@awe.gov.au)

Stuart Pether  
Chief Executive Officer  
Kimberley Mineral Sands  
Level 2, 41-47 Colin Street,  
WEST PERTH WA 6005

Dear Mr Pether,

**Commencement of the Action – Thunderbird Mineral Sands Project, WA,  
EPBC 2016/7648**

I refer to your letter on 16 December 2021 on behalf of Thunderbird Operations Pty Ltd notifying the Department of Agriculture, Water and the Environment (the department) of commencement of the action for Thunderbird Mineral Sands Project, WA in accordance with condition 6 of the *Environment Protection and Biodiversity Conservation Act 1999* (the Act) approval EPBC 2016/7648.

I note that the action commenced on 11 August 2021.

**Condition 8 – Annual Compliance Reporting**

Condition 8 of the approval states that the approval holder must prepare an Annual Compliance Report for each 12-month period preceding 30 June annually, following the commencement of the action. The approval holder must continue to publish each report and notify the Department of publication until the expiry of this approval on 30 June 2073. The reports must be published on the website by 30 June each year.

Please notify the department of publication of the reports by email, including a link to where the report is publicly available to [epbcmonitoring@awe.gov.au](mailto:epbcmonitoring@awe.gov.au). Please note the first Annual Compliance Report is due by 30 June 2022.

When preparing the report please refer to the department's Annual Compliance Report Guidelines available on the department's website at <http://www.environment.gov.au/epbc/publications/annual-compliance-report-guidelines>

I note that the notification of commencement was made outside the timeframe stipulated in condition 6 of the approval. I note that this delay may constitute a breach of section 142 of the EPBC Act. On this occasion, I consider it appropriate that no further compliance action is taken in response to this matter. This matter may be noted in your compliance history under the EPBC Act.

Please note that the conditions of approval require the approval holder to maintain accurate records of all activities associated with, or relevant to, the approval conditions so that they can be made available to the department on request. These documents may be

subject to audit and be used to verify compliance. Summaries of audits may be published by the department.

More information about the department's Monitoring and Audit program is available on the department's website at <http://www.environment.gov.au/epbc/compliance-and-enforcement/auditing>.

Section 142 of the Act requires an approval holder to comply with conditions attached to an approval. Penalties may apply to approval holders who contravene conditions.

If you would like to discuss this matter further, please contact Olivia Moore at [epbcmonitoring@awe.gov.au](mailto:epbcmonitoring@awe.gov.au)

Yours sincerely,

A handwritten signature in black ink, appearing to be 'Th' followed by a stylized flourish.

Thomas Long  
Assistant Director  
Environmental Audit Section  
18 January 2022



## 6.11 Appendix K KPA Letter to KMS – EPBC Reporting

Your ref:

Our ref: TRA127/211427  
Enquiries: Annie Delandro

Mitch Duley  
Environmental Superintendent  
Kimberley Mineral Sands  
264 Port Drive  
Broome, WA 6725

Dear Mr. Duley

### **KIMBERLEY MINERAL SANDS - EPBC REPORTING**

I am writing to you in response to Kimberley Mineral Sands (KMS) recent enquiry regarding the management controls implemented by Kimberley Ports Authority (KPA) to ensure the protection of cetaceans, namely Humpback Whales (*Megaptera novaeangliae*) in Port of Broome waters.

KPA is a Government Trading Enterprise under the *Port Authorities Act 1999* and has direct operational control of the Port of Broome/Port waters. In preparation for the upcoming Humpback whale migration along the Western Australian coastline, KPA has several measures to remind vessel operators of their responsibilities in ensuring the wellbeing and safety of whales in Port waters. These measures include but are not limited to:

- Issuing a Local Marine Notice with an attached Humpback Whale Migration bulletin outlining the actions to be taken in the event of an incident or hazard involving a Humpback Whale or any marine fauna.
- All large vessels are required to have a Marine Pilot licensed by KPA for their voyage from approximately 10 to 12 nautical miles (depending on the vessel size and Pilot boarding ground used) offshore into the Port of Broome.
- Recording any reported cetacean and marine fauna strikes in our Safety Management System.

In addition to the above, for certain projects, for example dredging & piling activities KPA utilises Marine Fauna Observers to monitor, record and respond as appropriate to the presence of marine mammals and other protected species.

I can confirm that to date, no cetacean or marine fauna strikes have been reported in Port waters by Kimberley Ports Authority vessels or Kimberley Mineral Sands contracted vessels.

Yours faithfully



Luke Westlake  
CEO

29 MAY 2024

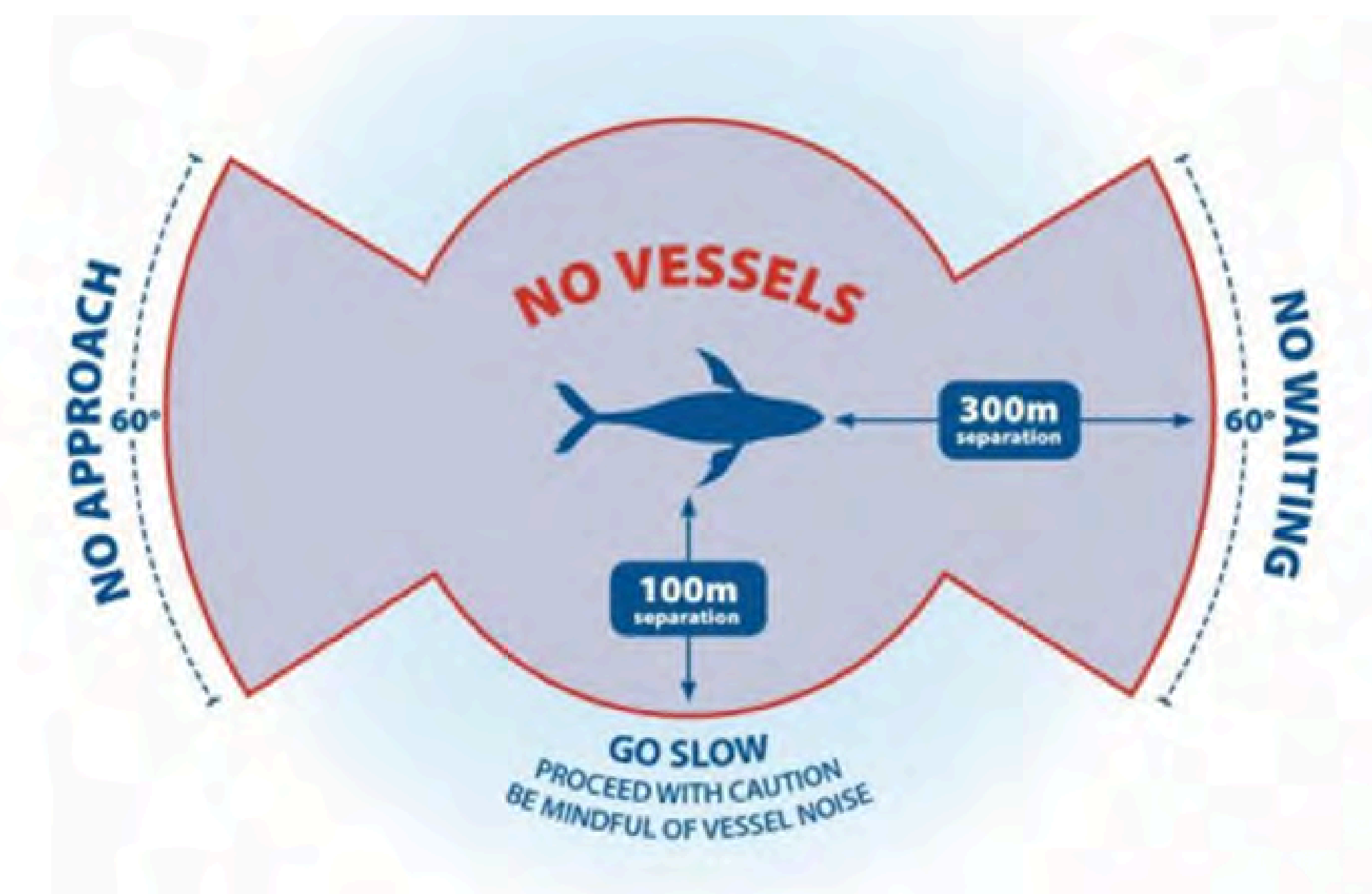
## 6.12 Appendix L KPA Environment Bulletin – Humpback Whale Migration

# ENVIRONMENT BULLETIN

## HUMPBACK WHALE MIGRATION – July to October

The Western Australian coastline is a known migration route for the Western Australian Humpback whale population. The migration occurs between July to October with their migration to breeding grounds in the Kimberley occurring between July and August and their southward migration back to the Antarctic feeding areas between August and October. Humpback whales typically travel along the coastline, sometimes swimming in waters as shallow as 200 meters during their migration.

**Vessel operators are reminded to maintain a safe distance from whales of 100m from either side or 300m from in front.**



These rules are designed to protect whales from an unacceptable level of impact from human activities.



# What to do if there is an incident involving a Humpback Whale?

If your vessel is involved in an incident you are required to report the event to the Department of Biodiversity, Conservation and Attractions (DBCA) and to work with them to determine the best course of action.

Contact the **DBCA Wildcare Helpline** on **9474 9055** to report a sick, injured, or deceased whale or marine fauna.

If there is a hazard or incident involving a Humpback whale or **ANY** marine fauna in port waters, please contact [info@kimberleyports.wa.gov.au](mailto:info@kimberleyports.wa.gov.au) and provide the following information (where possible):

- Time and exact location the marine fauna was encountered (provide coordinates if possible).
- Type of marine fauna and assumed maturity (i.e. juvenile or mature). Where safe and practicable, take photographs.
- Condition of the marine fauna, including physical condition (i.e. wounds etc.) and behavioural response (i.e. flighty, lethargic/non-responsive, etc.).
- If the marine fauna could pose a navigation hazard; and
- DBCA Wildcare incident report number (if applicable).



**Kimberley Mineral Sands Pty Ltd ACN 623 201 507 | Thunderbird Operations Pty Ltd ACN 611 351 743**

**BROOME:** 264 Port Drive, Broome WA 6725 | PO Box 1876, Broome WA 6725 | **DERBY:** 2 Clarendon Street, Derby WA 6728

**PERTH:** Level 2, 41-47 Colin Street, West Perth WA 6005 | PO Box 205, West Perth WA 6872

**P: 1300 336 725 / +61 8 6555 8757 | W: [kmsands.com.au](http://kmsands.com.au)**

