



**Nathan
River
Resources**

**ENVIRONMENTAL
COMPLIANCE
REPORT 2021**

OPERATOR DETAILS

Name of Mine	Nathan River Project
Name of Mine Operator	Nathan River Resources Pty Ltd
Approval Owner	Nathan River Resources Mining Pty Ltd
EPBC Approval	2012/6242

Reporting Period	5 October 2020 –5 October 2021	
Reporting Officer	Name:	Greg Oliver
	Title:	Environmental Approvals Specialist
	Signature:	
	Date:	31/12/22

TABLE OF CONTENTS

1.0 INTRODUCTION 1
 1.1 Scope 1
 2.0 OPERATIONAL HIGHLIGHTS..... 1
 3.0 COMPLIANCE TABLE 6
 4.0 REFERENCES..... 15

LIST OF TABLES

Table 1: Operational highlights for the reporting period 1
 Table 2: Project compliance against approval conditions EPBC 2012/6242 6

LIST OF FIGURES

Figure 1: Map of Nathan River Project Regional Locations 3
 Figure 2: Map of Nathan River Project Mine Site Infrastructure..... 4
 Figure 3: Map of Nathan River Project BBLF Infrastructure 5

1.0 INTRODUCTION

Nathan River Resources (NRR) operate the Nathan River Project (NRP) which comprises an iron ore mine in the Northern Territory, approximately 530 km south-east of Darwin and 230 km east of Katherine, a 171 km private haul road which connects to the Bing Bong Loading Facility (BBLF) on the Gulf of Carpentaria, approximately 50 km north of Borroloola.

Figures 1-3 (below) show the NRP regional location and the infrastructure associated with the mine and BBLF.

The NRP, previously known as the Roper Bar Iron Ore Mine, when it was operated by Western Desert Resources, was subject to assessment under the EPBC Act and granted approval on the 16 December 2012 (EPBC 2012/6242). The approval was formally transferred to Britmar (Aust.) Pty Ltd (now known as Nathan River Resources) on 20th February 2018.

Haulage and mining operations for the NRP recommenced on the 5th and 30th October 2020 respectively, ending seven years of care and maintenance.

1.1 Scope

This Environmental Compliance Report (ECR) covers the operational period from 5 October 2020 to 5 October 2021 and has been prepared to meet Condition 3 of the EPBC Approval which requires:

“Within 3 months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plan(s) as specified in the conditions. Documentary evidence providing proof of the date of publication and noncompliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published.”

2.0 OPERATIONAL HIGHLIGHTS

A total of 15 product shipments were made during the CER reporting period. Key operational highlights for the reporting period are summarised in Table 1 below.

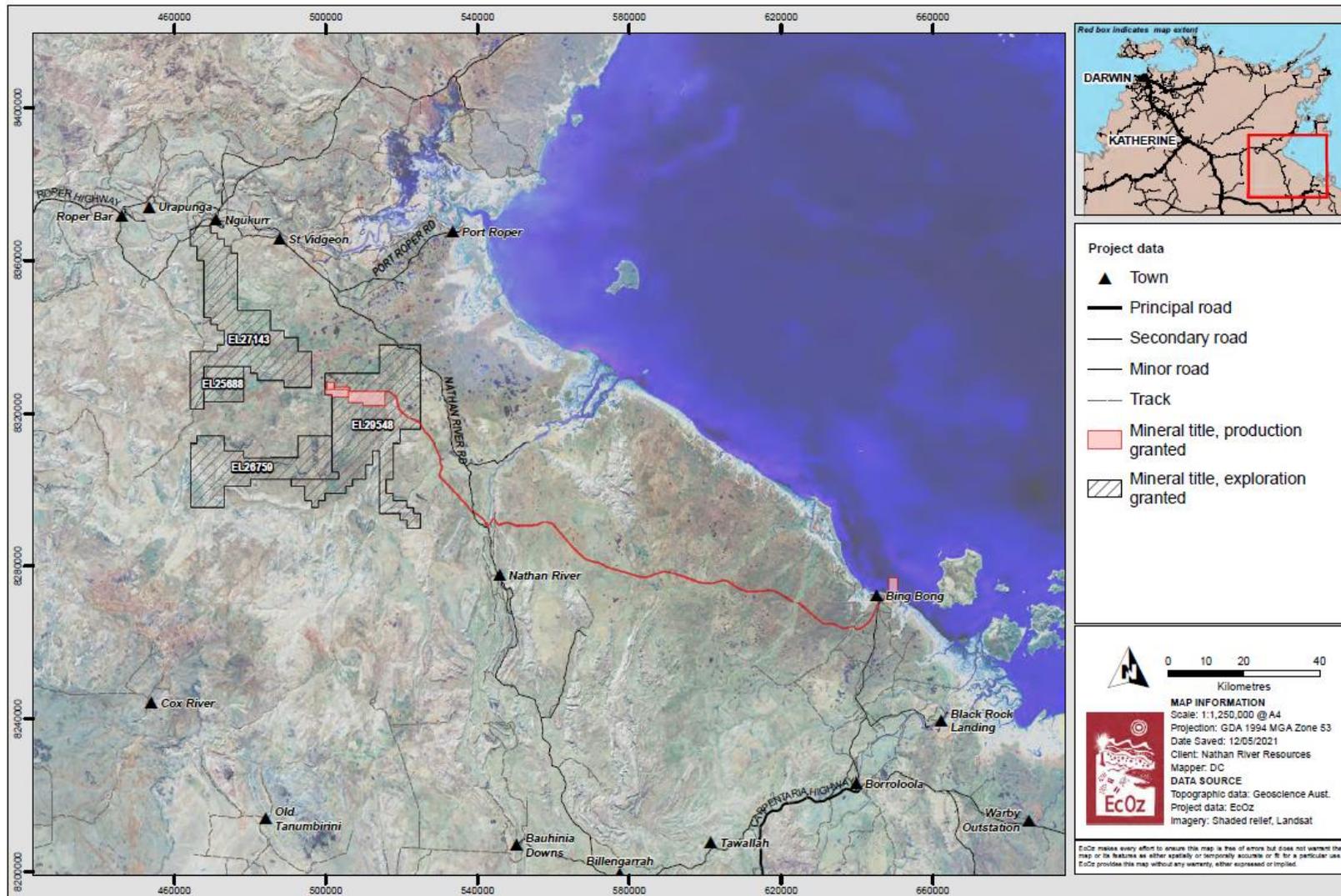
Table 1: Operational highlights for the reporting period

Operational Highlights 2020	
Date	Details
5 October 2020	Commence haulage of existing Direct Shipping Ore (DSO) stockpiles to Bing Bong Loading Facility (BBLF)
22 October 2020	Processing (crushing and screening) of existing ore stockpiles commences
30 October 2020	Extraction of ore from Danehill pit commences
7 November 2020	Ship 1 departs
14 November 2020	Drilling commences in Danehill pit
21 November 2020	First blast in Danehill pit

Operational Highlights 2020

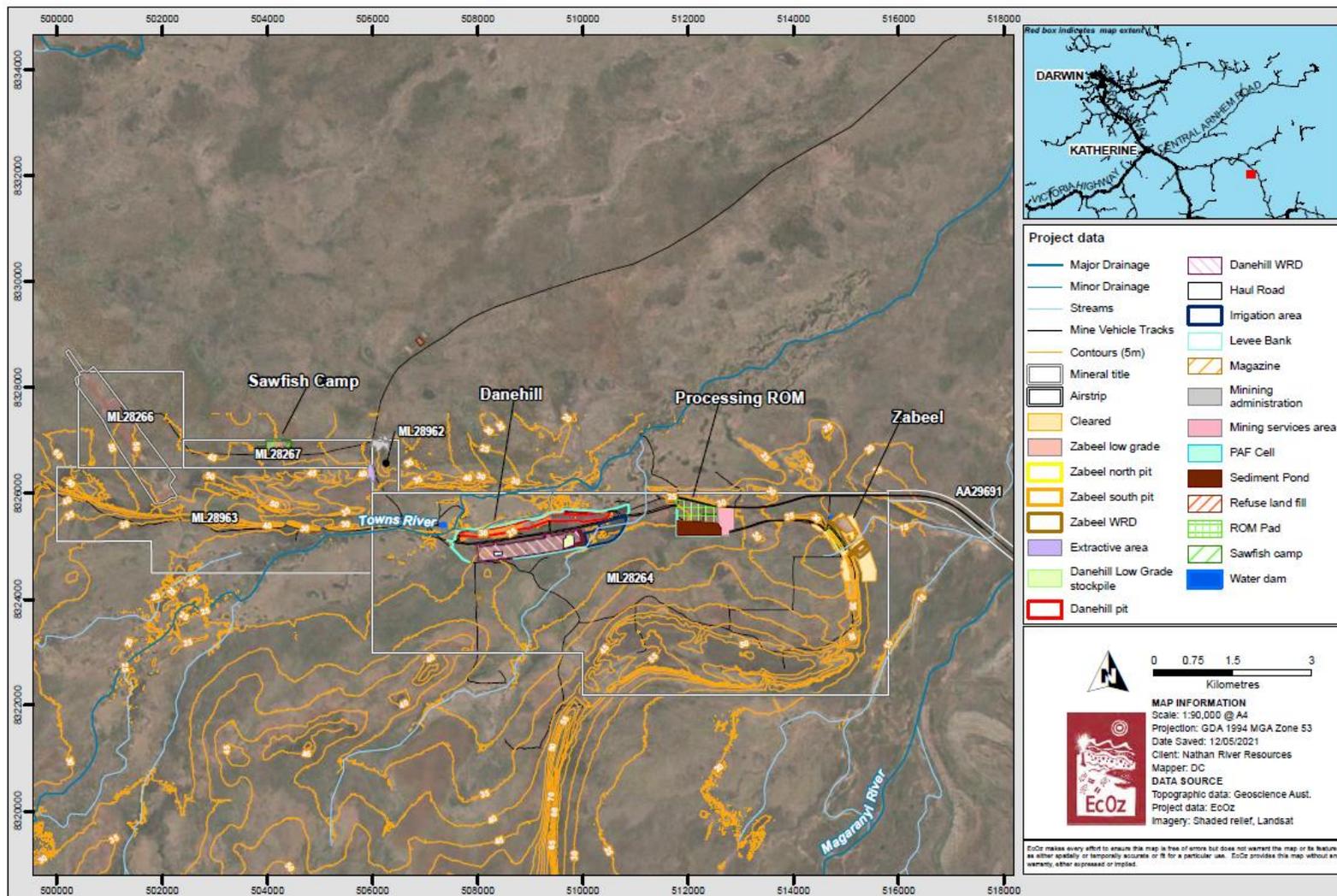
December 2020	Mining commences within Zabeel South pit
18 September 2021	Ship 15 final for reporting period departs
9 November 2021	Decision to suspend operations and prepare for entry into care and maintenance.

Figure 1: Map of Nathan River Project Regional Locations



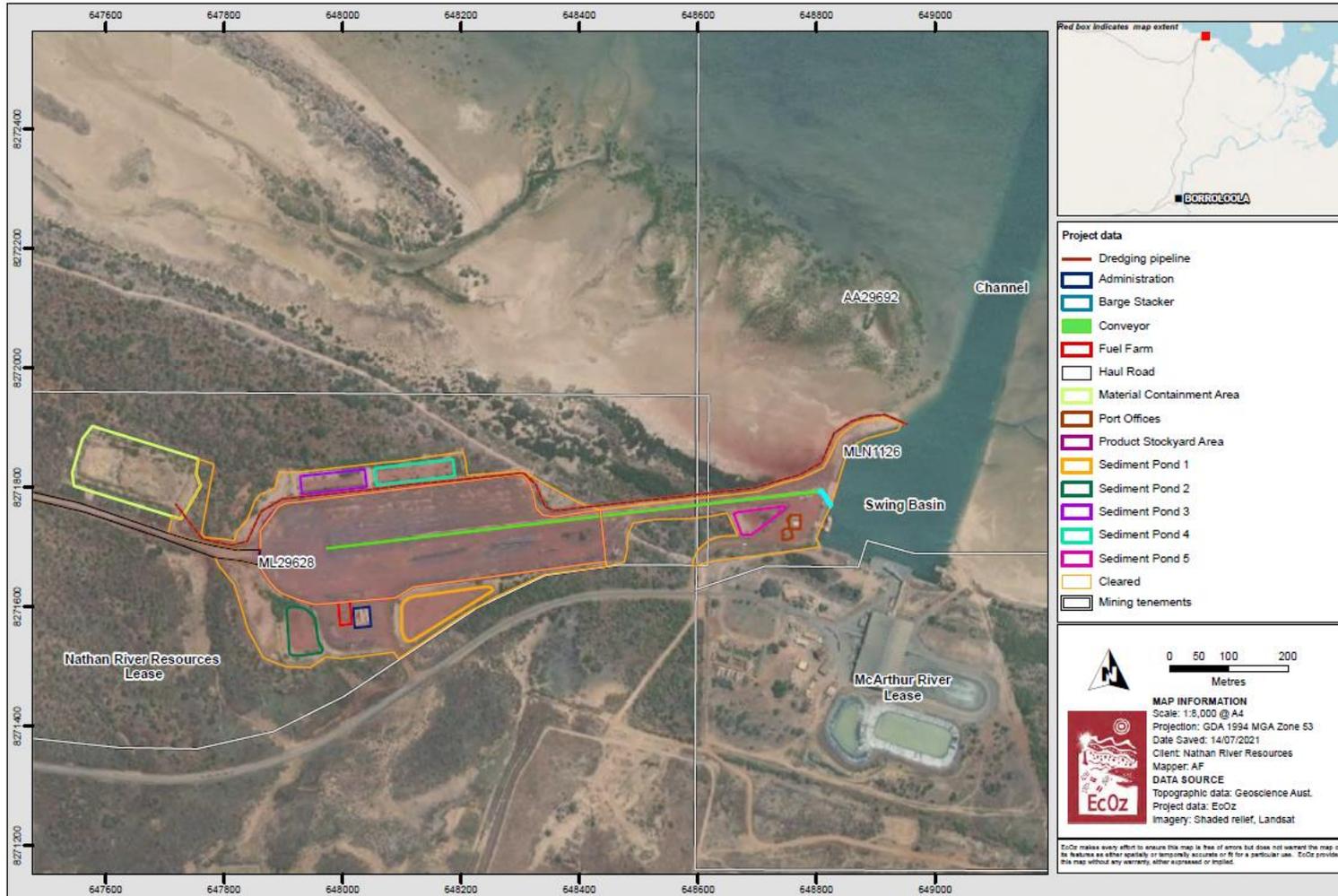
Path: Z:\01 EcOz_Documents\04 EcOz Vantage GIS\9221002 - NRR Mining Approval Services\01 Project Files\Report maps\Regional location.mxd

Figure 2: Map of Nathan River Project Mine Site Infrastructure



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Figure 3: Map of Nathan River Project BBLF Infrastructure



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3.0 COMPLIANCE TABLE

An internal desktop review has been conducted to determine the level of compliance with the Project's EPBC Approval conditions.

Compliance status has been assigned as either:

NYA (not yet applicable)

NA (not applicable)

FC (fully compliant): all aspects of the conditions have been met

PC (partially compliant): indicates that compliance has been achieved on some but not all aspects the condition

NC (non-compliant): indicates that most or all of the aspects of the condition have not been met

UTD (unable to determine)

Table 2: Project compliance against approval conditions EPBC 2012/6242

Conditions	Response	Evidence	Compliance Status
<p>Condition 1</p> <p>Within 28 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.</p>	<p>NRR does not have access to the original operators (Western Dessert Resources) correspondence to determine whether advice was provided to the Department at the commencement of operations.</p>	<p>NA</p>	<p>UTD</p>
<p>Condition 2</p> <p>The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement the management plan(s) required by this approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with Section 458 of the <i>EPBC Act</i>, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.</p>	<p>This report in part addresses Condition 2. A compliance assessment has also been undertaken against the Project's current active management plan - Acid Metalliferous Drainage Management Plan (AMDMP). Some actions have not been undertaken as initially planned and some commenced actions have been put on hold due to the site preparing to enter into care and maintenance in December 2021. A conservative approach has been taken with any waste material > 0.3% sulphur being managed as PAF.</p> <p>No Departmental or independent audit has been undertaken or requested during the reporting period.</p>	<p>Table 2 Compliance against Approval conditions EPBC 2012/6242.</p> <p>Nathan River Project AMD Management Plan Revision 4 – GEO Compliance Comments</p>	<p>PC</p>

Conditions	Response	Evidence	Compliance Status
<p>Condition 3 Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plan(s) as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published.</p>	<p>This Environmental Compliance Report (ECR) represents the first report from NRR to meet this condition. NRR is using the recommencement of operations (5th October, 2020) as the trigger date for initiating the reporting year</p>	<p>The completed ECR will be placed on the Company website and a confirmatory link emailed to the Department.</p>	<p>FC</p>
<p>Condition 4 Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.</p>	<p>No direction for an independent compliance audit has been received from the Minister during the reporting period</p>	<p>NA</p>	<p>FC</p>
<p>Condition 5 If the person taking the action wishes to carry out any activity otherwise than in accordance with the management plan(s) as specified in the conditions, the person taking the action must submit to the Department for the Minister's written approval a revised version of that management plan(s). The varied activity shall not commence until the Minister has approved the varied management plan(s) in writing. The Minister will not approve a varied management plan(s) unless the revised management plan(s) would result in an equivalent or improved environmental</p>	<p>Some actions within the Project's approved and active AMD-MP have not been undertaken as initially planned and some commenced actions have been put on hold due to the site preparing to enter into care and maintenance in December 2021. A conservative approach has been taken with any waste material > 0.3% sulphur being managed as PAF. A revised Management plan has been prepared by an independent third party. The plan has not yet been peer reviewed and submitted to the Department due to the site entering into Care and Maintenance.</p>	<p>Nathan River Project AMD Management Plan Revision 4 – GEO Compliance Comments.</p> <p>Acid and Metalliferous Drainage (AMD) Management Plan Nathan River Project, Northern Territory, Nathan River Resources. Revision No 5</p>	<p>PC</p>

Conditions	Response	Evidence	Compliance Status
outcome over time. If the Minister approves the revised management plan(s), that management plan(s) must be implemented in place of the management plan(s) originally approved.	Proposed actions at the site are of a reduced scale and impact than those identified within the <i>EPBC</i> referral.		
<p>Condition 6</p> <p>If the Minister believes that it is necessary or convenient for the better protection of listed threatened species and communities and/or listed migratory species to do so, the Minister may request that the person taking the action make specified revisions to the management plan(s) specified in the conditions and submit the revised management plan(s) for the Minister's written approval. The person taking the action must comply with any such request. The revised approved management plan(s) must be implemented. Unless the Minister has approved the revised management plan(s), then the person taking the action must continue to implement the management plan(s) originally approved, as specified in the conditions.</p>	Condition acknowledged. No Ministerial request has been made	NA	FC
<p>Condition 7</p> <p>If, at any time after five years from the date of this approval, the person taking the action has not substantially commenced the action, then the person taking the action must not substantially commence the action without the written agreement of the Minister.</p>	Original project commenced within 5 years of the Ministerial Approval	Correspondence from previous operator (Western Dessert Resources) not available	FC
<p>Condition 8</p> <p>Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all management plan(s) referred to in these conditions of approval on their website. Each management plan(s) must be published on the website within one month of being approved.</p>	The AMDMP (required under Condition 9) and has been approved by DAWE and is available on the Company's web site. The rehabilitation and mine closure plan (RMCP) (required under Condition 23) has not yet been submitted to the Minister for approval.	Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4. Website link:	FC

Conditions	Response	Evidence	Compliance Status
		https://www.nathan-river.com/environment	
Acid Metalliferous Drainage Management Plan (AMDMP)			
<p>Condition 9</p> <p>To protect freshwater sawfish (<i>Pristis microdon</i>), the person taking the action must submit an AMDMP for approval of the Minister. The AMDMP must include:</p> <p>a. Sampling and analysis procedures that will be employed to identify PAF materials;</p> <p>b. Design details and management strategies of proposed encapsulation beds, waste rock dumps, drainage systems, sediment traps, seepage diversion barriers, collection ponds and embankments; and</p> <p>c. A strategy for the ongoing monitoring of PAF material, including threshold trigger levels and mitigation responses.</p>	<p>AMD-MP was submitted to the Department of the Environment in April 2013. Following its submission, it was independently technically reviewed by Dave Salmon (Golder Associates) who in line with Condition 11 provided advice and recommendations which were subsequently put into an updated plan (the current plan).</p> <p>The AMD-MP was updated by NRR in 2019. DoEE approved the AMDMP in January 2020.</p> <p>Proposed actions at the site are of a reduced scale and impact than those identified within the <i>EPBC</i> referral.</p>	<p>Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4.</p> <p>Website link: https://www.nathan-river.com/environment</p>	FC
<p>Condition 10</p> <p>Actions required under 9a to 9c must be consistent with the Australian Government's <i>Managing Acid and Metalliferous Drainage Handbook</i> (February 2007) and any subsequent versions of this document.</p>	<p>The AMD-MP has been produced in general accordance with Department of Industry Tourism and Resources (DITR) (2007). <i>Managing Acid and Metalliferous Drainage. Manual in the Leading Practice Sustainable Development Program for the Mining Industry series.</i> Commonwealth of Australia.</p>	<p>Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4.</p> <p>Website link: https://www.nathan-river.com/environment</p>	FC
<p>Condition 11</p> <p>The person taking the action must ensure the AMDMP is reviewed by an independent technical reviewer to provide advice to the person taking the action on the development and review of the AMDMP. The person</p>	<p>In June 2013 the independent reviewer (David Salmon) provided advice on the proposed AMD management strategies for the Project in the form of a written report (Golder Associates, Review of material characterisation reports and acid mine drainage management Plan for</p>	<p>Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4.</p>	FC

Conditions	Response	Evidence	Compliance Status
taking the action must nominate an independent technical reviewer. The independent technical reviewer must be approved by the Minister in writing.	the RBIOP. Report No. 137636012- 001-R-Rev 0). The review identified seven recommendations pertaining to AMD management which were subsequently addressed. The Independent Technical Reviewer was approved by the Minister in 2013 (Correspondence reference 212/14423).	Website link: https://www.nathan-river.com/environment DSEWPC correspondence 2012/14423 (3rd April 2013).	
<p>Condition 12</p> <p>The person taking the action must ensure that the independent technical reviewer undertakes the following:</p> <p>a. Provide advice on the sampling and analysis procedures, design details and management strategies and the strategy for the ongoing management of PAF material.</p> <p>b. Provide advice on exceedance of trigger values and recommended changes to PAF material management practices, through the AMDMP, as required.</p>	In June 2013 the independent reviewer (David Salmon) provided advice on the proposed AMD management strategies for the Project in the form of a written report (Golder Associates). Review of material characterisation reports and acid mine drainage management Plan for the RBIOP. Report No. 137636012-001-R-Rev0). The AMDMP was updated by NRR in 2019. DoEE approved the AMDMP in January 2020.	Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4. Website link: https://www.nathan-river.com/environment	FC
<p>Condition 13</p> <p>The person taking the action must provide to the Minister, a copy of all advice and recommendations made by the independent technical reviewer and an explanation of how the advice and recommendations will be implemented or an explanation of why the person taking the action does not propose to implement certain recommendations. This information must be provided to the Minister when the AMD-MP is submitted for approval.</p>	The AMDMP was submitted to the Department of the Environment in April 2013. Following its submission, it was independently technically reviewed by Dave Salmon (Golder Associates) who in line with Condition 11 provided advice and recommendations which were subsequently put into an updated plan (the current plan). The AMDMP was updated by NRR in 2019. DoEE approved the AMDMP in January 2020.	Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4. Website link: https://www.nathan-river.com/environment	FC
<p>Condition 14</p> <p>The AMDMP must be submitted for approval by the Minister at least 60 days prior to the start of mining, unless otherwise approved in writing by the Minister.</p>		Correspondence from previous operator (Western Dessert Resources) not available	FC

Conditions	Response	Evidence	Compliance Status
<p>Condition 15</p> <p>Mining must not start until the AMDMP has been approved by the Minister. The approved AMD-MP must be implemented.</p>	<p>The AMDMP has been implemented at the Project. The AMDMP was updated by NRR in 2019 and approved by the Minister of DoEE in January 2020. Some AMD-MP actions have not been undertaken as initially planned and some commenced actions have been put on hold due to the site preparing to enter into care and maintenance in December 2021. A conservative approach has been taken with any waste material > 0.3% sulphur being managed as PAF.</p>	<p>Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4.</p> <p>Website link: https://www.nathan-river.com/environment</p>	PC
<p>Condition 16</p> <p>For the ongoing protection of freshwater sawfish (<i>Pristis microdon</i>), the AMDMP must be reviewed annually from the date of first approval of the AMDMP (until two years following the closure of Area F-East Pit 3) by the independent technical reviewer, to enable continuous improvement and adaptive management of PAF material management. From two years following the closure of Area F-East Pit 3, the AMD-MP must be reviewed by the independent technical reviewer once every three years for the remaining life of the project. The person taking the action must provide to the Minister, a copy of all advice and recommendations made by the independent technical reviewer and an explanation of how the advice and recommendations will be implemented or an explanation of why the person taking the action does not propose to implement certain recommendations. If the independent technical reviewer recommends that the approved AMDMP be varied, then the approved AMDMP must be varied in accordance with Condition 5.</p>	<p>It is noted that this Condition was drafted with recognition to the previous design which proposed allowing the Towns River to flow through the (Area F Pit 3) mine pit. Mining in this area has not been undertaken and the design has changed such that it is not proposed to allow Towns River to flow through the Area F Pit 3 (now referred to as Oratism), thereby reducing the risk to aquatic habitat and any freshwater sawfish (should they be present down-stream) from any mine affected and potentially metalliferous acid drainage.</p> <p>NRR commenced mining in October 2020 and initiated review of the approved AMD-MP in July 2021 by an independent specialist - Pendragon Environmental Solutions and NRR geology and mining specialists. The review was completed in October 2021 but has not progressed for independent review and subsequent submission for Ministerial Approval due to the site entering into Care and Maintenance.</p>	<p>Acid and Metalliferous Drainage (AMD) Management Plan Nathan River Project, Northern Territory, Nathan River Resources. Revision No 5</p>	PC
Haul Road Waterway Crossings			

Conditions	Response	Evidence	Compliance Status
<p>Condition 17 To ensure passage for freshwater sawfish (<i>Pristis microdon</i>) is maintained, the person taking the action must construct waterway crossings over all waterways along the haul road route in accordance with the <i>Culvert Fishway Planning and Design Guidelines</i> (Kapitzke 2010) and the <i>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> (Fairfull & Witheridge 2003).</p>	<p>Haul road bridges were constructed in general accordance with <i>Culvert Fishway Planning and Design Guidelines</i> (Kapitzke 2010) and <i>Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings</i> (Fairfull & Witheridge 2003).</p> <p>All haul road river crossing are of an elevated beam bridge design which pose no constraints or barriers to fish movements up or down stream.</p>		FC
<p>Condition 18 All waterway crossings must be monitored prior to and at the end of the wet season to ensure that there are no impediments to freshwater sawfish (<i>Pristis microdon</i>) passage. Any impediments to freshwater sawfish passage identified to be caused by or associated with the waterway crossings must be removed. Impediments must be removed on the day they are identified. If the impediment cannot be removed on the day it is identified, the person taking the action must notify the department within 48 hours and provide a report detailing the nature of the impediment (including photographs) and actions to be taken to remove the impediment.</p>	<p>Bridges are constructed several meters above the waterways which they span. Routine monitoring of the haul road and associated bridges is undertaken for impediments.</p>		FC
Port and Shipping Operations			
<p>Condition 19 To protect marine turtles, dugong (<i>Dugong dugon</i>) and in-shore dolphins, vessels must not exceed a speed of 6 knots, unless otherwise stated.</p>	<p>Speed restrictions to minimise impacts to marine fauna are documented in the Marine Management and Monitoring Plan.</p>	<p>Nathan River Resources (November 2019), Nathan River Project Marine Management and Monitoring Plan</p>	FC
<p>Condition 20 Within the dredged channel and swing basin of the Port of Bing Bong vessels must not exceed a speed of 4 knots.</p>	<p>Speed restrictions to minimise impacts to marine fauna are documented in the Marine Management and Monitoring Plan.</p>	<p>Nathan River Resources (November 2019), Nathan River Project Marine Management and Monitoring Plan</p>	FC

Conditions	Response	Evidence	Compliance Status
<p>Condition 21 Any injury to, or mortality of, marine turtles, dugong (<i>Dugong dugon</i>) or in-shore dolphins must be reported to the Minister within one business day.</p>	<p>Reporting requirements for injury or mortality of marine fauna are documented in the Marine Management and Monitoring Plan. There have been no reports of injury or mortality of turtles, dugongs or inshore dolphins.</p>	<p>Nathan River Resources (November 2019), Nathan River Project Marine Management and Monitoring Plan. HSE Incident Reporting system (MYOSH)</p>	<p>FC</p>
<p>Condition 22 To protect marine turtles, dugong (<i>Dugong dugon</i>) and in-shore dolphins, the person taking the action must undertake marine piling activities in accordance with the following measures:</p> <ul style="list-style-type: none"> a. Pre-start-up visual observations: Visual observations for marine turtles, dugongs and in-shore dolphins must be undertaken to the extent of the marine piling observation zone by a suitably trained crew member for at least 30 minutes before the commencement of marine piling. b. Operating procedures: While marine piling is undertaken, the following procedures must be implemented: <ul style="list-style-type: none"> i. Visual observations of a 1500 meter radius from the pile hammer must be maintained continuously to identify if there are any dugongs or in-shore dolphins present; ii. Visual observations of a 300 meter radius from the pile hammer must be maintained continuously to identify if there are any marine turtles present; iii. A 500 meter radius exclusion zone must be implemented for in-shore iv. dolphins and dugongs; v. A 100 meter radius exclusion zone must be implemented for marine turtles; 	<p>Marine piling was undertaken in 2013 prior to NRR acquiring operational control. No marine piling has been undertaken by NRR.</p>	<p>NA</p>	<p>NA</p>

Conditions	Response	Evidence	Compliance Status
<p>vi. If marine turtles, dugongs or in- shore dolphins are sighted within the relevant exclusion zone, action to cease all piling within the relevant exclusion zone, within 2 minutes or as soon as safely possible;</p> <p>vii. Piling activities must not recommence until marine turtles, dugongs or in- shore dolphins are observed to move outside the exclusion zone or 30 minutes have passed since the last sighting;</p> <p>viii. Soft start procedures: Piling activities must be initiated at the soft start level and then build up to full operating impact force. The soft start procedures may only commence if no marine turtles, dugongs or in- shore dolphins have been sighted within the exclusion zone during the pre-start-up visual observations.</p>			
<p>Condition 23 To protect freshwater sawfish (<i>Pristis microdon</i>) the person taking the action must submit for the Minister's approval a RMCP for the decommissioning of the Roper Bar Iron Ore and Transport Infrastructure. The RCMP must be submitted at least six months prior to the proposed commencement of closure or as otherwise agreed by the Minister.</p>	<p>An RMCP will be provided for the Minister's approval at least six months prior to the proposed commencement of closure or as otherwise agreed by the Minister.</p> <p>The Mining Management Plan approved under the NT Mining Act contains a conceptual Mine Closure Plan.</p>	NYA	NYA
<p>Condition 24 Rehabilitation and closure must not commence until the RMCP is approved by the Minister. The approved RMCP must be implemented.</p>	<p>An RMCP will be provided for the Minister's approval at least six months prior to the proposed commencement of closure or as otherwise agreed by the Minister. Rehabilitation activities with the potential to impact protected freshwater sawfish (<i>Pristis microdon</i>) will not be undertaken without approval of the Minister.</p>	NYA	NYA

4.0 REFERENCES

Nathan River Project AMD Management Plan Revision 4 – GEO Compliance Comments.

Nathan River Resources (Nov. 2019). Nathan River Project Marine Management and Monitoring Plan

Pendragon Environmental Solutions (Dec. 2019). Acid and Metalliferous Drainage (AMD) Management Plan (2020-2023) Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 4.

Pendragon Environmental Solutions (Nov. 2021). Acid and Metalliferous Drainage (AMD) Management Plan Nathan River Project, Northern Territory, Nathan River Resources. Revision No. 5