

# Mining Management Exploration Activities

## FNorthern Territory of Australia – Mining Management Act 2001

It is recommended that the Mining Management Plan (MMP) is completed in conjunction with the user guide available on the [Northern Territory Government website](#).

### Section 1 – Project Details

<b>Project Name</b> Provide new or existing project name	Ambalindum
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<b>Authorisation Number</b> Insert existing authorisation number, where applicable	TBA
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<b>Operator Name</b> Use ASIC-ABR registered name (if a company), or name of the applicant	Gundersen, Patrick
<b>Operator ABN and ACN numbers</b>	48 744 240 240

<b>Location and Access Details</b> Include brief description of the location, access details, and distance to nearest town or community	<p>Located in the Harts Range approximately 145km north east of Alice Springs.</p> <p>Access to the area is via the Plenty Highway before travelling approximately 15km south on station tracks.</p> <p>The area of proposed explorations lies entirely within Ambalindum Station which is operated by Hewitt Agribusiness Pty Ltd.</p>
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<b>Target Commodity Details</b> Include target mineral commodities (i.e. gold, copper etc.)	Semi-Precious Gemstones
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<b>Mining Activities</b> Summarise the mining activities (exploration) to be the subject of the proposed Authorisation or Variation.  Drilling programs over a maximum of four years are supported and encouraged and can be staged. Please refer to the guidelines for further information.	8 costeans measuring 8m long by 1m wide by 1m deep dug by mini excavator. Costeans be immediately backfilled. No bulk sampling would occur, the main propose of the program is to establish the strike and size of semi-precious mineral deposits.
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## Mining Management Exploration Activities

<b>Proposed Schedule</b> Include start and finish dates of ground disturbing work	June 2024 to September 2024
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## Mining Interest and Land Ownership

List the mining interests (titles), the title holder name/s, the title expiry date and the Property name/Land holder (e.g. pastoralist or Aboriginal land trust) for each title.

<b>Title Number</b>	<b>Title Holder</b>	<b>Expiry Date</b>	<b>Underlying Property Name or Land Holder</b>
EL32506	Patrick Gundersen	12/05/2027	Ambalindum Station
EL32514	Patrick Gundersen	12/05/2027	Ambalindum Station

A Land Access Agreement (LAA) will be lodged in due course.

## Organisational Structure

<b>Position Title</b>	<b>Name</b>
Managing Director	Patrick Gundersen

## Section 2 – Operator Self-Assessment of the Environmental Risk

The purpose of this self-assessment is to ensure Operators complete a project risk assessment of potential environmental impacts and are aware of other legislative obligations from various Agencies. As a result of this self-assessment, further information may be required in the form of a management plan to enable full assessment of the MMP. If you have any queries please contact a Mining Officer prior to submitting the MMP. Useful resources to assist with this self-assessment are provided in the User Guide.

### Environmental considerations

ASSESSMENT ASPECT	YES or NO	ACTIONS REQUIRED (if answered YES)	APPENDED INFORMATION (e.g. evidence of consultation with DEPWS and/or management plan where required).
<p><b>Step 1:</b> Are there any threatened flora and fauna species or habitats of significance that may occur in the proposed work area?</p>	<p>Yes</p>	<p>SLR Consulting Australia was engaged to complete a Desktop Terrestrial Biodiversity Assessment. Methodology is described in Appendix 9.</p> <p>Two listed threatened flora species, and 29 listed threatened or listed migratory species have been identified within 50km of the project area. By assessing the species ranges and habitat requirements, SLR Consulting Australia were able to assess the likelihood of each species occurring in the project area. 6 species were identified to have high likelihood of occurring in the project area:</p> <ul style="list-style-type: none"> <li>- MacDonnell Ranges Cycad (<i>Macrozamia macdonnelli</i>)</li> <li>- Southern Whiteface (<i>Aphelocephala leucopsis</i>)</li> <li>- Central Australia Rock Wallaby (<i>Petrogale lateralis centralis</i>)</li> <li>- Hart's Range Knob-lip Snail (<i>Dirutrachia subvelevata</i>)</li> <li>- Hart's Range Snail (<i>Granulomelon granditurberculatum</i>)</li> <li>- Watt's Multicoiled Snail (<i>Vidumelon wattii</i>)</li> </ul> <p>A risk assessment of potential impacts to threatened species identified the potential impacts as habitat clearing, introduction of harmful species, and fire. To avoid or mitigate these potential impacts (as per SLR Consulting Australia recommendations), Patrick Gundesen will:</p> <ul style="list-style-type: none"> <li>- Follow the 'Recommended management and control strategies to avoid or minimise</li> </ul>	<p>Appendix 9 - Desktop Terrestrial Biodiversity Assessment Appendix 4 - Significant Biodiversity Areas and Threatened &amp; Significant Flora &amp; Fauna</p>

**Mining Management Exploration Activities**

ASSESSMENT ASPECT	YES or NO	ACTIONS REQUIRED (if answered YES)	APPENDED INFORMATION (e.g. evidence of consultation with DEPWS and/or management plan where required).
		<p>the potential of impacts to threatened species' outlined in Table 8 of Appendix 9.</p> <ul style="list-style-type: none"> <li>- Avoid interacting with threatened plant, bird or mammal species.</li> <li>- If threatened snail species are identified in the area of planned costeans, they will be relocated to an area nearby of similar habitat which will not be impacted by the works.</li> <li>- Stockpile and return top 10cm of soil to original position upon rehabilitation of costeans. Rocks and organic litter will be replaced to replicate undisturbed surface.</li> <li>- Equipment and vehicles will be cleaned and free of seeds prior to entering the area.</li> <li>- Fire prevention strategies will be employed. Including:               <ul style="list-style-type: none"> <li>➤ Vehicles not parked idle in long grass.</li> <li>➤ No non-guarded open flames.</li> <li>➤ Proper storage of flammable material, including fuel.</li> <li>➤ Fire extinguishers available and accessible.</li> </ul> </li> <li>- Vegetation around watercourses will not be disturbed.</li> </ul> <p>Management and control strategies to avoid or minimise the potential impacts to the Grey Falcon (<i>Falco hypoleucos</i>) are to be the same as those outlined for the Southern Whiteface in Appendix 9 Table 8. The following additional control will also be implemented to avoid or minimise the potential impacts to the Grey Falcon:</p> <ul style="list-style-type: none"> <li>- Field crews to inspect within 300m of the proposed exploration areas for evidence of Grey Falcon or their nests. If identified, a minimum buffer distance of 300m is to be maintained between Grey Falcon nests and all exploration activities, traverses and camps.</li> </ul> <p>The following additional control strategies will be introduced to avoid or minimise the potential impacts to the Great Desert Skink (<i>Egernia kintorei</i>) and Slater's Skink (<i>Liopholis slateri</i>) (both assessed by SLR Consulting Australia to</p>	

**Mining Management Exploration Activities**

<b>ASSESSMENT ASPECT</b>	<b>YES or NO</b>	<b>ACTIONS REQUIRED (if answered YES)</b>	<b>APPENDED INFORMATION</b> (e.g. evidence of consultation with DEPWS and/or management plan where required).
		<p>have low likelihood of occurring in the project area):</p> <ul style="list-style-type: none"> <li>- Field crews to inspect within 50m of proposed work area for evidence of Great Desert Sink or Slater’s Skink, or their burrows prior to commencement of activities.</li> <li>- If evidence of Great Desert Sink or Slater’s Skink, or their burrows are identified, a 50m buffer is to be established with no works completed or access in this zone.</li> </ul>	
<p><b>Step 2:</b> Are there any known declared weeds within the proposed work area?</p>	No	<p>SLR Consulting Australia was engaged to complete a Desktop Terrestrial Biodiversity Assessment. Methodology is described in Appendix 9.</p> <p>A total of 20 introduced flora species were identified within 50km of the project area. Of the introduced flora species returned from the desktop assessment, Castor Oil Plant (<i>Ricinus communis</i>) is the only declared weed in the NT under the WM Act. None of the introduced species returned from database searches are cited as Commonwealth listed Weeds of National Significance.</p> <p>No occurrences of declared weeds are registered within the project area.</p> <p>Equipment and vehicles will be cleaned and free of seeds prior to entering and upon exiting the area. As per the requirements from Hewitt Cattle, all vehicles will be cleared prior to entry and will be accompanied with a signed weed hygiene certificate.</p> <p>When possible, weeds will be removed by hand and securely transported to disposal facility. In event that removal is not possible, the location will be noted and passed on to the landholder for eradication.</p>	Appendix 11- Desktop Terrestrial Biodiversity Assessment Appendix 4- NR Weed Records
<p><b>Step 3:</b> Will you be using water from bores or other sources for the operation?</p>	No	Water extraction or storage not required as part of the program.	

Environmental assessment and cultural considerations

ASSESSMENT ASPECT	YES or NO	MANAGEMENT REQUIREMENTS
<p><b>Step 4:</b> Is your project likely to have a significant impact on the environment?</p>	No	<p>Small exploration program only. 8 costeans measuring 8m long by 1m wide by 1m deep dug by mini excavator. Costeans be immediately backfilled. No bulk sampling would occur, the main propose of the program is to establish the strike and size of semi-precious mineral deposits.</p>
<p><b>Step 5:</b> Are there Aboriginal sacred sites in the Project area?</p>	No	<p>Sacred Sites are protected under the NT <i>Aboriginal Sacred Sites Act 1989</i> and administered by the Aboriginal Areas Protection Authority (AAPA). An updated abstract of records was obtained from the AAPA in December 2023. Records are attached in Appendix 1 and Appendix 5 Map 2. Two sacred sites are recorded within EL32514 and the extent of one sacred site is recorded within EL32506. The proposed project does not lie within or require access through the extent of a recorded site. Workers are not planned to be completed within 950m of the extent of a sacred site as part of the proposed program.</p>
<p><b>Step 6:</b> Are there archaeological and heritage sites in the Project area?</p>	No	<p>A search of the Heritage Register was conducted and identified no heritage places within Ambalindum Station.  The Heritage Branch also advised that a search of the areas found that there are no known Aboriginal archaeological places within the subject site. There are also no nominated, provisionally declared or declared heritage places or objects within the subject area.  Heritage register search results found in Appendices 2 and 3.</p>

### Section 3 – Amendments

N/A- First MMP.

Section	Amendment

## Section 4 – Activities Proposed for this MMP only

Provide relevant EL numbers

Mining Interests (i.e. titles)	EL32506	EL32514
Number and type of proposed exploration drill holes	N/A	N/A
Maximum depth of proposed holes (m)	N/A	N/A
Number and size of drill pads to be cleared (Length: m x Width: m)	N/A	N/A
Total area of drill pads to be cleared (ha)	N/A	N/A
Number of proposed water bores	N/A	N/A
Is drilling likely to encounter groundwater in multiple or confined aquifers? (Y, N, unsure) If answering yes, please provide the number of exploration holes where this is likely to occur	N/A	N/A
Number of costeans	6	2
Volume to backfill costeans (Length: m x Width: m x Depth: m)	8m x 1m x 1m= <b>0.0048 Ha</b>  Proposed costean sites only have grasses and small shrubs.	8m x 1m x 1m= <b>0.0016 Ha</b>  Proposed costean sites only have grasses and small shrubs.
Number of bulk sample pits	N/A	N/A
Volume to backfill bulk sample pits (Length: m x Width: m x Depth: m)	N/A	N/A
Bulk sample pits approved under <i>Mineral Titles Act</i> ? (Y or N). If Yes provide approval	N/A	N/A
Line/track clearing: (length m x width m)	N/A	N/A



## Mining Management Exploration Activities

Mining Interests (i.e. titles)	EL32506	EL32514
Area of proposed line/track clearing (ha)	N/A	N/A
Camp area to be cleared (ha)	N/A- Equipment set up in sparse small vegetation areas. No clearing required.	N/A- Equipment set up in sparse small vegetation areas. No clearing required.
Camp Infrastructure (i.e. demountable, tents) Please provide a complete list with measurements as required in the security calculation	2 caravans/ campervans for up to two weeks	2 caravans/ campervans for up to one week
Other	N/A	N/A
Total proposed area of disturbance (ha)	<b>0.0048 Ha</b>	<b>0.0016 Ha</b>

### Section 5 – Previous Disturbance

N/A no existing authorisation. The Disturbance Tracking spreadsheet will be completed and attached to subsequent MMP submissions.

## Section 6 – Environmental Management

By checking these shaded boxes, you are agreeing to implement the following minimum environmental management standards on the project area. Where boxes have been left unchecked, justification is required.

6.1	<b>N/A</b>	Blade-up approach for clearing will be used (i.e. no windrows, leave root stock and topsoil)
6.2	<b>X</b>	Significant vegetation will be avoided during clearing (i.e. large trees, specimens providing habitat or food sources, riparian vegetation, and threatened species)
6.3	<b>X</b>	Vegetation clearing during, and immediately after rainfall events, will be avoided
6.4	<b>X</b>	Vegetation clearing will be kept to the minimum required to safely traverse vehicles and drill rigs along tracks and drill pads
6.5	<b>N/A</b>	Where blade-up techniques cannot be employed, topsoil and vegetation will be stockpiled appropriately for rehabilitation purposes
6.6	<b>X</b>	All employees and contractors will be trained and inducted in relation to the management of environmental risks in the work area, including weeds, waterways, threatened species, soil erosion, sacred sites and heritage areas
6.7	<b>N/A</b>	Sumps will be lined or tanks of appropriate size to contain water, sediment and drilling fluids encountered during drilling, will be used
6.8	<b>N/A</b>	Sumps, drill holes, and fuel stores will be located away from environmentally significant areas and water courses
6.9	<b>X</b>	Excavations (sumps, costeans and pits) will be appropriately ramped to allow fauna egress
6.10	<b>N/A</b>	Drill holes will be securely capped immediately after drilling
6.11	<b>X</b>	Vehicle hygiene measures will be employed to prevent the introduction and spread of invasive species and pathogens when mobilising vehicles and equipment from one location to another
6.12	<b>X</b>	Hydrocarbon spills will be minimised using liners and drip trays under machinery, and appropriately sized spill-kits available in the event of a spill
6.13	<b>X</b>	Hazardous substances (including hydrocarbons) will be stored and handled in accordance with relevant Australian Standards
6.14	<b>X</b>	Hydrocarbons will be stored in lined and bunded areas
6.15	<b>X</b>	Waste will be stored securely while on-site to minimise windblown rubbish and access by feral animals
6.16	<b>X</b>	Waste will be removed off-site and disposed of at an appropriate waste management facility
6.17	<b>X</b>	All environmental incidents will be reported to the Department in accordance with Section 29 of the <i>Mining Management Act</i> .
6.18	<b>N/A</b>	Acid and Metalliferous Drainage (AMD) and Potentially Acid Forming (PAF) material derived from drilling cuts will be managed to avoid AMD and PAF related issues on site.

## Mining Management Exploration Activities

6.19	<b>N/A</b>	Radioactive/NORM drill cuttings will be managed to avoid radiation related issues on site.
6.20	<b>X</b>	Dust management will be implemented on site.

Justification and alternative management measures:

## Section 7 – Rehabilitation and Closure

By checking these shaded boxes, you are agreeing to implement the following minimum rehabilitation standards on the project area. Where boxes have been left unchecked, justification is required.

A refund of security related to completed rehabilitation on site requires the submission of a rehabilitation report including photographs, an updated security calculation and updated disturbance tracking spreadsheet to the Department.

7.1	<b>N/A</b>	Drill holes will be plugged below ground level at a minimum depth of 0.4 metres and soil mounded to prevent subsidence, within 6 months of completion of drilling.
7.2	<b>N/A</b>	Drill holes encountering multiple or confined aquifers will be grouted with concrete.
7.3	<b>N/A</b>	Drill samples/spoil will be returned down drill holes, buried in sumps, or removed from site.
7.4	<b>N/A</b>	All drill hole and access markers including flagging tape, wooden markers and star pickets will be removed from site.
7.5	<b>N/A</b>	Cut and fill drill pads will be re-contoured to be consistent with the surrounding terrain.
7.6	<b>N/A</b>	Drill pads and compacted areas along the contour (on sloping ground) will be ripped/scarified of and tracks will be cross-ripped (zig-zag).
7.7	<b>N/A</b>	Tracks will be rehabilitated, including pushing in all windrows, unless otherwise agreed in writing by the land holder or appropriate third party.
7.8	<b>X</b>	Appropriate erosion and sediment controls will be installed where erosion is evident or likely to occur.
7.10	<b>X</b>	Access through watercourses will be removed and banks restored.
7.11	<b>X</b>	All previously disturbed areas will be stable, with no evidence of active soil erosion.
7.12	<b>X</b>	All excavations will be backfilled within 6 months of their completion.
7.13	<b>N/A</b>	All water bores will be decommissioned unless otherwise agreed in writing by the land holder or appropriate third party.
7.14	<b>X</b>	All rubbish and infrastructure will be removed from site.
7.15	<b>X</b>	Topsoil will be replaced and vegetation re-established.
7.16	<b>X</b>	Contaminated soils (e.g. hydrocarbon or hazardous chemicals) will be rehabilitated or removed from site.
7.17	<b>X</b>	Monitoring will be undertaken following the wet season or a significant rainfall event

Justification and alternative management measures:

## Section 8 – Required Attachments

8.1	<b>X</b>	Initial Application for Authorisation or variation of Authorisation (only if details on the form have subsequently changed).
8.2	<b>N/A</b>	Nomination of Operator Form, where required
8.3	<b>X</b>	Security Calculation Spreadsheet
8.4	<b>TBA</b>	Evidence of Land Access Agreement if operating on an Exploration Licence (EL) on Pastoral Lease (e.g. two-ways exchange of email)
8.5	<b>N/A</b>	Disturbance tracking spreadsheet (for existing Authorisations)
8.6	<b>X</b>	Spreadsheet with coordinates of proposed drill holes or polygons of target areas
8.7	<b>X</b>	KML/shape files/track logs of proposed tracks, camp sites and proposed drill holes or polygons of target areas
8.8	<b>X</b>	Map(s) of the work area(s) showing: <ul style="list-style-type: none"> <li>1. title boundaries and title numbers</li> <li>2. current and proposed drill holes, or polygons of target areas</li> <li>3. current and proposed tracks</li> <li>4. rehabilitated areas</li> <li>5. camp sites</li> <li>6. heritage sites or significant environmental areas</li> <li>7. environmental constraints</li> </ul>
8.10	<b>N/A</b>	Radiation Management Plan (if applicable)
8.12	<b>X</b>	Document(s) being appended in relation to Section 2 (if any): <ul style="list-style-type: none"> <li>Appendix 1 - AAPA Abstract of Records</li> <li>Appendix 2- Heritage</li> <li>Appendix 3- Historic &amp; Archaeological</li> <li>Appendix 4- NR Maps</li> <li>Appendix 5- Proposed Works Maps</li> <li>Appendix 6- Proposed Works Digital Files</li> <li>Appendix 7- Security Calculation</li> <li>Appendix 8- Disturbance Tracking Spreadsheet</li> <li>Appendix 9- Desktop Terrestrial Biodiversity Assessment</li> <li>Appendix 10- Land Access Agreement</li> <li>Appendix 11- Weed Information</li> </ul>