

BHP

Ministers North Derived Proposal

Terrestrial Fauna Environmental Management Plan

Ministerial Statement 1105

September 2025



Version Control

Version	Description	Key changes	Date
0a	Draft submitted for interna BHP review	-	04/07/2025
0b	Draft submitted to BNTAC for review.	New document	4/08/2025
1	Final draft EMP submitted to the EPA	Incorporated feedback from BNTAC	15/09/2025

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Abbreviations and Definitions

Term	Meaning
BC Act	<i>Biodiversity Conservation Act 2016</i> (Western Australia)
BHP	BHP Iron Ore Pty Ltd
BNTAC	Banjima Native Title Aboriginal Corporation
CEO	Chief Executive Officer of DWER
Clearing	As defined by Section 51A of the <i>Environmental Protection Act 1986</i> (WA)
DBCA	Department of Biodiversity, Conservation and Attractions
DWER	Department of Water and Environmental Regulation
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
EP Act	<i>Environmental Protection Act 1986</i> (Western Australia)
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth)
GIS	Geographic Information System
m	metre
MEZ	Mining Exclusion Zone
mm/s	millimetres per second
OHP	Ore Handling Plant
OSA	Overburden Storage Area
PPV	peak particle velocity
ROM	Run of Mine

Executive Summary

Ministers North Terrestrial Fauna Environmental Management Plan	
Proposal	Ministers North
Proponent	BHP Iron Ore Pty Ltd
Ministerial Statement	Derived Proposal Request – Ministerial Statement 1105 – Pilbara Expansion Strategic Proposal
EMP Purpose	To meet the requirements of implementation conditions of Ministerial Statement 1105 for the Pilbara Expansion Strategic Proposal, being: <ul style="list-style-type: none"> • Condition 6 - Condition Environmental Management Plans • Condition 8 - Terrestrial Fauna Environmental Management Plan
Key Environmental Factors and EMP Objectives	Terrestrial Fauna <ul style="list-style-type: none"> • To protect terrestrial fauna so that biological diversity and ecological integrity are maintained.
EMP Key Components	Refer to Section 2 <i>EMP Components</i> .
Proposed construction date	2026
EMP required Pre-construction	Yes, this EMP will be applicable for all activities for the Ministers North Derived Proposal request including clearing activities ahead of construction

1 Context, Scope and Rationale

1.1 Pilbara Expansion Strategic Proposal

BHP referred the Pilbara Expansion Strategic Proposal (Strategic Proposal) to the EPA under Part IV of the EP Act on 6 July 2012. Having devised a long-term mine development plan, BHP's aim was to consider a more regional approach to environmental management across all its current and future operations. The Strategic Proposal included new mining operations and future expansions to existing mining operations, and associated infrastructure and activities in the Pilbara. The EPA assessed the Strategic Proposal at the level of Public Environmental Review and published its report on 9 July 2018 (EPA Report 1619, EPA 2018).

The Minister for Environment issued Ministerial Statement 1105 (MS1105) for the Strategic Proposal on 11 July 2019. The Statement states that in the event that the EPA declares a future proposal as identified in EPA Report 1619 and described in Schedule 1 of MS1105 under section 38E to be a derived proposal, the derived proposal may be implemented, subject to the Minister for Environment's identification of relevant conditions under section 45B(3) from the conditions set out in the Statement. The area covered by the Strategic Proposal is identified by Figure 1-1.

The MS1105 approval provides a framework through which future proposals within BHP's Strategic Proposal area may be referred to EPA for assessment as a 'Derived Proposal'. The intent of the Terrestrial Fauna Environmental Management Plan is for the Ministers North Derived Proposal to meet the requirements of MS1105 Condition 8.

1.2 Ministers North Derived Proposal

The Ministers North Derived Proposal (Ministers North) is located within the boundary of the Strategic Proposal, positioned to the south of the existing Yandi Mining Operations, as identified by Figure 1-1. Ministers North was also identified within the environmental assessments of the Strategic Proposal by BHP (2016) and EPA (2018).

The Derived Proposal is positioned within a Development Envelope of 5,556.6 ha, with an Indicative Footprint of 2,360 ha (Figure 1-2). The Indicative Footprint requires clearing of 1,848 ha of native vegetation and 512 ha of existing cleared/ disturbed land.

Mining will be undertaken through standard open pit mining techniques (drill, blast, load, haul) with the extracted ore from the mine pits temporarily stockpiled, prior to transport of the ore to the existing Yandi Mining Operations for processing. Waste rock extracted from the Mine Pits will be disposed of through a combination of Overburden Storage Areas (OSA) and the in-pit backfilling of the Mine Pits.

Generally, the Derived Proposal includes the following main elements and activities:

- mining above the groundwater level in open mine pits.
- stockpiling of ore on a Run of Mine (RoM) pad (including mobile crushing units, if required) prior to transport of ore to the existing Yandi Mining Operations for processing.
- waste rock disposal to Overburden Storage Areas (OSA), and in-pit backfilling of the mine pits.
- transport corridor connecting Ministers North to the existing Yandi Mining Operations, including:
 - a dual lane Haul Road with an overpass over a third-party railway.
 - land bridge over Yandi Mine W5 pit (existing approved pit).

- a widening of an existing creek crossing over Marillana Creek watercourse and crossings of other minor watercourses (includes disturbance to watercourse bed/banks).
- infrastructure changes at the existing Yandi Ore Handling Plant (Yandi OHP, located at the Yandi Mining Operations) to accommodate the Brockman-type ore supply, including a new primary crusher at the Eastern Front End crushing facility.
- mine access roads to connect various mining infrastructure.
- borrow pits to supply civil construction works (roads, RoM).
- laydown areas for equipment storage and construction.
- stockpiles for cleared rehabilitation materials (topsoil, subsoil, vegetation).
- temporary and localised minor diversion of drainage lines / watercourses comprising earthworks, earthen bunds, swale drains and/or culverts.
- water supply pipelines including water storage (e.g. turkey's nest) and pump stations.
- various non-process infrastructure for purposes including but not limited to administration, workshops, warehouse/storage, vehicle parking, vehicle and equipment wash-down, fuel storage and transfer, explosives storage, power generation and transmission powerlines, pipelines, and communications.

A full description of the Ministers North proposal, and an assessment of the potential impacts to the recorded environmental values, is provided within the BHP (2025a) *Ministers North Derived Proposal Request*.

1.3 Terrestrial Fauna EMP

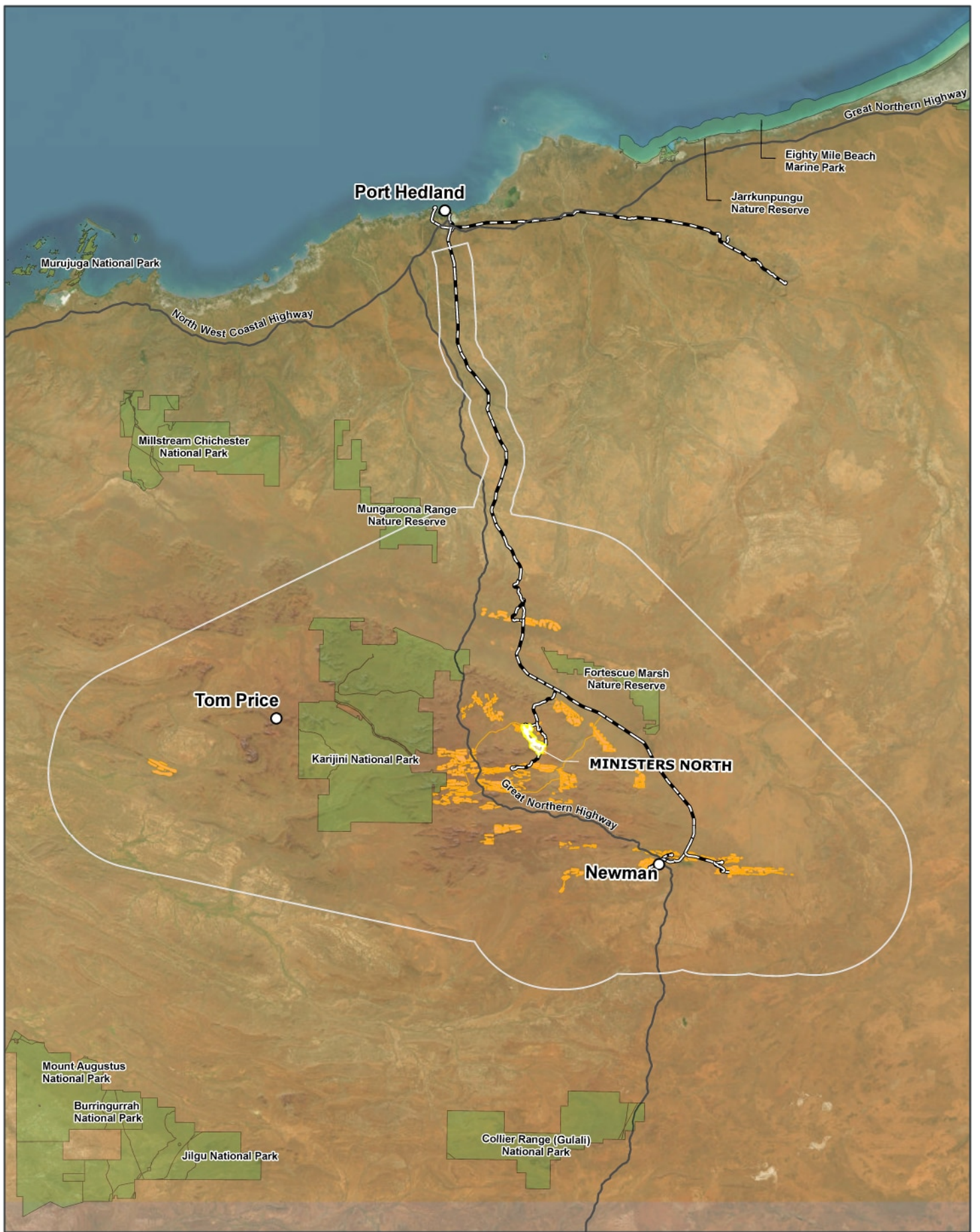
BHP has prepared this Terrestrial Fauna Environmental Management Plan (EMP) for Ministers North to meet the requirements of the implementation conditions for the Strategic Proposal under the MS1105 approval.

The intent for this EMP is to meet the requirements of the following implementation conditions:

- Condition 6 - Condition Environmental Management Plans.
- Condition 8 - Terrestrial Fauna Environmental Management Plan.

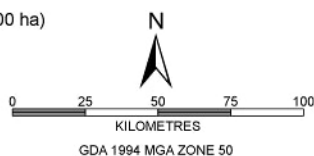
The scope of this EMP is the mining operations at Ministers North.

BHP has prepared this EMP to be consistent with the EPA (2024) document *Instructions: How to Prepare Environmental Protection Act 1986 Part IV Environmental Management Plans*.



Legend

- Development Envelope (5,557 ha)
- Indicative Footprint (2,360 ha)
- Strategic Proposal Area (7,650,074 ha)
- Strategic Proposal Full Conceptual Development Scenario (98,500 ha)
- Conservation Area
- Townsite
- Major Roads
- Rail (BHP)



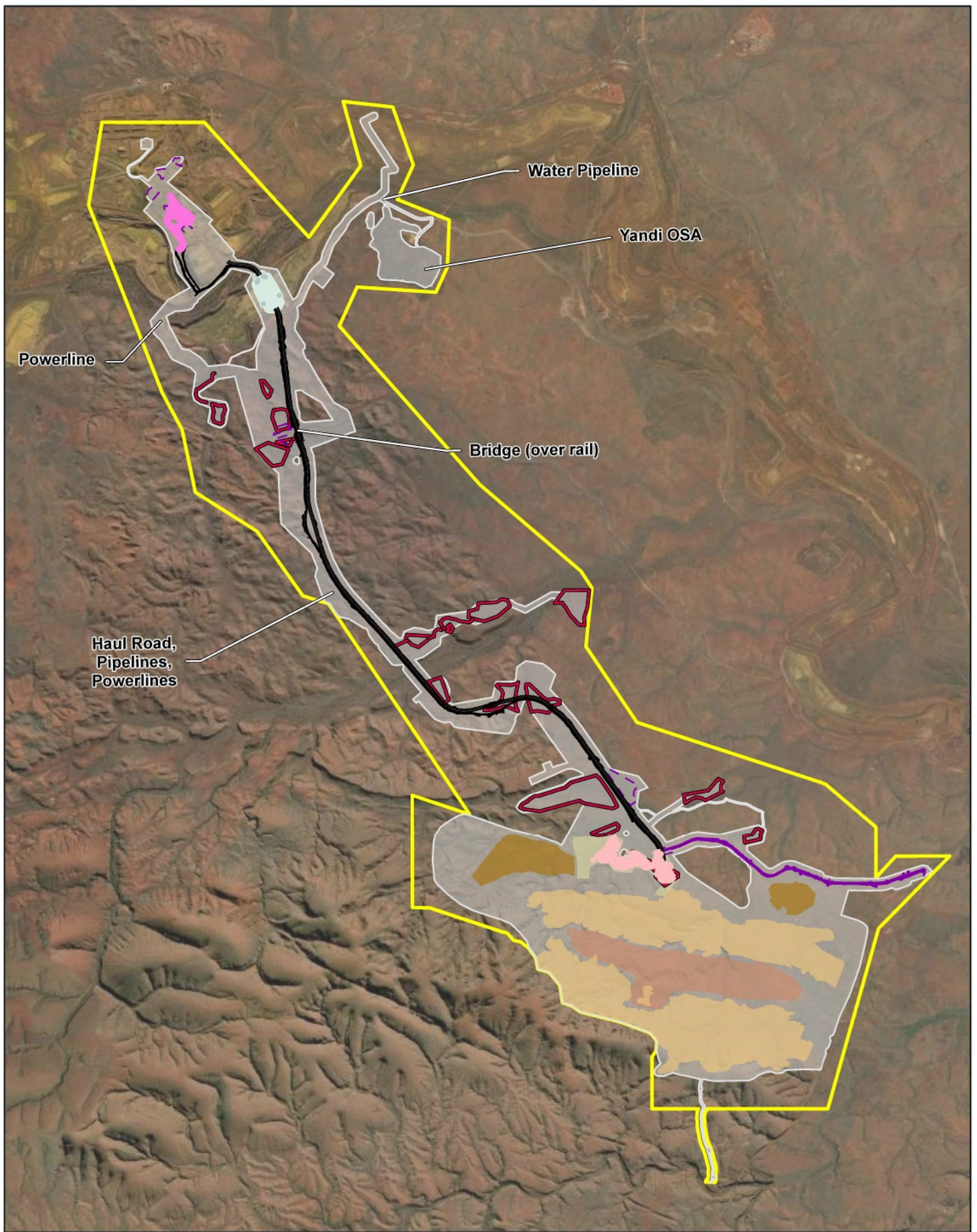
BHP

PUBLIC

**MINISTERS NORTH
STRATEGIC PROPOSAL AND
MINISTERS NORTH DERIVED PROPOSAL**

WAIO PLANNING, TECHNICAL & ENVIRONMENT

SCALE @A4:	1:2,600,000	REQUESTOR:	PROJECTS	FIGURE:	1-1
DATE:	15/09/2025	PREPARED:	GEOMATICS		
		REVIEWED:		NO:	A1317-007 RevG



- Legend**
- Development Envelope (5,557 ha)
 - Indicative Footprint (2,360 ha)
 - Indicative Mine Layout**
 - Non-Process Infrastructure
 - Stockpile
 - OSA
 - Pit
 - Non Process Infrastructure Layout
 - Yandi OHP
 - Borrow Pits
 - Road
 - Pipelines Access Road



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**MINISTERS NORTH
DEVELOPMENT ENVELOPE AND
INDICATIVE FOOTPRINT**

WAIO- PLANNING, TECHNICAL & ENVIRONMENT

SCALE @A4: 1:70,000 REQUESTOR: PROJECTS FIGURE: 1-2
 DATE: 15/09/2025 PREPARED: GEOMATICS
 REVIEWED: NO: A1317-003 RevK

1.4 Key Environmental Factors

The 'Key Environmental Factor' relevant to this EMP is 'Terrestrial Fauna'.

Table 1-1 describes the environmental values, proposal activities and potential impacts to terrestrial fauna values addressed in this EMP.

Table 1-1: Key environmental values, proposal activities and potential impacts

Key Environmental Factor	Environmental Values	Proposal Activities	Actual / Potential Impacts
Terrestrial Fauna	Conservation significant terrestrial vertebrate fauna	Clearing of native vegetation (fauna habitat) for mining operations within the Development Envelope	<p>Direct impacts</p> <ul style="list-style-type: none"> Clearing of up to 1,848 ha of native vegetation (fauna habitat), including removal of fauna habitats suitable for conservation significant native fauna <p>Indirect impacts</p> <ul style="list-style-type: none"> Loss of fauna taxa (mortality) during native vegetation clearing, including vertebrate fauna and invertebrate fauna Habitat clearing can enhance the ability of feral predators to move through the landscape and prey on native fauna.
		Mining operations e.g. mine pit blasting (noise and vibration), vehicle movements (interaction with fauna), infrastructure (e.g. barbed wire) within the Development Envelope	<p>Indirect impacts</p> <ul style="list-style-type: none"> Potential for vibration and/or noise to impact individuals of Ghost Bat <i>Macroderma gigas</i> (EPBC-V, BC-V) occupying two (2) 'Category 3' roosts (caves) located in proximity to the mining operations Potential for vibration resulting in physical damage (structural collapse) of a 'Category 3' Ghost Bat roost (cave) positioned within 500 metres (m) of the northern Mine Pit Potential exists for fauna taxa to interact with mining areas and infrastructure (including barbed wire and vehicles).
		Waste and water management within the Development Envelope	<p>Indirect impacts</p> <ul style="list-style-type: none"> Operations may attract native and introduced fauna (e.g. attracted to domestic waste, artificial water sources etc.).

1.5 Condition Requirements

The following conditions for the Strategic Proposal under the MS1105 approval are relevant to Ministers North:

- Condition 6 – Condition Environmental Management Plans.
- Condition 8 – Terrestrial Fauna Environmental Management Plan.

In accordance with Condition 6-1, this EMP has been submitted prior to ground-disturbing activities, and within six (6) months from the date of issue of the Section 45A Notice, to demonstrate that the environmental objectives specified in the conditions referred to in the Section 45A Notice for the proposal will be met. In accordance with Condition 6-4 (2), BHP will continue to implement this EMP until the CEO has confirmed by notice in writing that BHP has demonstrated the objectives specified in the relevant conditions referred to in the Section 45A Notice for the proposal have been met.

BHP has provided the condition requirements of Conditions 6-2, 6-3 and 6-5 to 6-7 in the provisions table (Table 2-1, Table 2-2 and Table 3-1) in *EMP Components (Section 2) and Reporting (Section 3)*, which the EPA (2024) guidance allows for, where there are multiple conditions and/or condition clauses.

Condition 6-8 and 6-9 requirements are addressed in *EMP Adaptive Management (Section 4)*.

The relevant sub-clauses of Condition 8 and how they are addressed within this EMP is outlined in Table 1-2.

Table 1-2: Ministerial Statement 1105 Condition 8

Condition	Applicable to this EMP?	EMP Section
8 Terrestrial Fauna Environmental Management Plan		
8-1 The proponent shall manage the implementation of the Proposal to meet the following environmental objective:	Yes	Section 2
(1) protect terrestrial fauna so that biological diversity and ecological integrity are maintained, and in particular:		
(a) maintain the local and regional populations of terrestrial fauna taxa that are listed as threatened or specially protected under the relevant legislation;	Yes	Section 2
(b) avoid and minimise direct and indirect impacts on the habitat of terrestrial fauna that is specially protected under the relevant legislation;	Yes	Section 2
(c) avoid and minimise direct and indirect impacts on terrestrial fauna listed as priority fauna, and its habitat; and	Yes	Section 2
(d) avoid and minimise direct and indirect impacts on conservation significant short-range endemic fauna.	No	N/A
8-2 The proponent shall prepare a Terrestrial Fauna Management Plan required by condition 6-1 that satisfies the requirements of condition 6-2, to meet the objectives specified in condition 8-1, in consultation with the agency responsible for administration of the Wildlife Conservation Act 1950 and the Biodiversity Conservation Act 2016.	Yes	This EMP
8-3 The Terrestrial Fauna Management Plan required by condition 6-1 shall include provisions required by condition 6-2 to address impacts on conservation significant fauna, where relevant, including from, but not limited to: loss of habitat; changes to surface water regimes; risk of vehicle strikes; changes to fire regimes; emissions of dust ¹ , light and noise; and impacts from feral animals.	Yes	Section 2
8-4 The proponent shall continue to implement the version of the Terrestrial Fauna Management Plan most recently approved by the CEO until the CEO has confirmed by notice in writing that the plan required by condition 6-1 satisfies the requirements of condition 6-2 to meet the objectives specified in condition 8-1.	Yes	Section 4

Condition 5 of the MS1105 approval requires BHP to make this EMP publicly available. To meet this requirement, BHP will publish the EMP on the BHP website as soon as reasonably practicable following endorsement of the EMP by the CEO. Further, the endorsed EMP will be made available to stakeholders, including members of the public, upon request. BHP considers these actions will meet the requirements of Condition 5.

¹ Management of dust is outside of the scope of this EMP. BHP has prepared a separate Air Quality EMP which aims to manage dust and as such, management of dust is excluded from this EMP to avoid duplication.

1.6 Rationale and Approach

As outlined by the EPA (2024) guidance document *Instructions: How to Prepare Environmental Protection Act 1986 Part IV Environmental Management Plans*, this section provides a description of the rationale and approach for the components of this EMP.

1.6.1 Management Approach

BHP has applied a risk-based approach to identify and prioritise the components of this EMP. The purpose of the components is to protect the environmental values identified in Table 1-1. In developing the components, BHP has used available scientific information from surveys / studies and has applied learnings from the management of terrestrial fauna at other BHP mining operations and third-party mining operations in the Pilbara region.

At the site level and prior to any ground disturbance activities, BHP implements an internal ground disturbance permit system to ensure that any legislative and regulatory requirements associated with the environment, Aboriginal cultural heritage and land tenure relevant to the area, are met.

1.6.2 Rationale

Table 1-3 describes the rationale for the EMP components identified in Section 2, including:

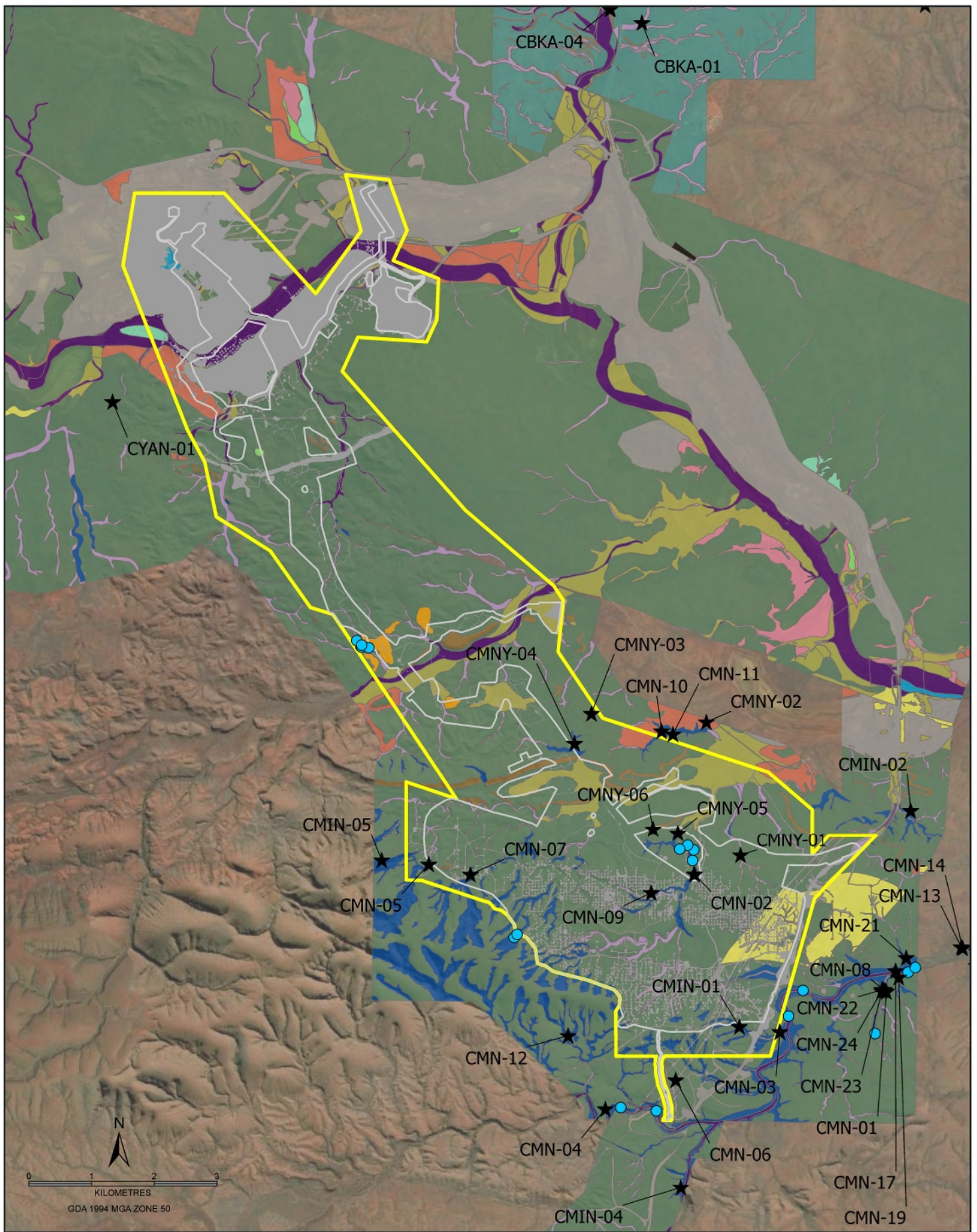
- Management objectives
- Survey / study findings
- Key assumptions and uncertainties
- Rationale for choice of management actions.

Figure 1-3 identifies the fauna habitats identified by the biological surveys/studies, with Figure 1-4 identifying the location of fauna taxa recorded by the biological surveys/studies. Figure 1-5 identifies the proposed Mining Exclusion Zone (MEZ) and the 500 m Blast Management Zone for the protection of Category 3 Ghost Bat roosts and supporting habitat. Figure 1-6 identifies the proposed 10 m avoidance buffers of identified Western Pebble-mound Mouse mounds. Figure 1-7 and Figure 1-8 provide photographs of the entrance for each of the Category 3 Ghost Bat roosts as a visual identification reference to assist with environmental monitoring.

Table 1-3: Rationale for EMP components

Surveys / Studies	Survey / Study Findings	Key Assumptions and Uncertainties	Risk-based Approach and Indicators / Management Actions Rationale
<p>Environmental Value: Terrestrial fauna with specific consideration of conservation-significant fauna.</p> <p>EMP Objective: Minimise direct and indirect impact to fauna habitat and native fauna individuals.</p>			
<p>The surveys / studies used to inform the EMP are summarised in Appendix 1.</p> <p>The biological surveys include 'desktop' literature reviews and field-based 'detailed' and 'targeted' survey methodologies.</p> <p>The biological surveys were undertaken by suitably qualified and experienced environmental professionals in the survey and identification of vertebrate and invertebrate terrestrial fauna for the bioregion.</p> <p>Each of the biological surveys conform to the relevant survey guidance requirements that were applicable to the type of survey completed.</p> <p>The more recent biological surveys have also been undertaken in accordance with the BHP (2023) Vertebrate Fauna Surveys in Western Australia: Procedure and the BHP (2022) Short-range Endemic Invertebrate Fauna Assessment Methods: Technical Process Instruction.</p>	<p>Fauna Values</p> <ul style="list-style-type: none"> 13 fauna habitat types have been mapped within the Development Envelope, comprising: <ul style="list-style-type: none"> Hillcrest / Hillslope Undulating Low Hills Gorge / Gully Breakaway / Cliff Boulders / Rockpiles . Drainage Area / Floodplain Minor Drainage Line Medium Drainage Line Major Drainage Line Mulga Woodland Sand Plain Sandy / Stony Plain Wetland. One vertebrate fauna listed as Vulnerable under the Commonwealth <i>Environment Protection and Biodiversity Conservation Act 1999</i> (Commonwealth) (EPBC Act) and the State <i>Biodiversity Conservation Act 2016</i> (WA) (BC Act) has been recorded within the Development Envelope, being the Ghost Bat (<i>Macroderma gigas</i>). <p>'Critical Habitat' for the Ghost Bat is considered to comprise the fauna habitats of Gorge / Gully and Breakaway / Cliffs. 'Supporting Habitat' for the Ghost Bat is considered to comprise the fauna habitats of Mulga Woodland, Sand Plain, Stony Plain, Drainage Area / Floodplain, Major Drainage Line and Minor Drainage Line.</p> <p>In addition, roosting habitat is categorised as either critical or supporting habitat. Category 1 and Category 2 roosts are considered critical habitat. Category 3 roosts are generally considered supporting habitat, except when adjacent to one or more Category 2 roosts, then they are considered critical roosting habitat. Category 4 roosts are considered supporting habitat.</p> <p>Individuals of Ghost Bat are known to occupy two (2) 'Category 3' roosts (caves) located within the Development Envelope in proximity to the mining operations. Individuals of Ghost Bat may also utilise a number of identified surface water features in proximity to the occupied roosts as a water source.</p> <ul style="list-style-type: none"> Two additional Threatened Fauna have been recorded in close proximity (within 150 m) to the Development Envelope: 	<p>Assumptions</p> <ul style="list-style-type: none"> This EMP focuses on the terrestrial fauna values, as identified during the environmental assessment of Ministers North, requiring targeted management. In consideration of the survey / study effort, it is reasonable to believe that terrestrial fauna values have been appropriately identified and quantified. Consistent with the environmental assessment for Ministers North, the Ghost Bat will require specific avoidance, management and monitoring actions. <p>The application of buffer distances between mining operations from Ghost Bat roosts will minimise the risk of indirect impact from noise and vibration. For 'Category 3' roosts the cave buffer distances applied are:</p> <ul style="list-style-type: none"> 100 m exclusion for any land disturbance. 500 m for blast vibration management measures of Mine Pits. <p>Control of indirect effects of blasting (noise and vibration) can be appropriately monitored through vibration only (as measured by peak particle velocity (PPV)), noting that monitoring of noise can be inconsistent due to the influence of other variables (e.g. wind speed). Bat Call WA (2021) recommends noise monitoring only for Category 1 and Category 2 roosts (noise monitoring not considered necessary for Category 3 or Category 4 roosts). It is assumed that control/reduction of vibration will also achieve an appropriate control/reduction of noise.</p> <p>It is assumed that the selected vibration trigger criteria and threshold criteria are appropriate as early warning indicators for cave protection. The trigger criteria of 15 mm/s is based on Bat Call WA (2022) as a conservative limit at which changes in bat behaviour may be detected. The threshold criteria of 20 mm/s is based on BHP WAIO's Operational Heritage Management Plan, being a level considered appropriate to protect caves with a 'moderate' geotechnical sensitivity. BHP's adaptive management approach enables the levels to be revised subject to the monitoring results.</p> <p>Uncertainties</p> <ul style="list-style-type: none"> Like many native fauna taxa, Ghost Bat local presence and abundance can be expected to naturally vary between seasons and years as a result of multiple environmental factors (e.g. rainfall, abundance of prey). 	<p>Type of Components</p> <ul style="list-style-type: none"> In accordance with Condition 8, this EMP shall include components required by Condition 6 to address the impacts to terrestrial fauna values. BHP has chosen both outcome-based and objective-based components to address the requirements of Condition 6 and meet the objectives specified in Condition 8. The combination of objective-based components and outcome-based components together is considered most likely to achieve the best outcomes for the protection, management and monitoring of terrestrial fauna values. <p>Rationale for Choice of Management Actions</p> <ul style="list-style-type: none"> The key impact to terrestrial fauna values is the potential for direct and indirect impacts to individuals of Ghost Bat that occupy two (2) 'Category 3' roosts located within the Development Envelope in proximity to the mining operations. Management actions listed in Table 2-1 for Ghost Bats target: <ul style="list-style-type: none"> Exclusion of direct impact to the roosts and immediately surrounding fauna habitat through implementation of a Mining Exclusions Zone (MEZ) Management of blasting (noise and vibration) within 500 m of Category 3 roosts (identified by a Blast Management Zone). Other fauna taxa will be appropriately managed through general actions applicable to fauna within this EMP. Management of dust is outside of the scope of this EMP. BHP has prepared a separate Air Quality EMP which aims to manage dust and as such, management of dust is excluded from this EMP to avoid duplication.

Surveys / Studies	Survey / Study Findings	Key Assumptions and Uncertainties	Risk-based Approach and Indicators / Management Actions Rationale
	<ul style="list-style-type: none"> ○ Northern Quoll (<i>Dasyurus hallucatus</i>) listed as Endangered under the BC Act and EPBC Act ○ Pilbara Olive Python (<i>Liasis olivaceus barroni</i>). listed as Vulnerable under the BC Act and EPBC Act. • A number of other fauna taxa of conservation significance occur, or have the potential to occur, within the Development Envelope and surrounds, being: <ul style="list-style-type: none"> ○ Peregrine Falcon <i>Falco peregrinus</i> (BC-SPS) ○ Pilbara Flat-headed Blind Snake <i>Anilius ganei</i> (DBCA-P1) ○ Western Pebble-mound Mouse <i>Pseudomys chapmani</i> (DBCA-P4) ○ Chocolate Wattled Bat <i>Chalinolobus morio</i> (locally significant). 		



Legend

- | | | |
|---------------------------------|---------------------------|----------------------|
| Development Envelope (5,557 ha) | Cleared/ Disturbed | Minor Drainage Line |
| Indicative Footprint (2,360 ha) | Drainage Area/ Floodplain | Mulga Woodland |
| Surface Water Features | Gorge/ Gully | Sand Plain |
| Bat Cave Sites | Hardpan Plain | Sandy/ Stony Plain |
| Habitat Type | Hillcrest/ Hillslope | Stony Plain |
| Basalt Outcrops | Ironstone Outcrops | Undulating Low Hills |
| Boulders/ Rockpiles | Major Drainage Line | Wetland |
| Breakaway/ Cliff | Medium Drainage Line | |

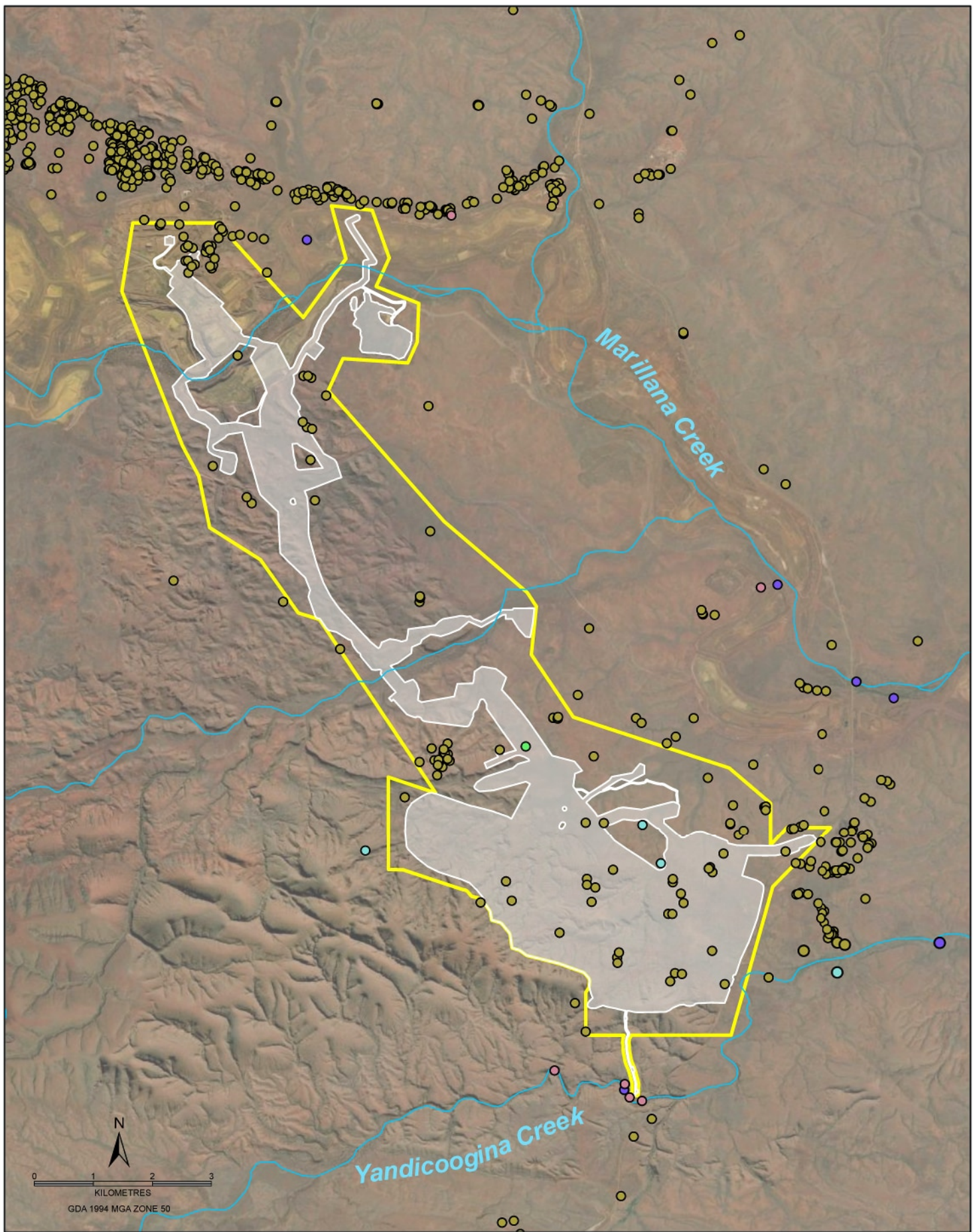
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**MINISTERS NORTH
FAUNA HABITAT**

WAIO PLANNING, TECHNICAL & ENVIRONMENT

SCALE @A4: 1:80,000 REQUESTOR: PROJECTS FIGURE: 1-3
 DATE: 15/09/2025 PREPARED: GEOMATICS
 REVIEWED: NO: A1317-037 RevG



Legend

- Development Envelope (5,557 ha)
 - Indicative Footprint (2,360 ha)
 - Watercourse
- BC Act and DBCA Priority Listed Vertebrate Taxa**
- *Dasyurus hallucatus* (Endangered)
 - *Liasis olivaceus subsp. barroni* (Vulnerable)
 - *Macroderma gigas* (Vulnerable)
 - *Falco peregrinus* (Other Specially Protected Fauna)
 - *Pseudomys chapmani* (P4)

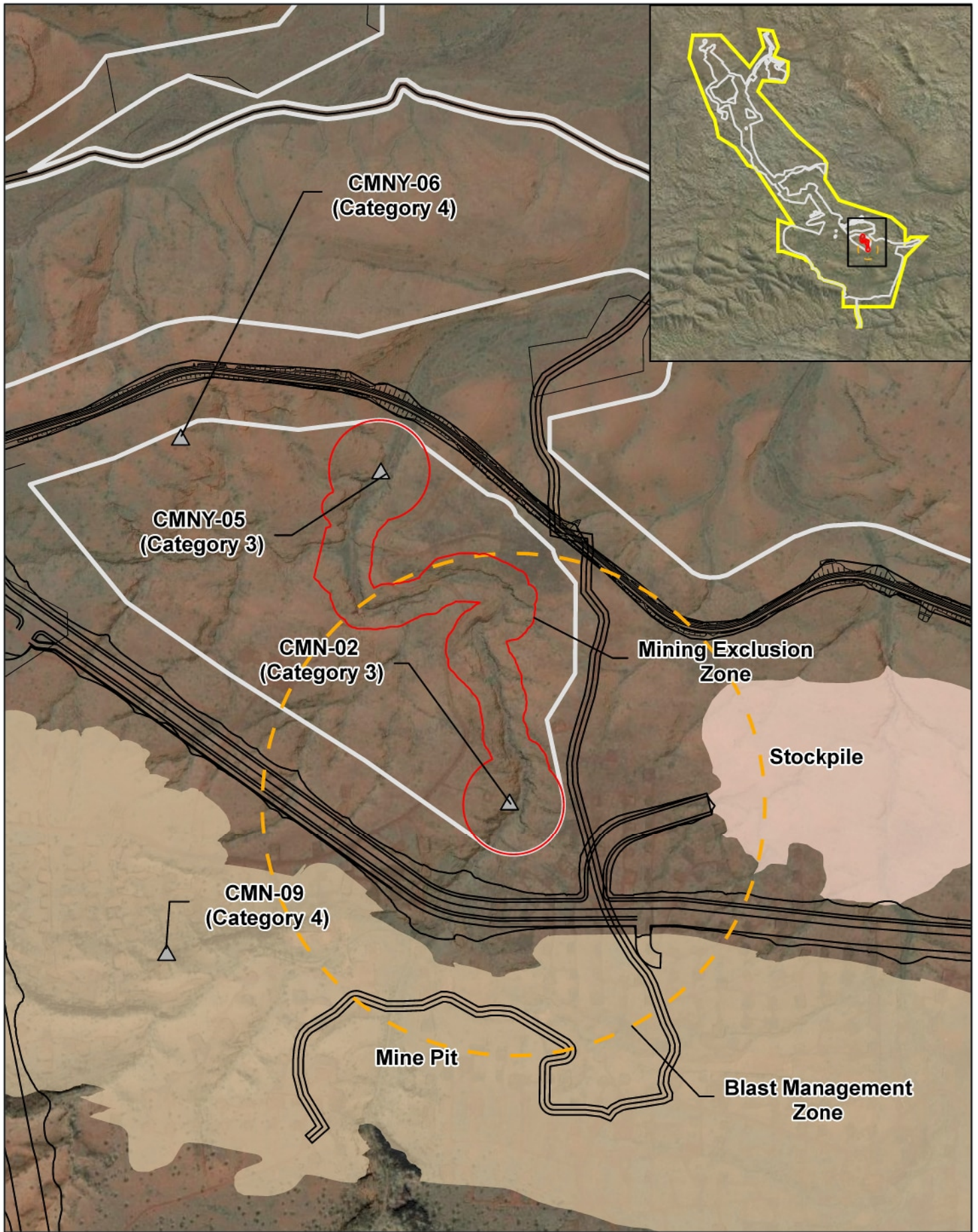
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**MINISTERS NORTH
CONSERVATION SIGNIFICANT
FAUNA**

WAIO PLANNING, TECHNICAL & ENVIRONMENT

SCALE @A4:	1:85,000	REQUESTOR: PROJECTS	FIGURE: 1-4
DATE:	15/09/2025	PREPARED: GEOMATICS	
		REVIEWED:	NO: A1317-038 RevG



- Legend**
- Development Envelope (5,557 ha)
 - Indicative Footprint (2,360 ha)
 - Roost (cave) for Ghost Bat *Macroderma gigas* (EPBC-V, BC-V)
 - Mining Exclusion Zone - 100m Radius and Gorge/Gully Fauna Habitat
 - Blast Management Zone - 500m Radius
 - Conceptual Infrastructure Layout
 - Mine Pit
 - Stockpile



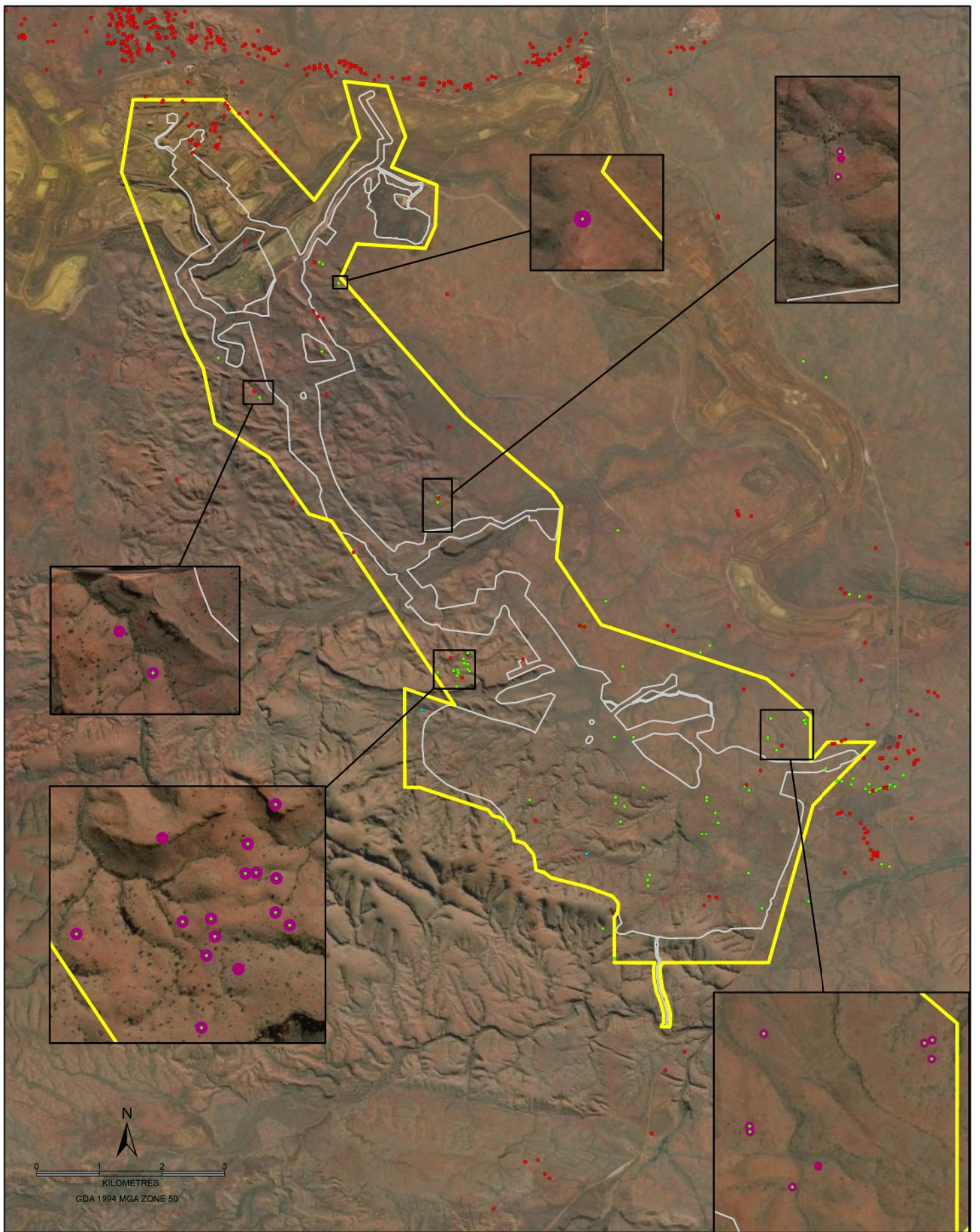
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PUBLIC

**MINISTERS NORTH
MANAGEMENT OF CATEGORY 3
GHOST BAT CAVES**

WAIO- PLANNING, TECHNICAL & ENVIRONMENT

SCALE @A4:	1:10,000	REQUESTOR:	PROJECTS	FIGURE:	1-5
DATE:	15/09/2025	PREPARED:	GEOMATICS	NO:	A1317-014 RevH
		REVIEWED:			



Legend

- Development Envelope (5,557 ha)
- Indicative Footprint (2,360 ha)
- Western Pebble-mound Mouse 10m Avoidance Area

Western Pebble-mound Mouse Records

- Individual (alive)
- Mound (active)
- Mound (inactive / recently inactive)

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**MINISTERS NORTH
WESTERN PEBBLE-MOUND
MOUSE RECORDS**

WAIO PLANNING, TECHNICAL & ENVIRONMENT

SCALE @A4:	1:80,000	REQUESTOR:	PROJECTS	FIGURE:	1-6
DATE:	15/09/2025	PREPARED:	GEOMATICS	NO:	A1317-058_RevE
		REVIEWED:			



Coordinates (MGA Zone 50 K):
 716963 mE, 7476116 mN

Entrance: Wide open entrance
 (3.5 m high x 2.5 m wide)

Orientation: East

Internal: Four internal chambers
 (Main chamber 2.5 m high x 7 m
 wide x 25 m deep, first right
 chamber 1.8 m high x 2 m wide
 x 18 m deep, second right
 chamber 2 m high x 2 m wide
 x 6+ m deep, End chamber 5+ m
 high x 6 m wide x 6 m deep with
 a continued cavity 5+ m deep
 x 0.3 m high)

Notes: Three constrictions with
 no observable end.

Conditions: Ghost bats
 previously recorded, Ghost Bat
 scat recorded (50-100), bat
 smell, raised humidity,
 microbats present

Figure 1-7: Ghost Bat Category 3 Roost CMN-02 (Photograph and Description)

Source: Astron Environmental (2025)



Coordinates (MGA Zone 50 K):
 717230 mE, 7475451 mN

Entrance: Narrow entrance
 (1.3 m high x 2 m wide)

Orientation: South-east

Internal: One internal chamber;
 1.9 m high x 5 m wide x 12 m
 deep

Conditions: Ghost Bat scats
 present (50-100), bat smell,
 raised humidity,
 microbats present.

Figure 1-8: Ghost Bat Category 3 Roost CMNY-05 (Photograph and Description)

Source: Astron Environmental (2025)

2 EMP Components

BHP has provided detail of the EMP components in Table 2-1 Table 2-2 and Table 3-1, as per the preferred approach outlined in the EPA (2024) guidance document *Instructions: How to Prepare Environmental Protection Act 1986 Part IV Environmental Management Plans*.

Table 2-1: Outcome-based provisions

Purpose: To meet the requirements of Condition 6 and the objectives specified in Condition 8 of the MS1105 approval.

Rationale: Specified environmental outcomes relating to the Ghost Bat will be used to achieve the environmental objectives specified in Condition 8 of the MS1105.

EPA Factor and Objective:	Terrestrial Fauna - "To protect terrestrial fauna so that biological diversity and ecological integrity are maintained" (EPA 2023)
Key Environmental Values:	Conservation significant fauna - Ghost Bat <i>Macroderma gigas</i> (EPBC-V, BC-V) habitat.
Outcome-based Objectives	Category 3 Ghost Bat caves within the Development Envelope are retained.
Key Impacts and Risks:	Impacts and risks to Ghost Bat <i>Macroderma gigas</i> (EPBC-V, BC-V) Category 3 Ghost Bat caves from ground vibration caused by blasting.

Outcome-based Components			
Trigger and Threshold Criteria	Actions to be implemented in the event of a Trigger Criteria or Threshold Criteria exceedance	Monitoring (to determine if Trigger Criteria and Threshold Criteria have been exceeded)	Reporting of Monitoring Results
Ghost Bat Roost Blast Management Zone			
<p>Trigger Criteria: No blasting within the 500 m radius Blast Management Zone (Figure 1-5) around 'Category 3' Ghost Bat roost CMN-02 without the following controls in place:</p> <ul style="list-style-type: none"> Inspect the cave for baseline structural condition before the first blast event within the Blast Management Zone and record the inspection ('one-off' inspection). Follow up annual² cave structural condition inspections. Ground vibration monitor installed at the cave. 	<ul style="list-style-type: none"> Refer to contingency actions for Threshold Criteria. 	<p>Site Environmental Superintendent (or delegate) to ensure that cave inspections are complete and monitoring equipment is in place.</p>	<p>Cave inspection reports, equipment monitoring records and blast logs/records.</p>
<p>Trigger Criteria: Vibration limit ≥ 15 mm/s PPV at the cave entrance (CMN-02).</p>	<ul style="list-style-type: none"> Report (Table 3-1) and investigate the exceedance. Review vibration monitoring data. Refine the drill and blast tactical plan (blast design parameters, scheduling and sequencing) to reduce vibration levels and continue blasting. 	<p>The Site Environmental Superintendent (or delegate) is responsible for ensuring ground vibration data is monitored during each blast event and that the data is assessed to determine if the trigger criteria has been exceeded, and for ensuring that monitoring data records are kept.</p>	<p>Ground vibration monitoring records, blast logs//records, and any incident reports and investigations.</p>
<p>Threshold Criteria: Vibration limit ≥ 20 mm/s PPV at the cave entrance (CMN-02).</p>	<ul style="list-style-type: none"> Complete the Trigger Criteria response actions, and the following threshold contingency actions: Visually inspect the cave for structural condition and record the inspection. Assess if there has been a material change in the structural condition of the cave. If there has been a material change, prepare and implement an action response plan³ prior to any further blasting. 	<p>The Site Environmental Superintendent (or delegate) is responsible for ensuring ground vibration data is monitored during each blast event and that the data is assessed to determine if the threshold criteria has been exceeded, and for ensuring that monitoring data records are kept.</p>	<p>Ground vibration monitoring records, blast logs//records, cave structural condition report, and any incident reports and investigations.</p>

² An annual assessment period has been selected to minimise the risk of disturbance to Ghost Bats. It is acknowledged that frequent visitation may cause Ghost Bats to flee a roost, either temporarily or permanently. Accordingly, an annual assessment period provides an appropriate balance between the collection of information/data and the risk that the visitation for the information collection may affect Ghost Bat roost occupancy.

³ Ensure BHP Heritage Team has been engaged in any response plan.

Table 2-2: Objective-based Components

Purpose: To meet the requirements of Condition 6 and the objectives specified in Condition 8 of the MS1105 approval.

Rationale: Specified environmental objectives to meet the intent of Condition 8 of the MS1105 approval, as it is not possible to specify practical environmental outcomes.

EPA Factor and Objective:	Terrestrial Fauna - "To protect terrestrial fauna so that biological diversity and ecological integrity are maintained" (EPA 2023)
Key Environmental Values:	Conservation significant fauna
EMP Objectives	Minimise the risk of direct and indirect impact to conservation significant fauna individuals and habitat
Key Impacts and Risks:	Impacts and risks to conservation significant fauna within the Development Envelope from mine construction and operational activities.

Objective-based Components			
Risk-based Management Actions	Measurable Management Targets to determine the effectiveness of the Risk-based Management Actions	Monitoring to measure the effectiveness of Management Actions against Management Targets	Verification and Reporting (refer to Table 3-1 for DWER management action and target 'non-conformance' reporting and annual compliance reporting requirements)
Induction containing environmental awareness information in place.	Personnel complete the site induction.	Site access control system monitors induction status.	Online induction records and reports.
Light vehicle speed limits restricted on unsealed access roads, and speed limit signage installed, to minimise vehicle-strike risks to conservation significant fauna.	No light vehicle-related mortality involving conservation significant fauna on unsealed access roads.	Site inspections to verify speed limit signage. Reported light vehicle fauna strike incidents.	Inspection records, and internal incident records
Turkey's nests fenced to exclude livestock and fauna egress points installed (for operational, long-term turkey's nests) to minimise entrapment risks.	No mortality of conservation significant fauna as a result of entrapment within turkey's nests.	Site inspections to verify fencing and egress points. Reported fauna entrapment incidents.	Inspection records, and internal incident records
Targeted feral cat control program implemented to reduce predation impacts on conservation significant fauna.	Feral cat control program implemented in accordance with the program.	Annual assessment of feral cat sightings and the feral animal control program implementation status.	Feral cat sighting records, annual assessment and evidence of participation in any feral cat control programs.
Minimise the risk of injury or mortality to Ghost Bats from entanglement in barbed wire fences by ensuring: <ul style="list-style-type: none"> No new barbed wire fencing installed, unless required by legislation. Where new barbed wire fencing is required by legislation, bat reflectors or other mitigation device installed. 	No Ghost Bat entanglement mortality in new fences.	Reported Ghost Bat entanglement incidents	Internal incident records
No new land disturbance within the Ghost Bat MEZ boundary (Figure 1-5) to protect two Category 3 Ghost Bat roosts (CMN-02 and CMNY-05) and fauna habitat.	No new clearing in the MEZ.	Site inspections during construction to check land disturbance near the MEZ. Reported incidents of MEZ disturbance. Land clearing monitored via quarterly land clearing data and annual land disturbance reconciliation process (spatial footprint and hectares) to identify any land disturbance within the MEZ.	Site inspection records, internal event reporting and investigations, annual land disturbance reconciliation process results, and internal ground disturbance permits.
Implement a pre-disturbance protocol prior to disturbing a Category 4 Ghost Bat roost (CMN-07, CMN-09, CMNY-01, CMIN-01, CMN-05, CMN-06), which must include: <ul style="list-style-type: none"> Roost inspection prior to disturbance to confirm bat absence/presence. If present, a reasonable effort to displace the bats using approved displacement methods. 	No Ghost Bat mortality during a roost disturbance activity.	Completed Ghost Bat roost pre-disturbance protocol checklist. Reported Ghost Bat mortalities from roost disturbance activities.	Completed roost pre-disturbance protocol checklist and internal incident reports.

Objective-based Components			
Risk-based Management Actions	Measurable Management Targets to determine the effectiveness of the Risk-based Management Actions	Monitoring to measure the effectiveness of Management Actions against Management Targets	Verification and Reporting (refer to Table 3-1 for DWER management action and target 'non-conformance' reporting and annual compliance reporting requirements)
Minimise impacts to Western Pebble-mound Mouse mounds outside the Indicative Footprint by implementing a 10 m radius avoidance buffer (exclusion zones) around mounds located within the Development Envelope as shown on Figure 1-6.	No land disturbance within 10 m of the Western Pebble-mound Mouse mounds shown on Figure 1-6.	Avoidance condition included in BHP's internal ground disturbance permits (for any work near the exclusion zones). Reported incidents of buffer disturbance. Land clearing monitored via the annual land disturbance reconciliation process (spatial footprint and hectares) to identify any unauthorised clearing within avoidance buffers.	Granted internal ground disturbance permits, internal incident reports and annual environment report (detailing land clearing for the previous financial year).

3 Reporting

BHP must report to the CEO in accordance with Ministerial Statement 1105 when Management Actions are not implemented, Management Targets are not achieved, Trigger or Threshold Criteria are exceeded, or on detection of other non-conformances, as detailed in Table 3-1.

Table 3-1: Regulatory reporting requirements

Action or Criteria	Reporting Time	Condition	Condition Details
Non-achievement of a Management Target.	Report the non-achievement in writing to the DWER CEO within twenty-one (21) days of the non-achievement being identified.	Condition 6-5	<p>If monitoring, tests, surveys or investigations indicate non-achievement of management target(s) specified in a Condition Environmental Management Plan(s), the proponent shall:</p> <p>(1) report the non-achievement in writing to the CEO within twenty-one (21) days of the non-achievement being identified;</p> <p>(2) investigate to determine the cause of the management target(s) not being achieved;</p> <p>(3) provide a report to the CEO within ninety (90) days of the nonachievement being reported as required by condition 6-5(1). The report shall include:</p> <p>(a) the cause(s) of the management targets not being achieved;</p> <p>(b) the findings of the investigation required by condition 6-5(2);</p> <p>(c) details of revised and/or additional management actions to be implemented to prevent non-achievement of the management target(s); and</p> <p>(d) relevant changes to proposal activities.</p>
Management Action not implemented.	Report the failure to implement the management action in writing to the CEO within seven (7) days of identification.	Condition 6-6	<p>If monitoring, tests, surveys or investigations indicate that one or more management actions specified in a Condition Environmental Management Plan(s) has not been implemented, the proponent shall:</p> <p>(1) report the failure to implement the management action(s) in writing to the CEO within seven (7) days of identification;</p> <p>(2) investigate to determine the cause of the management action(s) not being implemented;</p> <p>(3) investigate to determine the potential environmental harm or alteration of the environment that occurred due to the failure to implement the management action(s);</p> <p>(4) provide a report to the CEO within twenty-one (21) days of the reporting required by condition 6-6(1). The report shall include:</p> <p>(a) the cause of the failure to implement the management actions;</p> <p>(b) the findings of the investigations required by conditions 6-6(2) and 6-6(3);</p> <p>(c) relevant changes to proposal activities; and</p>

Action or Criteria	Reporting Time	Condition	Condition Details
			(d) measures to prevent, control or abate the environmental harm which may have occurred.
Trigger Criteria and/or Threshold Criteria exceedance.	Report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;	Condition 6-6	<p>In the event that monitoring, tests, surveys or investigations indicates exceedance of trigger criteria and/or threshold criteria specified in a Condition Environmental Management Plan(s), the proponent shall:</p> <p>(1) report the exceedance in writing to the CEO within seven (7) days of the exceedance being identified;</p> <p>(2) immediately implement the trigger level actions and/or threshold contingency actions specified in the Condition Environmental Management Plan(s) and continue implementation of those actions until the trigger criteria and/or threshold criteria are being met and implementation of the trigger level actions and/or threshold contingency actions are no longer required;</p> <p>(3) investigate to determine the cause of the trigger criteria and/or threshold criteria being exceeded;</p> <p>(4) identify additional measures required to prevent the trigger criteria and/or threshold criteria being exceeded in the future;</p> <p>(5) investigate to determine potential environmental harm or alteration of the environment that occurred due to threshold criteria being exceeded; and</p> <p>(6) provide a report to the CEO within ninety (90) days of the exceedance being reported. The report shall include:</p> <p>(a) details of any trigger level actions or threshold contingency actions implemented;</p> <p>(b) the effectiveness of the trigger level actions or threshold contingency actions implemented, monitored and measured against trigger criteria and threshold criteria</p> <p>(c) the findings of the investigations required by conditions 6-7(3) and 6-7(5);</p> <p>(d) additional measures to prevent the trigger or threshold criteria being exceeded in the future; and</p> <p>(e) measures to prevent, control or abate the environmental harm or alteration of the environment which may have occurred.</p>
Annual compliance reporting	Annually by 1 October each year	Condition 4-6	The proponent shall submit to the CEO a Compliance Assessment Report annually by 1 October each year addressing compliance in the previous financial year, or as otherwise agreed in writing by the CEO. In accordance with sub-clause (2), the report shall identify all potential

Action or Criteria	Reporting Time	Condition	Condition Details
			non-compliances and describe corrective and preventative actions taken. Condition 6-3, the failure to implement one or more management actions, the exceedance of a threshold criteria (regardless of whether threshold contingency actions have been or are being implemented in accordance with condition 6-7(2)), and/or comply with the requirements of a Condition Environmental Management Plan(s) represents non-compliance with these conditions.

4 EMP Adaptive Management and Review

4.1 Adaptive Management Approach

BHP applies an 'Adaptive Management Framework' for implementing management measures identified in this EMP; being an approach consistent with the EPA (2024) guidance document *Instructions: How to Prepare Environmental Protection Act 1986 Part IV Environmental Management Plans*. Adaptive management is a structured, iterative process to decision making. BHP's framework embeds a cycle of monitoring, reporting and implementing change where required. The framework allows for an evaluation of the management and mitigation measures so that they are progressively improved and refined, or alternative solutions adopted, in order to ensure that the environmental objectives and outcomes within the EMP are achieved. The key steps of BHP's adaptive management approach are depicted in Figure 4-1.

As this EMP is a requirement of the MS1105 implementation conditions, where BHP identifies that this EMP should be revised arising from information gained through the adaptive management approach, BHP will seek the endorsement of the CEO prior to the implementation of the revised EMP.

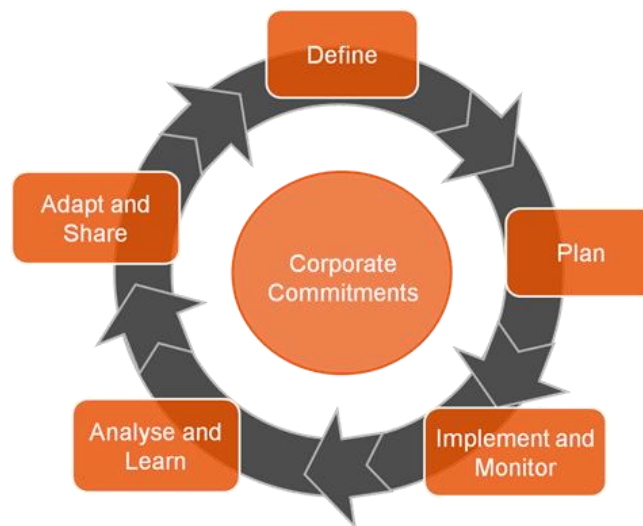


Figure 4-1: BHP's adaptive management approach

4.2 Review and Revision of this EMP

BHP will review this EMP (and revise the EMP, if required), to ensure that it achieves the identified environmental objectives and meets the implementation condition requirements of the MS1105 approval.

A review by BHP may arise from the following:

- Where initiated by BHP to revise management actions or changes to proposal activities if management targets are not being achieved, as required by Condition 6-2 (13).
- Where initiated by BHP as part of the adaptive management process, as permitted by Condition 6-8(1).
- Where directed by the CEO in accordance with Condition 6 of the MS1105 approval (Condition 6-8(2)).

- If triggered by an outcome from implementation of this EMP (e.g. if management targets are not achieved and/or management actions not implemented).

Changes to this EMP may arise from the following:

- Government publishes new or amend guidance/policy relevant to this EMP.
- BHP proposes to add and/or amend EMP components following a change to the Proposal (mining operations) and/or the implementation conditions.
- The CEO confirms by notice in writing that it has been demonstrated that the objective and/or outcome in the relevant condition is being met (and will continue to be met) and therefore certain requirements within this EMP are no longer required to be implemented.

In accordance with Condition 6-9, BHP will implement the latest revision of this EMP, which the CEO has confirmed by notice in writing, satisfies the implementation condition requirements.

5 Stakeholder Consultation

In accordance with Condition 6 and Condition 8 of the MS1105 approval, BHP has prepared this EMP to meet the objectives specified in Condition 8.

As part of the mine planning and environmental assessment processes for Ministers North, BHP has consulted with key stakeholders on the environmental values relevant to this EMP, notably including:

- Environmental Protection Authority
- Department of Water and Environmental Regulation (DWER)
- Banjima People (via the Banjima Native Title Aboriginal Corporation (BNTAC)).

Table 5-1 provides a summary of consultation undertaken by BHP with key stakeholders on the environmental values relevant to this EMP.

BHP will continue to consult with Government agencies and the Banjima People, where relevant, in relation to the implementation (and revision) of this EMP.

Table 5-1: Stakeholder consultation

Stakeholder	Date	Items Discussed	BHP Response and Outcome
Environmental Protection Authority (EPA) (includes EPA Services division of DWER)	August 2025	Pre-referral discussion introducing the Derived Proposal and key environmental factors, including Terrestrial Fauna.	BHP considered feedback provided during the engagement in relation to Terrestrial Fauna including short range endemic (SRE) fauna, opportunity to protect areas not required for mining, and conditional management plans. BHP will continue to engage with the EPA on conditional management plan requirements.
Banjima People (via Banjima Native Title Aboriginal Corporation (BNTAC))	August 2025	BNTAC provided comments on the Draft Terrestrial Fauna EMP (Version 0b). Comments related to the frequency of feral animal control programs, artificial lighting, vehicle speeds, the Ghost Bat mining exclusion zone and blast management zone (including vibration trigger and threshold criteria, weed management, and compliance inspections.	BHP is preparing a detailed response to BNTAC comments and has updated this EMP in response to the comments.

6 EMP Changes

As outlined within Section 3 *EMP Adaptive Management and Review*, this EMP may be revised. Table 6-1 provides a summary description of the revisions made to this EMP following submission to the EPA for assessment.

Table 6-1: Summary of EMP changes

Revision	Date	Description EMP Change(s)
1	September 2025	Final draft submitted to the EPA for assessment

7 References

Astron Environmental Services Pty Ltd (Astron) (2023) *Yandi 45C Targeted Significant Vertebrate Fauna Survey*.

Astron (2025) *Ministers North Consolidated Targeted Significant Vertebrate Fauna Surveys*.

Bat Call WA (2021) *A Review of Ghost Bat Ecology, Threats and Survey Requirements*. Report prepared by Bullen R D of Bat Call WA for the Department of Climate Change, Energy, the Environment and Water (formerly as the Department of Agriculture, Water and the Environment). May 2021.

Bat Call WA (2022) *Brockman Syncline Stage 1 Cave Sound and Vibration Review*. Report prepared by Bullen R D of Bat Call WA for Rio Tinto Limited. April 2022.

Biologic Environmental Survey Pty Ltd (Biologic) (2017) *Ministers North Level 2 Vertebrate Fauna Survey*. Report prepared by Biologic Environmental Survey Pty Ltd for BHP Iron Ore Pty Ltd. Revision 3. October 2017.

Biologic (2018) *Ministers North to Yandi Corridor Two Phase Targeted Fauna Survey*. Report prepared by Biologic Environmental Survey Pty Ltd for BHP Iron Ore Pty Ltd. Revision 3. October 2018.

Biologic (2023) *Central Pilbara Hub: Targeted Matters of National Environmental Significance Vertebrate Fauna Survey*. Report prepared by Biologic Environmental Survey Pty Ltd for BHP Iron Ore Pty Ltd. Final. May 2023.

BHP Iron Ore Pty Ltd (BHP) (2016) *Pilbara Public Environmental Review Strategic Proposal*. March 2016.

BHP (2022) *Short-range Endemic Invertebrate Fauna Assessment Methods: Technical Process Instruction*.

BHP (2023) *Vertebrate Fauna Surveys in Western Australia - Technical Process Instruction*.

BHP (2025a) *Ministers North Derived Proposal Request*. Ministerial Statement 1105.

BHP (2025b) *Ministers North Impact Reconciliation Procedure*.

Environmental Protection Authority (EPA) (2018) *Pilbara Expansion Strategic Proposal*. Report and recommendations of the Environmental Protection Authority. Report 1619. July 2018.

EPA (2023) *Statement of Environmental Principles, Factors, Objective and Aims of EIA*. April 2023.

EPA (2024) *Instructions: How to Prepare Environmental Protection Act 1986 Part IV Environmental Management Plans*. March 2024.

GHD Pty Ltd (GHD) (2021a) *Ministers North Fauna Survey Level 1 Survey*. Report prepared by GHD Pty Ltd for BHP Iron Ore Pty Ltd. February 2021.

GHD (2021b) *Ministers North Fauna Survey Level 2 Survey*. Report prepared by GHD Pty Ltd for BHP Iron Ore Pty Ltd. February 2021.

8 Appendices

Appendix 1: Terrestrial Fauna Supporting Studies

Title	Survey date	Survey summary
Vertebrate Fauna		
Astron Environmental Services Pty Ltd (Astron) (2025) Ministers North Targeted Significant Vertebrate Fauna Survey	13 - 22 April 2023 and 7- 18 June 2024	One-hundred and eleven vertebrate fauna were recorded within the Survey Area, comprising one amphibian, 25 reptile, 64 bird, and 21 mammal (including three introduced) species. Three MNES species, northern quoll (<i>Dasyurus hallucatus</i>), ghost bat (<i>Macroderma gigas</i>), and Pilbara olive python (<i>Liasis olivaceus</i>), were recorded during the current surveys. Only the ghost bat records coincide with the Derived Proposal area.
Astron (2023) Yandi 45C Targeted Significant Vertebrate Fauna Survey.	22 Sept – 2 Oct 2022	There were 91 vertebrate fauna species recorded within the survey area, comprising of seven reptiles, 66 birds, and 18 mammals (including four introduced species). The fauna species assemblage recorded during the survey was considered typical for the Pilbara region.
Biologic (2023) Central Pilbara Hub: Targeted Matters of National Environmental Significance Vertebrate Fauna Survey	4 – 13 April 2022 (relevant dates to the Derived Proposal)	Due to the size of the Study Area (approximately 60,000 ha ⁴), the field survey was undertaken over five separate field trips. Calls of Pilbara leaf-nosed bats were recorded at four locations during the survey (note these do not intersect the Derived Proposal area). Ghost bat was recorded on 33 nights at four locations (note these do not intersect the Derived Proposal area). No evidence of other MNES were recorded.
GHD Pty Ltd (GHD) (2021b) Ministers North Fauna Survey Level 2 Survey	19 Mar – 27 Mar 2020	The field survey identified 122 species of vertebrate fauna. This number comprises 55 birds, 44 reptiles, 19 mammals and four amphibians. Four conservation significant fauna species were recorded during the field survey: Ghost Bat, Western Pebble-mound Mouse (<i>Pseudomys chapmani</i>), Pilbara Olive Python, Pilbara Flat-headed Blind Snake (<i>Anilius ganei</i>)
GHD (2021a) Ministers North Fauna Survey Level 1 Survey	9 Sept – 20 Sept 2019	The fauna survey identified 67 species of vertebrate fauna. This number comprises 40 birds, 19 mammals and eight reptiles. Two conservation significant fauna species were recorded during the field survey: Ghost Bat; Western Pebble-mound Mouse.
Biologic (2018) Ministers North to Yandi Corridor Two Phase Targeted Fauna Survey	9 – 13 Oct 2017 and 15 – 23 June 2018	The surveys consisted of habitat assessments, targeted transect searches; motion cameras; ultrasonic bat recordings, acoustic bird recordings, Northern Quoll trapping sites and opportunistic recording of fauna species. Two species of conservation significance were recorded during the current survey: the Western Pebble Mound Mouse and the Peregrine Falcon (<i>Falco peregrinus</i>)
Biologic (2017) Ministers North Level 2 Vertebrate Fauna Survey	15 – 26 October 2016 and 3 – 13 April 2017	The survey recorded 116 vertebrate fauna species, comprising 17 mammal species, 54 bird species, 43 reptile species, and 2 amphibians. Two conservation significant species were recorded: the Western Pebble-mound Mouse and Rainbow Bee-eater. No species listed as Threatened were recorded.

⁴ Only a small portion of this survey intersects with the project – Mining Area C to Yandi Rail Corridor assessment area

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