

APPENDIX 7B: TERRESTRIAL FAUNA (MS1168 CONDITION 8)



YALYALUP MINERAL SANDS
PROJECT, NORTHERN EXTENSION –
FAUNA ENVIRONMENTAL
MANAGEMENT PLAN

Report Number:

DMS-YAL-NTH_EMP-8.1 FAUNA

27-MAR-24

YALYALUP MINERAL
SANDS PROJECT

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DOCUMENT DETAILS

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AMENDMENT REGISTER

DATE	REV	DESCRIPTION OF REVISION	REVIEW	APPROVED
27-Mar-24	1	Fauna Environmental Management Plan for EPA submission	CB	CB

GLOSSARY

AER	Annual Environmental Report (submitted annually to DWER, DAWE, DBCA, DEMIRS)
BC Act	<i>Biodiversity Conservation Act 2016</i>
DCCEEW	Department of Climate Change, Energy, the Environment and Water
DBCA	Department of Biodiversity, Conservation and Attractions
DBH	Diameter at breast height
DFES	Department of Fire and Emergency Services
DEMIRS	Department of Energy, Mines, Industry Regulation and Safety
DWER	Department of Water and Environmental Regulation
EMP	Environmental Management Plan
EMS	Environmental Management System
EPA	Environmental Protection Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
GDE	Groundwater Dependent Ecosystem
GWOS	Groundwater Operating Strategy
Ha	Hectare
Km	kilometre
myOSH	Doral's Hazard and Incident Management System
Possibly suitable	A Black Cockatoo tree with DBH \geq 50cm, with one or more hollows \sim >10cm diameter entrance big enough to use for nesting
TBA	To be advised
Unsuitable	A Black Cockatoo tree with DBH \geq 50cm, with too small hollow (\sim <5-10cm entrance), or a hollow that is too low, too shallow or wrong orientation.
WRP	Western Ringtail Possum

SUMMARY

PROPOSAL TITLE	YALYALUP MINERAL SANDS PROJECT
Proponent	Doral Mineral Sands Pty Ltd
Ministerial Statement No.	1168
Environmental Factor	Terrestrial Fauna
EPA Objective	To protect terrestrial fauna so that biological diversity and ecological integrity are maintained
Purpose	Support EPA's assessment of the Proposal
Outcomes	<p>Minimise impacts as far as practicable to the following conservation significant fauna and fauna habitat:</p> <ul style="list-style-type: none"> • Carnaby's Black-Cockatoo <i>Zanda latirostris</i> – S2 (BC Act), Endangered (EPBC Act). • Baudin's Black-Cockatoo <i>Zanda baudinii</i> – S3 (BC Act), Vulnerable (EPBC Act). • Forest Red-tailed Black-Cockatoo <i>Calyptorhynchus banksii naso</i> – S3 (BC Act), Vulnerable (EPBC Act). • Western Ringtail Possum <i>Pseudocheirus occidentalis</i> - S1 (BC Act), Critically Endangered (EPBC Act).
Key Provisions	Management-based provisions for Terrestrial Fauna
EMP Responsibility	Doral OHS&E Superintendent
Review Date	Two yearly review from the commencement date of Mine (TBA)

DECLARATION OF ACCURACY

I declare that:

1. To the best of my knowledge, all the information contained in, or accompanying this Flora and Vegetation Environmental Management Plan is complete, current and correct.
2. I am duly authorised to sign this declaration on behalf of the approval holder.
3. I am aware that:
 - a. Section 490 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (EPBC Act) makes it an offence for an approval holder to provide information in response to an approval condition where the person is reckless as to whether the information is false or misleading.
 - b. Section 491 of the EPBC Act makes it an offence for a person to provide information or documents to specified persons who are known by the person to be performing a duty of carrying out a function under the EPBC Act or the *Environment Protection and Biodiversity Conservation Regulations 2000* (Cth) where the person knows the information or document is false or misleading.
 - c. The above offences are punishable on conviction by imprisonment, a fine or both.

Signed:



Full Name: Craig Bovell

Organisation: Doral Mineral Sands Pty Ltd

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1. CONTEXT, SCOPE AND RATIONALE

1.1. PROPOSAL

This Fauna Environmental Management Plan (EMP) has been prepared to address the objectives and commitments in relation to the management of conservation significant fauna and their associated habitats for the Proposal (Figure 1) as outlined in the following document:

- *Yalyalup Mineral Sands Project Northern Extension, Referral Under S.38 of the EP Act (Doral, 2024).*

The EMP identifies management measures, monitoring actions, completion criteria and compliance reporting that are to be implemented to minimise impacts to the following conservation significant species and their habitats:

- Carnaby’s Black-Cockatoo *Zanda latirostris* – S2 (BC Act), Endangered (EPBC Act).
- Baudin’s Black-Cockatoo *Zanda baudinii* – S3 (BC Act), Vulnerable (EPBC Act).
- Forest Red-tailed Black-Cockatoo *Calyptorhynchus banksii naso* – S3 (BC Act), Vulnerable (EPBC Act).
- Western Ringtail Possum *Pseudocheirus occidentalis* - S1 (BC Act), Critically Endangered (EPBC Act).

1.2. KEY ENVIRONMENTAL FACTORS

Table 1 summarises the Proposal activities and site-specific environmental values that will affect Terrestrial Fauna values.

TABLE 1: KEY PROPOSAL ACTIVITIES AND SITE-SPECIFIC ENVIRONMENTAL VALUES AFFECTING TERRESTRIAL FAUNA

KEY PROPOSAL ACTIVITY AFFECTING TERRESTRIAL FAUNA	SITE-SPECIFIC ENVIRONMENTAL VALUE
<ul style="list-style-type: none"> • Loss or fragmentation of fauna habitat; • Death, injury and/or displacement of fauna species, as a result of clearing and construction activities, vehicle movement and presence of artificial water bodies; • Dewatering activities may affect GDE’s which may reduce the value of fauna habitat resulting in the displacement of fauna and migratory species; • Increase in the number of predatory introduced species; • Light, noise and dust emissions could disrupt fauna behaviour or reduce the value of fauna habitat; • Introduction and/or spread of Phytophthora dieback which may reduce the value of fauna habitat; 	<ul style="list-style-type: none"> • Western Ringtail Possum <i>Pseudocheirus occidentalis</i> - S1 (BC Act), Critically Endangered (EPBC Act). • Carnaby’s Black-Cockatoo <i>Zanda latirostris</i> – S2 (BC Act), Endangered (EPBC Act). • Baudin’s Black-Cockatoo <i>Zanda baudinii</i> – S3 (BC Act), Vulnerable (EPBC Act). • Forest Red-tailed Black-Cockatoo <i>Calyptorhynchus banksii naso</i> – S3 (BC Act), Vulnerable (EPBC Act).

KEY PROPOSAL ACTIVITY AFFECTING TERRESTRIAL FAUNA	SITE-SPECIFIC ENVIRONMENTAL VALUE
<ul style="list-style-type: none"> Altered fire regime which may reduce available fauna habitat. 	

1.3. CONDITION REQUIREMENTS

The Proposal has been referred separately to the State and Commonwealth and are anticipated to be assessed by the EPA under an accredited assessment process. As such there are currently no Ministerial Condition requirements at the time of preparation of this EMP, however it is anticipated that a Ministerial Condition requiring implementation of this Fauna EMP will be required.

1.4. RATIONALE AND APPROACH

For each of the conservation significant fauna species listed above, the EMP details the following:

- Management measures to address potential impacts;
- Monitoring programs developed for each of the species, where direct and indirect impacts may occur;
- Response framework where management triggers are not met.

The development of the EMP has been informed by the results of multiple surveys (BCE, 2024; Harewood, 2020a; 2020b) and is based on the assumptions and uncertainties listed in Section 1.4.2.

1.4.1. SURVEY AND STUDY FINDINGS

Bamford Consulting Ecologists (BCE, 2024) conducted a Level 1 Fauna Survey of the Proposal area in accordance with *Technical Guidance – Terrestrial Fauna Surveys* (EPA, 2016g) and *Technical Guidance – Sampling Methods for Terrestrial Vertebrate Fauna* (EPA, 2016h). In addition, the general area is known to be utilised by Western Ringtail Possums *Pseudocheirus occidentalis* (WRP) and three species of Black Cockatoos (*Zanda latirostris*, *Calyptorhynchus banksii naso* and *Zanda baudinii*), the scope of work was expanded to include targeted assessments of WRP’s and Black Cockatoos in areas containing suitable habitat within the Development Envelope. The targeted surveys were undertaken per EPA and Commonwealth guidance in 2023, 2019, and 2017.

Almost all of the Proposal area has been totally cleared or almost totally cleared of native vegetation for livestock grazing, with only pasture grasses and the occasional widely spaced, scattered trees remaining. Parts of the Proposal area have been planted with non-endemic/exotic tree species to act as windbreaks. Native remnant vegetation is mostly confined to road verges and along two small, seasonally inundated creek lines: a minor tributary of the Sabina River (Woddidup Creek/drain) and the Abba River. Most of this vegetation is dominated by woodlands containing various densities of marri, jarrah and/or flooded gum with or without midstory species such as peppermint, paperbark or banksia. Almost all native vegetation within the Proposal area is Completely Degraded (Ecoedge, 2023).

There was no evidence of the Western Ringtail Possum in the Proposal area; no dreys or scats were found, and no individuals were observed during spotlighting (BCE, 2024). However, this species is expected to be at least a regular visitor and possibly a resident (albeit in small numbers, reflecting the limited amount of

habitat available), as it is known from similar environments in the immediate vicinity, and suitable habitat is present in the Proposal area.

All three species of Black-Cockatoo are present in the southwest and are expected to be regular visitors to the Proposal area. During the field investigations, a flock of three Carnaby's Black Cockatoos was flushed from a stand of trees near the existing mining area (from what may be a day roost), and foraging evidence of Baudin's Black-Cockatoo was recorded across the project area.

A large proportion of the Proposal area is cleared pasture with isolated scattered trees which has a low foraging value of 3 out of 10 for all species (BCE, 2024). The presence of scattered mature trees is key to even this foraging value. The highest foraging values for all species are in VSAs 1 and 2, which contain Marri; these provide a moderate foraging value for the Carnaby's Black-Cockatoo (6 out of 10) and a high foraging value for the Baudin's and Forest Red-tailed Black-Cockatoos (7 out of 10).

A total of 9.83ha of native vegetation/foraging habitat will be cleared for the Proposal for clearing.

A total of 721 trees met the potential nest-tree criterion of a DBH of >500mm (or >300mm for Wandoo). Of these, 24 were ranked 3, 57 ranked four trees, and 640 ranked five trees.

Within the proposed disturbance area, only seven trees received a rank of 3 (contain possibly suitable hollows), of which five will be avoided from disturbance. No trees were ranked 1 or 2 (i.e., showing current or recent use by black cockatoos) (BCE, 2024). Two trees previously assessed by (Harewood, 2020a) (Harewood, 2020b), and avoided from disturbance for the Original Proposal, now also require clearing. Therefore, four trees in total that contain hollows possibly suitable for a Black Cockatoo will be cleared.

Locations of the potential Black Cockatoo nesting trees (DBH>500mm) are provided in Figure 2.

The Proposal area contains suitable roosting habitat in the form of the many large trees present and the presence of waterbodies nearby (an important feature of a black-cockatoo roost). BirdLife data returned seven confirmed roost sites within 25km of the Proposal area, with the closest being 1.3km southwest of the Proposal. No roost sites were identified within the proposal area during the assessment.

1.4.2. KEY ASSUMPTIONS AND UNCERTAINTIES

The key assumptions and uncertainties with this EMP include:

- The Fauna surveys conducted for the Proposal have accurately recorded the presence of all conservation significant fauna species and habitats within the Proposal area;
- Existing cleared areas (~99% of the disturbance area) do not contain habitat for or known records of conservation significant species (excluding isolated paddock trees with DBH \geq 500mm);
- All significant direct and indirect impacts to conservation significant fauna that may result from the Proposal have been identified;
- Direct impacts to fauna during construction of the Proposal relate to habitat loss;
- Mobile fauna will disperse in front of clearing activities;
- Indirect impacts to fauna habitat from groundwater drawdown will be managed in accordance with the GDE Management Plan;
- An Offset Management Strategy shall be prepared to offset significant residual impacts to conservation significant fauna and habitat.

1.4.3. MANAGEMENT APPROACH

The management approach has been informed by best practice and Doral's experience with similar mineral sands projects within the Southwest of Western Australia. The hierarchical approach focuses on avoiding ecologically sensitive areas primarily through mine pit design and refinement to utilise existing cleared areas. Where not able to be avoided, management aims to minimise the intensity and/or extent of impacts on fauna during the construction and operation of the Proposal. Any significant unavoidable residual impacts on fauna will be offset through an Environmental Offset Strategy. The management measures proposed are based on field studies and surveys, and relevant information is provided in species recovery plans where they exist. The following Recovery Plans, Conservation Advice and Abatement Plans have informed the development of this EMP:

- *Conservation Advice Pseudocheirus occidentalis Western ringtail possum. Canberra: Department of the Environment and Energy (Threatened Species Scientific Committee, 2018a);*
- *Western Ringtail Possum (Pseudocheirus occidentalis) Recovery Plan. Wildlife Management Program No. 58. Department of Parks and Wildlife, Perth, WA (DPaW, 2017);*
- *Approved Conservation Advice for Calyptorhynchus banksii naso (Forest Red-tailed Black Cockatoo). Canberra: Department of the Environment, Water, Heritage and the Arts (DEWHA, 2009);*
- *Forest Black Cockatoo (Baudin's Cockatoo Calyptorhynchus baudinii and Forest Redtailed Black Cockatoo Calyptorhynchus banksii naso) Recovery Plan. Department of Environment and Conservation, Western Australia (Chapman, 2008);*
- *Carnaby's Cockatoo (Calyptorhynchus latirostris) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia (DPaW, 2013);*
- *Threatened Species Scientific Committee (2018). Conservation Advice Calyptorhynchus baudinii Baudin's cockatoo. Canberra: Department of the Environment and Energy (DoEE, 2018);*
- *Threat abatement plan for predation by feral cats. Canberra, ACT: Commonwealth of Australia (DoE, 2015a);*
- *Threat abatement plan for predation by the European red fox. DEWHA, Canberra (DEWHA, 2008b).*

1.4.4. RATIONALE FOR CHOICE OF PROVISIONS

Evidence of foraging activity by three species of Black Cockatoos was observed within the Proposal area during the Fauna Survey (BCE, 2024). A total of 721 trees met the potential nest-tree criterion of DBH >500mm (or >300mm wandoo). Of these, 24 were rank 3 trees, 57 rank 4 trees and 640 rank 5 trees. In total 134 trees (including four with potentially suitable hollows) will be cleared for the Proposal.

Throughout the project planning and environmental assessment phase, Doral's primary mitigation strategy has been to design the Proposal to avoid and minimise direct impacts to Black Cockatoo foraging and potential breeding habitat. This has resulted in the avoidance of ~20ha present as foraging habitat within the Proposal area and the avoidance of 587 Black Cockatoo potential breeding trees (DBH>500mm). Of the 134 trees (DBH>500mm) to be cleared, only four contain possibly suitable hollows, however no evidence of actual use by a Black Cockatoo was identified.

The approach to Black Cockatoo management during the construction and operation of the Proposal is focused on pre-clearing surveys and sensitive and staged clearing practices.

1.5. INDEX OF BIODIVERSITY SURVEYS FOR ASSESSMENTS

An IBSA data package for the Proposal shall be submitted to EPA as part of the Part IV assessment process.

2. ENVIRONMENTAL MANAGEMENT PLAN

2.1. OBJECTIVES

The management measures have been developed to achieve the EPA’s objective “to protect terrestrial fauna so that biological diversity and ecological integrity are maintained” by minimising and managing impacts to terrestrial fauna species and their habitat. The key impacts and risks to the conservation significant fauna associated with the implementation of the Proposal are:

- Loss or fragmentation of fauna habitat;
- Death, injury and/or displacement of fauna species as a result of clearing and construction activities, vehicle movement and presence of artificial water bodies;
- Dewatering activities may affect GDEs which may reduce the value of fauna habitat, resulting in the displacement of fauna and migratory species;
- Increase in the number of predatory introduced species;
- Light, noise and dust emissions could disrupt fauna behaviour or reduce the value of fauna habitat;
- Introduction and/or spread of Phytophthora dieback, which may reduce the value of fauna habitat;
- Altered fire regime, which may reduce available fauna habitat.

2.2. MANAGEMENT ACTIONS

The management measures focus the greatest management effort on reducing habitat loss and impact on individual conservation of significant fauna and have been developed to ensure impacts are minimised as far as practicable during the implementation of the Proposal (Table 2).

TABLE 2: MANAGEMENT ACTIONS FOR KEY IMPACTS AND RISKS

KEY IMPACTS/RISKS	MANAGEMENT ACTION
Habitat loss and fragmentation	<p>Design the Proposal to avoid clearing conservation significant vegetation/fauna habitat.</p> <p>Targeted pre-clearing surveys of vegetation known to be used by conservation significant species will be conducted prior to any clearing of native vegetation by suitably qualified and experienced personnel.</p> <p>Demarcate vegetation to be cleared and receive authorisation by the OHS&E Superintendent or delegate and Mine Manager prior to any clearing action.</p> <p>For Black Cockatoos, a pre-clearing survey using the “Great Cocky Count” method (Peck et al., 2018) will be undertaken prior to clearing the two Black Cockatoo potential nesting trees containing a possibly suitable hollow.</p> <p>No WRP dreys were identified within the Proposal area therefore will not be cleared.</p> <p>The Mine Manager will liaise with the OHS&E Superintendent or delegate in regard to the location of all mine site infrastructure to ensure it minimises the clearing of vegetation and fragmenting of fauna habitat.</p> <p>Disturbed areas will be progressively rehabilitated in accordance with the Mine Closure Plan.</p>

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KEY IMPACTS/RISKS	MANAGEMENT ACTION
	<p>No dead, standing or fallen timber will be removed from the site unnecessarily, and vegetation debris, logs and rocks will be returned to areas that have been disturbed.</p>
<p>Death of fauna from operational areas of the Site</p>	<p>Construction of new tracks will be kept to a minimum. The Mine Manager will liaise with the OHS&E Superintendent or delegate to plan any new tracks' locations.</p> <p>A maximum speed limit of 40km/hr will apply to all internal roads unless otherwise signposted. Site personnel are instructed to 'drive to conditions'.</p> <p>The staff induction program will discuss the importance of protecting fauna on the mine site.</p> <p>The site will be designed to reduce accessibility to artificial water sources and drains.</p> <p>Fencing will be used strategically to segregate native vegetation areas from artificial ponds or drains.</p> <p>Overflow of artificial waterbodies and drains in dry conditions will be prevented.</p> <p>Non-slippery sides will be used in ponds/drains and/or egress points so that any animals that enter the artificial waterbody may escape.</p> <p>Any trenching required for services or drains should be kept open only for as long as necessary.</p> <p>Staff and contractors will be required to report the death of any fauna on roads and tracks. All collisions with fauna are to be reported and recorded through Doral's Hazard and Incident Management System (myOSH).</p> <p>In the event that fauna is injured the following process will occur:</p> <ol style="list-style-type: none"> 1. Fauna immediately taken to a veterinary clinic or registered Fauna rescue facility for assessment and treatment; 2. For species listed as threatened or specially protected, notification to be given to DBCA within 24 hours of taking possession of the animal. This can be done by completing an Injured or Abandoned Fauna Notification Form (accessible via DBCA's website) and emailing it to wildlife.protection@dbca.wa.gov.au; and 3. Doral will comply with relevant authorisations under the <i>Biodiversity Conservation Act 2016</i> to 'take' or 'disturb' fauna that are not provided for under Ministerial authorisations under the <i>Environmental Protection Act 1986</i>.
<p>Dewatering of WRP habitat</p>	<p>Implement the Groundwater Licence Operating Strategy (GLOS) to minimise impacts to hydrological processes by carefully managing the groundwater system at the site.</p> <p>Implement the GDE Management Plan designed to monitor a combination of hydrological parameters and vegetation health assessments using qualitative criteria. As per this Plan, implement the management responses, including the provision of reticulation to groundwater-dependent vegetation within GDEs during periods of reduced water availability.</p>
<p>Increase in feral fauna and pest species</p>	<p>A 1080 fox baiting program will be developed and implemented with the adjoining landowners. Liaison with landowners will focus on placing baits to not impact working (farm) dogs.</p> <p>The effectiveness of the control program will be assessed annually in association with DBCA.</p>

KEY IMPACTS/RISKS	MANAGEMENT ACTION
	<p>Cat trapping will be employed within the site by a licenced pest controller annually (or when the presence of cats is observed). Liaison with landowners will focus on placing traps not to impact working (farm) dogs.</p> <p>Adequate waste storage measures will be undertaken on-site to ensure fauna cannot access domestic and putrescible waste and rubbish.</p>
Dust, noise and light	<p>Implement the Dust EMP and Noise EMP to mitigate the generation of dust and dust as far as practicable.</p> <p>Lighting at the site will be designed and managed in accordance with Australian Standard AS4282-1997 <i>Control of Obtrusive Effects of Outdoor Lighting</i>.</p>
Introduction of weed and dieback to fauna habitat	<p>Strict weed hygiene measures will be implemented during the proposal's implementation to reduce the risk of weed introduction and spread into areas of native vegetation.</p> <p>The only identified dieback-infested area (0.3ha), located in the roadside of Princefield Rd will be segregated and avoided until cleared for mining with the topsoil and vegetation disposed to the base of the deep mine void for burial >5m..</p>
Altered fire regime	<p>Fire risk will be managed through the implementation of a Bushfire Management Plan.</p>

2.3. MANAGEMENT TARGETS

The following management targets will be used to measure and report achievement against the environmental objective (Table 3).

TABLE 3: MANAGEMENT TARGETS

KEY IMPACT/RISK	MANAGEMENT TARGET
Loss or fragmentation of fauna habitat	Compliance with pre-defined clearing limits and boundaries described within approval documents
Death, injury and/or displacement of fauna species as a result of clearing, vehicle strikes and artificial water bodies	No incidents of conservation significant fauna injury or deaths within the Development Envelope due to Site activities over the life of the mine
Dewatering activities	Limit indirect impacts from groundwater drawdowns to affected GDE's as far as practicable.
Increase in the number of predatory introduced species	No increase in feral fauna and pest species from baseline conditions as a result of the mine operation for the life of the mine.
Dust, noise and light	Impacts on fauna habitat from dust, noise and light generation are minimised through implementing Dust and Noise EMPs and compliance with Australian Standard AS4282-1997 <i>Control of Obtrusive Effects of Outdoor Lighting</i> .

KEY IMPACT/RISK	MANAGEMENT TARGET
Introduction and or/spread of weed and dieback	No impacts on fauna habitat from the spread of weeds and dieback associated with mine activities from baseline weed and dieback conditions (refer to Flora and Vegetation EMP).
Altered fire regime	No impacts to fauna habitat from altered fire regime as a result of Mine activities for the life of the mine.

2.4. MONITORING

The monitoring aims to inform, through the management targets, if the environmental objectives are being achieved and whether management actions need to be reviewed or revised.

As detailed in Table 4, each management target will be monitored. The method, location, parameters and frequency of monitoring are specified. Early warning indicators provide advance warning that a management target may not be met. The monitoring results will be compared against these indicators and will enable actions to be implemented to control the contributing process to meet the management objective.

TABLE 4: MONITORING AND REPORTING

KEY IMPACT/RISK	MONITORING	REPORTING
Habitat loss and fragmentation	<p>Prior to clearing, ensure the proposed clearing area is equal to or less than the approved clearing area.</p> <p>Pre-clearing survey of Black Cockatoo trees prior to clearing activities by suitably qualified and experienced personnel.</p>	<p>Report the amount of conservation significant fauna habitat cleared in the Annual Environmental Report (AER).</p> <p>Results of all pre-clearing surveys reported annually in Doral's AER.</p>
Death, injury or displacement of fauna	Daily visual site inspections by the Mine Manager and/or Environmental Advisor of operational mine areas, access roads and artificial water bodies to identify the presence of fauna deaths, injuries or displacement from habitat. Monitoring will continue until 2 years post mining/dewatering.	All collisions/incidents with fauna are to be reported and recorded through Doral's Hazard and Incident Management System (myOSH) immediately upon the incident. Results are to be reported annually in Doral's AER.
Dewatering impacts on fauna habitat	<p>Monitoring of water table levels as per the GDE Management Plan.</p> <p>Monitoring is to be conducted by suitably experienced and qualified personnel per the relevant guidelines for survey for the species as recommended in <i>Survey guidelines for Australia's threatened mammals</i> (DSEWPac, 2011).</p>	Reported annually in AER per the GDE Management Plan reporting requirements.
Increase in feral fauna and pest species	The effectiveness of the 1080 fox/feral cat control program will be assessed annually in	Reported annually in AER.

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KEY IMPACT/RISK	MONITORING	REPORTING
	<p>association with DBCA. The 1080 baiting program will continue until mining has ceased.</p> <p>Monthly inspections ensure waste disposal activities are implemented until two years post-mining.</p>	<p>Reported in production meetings.</p>
<p>Dust, noise and light</p>	<p>Monitoring in accordance with the Dust and Noise EMPs and Licence conditions.</p> <p>Review of lighting design/placement when erecting lights in new areas of the Mine for the first time to ensure compliance with Australian Standard AS4282-1997 <i>Control of Obtrusive Effects of Outdoor Lighting</i>.</p>	<p>Reported annually in AER or to DWER in response to exceedance of an agreed trigger or threshold (as per Licence).</p>
<p>Introduction and/or spread of weed and dieback to WRP habitat</p>	<p>Weed and dieback monitoring per the Flora and Vegetation EMP.</p>	<p>Reported annually in AER.</p>
<p>Altered fire regime</p>	<p>Daily monitoring for the presence of fires in the area through review of the DFES website during fire season per the Fire EMP until two years post-mining.</p>	<p>Reported in response to exceedance of an agreed trigger or threshold within the Bushfire EMP.</p>

3. ADAPTIVE MANAGEMENT AND REVIEW OF THE EMP

This EMP applies adaptive management principles through monitoring, corrective actions and implementing changes. The EMP is intended to be dynamic and will be updated to reflect changes in management practices over the life of the Proposal. This will also allow flexibility to respond to new environmental impacts and adopt new technologies/management measures.

3.1. MONITORING TRIGGERS, THRESHOLDS, AND CONTINGENCY ACTIONS

Triggers, thresholds and contingency for each conservation significant species included in this EMP are detailed in Table 5 based on the environmental monitoring and targets previously described.

If monitoring identifies non-conformance/non-compliance with EMP targets, the incident will be assessed, and corrective actions will be implemented. The corrective actions are aimed at preventing recurrences of the incident taking place.

Environmental incidents are defined as events that cause or potentially cause harm to the environment. Any environmental incident is to be reported immediately to the OHS&E Superintendent, who will assess the type and severity of the incident and, where required, notify the relevant Regulatory Authority.

TABLE 5: MONITORING TRIGGERS, THRESHOLDS AND CONTINGENCY ACTIONS

MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
Habitat loss or fragmentation	Clear or damage WRP and Black Cockatoo habitat outside the approved clearing area.	Any clearing or damage to WRP and Black Cockatoo habitat outside of the approved clearing area.	<ul style="list-style-type: none"> • Investigate cause and raise incident report with Doral OHS&E Superintendent. • Implement threshold corrective actions within 24 hours of exceedance being reported, which may include: <ul style="list-style-type: none"> - Review the practicality and relevance of management measure - Improve training and education of employees/contractors - Improve and implement increased protective measures as necessary - Improve methods for defining habitat to be cleared • Monitor outcomes. • Report any non-compliance to EPA/DCCEW within seven days.

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MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
			<ul style="list-style-type: none"> Provide a report to EPA within 21 days of exceedance detailing the actions implemented, effectiveness of actions, findings of investigations, measures to prevent future exceedance of thresholds, and measures to prevent, control or abate any environmental harm that may have occurred.
Loss of individual WRP or Black Cockatoos	Any individual WRP and/or Black Cockatoos killed by Site activities	Injury or death to one or more individuals.	<p>Implement the following threshold contingency actions within 24hrs of exceedance being reported:</p> <ul style="list-style-type: none"> Clearing and construction activities within known Black Cockatoo habitat to cease. Investigate cause of injury or loss and report to Doral OHS&E Superintendent. Consult with DBCA to advise on loss of WRP or Black Cockatoo mortality occurring. Review clearing and construction protocols, speed limits (where required). Review traffic management and artificial water body design protocols (where required). Improve training and education of employees and contractors. Report any non-compliance to EPA/DCCEW within 7 days. Provide a report to EPA within 21 days of exceedance detailing the actions implemented, effectiveness of actions, findings of investigations, measures to prevent future exceedance of thresholds, and measures to prevent, control or abate any environmental harm that may have occurred.

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MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
Dewatering impacts to fauna habitat	Reduction of groundwater levels in GDE bores below threshold levels of greater than 25cm (see GDE Management Plan)	Decline in vegetation health score of 2 categories (see GDE Management Plan).	<ul style="list-style-type: none"> • Investigate cause and raise incident report to Doral OHS&E Superintendent. • Implement threshold corrective actions within 24 hours of exceedance being reported as per the GDE Management Plan, which includes: <ul style="list-style-type: none"> - Supply reticulated water to vegetation via surface and subsurface irrigation; - Monitor groundwater levels in adjacent bores following supplementation to ensure levels return to natural range. • Monitor outcomes. • Report any non-compliance to EPA/DCCEW within seven days. • Provide a report to EPA within 21 days of exceedance detailing the actions implemented, the effectiveness of actions, findings of investigations, measures to prevent future exceedance of thresholds, and measures to prevent, control or abate any environmental harm that may have occurred.
Feral fauna and pest species	Presence of any predatory feral fauna and pest species (i.e. fox and cat) within the disturbance area.	Identification of one or more predatory feral fauna and pest species (i.e. fox and cat) within fauna habitat.	<ul style="list-style-type: none"> • Investigate the cause and report to the Doral OHS&E Superintendent. • Implement the following contingency actions within 24 hours of exceedance being reported. • Implement 1080 fox baiting program, cat trapping as soon as practicable. • Review waste management activities and discuss them with the Doral OHS&E Superintendent. • Improve training and education of employees and contractors.

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MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
Dust, noise and light	<p>Visual dust was observed being deposited on fauna habitat.</p> <p>Excessive use of machinery in the vicinity of fauna habitat.</p> <p>Visual assessment of Lighting affects fauna habitat.</p>	<p>A decline in vegetation health score of 2 categories within fauna habitat, attributable to dust impacts (monitored/assessed as per the GDE Management Plan).</p> <p>Fauna observed to be evacuating the habitat due to noise.</p> <p>Any light observed to be directly shining onto fauna habitat.</p>	<ul style="list-style-type: none"> • Monitor outcomes. • Investigate the cause and report to the Doral OHS&E Superintendent. • Improve training and education of employees and contractors. • Monitor outcomes.
Introduction and/or spread of weed and dieback within conservation significant fauna habitat	<p>Increase in the number or type of weeds within conservation significant fauna habitat (as per Flora and Vegetation EMP).</p> <p>Presence of dieback in conservation significant fauna habitat (absent at present)</p>	<p>Identification of any new weed species (as per the Flora and Vegetation EMP) within conservation significant fauna habitat.</p> <p>Increase weed coverage by 20% or more (as per Flora and Vegetation EMP).</p> <p>Identification of any <i>Phytophthora</i> dieback within fauna habitat.</p>	<ul style="list-style-type: none"> • Investigate the cause and report to the Doral OHS&E Superintendent. • Implement weed management measures as per the Flora and Vegetation EMP. • Implement dieback management measures as per the Flora and Vegetation EMP. • Monitor outcomes.
Altered fire regime	<p>Presence of uncontrolled fire within the disturbance area.</p>	<p>Uncontrolled fire impacts the conservation significant habitat.</p>	<ul style="list-style-type: none"> • Report immediately to the Mine Manager and OHS&E Superintendent. • Implement contingency measures as per the Bushfire EMP. • Monitor outcomes. • Report any non-compliance to EPA/DCCEW within seven days. • Provide a report to EPA within 21 days of exceedance detailing the actions implemented, the effectiveness of actions, findings of investigations, measures to prevent

MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
			future exceedance of thresholds, and measures to prevent, control or abate any environmental harm that may have occurred.

3.2. EMP REVISIONS

This EMP will be reviewed on an annual basis during the life of the Proposal. The EMP review will take into account the adaptive management and continual improvement process, new or revised information relevant to the conservation significant fauna and/or changes to the Proposal.

3.3. REPORTING

The implementation of this Fauna EMP is likely to be part of a Ministerial Condition. As such, compliance with this EMP will be reported annually in Doral’s Annual Compliance Assessment Report (CAR), which is also likely to be a Ministerial Condition. In addition, Doral will report compliance against the Management Targets (Table 3) in this EMP in Doral’s Annual Environment Report. This will include how any non-compliance has been managed and reported.

In the event of a threshold criteria (as outlined in relevant monitoring parameters in Table 5) being exceeded, Doral will prepare a report and provide it to EPA within 21 days of exceedance. The report will include:

- Detail the threshold contingency actions implemented,
- Effectiveness of threshold contingency actions,
- Findings of investigations,
- Measures to prevent future exceedance of threshold criteria;
- Measures to prevent, control or abate any environmental harm that may have occurred;
- Justifications of threshold criteria remaining or being adjusted based on better understanding to demonstrate that objectives will continue to be met.

3.4. AUDITING

Doral is committed to its environmental performance and has developed, implemented and continually improved its Environmental Management System (EMS) since its establishment in 2001. The EMS was initially developed in response to advice from the EPA during the planning and approval process for the Dardanup Mineral Sands Project. Doral’s EMS is in line with the requirements of the Australian/New Zealand Standard AS/NZS ISO 14001:1996 (ISO 14001).

Doral’s EMS consists of the following key elements:

- Environmental Policy and Objectives;
- Environmental Planning;
- Implementation and Operation;

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- Checking and Corrective Action;
- Management Review.

The Checking and Corrective Action component of Doral's EMS relates to the monitoring and evaluation of Doral's environmental performance and consists of the following elements:

- Monitoring and measurement;
- Non-conformance and corrective and preventive action;
- Records;
- EMS audits;
- Annual review and update of the project's Environmental Risk Assessment and management procedures.

Doral will achieve continuous improvement for the Project by conducting an annual review and update of the Environmental Risk Assessment, risk treatments and management plans/procedures. Any additional risks and/or alternative forms of treatment/management that result in an improved outcome for site activities will be adopted, and the EMS will be updated accordingly.

Should this EMP be required to be revised and resubmitted to the EPA or DCCEW, it will be accompanied by documentation clearly identifying where changes have been made to ensure the review is efficient and addresses all proposed changes.

4. STAKEHOLDER CONSULTATION

Doral has consulted with several stakeholders in relation to the management of conservation significant fauna for the Proposal. A summary of the consultation is provided in Table 6.

TABLE 6: STAKEHOLDER CONSULTATION

STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
DWER (OEPA)	19/10/17 26/10/17 03/01/18 07/04/18 29/08/18 05/03/19 21/03/19 29/05/19 30/05/19 04/10/19	Pre-referral meeting; R Sutherland, R Hughes. All relevant environmental factors discussed. Referral Document received. Referral Document accepted and nominated as PER. Draft ESD submitted to EPA. Yalyalup Site Visit – R Hughes and M Spence. ESD Submitted to EPA. Presentation of Yalyalup Project to EPA Board. Submission of Revised version of ESD to EPA. ESD acceptable by EPA services and published on website. Submission to EPA of S43A amendment to Proposal for the amendment of Development Envelope and disturbance areas to include creation of internal access road.	No significant issues noted at this stage
DMIRS	14/02/18	Pre-referral meeting to discuss project; R Hepworth, L Copeland. All relevant environmental factors discussed.	No issues noted
DBCA	24/05/19	A Webb - Post referral meeting to discuss project, flora studies to date and proposed GDE survey scope. Reference to historic mineral sands dewatering incident at Gwinninup mine and likelihood of direct offsets due to dewatering risks of McGibbon Track. Likely offsets requirement due to dewatering risk of McGibbon Track. Several sites	Acknowledged

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	03/12/19	mentioned as possible Ironstone community for investigation by Doral. Email to DBCA; A Webb of completed Yalyalup GDE report for discussion.	Proposed meeting to discuss in new year (2020).
DWER- Licencing	01/12/17	Pre-referral meeting - D Hartnup to inform of proposal and relevant environmental factors.	No issues noted.
DWER - DoW	22/11/17	Pre referral meeting to discuss project; A De Chanee, R Gibbs. Potential for cumulative effects of dewatering with Avocado farm and Wonnerup North Mine.	Acknowledged.
DWER - Contaminated Sites Branch	13/11/17	Pre-referral meeting S Appleyard, S Jenkinson to discuss potential acid sulphate soils risk and intended management actions.	Acknowledged.
City of Busselton	09/08/19 09/12/19 2023 8/9/23 8/2/24 20/2/24	Email correspondence regarding construction for intersection and road reserve crossings. Meeting with City of Busselton Executive and CEO to discuss Yalyalup Proposal. Quarterly update and newsletter mailed. Meeting with CoB CEO and Director of planning to discuss Northern Extension proposal. Meeting with Director of Community planning and Infrastructure/Environment provide northern extension proposal overview, timeline, boundary, approvals process. Meeting with Shire council members and Executive to brief on Northern Extension proposal.	Committed to ongoing engagement.
SWALSC	06/08/19	Consultation; P Nettleton and M Benson to review Heritage agreement contract and request nomination of consultants for Ethnographic studies.	Agreed.
DAWE (previously DoEE)	01/11/17 09/11/17	Submission of referral of Project. Request for information; D Rothenfluh regarding Naturally Occurring Radioactive Materials.	Information supplied, not a nuclear action.

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	12/02/18	DAWE (then DoEE) decision a declared action. Assessment by EPA under bilateral agreement.	Acknowledged.
Water Corporation	12/12/19	Construction of crossing over Abba River identified as a drain under the <i>Water Services Act 2012</i> and will require approval by the Water Corporation.	The proposed construction of the bridge to cross the Abba River (drain) will not impede upon the waterway. Doral will provide suitable engineering drawings of the “bridge” design to the Water Corporation to satisfy Water Corporation Policy requirements.
LANDOWNERS (require approvals and/or agreements)			
Tonkin S & N Lot 2	2020/22 3/11/22 16/5/23 1/6/23 8/8/23 18/10/23 30/11/23 15/12/23	Regular consultation Yalyalup project overview, timeline, new developments and follow up on any concerns. Regular engagement on Northern extension proposal overview, timeline/boundary distance and environmental approvals/assessments. Noise, dust, visual amenity concerns Quarterly update and newsletter mailed. Community update letter Northern Extension proposal overview. Discussion on referral timeline.	Committed to ongoing engagement. Potential impacts assessed in modelling. Mitigation measures presented in management plans (refer social surroundings) Commenced mining lease discussions.
Tonkins G & A Lot 1	2020/22 2022/23 15/2/23 24/11/23	Consultation on Yalyalup project overview, timeline, boundary and exploration drilling. Quarterly update and newsletter mailed. Meeting on exploration drilling and northern extension proposal. Concerns water quality/quantity of bore. Meeting Northern extension proposal overview, timeline/boundary distance. Environmental approvals/assessments No concerns raised.	Investigation of historical bore monitoring results. No impact Potential impacts assessed in ERD and will be incorporated into water management plans (refer Hydrological Processes) Committed to ongoing engagement.
Cowcills Lot 102	2021-2023 18/10/23	Regular consultation on Yalyalup project overview, timeline, new developments and follow up concerns. Quarterly update letter/newsletter mailed.	Potential visual amenity impacts assessed. Tree planting provision. Potential impacts assessed in ERD and incorporated into noise and dust

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	5/12/23	<p>Community update overview of northern extension proposal.</p> <p>Meeting on Northern Extension progress, boundary, timeline and approvals process.</p> <p>Concerns with visual amenity and dust.</p>	<p>management plans (refer Social Surroundings).</p> <p>Committed to ongoing engagement.</p>
Stone Lot 1833	7/2/23 2022/23 18/10/23	<p>Consultation on exploration drilling and northern extension overview.</p> <p>Quarterly update and newsletter mailed.</p> <p>Community update letter. Northern Extension proposal overview and invitation to meet.</p> <p>Ongoing discussion on suitable meeting date.</p>	No concerns raised
Bills/Waters Lot 3196	18/10/22 13/11/23 29/2/24	<p>Community update letter. Northern Extension proposal overview and invitation to meet.</p> <p>Meeting on project proposal, timeline, boundary, environmental approvals process.</p> <p>Concerns on impact on Surface dam water.</p>	Potential impacts on water supply assessed in the groundwater modelling studies and ERD (refer Hydrological Processes).
Don Lot 1832	18/10/22 1/12/23	<p>Community update letter. Northern Extension proposal overview and invitation to meet.</p> <p>Project proposal, timeline, boundary, environmental approvals process.</p> <p>Dust concerns.</p>	Potential impacts assessed in ERD and incorporated into dust management plans (refer Social Surroundings).
Whiteland Lot 4	2019-2023 18/10/22	<p>Regular consultation on Yalyalup project overview, timeline, new developments.</p> <p>Quarterly update letters/newsletter mailed.</p> <p>Regular consultation on exploration drilling and project extension.</p> <p>Community update letter Northern Extension proposal and offer to meet.</p>	<p>Continue to send quarterly Community update and newsletter.</p> <p>No concerns raised.</p>

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Waters Haddon Lot 1761	2019-2023 18/10/22 15/12/24	Regular consultation providing Yalyalup project overview, timeline, new developments, receive feedback, follow up on any concerns. Quarterly update letters/newsletter mailed. Community update letter Northern Extension proposal and offer to meet. Northern extension proposal, timeline, boundary, environmental approvals process.	No concerns raised. Committed to ongoing engagement.
Hodgson Lot 1830	18/10/22 6/3/24	Community update letter. Northern Extension proposal overview and invitation to meet. Meeting Northern Extension overview, timeline, boundary and approvals process. Dust concerns.	Continue to send Quarterly update and newsletter. Potential impacts assessed in modelling. Mitigation measures presented in management plans (refer social surroundings) Committed to engagement.
Chapman Lot 1762 Lot 1764 Rentals	2021-2023 7/2/23 18/10/22 9/1/24 7/2/24 5/3/24	Quarterly updates, newsletter mailed. Bore Water quality issue. Quarterly update letter Northern extension overview and offer to meet. Phone/email to provide Northern extension update. Meeting to discuss the Northern Extension, timeline, boundary and approvals process. No issues raised	Investigations of historical data identified no impact. Potential impacts on water supply assessed in the groundwater modelling studies and ERD (refer Hydrological Processes). Continue quarterly updates to landowner and tenants. Committed to ongoing engagement.
Denny Lot 1 Lot 107 Rentals	2022/23 18/10/22 10/1/24	Regular consultation on Yalyalup project update, timeline, new developments, follow up on any concerns. Quarterly update letter mailed. Northern Extension overview and offer to meet. Consultation northern extension progress, timeline, boundary, approvals process. Dust concerns.	Dust monitoring and assessment conducted. Dust mitigation strategies adopted. Potential impacts assessed in ERD and incorporated into dust management plans (refer Social Surroundings).

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Avery Lot 1270	2020-2023 18/10/22 14/2/24	Regular consultation providing Yalyalup project overview, timeline, new developments, follow up on concerns. Quarterly update letter/newsletter mailed. Northern Extension overview and offer to meet. Discussion on extension proposal, timeline, boundary, approvals process. Dust, water, vermin control concerns.	Potential impacts assessed in ERD and incorporated into noise and dust management plans (refer Social Surroundings). Committed to ongoing engagement
Hodge 309	2019-2022 2022/23 18/10/23 8/1/24 14/02/24	Consultation providing Yalyalup project overview, timeline, new developments, receive feedback, follow up on any concerns. Quarterly update letter/newsletter mailed. Community update letter. Northern Extension proposal overview and invitation to meet. Phone discussion on northern extension. Concerns on summer weather conditions impacting on dust/noise. Follow up to offer to meet to discuss Northern extension proposal, timeline, boundary, and approvals process. No response	Potential impacts assessed in ERD and incorporated into dust and noise management plans (refer Social Surroundings). Committed to ongoing engagement
Plank Lot 15	2022/23 2022/23 18/10/23 18/12/23 4/1/24 9/1/24	Quarterly update letter/newsletter mailed. Consultation on Yalyalup minesite and noise concerns. Quarterly community update/newsletter mailed. Community update letter, Northern Extension proposal overview. Phone and email invitation to meet to discuss extension proposal in early 2024. Exploration drilling on adjacent property and invitation to meet. No response.	Potential impacts assessed in ERD and incorporated into noise management plans (refer Social Surroundings).

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Teal Lot 1831	18/10/23 29/1/24	Community update letter mailed on Northern extension proposal and invitation to meet. Phone call to discuss extension. Concern on distance and potential impacts.	Continue to send community update sand newsletter. Potential impacts assessed in ERD and incorporated into management plans (refer Social Surroundings).
Harbeck Lot 61 Lot 1757 Rental	2022-2023 18/10/23 26/02/24	Quarterly update letter mailed. Regular consultation exploration drilling. Community update letter. Northern Extension proposal overview and invitation to meet. Meeting on Northern extension overview, timeline, boundary, and approvals process.	No concerns raised
Radford Lot 82	2021-2023 18/10/23 9/1/24	Quarterly update letter/newsletter mailed. Community update letter. Northern Extension proposal overview and invitation to meet. Phone discussion on extension timeline and boundary. Public road condition a concern.	
Buchan Lot 81	2020-2023 18/10/23 9/1/24 5/2/24	Consultation via email. Quarterly update letter emailed to postal address. Community update letter. Northern Extension proposal overview and invitation to meet. Phone and Email offer to meet to discuss extension plans.	No Concerns raised.
Van Kleef Lot 651	2019-2022 2022/23 18/10/23 30/11/23 30/1/24 21/02/24	Phone discussion providing project overview. Interested in site plan/ layout and proximity to residence including road haulage options. Quarterly update letter mailed to postal address. Northern extension overview and offer to meet. Phone call and email on extension proposal. Offer to meet to update on intent, boundary, timeline, approvals process.	No concerns raised. Follow up meeting in 2024. Committed to ongoing engagement

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Ealing Lot 1759	2022-2023 8/6/23 18/10/23 9/1/24 11/1/24	Quarterly update letter/newsletter emailed. Exploration drilling program Community update letter mailed on northern extension overview and offer to meet. Emailed purpose of meeting, northern extension referral, timeline, boundary, approvals process. Not interested in meeting. Amenity concerns.	Committed to quarterly community update letters and newsletters. Potential impacts assessed in ERD and will be incorporated into noise and dust management plans (refer Social Surroundings).
P & A Macleay Lot 843 Lot 748	2017 – 2022	Regular consultation providing project overview, timeline and any new developments, receive feedback, follow up on any concerns. Quarterly update letter mailed to postal address.	Property sold 2022.
K & J Hester Lot 103 Lot 104	2017 – 2019	Ongoing engagement regarding project proposal, timeline and environmental approvals process.	Property sold 2020
Mark Conrau Lot 4551 Land only	2019-2023 18/10/24 21/2/23	Consultation and quarterly updates on Project overview, approvals process, timeline, new developments. Quarterly update letter mailed on northern extension and offer to meet. Meeting to discuss Northern Extension proposal overview, timeline and approvals process.	No concerns raised.
A & K Bashford Lot 1426 Lot 552	2017 – 2022 31/10/22 2022 /2023 18/10/22	Regular consultation providing project overview, timeline, new developments, receive feedback. Quarterly update letter mailed to postal address. Quarterly update letter mailed to postal address. Community update Northern Extension proposal overview and invitation to meet.	Committed to ongoing engagement. Mining agreement commenced October 2022.

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Boardman Lot 3773	2017 – 2023 18/10/24	Ongoing engagement providing project progress, timeline, new developments, follow up on any concerns. Quarterly update Northern Extension overview and invitation to meet.	Mining agreement discussion commenced. No concerns raised. Committed to ongoing engagement.
Slade Lot 668 Lot 421	2017- 2024 2022/23 18/10/23	Ongoing consultation on project progress, timelines, new developments, follow up concerns raised. Dust management, noise, water concerns. Quarterly update letter mailed. Community update letter. Northern Extension proposal overview and invitation to meet.	Undertake dust sampling pre-mining and radiation survey. Incorporate in Dust Management Plan. Potential noise impacts incorporated in MP. Soil and water testing incorporated in mine closure plan.
Gronya Swift Lot 200	2017-2019 5/06/19	Project overview and next phase of work were discussed. Preliminary mine plan and approvals process discussed.	Potential impacts on water supply assessed in the groundwater modelling studies and ERD (refer Hydrological Processes). Property sold in 2020
Jane Gilham Lot 200	2020-2023 18/10/24 24/11/23	New owners contacted and informed of Yalyalup project. Regular engagement on project timeline and progress. Quarterly update letter mailed Northern Extension overview and invitation to meet. Northern Extension proposal discussion northern extension proposal, timeline and approvals process. Concern on impacts water supply from natural creek line.	Committed to ongoing engagement. No concerns raised. Committed to ongoing engagement. Potential impacts assessed in ERD and will be incorporated into water management plans (refer Hydrological Processes)
Mitchell & Anstey Lot 292	2019-2024 18/10/222	Regular engagement on project progress, timeline and follow up concerns. Quarterly update letter mailed Northern Extension overview and invitation to meet. Meeting Northern Extension proposal overview, timeline and approvals process.	Potential impacts assessed in ERD and will be incorporated into noise, dust and water management plans (refer Hydrological Processes and Social Surroundings). Committed to ongoing engagement.
McClean Lot 10	2017 – 2022	Regular consultation on Yalyalup project, timeline, new developments and any concerns or feedback.	No concerns raised.

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	18/10/22 20/02/24	Quarterly update letter mailed. Northern Extension proposal overview and invitation to meet. Discussion on Northern Extension proposal. Arrange time to meet.	
NEAR NEIGHBOURS (residents)			
Jamie Oates Lot 652	2017 – 2024 18/10/22 16/11/23	Regular consultation on Yalyalup project, timeline, new developments and follow up any concerns. Concern raised at increased traffic on Ludlow Hithergreen Road and visual amenity. Quarterly update letter mailed. Northern Extension proposal overview and invitation to meet. Meeting to discuss Northern Extension proposal overview, timeline, approvals process.	Advised of the proposed road access and haulage route as per mine plan. Potential visual amenity impacts assessed. Tree planting along haulage route. Follow up meeting to advise on mitigation measures (refer social surroundings) No concerns raised
Treanor Lot 60 Rental	2020-2021 2022/23 8/10/23	Overview of project, timeline and approvals process. Concerned at increase in traffic in general and air quality. Quarterly update letter mailed to postal address. Northern Extension proposal overview and invitation to meet.	Advised of the proposed road access and haulage route as per mine plan. Potential impacts assessed in modelling. Mitigation measures presented in management plans (refer social surroundings) Committed to ongoing engagement with landowner and tenant.
Clifford Lot 52	2020-2023 18/10/23	Meeting to discuss project plan, timeline and update. Concern noise, truck movements Quarterly update letters emailed and mailed to postal address. Northern Extension proposal overview and invitation to meet.	Potential impacts assessed in ERD and incorporated into noise and dust management plans (refer Social Surroundings).
Taylor's Lot 102	2020/ 2021	Project overview, timeline and rehabilitation. Quarterly update letter mailed to postal address.	Property sold 2021
Phillips Lot 229	2017	Consulted on Yalyalup project overview, mine plan and approvals process.	Committed to ongoing engagement via tenant. Continue community update letters.

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Rental	2020/21 18/10/23 6/2/24	Quarterly update letter mailed to landowner and tenant. Northern Extension proposal overview and invitation to meet. Phone call to discuss Northern Extension. No concerns raised.	
Scott, Spragg, Hartnett Lot 1461	2019-2022	Overview Yalyalup project, timeline, and approvals process. Quarterly update letter mailed.	Property sold 2022
Peter Oates Lot 1370, Lot 3382, 1976	2019-2023 18/10/23 15/1/24 5/3/24	Regular consultation of Yalyalup project, mine plan and timeframe. Concerns at McGibbon track access and closure. Quarterly update letter mailed. Community update letter northern extension proposal and offer to meet. Meeting discuss Northern Extension proposal, boundary, timeline and approvals process.	Potential impacts assessed in the Groundwater Dependent Ecosystems Study and the ERD (refer Flora and Vegetation and Hydrological Processes factors). No concerns raised
Copeland Lot 221	2019-2023 18/10/23 15/12/23	Consultation Yalyalup project, mine plan, approvals process and timeframe. Quarterly update letter/newsletter emailed and mailed. Community update letter northern extension proposal and offer to meet. Meeting discuss Northern Extension proposal, boundary, timeline and approvals process.	No concerns raised.
A Franklin Lot 52	2019-2022 18/10/23 8/2/24	Phone discussion on Yalyalup project overview, current work, and timeframe. Quarterly update letter mailed to postal address. Community update letter northern extension proposal and offer to meet. Meeting extension overview, timeline, boundary, approvals process.	No concerns raised.
Wright Lot 1758	2022/23	Regular consultation on Yalyalup project, new developments, timeline.	No Concerns raised

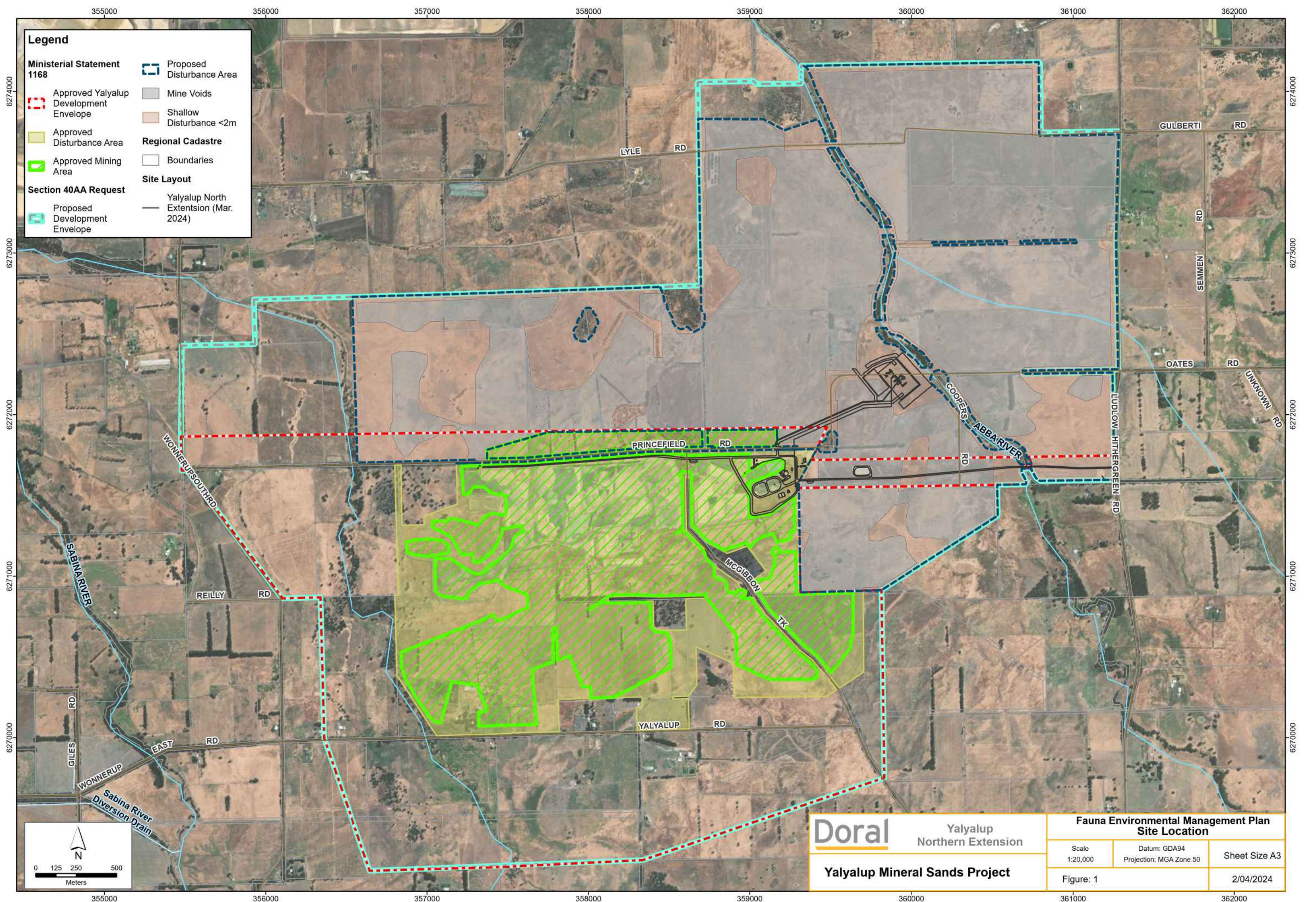
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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	17/2/223 18/10/23	Drilling, northern extension preliminary discussions. Community update letter and phone conversation on extension proposal, timeline, boundary, approvals process.	
Jones	20/02/24	Preliminary discussion on northern extension. Meeting end of March Water supply concerns.	Potential impacts assessed in ERD and will be incorporated into water management plans (refer Hydrological Processes).

5. REFERENCES

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FIGURE 1: REGIONAL SETTING



Legend

Ministerial Statement 1168

- Approved Yalyalup Development Envelope
- Approved Disturbance Area
- Approved Mining Area

Section 40AA Request

- Proposed Development Envelope

Proposed Disturbance Area

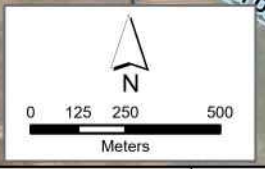
- Mine Voids
- Shallow Disturbance <2m

Regional Cadastre

- Boundaries

Site Layout

- Yalyalup North Extension (Mar. 2024)

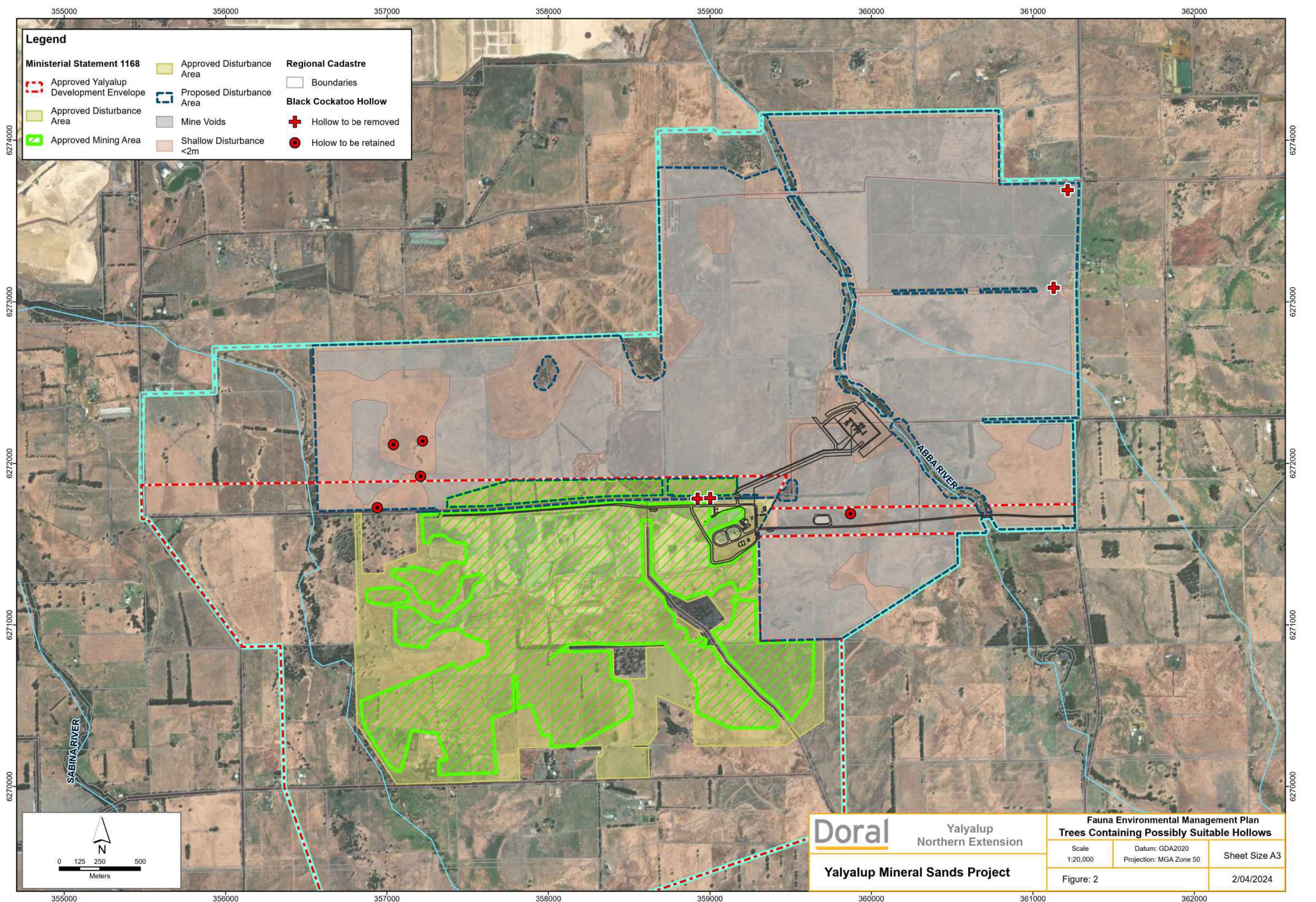


Doral Yalyalup Northern Extension

Yalyalup Mineral Sands Project

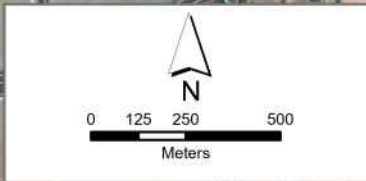
Fauna Environmental Management Plan Site Location		
Scale 1:20,000	Datum: GDA94 Projection: MGA Zone 50	Sheet Size A3
Figure: 1	2/04/2024	

FIGURE 2: POTENTIAL BLACK COCKATOO BREEDING TREES



Legend

Ministerial Statement 1168		Regional Cadastre	
[Red dashed line]	Approved Yalyalup Development Envelope	[White box]	Boundaries
[Yellow hatched box]	Approved Disturbance Area	[Cyan dashed line]	Proposed Disturbance Area
[Green hatched box]	Approved Mining Area	[Grey box]	Mine Voids
		[Light brown box]	Shallow Disturbance <2m
		[Red cross]	Hollow to be removed
		[Red circle]	Hollow to be retained



	Yalyalup Northern Extension		Fauna Environmental Management Plan	
	Yalyalup Mineral Sands Project		Trees Containing Possibly Suitable Hollows	
	Scale: 1:20,000	Datum: GDA2020 Projection: MGA Zone 50	Sheet Size A3	
Figure: 2		2/04/2024		

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