

APPENDIX 7C: FAUNA MANAGEMENT PLAN



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

Report Number:

DMS-YAL-NTH_EMP-8.1 FAUNA

6-MAY-25

YALYALUP MINERAL
SANDS PROJECT

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DOCUMENT DETAILS

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AMENDMENT REGISTER

DATE	REV	DESCRIPTION OF REVISION	REVIEW	APPROVED
27/3/24	1	Fauna Environmental Management Plan for EPA/DCCEEW referral submissions	CB	CB
6/5/25	2	Fauna Environmental Management Plan for DCCEEW submission of PD	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.	TBA
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).⁶ • 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 Fauna 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/Proposed Action (Figure 1) as outlined in the following documents:

- *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

The Proposal/Proposed Action will operate 24 hours a day, seven days a week. However, all mining activities will stop during the evening and night time (7pm-7am), and only the feed prep and Wet Concentrator Plant will remain in operation. All processing activities occur within the already approved area of the Yalyalup Mine under EPBC 2017/8094.

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; • 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 is being assessed separately by the EPA and DCCEE. As such, there are currently no Condition requirements at the time of preparation of this EMP; however, it is anticipated that a 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) completed a fauna assessment for the Proposal/Proposed Action (BCE, 2024) which included:

- A Desktop Study and Level 1 Fauna Survey in accordance with Technical Guidance – Terrestrial Fauna Surveys (EPA, 2016h) and Technical Guidance – Sampling Methods for Terrestrial Vertebrate Fauna (EPA, 2016) for Terrestrial Fauna potentially present within the DE;
- Targeted Western Ringtail Possum assessment in areas containing suitable habitat within the DE in accordance with relevant EPA and Commonwealth guidance;
- Targeted black-cockatoo assessment in areas containing suitable habitat within the Development Envelope in accordance with relevant EPA and Commonwealth guidance;
- Conduct a follow-up camera pole survey of 17 x Rank 3 trees (suitable DBH trees with potentially suitable hollows) located within the potential disturbance area to assess hollow suitability;
- Describe the terrestrial fauna, including conservation significant and migratory species that occur or are likely to occur within the Proposed Action;
- Conduct targeted surveys for any other significant species, communities or habitats identified by the desktop study and Level 1 survey as potentially being present.

OVERVIEW OF FAUNA VALUES

The DE is predominantly cleared pasture used for stock grazing but there are some remnant bushland patches, large paddock trees and established gardens around farm buildings. The degraded nature of the

vegetation, presence of stock and absence of any understorey within native vegetation areas are considered to be of limited value to ground-dwelling fauna.

Three threatened Black Cockatoo species, however occur in the area, with their conservation significance under the EPBC Act and BC Act presented below:

- Carnaby’s Black-Cockatoo (*Zanda latirostris*) (CBC) – listed as Endangered under the *BC Act* and *EPBC Act*.
- Baudin’s Black-Cockatoo (*Zanda baudinii*) (BBC) – listed as Endangered under the *BC Act* and *EPBC Act*.
- Forest Red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*) (FRTBC) – listed as Vulnerable under the *BC Act* and *EPBC Act*.

The following species were not identified to be present within the DE:

- Western Ringtail Possum (*Pseudocheirus occidentalis*) (WRP)– listed as Critically Endangered under the *BC Act* and *EPBC Act*.
- Carter’s Freshwater Mussel (*Westralunio carteri*) (CFM) – listed as Vulnerable under the *BC Act* and *EPBC Act*.
- Balston’s Pygmy Perch (*Nannatherina balstoni*) (BPP) – listed as Vulnerable under the *BC Act* and *EPBC Act*.

VEGETATION AND SUBSTRATE ASSOCIATIONS (VSAS)

There were eight VSAs identified in the DE: Paddocks with scattered mature trees (VSA 8) were the dominant VSA (Figure 2). The key fauna values of this VSA were in the mature trees, most of which were large native remnant trees (e.g. Marri). Mixed Marri woodland and Stream with mixed Marri (VSAs 1 and 2) were represented along road verges, in patches, and along the Abba River; this is native remnant vegetation and likely supports the highest biodiversity due to the floristic and structural diversity. There were patches of Melaleuca dampland (VSA 6) which will support a unique suite of species. The Flooded Gum stands (VSA 3), Planted Eucalypts (VSA 4) and Stream with planted Eucalypts (VSA 5) likely provides foraging, roosting and connectivity value, while the Planted Garden (VSA 7) likely supports more common garden species. The total area of the VSAs in the DE is presented in the table below.

TABLE 2: TOTAL VSA AREAS WITHIN DE

VEGETATION AND SUBSTRATE ASSOCIATIONS			AREA WITHIN DE
VSA 1	Mixed Marri Woodland	Closed woodland of Marri (<i>Corymbia calophylla</i>) with scattered Jarrah (<i>Eucalyptus marginata</i>), Flooded Gum (<i>Eucalyptus rudis</i>) and Swamp Mahogany (<i>Eucalyptus robusta</i>) over a sparse midstorey of <i>Kunzea sp</i> , <i>Agonis flexuosa</i> , <i>Xanthorrhoea pressii</i> , and <i>Banksia grandis</i> with a disturbed understory of introduced grasses on grey to white sand.	4.60
VSA 2	Stream with mixed Marri	Closed remnant woodland with Marri (<i>Corymbia calophylla</i>) and patches of <i>Eucalyptus rudis</i> over an open midstorey of <i>Agonis flexuosa</i> and <i>Melaleuca raphiophylla</i> , with an	10.58

VEGETATION AND SUBSTRATE ASSOCIATIONS			AREA WITHIN DE
		understorey of exotic grasses and sedges on grey sand along stream banks.	
VSA 3	Flooded Gum stand	Open stand of Flooded Gum (<i>Eucalyptus rudis</i>) with no midstorey and understorey consisting of invasive grasses and weeds on grey to white sand.	0.75
VSA 4	Planted Eucalypts	Open woodland or stand of scattered planted mature eucalypt trees (often exotic) such as <i>Eucalyptus camaldulensis</i> and <i>Corymbia maculata</i> over a grassy understorey on grey to white sand.	20.39
VSA 5	Stream with Planted Eucalypts	Human-made stream (irrigation channel) with introduced eucalypts on banks with no midstorey or understorey over introduced grasses on grey to white sand.	0.26
VSA 6	Melaleuca Dampland	It ranges from open to closed damp land with <i>Melaleuca raphiophylla</i> , a midstorey of scattered <i>Kunzea</i> , and an understorey of invasive weeds and grasses on dark grey sand. It appears to be seasonally inundated.	7.84
VSA 7	Planted Garden	Ornamental species are in proximity to dwellings, with scattered introduced eucalypts, remnant and planted <i>Agonis flexuosa</i> , and pine trees (<i>Pinus pinaster</i>) on grey to white sand.	0.58
VSA 8	Paddocks with scattered mature trees	Previously cleared paddocks planted with exotic planted grasses, used for grazing, with scattered mature trees, mostly native remnant and some planted, on grey to white sand.	946.85
			991.85

BLACK-COCKATOOS FORAGING HABITAT

All three species of Black-Cockatoo present in the South-West are expected to be regular visitors to the DE. During the field investigations, a flock of three CBC's were observed near the existing mining area, and foraging evidence of BBC was recorded within the DE.

(BCE, 2024) mapped the majority of the DE as VSA 8 (paddocks with mature trees), and this VSA has a low foraging value of 3 out of 10 for all species. The presence of scattered mature trees is key to even this HQS. The highest foraging values for all species are in VSAs 1 and 2, which contain Marri; these provide a moderate foraging value for the CBC (6 out of 10) and a high foraging value for the BBC and FRTBC (7 out of 10). However, only very small areas of these VSAs will be impacted by the Proposed Action, with the majority of the disturbance occurring in the paddocks with mature trees (VSA 8).

Foraging values (i.e. Habitat Quality Score, HQS) (out of ten) for each Black Cockatoo species are presented in the table below. Further information is provided in the Fauna Assessment (BCE, 2024).

TABLE 3: BLACK COCKATOO VSA FORAGING QUALITY (OUT OF TEN)

VSA	DESCRIPTION	CBC HQS	BBC HQS	FRTBC HQS
1	Mixed Marri Woodland	6	7	7
2	Stream with mixed Marri	6	7	7
3	Flooded Gum stand	2	2	2
4	Planted Eucalypts	2	2	2
5	Stream with Planted Eucalypts	2	2	2
6	Melaleuca Dampland	1	1	1
7	Planted Garden	3	2	2
8	Paddocks with scattered mature trees	3	3	3

NESTING HABITAT WITHIN DE

The suitability of the DE for potential nesting habitat was assessed by checking for large, potentially hollow-bearing trees that may facilitate nesting by Black Cockatoos, and assigning trees a rank using a system developed by BCE. DSEWPaC (2012) and DAWE (2022) consider trees that meet the basic criterion of having a DBH >500mm (or >300mm for Wandoo) as being potential Black-Cockatoo nesting trees. The BCE ranking system allows trees that meet this criterion to be assessed as to the likelihood of a tree actually being used for nesting (BCE, 2021; 2022). Trees with a rank of 4 or 5 are extremely unlikely to contain hollows that could be used for nesting, although could eventually develop hollows of suitable size. Trees ranked from 1 to 3 are either being used (rank of 1), have been recently used based on chew marks around a suitable hollow entrance (rank of 2), or have potentially suitable hollows that have not been recently used (rank of 3).

The final tree classifications of the (BCE, 2024) survey results within the DE are:

- 721 trees with suitable DBH comprising:
 - 24 x rank 3 trees;
 - 57 x rank 4 trees;
 - 640 x rank 5 trees.

In addition, 43 trees with suitable DBH, previously avoided for the Original Proposal (EPBC 2017/8094), are included in the DE and Proposed Action. It is noted that these 43 trees were assessed by (Harewood, 2020a) (Harewood, 2020b) were not assigned a tree ranking as used by (BCE, 2024). This brings the **total trees with suitable DBH within the DE to 764**.

The locations of the trees and their rankings are shown in Figures 3: Area 1, Area 2 and Area 3. Details of each tree with suitable DBH, including GPS coordinates and rankings, are provided in Appendix 8 of BCE (2023).

The DBCA threatened species database returned three confirmed nesting hollows within 15km of the DE, these are of the CBC and were all natural breeding hollows (not artificial hollows). The closest breeding site to the DE is located 4.2km northeast.

NESTING HABITAT WITHIN PROPOSED ACTION

A total of **177 trees with suitable DBH** (113 included within native vegetation areas and 64 present as isolated scattered paddock trees) occur within the Proposed Action and will require clearing (Figure 3). A total of **4 trees with possibly suitable hollows** will also be cleared. The BC trees containing possibly suitable hollows to be cleared are shown in Figure 4.

The total of 177 trees, comprises 134 trees from the current Fauna Survey by (BCE, 2024), while an additional 43 trees, are from the Original Survey (EPBC 2017/8094) are now also proposed for disturbance.

BLACK COCKATOO ROOSTING HABITAT

Night roosts are used regularly by black-cockatoos and are therefore of significance to the species. No night roosts were recorded in the DE during the roost survey (BCE, 2024). Due to the absence of night roosts within the DE no consideration of vegetation within 500m was required.

WESTERN RINGTAIL POSSUM

The WRP (or evidence of the species) was not recorded in the DE (BCE, 2024). The species was recorded along McGibbon Track as part of surveys for the Original Proposal (EPBC 2017/8094) in 2017 and 2019 by (Harewood, 2020a). As per EPBC 2017/8094 conditions, annual WRP monitoring along a 2km section of McGibbon Track has also occurred since commencement of the Action in 2021. Results to date indicate that only one WRP has been recorded since 2019, which was recently in May 2024. A steady number of Common Brushtail Possums has been recorded in the monitoring area, with a total of 7 recorded in May 2024.

Suitable habitats for the species occur in the DE, particularly along road verges and the Abba River, which are predominantly avoided by disturbance. These habitats align with the VSAs 1 and 2 (15.18 ha) as they contain foraging habitat of mixed marri, jarrah and peppermint trees with a close water source.

The home range of the WRP is reported on average to be less than 5ha (Jones, 2001). Home ranges in the jarrah forest average 2.7ha (Wayne, Ward, Rooney, & Wheeler, 2000). Home ranges in peppermint dominated habitat are generally less than two hectares and average 0.4ha and 0.3ha for females and males respectively (Jones et al. 1994b; cited in DPAW, 2017). Densities as high as 20 possums per hectare have been determined in some remnants of the Busselton peppermint stands compared to about four adults per hectare in the jarrah forest (Jones, 2004; cited in DPAW, 2017). There is evidence of territoriality within western ringtail possums (Ellis and Jones 1992; cited in DPAW, 2017). Most young establish home ranges next to the natal range, but in high density groups, young disperse across distances equivalent to several home ranges (Harewood 2005; cited in DPAW, 2017).

Fauna habitat present within the DE is outside of Area 1 - Core Habitat, Area 2 - Primary Corridors and Area 3 - Supporting Habitat as documented in the *Significant Impact Guidelines for the Vulnerable Western Ringtail Possum in the Southern Swan Coastal Plain, Western Australia* (DEWHA, 2009). The nearest core habitat to the Site occurs in Tuart Forest National Park (DEWHA, 2009).

1.4.2. KEY ASSUMPTIONS AND UNCERTAINTIES

The key assumptions and uncertainties with this EMP include:

- The Fauna surveys have accurately recorded the presence of all conservation significant fauna species and habitats that may be affected by the Proposal/Proposed Action;
- 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 and Offset as required;
- Direct impacts to fauna during construction of the Proposal relates to habitat loss;
- Mobile fauna will disperse in front of clearing activities;
- An Offset Strategy has been prepared to offset significant residual impacts to conservation significant fauna and habitat (i.e. Black Cockatoo foraging and potential nesting 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 Offset Strategy in consultation with EPA and DCCEE. 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;
- 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 in the table below 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 4: 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 four Black Cockatoo trees containing a possibly suitable hollow.</p> <p>No WRP individuals or dreys were identified within the Proposal area; therefore, none will be affected by the Proposal.</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> <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>

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KEY IMPACTS/RISKS	MANAGEMENT ACTION
<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>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> <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>
<p>Dust, noise and light</p>	<p>Implement the Dust EMP and Noise EMP to mitigate the generation of dust and noise 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>

KEY IMPACTS/RISKS	MANAGEMENT ACTION
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 (refer to the Flora and Vegetation EMP).</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	Fire risk will be managed through the implementation of a Bushfire Management Plan.

2.3. MANAGEMENT TARGETS

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

TABLE 5: 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.
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> .
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.
Altered fire regime	No impacts to fauna habitat from an 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.

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As detailed in the following Table, 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 6: 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	<p>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.</p>	<p>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.</p>
Increase in feral fauna and pest species	<p>The effectiveness of the 1080 fox/feral cat control program will be assessed annually in 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 annually in AER.</p> <p>Reported in production meetings.</p>
Dust, noise and light	<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>
Introduction and/or spread of weed and dieback to WRP habitat	<p>Weed and dieback monitoring per the Flora and Vegetation EMP.</p>	<p>Reported annually in AER.</p>
Altered fire regime	<p>Daily monitoring for the presence of fires in the area through review of the DFES website</p>	<p>Reported in response to exceedance of an agreed trigger or threshold within the Bushfire EMP.</p>

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KEY IMPACT/RISK	MONITORING	REPORTING
	during fire season per the Fire EMP until two years post-mining.	

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 the following table 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 7: 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.
Feral fauna and pest species	Presence of any predatory feral	Identification of one or more predatory feral	<ul style="list-style-type: none"> • Investigate the cause and report to the Doral OHS&E Superintendent.

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MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
	fauna and pest species (i.e. fox and cat) within the disturbance area.	fauna and pest species (i.e. fox and cat) within fauna habitat.	<ul style="list-style-type: none"> • 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. • Monitor outcomes.
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 Flora and Vegetation 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"> • 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.

MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
Altered fire regime	Presence of uncontrolled fire within the disturbance area.	Uncontrolled fire impacts the conservation significant habitat.	<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 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 5) 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 6) 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;
- 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 the following table.

TABLE 8: STAKEHOLDER CONSULTATION

STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
DWER (OEPA) – Rowan Inglis	11/03/2024	Proposed Yalyalup Northern extension	Doral Request for pre-referral meeting
OEPA – Rowan Inglis, Robert Hughes	19/03/2024	Yalyalup Northern Extension – Pre-referral meeting	Presentation by Doral and discussion, no issues
OEPA – Rowan Inglis	05/04/2024	Yalyalup Northern Extension Referral submitted into Environment online	Document submitted, no issues
OEPA – Rowan Inglis	27/05/2024	EPA Level of assessment determined as Assessment of Referred Information with 4 week public consultation period	Acknowledged
OEPA – Rowan Inglis	29/10/2024	EPA request for further information forwarded to Doral	Acknowledged
OEPA – Rowan Inglis, Annarie Boer, DCCEEW - Neil Riches, Maddi Wenzel	06/11/2024	Meeting to discuss proposed Offsets site with Doral and DCCEEW	Presentation by Doral describing proposal and in particular related Black cockatoo values
OEPA – Rowan Inglis	18/12/2024	Email from Doral	General update of progress on RFI response and offsets vegetation survey
OEPA – Rowan Inglis	Dec 2024 – Apr 2025	Periodic general correspondence via teams and email with Doral to discuss progress of the RFI information and offsets	Communication support by assessing officer is appreciated by Doral
DCCEEW – Maddi Wenzel, Neil Riches	02/05/2024	Pre-referral meeting for the Yalyalup North Extension	Presentation from Doral and discussion
DCCEEW Gateway	28/05/2024	Submission of referral 2024/09870 was received and under validation	Acknowledged
DCCEEW – Maddi Wenzel	11/07/2024	EPBC 2024/09870 Controlled Action - Decision notice issued to Doral Assessment by DCCEEW - Preliminary Documentation and Request for Further Information forwarded to Doral	Acknowledged

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
DCCEEW – Maddi Wenzel, Neil Riches	16/08/2024	Offsets discussion with Doral	Doral presented general overview of proposed offset site
DCCEEW – Maddi Wenzel, Neil Riches, OWE Officers	09/10/2024	Meeting to discuss response to hydrological queries in Request for Information	Comprehensive response prepared and delivered to DCCEEW Office of Water Sciences. No further issues noted
DCCEEW - Neil Riches, Maddi Wenzel OEPA – Rowan Inglis, Annarie Boer	06/11/2024	Meeting to discuss proposed Offsets site with Doral and EPA	Presentation by Doral describing proposed site and in particular related Black cockatoo values
DCCEEW – Maddi Wenzel	Nov 2024 – Apr 2025	Periodic general correspondence via teams with Doral to discuss progress of the RFI information and offsets	Communication support by assessing officer is appreciated by Doral
Dept Planning, Lands and Heritage	05/06/2023	Received notice of request for Section 18	Doral submitted Section 18 request to impact land
Dept Planning, Lands and Heritage	13/12/2023	Consent granted with conditions	Acknowledged
DBCA – Andrew Webb	15/08/2024	General discussion of proposed offset site	DBCA contacted by Doral to inform of proposal
City of Busselton	8/9/2023 18/10/2023 to 17/12/2024 20/3/2024	Yalyalup operation update and Northern Extension proposal overview. Quarterly Community Update letter on proposed northern extension of current Yalyalup operations, approvals and referral process. Continued project update on progress. Meeting Northern Extension project update, proposed road closure and approvals process.	No issues
Ruabon Fire Brigade	25/7/2024 30/7/2024	Discussion regarding Northern Extension project, possible road closure and potential impacts. Offer extended and open to meet Committee members to discuss.	Potential impacts assessed and incorporated into traffic management plan. Shire road closure request in progress
SWALSC, South West Boojarah consultants,	31/05/2023	Site visit and consultation of Yalyalup extension proposal and proposed actions	No issues

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Karri Karrak Aboriginal Corporation			
LANDOWNERS, RESIDENTS, NEAR NEIGHBORS			
Lot 1270	18/10/2023 to 17/12/2024 10/1/2024 14/2/2025	Quarterly Community update letter. Northern Extension (NE) proposal overview and invitation to meet. Update letter outlining NE project, timeline and referral process. Meeting on NE project overview and environmental approvals process. Meeting project update, timeline, disturbance boundary and approvals process. Dust, water, vermin control concerns.	Potential impacts assessed in ERD and incorporated into noise and dust management plans (refer Social Surroundings). Vermin/pest impacts assessed and incorporated into annual control program.
Lot 3196	13/11/2023 18/10/2023 to 17/12/2024 29/2/2024 26/11/2024	Meeting Northern Extension (NE) proposal, timeline, boundary, environmental studies. Quarterly Community update letter on Northern Extension proposal. Invitation to meet. Letter outlining Northern Extension project, timeline and referral process. Community update letter on project progress and environmental approvals process. Phone discussion northern extension road including road closure proposal. Meeting on project proposal, timeline, disturbance boundary, environmental approvals process. Concerns on impact on surface dam water.	Potential impacts on water supply assessed in the groundwater modelling studies and ERD (refer Hydrological Processes). Road closure proposal to be assessed and approved City of Busselton.
Lot 81	18/10/2023 to 17/12/2024	Consultation via email. Quarterly update letter emailed. Northern Extension proposal overview and invitation to meet.	No Concerns raised.
Lot 221	18/10/2023 to 17/12/2024	Community update letter Northern Extension proposal and offer to meet. Quarterly update letters posted overview of extension proposal, timeline, referral assessment and approvals process.	No concerns raised.

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	15/12/2023	Meeting provided overview of the Northern Extension proposal, boundary, timeline and approvals process.	
Lot 4551 Land only no residence	18/10/2023 to 17/12/2024 29/2/2025	Quarterly community update letter mailed on northern extension and offer to meet. Update letter outlining NE project, timeline and referral process. Update letter on progress and environmental approvals process. Meeting to discuss NE project and approvals process.	No concerns raised.
Lot 102	5/12/2023 18/10/2023 to 17/12/2024 5/3/2025 25/11/2024	Meeting Northern Extension (NE) proposal overview. Quarterly Community update letter on proposal to extend current Yalyalup operations. Invitation to meet in person. Update letter outlining NE project, timeline, location and referral process. Meeting Northern Extension progress update. Concerns with visual amenity, dust and noise.	Potential visual amenity impacts assessed. Potential impacts assessed in ERD and incorporated into noise and dust management plans (refer Social Surroundings). Committed to ongoing engagement.
Lot 1762 Lot 1764 (Rentals)	18/10/2023 to 17/12/2024 5/3/2024	Quarterly Community Update letter, Northern Extension (NE) proposal overview and invitation to meet. Update letter outlining NE project, timeline and referral process. Meeting to discuss the Northern Extension, timeline, location and approvals process. Regular phone dialogue to arrange meeting. No issues raised	Potential impacts on water supply assessed in the groundwater modelling studies and ERD (refer Hydrological Processes). Committed to ongoing engagement.
Lot 1 Lot 107 (Rentals)	18/10/2023 to 17/12/2024 10/1/2024	Quarterly Community update letter. Northern Extension (NE) proposal overview and invitation to meet. Update letter outlining NE project, timeline and location. Update letter on project progress and environmental approvals process. Meeting project overview, timeline, disturbance boundary and approvals process.	

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
		No concerns raised.	
Lot 1832	1/12/2023 18/10/2023 to 17/12/2024	Meeting to discuss Northern Extension (NE) proposal, timeline, location and approvals process. Quarterly Community update letter. NE proposal overview and invitation to meet. Letter outlining NE proposal, timeline and referral process. Community update letter on project progress and environmental approvals process. Dust concerns.	Committed to continue ongoing engagement and see follow up meeting. Potential impacts assessed in ERD and incorporated into dust management plans
Lot 1760	15/12/2023 18/10/2023 to 17/12/2024 15/12/2024 15/8/2025	Meeting Northern Extension (NE) proposal overview. Quarterly Community Update letter proposal extension overview and invitation to meet. Community update letter on project progress and environmental approvals process. Meeting to discuss project proposal, timeline, boundary, environmental approvals process. Meeting Northern Extension progress update.	Committed to ongoing engagement. No concerns raised.
Lot 1830	18/10/2023 to 17/12/2024 5/3/2024 24/11/2025	Quarterly Community Update letter. Northern Extension (NE) proposal overview and invitation to meet. Update letter outlining NE project, timeline and referral process. Update letter on project progress and environmental approvals process. Meeting project overview, timeline, disturbance boundary and approvals process. Dust and surface water concerns.	Potential impacts assessed in modelling. Mitigation measures presented in management plans (refer social surroundings) Committed to engagement.

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Lot 1759	18/10/2023 to 17/12/2024 16/1/2024	<p>Quarterly community update letter mailed on northern extension proposal and offer to meet.</p> <p>Update letter outlining NE project, timeline and referral process.</p> <p>Phone dialogue and emails outlining purpose of meeting, northern extension referral, timeline, boundary, approvals process.</p> <p>Not interested in meeting.</p> <p>Amenity concerns.</p>	<p>Committed to quarterly community update letters, newsletters and availability to meet.</p> <p>Potential impacts assessed in ERD and will be incorporated into noise and dust management plans</p>
Lot 52	18/10/2023 to 17/12/2024 8/2/2024	<p>Quarterly Community Update Letters Northern Extension proposal overview and invitation to meet.</p> <p>Project update letters posted to landowner overview of extension project, timeline and approvals process.</p> <p>Meeting extension overview, timeline, boundary, environmental approvals process.</p>	No concerns raised.
Lot 125	18/10/2023 to 17/12/2024 8/1/2024	<p>Quarterly Community update letter Northern Extension (NE) proposal overview and invitation to meet.</p> <p>Update letter outlining NE project, timeline and referral process.</p> <p>Update letter on project progress and environmental approvals process.</p> <p>Phone discussion on northern extension project concerns.</p> <p>Follow up to offer to meet to discuss Northern extension proposal, timeline, boundary, and approvals process.</p> <p>No response.</p> <p>Dust and noise concerns.</p>	Potential impacts assessed in ERD and incorporated into dust and noise management plans (refer Social Surroundings).
Lot 61 Lot 1757 (Rental)	18/10/2023 to 17/12/2024 26/02/2024	<p>Quarterly Community Update letter. Northern Extension (NE) proposal overview and invitation to meet.</p> <p>Letter outlining NE project, timeline and referral process.</p> <p>Update letter on project progress and environmental approvals process.</p> <p>Meeting project overview, timeline, disturbance boundary and approvals process.</p>	No concerns raised.

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	5/3/2025	Meeting amenity agreement discussions.	
Lot 1 Gulberti Road	20/02/2024 18/10/2023 to 17/12/2024	Preliminary discussion on northern extension. Quarterly Community Update letter on Northern Extension (NE) project overview and invitation to meet. Letter outlining NE project, timeline and referral process. Water supply concerns.	Potential impacts assessed in ERD and will be incorporated into water management plans (refer Hydrological Processes).
Lot 10	25/10/2023 to 17/12/2024	Quarterly update letter mailed. Northern Extension proposal overview and invitation to meet. Update letter on project progress, timing, location and approvals process.	No concerns raised.
Lot 292	18/10/2023 25/10/2023 to 17/12/2024	Meeting discuss Northern Extension proposal overview. Quarterly Community update letter mailed Northern Extension project proposal, timeline, referral assessment and approvals process.	No concerns raised.
Lot 60	16/1/2023 25/7/2024 18/10/2023 to 17/12/2024 16/1/2025	Regular consultation and follow up on concerns raised. Meeting Northern Extension (NE) update. Quarterly update letters mailed. Northern Extension proposal overview. Meeting to discuss Northern Extension project, timeline, location, approvals process. Noise and mine boundary distance concerns raised.	Potential impacts assessed in ERD and mitigation measures incorporated into noise, dust, water management plans Committed to ongoing engagement with landowner and tenant.
Lot 60 (Rental)	18/10/2023 to 17/12/2024	Northern Extension proposal overview and invitation to meet. Quarterly update letters posted to landowner and tenant, overview of extension proposal, timeline, referral assessment and approvals process.	Potential impacts assessed in modelling. Mitigation measures presented in management plans

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STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Lot 1370, 1976, 1978	18/10/2023 to 17/12/2024 15/1/2024 5/3/2024 18/12/2024	Community update letter northern extension (NE) proposal and offer to meet. Quarterly update letters posted. Extension overview, timeline, referral assessment and approvals process. Meeting discuss Norther Extension project, boundary, timeline and approvals process. Meeting Northern Extension project overview and update. Traffic concern raised.	Committed to ongoing engagement.
Lot 15	18/10/2023 to 17/12/2024 9/1/2024 15/1/2025 7/3/2025 30/4/2025	Quarterly Community update letter. Northern Extension (NE) proposal overview and invitation to meet. Letter outlining NE project, timeline and referral process. Update letter on project progress and environmental approvals process. Phone and email dialogue to arrange to meet to discuss extension proposal in 2024. Dust, noise and surface water concerns. Meeting to discuss Northern Extension project and mining lease application. Meeting Northern Extension project overview, timing, location, approvals process and mining lease application. Meeting Norther Extension proposal. Updated on Mining tenement boundary and disturbance area.	Potential impacts assessed in ERD and incorporated into noise, dust and water quality management plans
Lot 82	18/10/2023 to 17/12/2024 24/10/2024 9/1/2025	Quarterly Community update letter. Northern Extension proposal overview and invitation to meet. Community update letter, Northern Extension project details and referral process. Meeting project overview, timeline, disturbance boundary and approvals process.	No issues raised.
Lot 668 Lot 421	18/10/2023 to 17/12/2024	Quarterly update letters posted to landowner and tenant, overview of extension proposal, timeline, referral assessment and approvals process.	Committed to ongoing engagement

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

STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
		<p>Update letter on project progress and environmental approvals process.</p> <p>Meeting project overview, timeline, disturbance boundary and environmental approvals process.</p>	
Lot 1833	<p>7/2/2023</p> <p>18/10/2023 to</p> <p>17/12/2024</p> <p>23/10/2024</p>	<p>Consultation on exploration drilling and proposal to extend Yalyalup operations.</p> <p>Quarterly Community update letter on Northern Extension proposal. Invitation to meet in person.</p> <p>Update letter outlining Northern Extension proposal, timeline and referral process.</p> <p>Update letter on progress and environmental approvals process.</p> <p>Ongoing phone dialogue on suitable meeting date.</p> <p>Meeting Northern Extension overview, timeline, disturbance boundary and referral.</p> <p>Water concerns raised.</p>	Committed to ongoing engagement.
Lot 1831	<p>18/10/2023 to</p> <p>17/12/2024</p> <p>30/1/2024</p>	<p>Quarterly Community update letter mailed on Northern extension proposal and invitation to meet.</p> <p>Update Letter outlining NE project, timeline and referral process.</p> <p>Update letter on project progress and environmental approvals process.</p> <p>Phone call to discuss extension.</p> <p>Concern raised on distance and potential impacts.</p>	<p>Continue to send community update and newsletter.</p> <p>Potential impacts assessed in ERD and incorporated into management plans</p>
Lot 2	<p>2023/2024</p> <p>18/10/2023 to</p> <p>9/4/2024 to 26/2/2025</p> <p>15/5/2025</p>	<p>Regular engagement on Northern extension proposal overview, timeline, disturbance boundary, environmental and assessments.</p> <p>Quarterly community update and newsletter mailed. Northern Extension project overview, update, timeline and approvals process.</p> <p>Ongoing phone and email dialogue on the referral public review period, mining lease application and amenity concerns.</p>	<p>Committed to ongoing engagement.</p> <p>Potential impacts assessed in modelling. Mitigation measures presented in management plans</p>

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

STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	25/7/2024 8/8/2024 15/12/2024	Meeting onsite to observe mining operations and discuss options. Meetings Northern Extension project update, referral timeline, public review period and amenity concerns raised.	
Lot 1	15/2/2023 27/11/2023 18/10/2023 to 17/12/2025 14/8/2024 15/10/2024 17/1/2025 2/4/2025	Meetings exploration drilling and new developments with proposed extension. Quarterly community update letter and newsletter mailed and invitation to meet. Update letter outlining proposal, timeline and referral process. Meeting Northern Extension proposal overview, timeline/boundary distance, environmental approvals and assessments. Follow up meetings Northern Extension update, approvals process and mining lease application. No concerns raised.	Investigation of historical bore monitoring results. No impact Potential impacts assessed in ERD and will be incorporated into water management plans Committed to ongoing engagement.
Lot 971 (Rental)	2024/2025 18/10/2023 to 17/12/2024	Meetings with resident and farm manager to provide Northern Extension proposal and updates. Quarterly community update letter NE proposal and offer to meet. Quarterly update letters posted overview of extension proposal, timeline, referral assessment and approvals process.	No concerns raised.
Lot 651	18/10/2023 to 17/12/2024 20/8/2024 27/11/2024 9/4/2025	Quarterly Community update letter. Northern Extension (NE) proposal overview and invitation to meet. Letter outlining NE project, timeline and referral process. Update letter on project progress and environmental approvals process. Meeting extension project overview, timeline, disturbance boundary and environmental approvals process. Meetings Northern Extension project update and approvals process.	Committed to ongoing engagement

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

STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
Lot 4	27/4/2021 18/10/2023 to 17/12/2024	Meeting Northern Extension (NE) drilling and proposal overview. Quarterly Community update letter. Northern Extension (NE) proposal overview and invitation to meet. Letter outlining NE project, timeline and referral process. Update letter on project progress and environmental approvals process.	Continue to send quarterly Community update and newsletter. No concerns raised.
Lot 1758	17/2/2023 18/10/2023 to 17/12/2025 2024	Meeting to discuss drilling, northern extension preliminary discussions. Community update letter northern extension proposal and offer to meet. Community update letter and phone conversation on extension proposal, timeline, boundary, approvals process. Regular phone dialogue NE project update, timeline and approvals process.	No Concerns raised
LOCAL MP's			
Libby Mettam MLA	06/12/2023 7/5/2025	Update on the Yalyalup operations with focus on the Northern Extension proposal. Yalyalup site tour and Northern Extension update.	Queried employment numbers generated and ran through possible local funding opportunities. No concerns raised. Committed to ongoing engagement.
Steve Thomas MLC	06/12/2023	Met to provide an update on the Yalyalup operations and discuss the Northern Extension proposal.	Discussed power concerns leading into summer period. No concerns raised in regard to project. Committed to ongoing engagement.
Nola Marino MP	14/12/2023	Project update on proposed Northern Extension proposal.	Topics discussed included water allocations, community sentiment, power shortages and economic benefits. Committed to ongoing engagement.
Sally Talbot MLC	13/03/2024	Project update at Parliament House to provide overview of proposed Northern Extension with associated timings. Ran through economic contributions, community sentiment.	No concerns raised, advised to also meet with Jackie Jarvis MLC. Committed to ongoing engagement.
Jackie Jarvis MLC	19/03/2024	Meeting request sent to provide project update on the Northern Extension proposal.	

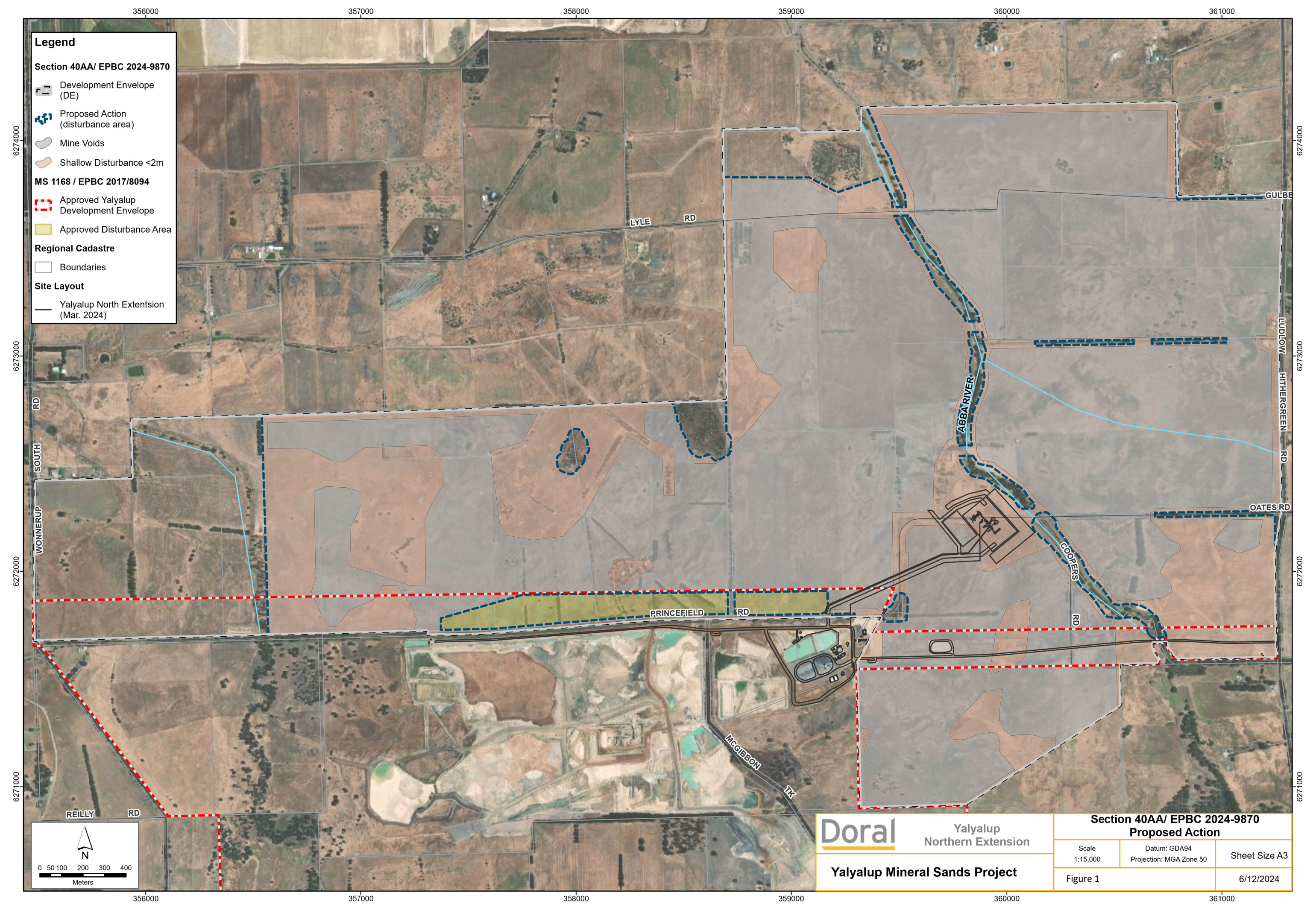
5. REFERENCES

- AQ2. (2020d). *Yalyalup Mineral Sands Project GDE Management Plan. Version C. October 2020.*
- BCE. (2021). *Assessment of the nesting and foraging values of three Lots near Keysbrook for Doral Mineral Sands Keysbrook.*
- BCE. (2022). *Assessment of Nesting, Foraging and Roosting Values for Three Species of Black-Cockatoo in Lots 62, 63, 20 and 507 near Keysbrook, Western Australia. Unpublished report prepared for Doral Mineral Sands Pty Ltd. 9 September 2022.*
- BCE. (2024). *Yalyalup Mineral Sands Mine Proposed Extension Fauna Assessment. Prepared for Doral Mineral Sands Pty Ltd by Bamford Consulting Ecologists.*
- BCE. (2024). *Yalyalup Mineral Sands Mine Proposed Extension Fauna Assessment. Prepared for Doral Mineral Sands Pty Ltd by Bamford Consulting Ecologists. December, 2023.*
- Chapman, T. (2008). *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.*
- DAWE. (2022). *Referral guideline for 3 WA threatened black cockatoo species: Carnaby's Cockatoo, Baudin's Cockatoo and the Forest Red-tailed Black- cockatoo, Department of Agriculture, Water and the Environment, Canberra, February 2022.*
- DEWHA. (2008b). *Threat abatement plan for predation by the European red fox. DEWHA, Canberra. .*
- DEWHA. (2009). *Approved Conservation Advice for *Calyptorhynchus banksii naso* (Forest Red-tailed Black Cockatoo). Canberra: Department of the Environment, Water, Heritage and the Arts.*
- DEWHA. (2009). *Significant impact guidelines for the vulnerable western ringtail possum (*Pseudocheirus occidentalis*) in the southern swan Coastal Plain, Western Australia. Australian Government.*
- DoE. (2015a). *Threat abatement plan for predation by feral cats. Canberra, ACT: Commonwealth of Australia.*
- DoEE. (2018). *Threatened Species Scientific Committee (2018). Conservation Advice *Calyptorhynchus baudinii* Baudin's cockatoo. Canberra: Department of the Environment and Energy.*
- Doral. (2024). *Yalyalup Mineral Sands Project, Northern Extension.*
- DPaW. (2013). *Carnaby's Cockatoo (*Calyptorhynchus latirostris*) Recovery Plan. Department of Parks and Wildlife, Perth, Western Australia. .*
- DPaW. (2017). *Western Ringtail Possum (*Pseudocheirus occidentalis*) Recovery Plan. Wildlife Management Program No. 58. Department of Parks and Wildlife, Perth, WA.*
- DSEWPaC. (2011). *Survey guidelines for Australia's threatened mammals.*
- DSEWPaC. (2012). *EPBC Act Referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus b.* Australian Government.*
- DSEWPaC. (2012b). *EPBC Act Referral guidelines for three threatened black cockatoo species: Carnaby's cockatoo (endangered) *Calyptorhynchus latirostris*, Baudin's cockatoo (vulnerable) *Calyptorhynchus baudinii*, Forest red-tailed black cockatoo (vulnerable) *Calyptorhynchus b.* Australian Government.*

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- Ecoedge. (2023). *Reconnaissance and Targeted Flora and Vegetation Survey, Proposed Yalyalup Mine Northern Extension*. May 2023.
- EPA. (2016a). *Environmental Impact Assessment (Part IV Divisions 1 and 2) Procedures Manual*. Perth WA.
- EPA. (2016g). *Technical Guidance - Terrestrial Fauna Surveys*. Perth, WA.
- EPA. (2016h). *Technical Guidance - Sampling Methods for Terrestrial Vertebrate Fauna*.
- Harewood. (2020a). *Fauna Assessment - Yalyalup Mineral Sands Project*. Unpublished report prepared for Doral Mineral Sands Pty Ltd. May 2020. V5a.
- Harewood, G. (2020b). *Black Cockatoo Habitat Tree Inspection*. Yalyalup Mineral Sands Project. Unpublished report prepared for Doral Mineral Sands Pty Ltd. April 2020. V1.
- Jones, B. (2001). *A report on the conservation status and future management of the ringtail possum population in the Harvey River valley*. Draft report to the Water Corporation, Perth.
- Peck, A., Barrett, G., & Williams, M. (2018). *The 2018 Great Cocky Count: A community-based survey for Carnaby's Black-Cockatoo (*Calyptorhynchus latirostris*), Baudin's Black Cockatoo (*Calyptorhynchus baudinii*) and Forest red-tailed Black-Cockatoo (*Calyptorhynchus banksii naso*)*. Birdlife Australia. Floreat, WA.
- Threatened Species Scientific Committee. (2018a). *Conservation Advice Pseudocheirus occidentalis Western ringtail possum*. Canberra: Department of the Environment and Energy.
- Wayne, A., Ward, C., Rooney, J., & Wheeler, I. (2000). *The immediate impacts of timber harvesting and associated activities on the Ngwajir (*Pseudocheirus occidentalis*) in the Jarrah forest of Kingston State Forest Block*. Department of Conservation and Land Management, Manjimup.

FIGURE 1: SITE LOCATION



Legend

Section 40AA/ EPBC 2024-9870

- Development Envelope (DE)
- Proposed Action (disturbance area)
- Mine Voids
- Shallow Disturbance <2m

MS 1168 / EPBC 2017/8094

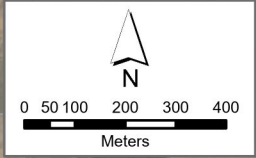
- Approved Yalyalup Development Envelope
- Approved Disturbance Area

Regional Cadastre

- Boundaries

Site Layout

- Yalyalup North Extension (Mar. 2024)



Doral Yalyalup Northern Extension

Yalyalup Mineral Sands Project

Section 40AA/ EPBC 2024-9870 Proposed Action		
Scale 1:15,000	Datum: GDA94 Projection: MGA Zone 50	Sheet Size A3
Figure 1	6/12/2024	

FIGURE 2: VEGETATION AND SUBSTRATE ASSOCIATIONS (VSA)

356000 357000 358000 359000 360000 361000

6274000
6273000
6272000
6271000

6274000
6273000
6272000
6271000

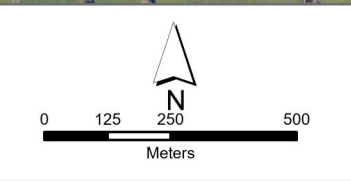
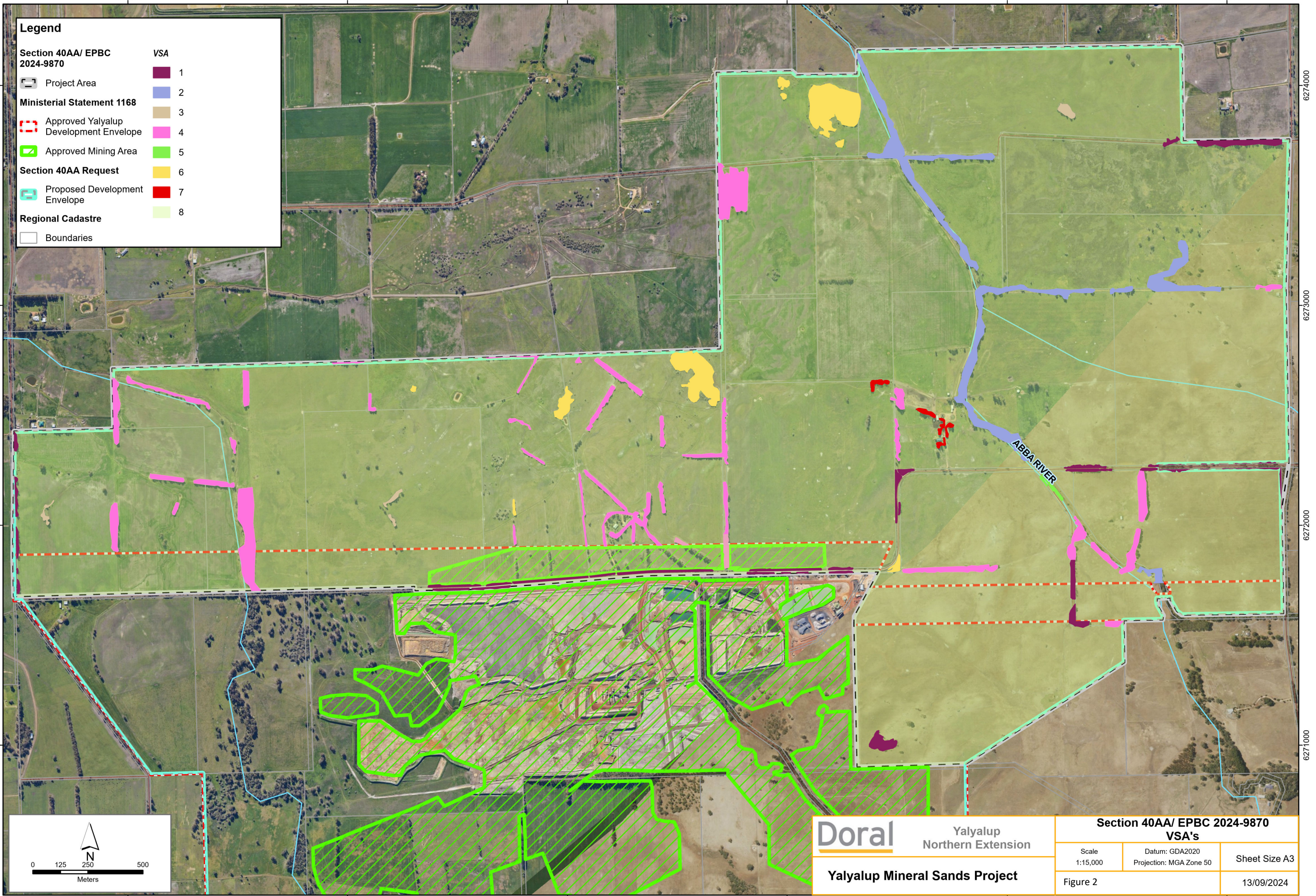
Legend

Section 40AA/ EPBC 2024-9870

- Project Area
- Ministerial Statement 1168
 - Approved Yalyalup Development Envelope
 - Approved Mining Area
- Section 40AA Request
 - Proposed Development Envelope
- Regional Cadastre
 - Boundaries

VSA

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8



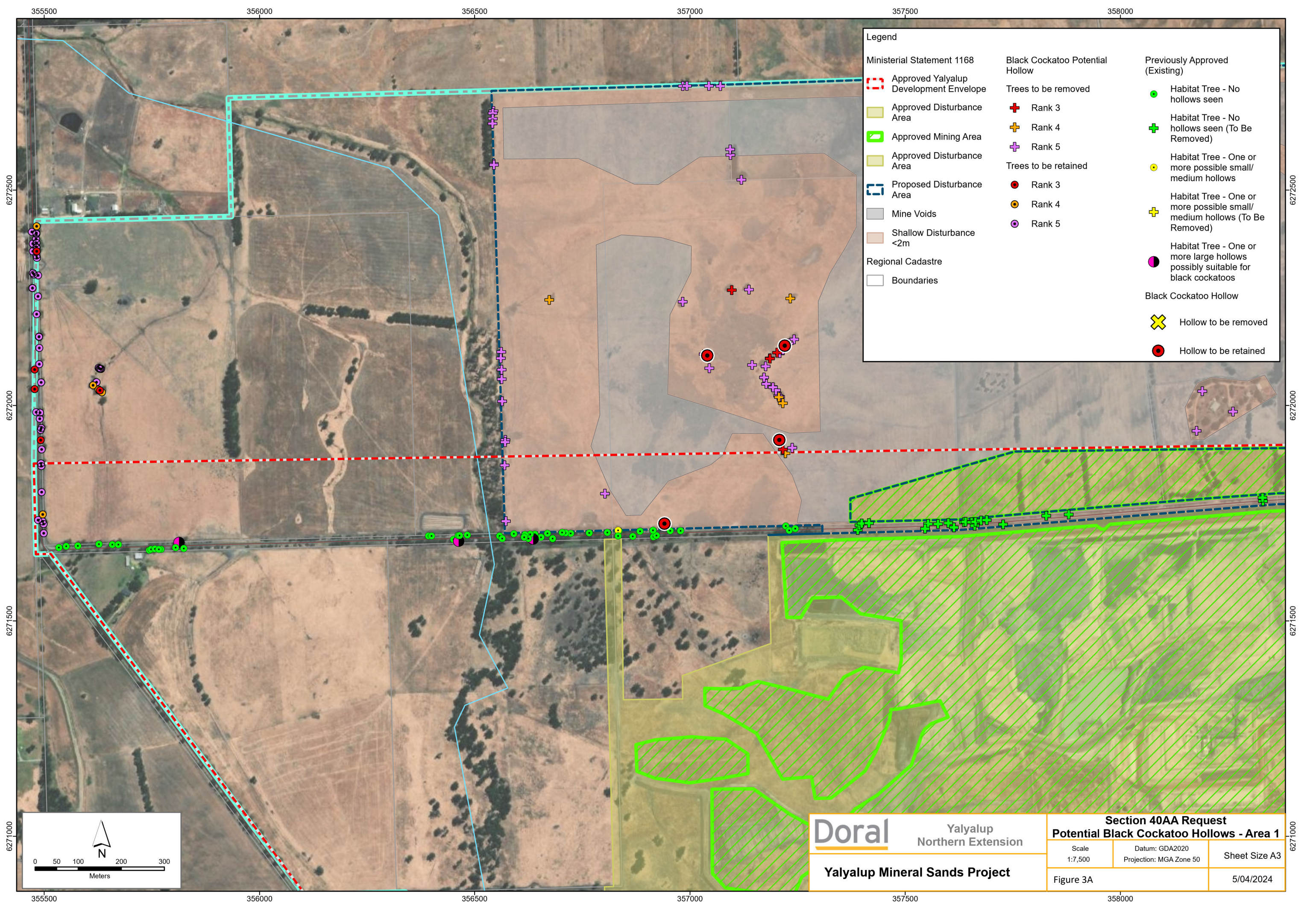
Doral Yalyalup Northern Extension

Yalyalup Mineral Sands Project

Section 40AA/ EPBC 2024-9870 VSA's		
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Figure 2		13/09/2024

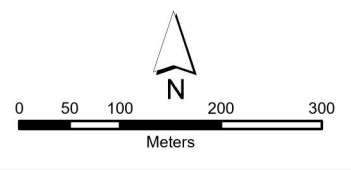
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FIGURE 3: BLACK COCKATOO POTENTIAL NESTING TREES



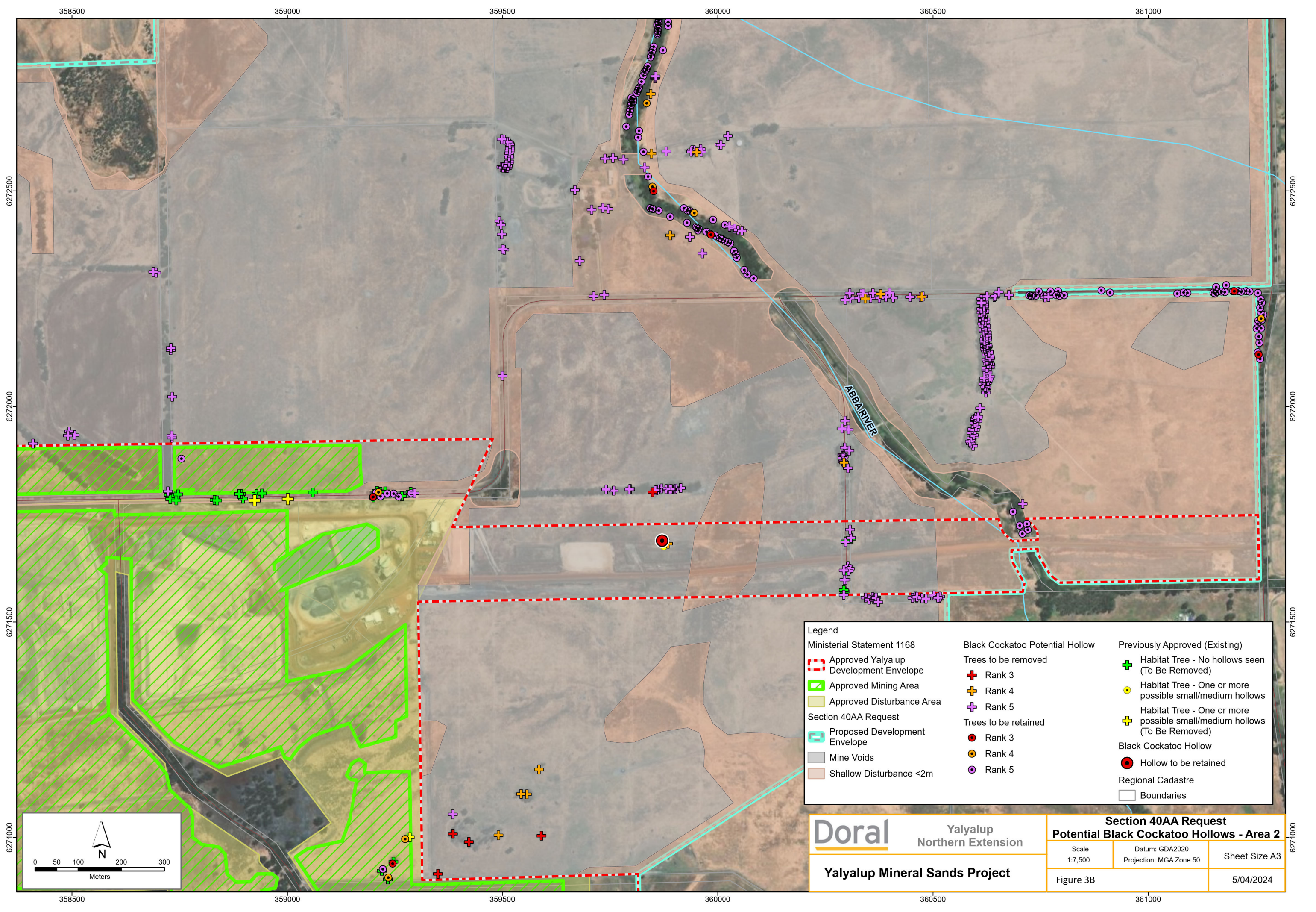
Legend

Ministerial Statement 1168	Black Cockatoo Potential Hollow	Previously Approved (Existing)
Approved Yalyalup Development Envelope	Trees to be removed	Habitat Tree - No hollows seen
Approved Disturbance Area	Rank 3	Habitat Tree - No hollows seen (To Be Removed)
Approved Mining Area	Rank 4	Habitat Tree - One or more possible small/medium hollows
Approved Disturbance Area	Rank 5	Habitat Tree - One or more possible small/medium hollows (To Be Removed)
Proposed Disturbance Area	Trees to be retained	Habitat Tree - One or more large hollows possibly suitable for black cockatoos
Mine Voids	Rank 3	Black Cockatoo Hollow
Shallow Disturbance <2m	Rank 4	Hollow to be removed
Regional Cadastre	Rank 5	Hollow to be retained
Boundaries		



Doral Yalyalup Northern Extension
Yalyalup Mineral Sands Project

Section 40AA Request Potential Black Cockatoo Hollows - Area 1		
Scale 1:7,500	Datum: GDA2020 Projection: MGA Zone 50	Sheet Size A3
Figure 3A		5/04/2024



Legend

Ministerial Statement 1168	Black Cockatoo Potential Hollow	Previously Approved (Existing)
Approved Yalyalup Development Envelope	Trees to be removed	Habitat Tree - No hollows seen (To Be Removed)
Approved Mining Area	Rank 3	Habitat Tree - One or more possible small/medium hollows
Approved Disturbance Area	Rank 4	Habitat Tree - One or more possible small/medium hollows (To Be Removed)
Section 40AA Request	Trees to be retained	Black Cockatoo Hollow
Proposed Development Envelope	Rank 3	Hollow to be retained
Mine Voids	Rank 4	Regional Cadastre
Shallow Disturbance <2m	Rank 5	Boundaries

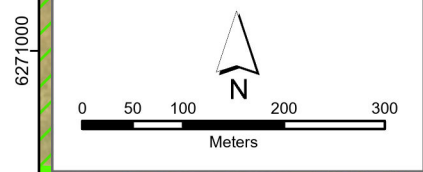
Doral Yalyalup Northern Extension

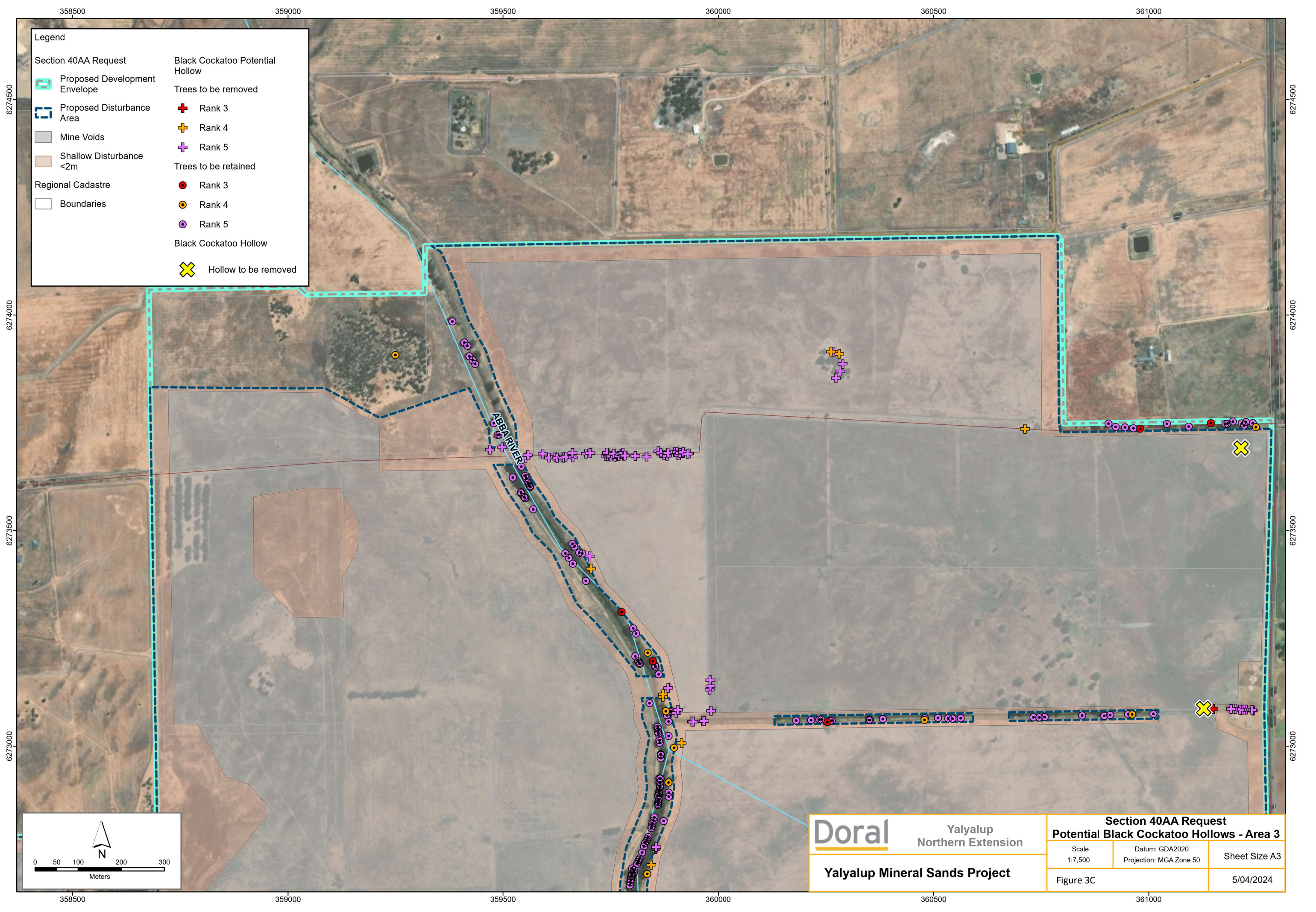
Yalyalup Mineral Sands Project

Section 40AA Request Potential Black Cockatoo Hollows - Area 2

Scale 1:7,500	Datum: GDA2020 Projection: MGA Zone 50	Sheet Size A3
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Figure 3B	5/04/2024
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Legend

Section 40AA Request

- Proposed Development Envelope
- Proposed Disturbance Area
- Mine Voids
- Shallow Disturbance <2m

Regional Cadastre

- Boundaries

Black Cockatoo Potential Hollow

Trees to be removed

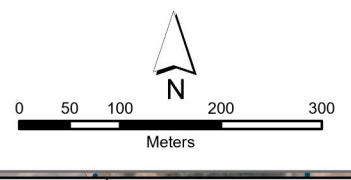
- Rank 3
- Rank 4
- Rank 5

Trees to be retained

- Rank 3
- Rank 4
- Rank 5

Black Cockatoo Hollow

- Hollow to be removed

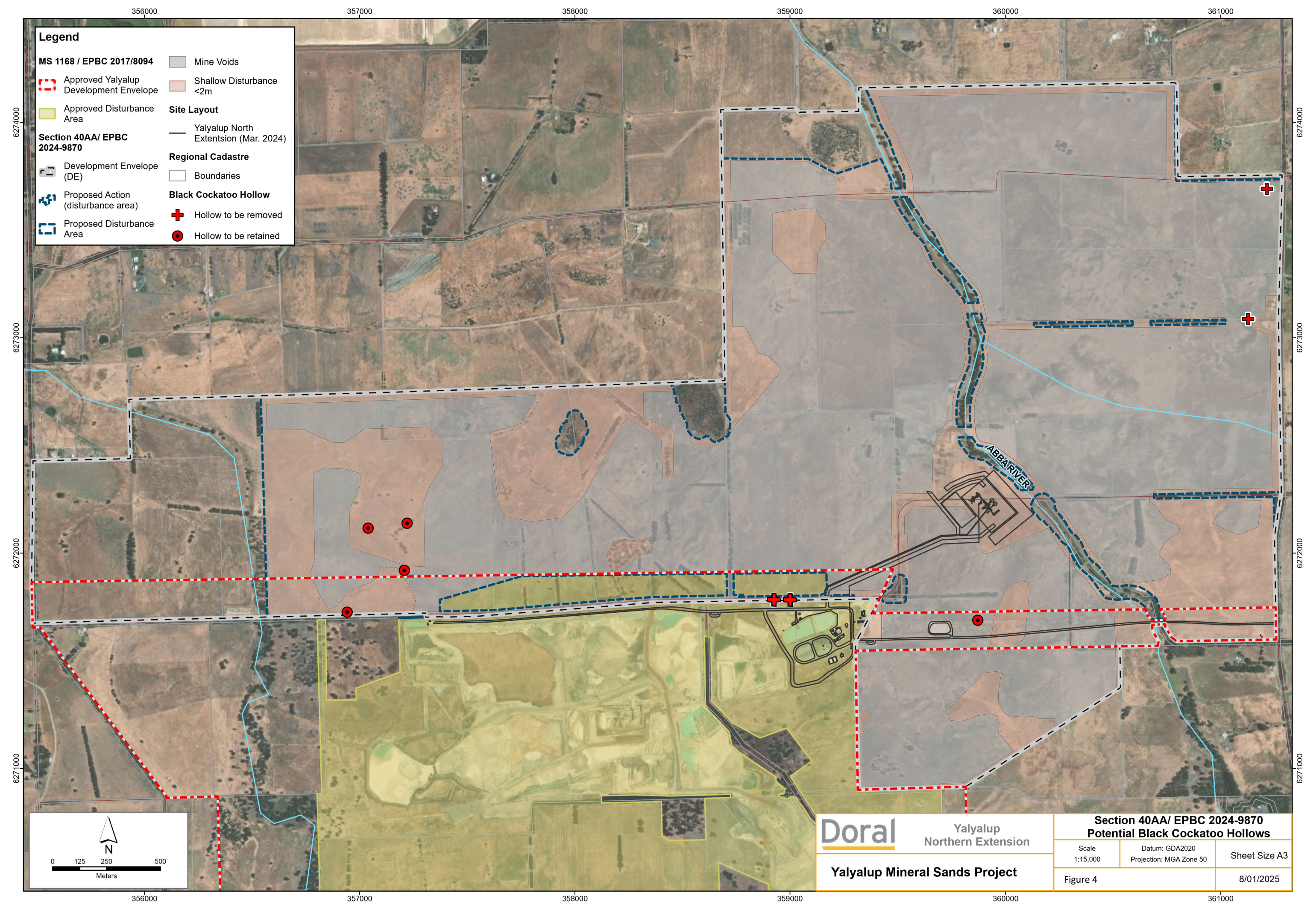


Doral Yalyalup Northern Extension

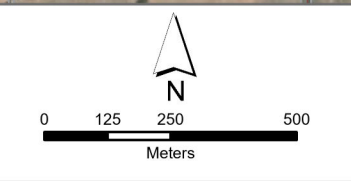
Yalyalup Mineral Sands Project

Section 40AA Request Potential Black Cockatoo Hollows - Area 3		
Scale 1:7,500	Datum: GDA2020 Projection: MGA Zone 50	Sheet Size A3
Figure 3C		5/04/2024

FIGURE 4: BLACK COCKATOO HOLLOWS



- Legend**
- MS 1168 / EPBC 2017/8094**
- Approved Yalyalup Development Envelope
 - Approved Disturbance Area
- Section 40AA/ EPBC 2024-9870**
- Development Envelope (DE)
 - Proposed Action (disturbance area)
 - Proposed Disturbance Area
- Site Layout**
- Yalyalup North Extension (Mar. 2024)
- Regional Cadastre**
- Boundaries
- Black Cockatoo Hollow**
- + Hollow to be removed
 - Hollow to be retained



Doral Yalyalup Northern Extension

Yalyalup Mineral Sands Project

Section 40AA/ EPBC 2024-9870 Potential Black Cockatoo Hollows		
Scale 1:15,000	Datum: GDA2020 Projection: MGA Zone 50	Sheet Size A3
Figure 4		8/01/2025

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