

## APPENDIX 7D: DUST EMP



YALYALUP MINERAL SANDS  
PROJECT, NORTHERN EXTENSION -  
DUST ENVIRONMENTAL  
MANAGEMENT PLAN

DOCUMENT REFERENCE:

DMS-YAL-NTH-EMP-4.1 DUST

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YALYALUP MINERAL  
SANDS PROJECT

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## DOCUMENT DETAILS

DOCUMENT ID	REPORT TITLE	REPORT NO	DATE	PREPARED FOR
DMS-YAL-NTH-EMP-4.1 DUST	YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN	DMS-YAL-NTH-EMP-4.1 DUST	18/03/2024	DORAL MINERAL SANDS PTY LTD

## PREPARED FOR

DATE	REV	DESCRIPTION OF REVISION	REVIEW	APPROVED
18/03/2024	V1	Dust Management Plan for EPA submission	CB	CB

# TABLE OF CONTENTS

1. INTRODUCTION .....	1
1.1. PURPOSE AND SCOPE .....	1
1.2. COMMITMENTS AND CONDITIONS .....	1
1.3. DORAL OBJECTIVES .....	2
1.4. RELEVANT STANDARDS AND LEGISLATION .....	2
1.5. RESPONSIBILITIES .....	2
1.6. REVIEW DATE .....	2
1.7. SETTING .....	2
2. POTENTIAL IMPACTS .....	3
3. MANAGEMENT AND MONITORING MEASURES .....	6
4. REPORTING .....	11
5. STAKEHOLDER CONSULTATION .....	12
6. REFERENCES .....	24
FIGURE 1: REGIONAL SETTING .....	i
FIGURE 2: SENSITIVE RECEPTORS AND MONITORING LOCATIONS .....	ii

## TABLES

TABLE 1: COMMITMENTS AND CONDITIONS

TABLE 2: PREDICTED PREVAILING WIND DIRECTION IN RELATION TO RESIDENCE LOCATIONS

TABLE 3: MANAGEMENT AND MONITORING MEASURES

TABLE 4: STAKEHOLDER CONSULTATION

## 1. INTRODUCTION

### 1.1. PURPOSE AND SCOPE

This Dust Environmental Management Plan (EMP) has been prepared to address the objectives and commitments in relation to the management and monitoring of dust for the Northern Extension to the Yalyalup Mineral Sands Project as outlined in the following document:

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

The Dust EMP aims to meet the Department of Water and Environmental Regulation (DWER) and Doral objectives for dust management and outlines the following:

- Commitments and conditions;
- Doral objectives;
- Relevant standards and legislation;
- Potential impacts;
- Management and monitoring measures;
- Reporting requirements; and
- Relevant environmental operating procedures.

### 1.2. COMMITMENTS AND CONDITIONS

TABLE 1: COMMITMENTS AND CONDITIONS

DOCUMENT	COMMITMENTS
<p>Commitments Outlined in:</p> <p><i>Northern Extension Yalyalup Mineral Sands Project, Referral Under S.38 of the EP Act (Doral, 2024)</i></p>	<ul style="list-style-type: none"> <li>• Doral commit to a prepare and implement a Dust Environmental Management Plan (EMP) for the proposed Northern Extension to the Yalyalup Project.</li> <li>• Doral commits to providing a direct line of communication for adjacent landowners to contact the Mine Manager and or Mine Supervisor to advise their dust-related concerns.</li> <li>• Doral will focus on minimising the concentration of total suspended particulates (TSP) leaving the site and potentially impacting neighbours.</li> <li>• Doral commit to investigate and validate any neighbour concerns as a matter of urgency and communicate the outcomes and actions taken to relevant parties as required.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• Doral will regularly monitor ambient (TSP) in accordance with this Dust EMP and or the Licence.</li> <li>• Doral will adhere to limits set for dust within the DWER Licence.</li> <li>• Doral commit to report dust management measures, non-compliance with licence conditions and actions or measures taken to ensure non-compliances are not repeated. Reporting</li> </ul>

DOCUMENT	COMMITMENTS
	will be as part of Annual Environmental Reporting under the DWER licence.

### 1.3. DORAL OBJECTIVES

Objectives for this Dust EMP are to:

- Address all commitments and conditions outlined in Table 1; and
- Meet the EPA objective to ensure emissions do not adversely affect environmental values or the health, welfare and amenity of people and land uses by meeting statutory requirements and acceptable standards.

### 1.4. RELEVANT STANDARDS AND LEGISLATION

The following standards and legislation are relevant to the implementation of this Dust EMP:

- *Environmental Protection Act 1986* – ambient particulate limits are regulated by DWER through licensing provisions under Part V of the Act;
- *A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities* (DEC, 2011).
- *National Environment Protection (Ambient Air Quality) Measure* (AAQ NEPM) (NEPM, 1998).

### 1.5. RESPONSIBILITIES

All management and monitoring actions outlined in this Dust EMP are the responsibility of the Doral Mineral Sands Pty Ltd OHS&E Superintendent or their delegate unless otherwise specified.

### 1.6. REVIEW DATE

This Dust EMP is considered a “live document” and will be subject to an internal review on an annual basis. The Dust EMP will also be updated to include the details of any licence-required dust monitoring or management. Alternatively, the following review is in March 2027.

### 1.7. SETTING

The Northern Extension to the Yalyalup Project is located within a rural farming land set ~11km southeast of Busselton, in a generally flat to slightly undulating landscape (Figure 1). There are 19 residences within 1km, 14 within 1 to 1.5 km and 16 within 1.5 to 2 km of the Project (Figure 2). Wind data from the nearest Bureau of Meteorology (BOM) weather station, Busselton Area (Site No. 006603), indicates the prevailing morning winds (9 am) for most of the year are from the east. Mid-afternoon (3 pm) winds tend to vary in direction, without a predominant vector, but are most commonly between 10-20km/hr from various directions, frequently from the northwest (~20%) or south (~18%), although also from the north, southwest or south (~15% each). In winter, regional weather systems can result in strong westerly and north-westerly winds.

## 2. POTENTIAL IMPACTS

Dry mining has the potential to generate dust from the clearing of topsoil and overburden by vehicular movement and surface lift-off from exposed surfaces during dry and windy ambient conditions. Dust may also be generated from rehabilitation activities and areas recently rehabilitated before vegetation establishment. Airborne dust generation is more likely to be prevalent in the summer when strong winds are from the southwest and southeast.

Dust generation may adversely impact surrounding vegetation, flora and fauna and create a nuisance to landowners in the vicinity of the mine disturbance areas. The risk of significant off-site impacts is considered low due to the proven performance of the dust management strategies utilised by Doral Mineral Sands at the previous Dardanup and Yoongarillup Mines and operational Yalyalup and Keysbrook Mines.

It should also be noted that the nature of the mining operation is progressive in that potential impacts while mining in a particular area are relatively short-term as the mine face moves and the void is backfilled and rehabilitated behind.

23 residences (including 4 own by Doral) are located around the local area less than 1km from the disturbance boundary (Figure 2). Table 2 shows the location and distances to the nearest residences in relation to the prevailing morning and afternoon winds.

**TABLE 2: PREDICTED PREVAILING WIND DIRECTION IN RELATION TO RESIDENCE LOCATIONS**

TIME OF DAY	0900 HOURS			1500 HOURS		
MONTH	PREDICTED PREVAILING WIND DIRECTION*	RESIDENCE(S) MOST SUSCEPTIBLE TO PREDICTED PREVAILING WIND DIRECTION	APPROXIMATE DISTANCE TO MINE (m)	PREDICTED PREVAILING WIND DIRECTION*	RESIDENCE(S) MOST SUSCEPTIBLE TO PREDICTED PREVAILING WIND DIRECTION	APPROXIMATE DISTANCE TO MINE (m)
Jan	SE	R1, R2, R4, R20, R19, R18, R21, R22, R23.	~450-1500m	S	R1, R2, R3, R4, R7*, R21, R22, R23.	~450-1500m
Feb	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	S	R1, R2, R3, R4, R7* <sup>1</sup> , R21, R22, R23.	~450-1500m
Mar	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	S	R1, R2, R3, R4, R7, R21, R22, R23.	~450-1500m
Apr	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	NW	R4, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15.	~100-2000m

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

TIME OF DAY	0900 HOURS			1500 HOURS		
MONTH	PREDICTED PREVAILING WIND DIRECTION*	RESIDENCE(S) MOST SUSCEPTIBLE TO PREDICTED PREVAILING WIND DIRECTION	APPROXIMATE DISTANCE TO MINE (m)	PREDICTED PREVAILING WIND DIRECTION*	RESIDENCE(S) MOST SUSCEPTIBLE TO PREDICTED PREVAILING WIND DIRECTION	APPROXIMATE DISTANCE TO MINE (m)
May	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	N	R11, R12, R13, R14, R15, R16.	~100-2000m
Jun	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	N	R11, R12, R13, R14, R15, R16.	~100-2000m
Jul	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	N	R11, R12, R13, R14, R15, R16.	~100-2000m
Aug	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	NW	R4, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15.	~100-2000m
Sep	W	R4, R5, R6, R7, R8, R9, R10, R11, R12, R13	~450-1,500m	NW	R4, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15.	~100-2000m
Oct	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	NW	R4, R6, R7, R8, R9, R10, R11, R12, R13, R14, R15.	~100-2000m
Nov	E	R17, R18, R19, R20, R21, R22, R23.	~450-1500m	S	R1, R2, R3, R4, R7* <sup>1</sup> , R21, R22, R23.	~450-1500m
Dec	SE	R1, R2, R4, R20, R19, R18, R21, R22, R23.	~450-1500m	S	R1, R2, R3, R4, R7, R21, R22, R23.	~450-1500m

\* \*Prevailing wind direction taken from Bureau of Meteorology data (for Busselton Aero 009603) collated from 1997 – 2010

During dry and windy ambient conditions, several residences that are present within 500m from the disturbance area boundary may be potentially impacted by nuisance dust during construction activities, mining of mine pits and other associated dust-generating activities from soil disturbance:



## YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

Residences on the eastern boundary are susceptible to northwesterly winds (R4, R6, R7, R8, R9, R10, R11) and are located within 450 to 1000m. In addition, being approximately 450m to 1000m from the southeast site boundary, R11 and R12 are susceptible to westerly winds. Residences north of the site boundary within 500m (R1, R2, R3, R4) are susceptible to dust from southern vectors, while operations occur on the northeast corner of the disturbance area. Western residences (R18, R19, R20, R21, R22, R23) are susceptible to easterly winds. However, R23 is the only residence close to the project (~500m) on the western boundary, and the others are approximately 1 km away. Given the proximity of this residence to the disturbance area, dust measures will be implemented to minimise dust emissions leaving the northern boundary, and real-time dust monitoring will be employed in the vicinity of these residences.

The project's mining occurs in a staged approach; therefore, not all residences will be affected simultaneously, and some will only be affected temporarily.

Surrounding vegetation could potentially be affected by dust deposition arising from mining activities. Dust interferes with the physiological processes of plants (e.g. transpiration). In extreme cases, dust can smother the leaves of vegetation, resulting in adverse health of the plant and/or death. Generally, significant dust is not generated from within the mining pits but may be more likely from stockpiles and unsealed road surfaces. Management measures (outlined below) will be implemented to reduce dust generation. The risk of death of vegetation from dust impacts is considered low, given the temporary nature of mining activities and the small area of vegetation within the disturbance area.

### 3. MANAGEMENT AND MONITORING MEASURES

Table 3 outlines the Management and Monitoring Measures to address potential environmental impacts to residents from dust as outlined in Section 3. These control measures have been divided into the following three categories for ease of implementation:

- Prior to the commencement of on-ground works;
- Pre-mine establishment phase; and
- Operational and post-mining phases.

**TABLE 3: MANAGEMENT AND MONITORING MEASURES**

PRIOR TO COMMENCEMENT OF ON-GROUND WORKS		
Commitment	Management/Monitoring Action	Timing
Doral will commit to prepare and implement a Dust EMP for the Northern Extension to the Yalyalup Mineral Sands Project.	Inform all employees and contractors of the importance of reducing the creation of dust-generating activities through site induction training, mandatory 2-way radio communications, toolbox communication meetings and feedback from incident reporting.	Duration of Project
Doral will commit to providing a direct line of communication for adjacent landowners to contact the Mine Manager and or Mine Supervisor to advise their dust-related concerns.	All communication relating to dust related concerns will be recorded into a complaint register.  All public comments and complaints relating to dust will be investigated, and actions taken to address complaints will be recorded. Feedback regarding the implemented investigation actions shall be communicated to the complainant concerned as soon as possible.  Dust complaints and responses will be reported in the Annual Environmental Report.	Duration of Project
PRE-MINE ESTABLISHMENT PHASE		
Commitment	Management/Monitoring Action	Timing
Doral will minimise clearing and land disturbance, consistent with safe and efficient operations.  Doral will actively implement dust controls focused on minimising the concentration of TSP leaving the site and potentially impacting neighbours.	Control techniques include: <ul style="list-style-type: none"> <li>• Inform all employees and contractors of the importance of reducing the creation of dust-generating activities through site induction training, mandatory 2-way radio communications, toolbox communication meetings and feedback from incident reporting;</li> <li>• Restrictions on the areas open at any one time to ensure safe and efficient operations;</li> <li>• Scheduling topsoil stripping as such to avoid periods of high winds from an unfavourable direction relative to residences;</li> <li>• Scheduling topsoil stripping for when soil conditions are moist but not saturated (this also minimises soil structural damage);</li> </ul>	Pre-mine establishment works

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

	<ul style="list-style-type: none"> <li>• When necessary, and when there is the observed risk of sensitive receptor impact, stripping operations are to be suspended under particularly high wind conditions;</li> <li>• Water all high traffic and haulage areas routinely for dust suppression. Up to three water carts will be available for use anytime. The early morning operation of water carts will incorporate consideration of neighbouring residents and the Noise Management Plan;</li> <li>• Spraying stockpiles, noise control bunds and pond embankments with fine clay solution such that dust control and soil erosion measures are achieved and</li> <li>• Use of spray-on PVA glue on stockpiles and/or cleared areas as determined by ongoing environmental and social risk assessments.</li> </ul>	
<b>OPERATIONAL AND POST-MINING PHASES</b>		
<b>Commitment</b>	<b>Management/Monitoring Action</b>	<b>Timing</b>
<p>Doral will minimise clearing and land disturbance, consistent with safe and efficient operations.</p> <p>Doral will actively implement dust controls to minimise the creation of airborne dust, and therefore its potential release across the boundaries of the mine site.</p> <p>Doral will prevent visible dust from crossing the boundary of the premises.</p>	<p>Control techniques include all of those listed above and additional controls listed below:</p> <ul style="list-style-type: none"> <li>• Minimising the number and size of stockpiles. This involves the direct use of overburden as backfill and direct replacement of top-soil, wherever possible;</li> <li>• Encouraging vegetative cover on stockpiles, especially the topsoil stockpiles. Many of these vegetative species are generated from stored seed to minimise dust generation;</li> <li>• The management and monitoring of ore loading and unloading operations such that dust generation is minimised and controlled;</li> <li>• Regular operation of water sprinklers at HMC stockpiles during dry conditions. HMC stockpiles generally have a moisture content of between 5-9% and are routinely removed from site to minimise the overall stockpile volumes held on site.;</li> <li>• The direct backfilling of pit voids with wet sand and clay co-disposed tailings to minimise the disturbance footprint and reduce ground areas potentially vulnerable to dust generation;</li> <li>• The co-disposal of sand tails and clay fines into pit backfill areas. This homogenous mixing increases the average particle size and reduces the potential for dust generation.</li> </ul>	<p>Operational phase and post-mining phase.</p>

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

	<ul style="list-style-type: none"> <li>• When and where necessary, spraying with water or other dust suppression measures (e.g. emulsion spray, erection of shadecloth wind barriers) is employed;</li> <li>• Employ routine maintenance and housekeeping practices to ensure that waste materials in and around the mine voids and infrastructure do not accumulate and lead to the generation of unacceptable airborne particulates.</li> <li>• Two-way radio communication within the site to enable rapid communication of observed dust impacts requiring control (e.g. water cart or cessation of activities).</li> </ul>																									
<p>Doral will regularly monitor ambient total suspended particulates (TSP) and particulate matter with diameter &gt;10µm (PM<sub>10</sub>) emissions in accordance with this Dust EMP and or the Licence.</p> <p>Doral will adhere to limits set for dust within the Licence.</p> <p>Doral commit to report annually dust management measures, non-compliance with licence conditions and actions or measures taken to ensure non-compliances are not repeated.</p>	<ul style="list-style-type: none"> <li>• Two-way radio communication within the site to enable rapid communication of observed dust impacts requiring control (e.g. water cart or cessation of activities).</li> <li>• Monitoring for TSP and PM<sub>10</sub> will be undertaken monthly from September to March.</li> <li>• Designated monitoring locations will be monitored for TSP with a Doral internal target and investigative level of 260 µg/m<sup>3</sup> (24-hour average) applied.</li> <li>• Designated monitoring locations as per DWER Licence will be monitored for PM<sub>10</sub>, with a Doral internal target and investigative level of 50 µg/m<sup>3</sup> (24-hour average).</li> <li>• Reporting of dust management measures, actions and non-compliances will be annually provided as part of the licence-required regulatory environmental reporting.</li> <li>• The ambient dust monitoring schedule with reference to monitoring locations in Figure 2 is as follows;</li> </ul> <table border="1" data-bbox="539 963 1783 1362"> <thead> <tr> <th colspan="6">Table 3.1 Monitoring of ambient air quality</th> </tr> <tr> <th>Monitoring point reference</th> <th>Parameter</th> <th>Units</th> <th>Frequency</th> <th>Sampling duration</th> <th>Method</th> </tr> </thead> <tbody> <tr> <td>AQ1-AQ4</td> <td>TSP</td> <td>ug/m3</td> <td>Three days per Month<sup>1,2</sup></td> <td>Continuous logging with 15-minute averages</td> <td>None Specified</td> </tr> <tr> <td>AQ1-AQ4</td> <td>PM10</td> <td>ug/m3</td> <td>Three days per Month<sup>1,2</sup></td> <td>Continuous logging with 15-minute averages</td> <td>None Specified</td> </tr> </tbody> </table>	Table 3.1 Monitoring of ambient air quality						Monitoring point reference	Parameter	Units	Frequency	Sampling duration	Method	AQ1-AQ4	TSP	ug/m3	Three days per Month <sup>1,2</sup>	Continuous logging with 15-minute averages	None Specified	AQ1-AQ4	PM10	ug/m3	Three days per Month <sup>1,2</sup>	Continuous logging with 15-minute averages	None Specified	<p>Duration of Project</p>
Table 3.1 Monitoring of ambient air quality																										
Monitoring point reference	Parameter	Units	Frequency	Sampling duration	Method																					
AQ1-AQ4	TSP	ug/m3	Three days per Month <sup>1,2</sup>	Continuous logging with 15-minute averages	None Specified																					
AQ1-AQ4	PM10	ug/m3	Three days per Month <sup>1,2</sup>	Continuous logging with 15-minute averages	None Specified																					

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

	Note 1. During the period 1 October and ending 31 May the following year 2. During periods outside of 3d/mth, monitoring should continue at the location closest to mining activities.	
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## 4. REPORTING

The minimum reporting requirements of this Dust EMP is to annually compile the results of all dust monitoring and detail any management actions taken to reduce visible dust leaving the site boundaries for inclusion into the DWER Annual Environmental Report.

In addition, any requirements for reporting dust management detailed in the expected EP Act Part V Licence for the Site will be met. Once issued, the reporting requirements of the Licence will be incorporated into this Dust EMP within this section.

## 5. STAKEHOLDER CONSULTATION

A summary of Stakeholder Consultation relevant to dust is provided in the following table.

**TABLE 4: 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 mentioned as possible Ironstone community for investigation by Doral.	Acknowledged



YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	03/12/19	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. DAWE (then DoEE) decision a declared	Information supplied, not a nuclear action.

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

STAKEHOLDER	DATE	ISSUES/TOPICS RAISED	PROPONENT RESPONSE/OUTCOME
	12/02/18	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.
<b>LANDOWNERS (require approvals and/or agreements)</b>			
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 management plans (refer Social Surroundings).

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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.  <b>Committed to ongoing engagement.</b>
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)  <b>Committed to engagement.</b>
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.  <b>No issues raised</b>	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.  <b>Committed to ongoing engagement.</b>
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).

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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).  <b>Committed to ongoing engagement</b>
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).  <b>Committed to ongoing engagement</b>
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).

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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.	<b>No concerns raised</b>
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.	<b>No Concerns raised.</b>
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

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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.	<b>Property sold 2022.</b>
K & J Hester Lot 103 Lot 104	2017 – 2019	Ongoing engagement regarding project proposal, timeline and environmental approvals process.	<b>Property sold 2020</b>
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.  <b>Mining agreement commenced October 2022.</b>

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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).  <b>Property sold in 2020</b>
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.



YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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.	
<b>NEAR NEIGHBOURS (residents)</b>			
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 Lot 102	2020/ 2021	Project overview, timeline and rehabilitation. Quarterly update letter mailed to postal address.	<b>Property sold 2021</b>
Phillips Lot 229	2017	Consulted on Yalyalup project overview, mine plan and approvals process.	Committed to ongoing engagement via tenant.  Continue community update letters.

YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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.	<b>Property sold 2022</b>
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

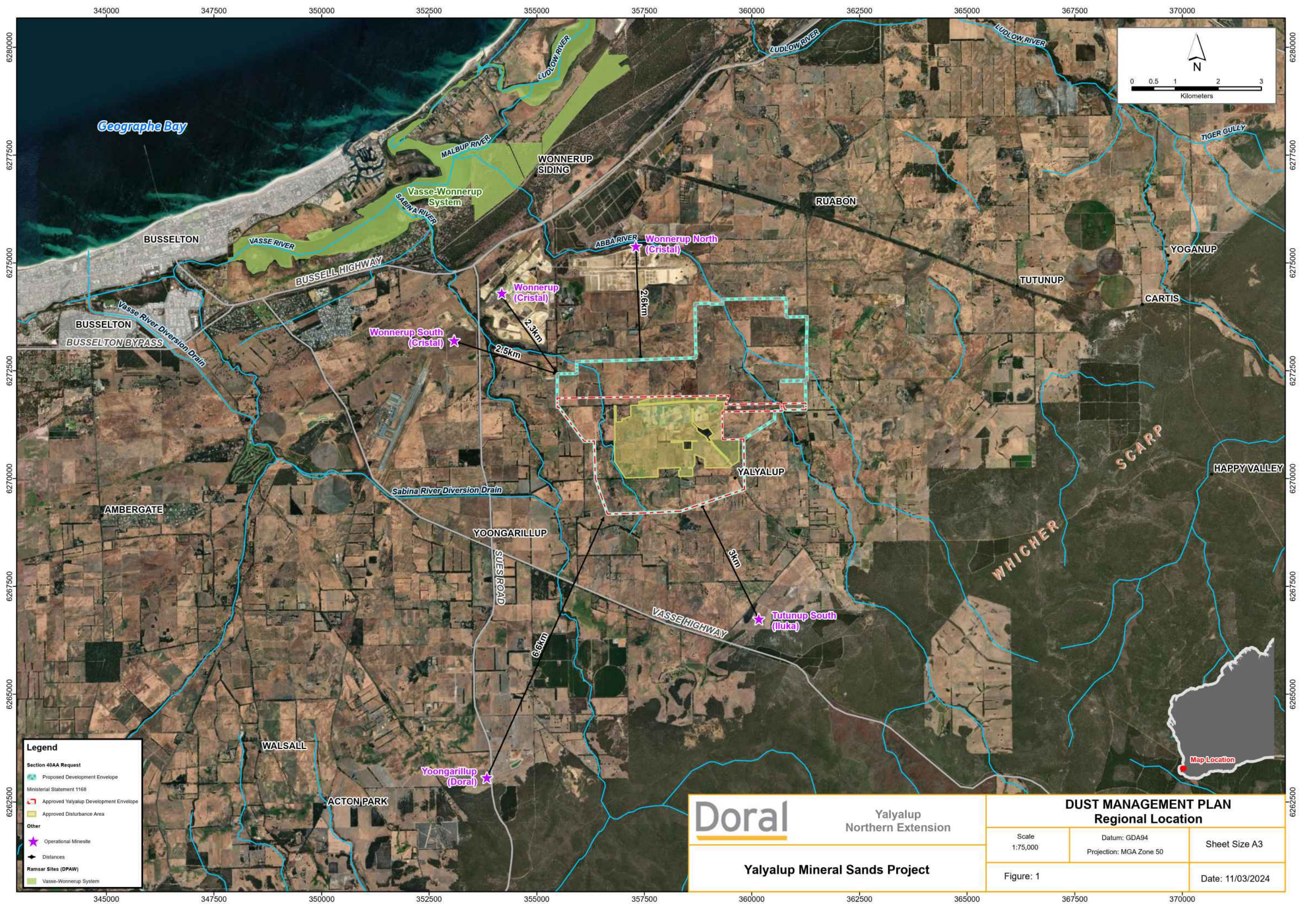
YALYALUP MINERAL SANDS PROJECT, NORTHERN EXTENSION - DUST ENVIRONMENTAL MANAGEMENT PLAN

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).

## 6. REFERENCES

- DEC. (2011). • *A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities.*
- Doral. (2024). *Northern Extension to Yalyalup Mineral Sands Project.* .
- NEPM. (1998). *National Environment Protection (Ambient Air Quality) Measure.* .

## FIGURE 1: REGIONAL SETTING



**Legend**

<b>Section 40AA Request</b>	
	Proposed Development Envelope
<b>Ministerial Statement 1168</b>	
	Approved Yalyalup Development Envelope
	Approved Disturbance Area
<b>Other</b>	
	Operational Minesite
	Distances
	Ramsar Sites (DPAW)
	Vasse-Wonneup System

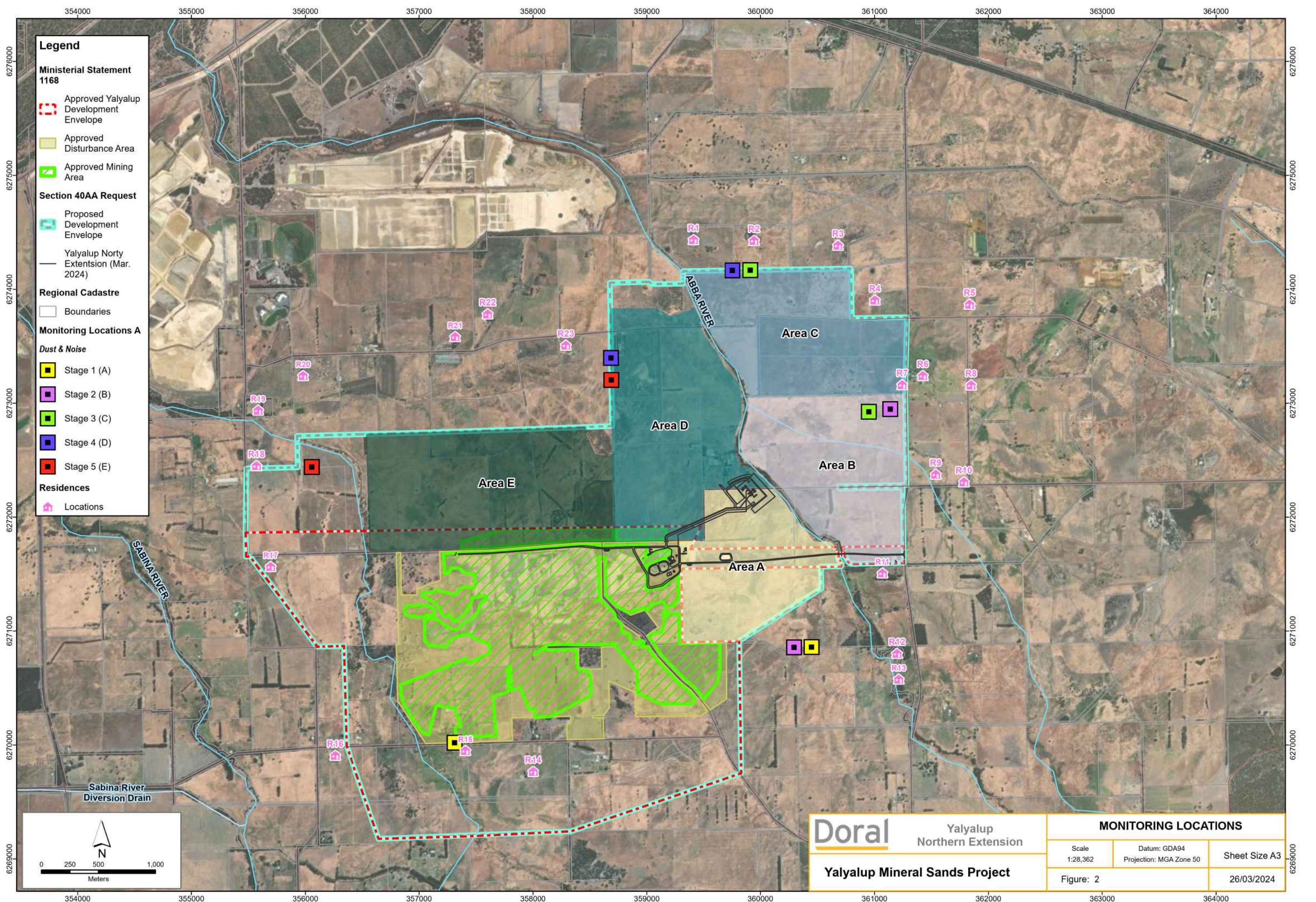
**Doral**

Yalyalup Northern Extension

**Yalyalup Mineral Sands Project**

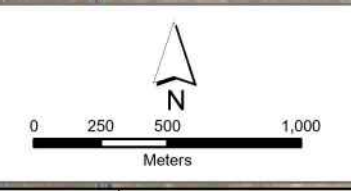
<b>DUST MANAGEMENT PLAN</b>		
<b>Regional Location</b>		
Scale 1:75,000	Datum: GDA94 Projection: MGA Zone 50	Sheet Size A3
Figure: 1	Date: 11/03/2024	

## FIGURE 2: SENSITIVE RECEPTORS AND MONITORING LOCATIONS



- Legend**
- Ministerial Statement 1168**
- Approved Yalyalup Development Envelope
  - Approved Disturbance Area
  - Approved Mining Area
- Section 40AA Request**
- Proposed Development Envelope
  - Yalyalup Norty Extension (Mar. 2024)
- Regional Cadastre**
- Boundaries
- Monitoring Locations A**
- Dust & Noise**
- Stage 1 (A)
  - Stage 2 (B)
  - Stage 3 (C)
  - Stage 4 (D)
  - Stage 5 (E)
- Residences**
- Locations

<p><b>Doral</b></p> <p>Yalyalup Northern Extension</p> <p><b>Yalyalup Mineral Sands Project</b></p>	<b>MONITORING LOCATIONS</b>	
	Scale 1:28,362	Datum: GDA94 Projection: MGA Zone 50
	Figure: 2	Sheet Size A3 26/03/2024





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