



Application for Licence

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L9292/2021/1
Applicant	Urban Resources Pty Ltd
ACN	121 043 034
File number	DER2021/000212
Premises	Lot 810 (253) Yangedi Road Hopeland Lot 810 on Deposited Plan 202726
Date of report	30 July 2021
Decision	Licence granted

Lauren Edmands

MANAGER – RESOURCE INDUSTRIES

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

Table of Contents

1. Decision summary	1
2. Scope of assessment	1
2.1 Regulatory framework	1
2.2 Application summary and overview of premises	1
2.3 Other relevant approvals	2
2.3.1 Environmental Protection and Biodiversity Conservation Act 1999	2
2.3.2 Planning Approval	2
3. Risk assessment	3
3.1 Source-pathways and receptors	3
3.1.1 Emissions and controls	3
3.1.2 Receptors	4
3.2 Risk ratings	9
3.3 Risk assessment – noise emissions	12
3.4 Risk assessment – dust emissions	13
3.5 Risk assessment – wetlands	17
4. Consultation	17
5. Conclusion	18
References	18
Appendix 1: Applicant Proposed Dust Management	19
Appendix 2: Application validation summary	21
Table 1: Proposed applicant controls	3
Table 2: Sensitive human and environmental receptors and distance from prescribed activity	4
Table 4: Risk assessment of potential emissions and discharges from the premises during operation	10
Table 5: Consultation	17
Figure 1 Site Layout after construction as per W6347/2020/1	2
Figure 2: Distance to sensitive human receptors	6
Figure 3 Wetlands and site stormwater drainage (aerial image is prior to clearing of native vegetation)	7
Figure 4 Threatened ecological communities – Banksia Woodlands (includes buffer zone)	8
Figure 5 Residential receptors and noise monitoring location	13
Figure 6 Annual wind rose at Karnet weather station site 009111 (9am)	14
Figure 7 Annual wind rose at Karnet weather station site 009111 (3pm)	15
Figure 8 Dust monitoring locations	16

Figure 10 Trigger levels for dust monitors20

1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during operation of the premises. As a result of this assessment, licence L9292/2021/1 has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) has considered and given due regard to its regulatory framework and relevant policy documents which are available at <https://dwer.wa.gov.au/regulatory-documents>.

2.2 Application summary and overview of premises

On 16 April 2021, Urban Resources Pty Ltd (the applicant) submitted an application for a licence to the department under section 57 of the *Environmental Protection Act 1986* (EP Act). Construction and time limited operations have already taken place at the premises under works approval W6347/2020/1 and appropriate compliance documentation received by DWER (SERS, 2021). Urban Resources are now applying for an operational licence for category 12 activities (wet and dry screening) at the premises. The premises is approximately 10 km north-east of the town of Serpentine.

Sand will be processed as required by market demand. The applicant estimates between 50,000 and 100,000 tonnes per annual period will require wet screening to remove impurities in the product. Wet screening will involve the raw product being processed through the on-site Terex FM120 wet screening plant.

Water to supply the wet screening operations is sourced from two purpose-build groundwater dams (Figure 1). Water is drawn from one dam to supply the plant and the wash-water is directed to the second dam to allow for settling of undersize particles. The wash-water will be reused in the wet screening process at a later date. No additives are introduced to the wet screening process and there is not expected to be any water discharges from the wet screening activities. The estimated water usage of the wet screening activities is shown in Diagram 1 below.

The premises relates to the category and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in licence L9292/2021/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in licence L9292/2021/1.

A clearing permit (6417/1) for 13.063ha was granted and vegetation cleared in 2017. The vegetation cleared was regrowth vegetation considered suitable foraging habitat and 21 potential breeding habitat trees for Carnaby's Black Cockatoo and Forest Red-tailed Black Cockatoos. The remaining vegetation onsite consists of approximately 5.4ha of pasture and isolated trees. Proposed operations are to be undertaken in areas where clearing has been authorised.

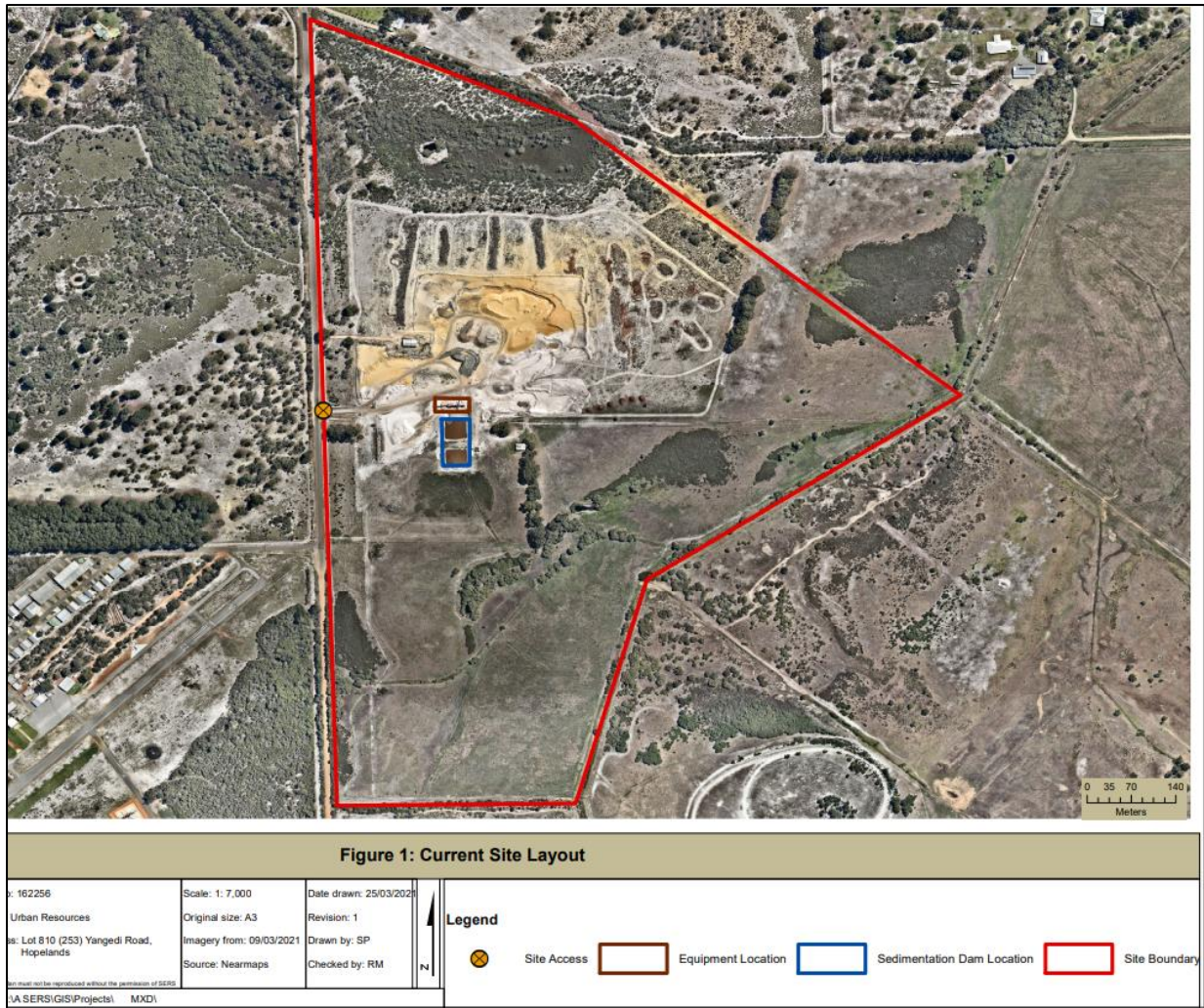


Figure 1 Site Layout after construction as per W6347/2020/1

2.3 Other relevant approvals

2.3.1 Environmental Protection and Biodiversity Conservation Act 1999

To compensate for the clearing of potential cockatoo foraging and breeding habitat, the applicant was required by the former Department of the Environment and Energy (DEE) under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) to develop and implement an offset plan for the clearing of habitat trees (Strategen, 2016). Approval for the offset plan was granted by DEE until 30 September 2021 (EPBC 2015/7429).

The selected offset areas were a strip of vegetation along the western portion of Lot 810 Yangedi Road, with species to provide roosting and potential breeding habitat once fully grown. Furthermore, a second offset site was selected at a separate site in Waroona.

2.3.2 Planning Approval

The applicant has development approval (PA20/1006) with the Shire of Serpentine-Jarrahdale to undertake extractive industry operations at the premises. The approval is valid until 12 April 2025. Planning approval was granted containing the following conditions that are relevant to this application:

- Acoustic Assessment;
- Dust Management Plan; and

- Water and Drainage Management Plan.

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guideline: Risk Assessments* (DWER 2020).

To establish a risk event there must be an emission, a receptor which may be exposed to that emission through an identified actual or likely pathway, and a potential adverse effect to the receptor from exposure to that emission.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this decision report are detailed in Table 1 below. Table 1 also details the proposed control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Operation			
Dust	Screening of material – wet and dry Vehicle movements Unloading, loading and storage of product	Air/windborne pathway causing impacts to sensitive environmental receptors and fauna (potential black cockatoo foraging area surrounding operational area)	A dust management plan exists for the operation. Proposed controls are detailed below in Appendix 1 – Dust Management
Noise		Nearest residence 700m north-east of screening area Suitable foraging habitat and potential breeding habitat for Carnaby's black cockatoo surrounding the operational area	Operating hours 0700 – 1700 Monday to Saturday (excluding public holidays)
Sediment laden stormwater		Overland run-off impacting sensitive environmental receptors	Water and drainage management plan: <ul style="list-style-type: none"> • 50m operations buffer from conservation wetland unique identifier number (UFI) 14706 (north of extractive area). This boundary will be delineated with fencing. (Figure 3). • Identify and stabilize exposed areas of soil with increased susceptibility to erosion or riling. • Identify and remove impediments to the surface water drainage infrastructure that would significantly alter effective site drainage.

Emission	Sources	Potential pathways	Proposed controls
Hydrocarbon spills	<p>Re-fuelling and engine maintenance</p> <p>Service truck with 5000L diesel fuel capacity used to re-fuel site equipment as required. Includes separate tanks for lubricants and waste oils.</p>	Contaminated stormwater impacting sensitive environmental receptors	<ul style="list-style-type: none"> Any use of hydrocarbons managed through installation of an area of compacted limestone for the purpose of re-fueling and small scale engine maintenance. No machinery to be serviced on-site or fuel farm to be constructed on-site. No engine oil or other waste hazardous chemicals to be stored on-site. Spill kits available on-site. Remove all waste oil or other waste hazardous chemicals from site within the working day on which they were generated. Clean up spills or leaks of hydrocarbons to ground, removing all traces of contaminated soil. Remove all contaminated items off-site and dispose of at an appropriately licensed waste facility.

3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 and Figure 1 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DER 2020)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
323 Jarrah Road, Hopeland	680m north of screening area
192 Jarrah Road, Hopeland	830m north of screening area
342 Jarrah Road, Hopeland	900m north of screening area
333 Jarrah Road, Hopeland	970m north of screening area
Serpentine Airfield	300m south west of screening area (immediately adjacent prescribed premises boundary)
Environmental receptors	Distance from prescribed activity
<p>Geomorphic wetland – Swan Coastal Plain unique identifier number (UFI) 14706</p> <p>DBCA classification “Conservation”</p> <p>“Wetlands which support a high level of</p>	<p>Within prescribed premises boundary (Figure 3)</p> <p>300m north of screen location</p> <p>Directly north of cleared area (extractive and</p>

<p>attributes and functions.</p> <p>No development or clearing is considered appropriate. These are the most valuable wetlands and any activity that may lead to further loss or degradation is inappropriate”</p>	<p>stockpiling area)</p>
<p>Geomorphic wetland – Swan Coastal Plain unique identifier number (UFI) 14708</p> <p>DBCA classification “Resource enhancement”</p> <p>“Wetlands which may have been partially modified but still support substantial ecological attributes and functions.</p> <p>Ultimate objective is to manage, restore and protect towards improving their conservation value. These wetlands have the potential to be restored to Conservation category.”</p>	<p>Within prescribed premises boundary (Figure 3)</p> <p>150m south east of screen location</p> <p>130m south east of groundwater dams</p>
<p>Bush Forever: Regional open space or proposed regional open space</p>	<p>Bushforever ID: 378 is located approximately 500m south west of the screen location</p>
<p>Threatened ecological communities</p>	<p>Banksia woodlands adjacent to the premises. Mostly cleared within the premises under clearing permit 6417/1 (Figures 2 and 4)</p>
<p>Environmentally sensitive areas (clearing regulations)</p>	<p>250m north of screening area</p> <p>380m south west of screening area</p>
<p>Biological component</p>	<p>Distance from the premises</p>
<p>Threatened/Priority Fauna</p>	<p>The vegetation within the premises boundary prior to clearing was likely to provide suitable foraging habitat and 21 potential breeding habitat trees for Carnaby’s Black Cockatoo and Forest Red-tailed Black Cockatoos (Strategen, 2015) (for further detail see section 2.3.1). The applicant indicates that the remaining vegetation onsite consists of approximately 5.4ha of pasture and isolated trees.</p>

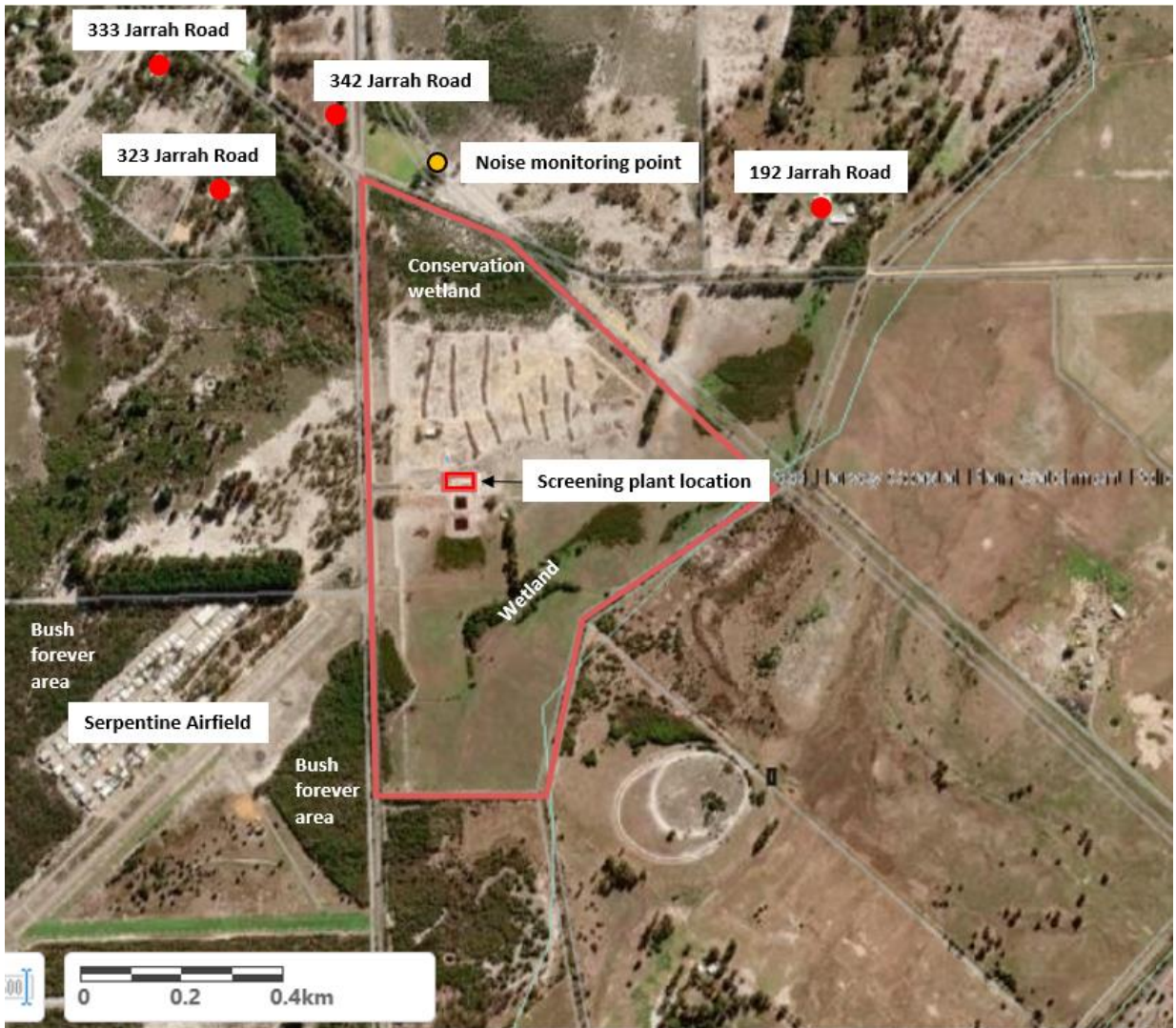


Figure 2: Distance to sensitive human receptors

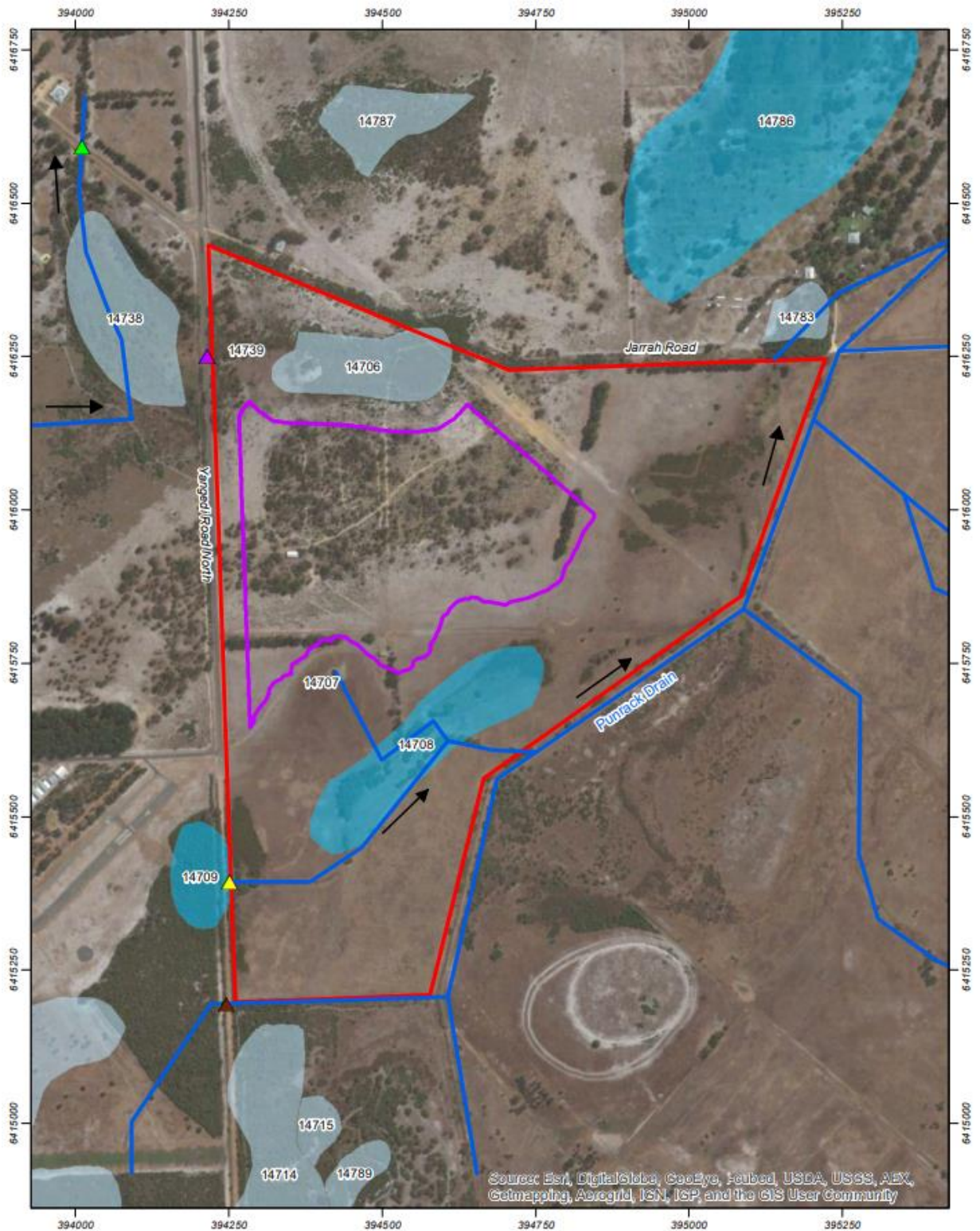


Figure 3 Wetlands and site stormwater drainage (aerial image is prior to clearing of native vegetation)



Figure 4 Threatened ecological communities – Banksia Woodlands (includes buffer zone)

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the applicant has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the delegated officer considers the applicant's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Licence L9292/2021/1 that accompanies this decision report authorises emissions associated with the operation of the premises i.e. category 12 activities.

The conditions in the issued licence, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 4: Risk assessment of potential emissions and discharges from the premises during operation

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Operation (including time-limited-operations operations)								
Screening of material – wet and dry Vehicle movements Unloading, loading and storage of product	Dust	Air/windborne pathway causing impacts to sensitive environmental receptors and cockatoo foraging habitat	Bush forever area 500m south east of screening area Threatened/priority fauna: remnant on-site cockatoo foraging habitat TECs: Banksia woodlands on and adjacent to premises Geomorphic wetlands within premises Environmentally sensitive areas 250m north and 380m south of screening area	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 – infrastructure specifications and location Condition 3 – no visible dust to cross premises boundary Condition 4 – dust management Condition 5 – dust management (50 µg/m ³ (24 hour average) Condition 6 – 50m buffer from conservation wetland Condition 7 – dust monitoring	See section 3.4 – dust emissions
		Air/windborne pathway causing impacts to amenity	Serpentine Airfield (300m south west from screening area) Residences to the north (closest 700m north of screening area)	Refer to Section 3.1	C = Major L = Unlikely Medium Risk	Y	Condition 1 – infrastructure specifications and location Condition 3 – no visible dust to cross premises boundary Condition 4 – dust management Condition 5 – dust	See section 3.4 – dust emissions

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
							management (50 µg/m ³ (24 hour average) Condition 7 – dust monitoring	
	Noise	Air / windborne pathway causing impacts to health and amenity	Residences to the north (closest 700m north of screening area)	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 – infrastructure specifications and location Condition 2 – operational hours	See section 3.3 – noise emissions
	Sediment laden stormwater	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Geomorphic wetlands within premises	Refer to Section 3.1	C = Moderate L = Possible Medium Risk	Y	Condition 6 – 50m buffer from conservation wetland	See section 3.5 - wetlands

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk Assessments* (DWER 2020).

Note 2: Proposed applicant controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

3.3 Risk assessment – noise emissions

Herring Storer Acoustics (HSA)(2020) completed an Environmental Acoustic assessment for sand extraction operations including screening, use of the wash plant and use of the front end loader feeding the plant at regular intervals. Noise level measurements were taken both near (7m in all directions) and at a point representative¹ of the nearest noise sensitive residential receptors to the north (Figure 5). The closest residential receptor is 323 Jarrah Road (~680m north west of the¹ screening plant location. Results indicate that during the operating periods (0700 – 1700 Monday to Saturday) and the nominated screening plant location (Figure 2), the noise levels comply with the *Environmental Protection (Noise) Regulations*. The allowable LA₁₀ noise level is 45 decibels (dB) at noise sensitive premises under the Noise Regulations for operations between 7.00 am to 5.00 pm, Monday to Saturday.

DWER's notes that the assessment did not include:

- Weather conditions at the time of measurement, creating the possibility that noise monitoring may under-represent possible 'worst-case' conditions;
- A description of the local site and if any stockpiles or bunds surrounding the operation might have provided noise screening effects;
- Specify if multiply pieces of equipment were used simultaneously during the assessment.

The recorded levels and assessment are only appropriate to the extent they reflect existing and future operations on site. If it is considered the noise levels were recorded under typical 'worst-case' weather conditions and are representative of the overall operations on site (i.e. excavation operations, screening and washing, product loading and truck movements), compliance with the applicable daytime assigned noise levels is expected. No noise complaints were received during time limited operations for works approval W6347/2020/1.

DWER outcome

The assessed risk for noise emissions during operations is 'medium risk' with a consequence rating of moderate and likelihood of unlikely. Given the acoustic assessment provided seems to be mostly representative of likely noise emissions from prescribed activities, the delegated officer considers results of the noise assessment acceptable. A permissible screening location will be placed on the licence as a regulatory control, as moving the screening plant may alter the noise risk to sensitive receptors. Operational hours will also be placed on the licence as a regulatory control.

¹ The noise monitoring location appears to be a large storage shed, rather than a residential receptor, however it is closer than the nearest residence (323 Jarrah Road) and therefore considered an acceptable monitoring location.

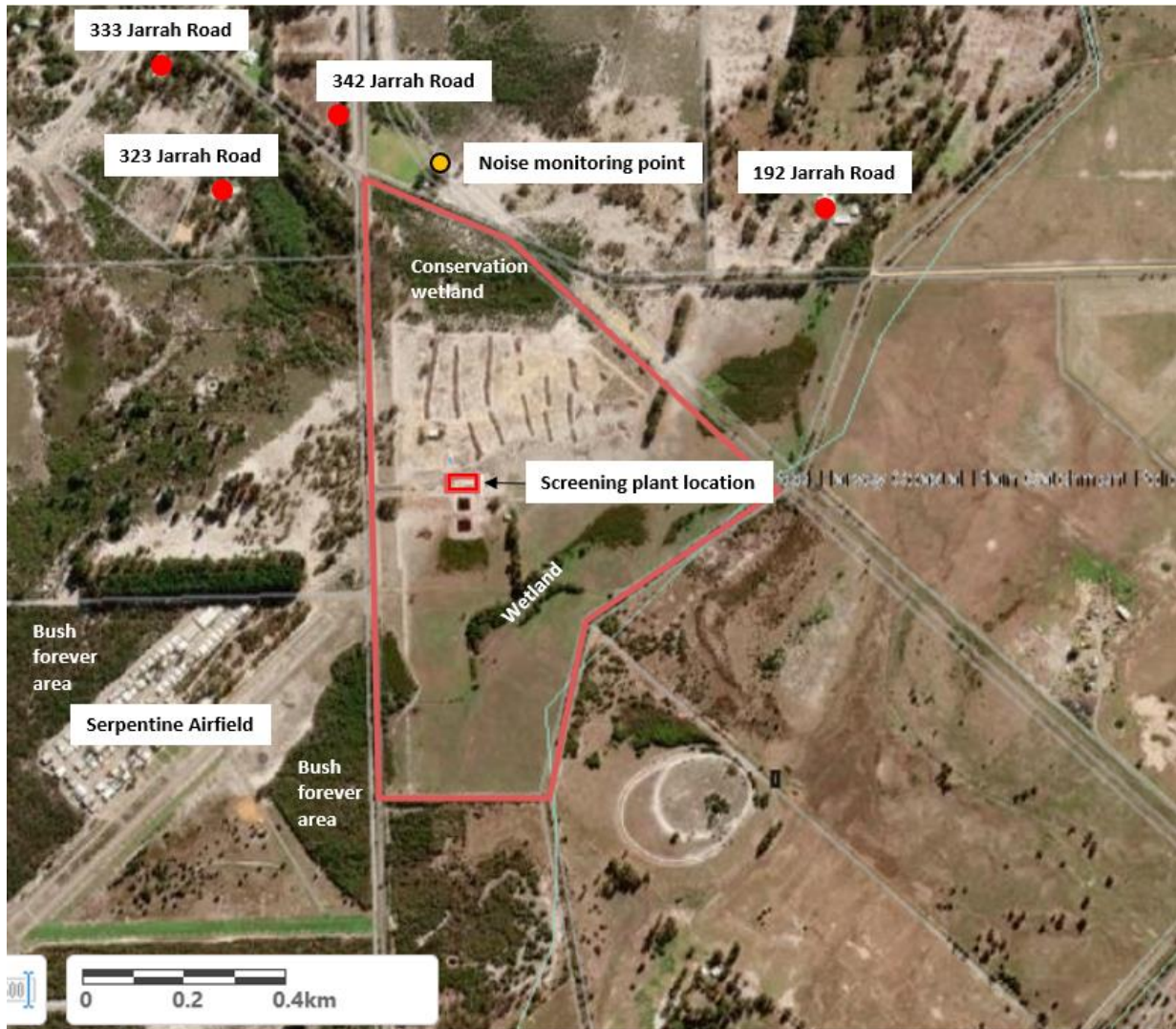


Figure 5 Residential receptors and noise monitoring location

3.4 Risk assessment – dust emissions

Annual wind roses (including wind speed, direction and frequency) for the nearest weather station recording climate data (18.8 km from premises, Karnet weather station no. 009111) are provided in Figures 5 and 6.

The 9am prevailing wind direction originates predominantly from an east, north-east and south-easterly direction towards the vacant lot (directly west), Serpentine Airfield (south-west) and residential lots (north-west). Winds originating from the east occur less than 30% of the time, with a majority of wind speeds 0-20km per hour. Winds originating from the north-east and south-east occur less than 16% of the time with majority of wind speeds 0-20km per hour.

The 3pm prevailing wind direction originates predominantly from the south-west and west towards a residential lot to the north-east and a vacant lot directly east. Winds from the south-west occur less than 30% of the time, with a majority of wind speeds 0-20km per hour. Winds from the west occur less than occur less than 20% of the time with a majority of wind speeds 0-20km per hour.

Rose of Wind direction versus Wind speed in km/h (01 Jan 1965 to 10 Aug 2020)

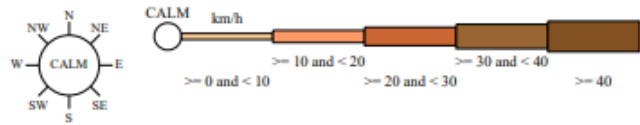
Custom times selected, refer to attached note for details

KARNET

Site No: 009111 • Opened Dec 1963 • Still Open • Latitude: -32.4389° • Longitude: 116.0789° • Elevation 286m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.



9 am
19491 Total Observations

Calm 7%

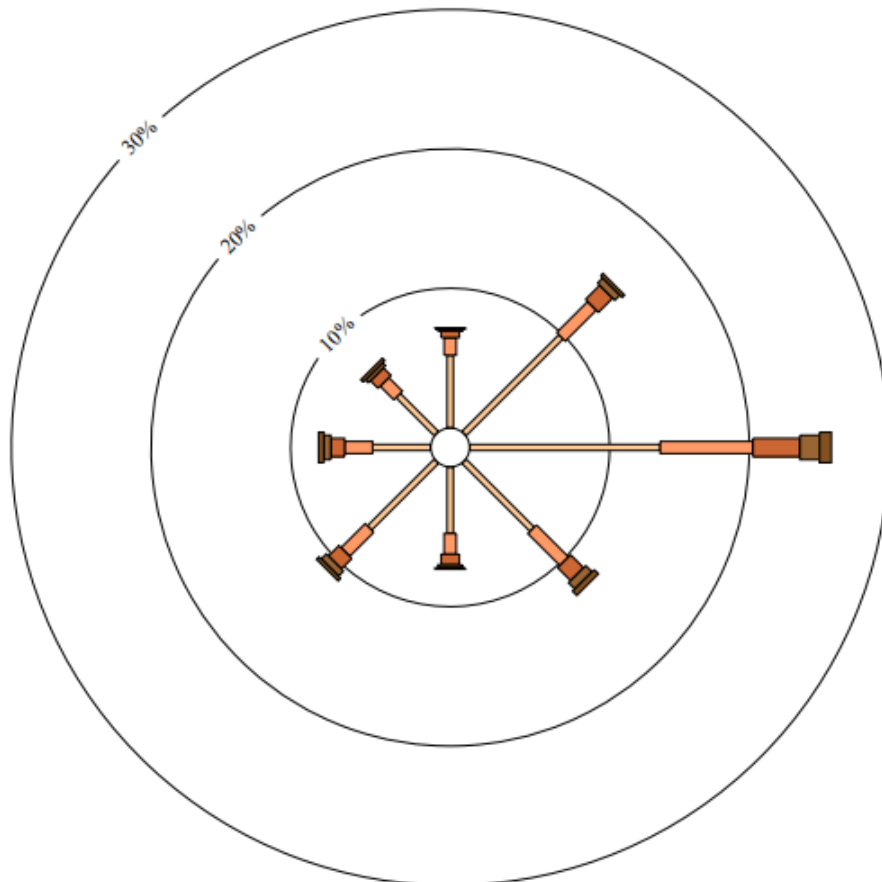


Figure 6 Annual wind rose at Karnet weather station site 009111 (9am)

Rose of Wind direction versus Wind speed in km/h (01 Jan 1965 to 10 Aug 2020)

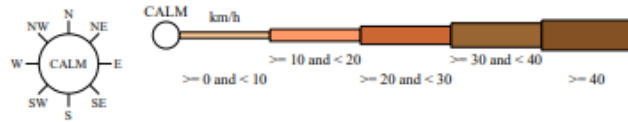
Custom times selected, refer to attached note for details

KARNET

Site No: 009111 • Opened Dec 1963 • Still Open • Latitude: -32.4389° • Longitude: 116.0789° • Elevation 286m

An asterisk (*) indicates that calm is less than 0.5%.

Other important info about this analysis is available in the accompanying notes.



3 pm
15422 Total Observations

Calm 4%

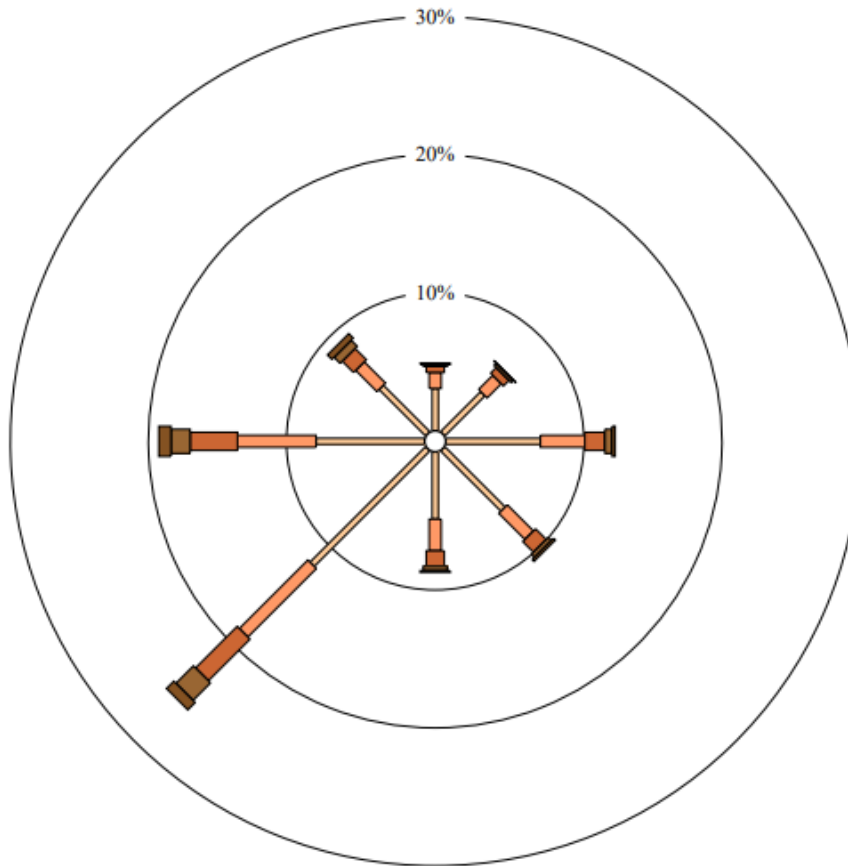


Figure 7 Annual wind rose at Karnet weather station site 009111 (3pm)

The applicant has developed a Dust Management Plan (DMP) as part of their application for Planning Approval with the Shire of Serpentine/Jarrahdale. Dust controls, contingency and monitoring proposed by the applicant are detailed in Appendix 1. Key controls include use of dust monitors (Figure 7), water cart, covering vehicle loads, restricting vehicle speeds and stabilisation of open areas during earthworks using chemical stabilisation. Key contingencies for dust detected outside normal working hours include erection of wind-fencing stored on-site and application of spray mulch.

The applicant has proposed dust monitoring (further detailed in Appendix 1), using three monitors (Figure 7) which will take place 24 hours per day and will use National Environmental Protection (Ambient Air Quality) Measure (NEPM) criteria of 50 micrograms per cubic metre

($\mu\text{g}/\text{m}^3$) (24 hour average)². A 1 hour average value of $1000\mu\text{g}/\text{m}^3$ will also be adopted to implement management action to prevent short term dust events which might exceed the $50\mu\text{g}/\text{m}^3$ 24 hour average. Corrective actions will be implemented upon detection of 80% of the adopted criteria.

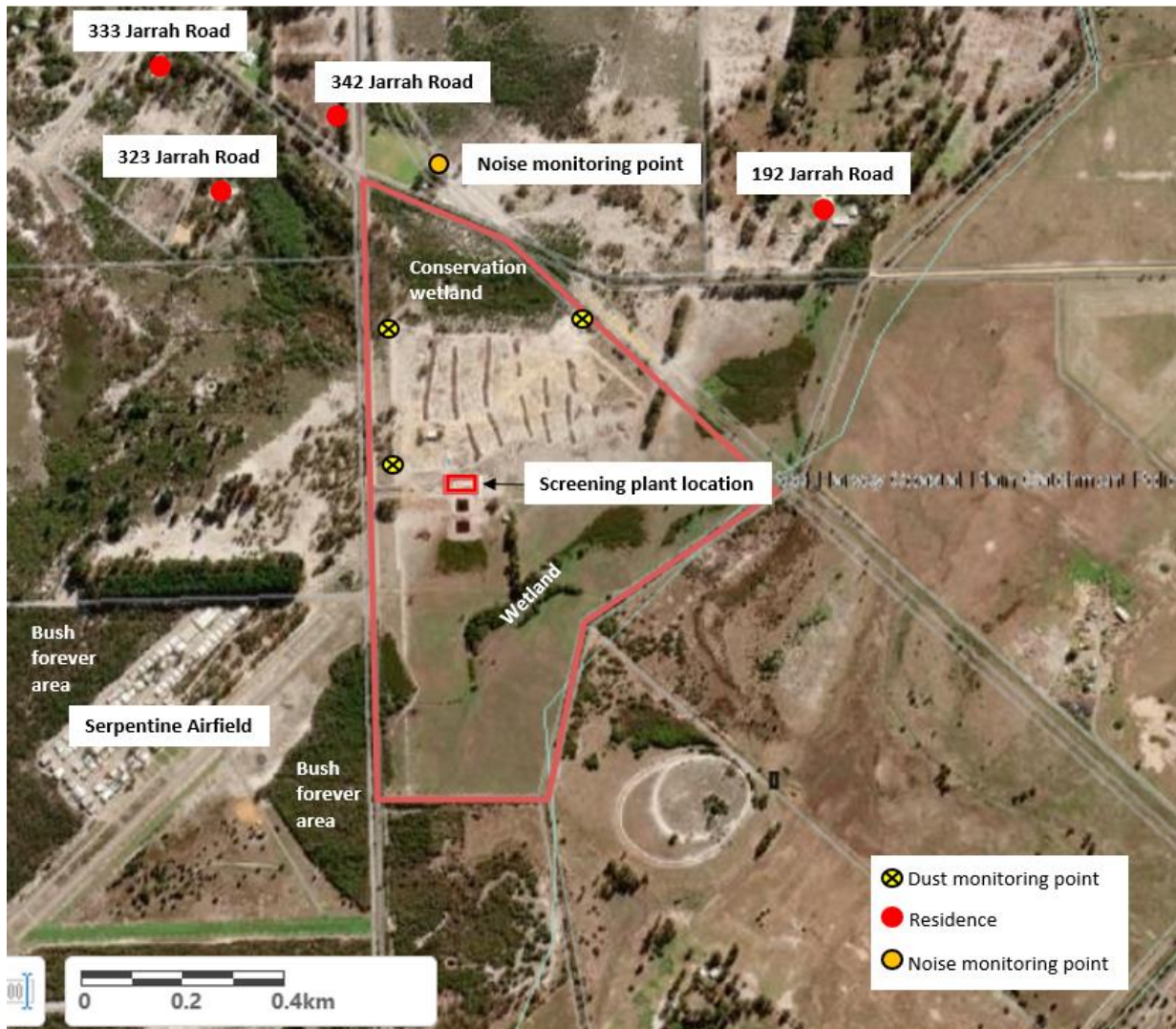


Figure 8 Dust monitoring locations

DWER Outcome

The assessed risk for dust emissions impacting Serpentine Airfield during operations is 'medium risk' with a consequence rating of 'major' and likelihood of 'unlikely'. The risk associated with dust impacts to nearby sensitive environmental receptors are considered 'minor' and 'unlikely'.

The delegated officer considers the applicant controls are sufficient to mitigate the risk of dust emissions to nearby receptors. As Serpentine airfield may be particularly sensitive to dust emissions, the applicant proposed controls and dust monitoring and criteria (NEPM criteria of $50\mu\text{g}/\text{m}^3$ for a 24 hour average) will be placed on the licence as regulatory controls. Additionally,

² The National Environment Protection (Ambient Air Quality) Measure for (NEPM) sets standards for the key air pollutants to which most Australians are exposed, including particulate matter (PM10 and PM2.5). PM10 refers to particulate matter less 10 microns in diameter. The criteria which the applicant proposes to adopt is for particulate matter PM10, maximum concentration of $50\mu\text{g}/\text{m}^3$ over a 24 hour average.

it has been conditioned that no visible dust generated from primary activities shall cross the premises boundary.

3.5 Risk assessment – wetlands

A conservation category wetland (UFI 14706) is located within the premises directly north of the area cleared for extractive industry. Conservation category wetlands are classified by Department of Biodiversity, Conservation and Attractions (DBCA) as those which ‘support a high level of attributes and functions’ and that ‘No development or clearing is considered appropriate. These are the most valuable wetlands and any activity that may lead to further loss or degradation is inappropriate’.

The Shire of Serpentine Jarrahdale placed a requirement on their development approval that “Prior to the commencement of pre-excavation works, a Wetland Management Plan shall be submitted to and approved by the Shire and thereafter implemented”. Strategen (2015) consequently developed a Wetland Management Plan (WMP) for the site.

Management strategies listed to protect the wetland within the WMP include a 50m buffer defined by fencing. The fencing will be used to improve fauna habitat through prevention of stock access, enable native fauna movement and buffer the habitat from clearing.

The WMP also mentions protection of the wetland by a Water and Drainage Management Plan (WDP). The WDP states that the site is bounded to the east by Punrack Drain (Figure 3) which flows north to the Serpentine River and that culverts and a drain invert are located along the western boundary. It states that “Wetlands are drained by existing surface water drainage infrastructure (outlets, culverts and inverts); there is no foreseen impact to surface water levels from proposed sand extraction activities.” The WDP includes the following management practices:

- 50m operations buffer from conservation wetland defined with fencing. (Figure 3);
- Identify and stabilize exposed areas of soil with increased susceptibility to erosion or riling;
- Identify and remove impediments to the surface water drainage infrastructure that would significantly alter effective site drainage.

DWER Outcome

The assessed risk to the conservation wetland during operations is ‘medium risk’ with a consequence rating of ‘moderate’ and likelihood of ‘possible’. DWER considers the applicant controls sufficient to mitigate risk to the conservation wetland. The applicant proposed 50m buffer between the conservation wetland and site operations will be placed on the licence as a regulatory control.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 5: Consultation

Consultation method	Comments received	Department response
Application advertised on the department’s website on 27 May 2021	None received	N/A
Local Government Authority advised of proposal on 27 May 2021	None received	N/A

Letters sent to nearby Hopeland residents: <ul style="list-style-type: none"> • 192 Jarrah Road • 323 Jarrah Road • 333 Jarrah Road • 342 Jarrah Road On 27 May 2021	None received	N/A
Serpentine Airfield advised of proposal on 27 May 2021	None received	N/A
Applicant was provided with draft documents on 9 July 2021.	Request for clarity regarding “biannual reporting”	Language updated to “biennial” i.e. reporting every second year.

5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. SERS, 2021. Compliance documentation for Works Approval W6347/2020/1 (DWER reference: DWERDT433699)
5. Strategen, 2016, *Lot 810 Yangedi Road, Hopeland. Environmental Offset Plan* (DWER reference: A2013744)

Appendix 1: Applicant Proposed Dust Management

Urban Resources has developed a Dust Management Plan (DMP) as part of their application for Planning Approval with the Shire of Serpentine/Jarrahdale. The plan includes dust controls, contingency measures for outside working hours, and monitoring, summarised below.

Dust management plan controls:

- Stabilization of cleared land by earthworks and chemical stabilization;
- Batters and top soil bunds stabilized with hydro mulch with grass seed;
- Vehicle paths to be restricted to limestone road routes;
- Vehicles transporting loose material such as sand, limestone and topsoil to have loads covered;
- Vehicle speeds limited to no more than 20km/hr on the site to minimize dust lift off;
- Material drop heights between loaders and trucks and to stockpiles will be kept to a minimum practical height;
- Water carts used (10,000 litres capacity per 7.5ha of disturbed site);
- Complaints recording and reporting;

Contingency measures (outside working hours):

- Use of water to stabilize areas where visible dust liftoff is occurring;
- Application of spray mulch as soon as feasible; and
- Wind fencing to be stored on site to be available within one hour of being required;

Dust monitoring

- Three dust monitors as per Figure 7, operating continuously 24 hours per day;
- Monitors are Dustrak II and instrument calibrated in accordance with the manufacturers recommendations once per week;
- The DustTrack II instruments are equipped with an SMS alarm card that can trigger an alarm to the mobile phone of the site supervisor or a second person at preset alarm levels;
- Background monitoring once per week prior to site activity commencing to provide baseline levels of air pollutants;
- Adherence to National Environmental Protection Measure (NEPM) criteria of 50ug/m³ (24 hour average) not to be exceeded more than 5 times per year which is a target for urban air quality throughout Australia.
- A 1 hour average value of 1000 ug/m³ has been adopted as a 1 hour average alert level as if that value is maintained for 1 hour then it is possible that the 50 ug/m³ (24 hour average criteria) will be exceeded.
- To minimise the possibility that the adopted assessment criteria will be exceeded, Corrective Action Alerts will be set at 80% of the adopted criteria with the aim that the action will be taken to prevent an exceedance of the Alarm level (Figure 7);
- Dust will be visually monitored daily during operations to ensure control measures are effective; and
- Any complaints generated due to dust will be directed to the site supervisor and stabilisation will occur within 18 hours of receiving the initial complaint. The C.A.R. Procedure and complaints is in place to record complaints and ensure complaints are acted on promptly.

The applicant has developed a complaints register to ensure all issues with operations are brought to the attention of the on-site manager. A template has also been developed to be sent to nearby residents prior to major excavation activities to notify residents and provide contact details in case of a dust event.

Alarm Type	Trigger Value (ug/m³)	Management Response
1 hour average Corrective Action Alert	800	<ul style="list-style-type: none"> • Flashing light triggered on top of monitoring unit • Alarm notification sent to site supervisors phone • Site supervisor to immediately evaluate conditions and implement contingency measures
24 hour average Corrective Action Alert	40	<ul style="list-style-type: none"> • Flashing light triggered on top of monitoring unit • Alarm notification sent to site supervisors phone • Site supervisor to immediately evaluate conditions and implement contingency measures
1 hour average Alarm	1000	<ul style="list-style-type: none"> • In addition to SMS alarm to supervisor and flashing light, SMS is also sent to Stephen Elliot or the site environmental consultant • If condition persists for more than 3 hours, then work to cease on site
24 hour average Alarm	50	<ul style="list-style-type: none"> • In addition to SMS alarm to supervisor and flashing light, SMS is also sent to Stephen Elliot or the site environmental consultant • Dust controls for the site to be re-evaluated and upgraded as required to prevent a recurrence

Figure 10 Trigger levels for dust monitors

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY					
Application type					
Works approval	<input type="checkbox"/>				
Licence	<input checked="" type="checkbox"/>	Relevant works approval number:	W6347/2020/1	None	<input type="checkbox"/>
		Has the works approval been complied with?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report submitted?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Date Report received: ECR received on 30/3/2021- compliant			
Renewal	<input type="checkbox"/>	Current licence number:			
Amendment to works approval	<input type="checkbox"/>	Current works approval number:			
Amendment to licence	<input type="checkbox"/>	Current licence number:			
		Relevant works approval number:		N/A	<input type="checkbox"/>
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>
Date application received					
Applicant and Premises details					
Applicant name/s (full legal name/s)		Urban Resources Pty Ltd			
Premises name		Yangedi Road Quarry			
Premises location		253 Yangedi Road, Hopeland Lot 810 on Deposited Plan 202726			
Local Government Authority		Shire of Serpentine-Jarrahdale			
Application documents					
HPCM file reference number:		DER2021/000212			
Key application documents (additional to application form):		Planning approval (Shire of Serpentine-Jarrahdale) EPBC Offset Agreement (for clearing of black cockatoo habitat) Water Report Noise Assessment Dust management plan Water and drainage management plan			
Scope of application/assessment					
Summary of proposed activities or changes to existing operations.		Transition from works approval to licence			

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 12	200,000 tonnes per annual period	N/A

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Reference No: EPBC Approval 2015/429 Due to presence of defined black cockatoo habitat, Urban resources developed "Lot 810 Yandengi Road, Hopeland, Environmental Offset Plan" – approval granted until 30 September 2021
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input checked="" type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: PA20/1006 / PA18/475 Expiry date: 12/4/2025 If N/A explain why?
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: 6417/1
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Application reference No: N/A Licence/permit No: N/A
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: Licence/permit No: CAW181145 & GWL201334(1)

<p>Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Name: Serpentine River System & Serpentine Groundwater Area Type: RIWI surface water and groundwater Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office: Kwinana Peel</p>
<p>Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Name: N/A Priority: P1 / P2 / P3 / N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/></p>
<p>Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i>, <i>Environmental Protection (Controlled Waste) Regulations 2004</i>, <i>State Agreement Act xxxx</i>)</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Planning and Development Act 2005</p>
<p>Is the Premises within an Environmental Protection Policy (EPP) Area?</p>	<p>Yes <input type="checkbox"/> No <input type="checkbox"/></p>	<p>EPP Peel Harvey Estuary Policy 1992</p>
<p>Is the Premises subject to any EPP requirements?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>EPP policy is to manage build up of nutrients, especially phosphorous in water source.</p>
<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Classification: N/A Date of classification: N/A</p>