



## Application for Works Approval

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

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<b>Works Approval Number</b>	W6557/2021/1
<b>Applicant</b>	CPB Contractors Pty Limited
<b>ACN</b>	000 893 667
<b>File number</b>	DER2021/000284
<b>Premises</b>	Yanchep Rail Extension Lot 9001, Taronga Place Eglinton WA 6034  Legal description – Lot 9001 on Deposited Plan 413782 Certificate of Title Volume 2964 Folio 312 As defined by the premises maps attached to the issued works approval
<b>Date of report</b>	8 October 2021
<b>Decision</b>	Works approval granted

**MANAGER, RESOURCE INDUSTRIES  
REGULATORY SERVICES**

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

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## 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operations (including time limited operations) of the premises. As a result of this assessment, works approval W6557/2021/1 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 Overview of Project

The Yanchep Rail Extension (YRE Project) is an extension to the northern suburbs railway (also known as the Joondalup line) in Perth's northern suburbs. The YRE Project includes 14.5 km of railway beyond the existing Butler Station and three new stations at Alkimos, Eglington and Yanchep.

The Yanchep Rail Extension: Part 1 – Butler to Eglington (Part 1 Project) consists of the construction and operation of a 7.3 km extension to the existing Joondalup railway line from Butler Station to the suburb of Eglington in the City of Wanneroo.

The design of the YRE Project requires a considerable volume of material be extracted from existing ground levels, which includes sand. A contract condition requires that the applicant reuse the sand in permanent and temporary construction works associated with the YRE Project.

As part of Part 1 Project delivery, the applicant is proposing to screen the extracted sand. The area selected for sand screening has been cleared under Ministerial Statement 1100 (MS 1100) and is being used as a stockpile storage area under Development Approval 30-50410-1.

### 2.3 Application summary and overview of premises

On 13 May 2021, the applicant applied for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction and operations (including time limited operations) works relating to Category 12: Screening etc. of material at the premises. The applicant is proposing to screen up to 100,000 tonnes of sand over a one-year period.

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 works approval W6557/2021/1. 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 2020b) are outlined in works approval W6557/2021/1.

### 2.4 Description of proposed activity

#### 2.4.1 Construction

The proposed construction phase activities include the following works:

- placement and mobilisation of screening plant and associated infrastructure (including

vehicle movements):

- mobile screen (Terex Finlay 883MKII Supertrak);
  - stacker (Edge RTS 9048);
  - articulated dump truck;
  - articulated water cart;
  - WA 470-6 loader; and
  - excavator.
- construction of stormwater management infrastructure.

#### 2.4.2 Operations (including time limited operations)

The proposed sand screening operations (including time limited operations) activities includes the following:

- screening of sand;
- handling and stockpiling of material including loading of material into trucks;
- vehicle movements; and
- refuelling (via refuelling truck equipped with a spill kit and drip tray).

Operating hours are proposed to occur between 7 am and 7 pm Monday to Saturday. Operations exclude Sundays and public holidays.

### 2.5 Part IV of the EP Act

The overall YRE Project was assessed under Part IV of the EP Act with two Ministerial Statements issued.

MS 1100 was approved on 26 June 2019 for the Part 1 Project and requires the proponent to minimise impacts from construction on flora and vegetation, landforms, terrestrial fauna and social surroundings. These Part IV regulatory requirements do not pertain to the applicant's proposed sand screening activities. Therefore, works approval W6557/2021/1 provides Part V regulatory requirements for these activities.

MS 1129 was issued on 14 April 2020 for Part 2 of the YRE Project. The proposed sand screening activities assessed under this works approval are not located within the envelope for Part 2 of the YRE Project.

## 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 2020b).

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 construction and operations (including time limited operations) 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
<b>Construction</b>			
Noise	Activities: <ul style="list-style-type: none"> <li>• placement and mobilisation of screening plant and associated infrastructure (including vehicle movements); and</li> <li>• construction of stormwater management infrastructure.</li> </ul> For noting: <ul style="list-style-type: none"> <li>• the applicant has advised that site establishment works have largely been completed as part of other activities associated with the construction of the YRE Project.</li> </ul>	Air / windborne pathway	All works will be undertaken during normal operating hours. See section 2.4.2.
Dust			<ul style="list-style-type: none"> <li>• Water access:               <ul style="list-style-type: none"> <li>○ water for dust suppression is being sourced from a High Density Polyethylene (HDPE) lined pond located 2 km north of the premises, at the Eglinton Station site.</li> </ul> </li> <li>• Water carts:               <ul style="list-style-type: none"> <li>○ water for dust suppression will be applied as necessary by water carts.</li> </ul> </li> <li>• Dust monitoring               <ul style="list-style-type: none"> <li>○ daily visual monitoring for off-site dust. Should dust drift be identified off-site, additional dust controls will be implemented (such as increased water cart operations) or operations temporarily discontinued.</li> </ul> </li> </ul>
<b>Operations (including time limited operations)</b>			
Hydrocarbons (hydraulic oil or diesel) and chemicals	Source: <ul style="list-style-type: none"> <li>• operation of vehicles, trucks and mobile equipment</li> </ul> Activities: <ul style="list-style-type: none"> <li>• refuelling of plant and equipment</li> <li>• damage to equipment causing leaks</li> </ul>	Infiltration to protected groundwater area via soil Overland flow	Refuelling truck equipped with a spill kit and drip tray.

Emission	Sources	Potential pathways	Proposed controls
Stormwater - sediment laden	Activities: <ul style="list-style-type: none"> <li>• screening of sand</li> <li>• handling and stockpiling of material including loading of material into trucks</li> <li>• vehicle movements</li> </ul>	Overland runoff	<ul style="list-style-type: none"> <li>• Stormwater diversion or bund will be constructed where required to divert surface water away from stockpiles and to minimise soil erosion caused by concentrated flows.</li> <li>• Erosion control measures will be implemented to minimise soil erosion caused by stormwater.</li> <li>• Sediment control measures will be implemented to trap and retain sediment within the site.</li> </ul>
Noise		Air / windborne pathway	<ul style="list-style-type: none"> <li>• All works will be undertaken during normal operating hours. See section 2.4.2.</li> <li>• Using the lowest-noise equipment which meet the requirements of the job.</li> <li>• Premises designed to minimise the need for reversing of vehicles and mobile equipment.</li> <li>• Broadband reversing alarms installed on construction vehicles and mobile equipment.</li> <li>• A monitoring exercise to be undertaken at the commencement of operations to establish the noise levels from the premises at the nearest noise sensitive premises.</li> <li>• Further noise mitigation measures considered if measured noise levels exceed the Assigned Noise Levels at noise sensitive premises.</li> </ul>
Dust			<ul style="list-style-type: none"> <li>• Water access:               <ul style="list-style-type: none"> <li>○ water for dust suppression is being sourced from a HDPE-lined pond located 2 km north of the premises, at the Eglinton Station site.</li> </ul> </li> <li>• Water carts:               <ul style="list-style-type: none"> <li>○ water for dust suppression will be applied as necessary by water carts.</li> </ul> </li> <li>• Bulk material stockpile:               <ul style="list-style-type: none"> <li>○ constructed in a series of lifts and compacted with machinery to mechanically stabilise the material; and</li> <li>○ access maintained to allow water cart operation on top of the stockpile.</li> </ul> </li> </ul>

Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> <li>• Chemical stabilisation: <ul style="list-style-type: none"> <li>○ a store of chemical stabiliser will be maintained on the project. This will be applied to the stockpile: <ul style="list-style-type: none"> <li>- to the eastern face following each stockpile lift;</li> <li>- where stockpile operations are not planned for an extended period (i.e. greater than two weeks); and</li> <li>- where it has been identified that water is being ineffective as a dust suppressant.</li> </ul> </li> </ul> </li> <li>• Wind observations: <ul style="list-style-type: none"> <li>○ daily observation of wind direction and strength for the Eglinton area (via <a href="http://www.willyweather.com.au">www.willyweather.com.au</a>). Should southerly or south-westerly winds be predicted in excess of 30 km/hr, then stockpiling operations will be stopped.</li> </ul> </li> <li>• Dust monitoring <ul style="list-style-type: none"> <li>○ daily visual monitoring for off-site dust. Should dust drift be identified off-site, additional dust controls will be implemented (such as increased water cart operations) or operations temporarily discontinued.</li> </ul> </li> <li>• Proposed further contingency measures, to be implemented as deemed necessary: <ul style="list-style-type: none"> <li>○ application of chemical stabiliser to dust generating areas;</li> <li>○ dust suppression on access tracks and key areas of vehicle and mobile equipment movement;</li> <li>○ installation of wind fencing along the north-eastern and eastern boundaries of the premises;</li> <li>○ installation of sprinkler systems on top of the stockpiles; and</li> <li>○ installation of continuous onsite dust monitoring units at problematic site boundaries to quantify dust levels (most likely the northern and eastern boundaries).</li> </ul> </li> </ul>



### 3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020b), 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.

The premises is approximately 7.2 km south-east of Yanchep.

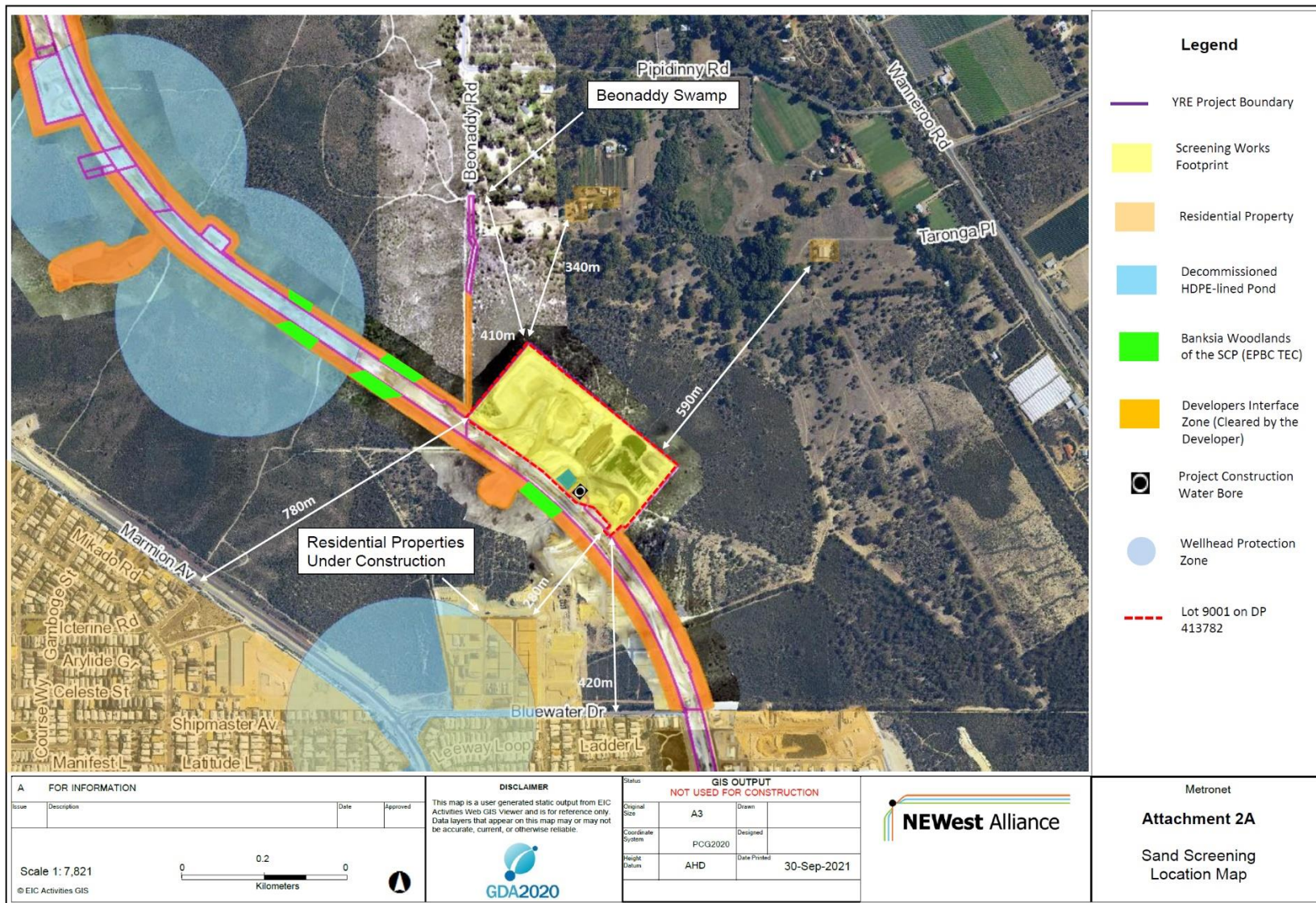
Table 2 and Figure 1 below provides a summary of potential human and environmental receptors that may be impacted because of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental Siting* (DWER 2020a)).

**Table 2: Sensitive human and environmental receptors and distance from prescribed premises boundary**

Sensitive receptors	Distance from prescribed premises boundary	Pathway assessment
<b>Human receptors</b>		
Residential properties	approximately 340-665 m north (located along Beonaddy Road and the corner of Beonaddy and Pipidinny roads);	This residential property is located downhill of the proposed sand screening area (Figure 2). Southerly winds are directed towards this single residential property; however, these winds occur less than 10% of the time during the mornings and afternoons (Figure 3).
	approximately 590 m north-east (single house located on Taronga Place);	This residential property is located downhill of the proposed sand screening area (Figure 2). Strong prevailing south-westerly winds are directed towards this single residential property approximately 36% of the time during the afternoons. Approximately 80% of these wind speeds are between 20-40 km/hr (Figure 3).
	approximately 280 m south (Sandpatch Parkway). Note that this residential estate is currently under construction;	These residential properties are located slightly uphill of the proposed sand screening area (Figure 2). Northerly winds are directed towards these residential properties; however, these winds occur less than 17% and 7% of the time during the mornings and afternoons respectively and the majority of wind speeds are between 0-20 km/hr (Figure 3).
	approximately 420 m south (south of Bluewater Drive); and	
	approximately 780 m west-south-west (on Verdigris Loop).	These residential properties are located uphill of the proposed sand screening area (Figure 2). Prevailing easterly winds are directed towards these residential properties approximately 14% and 29% of the time during the mornings and afternoons respectively. Approximately 50% of these wind speeds are between 20-40 km/hr (Figure 3).

Sensitive receptors	Distance from prescribed premises boundary	Pathway assessment
<b>Environmental receptors</b>		
Threatened Ecological Communities (TECs) and native vegetation	<p>The premises and surrounding areas are located within the below TEC buffer zones, indicating that any remnant native vegetation may be TEC habitat:</p> <ul style="list-style-type: none"> <li>• Tuart (<i>Eucalyptus gomphocephala</i>) woodlands and forests of the Swan Coastal Plain – Critically Endangered under the EPBC Act and listed as a Priority 3 ecological community by the Department of Biodiversity, Conservation and Attractions (DBCA); and</li> <li>• <i>Melaleuca huegelii</i> - <i>Melaleuca systema</i> shrublands on limestone ridges (floristic community type 26a as originally described in Gibson et al. (1994)) – listed as an Endangered ecological community by DBCA.</li> </ul>	Pathways via air/wind dispersion and overland runoff may lead to poor TEC/native vegetation health.
Threatened and priority fauna	<p>The following conservation significant fauna species have been sighted (DWER Geocortex):</p> <ul style="list-style-type: none"> <li>• Carnaby's black-cockatoo, <i>Calyptorhynchus latirostris</i> (EN) sightings: <ul style="list-style-type: none"> <li>○ southern border of premises;</li> <li>○ approximately 650 m south-east; and</li> <li>○ approximately 722 m north.</li> </ul> </li> </ul> <p>Note: sightings are from 2002, 2011 and 2012</p>	<p>The report and recommendations of the Environmental Protection Authority (EPA) (PTA 2019) notes that:</p> <ul style="list-style-type: none"> <li>• no roosting sites for Carnaby's cockatoo were recorded within the Part 1 Project development envelope during field surveys;</li> <li>• DBCA confirmed no roosting sites for Carnaby's cockatoo were located within the Part 1 Project development envelope; and</li> <li>• the nearest Carnaby's cockatoo foraging habitats and confirmed, or potential breeding habitats are located within the Yanchep and Neerabup national parks, which are both located more than 1 km from the Part 1 Project development envelope.</li> </ul> <p>Considering the above and noting that the proposed screening area does not contain any native vegetation and therefore no suitable habitat for the Carnaby's cockatoo; this receptor is not considered to be impacted during the proposed sand screening</p>

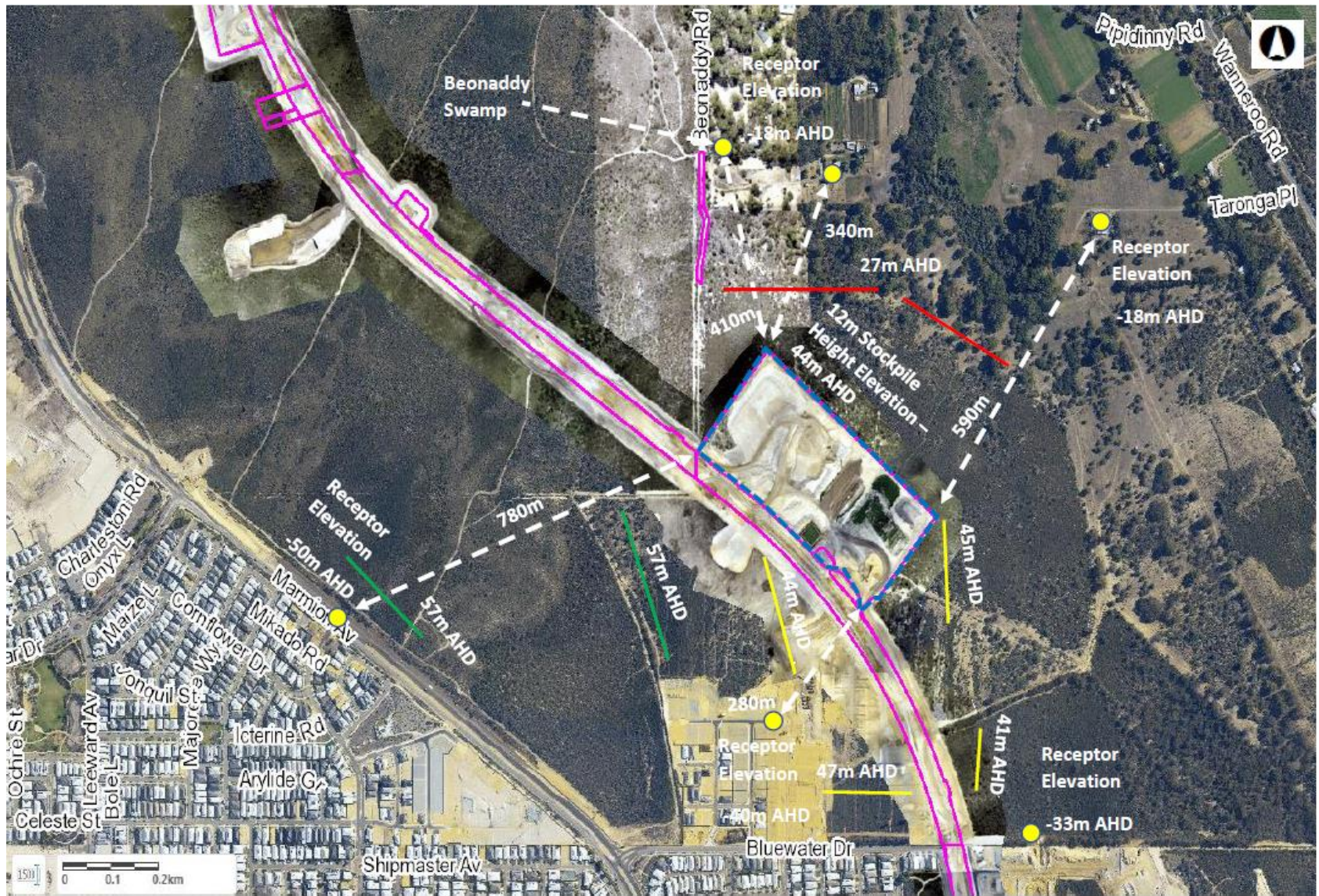
Sensitive receptors	Distance from prescribed premises boundary	Pathway assessment
		operations and is not further considered in the risk assessment.
Beonaddy Swamp	Approximately 410 m north. Note: DBCA legislated tenure (Yanchep National Park).	Beonaddy Swamp is located downhill of the proposed sand screening area (Figure 2). Pathways via air/wind dispersion and overland runoff may impact surface water quality.
P3 Drinking Water Source Area (PDWSA)	<p>The entire premises is located within the:</p> <ul style="list-style-type: none"> <li>• Perth Coastal and Gwelup Underground Water Pollution Control Area; and</li> <li>• Perth Groundwater Area proclaimed under <i>Rights in Water and Irrigation Act 1914</i>.</li> </ul> <p>The premises is located at least 290 m (north-west) and 345 m (south-west) away from two wellhead protection zones (Figure 1).</p> <p>Groundwater is considered marginal at 500-1000 mg/L Total Dissolved Solids (TDS) (Geocortex).</p> <p>Groundwater is located at a depth of approximately 18 metres below ground level (mbgl) (PTA 2019).</p>	<p>Discharges of hydrocarbons (e.g. hydraulic oil or diesel) and chemicals have potential to infiltrate to groundwater via soil causing impacts to groundwater quality.</p> <p>Seepage or overtopping from the HDPE-lined storage pond has potential to infiltrate to groundwater via soil causing impacts to groundwater quality.</p> <p>Soil within the Part 1 Project development envelope are calcareous and/or limestone, which are highly permeable (PTA 2019).</p>



**Figure 1: Distance to sensitive receptors**

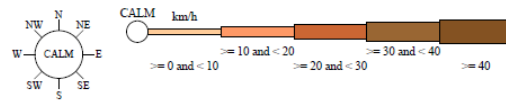
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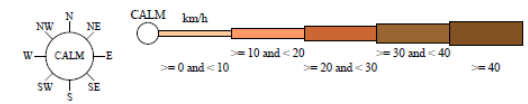
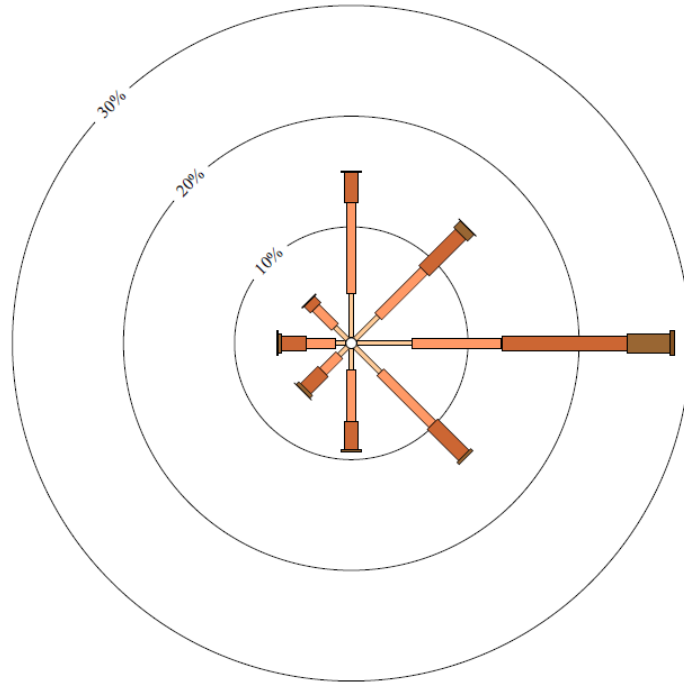
**Figure 2: Premises location elevation compared to surrounding sensitive receptors**

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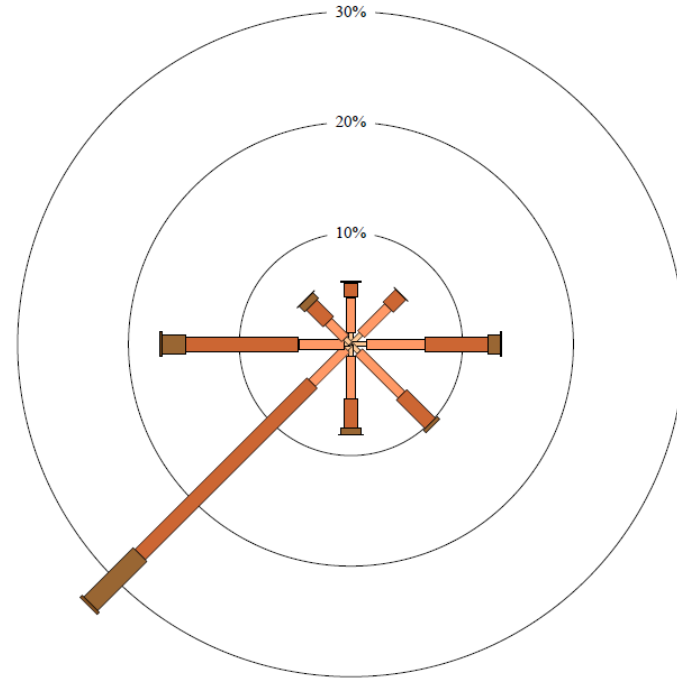
9 am  
8656 Total Observations

Calm 2%



3 pm  
8658 Total Observations

Calm \*



**Figure 3: Annual wind rose at Gingin Aero (Site No: 009178) – 9 am and 3 pm (BOM 2021)**

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020b) for each identified emission source and considers 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 works approval 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.

Works approval W6557/2021/1 that accompanies this decision report authorises construction and time limited operations. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. screening of sand. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

**Table 3: Risk assessment of potential emissions and discharges from the premises during construction and operations (including time limited operations)**

Risk Event						Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory requirements
Source/Activities	Potential emission	Potential pathways	Potential adverse impacts	Receptors	Applicant controls				
<b>Construction</b>									
Placement and mobilisation of screening plant and associated infrastructure (including vehicle movements)	Noise	Air/Wind dispersion	Impacts to health and amenity	Residential properties (between 280-780 m)	Refer to Table 1, section 3.1.1	C = Slight L = Possible <b>Low Risk</b>	Yes	N/A	N/A
	Dust	Air/Wind dispersion	Impacts to health and amenity	Residential properties (between 280-780 m)	Refer to Table 1, section 3.1.1	C = Slight L = Possible <b>Low Risk</b>	Yes	N/A	N/A
			Impacts to TEC/native vegetation health Impacts to surface water quality within Beonaddy Swamp	TEC/Native vegetation (surrounding premises boundary, except the area located adjacent to the southern corner of the premises) Beonaddy Swamp (410 m north)	Refer to Table 1, section 3.1.1	C = Slight L = Possible <b>Low Risk</b>	Yes	N/A	N/A
<b>Operations (including time limited operations)</b>									
Source: <ul style="list-style-type: none"> <li>operation of vehicles, trucks and mobile equipment</li> </ul> Activities: <ul style="list-style-type: none"> <li>refuelling of plant and equipment; and</li> <li>damage to</li> </ul>	Hydrocarbons (e.g. hydraulic oil or diesel) and chemicals	Infiltration to groundwater via soil Overland flow	Impacts to groundwater quality (P3 PDWSA) Impacts to TEC/native vegetation health	Groundwater, P3 Drinking Water Source Area (approximately 18 mbgl) TEC/Native vegetation (surrounding premises boundary, except the area located adjacent to the southern corner of the premises)	Refer to Table 1, section 3.1.1	C = Moderate L = Unlikely <b>Medium Risk</b>	No	<b><u>Condition 7 (Item 2)</u></b>	Refer to section 3.3 for the detailed risk assessment for discharges to the P3 PDWSA.

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Risk Event						Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory requirements
Source/Activities	Potential emission	Potential pathways	Potential adverse impacts	Receptors	Applicant controls				
equipment causing leaks.									
<ul style="list-style-type: none"> <li>Screening of sand;</li> <li>handling and stockpiling of material including loading of material into trucks; and</li> <li>vehicle movements.</li> </ul>	Stormwater - sediment laden	Overland runoff	Impacts to TEC/native vegetation health Impacts to surface water quality within Beonaddy Swamp	TEC/Native vegetation (surrounding premises boundary, except the area located adjacent to the southern corner of the premises)  Beonaddy Swamp (410 m north)	Refer to Table 1, section 3.1.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Yes	<u>Condition 1</u> <u>Condition 7</u> (Item 1)	N/A
	Noise	Air/Wind dispersion	Impacts to health and amenity	Residential properties (between 280-780 m)	Refer to Table 1, section 3.1.1	C = Moderate L = Possible <b>Medium Risk</b>	Yes	<u>Condition 1</u> <u>Condition 8</u> <u>Conditions 9-15</u>	Refer to section 3.4 for the detailed risk assessment for noise emissions.
	Dust	Air/Wind dispersion	Impacts to health and amenity	Residential properties (between 280-780 m)	Refer to Table 1, section 3.1.1	C = Moderate L = Possible <b>Medium Risk</b>	Yes	Condition 6 <u>Condition 7</u> (Item 3)	Refer to section 3.5 for the detailed risk assessment for dust emissions.
			Impacts to TEC/native vegetation health Impacts to surface water quality within Beonaddy Swamp	TEC/Native vegetation (surrounding premises boundary, except the area located adjacent to the southern corner of the premises)  Beonaddy Swamp (410 m north)	Refer to Table 1, section 3.1.1	C = Minor L = Possible <b>Medium Risk</b>	Yes		N/A

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

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

## 3.3 Detailed risk assessment – Discharges to P3 PDSWA

### 3.3.1 Overview of risk event

The entire premises falls within the P3 PDWSA 'Perth Coastal and Gwelup Underground Water Pollution Control Area' and is located at least 290 m (north-west) and 345 m (south-west) away from two wellhead protection zones<sup>1</sup> (Figure 1).

Groundwater is considered marginal at 500-1000 mg/L (TDS) (Geocortex) and located at a depth of approximately 18 mbgl (PTA 2019).

#### **Refuelling of screening plant and damage to equipment causing leaks**

The applicant advised that there will be no fuel storage at the premises and that on average, the machinery will be refuelled 2-3 times a week by a refuelling truck.

Applicant controls include the refuelling truck being equipped with a drip tray and spill kit. The Delegated Officer deems these controls to be suitable and they have been captured as regulatory requirements within works approval W6557/2021/1.

### 3.3.1 DWER determination

#### **Refuelling of screening plant and damage to equipment causing leaks**

The Delegated Officer has determined that due to the premises being located within a P3 PDSWA and the porous calcareous and/or limestone soils at the premises, additional regulatory requirements have been applied to ensure appropriate management of hydrocarbons.

The Delegated Officer has determined that the following additional regulatory requirements are to be applied to manage hydrocarbon emissions during time limited operations:

- Maintain all mobile plant as per manufacturer's specifications, keep suitably stocked spill response equipment, ensure all staff are trained to use spill response equipment and contain and clean-up spills as soon as they occur (Condition 7, Item 2).

The Delegated Officer notes that discharges to the environment are also regulated under the *Environmental Protection (Unauthorised Discharges) Regulations 2004*.

## 3.4 Detailed risk assessment – Noise Emissions

### 3.4.1 Overview of risk event

The acoustic assessment was prepared by NEWest Alliance and considered operational noise produced by the sand screening equipment and infrastructure. The assessment is titled *YRE Urban Quarter Sand Screening Plant Noise Assessment* (NEWest Alliance 2021) and is referenced in this document as 'acoustic assessment'.

The acoustic assessment indicates that noise from sand screening operations can be managed to comply with the assigned noise levels, as specified in the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations), at all neighbouring residences without additional mitigation (Figure 4).

Table 2 above lists the relevant sensitive land uses in the vicinity of the premises, which may be receptors relevant to the activities. The residential receptors are considered as noise sensitive premises: highly sensitive area in the Noise Regulations, which are afforded the lowest

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<sup>1</sup> A wellhead protection zone is intended to protect the immediate area around a bore from where drinking water is abstracted.

allowable decibel levels to reduce impacts on health and amenity. The location of the neighbouring residential receptors to the premises are shown in Figure 1 above.

The nearest residential premises are located to the south, north and north-east, with the residential premises to the south (note these premises are currently under construction) and north being the closest and located within 280 m and 340 m respectively from the proposed sand screening operations.

Topography of the surrounding landscape provides natural bunds to the west and south-west of the premises to buffer noise emissions from the site activities.

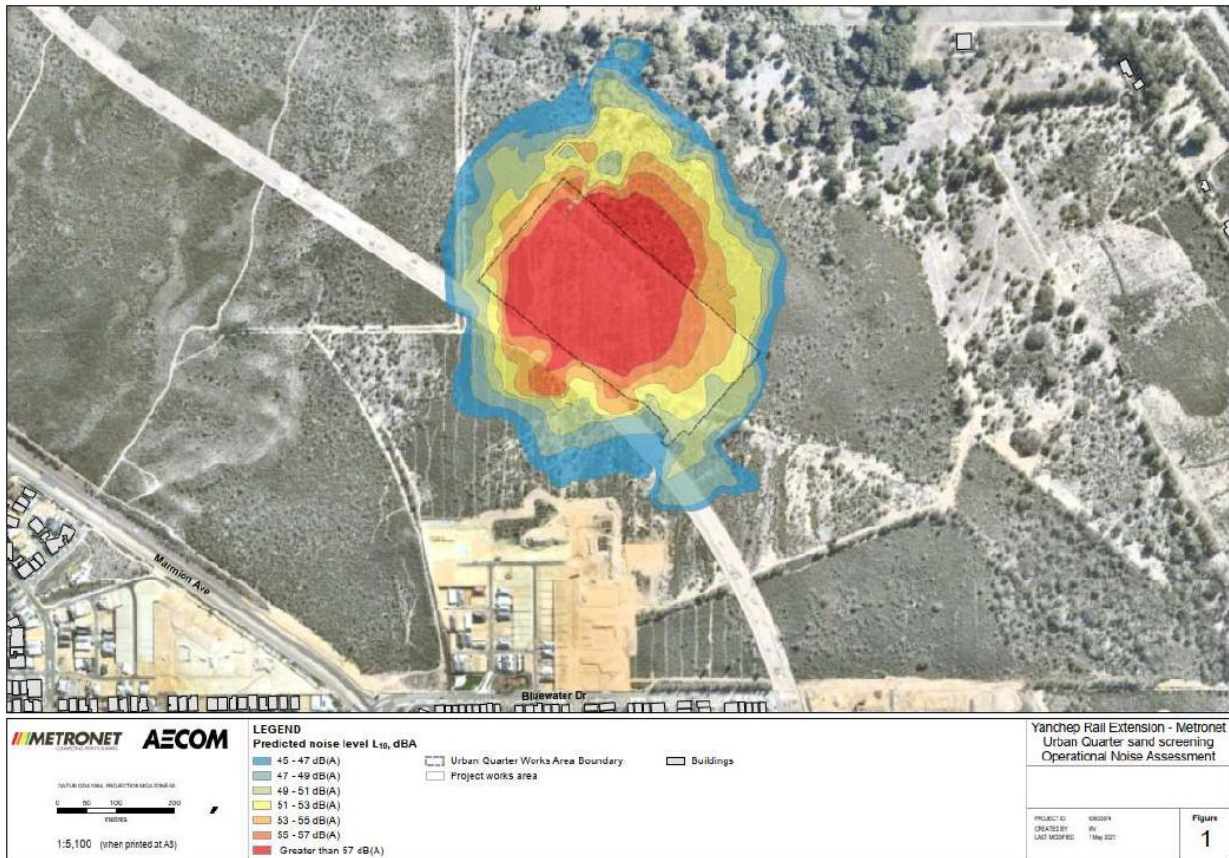
The assigned LA<sub>10</sub> noise level applicable under the Noise Regulations for operations between 7:00 am to 7:00 pm, Monday to Saturday is 45 decibels (dB) at noise sensitive premises. The acoustic assessment demonstrates that the use of mobile plant with sound power levels as specified in the acoustic assessment, will comply with the daytime assigned noise level at all residential receptors, even with a worst-case scenario of all equipment operating 100% of the time. The applicant notes that it is not expected for all equipment to always operate simultaneously.

The Delegated Officer notes the following potential limitations of the provided acoustic assessment:

- sound power levels (of the mobile plant) used for the noise modelling are relatively low and any underestimation of the sound power levels may lead to the noise exceedances at noise sensitive premises; and
- the influencing factors used for the noise modelling are relatively high given the receivers considered are surrounded by land zoned *Urban development* or *General rural*, and the fact some of that land is either vacant or already developed as residential use. Therefore, such land should be considered as type C (residential) for the purposes of the influencing factor calculation.

The applicant's key proposed noise emission controls include:

- designing the premises to minimise the need for reversing of vehicles and mobile equipment;
- installing broadband reversing alarms on construction vehicles and mobile plant;
- undertaking a noise monitoring exercise at the commencement of operations to establish the noise levels from the premises at the nearest noise sensitive premises; and
- further noise mitigation measures considered if measured noise levels exceed the Assigned Noise Levels at noise sensitive premises.



**Figure 4: Predicted noise levels**

### 3.4.2 DWER determination

The proposed applicant controls are deemed suitable and necessary to manage noise emissions during operations; therefore, these aspects have been conditioned as regulatory requirements within works approval W6557/2021/1.

The Delegated Officer's review of the proposed noise control measures and modelled results indicates that noise compliance is achievable. As outlined in Table 3 above, the assessed risk for noise emissions during operations is 'medium' with a consequence rating of 'moderate' and likelihood of 'possible'.

Considering the above, the Delegated Officer has determined that the following additional regulatory requirements are to be applied to manage and monitor noise emissions during time limited operations:

- maximum sound power levels permitted for each mobile equipment type have been specified to ensure these align with the sound power levels utilised in the noise modelling (Condition 1);
- noise monitoring equipment is to be operated and calibrated in accordance with the manufacturer's specifications (Condition 8); and
- the requirement to complete noise monitoring, reporting of noise monitoring results and taking corrective action where noise emissions do not comply with the relevant assigned levels in the Noise Regulations (Conditions 9-15).

## 3.5 Detailed risk assessment – Dust Emissions

### 3.5.1 Overview of risk event

The dust risk assessment considers dust emissions from sand screening activities. Table 2 above lists the relevant sensitive land uses in the vicinity of the premises, which may be receptors relevant to the activities.

Annual wind roses (including wind speed, direction and frequency of counts) for the Gingin Aero (Site No. 009178), which are representative of the prescribed premises wind conditions are provided in Figure 3.

During the mornings, the predominant winds originate from the east, north-east and north (Figure 3) and are directed towards the residential properties with the majority of wind speeds between 10 - 30 km/hr. The Delegated Officer notes that easterly winds occur less than 30% of the time, while north-east and north winds occur less than 16% of the time.

During the afternoons, the predominant winds originate from the south-west (Figure 3) and are directed towards a single residential property that is located 590 m from the premises. Although the wind speeds are considered strong, ranging between 20 - >40 km/hr; the Delegated Officer notes that south-westerly winds occur less than 35% of the time.

Topography of the surrounding landscape provides natural bunds to the west and south-west of the premises to buffer dust emissions from the site activities.

The applicant has proposed to use water as the primary mechanism for dust suppression, with water applied by water carts as necessary. A store of chemical stabiliser will be maintained on site and will be used where it has been identified that water is being ineffective as a dust suppressant.

The applicant will undertake daily observations of wind direction and strength and stockpiling operations will cease should southerly or south-westerly winds exceed 30 km/hr.

### 3.5.2 DWER determination

The Delegated Officer notes that these proposed dust control measures (refer to Table 1) are consistent with those described in *A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities* (DEC 2011) available on the DWER website. These controls are deemed suitable and necessary to manage dust emissions during operations and have therefore been conditioned as regulatory requirements within works approval W6557/2021/1.

Considering that the strongest wind speeds directed towards sensitive land uses occur less than 35% of the time and that the applicant's critical dust control measures have been conditioned within the works approval; the Delegated Officer has determined that dust emissions from sand screening operations can be managed to address the risk to sensitive land uses and that additional regulatory requirements are not considered necessary.

As outlined in Table 3 above, the assessed risk for dust emissions during operations is 'medium' with a consequence rating of 'moderate' and likelihood of 'possible'.

## 4. Licensing stage

As outlined in section 3.2, a licence is required following the time limited operations phase to authorise emissions associated with the ongoing sand screening operations.

The Delegated Officer notes that the department will re-assess regulatory requirements as required during the licensing stage following review of the monitoring results (noise emissions) and compliance reporting submitted as part of time limited operations under work approval W6557/2021/1.

## 5. Consultation

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

**Table 4: Consultation**

Consultation method	Comments received	Department response
Application advertised on the department's website on 25/06/2021	None received	N/A
Local Government Authority advised of proposal on 25/06/2021	None received	N/A
The Department of Planning, Lands and Heritage (DPLH) advised of proposal on 25/06/2021	DPLH responded on 2 July 2021 and advised that they have no further comment or objections to the proposed works approval.	N/A
Applicant was provided with draft documents on 10/09/2021	The applicant provided a comment on 30 September 2021. Condition 7 (item 2) of works approval W6557/2021/1: The HDPE-lined pond displayed in Figure 1 has recently been decommissioned. We are now sourcing water for construction purposes in that area from another HDPE-lined pond 2 km to the north, at the Eglinton Station site.	The department has removed reference of the HDPE-lined pond that has now been decommissioned at the premises.

## 6. Conclusion

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

## References

1. Bureau of Meteorology (BOM) 2021, *Gingin (Site number: 009178)*, website: [http://www.bom.gov.au/climate/averages/tables/cw\\_009178.shtml](http://www.bom.gov.au/climate/averages/tables/cw_009178.shtml)
2. Department of Environment and Conservation (DEC) 2011, *A guideline for managing the impacts of dust and associated contaminants from land development sites, contaminated sites remediation and other related activities*, Perth, Western Australia.
3. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2020a, *Guideline: Environmental Siting*, Perth, Western Australia.
5. DWER 2020b, *Guideline: Risk Assessments*, Perth, Western Australia.
6. NEWest Alliance 2021, *YRE Urban Quarter Sand Screening Plant Noise Assessment*, Perth, Western Australia.
7. PTA 2019, *Public Transport Authority (PTA) Report and recommendations of the Environmental Protection Authority, Yanchep Rail Extension: Part 1 – Butler to Eglinton*, Perth, Western Australia

## Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)				
<b>Application type</b>				
Works approval	<input checked="" type="checkbox"/>			
Licence	<input type="checkbox"/>	Relevant works approval number:		None <input type="checkbox"/>
		Has the works approval been complied with?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?	Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date report received:		
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 checked="" type="checkbox"/>
Date application received	13 May 2021			
<b>Applicant and premises details</b>				
Applicant name/s (full legal name/s)	CPB Contractors Pty Limited			
Premises name	Yanchep Rail Extension (YRE)			
Premises location	Lot 9001 on Deposited Plan 413782 Volume/Folio 2964/312 PTA have a deed of agreement with the landholder and a Development Approval (Attachment 5A) to utilise this land for stockpiling.			
Local Government Authority	City of Wanneroo			
<b>Application documents</b>				
HPCM file reference number:	DER2021/000284			
Key application documents (additional to application form):	<ul style="list-style-type: none"> <li>Attachment 2A (1) - Location Map</li> <li>Attachment 2B - Indicative Layout</li> <li>Attachment 5A- DA UQ Stockpiles</li> <li>Attachment 6A (1) - UQ Stockpile and Dust Management Plan</li> <li>Attachment 6A (2) - Noise Assessment</li> <li>Attachment 7 - Development Application</li> </ul>			
<b>Scope of application/assessment</b>				

**SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)**

<p>Summary of proposed activities or changes to existing operations.</p>	<p>The Yanchep Rail Extension – Part 1 (Butler to Eglinton)</p> <p><u>Works approval</u></p> <p>Construction:</p> <ul style="list-style-type: none"> <li>• placement and mobilisation of screening plant and associated infrastructure (including vehicle movements):             <ul style="list-style-type: none"> <li>○ mobile screen (Terex Finlay 883MKII Supertrak);</li> <li>○ stacker (Edge RTS 9048);</li> <li>○ articulated dump truck;</li> <li>○ articulated water cart;</li> <li>○ WA 470-6 loader; and</li> <li>○ excavator.</li> </ul> </li> <li>• construction of stormwater management infrastructure.</li> </ul> <p>Operations (including time limited operations):</p> <ul style="list-style-type: none"> <li>• screening of sand;</li> <li>• handling and stockpiling of material including loading of material into trucks;</li> <li>• vehicle movements; and</li> <li>• refuelling (via refuelling truck equipped with a spill kit and drip tray).</li> </ul>
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Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 12: Screening etc. of material	Approximately 100,000 tonnes for the single year of operation.	

**Legislative context and other approvals**

<p>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?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Referral decision No: Managed under Part V <input checked="" type="checkbox"/> Assessed under Part IV <input type="checkbox"/></p>
<p>Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Ministerial statement No: 1100 EPA Report No: 1634</p>
<p>Has the proposal been referred and/or assessed under the EPBC Act?</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>	<p>Reference No: N/A A Deed of Agreement is in place between the landholder and Public Transport Authority (PTA) to utilise their existing EPBC Act approval.</p>



**SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)**

Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input checked="" type="checkbox"/> A Project Alliance Agreement is in place between the PTA and CPB Contractors Pty Limited and Downer EDI Works Pty Ltd to provide access to each portion of land forming the premises.
Has the applicant obtained all relevant planning approvals?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>	Approval: 30-50410-1 Expiry date: If N/A explain why? Approval by the Western Australian Planning Commission to commence development.
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	CPS No: N/A No clearing is proposed.
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 No clearing is proposed.
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 checked="" type="checkbox"/>	Application reference No: Licence/permit No: GWL205181(1)
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Perth Coastal and Gwelup Underground Water Pollution Control Area. Priority: P3 Are the proposed activities/ landuse compatible with the PDWSA (refer to <a href="#">WQPN 25</a> )? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i> )	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<ul style="list-style-type: none"> <li>• <i>Environmental Protection (Controlled Waste) Regulations 2004</i></li> <li>• <i>Environmental Protection (Noise) Regulations 1997</i></li> <li>• <i>Environmental Protection (Unauthorised Discharge) Regulations 2004</i></li> <li>• <i>Planning and Development Act 2005</i></li> <li>• <i>Rights in Water and Irrigation Act 1914</i></li> </ul>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A

**SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)**

Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Classification: N/A Date of classification: N/A