Decision Report

Application for Works Approval

Division 3, Part V *Environmental Protection Act 1986*

Works Approval Number	W6288/2019/1
Applicant	Hanson Construction Materials Pty Ltd
ACN	009 679 734
File Number	DER2019/000235
Premises	Hanson Hopeland 394 Hopeland Road Hopeland WA 6125 Legal description - Lot 137 on Deposited Plan 152967 Certificate of Title Volume 1668 Folio 739
Date of Report	11 December 2019
Status of Report	Final

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1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
Applicant	Hanson Construction Materials Pty Ltd
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AHD	Australian Height Datum
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CS Act	*Contaminated Sites Act 2003* (WA)
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under section 35 of the *Public Sector Management Act 1994* and is responsible for the administration of the *Environmental Protection Act 1986* along with other legislation.
EIL	Extractive Industries Licence
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
Minister	the Minister responsible for the EP Act and associated regulations

MS	Ministerial Statement
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
Occupier	has the same meaning given to that term under the EP Act.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Primary Activities	as defined in Schedule 2 of the Revised Licence
P&DC	Production and Design Capacity
Risk Event	As described in *Guidance Statement: Risk Assessment*
Shire	Shire of Serpentine-Jarradale
UDR	*Environmental Protection (Unauthorised Discharges) Regulations 2004* (WA)

2. Purpose and scope of assessment

This Works Approval application was submitted by the applicant to construct a mobile screening operation at Lot 137, 394 Hopeland Road, Hopeland WA 6125. The applicant proposes to screen approximately 160,000 tonnes per annual period of in-situ sand over a three to five year period to complement current business operations. The premises has a commercial sand volume of approximately 500,000 tonnes. The sand screening process is designed to produce highly specialised made to order sand products. The applicant has requested a P&DC of 250,000 tonnes per annual period to meet market expectations if they fluctuate.

2.1 Application details

Table 2 lists the documents submitted during the assessment process.

Table 2: Documents and information submitted during the assessment process

Document/information description	Date received
Application form	8 April 2019
Works Approval and Screening Licence Application Report. Lot 137 Punrak Rd, Hopeland EEL 15055.004 6 March 2019	8 April 2019

3. Background

Table 3 lists the prescribed premises categories that have been applied for.

Table 3: Prescribed Premises Categories in the Existing Licence

Classification of Premises	Description	*Approved Premises production or design capacity or throughput*
Category 12	Screening, etc. of material: premises (other than premises within category 5 or 8) on which material extracted from the ground is screened, washed, crushed, ground, milled, sized or separated.	250,000 tonnes per annual period

4. Overview of Premises

4.1 Operational aspects

The applicant produces building and construction materials through extracting, processing and distributing sands for pre-mixed concrete and concrete products.

The premises has a total extractive footprint of 11.2ha at the site which will include areas of disturbance for mining and site infrastructure. Figure 1 outlines the premises layout. The approved EIL proposes to mine the extractive footprint in four (4) stages as outlined in Figure 2. There are four consecutive stages identified and this staging limits the 'open' excavation area, in the first two years, capped at approximately 7.9 ha. The EIL governs the sand extractions activities at the premises; refer to section 4.3 below.

The mobile screen (Table 4) will initially be located within Stage 1; refer to Figure 2. The premises has a commercial sand volume of approximately 500,000 tonnes of commercial sand and the applicant proposes to screen 160,000 tonnes per annual period of sand to complement current business operations, however the rate of screening sand will be market driven; the applicant has requested a P&DC of 250,000 tonnes per annual period to cater for this.

A mobile screen will be employed at the premises. The mobile screening plant will be used to mechanically sort sand material after excavation to remove organic matter and oversized material. No water will be used or required in the screening process. A stockpiling conveyor is then used to stockpile the screen sand. A front end loader will be employed to mine the sand prior to screening at the premises.

Sand from the premises will be extracted, screened and stockpiled on site prior to loading and transport off site to market. Sand will be removed from site as required by trucks. Other infrastructure at the premises will include a site office (existing building) vehicle/equipment compound, toilet (existing building) and a 5000L self bunded diesel above ground tank. These are currently located in Stage 4 (Figure 2). Operation hours are 7.00 am to 5.00 pm Monday to Saturday inclusive.

The applicant will only employ a mobile screening plant that will not require permanent fixture to the ground. The mobile screening plant will be transported to site by truck and sited on a stable compacted sand pad, to screen sand. There will be no construction apart from siting. The mobile screening plant will be moved between Area 1 and Area 2 as required by operations.

No crushing activity has been assessed or authorised for this Works Approval application.

4.2 Infrastructure

The screening facility infrastructure, as it relates to Category 12, is detailed in Table.

Table 4 lists infrastructure associated with each prescribed premises category.

Table 4: Screening facility Category 12 infrastructure

	Infrastructure
	Prescribed Activity Category 12
Screening of sand	
1	Mobile Screen -Terex Finlay 883 mobile screening plant (or equivalent)
	Directly related activities
Extraction of sand and stockpiling of screened (market) sand	
1.	Front end loader
2.	Stockpiling conveyor for temporary storage of sand prior to export to market

Figure 1 Premises layout

Figure 2 Extractive footprint – Staged Screening

4.3 Exclusions to the Premises

The extraction of the sand (Extractive activity) is not a Prescribed activity or Premises listed under Schedule 1 of the EP Regulations and is there not a Prescribed activity regulated under the EP Act. Extraction is regulated by the respective Local Government Authority and the applicant has a valid EIL – refer to Table 5 below.

The storage of 5000L diesel at the premises is not a prescribed activity as it does not meet the requirements of Category 73 and therefore is not regulated under the EP Act. Emissions will be assessed as part of this assessment but the UDR apply in this instance and will therefore regulate this activity.

5. Legislative context

Table 5 summarises approvals relevant to the assessment.

Table 5: Relevant approvals and tenure

Legislation	Number	Subsidiary	Approval
EIL	*PA16/164*	*Landowners and Hanson Construction Materials Pty Ltd*	*Approved March 2018*
DWER Clearing Permit	*CPS 8036/01*	*Landowners – Craig and Michelle McAllister*	*Approved 18/10/2018 – Expires 17/11/2028*

5.1 Other relevant approvals

5.1.1 Planning approvals

Section 1.1.2 of the application states Development Approval under both the Metropolitan Regional scheme and the Shire of Serpentine-Jarrahdale Town Planning Scheme No. 2 was granted March 2018.

5.1.2 Federal Legislation

Environment Protection and Biodiversity Conservation Act 1999 (Cth)

A clearing permit application was initially submitted to DWER in September 2015 and in response DWER Clearing Branch requested the applicant establish whether an EPBC Act referral is required for potential impacts to black cockatoo habitats. Appendix C of the application states upon investigating impacts to a small area of habitat at the premises, this small impact does not warrant an EPBC Act referral.

5.2 Part V of the EP Act

5.2.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act and EP Regulations.

The guidance statements which inform this assessment are:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Publication of Annual Audit Compliance Reports (May 2016)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessments (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

5.2.2 Works approval and licence history

Table 6 summarises the works approval and licence history for the premises.

Table 6: Works approval and licence history

Instrument	Issued	Nature and extent of works approval, licence or amendment
W6288/2019/1	11/12/2019	New works approval to screen sand

5.2.3 Clearing

DWER issued clearing permit CPS 8036/01 to commence on 17 November 2018 and expires 17 November 2028. The purpose for which clearing may be done is for clearing for the purpose of sand extraction. The permit allows for a total of 4.39ha of native vegetation to be cleared under the permit.

6. Modelling and monitoring data

6.1 Monitoring of Noise emissions

The applicant has submitted a Noise Assessment in Appendix F as part of the Application. The Noise Assessment relates only to the operation of the premises under a Licence; not construction activities. It is noted that the only construction activity associated with this application is the movement and sitting of the mobile screen at the premises. All other activity will be during operations.

The applicant will employee a mobile screen and conveyor to screen and temporarily stockpile sand prior to export to market. A front end loader will extract the sand to be screened. Hours of operation are proposed for 0700 to 1700 hours Monday to Friday (excluding public holidays) and 0700 to 1200 hours Saturday. The Noise assessment includes the use of screening machinery and trucks used in transport at the premises.

Table 7 provides the allowable noise levels received at surrounding sensitive noise receptors as prescribed in the Noise Regulations. Regulations 7 and 8 stipulate maximum allowable external noise levels determined by calculating an influencing factor, which is then added to the base levels shown in Table 7.

Table 7 Assigned Noise levels

Premises receiving noise	Time of day	Assigned Level (dB)		
		L_A 10	L_A 1	L_A max
Noise sensitive premises	0700 – 1900 hours Monday to Saturday (Day)	45 + IF	55 + IF	65 + IF
	0900 – 1900 hours Sunday and Public Holidays (Sunday / Public Holiday Day Period)	40 + IF	50 + IF	65 + IF
	1900 – 2200 hours all days (Evening)	40 + IF	50 + IF	55 + IF
	2200 hours on any day to 0700 hours Monday to Saturday and 0900 hours Sunday and Public Holidays (Night)	35 + IF	45 + IF	55 + IF
Industrial and Utility Premises	All hours	65	80	90

It is a requirement that noise received be free of annoying characteristics such as tonality, modulation and impulsiveness as defined in the Noise Regulations. If the noise is not music and if the annoying characteristics exist and cannot be practically removed, then any measured level is adjusted according to Table 8.

Table 8 Adjustments to noise levels

Tonality	Modulation	Impulsiveness
+5 dB(A)	+5 dB(A)	+10 dB(A)

The closest sensitive receptors are provided in Figure 3. Due to the proximity of the screening operation Location A influencing factor has been assessed as 3 dB(A). The other locations for noise sensitive premises, B, C, D and E have an influencing factor of 0 dB. Therefore the assigned noise levels is provided in Table 9.

Table 9 Assigned Noise Levels

Noise sensitive premises	Time of day	Assigned Level (dB)		
		L_A 10	L_A 1	L_A max
Location A	0700 – 1900 hours Monday to Saturday (Day)	48	58	68
Location B, C, D and E		45	55	65

The applicant has modelled noise received at sensitive receptors using the computer model SoundPlan. Sound power levels have been provided for the machinery employed at the premises to conduct screening operations and are provided in Table 10. Due to the nature of the screening program, generally the screen and front end loader will operate within a pit. The pit will move with operations over time but the pit walls and associated sand stockpiles will always provide a barrier to noise. It is proposed that operations will start Stage 1 in the south east corner and extend towards the North West corner of the premises (Figure 2). Based on the noise emissions from machinery employed for screening operations a worst case scenario has been developed which allows for all the equipment to be operating at the same time at the

centre of the pit.

Table 10 Sound power levels

Element name	Unit	Frequency Hz										dB(A)
		31.5	63	125	250	500	1k	2k	4k	8k	16k	Sum
Screening Plant (McCloskey S190)	dB(A)/unit	66	80	84	90	93	95	95	95	87	-	101
Truck (Semi-trailer Tipper)	dB(A)/unit	42	60	62	66	72	81	85	90	70	62	95
		45	59	61	73	76	82	84	76	68	59	
		54	58	63	71	78	84	86	73	66	53	
Loader (WA430)	dB(A)/unit	46	72	73	80	86	93	90	87	82	69	105
		48	60	70	81	89	93	91	86	78	63	
		58	68	76	85	91	91	89	88	73	54	

The calculated Noise levels for noise emissions from the screening operation for the worst case scenario is provided in Table 11 and Figure 4 provides the noise contour plot.

Table 11 Calculated noise emission

Noise sensitive receptor	Scenario all machinery operating dB(A)
A	40
B	32
C	34
D	25
E	28

Based on calculated noise levels at the closest sensitive receptor, noise levels could be considered being tonal in characteristic. Therefore a +5 dB(A) penalty has been included to allow for the tonal component.

Thus if each sensitive receptor includes this tonal penalty the assessment of noise levels for emissions for the worst case scenario for Location A is 45 dB(A), Location B is 37 dB(A), Location C is 39 dB(A), Location D is 30 dB(A) and Location E is 33 dB(A) respectively. If these noise levels are assessed against the Assigned levels under the Noise Regulations as provide in Table 7, all of these assessment noise levels are below those outlined in Table 7 so noise levels at the premises should comply with the Noise Regulations. Table 12 provides a summary.

Table 12 Assessment of noise levels

Noise sensitive premises	Assessable Noise Level	Time of Day	Assigned Level (dB)	Compliance
A	45	0700 – 1900 hours Monday to Saturday (Day)	48	Complies
B	37		45	Complies
C	39			Complies
D	30			Complies
E	33			Complies

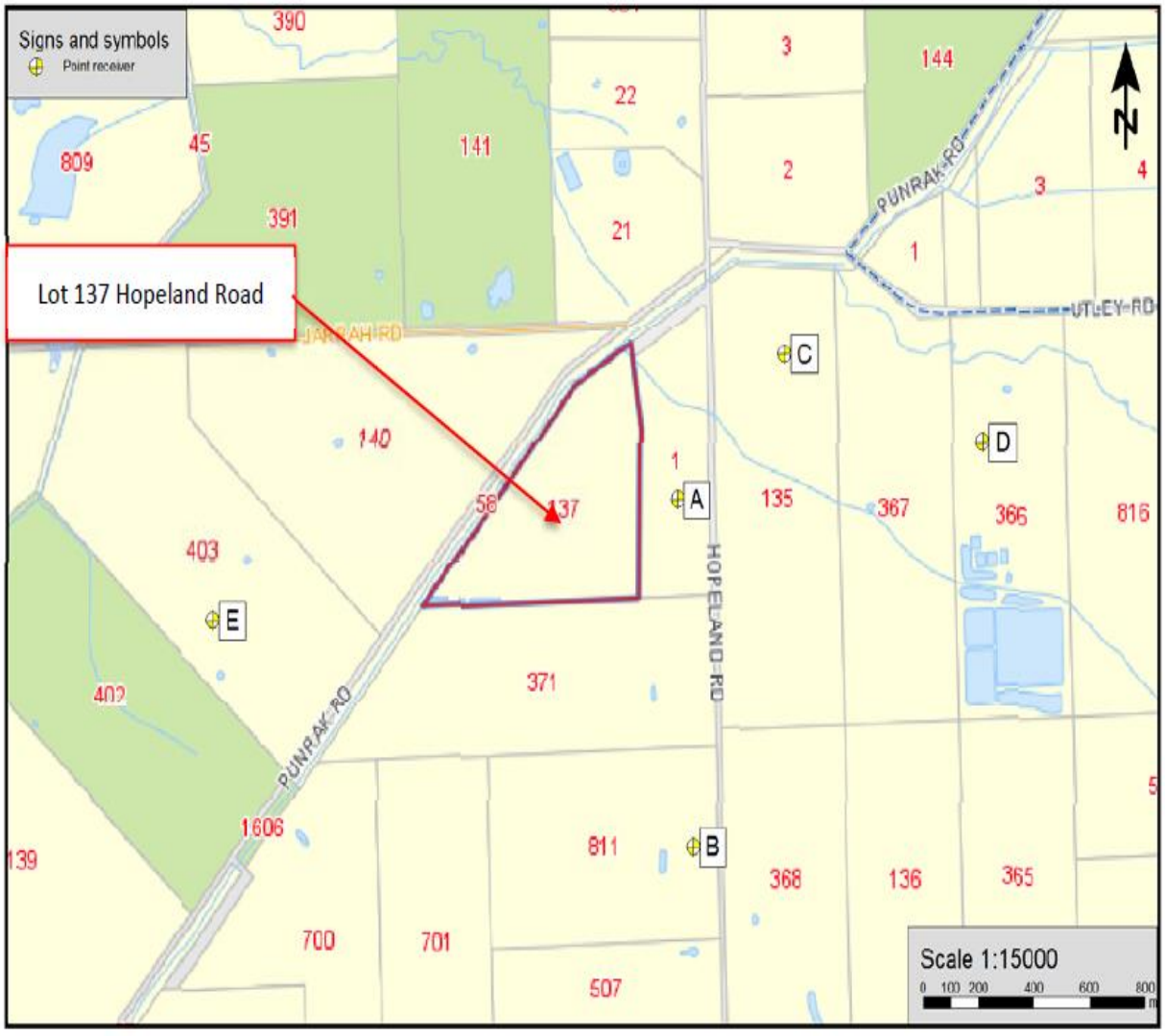


Figure 3 Noise sensitive receptor locations

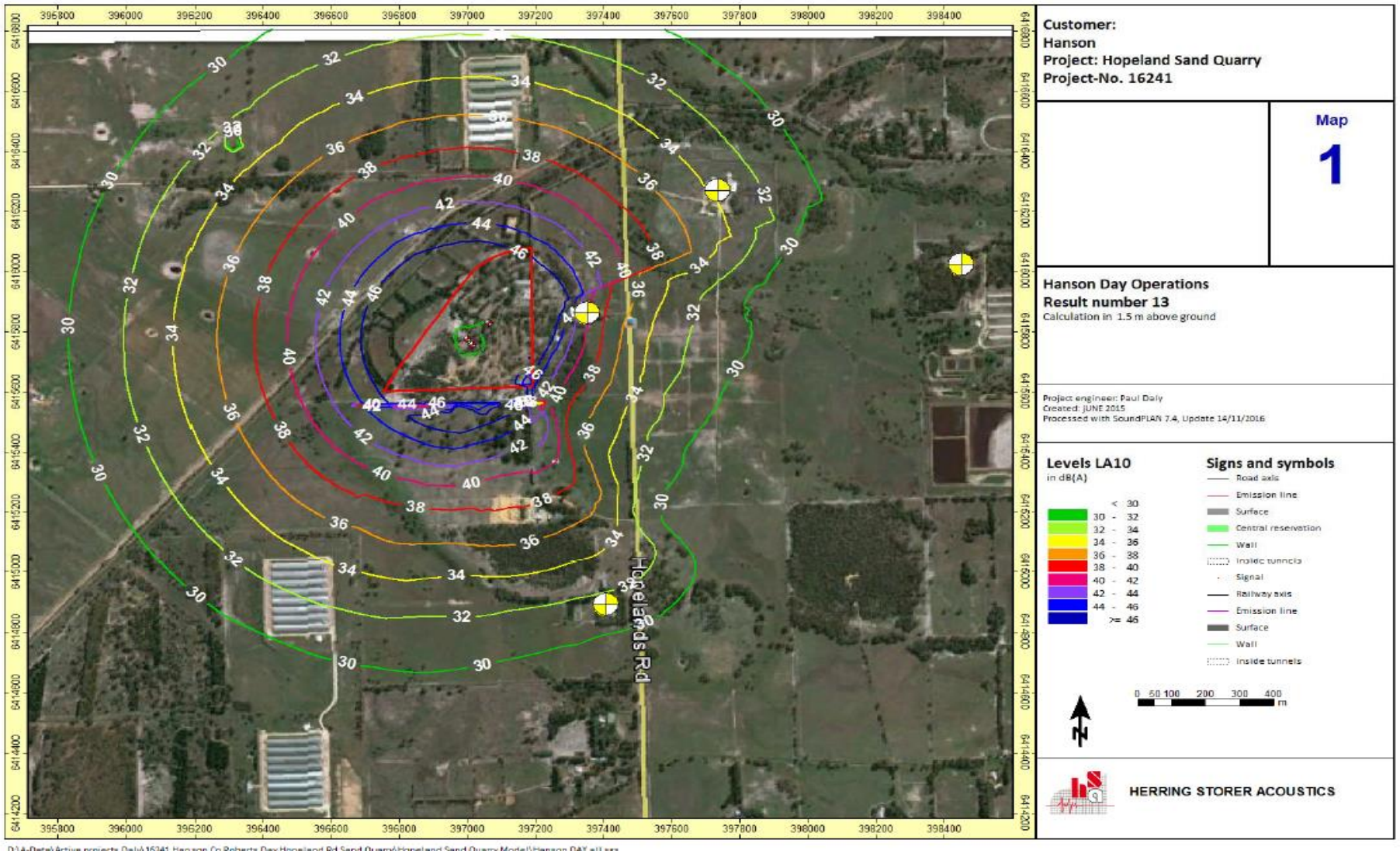


Figure 4 Noise contours

Key finding:

The Delegated Officer has reviewed the information regarding Noise emissions and has found:

1. *The extraction of sand is not a prescribed activity and thus not subject to approval under the EP Act. Extractive industry is regulated by the respective LGA under an EIL.*
2. *Noise emissions have been assessed and modelled for screening operations at the premises and include machinery such as the mobile screen and conveyor, Front end loader and transport trucks used at the premises.*
3. *It is noted that construction activity will only consist of the transport and sitting of the mobile screen. Noise emissions for construction activities are regulated under the Noise Regulations.*
4. *DWER Noise Branch has reviewed the acoustic assessment and have indicated that noise from the proposed sand operations is able to be managed to comply with the assigned noise levels at the closest residence if the proposed sand operation schedule is followed.*

6.2 Monitoring of Groundwater

In accordance with the Shire requirements for the EIL and the Development Approval, the applicant required an assessment of the seasonal groundwater levels to determine the finish floor levels for screening operations.

Based on the groundwater assessment the maximum depth of excavation is approximately 17m to 18m AHD which facilitates a two metre separation to groundwater.

There are no wetlands within the prescribed premises boundary and the closest is located 80m from the proposed sand extraction area.

The applicant drafted a Water Management Plan and submitted it as part of the Application as Appendix E. The Water Management Plan and was approved by the Shire as part of the EIL and includes the flowing management actions:

- Groundwater levels and quality will be monitored using established monitoring bores for the duration of operations in accordance with the Water Management Plan.
- There will monthly groundwater monitoring to control the excavation process.
- Above ground 5000L fuel storage will be a self bunded tank to mitigate spills.
- If any soil is contaminated from a spill the soil will be immediately excavated to prevent groundwater contamination.
- Bunds and V-drains will be established to contain run-off entering the wetland.

Key finding:

The Delegated Officer has reviewed the information regarding Monitoring of Groundwater and has found:

5. *The extraction of sand is not a prescribed activity and thus not regulated under the EP Act.*
6. *Extractive industry is regulated by the respective Shire under an EIL.*
7. *The Shire require a Water Management Plan as part of the premises EIL and Development Approval and the Shire has approved the Water Management Plan for the premises.*

7. Consultation

The application was advertised on 23 September 2019 seeking any public comment. Comments were due on 14 October 2019. No comments were received.

The Shire was notified of the application on 27 September 2019. No comments were received.

8. Location and siting

8.1 Siting context

The premises is located on Lot 137, 394 Hopeland Road, Hopeland WA, approximately 60km south of Perth. The land is predominantly used for horse training and agistment.

8.2 Residential and sensitive premises

The distances to residential and sensitive receptors are detailed in Table 13.

Table 13: Receptors and distance from activity boundary

Sensitive Land Uses	Distance from Prescribed Activity
Residential Premises	150m east – directly east of Stage 4 / Stage 1 boundary as per Figure 2. 475m north east of Stage 4 north boundary as per Figure 2. 550m north east of Stage 4 northern boundary as per Figure 2. 675m north west form Stage 2 / Stage 4 western boundary as per Figure 2. 650m north east of Stage 4 / Stage 1 boundary as per Figure 2. 730m south east of Stage 1 southern boundary as per Figure 2. 1180m south west of Stage 3 western boundary as per Figure 2.

8.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at, or emissions and discharges from, the premises. The distances to specified ecosystems are shown in Table 14. Table 14 also identifies the distances to other relevant ecosystem values which do not fit the definition of a specified ecosystem.

The table has also been modified to align with the *Guidance Statement: Environmental Siting.*

Table 14: Environmental values

Specified ecosystems	**Distance from the Premises**
Contaminated Sites	Lot 371 immediately south – Incomplete Report
Geomorphic wetland Unknown - Palusplain Unknown - Dampland	 Western boundary of proposed pits. 80m from eastern boundary of premises
Bush Forever: Regional open space or proposed regional open space	Site 378 – 2.4km west of premises South Western boundary
Threatened Ecological Communities and Priority Ecological Communities	Banksia dominated woodlands of the Swan Coastal Plain; Priority 3 – within premises.
Biological component	**Distance from the premises**
Threatened/Priority Fauna	*Isoodon fusciventer* (southwester brown bandicoot) - 465m north east of northern premises boundary Calyptorhynchus latirostris (Carnaby's cockatoo) – 425m south east of south eastern premises boundary

8.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 15.

Table 15: Groundwater and water sources

Groundwater and water sources	**Distance from premises**	**Environmental value**
RIWI Act - Groundwater	Serpentine Groundwater Area	Groundwater Drinking water
Watercourses - canal	Canal north east and south east from northern top of premises boundary	Civil works to divert stormwater
Watercourse - minor	480m north of northern boundary	Aesthetic - agriculture
Hydrography WA 250K Surface Waterbodies – Land subject to Inundation	1.31km west of western premises boundary	N/A
Groundwater	Depth to groundwater encountered at approximately 19m AHD (based on information within works approval W6288/2019/1).	Water is used for potable or agricultural use.

	Land owner has GWL178117 for annual entitlement of 16600kL for domestic use, irrigation of up to 0.2ha of lawns and garden and 3ha of pasture and stock watering. GWL152631- 190m north of northern premises boundary. GWL159625 – 220m north east of northern stage 4 boundary. Numerous bores located within 1km of premises (based on available GIS dataset –WIN Groundwater Sites).	

8.5 Soil type

Table 16 details soil types and characteristics relevant to the assessment.

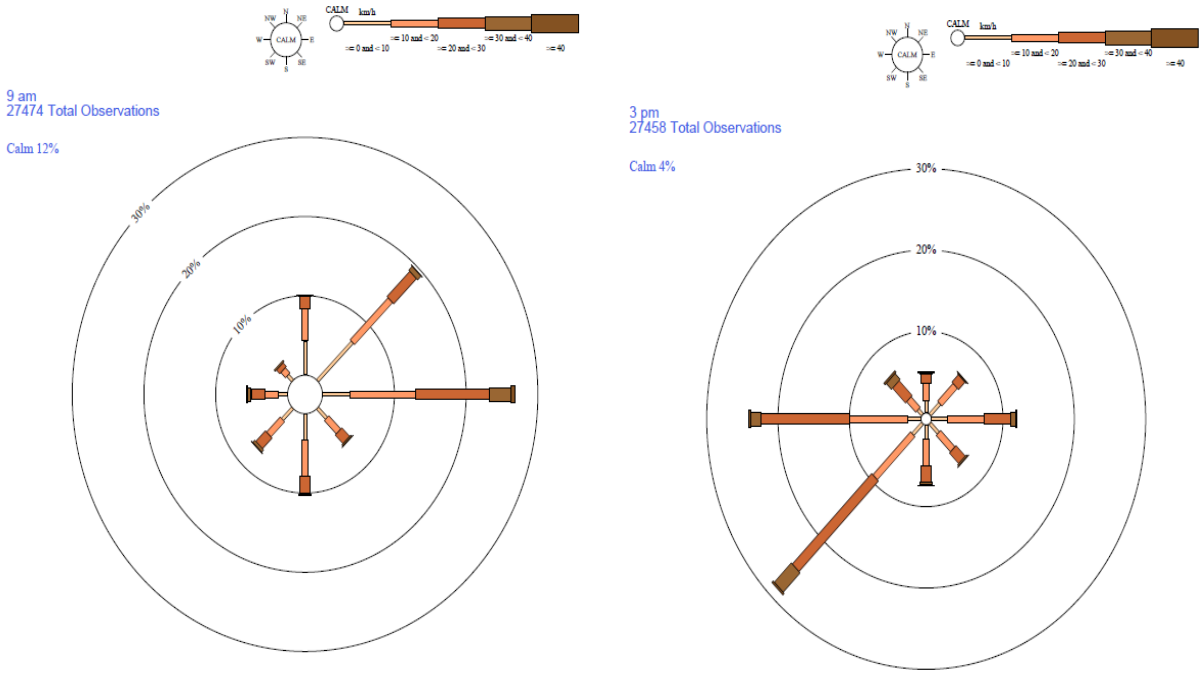
Table 16: Soil and sub-soil characteristics

Groundwater and water sources	Distance from Premises
Soil type classification	Sandplain and broad extremely low rises with imperfectly drained deep or very deep grey siliceous sands. Extremely low to very low relief dunes, undulating sandplain and discrete sand rises with deep bleached grey sands with an intensely coloured yellow B horizon within 1m of the surface.
Acid sulfate soil risk	Moderate to Low Risk at premises

8.6 Meteorology

8.6.1 Wind direction and strength

The respective annual 9am and 3pm wind roses for Perth Airport, located approximately 60km south from the premises is represented in Figure 5 below.



"It is important to note that these wind roses show historical wind speed and wind direction data for Perth Airport weather station and should not be used to predict future data"

Figure 5 9am and 3pm Wind rose respectively

9. Risk assessment

9.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

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. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 17 and 18.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Tables 17 and 18 below.

Table 17. Identification of emissions, pathway and receptors during construction

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
Construction of Screener	Vehicle movements on premises to transport mobile screen and Siting of mobile screen	Noise	Residential: 150m east of premises – zoned General rural.	Air / wind dispersion	Amenity impacts causing nuisance	No	Construction for the mobile screen and conveyor will only consist of transporting the screen to the location demarcated to site the screen within Stage 1 initially. This activity will only take a short amount of time and will be a once off event. Construction will comply with regulation 13 of the EP Noise Regs. Construction activities will only be undertaken between 0700 hours and 1900 hours Monday to Saturday. Equipment utilised on site will be the quietest that is reasonably possible. The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of noise emissions as not foreseeable. Noise can be adequately regulated by the EP Noise Regs.
		Dust			Health and amenity impacts - Potential suppression of photosynthetic and respiratory functions	No	Construction for the mobile screen and conveyor will only consist of transporting the screen to the location demarcated to site the screen within Stage 1 initially. The transport distance is very small and thus it is unlikely dust will be emitted during this short journey. The screen itself just has to be placed on the ground and again this activity will

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
							not induce dust emissions. The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of dust emissions as not foreseeable. Dust emissions can be adequately regulated by the section 49 of the EP Regs.

Table 18: Identification of emissions, pathway and receptors during operation

Risk Events						Continue to detailed Risk Assessment	Reasoning
Sources/Activities		Potential Emissions	Potential Receptors	Potential Pathway	Potential Adverse Impacts		
Screening operation	Operation of Mobile Screening Plant (including conveyor)	Noise from movement of Screen, Front end loader and transport Trucks	Residential premises located 150km east of the premises.	Air / wind dispersion	Amenity impacts causing nuisance	No	Prevailing 9am and 3pm winds East and south east and South west and west respectively. The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of noise emissions. Noise can be adequately regulated by the EP Noise Regs.
		Dust from movement of Front end loader, Transport Trucks and Screening Plant including conveyor	Residential premises located 150m east of the premises.	Air / wind dispersion	Health and amenity impacts - Potential suppression of respiratory functions	No	Prevailing 9am and 3pm winds east and south east and south west and west respectively. A 20m vegetation buffer will be retained on site. Screen will employee in-situ dust suppression such as sprays and dust shields. Vehicle movements will be restricted and the size of the premises won't allow vehicles to gain speed. The applicant will employed a dedicated water cart. Trucks leaving the premises will have covered loads. The Delegated Officer has considered the separation distance between the source and receptors as a guide to inform the risk of dust emissions. Dust can be adequately regulated by section 49 of the EP Act.

Risk Events						Continue to detailed Risk Assessment	Reasoning
Sources/Activities		Potential Emissions	Potential Receptors	Potential Pathway	Potential Adverse Impacts		
	Stormwater	Contaminated Stormwater with Sediment and hydrocarbons	Surface water canal north east and south east from northern top of Premises boundary Minor watercourse 480m north of northern boundary. Geomorphic wetland; Unknown - Palusplain Unknown – Dampland 80m east	Direct discharge from overland flow	Soil contamination inhibiting vegetation growth and survival and health impacts to fauna and flora	No	The applicant is proposing to screen in-situ sand which is a natural inert material. Any waste material not suitable for sale will be returned to the void in its unaltered natural state. Fuel will be transferred between a fuel truck and mobile screener. Fuel volumes limited to that of the mobile screen when used on a campaign basis. Post initial topsoil removal sand extraction will occur in pits at depth – once below ground level there will be no associated stormwater runoff away from the staged pits. Applicant will establish V-drains on access rods to divert uncontaminated stormwater away from screening pits. The Delegated Officer has considered the potential contaminated stormwater emissions and these can be adequately regulated by the UDR.
	Fuel transfer to Mobile Screening Plant	Hydrocarbon discharge / spill to land	Surface water canal north east and south east from northern top of premises boundary Minor watercourse 480m north of northern boundary Groundwater depth approximately 19m AHD	Direct discharge	Soil contamination inhibiting vegetation growth and survival and health impacts to fauna and flora Groundwater contamination	No	No bulk fuel will be stored on site; storage volumes will not exceed 5000 litres. Fuel will be transferred between a fuel truck and mobile screener. There will no be underground fuel pipes etc. The fuel storage tank will be self bunded and contained spill kits. Any spill that contaminated the soil will immediately excavated and removed from site. The Delegated Officer has considered the separation distance as a guide to receptors and potential emissions from fuel spillage and

Risk Events						Continue to detailed Risk Assessment	Reasoning
Sources/Activities		Potential Emissions	Potential Receptors	Potential Pathway	Potential Adverse Impacts		
							hydrocarbon discharges to land can be adequately regulated by the UDR.

9.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 19 below.

Table 19: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 20 below.

Table 20: Risk criteria table

Likelihood		**Consequence**		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		**The following criteria has been used to determine the consequences of a Risk Event occurring:**		
			Environment	**Public health* and amenity (such as air and water quality, noise, and odour)**
Almost Certain	The risk event is expected to occur in most circumstances	Severe	• **onsite impacts**: catastrophic • **offsite impacts local scale**: high level or above • **offsite impacts wider scale:** mid-level or above • Mid to long-term or permanent impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are significantly exceeded	• Loss of life • **Adverse health effects:** high level or ongoing medical treatment • Specific Consequence Criteria (for public health) are significantly exceeded • **Local scale impacts:** permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	• **onsite impacts**: high level • **offsite impacts local scale**: mid-level • **offsite impacts wider scale**: low level • Short-term impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are exceeded	• **Adverse health effects:** mid-level or frequent medical treatment • Specific Consequence Criteria (for public health) are exceeded • **Local scale impacts**: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	• **onsite impacts**: mid-level • **offsite impacts local scale**: low level • **offsite impacts wider scale**: minimal • Specific Consequence Criteria (for environment) are at risk of not being met	• **Adverse health effects:** low level or occasional medical treatment • Specific Consequence Criteria (for public health) are at risk of not being met • **Local scale impacts:** mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	• **onsite impacts**: low level • **offsite impacts local scale**: minimal • **offsite impacts wider scale**: not detectable • Specific Consequence Criteria (for environment) likely to be met	• Specific Consequence Criteria (for public health) are likely to be met • **Local scale impacts:** low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	• **onsite impact**: minimal • Specific Consequence Criteria (for environment) met	• **Local scale**: minimal to amenity • Specific Consequence Criteria (for public health) met

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting.*

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines.*
"onsite" means within the Prescribed Premises boundary.

9.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment Table 21 below:

Table 21: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

10. Determination of Works Approval conditions

The conditions in the issued Works Approval have been determined in accordance with the *Guidance Statement: Setting Conditions*.

The *Guidance Statement: Licence Duration* has been applied and the issued Works Approval expires in 3 years from date of issue.

Table 22 provides a summary of the conditions to be applied to this works approval.

Table 22: Summary of conditions to be applied

Condition Ref	Grounds
Infrastructure and Equipment 1, 2, 3 and 4	These conditions are valid, risk-based and contain appropriate controls.
Emissions 5	This condition is valid, risk-based and consistent with the EP Act.
Record- keeping 6 and 7	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the works approval under the EP Act.

11. Applicant's comments

The applicant was provided with the draft Decision Report and draft issued Works Approval on 13 November 2019. The Applicant submitted correspondence on 5 December 2019 advising they did not have any comments on the draft documents.

12. Conclusion

This assessment of the risks of activities on the premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this Decision Report (summarised in Appendix 1).

Based on this assessment, it has been determined that the Works Approval will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Stephen Checker

Digitally signed by Stephen Checker
Date: 2019.12.11 20:46:46 +08'00'

Stephen Checker
MANAGER WASTE INDUSTRIES
REGULATORY SERVICES

Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Works Approval Application	W6288/2019/1	A1779549; A1779543
2.	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	DER 2015a	accessed at www.dwer.wa.gov.au
3.	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	DER 2015b	
4.	DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.	DER 2016a	
5.	DER, February 2017. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER 2017b	
6.	DWER, June 2019. *Guideline: Decision Making.* Department of Water and Environmental Regulation, Perth.	DER 2019a	
7.	DWER, June 2019. *Guideline: Industry Regulation Guide to Licensing.* Department of Water and Environmental Regulation, Perth.	DWER 2019b	

Attachment 1: Site Map