



Application for licence

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

Licence number	L9136/2018/1
Applicant	Norwest Sand & Gravel Pty Ltd
ACN	090 664 378
DWER file number	DER2018/000852-1
Premises	The Farm Lot 178 on Deposited Plan 186560 Sturt Pea Road WICKHAM WA 6720
Date of report	11 June 2020
Status	Granted

1. Definitions

Key terms relevant to this decision report and their associated definitions are listed in Table 1.

Table 1: Definitions

Term	Definition
Asbestos guidelines	refers to the document "DEC, December 2012. Guidelines for managing asbestos at construction and demolition waste recycling facilities. Department of Environment and Conservation, Perth."
Applicant	Norwest Sand & Gravel Pty Ltd
Category / categories	Categories of prescribed premises as set out in Schedule 1 of the EP Regulations.
Decision Report	refers to this document.
Delegated Officer	An officer delegated under section 20 of the EP Act.
Department	The department established under section 35 of the <i>Public Sector Management Act 1994</i> 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 <i>Public Sector Management Act 1994</i> and is responsible for the administration of the <i>Environmental Protection Act 1986</i> along with other legislation.
Emission	has the same meaning given to that term under the EP Act.
EP Act	<i>Environmental Protection Act 1986 (WA)</i>
EP Regulations	<i>Environmental Protection Regulations 1987 (WA)</i>
Licence Holder	Norwest Sand and Gravel Pty Ltd
LGA	Local Government Authority
Noise Regulations	<i>Environmental Protection (Noise) Regulations 1997 (WA)</i>
Occupier	has the same meaning given to that term under the EP Act.
Prescribed premises	This 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 Licence
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>
UDR	<i>Environmental Protection (Unauthorised Discharges) Regulations 2004 (WA)</i>

2. Overview of premises

Norwest Sand & Gravel Pty Ltd holds Registration R2369/2014/1 for the purposes of Category 70 Screening activities granted on 27 March 2014. The Applicant has applied for a licence for Category 12 screening activities, Category 13 Crushing activities and Category 62 Solid waste depot at Lot 178 on Deposited Plan 186560. Although the Category 12 throughput volumes will be less than licensing limits, the Applicant is incorporating the screening activities onto the licence and will surrender the separate Registration for the Premises.

The Applicant intends on storing (Category 62) and crushing (Category 13) building and demolition waste at the Premises to a maximum of 20,000 tonnes per year, for the purposes of reuse in building projects.

The Applicant intends on trucking sand to the Premises from the Applicant's Point Samson mining leases and screening to a maximum of 20,000 tonnes per year. Screening plants at the site screen the sand as required for sale. Loaders transfer the sand from the stockpiles to hoppers for processing through the screening plants and into the trucks for transport to clients. Sand is only screened during the dry months of the year as wet sand is unable to be screened using the equipment on-site. Sand not used in current contract jobs is stockpiled at the Premises and used in future contract jobs.

As no works are proposed at the premises, and all mobile equipment is located on site, a Works Approval is not required. No workshops, toilets or other facilities are located on the site. The Applicant has workshops and office facilities situated off site, within the Wickham Industrial Estate, located across the road from the site.

This site has been in operation for a number of years and no dust or noise related complaints have been received by DWER. The Applicant proposes to conduct activities from 6am to 4pm Monday to Friday. The Applicant has not provided noise monitoring for Category 12 and Category 13 associated activities, nor management processes to monitor incoming loads of building and demolition waste for asbestos and ACM-containing materials contamination.

The Applicant leases a portion of Lot 178 on Deposited Plan 186560 to Concrete Logistics Pty Ltd who store concrete batching equipment at the Premises and who hold Registration R2215/2011/1 for Category 77 activities. Category 77 activities do not form part of this application and emissions and discharges of these activities have not been assessed in this report.

Table 2: Classification of premises and assessed design capacity

Category	Description	Assessed production or design capacity or throughput
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.	20,000 tonnes per annum
13	Crushing of building material: premises on which waste building or demolition material (for example, bricks, stones or concrete) is crushed or cleaned.	20,000 tonnes per annum
62	Solid waste depot: premises on which waste is stored, or sorted, pending final disposal or re-use.	20,000 tonnes per annum

Table 3: Premises infrastructure

Infrastructure or Equipment	
1	Finlay Mobile Jaw crusher
2	Finlay Mobile Cone crusher
3	Screening plant
4	Reclaimer
5	Tracked stacker
6	Radial stacker
7	Cat 966 front end loader
8	Cat 330 excavator
9	40 tonne articulated dump truck
10	Water cart
11	Two stormwater drainage basins

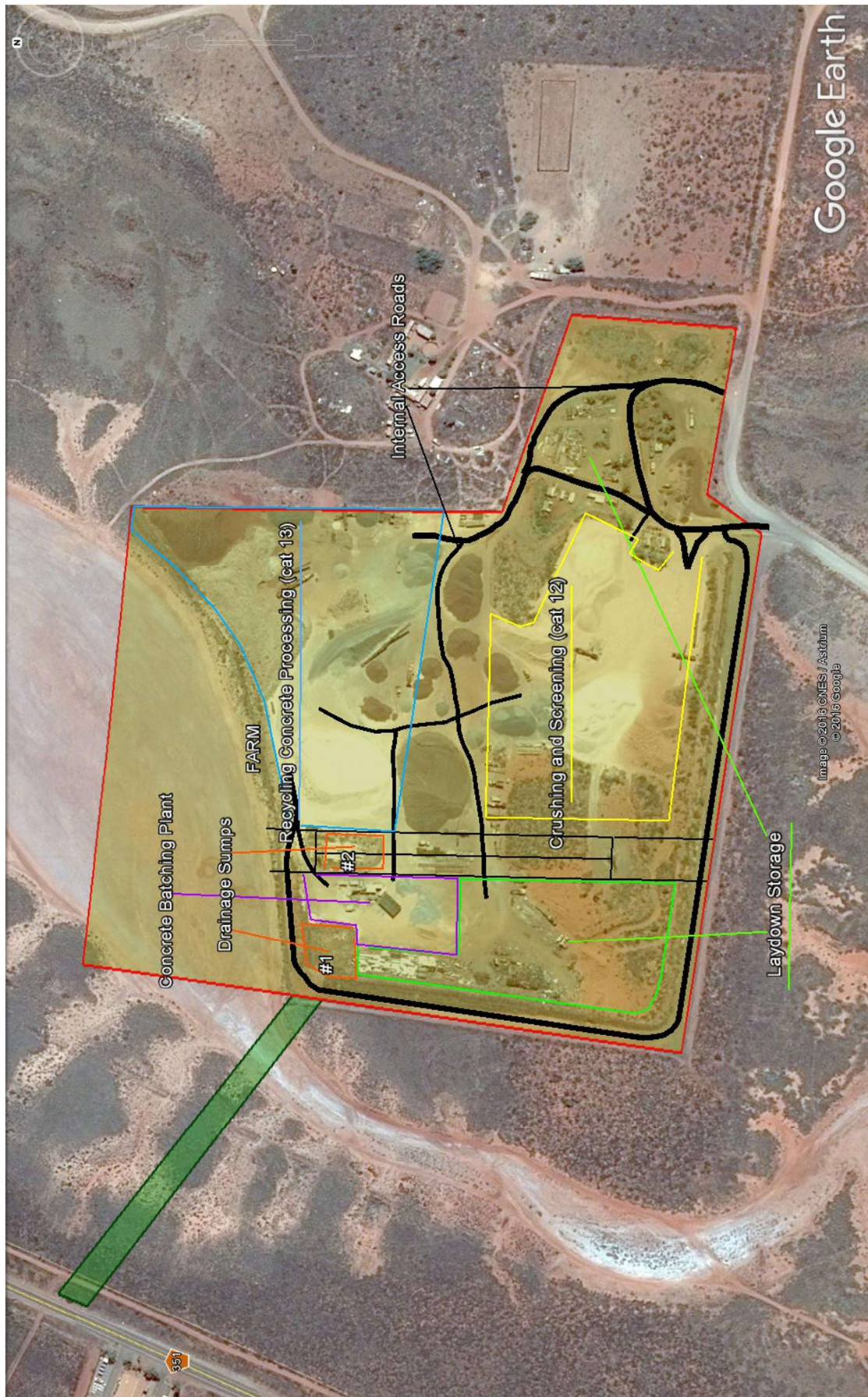


Figure 1: Site Layout Plan (NB concrete batching plant excluded from application)

3. Legislative context and other approvals

The Applicant has lodged an application for a Scheme Amendment with the City of Karratha requesting to modify the zoning of the Premises to allow Primary Activities to occur. The City of Karratha advised on 9 August 2019 the Scheme Amendment application has been approved by Council and is currently with WAPC for final approval. The second stage of the process is the approval to operate the Primary Activities at the Premises. The City would not approve operational hours prior to 7am or after 7pm. Approvals relevant to the premises are outlined in Table 4 below.

Table 4: Approvals relevant to the Premises

Legislation	Number	Approval
Part V Division 3, EP Act	R2369/2014/1	Registration, Category 70 Granted March 2014
<i>Planning and Development Act 2015</i>	N/A	WAPC Scheme Amendment approved
<i>Planning and Development Act 2015</i>	N/A	Local government planning application received

4. Emissions, receptors, pathways and Applicant Controls

Risk is assessed as a combination of emission sources, the proximity and sensitivity of receptors to those emission sources and any pathways that can allow the emission to reach and potentially harm the receptor.

4.1 Emissions

The potential for emissions to impact on sensitive receptors has been assessed in accordance with the Department's Risk Framework. The key emissions which have been considered in the risk assessment in Section 5 are:

- Dust from crushing & screening activities, unloading, loading and storage of material and vehicle movements.
- Noise emissions from crushing & screening activities, unloading, loading and storage of material and vehicle movements. The Applicant wishes to commence daily operations at 6am until 4pm.
- Asbestos fibre from potentially contaminated building and demolition materials, where subjecting it to crushing the asbestos fibre could be released.
- Contamination of stormwater through rainfall interacting with waste onsite.

The Applicant has proposed measures to assist in controlling these emissions which are outlined in Section 4.4 and have been considered when undertaking the risk assessment in Section 5.

4.2 Receptors

Table 5 below provides a summary of human receptors and Table 6 provides a summary of environmental receptors in proximity to the premises which have a potential to be impacted from the site activities considered in this report. The risk assessment in Section 5 considers these human and environmental receptors in the context of emissions and potential pathways.

Table 5: Residential sensitive receptors relevant to the Premises

Human receptors	Distance from Prescribed Premises
Wickham Townsite	950 m south west of Premises boundary

Table 6: Environmental receptors relevant to the Premises

Environmental receptors	Description and distance from Prescribed Premises
Saline coastal flats	The nearly level tract of land between mean high water and the line of the highest astronomical tide. Immediately adjacent north of the Premises boundary.
Minor non-perennial watercourse	Whilst the mapped location of the watercourse runs along the south-eastern corner of the Premises boundary, on ground the watercourse does not have an established path through or near the Premises. Being non-perennial, the watercourse has no flow during the dry seasons.
Threatened and Priority Fauna	Recorded at 670 m east of the Premises boundary, at the Wastewater Treatment Plant: <ul style="list-style-type: none"> • <i>Calidris ferruginea</i> (curlew sandpiper) critically endangered and protected under an International Agreement • <i>Arenaria interpres</i> (ruddy turnstone) protected under an International Agreement • <i>Tringa stagnatilis</i> (marsh sandpiper, little greenshank) protected under an International Agreement • <i>Actitis hypoleucos</i> (Common Sandpiper) protected under an International Agreement • <i>Hydroprogne caspia</i> (Caspian Tern) protected under an International Agreement

4.3 Pathways

Air

Prevailing wind patterns can provide a direct pathway for transmission of dust, noise and asbestos fibre emissions by air, so the prevailing wind patterns that may carry these emissions to sensitive receptors have been considered. The closest Bureau of Meteorology (BoM) weather station which records wind frequency data is Port Hedland Airport (BoM site 004032). Prevailing winds are from the east and south east in the mornings, and from the north west and north in the afternoons (Figure 2). These pathways have been considered in the risk assessment table in Section 5.

Whilst the distance to human sensitive receptors and threatened and priority fauna is considered close, the prevailing wind conditions direct potential dust emissions away from these sensitive receptors. The Delegated officer does not consider there is a pathway for potential emissions to impact the Wickham townsite and fauna.

As the saline coastal flats and the minor non-perennial watercourse are adjacent to the Premises, minor wind patterns throughout the day can provide a direct pathway for transmission of dust.

Prevailing wind patterns generally move away from sensitive residential areas so may provide some reduction to the transmission of noise, emissions of noise are not minimised sufficiently by wind direction alone. As the Applicant wishes to commence daily operations at 6am, allowable noise emissions at this time are stricter than post-7am noise emissions, which can intensify impacts of noise emissions on sensitive receptors.

The ability of asbestos fibres to persist in the environment and the inherent risk to human health leads the Delegated Officer to consider the prevailing winds can still provide a direct pathway for transmission of asbestos fibre.

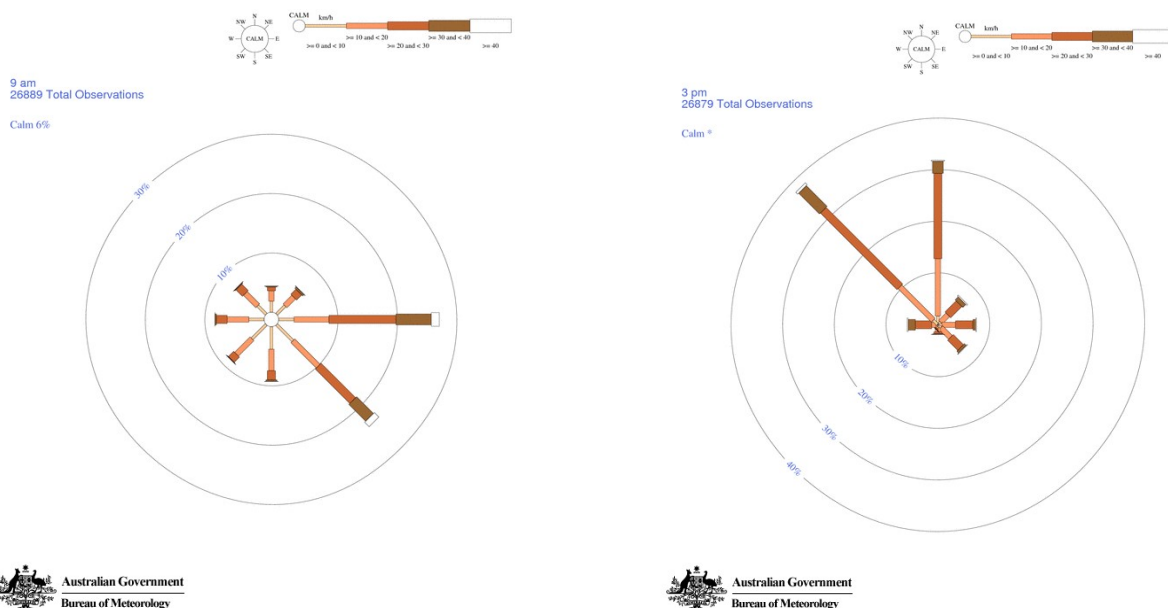


Figure 2: Annual wind rose for 9am and 3pm at Port Hedland Airport.

Source: Bureau of Meteorology website www.bom.gov.au

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

Overland flow of stormwater

Accumulation of contaminants in stormwater and transfer overland via surface water flow is a potential pathway for emissions to reach sensitive receptors.

The close proximity of the Premises to the saline coastal flats and the minor non-perennial watercourse combined with overland flow of contaminated stormwater provides a direct pathway for transmission of contaminated stormwater to the adjacent environment.

4.4 Applicant Controls

The Applicant proposes to implement the following controls at the Premises to control emissions.

Table 7: Applicant controls for emissions

Emissions	Source	Controls proposed by the Applicant
Dust	Crushing & screening activities Unloading, loading and storage of material Vehicle movements	<ul style="list-style-type: none"> Water cart and water cannon to be used on site to minimise dust from stockpiles and vehicle movements. Inbuilt sprinklers installed on screening equipment to minimise dust. Delay screening during unfavourable weather conditions.
Noise		No noise modelling data provided
Asbestos fibre		<ul style="list-style-type: none"> Non-acceptance of building and demolition waste containing asbestos or ACM.
Contaminated stormwater	Stormwater interacting with wastes	<ul style="list-style-type: none"> Earthen bunding on site directing water to north-west corner via natural gradient to two basins for evaporation. Sediments will be contained in this sump.

5. Risk assessment

Risk ratings have been assessed for each key emission source and take into account potential source-pathway-receptor linkages. The mitigation measures / controls proposed by the Applicant have been considered in determining the risk rating for emissions during operation.

Table 8: Risk assessment – Operation

Risk Event				Consequence rating*	Likelihood rating*	Risk*	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/ Activities	Potential emissions	Potential impact, pathway and receptor	Applicant controls					
Crushing & screening activities Unloading, loading and storage of material Vehicle movements	Dust	Air/windborne dust causing impacts to adjacent saline coastal flats and the minor non-perennial watercourse	Water cart and water cannon Inbuilt sprinklers installed on screening equipment. Delay screening during unfavourable weather conditions.	Moderate	Possible	Medium	The Delegated Officer considers the Applicant's proposed dust mitigation controls are likely to sufficiently alleviate dust emissions.	Conditions will be applied to the Licence to ensure the Applicant's controls are utilised to manage dust at the Premises.

Risk Event				Consequence rating*	Likelihood rating*	Risk*	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/ Activities	Potential emissions	Potential impact, pathway and receptor	Applicant controls					
Crushing & screening activities Unloading, loading and storage of material Vehicle movements	Noise Pre 7 am Post 7 am	Airborne transfer of noise causing impacts to health and amenity of closest human receptors (town of Wickham)	None provided	Major	Likely	High	<p>The Delegate Officer considers the town of Wickham is of a close enough distance to be significantly impacted by noise emissions arising from the Primary Activities. The Applicant wishes to operate before 7am which is considered as 'night-time' hours in the Noise Regulations and is afforded a lower assigned decibel level than after 7am, and the Applicant has not provided noise modelling to inform the Delegated Officer's decision.</p> <p>The Delegated Officer is taking the precautionary approach to restrict pre-7am Primary Activities and allow post-7am to enable measurement of noise emissions to determine compliance with the allowable criteria of the Noise Regulations.</p>	Conditions will be applied to the Licence to restrict operating hours from 7 am to 7 pm, and investigate the nature and extent of noise emissions to determine compliance with the Noise Regulations, and if necessary a plan to resolve any non-compliance.

Risk Event				Consequence rating*	Likelihood rating*	Risk*	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/ Activities	Potential emissions	Potential impact, pathway and receptor	Applicant controls					
Crushing & screening activities Unloading, loading and storage of material Vehicle movements	Asbestos fibres	Airborne asbestos fibres causing impacts to health and amenity of closest human receptors (town of Wickham)	Non-acceptance of building and demolition waste containing asbestos or ACM	Severe	Rare	High	Whilst the consequence is Severe, the likelihood is only Rare, therefore the Delegated Officer considers the Applicant is required to adequately manage incoming loads of building material for asbestos to sufficiently mitigate the High risk of asbestos fibre emissions occurring.	Conditions will be applied to the licence to ensure incoming loads of building and demolition waste are monitored in accordance with the Asbestos Guidelines
Contamination of stormwater	Contaminated stormwater	Overland flow causing impacts to adjacent saline coastal flats and the minor non-perennial watercourse	Earthen bunding on site directing water to north-west corner via natural gradient to two basins for evaporation. Sediments will be contained in this sump	Moderate	Possible	Medium	The Delegated Officer considers the Applicant's proposed stormwater controls sufficient to mitigate contaminated stormwater emissions. Conditions related to maintenance of infrastructure have been added to reinforce the controls.	Conditions will be applied to the Licence to ensure the Applicant's controls are utilised to manage contaminated stormwater at the Premises and additional conditions to maintain the basin volume capacities so they do not overtop.

*Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)

Consultation

Method	Comments received	DWER response
Application advertised on DWER website 18/06/2018	None received	N/A
Local Government Authority advised of proposal 14/06/2018	The City of Karratha replied on 02/08/2018 confirming that a Scheme Amendment application would likely be required followed by a planning approval application. Neither had been received to date.	The Delegated Officer notes that a Scheme Amendment has since been submitted to the LGA. It is the Applicant's responsibility to ensure all required approvals are in place to operate the premises.
Applicant referred draft documents 05/09/2019	None received	N/A

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.

Tracey Hassell

A/MANAGER

WASTE INDUSTRIES

An officer delegated by the CEO under section 20 of the EP Act

Appendix 1: Key documents

	Document title	In text ref	Availability
1.	Registration (R2369/2014/1)	DWER records (A741836)	accessed at www.dwer.wa.gov.au
2.	DER, July 2015. <i>Guidance Statement: Regulatory principles</i> . Department of Environment Regulation, Perth.	DER 2015a	
3.	DER, October 2015. <i>Guidance Statement: Setting conditions</i> . Department of Environment Regulation, Perth.	DER 2015b	
4.	DER, May 2016. <i>Guidance Statement: Publication of Annual Audit Compliance Reports</i> . Department of Environment Regulation, Perth.	DER 2016a	
5.	DER, August 2016. <i>Guidance Statement: Licence duration</i> . Department of Environment Regulation, Perth.	DER 2016b	
6.	DER, September 2016. <i>Guidance Statement: Environmental Standards</i> . Department of Environment Regulation, Perth.	DER 2016c	
7.	DER, November 2016. <i>Guidance Statement: Environmental Siting</i> . Department of Environment Regulation, Perth.	DER 2016d	
8.	DER, February 2017. <i>Guidance Statement: Land Use Planning</i> . Department of Environment Regulation, Perth.	DER 2017a	
9.	DER, February 2017. <i>Guidance Statement: Risk Assessments</i> . Department of Environment Regulation, Perth.	DER 2017b	
10.	DWER, June 2019. <i>Guideline: Decision Making</i> . Department of Water and Environmental Regulation, Perth.	DWER 2019a	
11.	DWER, June 2019. <i>Guideline: Industry Regulation Guide to Licensing</i> . Department of Water and Environmental Regulation, Perth.	DWER 2019b	
12.	DWER, June 2019. <i>Guideline: Odour Emissions</i> . Department of Water and Environmental Regulation, Perth.	DWER 2019c	