# **Decision Report**

# **Application for Licence**

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

Licence Number L9380/2023/1

**Applicant** WA Kaolin Limited

**ACN** 083 187 017

File number DER2023/000139

Premises Kaolin Mine and Process Plant

330 Sparks Road

EAST WICKEPIN WA 6370

Legal description -

Mining tenement M70/1143

As defined by the premises maps attached to the issued

licence.

Date of report 18 May 2023

**Decision** Licence granted

# SENIOR ENVIRONMENTAL OFFICER, INDUSTRY REGULATION REGULATORY SERVICES

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

# **Table of Contents**

1.	Decis	Decision summary1						
2.	Scop	e of as	sessment	1				
	2.1	Regula	atory framework	1				
	2.2	Applic	ation summary	1				
		2.2.1	Overview of premises	1				
		2.2.2	Stack monitoring during commissioning and time limited operation	4				
3.	Risk	assess	sment	6				
	3.1	Source	e-pathways and receptors	6				
		3.1.1	Emissions and controls	6				
		3.1.2	Receptors	9				
	3.2	Risk ra	atings	13				
4.	Cons	ultatio	n	16				
5.	Conc	lusion		16				
Refe	rence	S		17				
Арр	endix	1: Sun	nmary of applicant's comments on risk assessment and dr	aft				
			lication validation summary					
Table	∋ 1: To	tal partio	culate matter and PM <sub>10</sub> stack monitoring results	5				
Table	e 2: Air	pollutar	nt stack monitoring results for rotary kiln	5				
Table	e 3: Pro	posed	applicant controls	6				
Table	e 4: Se	nsitive h	numan and environmental receptors and distance from prescribed ac	tivity.9				
			ssment of potential emissions and discharges from the premises duri					
Table	e 6: Co	nsultatio	on	16				
Figur	e 1: Pr	escribe	d premises boundary	2				
			tructure and (B) process flowsheet of kaolin de-gritting at premises					
_			of emission stacks in de-gritting process					
			to sensitive receptors					
Figur	e 5: Pr	iority ec	cological communities at and surrounding the premises	12				
Figur	e 6: Hy	/drogeo	logical conceptual site model	12				

# 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the operation of the premises. As a result of this assessment, licence L9380/2023/1 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 <a href="https://dwer.wa.gov.au/regulatory-documents">https://dwer.wa.gov.au/regulatory-documents</a>.

# 2.2 Application summary

On 21 February 2023, the WA Kaolin Limited (the applicant) submitted an application for a licence to the department under section 57 of the *Environmental Protection Act 1986* (EP Act).

The application was to seek a Category 5 licence relating to the operation of the Kaolin Mine and Process Plant at the premises.

The premises relates to the category and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations), which are defined in licence L9380/2023/1. 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 licence L9380/2023/1.

#### 2.2.1 Overview of premises

The Kaolin Mine and Process Plant currently comprises two open mine pits and a de-gritting plant, located approximately 19 km east of the town of Wickepin (Figure 1). The construction of the premises was authorised under works approval W5443/2013/1 and completed in late 2022.

In addition to the Wickepin de-gritting plant, works approval W5443/2013/1 also authorised the construction of a processing plant at Wedin, as well as pipeline to transport kaolin slurry from Wickepin to Wedin. Since the granting of the works approval, the applicant modified the design and staging of their operations, which allowed the Wickepin de-gritting plant to operate without the Wedin site. The construction of the remaining processing plant and connecting pipeline are not considered at the time of this assessment.

The de-gritting plant design utilises a drying kiln and air stream process for de-gritting the kaolin, which mostly occurs within an enclosed shed at the premises, apart from the movement of ore from stockpile (Figure 2).

Ore is first directed to the feed hopper via front end loader and conveyed to the rotary kiln (equipped with a stack), where it is dried. After drying, the ore moves into a two-stage air separator, where coarse quartz particles are removed, followed by finer quartz particles. The waste quartz sand is conveyed, wetted and stored in a bunker for disposal transport. Three dust collectors are installed to separate the kaolin resource from the airstream, while the residual dust is released into the atmosphere through stacks. The residual product is then collected and stored in silos.

The premises is powered by three 550 kVA diesel-fuelled gensets, located on concrete plinths adjacent on the north-eastern corner of the plant shed.

Waste quartz sand and residual kaolin are conveyed to a stockpile outside the shed and

returned to the mine pits from where they were mined (Figure 1). Other types of waste (e.g., packaging waste, putrescible waste, waste oil, lubricant, hydrocarbon) will be transported offsite for disposal.

The applicant has a two-stage plan for the project. The initial first stage will process approximately 600,000 tonnes per annum (tpa) of ore to produce kaolinite product that will be trucked out of the premises. The second stage involves an increase of ore processed to approximately 1,250,000 tpa. The assessment of this licence application considered and assessed a production capacity of 1,250,000 tpa.

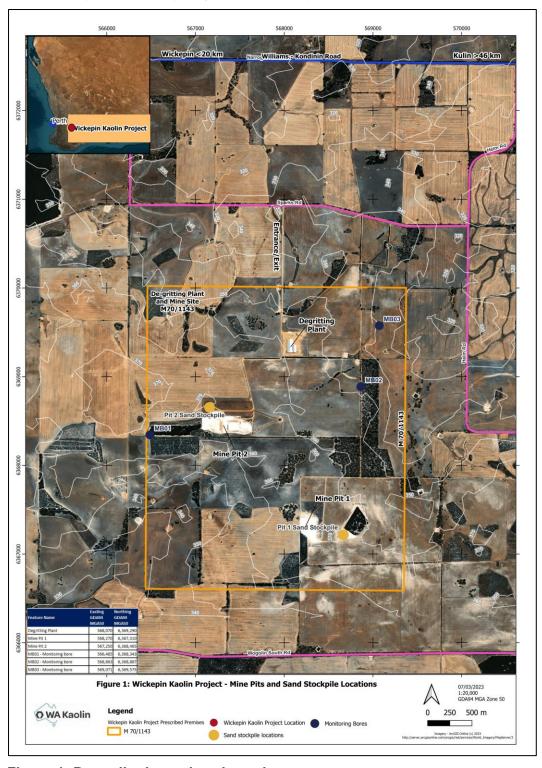


Figure 1: Prescribed premises boundary

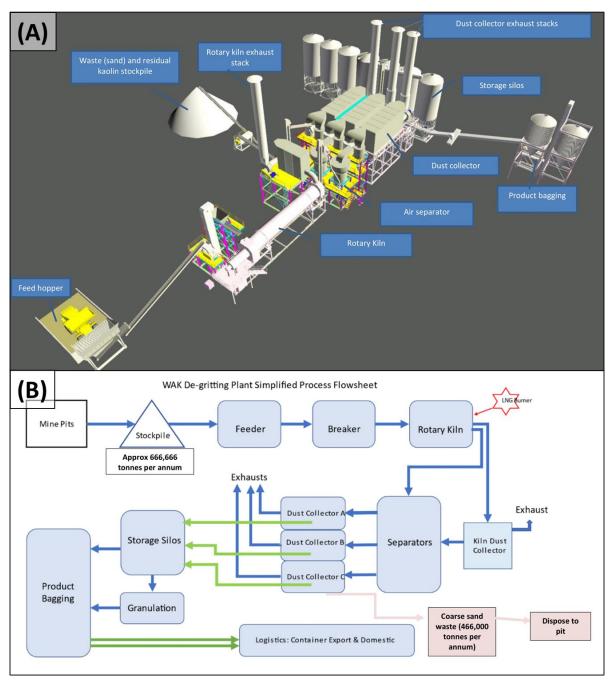


Figure 2: (A) Infrastructure and (B) process flowsheet of kaolin de-gritting at premises

#### 2.2.2 Stack monitoring during commissioning and time limited operation

Operation of the Wickepin de-gritting plant results in emissions to air through stacks. There are two types of emissions at the premises (Figure 3):

- Liquified natural gas (LNG) exhaust, as a result of utilising LNG to operate the rotary kiln; and
- Dust emissions, from a series of three stacks, each corresponding to a dust collector, following removal of kaolin resource.

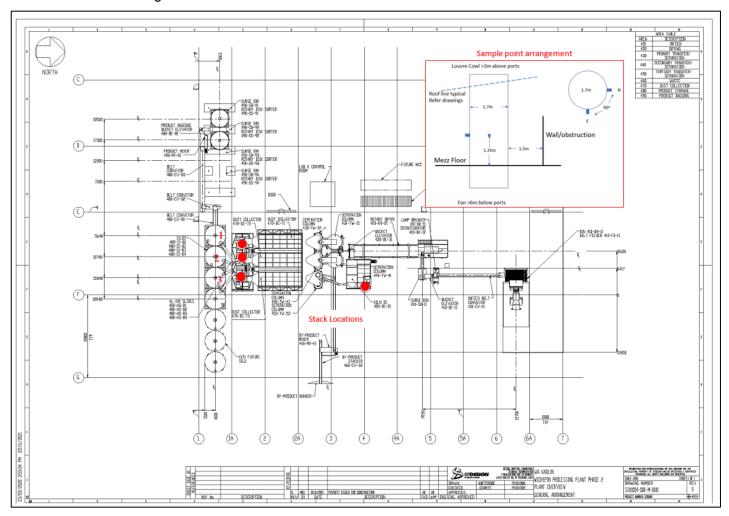


Figure 3: Location of emission stacks in de-gritting process

There is potential for air emissions from these stacks to impact human health receptors nearby, particularly rural residents. To assess the risks present, stack monitoring was undertaken at the premises during time limited operation in 2023, as required by works approval W5443/2013/1. In addition, the rotary kiln's LNG exhaust stack was monitored during plant commissioning in October 2022. The monitoring results were undertaken by third parties that are accredited by the National Association of Testing Authorities (NATA) and are presented in Table 1 and Table 2.

Stack monitoring results indicate low particulate matter (PM) concentrations at the dust collector stacks, with higher levels detected at the rotary kiln stack. Laser diffraction size distribution of stack samples was consistent with measurements from PM monitoring, where  $PM_{10}$  was shown to be make up around 49% to 68% of total particulate matter.  $PM_{2.5}$  was found to make up approximately 6.4% to 10.8% of total particulate matter.

At the rotary kiln stack, pollutant concentrations were lower when sampled during time limited

operation, compared to during plant commissioning. This is an indication that the rotary kiln has reached steady state operation.

Table 1: Total particulate matter and PM<sub>10</sub> stack monitoring results

Sample location	Date sampled	Total particulate matter (PM)	PM <sub>10</sub>	PM <sub>2.5</sub>
Unit		mg/m³	mg/m³	mg/m³
Rotary kiln stack	October 2022	20	11.5	1.7
	March 2023	14	6.3	
Dust collector stack 1	March 2023	<2.8	<2.2	
Dust collector stack 2	April 2023	<2	<2	
Dust collector stack 3	March 2023	<2	<2	

Table 2: Air pollutant stack monitoring results for rotary kiln

Sample location	Date sampled	Stack velocity (m/s)	Carbon monoxide (CO)	Nitrogen oxides (NOx)	Sulfur dioxide (SO <sub>2</sub> )	Oxygen (O <sub>2</sub> )	Carbon dioxide (CO <sub>2</sub> )
Unit		m/s	mg/m³	mg/m³	mg/m³	%v/v	%v/v
Rotary kiln stack	October 2022	21.3	290	36.5	3.75	17.4	2.0
Stack	April 2023	19.0	<3	<4		21.0	<0.4

The air pollutant concentrations detected over the two monitoring events were below relevant assessment criteria outlined in the NSW EPA (2016) *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales*, which is based on the *National Environment Protection (Ambient Air Quality) Measures* (NEPC 1998). It should be noted that these assessment criteria were designed to be compared to ambient air measurements at the premises boundary and/or at the receiving environment (i.e., human health receptors).

The concentration of air pollutants from emission stacks detected during time limited operation was less than 10% of their respective assessment criterion. Once emitted into the atmosphere, air pollutants undergo further dilution due to plume dispersion, though the behaviour of the plume can also be affected by meteorological conditions.

Nevertheless, it is unlikely that human health and environmental receptors would be impacted by emissions from these stacks, considering the controls in place and siting of receptors from the emission source (refer to Section 3). The Delegated Officer considers ongoing stack monitoring and dispersion modelling to not be required at this time. The stacks are currently equipped with sampling ports, which can be sampled from in the future, should the need arise.

### 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 operation have been considered in this decision report are detailed in Table 3 below. Table 3 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 3: Proposed applicant controls** 

Emission	Sources	Potential pathways	Proposed controls	
Operation				
Dust (fugitive)	Movement and handling of ore, stockpiles Vehicle movement	Air/ windborne pathway	<ul> <li>Visual monitoring for dust will be undertaken at all times;</li> <li>Optimal moisture content (12%) will be maintained in raw material;</li> <li>Ore transfer points will utilise dust suppression sprays and dust collection equipment, as necessary;</li> <li>Stockpiles and unsealed roads will be sprayed by water cart;</li> <li>Waste sand conveyor equipped with water spray for dust suppression;</li> <li>Waste sand will be mixed with overburden and become part of the rehabilitated pit area that remains subject to routine dust suppression.</li> </ul>	
Point source stack emissions - Dust	Operation of dust collectors and rotary kiln	Air/ windborne pathway	<ul> <li>Dust collector and rotary kiln will be maintained in optimal running condition, with regular servicing and repair, as required;</li> <li>Stack emission sampling will be undertaken at sample ports installed in accordance with relevant Australian Standards;</li> <li>Exhaust emissions will be monitored quarterly and compared against relevant standards and</li> </ul>	

Emission	Sources	Potential pathways	Proposed controls							
			baseline data;							
			<ul> <li>Stack monitoring undertaken during time limited operation to demonstrate low contaminant emission concentrations.</li> </ul>							
Point source stack	Operation of rotary kiln	Air/ windborne	Dust collector and rotary kiln will be maintained in optimal running condition, with regular servicing and repair, as required;							
emissions - LNG exhaust		pathway	Stack monitoring undertaken during time limited operation to demonstrate low contaminant emission concentrations.							
Noise	Operation of de- gritting plant	Air/ windborne	De-gritting plant is mostly enclosed within the industrial building, which acts as a containment barrier;							
		pathway	pathway	pathway	pathway	pathway	pathway	pathway	pathway	<ul> <li>De-gritting plant machinery and alarms will be maintained in accordance with regular maintenance schedule to comply with workplace health and safety guidelines;</li> </ul>
			<ul> <li>Sound power level of plant and equipment will be periodically tested to ensure consistency with design specification. Plant and equipment producing excess noise will be identified and corrective actions will be taken;</li> </ul>							
			<ul> <li>Vehicle and machinery will be maintained in optimal running condition with regular servicing and repair, as required;</li> </ul>							
			Noise assessment undertaken during commissioning phase.							
Sediment	Operation of de-	Overland	Site drainage assessment has been undertaken to identify issues with drainage and runoff;							
laden stormwater	gritting plant	surface runoff	<ul> <li>Stormwater from roof area of plant shed will be redirected to water tank with 600 kL storage capacity;</li> </ul>							
Contaminated stormwater		Overland surface runoff	<ul> <li>Stormwater from de-gritting plant surrounding will be redirected to a 4,000 m<sup>3</sup> stormwater pond (i.e., 43 m x 38 m, with average depth of 2.5 m);</li> </ul>							
			Stormwater pond will operate with a 300 mm freeboard to prevent overtopping;							
			Existing drainage bunds and stormwater pond will be maintained;							
			<ul> <li>Stormwater pond will be fitted with floating surface bund at entrance of pond to contain potential hydrocarbon contamination;</li> </ul>							
			Stormwater on refuelling hardstand will be redirected to a sump before release to stormwater							

Emission	Sources	Potential pathways	Proposed controls
			<ul> <li>pond;</li> <li>No reagents are used during the de-gritting process and the rotary drying kiln is operated at a temperature that will not alter the chemical composition of any components of the kaolin ore.</li> </ul>
Hydrocarbon and other chemical reagent	Vehicle and equipment malfunction Fuel storage	Loss of containment (spill, leak, seepage)	<ul> <li>Vehicle and equipment will be maintained in optimal condition, with regular servicing and repair, as required;</li> <li>Hydrocarbon, chemical and reagent storage have been appropriately bunded;</li> <li>Hydrocarbon spill kit will be maintained at de-gritting plant and refuelling hardstand, with sufficient volume to contain spills up to 135 L;</li> <li>Any hydrocarbon spill or leak will be immediately cleaned up with a spill kit and contained in impermeable containers for offsite disposal by licensed hydrocarbon waste collection services.</li> </ul>
Sediment laden stormwater	Deposition of waste sand in mine pits	Overtopping	<ul> <li>Mine pits are located at the top of catchment and are not intersecting surface water flowpaths, allowing stormwater outside the pit to be directed away of the pit;</li> <li>Mine pits are surrounded by a pit crest bund to prevent surface water runoff from entering the pit;</li> <li>Pit volumes are adequate to contain 72-hour 1% Annual Exceedance Probability rainfall events of 143 mm, while maintaining a freeboard of 5 metres;</li> <li>Rainfall collected within the mine pits drain into sumps, which will be occasionally pumped out after heavy rainfall.</li> </ul>
Seepage from contaminated waste sand		Vertical infiltration and lateral migration	<ul> <li>Waste sand will unlikely be impacted during processing due to controls placed on the storage of hydrocarbon and other chemical reagents;</li> <li>Mine pit depth is unlikely to intercept the local water table, due to the shallower depth of the economic kaolin resource;</li> <li>There is expected to be a separation distance of at least 7 metres between the maximum pit excavation depth and the local water table.</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.

Table 4 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (Guideline: Environmental Siting (DWER 2020a)).

Table 4: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Rural residential premises and agricultural activities	The land neighbouring the premises boundary are all operating agricultural properties, with a combination of dryland cropping and sheep production activities. There are several residential premises that are close to the degritting plant (Figure 4).
	The residential premises closest to the premises boundary is located approximately 750 m to the south-west This premises is located at least 3.5 km away from the Wickepin de-gritting plant, which is the primary source of emissions and discharges.
	The residential premises closest to the Wickepin de-gritting plant is approximately 2.6 km to the north, near Williams-Kondinin Road.
	It was noted that the premises located 1.6 km north of the Wickepin degritting plant is not considered the closest sensitive human receptor as it is owned by a commercial entity, of which an Executive Director of the applicant is an owner of.
Environmental receptors	Distance from prescribed activity
Remnant native vegetation	Based on aerial imagery, most of the area at the premises and its surrounding has been cleared for agricultural activities, with only fragments of remnant native vegetation present (Figure 5). The closest patch of native vegetation at the premises is approximately 200 m north and north-west of the de-gritting plant.
	Remnant native vegetation at the premises typically comprises:
	<ul> <li>open woodland, comprising Corymbia calophylla, Eucalyptus wandoo and E. camaldulensis; and</li> </ul>
	dwarf scrub, open low shrubs, comprising Acacia, Eremophila and Senna.
Priority ecological community (PEC)	Fragmented patches of the "Eucalyptus woodlands of the Western Australian Wheatbelt" PEC are present throughout the premise and its surrounds. The disturbance envelope does not overlap with these patches within the premise. Therefore, no clearing of PEC will be undertaken (Figure 5).
	The closest PEC is located approximately 200 m north of the de-gritting plant.
Surface water and drainage	The premise is spread across a low rise and the upper boundaries of several catchments. There are no defined streamlines or concentrated flow paths near site infrastructure (Figure 6) (Hydrologia 2021).

	The northern portion of the premise is part of the Avon River Management Area, under the Waterways Conservation Act.  A series of lakes are present southwest of the premise, with the closest being about 4.7 km away, while the most ecologically and culturally significant being Toolibin Lake, located 12.3 km from the premises boundary.
Groundwater aquifer	An interbedded clay extending to depths of approx. 30 metres below ground level (mbgl) acts as a confining layer, with no groundwater occurring in the overlying clay sediments. Underlying the confining clay is the local, fractured bedrock aquifer (GDS 2021).
	Based on monitoring undertaken in 2021, the depth of groundwater at the premises ranged from between 27.8 mbgl to 34.1 mbgl, based on onsite groundwater monitoring bores. Groundwater was predicted to flow away from the premises, aligning with local drainage channels (Figure 6).
	Groundwater quality is considered brackish to slightly saline, with TDS ranging between 1,000 mg/L to 4,000 mg/L. Field pH at the bores ranged from acidic to slightly alkaline (between 5.1 to 8.1 pH units).

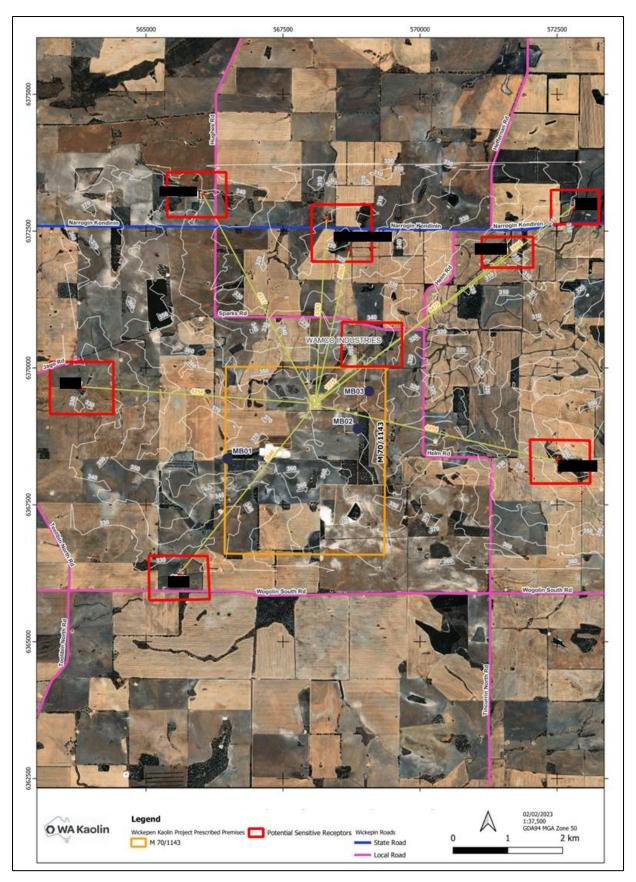


Figure 4: Distance to sensitive receptors

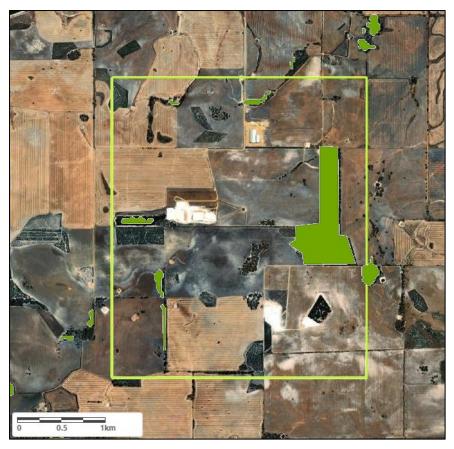


Figure 5: Priority ecological communities at and surrounding the premises

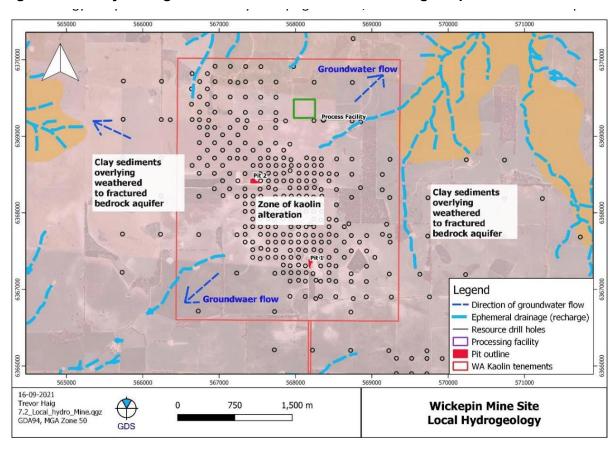


Figure 6: Hydrogeological conceptual site model

# 3.2 Risk ratings

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

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

Additional regulatory controls may be imposed where the applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 5.

Licence L9380/2023/1 that accompanies this decision report authorises emissions associated with the operation of the premises i.e. de-gritting of kaolin ore.

The conditions in the issued licence, as outlined in Table 5 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 5: Risk assessment of potential emissions and discharges from the premises during operation

Risk events					Risk rating <sup>1</sup>	Applicant	Conditions <sup>2</sup>	Justification for additional
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	controls sufficient?	of licence	regulatory controls
Operation								
	Fugitive dust	Pathway: Air/ windborne pathway Impact: Impacts to health and amenity	Rural residential premises  Remnant native vegetation, including PECs	Refer to Section 3.1.1	C = Minor L = Possible Medium risk	Y	Condition 1 (Infrastructure requirement) Condition 4 (Dust emissions)	N/A
	Point source stack emissions (dust and LNG exhaust)		Rural residential premises	Refer to Section 3.1.1	C = Slight L = Possible Low risk	Y	Condition 2 (Authorised emission points)	N/A
De-gritting process plant activity, including: loading/ unloading,	Noise			Refer to Section 3.1.1	C = Slight L = Unlikely Low risk	Y	N/A	N/A
stockpiling, screening, kiln use, dust collection, bagging and storage of product Vehicle movements	Hydrocarbon and chemical reagents	Pathway: Spills and leaks, resulting in loss of containment Impact: Impacts to ecological health	Remnant native vegetation, including PECs Surface water drainage	Refer to Section 3.1.1	C = Slight L = Unlikely Low risk	Y	N/A	The Delegated Officer considers this risk event to be adequately covered under the Dangerous Goods and Safety Act 2004 and Environmental Protection (Unauthorised Discharges) Regulations 2004.
	Sediment laden stormwater	Pathway: Overland runoff during rainfall events Impact: Impacts to ecological health		Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium risk</b>	Y	Condition 1 (Infrastructure requirement)	Additional controls were included in condition 1 to ensure the stormwater pond is maintained. These controls include maintenance of freeboard and floating surface bund, as well as the need to dispose of pond water offsite if hydrocarbon contamination is detected.  These controls were conditioned for the time limited operation of the premises under works approval

Risk events	Risk events						On aliting 2	locatificacion for a latticard
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
								W5443/2013/1. The Delegated Officer has carried these controls over.
	Fugitive dust	Pathway: Air/ windborne pathway Impact: Impacts to health and amenity	Rural residential premises Remnant native vegetation, including PECs	Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium risk</b>	Y	Condition 3 (Authorised discharge points) Condition 4 (Dust emissions)	N/A
Deposition of waste sand material to mine pits	Sediment laden stormwater	Pathway: Overtopping of mine pit, resulting in overland runoff during rainfall events  Impact: Impacts to ecological health	Remnant native vegetation, including PECs Surface water drainage	Refer to Section 3.1.1	C = Minor L = Rare Low risk	Y	N/A	N/A
	Contaminated stormwater	Pathway: Vertical infiltration and lateral migration of contaminants in waste sand  Impact: Impacts to groundwater resources	Groundwater aquifer	Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium risk</b>	Y	Condition 3 (Authorised discharge points)	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.

#### 4. Consultation

Table 6 provides a summary of the consultation undertaken by the department.

No concerns were raised by the Department of Mines, Industry Regulation and Safety during a previous application to amend works approval W5443/2013/1 to authorise time-limited operations (DWER 2022). As such, they were not consulted as part of this assessment.

**Table 6: Consultation** 

Consultation method	Comments received	Department response		
Application advertised in The West Australian on 27 March 2023.	None received.	N/A		
Application advertised on the department's website on 23 March 2023.	None received.	N/A		
Shire of Wickepin advised of proposal on 23 March 2023.	The Shire of Wickepin responded on 11 April 2023, with support for the licence application.  The Shire requested the department consider the detrimental impact of increased mine site movements on local government roads (i.e., Sparks Road).	The department notes that road access for premises is not typically regulated under a works approval or licence.		
Local resident advised of proposal on 23 March 2023.	None received.	N/A		
Applicant was provided with draft documents on 16 May 2023.	Refer to Appendix 1.	Refer to Appendix 1.		

#### 5. Conclusion

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

## References

- 1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
- 2. Department of Water and Environmental Regulation (DWER) 2020a, *Guideline: Environmental Siting*, Perth, Western Australia.
- 3. DWER 2020b, Guideline: Risk Assessments, Perth, Western Australia.
- 4. DWER 2022, Amendment Report: W5443/2013/1, Perth, Western Australia.
- 5. Groundwater Development Services Pty Ltd (GDS) 2021, *Hydrogeological study of the WA Kaolin Wickepin Mine Site and Wedin Railway Siding*, Rockingham, Western Australia.
- 6. Hydrologia 2021, WA Kaolin Project Wickepin Surface Hydrology Study, Perth, Western Australia.
- 7. National Environmental Protection Council (NEPC) 1998, *National Environment Protection (Ambient Air Quality) Measure*, Canberra.
- 8. New South Wales Environmental Protection Authority (NSW EPA) 2016, Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales, Sydney, New South Wales.

# Appendix 1: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response
Condition 3	The applicant noted misnumbering in Table 3, row 2.	The department has addressed these errors and omissions.
Condition 8	The applicant noted missing information on submission timeframe of the environmental report.	The requirements for Mine Pit 2 in Table 3 were also amended to reflect those for Mine Pit 2 in the same table. This was an administrative omission in the draft conditions.
Definitions	The applicant nominated the annual year to span from 1 July to 30 June of the following year.	The department has updated the licence accordingly.
Figure 2	The applicant provided an updated figure, as requested by the department.	

# **Appendix 2: Application validation summary**

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)								
Application type								
Works approval								
Licence	×	Relevant works approval number:	W5443/2013/1		None			
		Has the works approval been complied with?		Yes □ No □				
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes □ No □ N/A □				
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes □ No □				
		Date report received:						
Renewal		Current licence number:						
Amendment to works approval		Current works approval number:						
Amendment to licence		Current licence number:						
		Relevant works approval number:			N/A			
Registration		Current works approval number:			None			
Date application received		21 February 2023						
Applicant and premises details								
Applicant name/s (full legal name/s)		WA Kaolin Limited						
Premises name		Kaolin Mine and Process Plant						
Premises location		Mining tenement M70/1143						
Local Government Authority		Shire of Wickepin						
Application documents								
HPCM file reference number:		DER2023/000139						
Key application documents (additional to application form):		<ol> <li>Attachments to the Application Form (17 February 2023)</li> <li>Response to Request for Information (8 March 2023)</li> </ol>						
Scope of application/assessment								
Summary of proposed activities or changes to existing operations.		Licence (new)  Operation of Wickepin de-gritting plant.						

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

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 5: Processing or beneficiation of metallic or non-metallic ore	1,250,000 tonnes per annual period	N/A

#### Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes □ No ⊠	N/A
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes □ No ⊠	N/A
Has the proposal been referred and/or assessed under the EPBC Act?	Yes □ No ⊠	N/A
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ⊠ No □	Mining lease / tenement ⊠ Expiry: 20 May 2024
Has the applicant obtained all relevant planning approvals?	Yes □ No □ N/A ⊠	N/A
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes □ No ⊠	No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes □ No ⊠	No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes □ No ⊠	Licence / permit not required.
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes □ No ⊠	N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes □ No ⊠	N/A

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
Is the Premises subject to any other Acts or subsidiary regulations?	Yes ⊠ No □	<ol> <li>Mining Act 1978</li> <li>Dangerous Goods Safety Act 2004</li> <li>Environmental Protection (Noise) Regulations 1997</li> <li>Environmental Protection (Unauthorised Discharges) Regulations 2004</li> </ol>			
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes □ No ⊠	N/A			
Is the Premises subject to any EPP requirements?	Yes □ No ⊠	N/A			
Is the Premises a known or suspected contaminated site under the Contaminated Sites Act 2003?	Yes □ No ⊠	N/A			