Government of Western Australia
Department of Water and Environmental Regulation

Decision Report

Application for Works Approval

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

Works Approval Number	W3105/2025/1
Applicant	Alcoa of Australia Limited
ACN	004 879 298
File number	APP-00313929
Premises	Kwinana Alumina Refinery Hogg Road NAVAL BASE WA 6167 Legal description - Part of Lot 501 on Deposited Plan 727207, Lot 200 on Deposited Plan 61086, Part of lot 113 on Deposited Plan 20587 and Part of Lot 114 on Plan 48295 As defined by the premises maps attached to the issued works approval
Date of report	05 February 2026
Decision	Works approval granted

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1. Decision summary

This Decision Report documents the assessment of potential risks to the environment and public health from emissions and discharges during the construction and operation of the premises. As a result of this assessment, works approval W3105/2025/1 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 DWER Regulatory documents | Western Australian Government.

2.2 Background

Alcoa notified the department on 9 January 2024 of their plan to curtail production at the Kwinana Alumina Refinery beginning in the second quarter of 2024. The curtailment was expected to result in a surplus water inventory and Alcoa has been investigating options to manage this throughout the curtailment period.

Several amendments have been made to the Part V licence L5245/1967/14 since 2024 to facilitate activities related to management of the premises water balance including installation of evaporators and diesel storage tanks. These solutions are considered short-term while Alcoa investigated other longer-term water management options for the premises.

2.3 Application summary

On 19 October 2025, Alcoa of Australia Limited (the applicant) submitted an application (the application) for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction works relating to a closed loop wastewater treatment plant (WTP) at the premises. The premises is approximately 1.3 km east of the residential area of the residential area of Mandogalup.

No discharges to the environment are proposed in the application. Any future discharge or reuse of WTP outputs will require a separate Part V application.

The Delegated Officer understands that a supplementary Works Approval application will follow this application, seeking approval for construction commissioning and time limited operation (TLO) of infrastructure to reinject treated water produced by the WTP.

The premises relates to the categories and assessed production capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in Licence L5245/1967/14. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in works approval W3105/2025/1.

2.3.1 Overview of proposal

The Kwinana Refinery is currently in a curtailed state. During this time, it is not processing inputs (bauxite and process chemicals) or producing alumina or residue outputs. Port activities (raw material import and export) are still running, and RSAs and the process water circuit are being managed under the Part V Licence (L5245/1967/14).

During normal operation, the refinery uses a closed water system, topped up with stormwater,

municipal water, and extracted contaminated groundwater. Ongoing operation of the groundwater bores on the premises is required by the Contaminated Sites Act 2003 and the Kwinana Groundwater Monitoring and Management Plan enforced by Condition W1 of L5245/1967/14.

It is Alcoa's intention to improve water quality within the ROWS pond in preparation of future disposal and reuse. The WTP will be operated in a closed loop formation until such time that water management and disposal options are available for the premises.

The WTP will abstract water from the ROWS Pond and F-Surge and return treated water to the ROWS Pond. Brine produced during process will be stored in the Lake Water Pond.

The WTP uses reverse osmosis and associated filtration steps to remove dissolved solids and impurities. This produces three streams:

- Permeate: Returned to the ROWS Pond for reuse in the process.
- Brine: Directed to the lined Lake Water Pond for secure storage.
- Centrifuge cake to cells within RSA L for disposal

Water from filter backwashing and any off-spec treated water is also returned to the ROWS Pond for reprocessing. Centrifuge cake generated during solids separation is proposed to be placed in purpose built cells within the composite lined RSA L.

2.3.2 RSA L Stability Assessment

Alcoa engaged the appointed Engineer of Record for the Kwinana RSAs, Klohn Crippen Berger (KCB), to assess the impacts of the construction of the WTP footprint hardstand on the dam safely of RSA L.

A summary of KCB's assessment is as follows:

- There is expected to be no appreciable reduction of the stability of the RSAs in terms of the factor of safety against slope failure, compared with the current stability.
- The static load imposed by the WTP does not negatively impact the geotechnical stability of RSA L.
- Operation of the WTP is expected to have negligible impact on the dam safety of RSA L.

KCB recommended ongoing consultation with KCB throughout construction of the WTP, hardstand and pipelines to and from the WTP.

2.3.3 Summary of water treatment plant process

The plant will treat water from the ROWS and F-Surge ponds which contains process water from Alumina processing activities at the site.

The WTP uses six major treatment stages.

- Neutralisation: CO_2 gas is added to adjust the pH. This helps aluminium and other solids form particles that can be removed later.
- Clarification: Chemicals are added to help small solids stick together. The water flows through lamella clarifiers where solids settle to the bottom. Settled solids (sludge) go to centrifuges for dewatering.
- Centrifuging: Centrate (water) and centrifuge cake are separated. Centrifuge cake is disposed of on site in lined purpose-built cells and centrate is returned through the system for further processing
- Media filtration: water passes through sand-like filters that remove remaining fine

particles. Filters are backwashed regularly, and washwater is returned through the system.

- Ultra-filtration: fine membranes to remove tiny particles the media filters miss.
- Reverse Osmosis (RO): separates dissolved salts and organics to produce final treated water which is returned to the ROWS pond and Brine which is disposed of in the Lake Water Pond.

2.3.4 Surface water and spill management

The WTP area is located in the southeastern corner of RSA L on a constructed hardstand. The area directs water to V-drains at the perimeter of the hardstand area. In the event of a major spill, water is immediately contained on the hardstand, where the graded surface directs flow to the surrounding V-drains. From there, water is conveyed via the engineered drainage system to the RSA L perimeter table drain and then into L Oxalate Pond, which has significant freeboard (1.1 m) and capacity to safely store spill volumes. a tank failure would only occupy 3.7% of the available freeboard, conservatively assuming the pond was at its maximum operating capacity at the time of the failure event. Freeboard at the Oxalate Pond can be maintained by pumping to the F-Surge pond following an extreme rainfall event. During a tank failure event, any waters that infiltrate into the hardstand, and the underlying residue below, will be collected in the existing RSA L underdrainage system.

2.3.5 Centrifuge cake disposal

Laboratory testing was carried out on centrifuge cake produced during small-scale trials using feedwaters with total alkalinity levels of 5 g/L and 10 g/L. The samples were analysed by an external NATA-accredited laboratory in accordance with the *Landfill Waste Classification and Waste Definitions 1996*. Results showed that all analysed parameters were well below Class I/II concentration and leachate limits, except for aluminium, which fell within the Class IV range—consistent with alumina-refinery residue materials. The aluminium concentrations in the centrifuge cake were comparable to those routinely measured in existing RSA residue mud.

2.4 Noise assessment

Alcoa submitted the Water Treatment Plant Noise Assessment Report (2025) prepared by noise consultancy company Wood, as part of their works approval application. Operational scenarios associated with the WTP were modelled and assessed for day, evening and night periods. Noise at sensitive receptors were assessed by Wood utilising SoundPLAN v 8.2 in accordance with the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) and DWER Draft Guideline on Environmental Noise for Prescribed Premises.

The assessment accounted for cumulative noise from existing equipment including evaporators approved under two licence amendments. The evaporators are scheduled for installation in early 2026. Predicted noise levels were assessed against the assigned levels set out in the Noise Regulations.

One Industrial and ten residential sensitive noise receptors were identified, and cumulative noise levels were predicted for each receptor and compared with assigned levels for each receptor location.

Wood found that predictive noise modelling results show that the equipment associated with the WTP is significantly below the assigned level for each receiver.

Cumulative noise levels were then determined by considering other operational equipment from the RSA facility. Noise levels from other equipment have been assumed to be compliant with assigned levels and conservatively assumed to be operating at a level equal the assigned level at each NSR. The WTP was found to have negligible impact to the cumulative noise levels at the receivers. As a result, noise emissions from the WTP operations are predicted by Wood to

be compliant with assigned levels.

2.4.1 Technical review

The Department undertook a technical review of the noise assessment and found the methodology of the noise modelling to be reasonable and complete for the proposed WTP project.

The modelled noise emission levels at the 9 neighbouring noise sensitive receptors seem reasonable and reliable. Based on Wood's assessment, noise generated by the proposed WTP would be in the range between 14 and 32 dB(A) at the 9 assessed residences day and night, which are significantly lower than the assigned levels at all assessed receptors: at least 20 dB lower in the daytime, 15 dB lower in the evenings and 9 dB lower at night. The Delegated Officer considers that at those predicted noise emission levels, noise from the proposed WTP will not significantly contribute to the overall noise emission levels from the Kwinana Refinery site.

Wood conducted the cumulative noise assessment by assuming that noise levels from the existing operations (including the recently proposed evaporators fitted with noise attenuation kits) were equivalent to the assigned levels at each of the 9 receptors. Also, by assuming that noise contributions from the proposed WTP to the cumulative noise emission levels would be negligible, Wood concluded in Table 5-1 that the cumulative noise levels wound remain the same with the proposed WTP at all 9 receptors. The Delegated Officer considers this approach of cumulative noise assessment may be too simplified, and may not be accurate.

Noise modelling conducted to support licence amendment applications for the addition of evaporators, noise emission exceedances of assigned levels were predicted under the following scenarios:

- Night-time at receptor R5 under non-tonal conditions
- Night-time at receptor R5 under non-tonal conditions
- Night-time at four receptors (R5, R7, R8, R9) under tonal conditions

As such the Delegated Officer considers that noise compliance of the Kwinana Refinery site is highly dependent on the successful implementation of noise mitigation measures Wood proposed for the evaporators. The Department previously included requirements for noise verification monitoring in the abovementioned amendments to the licence (refer to section 2.2), which will further inform noise impacts from the premises.

3. Risk assessment

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

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

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

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

Table 1: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Vehicle movements, earthworks.	Air / windborne pathway	Application of water via water carts or other means to limit dust generation
Noise	Minor earthworks Installation of infrastructure		Equipment maintained to prevent unwanted noise generation.
Operation			
Dust	Lift off from centrifuge cake in RSA	Air / windborne pathway	**Existing licence conditions** Conditions A9 and A10 of Licence L5245/1967/14 which relate to monitoring and reporting of dust emissions at the RSA **Proposed controls** Centrifuge Cake disposal is a wet process which is unlikely to generate dust emissions. Visual inspections of the Centrifuge Cake disposal cells will be undertaken to monitor for any potential dust emissions Watercarts, or similar, will be maintained onsite to dampen the disposal cells to minimise dust lift off, as required. Siting of disposal cells within the RSA facility at distance from potential receptors
Noise	Operation of WTP	Air / windborne pathway	Distance from sensitive receptors
Treated process water		Overtopping of ROWS pond	**Existing licence conditions:** Conditions W1, W2 and W3 of Licence L5245/1967/14 which relate to the Licence Holder's Ground Water monitoring and Management Plan **Proposed controls** The installation and operation of the WTP alone will not materially change the water balance for the site. The WTP will be commissioned and operated in a closed loop configuration abstracting feed water from the ROWS Pond and F-Surge and returning treated water to the ROWS Pond and brine to the Lake Water Pond.
		Rupture or leaks of pipelines	Conveyed via pipeline to existing ROWS Pond Pipelines pressure/leak tested during commissioning and routinely inspected in

Emission	Sources	Potential pathways	Proposed controls
			accordance with Alcoa's existing inspection regimes.
Contaminated water (effluent process water)	Operation of WTP	Overtopping of ROWS pond Rupture or leaks of pipelines Tank failure	Surface drainage system which directs surface water to RSA L perimeter table drain towards existing Oxalate Pond which has a maintained 1.1 m freeboard. Underdrainage system which pumps water to the decant infrastructure to an existing, lined, Cooling Pond for storage in the event of a tank failure event. All major tanks fitted continuous low level instrumentation with low level alarms and where applicable, automated shutdown controls WTP located on graded hardstand which directs to drainage system and then to L Oxalate Pond.
Brine	Transfer and storage of brine from RO to Lake Water Pond	Overtopping of Lake Water Pond Rupture or leaks of pipelines	**Existing licence conditions:** Conditions W1, W2 and W3 of Licence L5245/1967/14 which relate to the Licence Holder's Ground Water monitoring and Management Plan **Proposed applicant control** Pipelines will be leak and pressure tested during commissioning Existing Lake Water Pond is lined
Centrifuge cake leachate	Discharge to and storage of centrifuge cake in RSA L	Direct discharge to land Underground infiltration Overland runoff via stormwater	Centrifuge Cake disposed within discrete cells located with composite lined RSA L and covered with 1m of residue sand or mud Surface drainage system which directs surface water to RSA L perimeter table drain towards existing Oxalate Pond which has a maintained 1.1 m freeboard (22 000 m^3).

3.1.2 Receptors

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

Table 2 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 2020)).

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

Human receptors	**Distance from activity / prescribed premises**
Residential receptors	300 m north of the RSA
	400 m east of the RSA and approx. 3 000 m from WTP
	200 m east of the RSA and approx. 2 500 m from WTP
	500 m south east of the RSA and approx. 2 000 m from the WTP
	150 m west of the RSA and approx. 1 300 m from WTP
	2 km south of the RSA and approx. 2400 m from WTP
Environmental receptors	**Distance from activity / prescribed premises**
Fauna *Black cockatoo roost sights*	From 5 km northwest and approx. 6km southwest
<u>Wetlands</u> Spectacles Swamp (DIWA wetland) Mandogalup Swamp South (multiple use category wetland) Small unknown wetland (multiple use) Small unknown wetland , dampland (multiple use) Long Swamp (conservation category wetland)	 500 m south-east of premises boundary 900 m east of cooling pond - 1500 m from proposed WTP (RSA L) 150m east of premises boundary -2 km east of proposed WTP 450 m from premises boundary 1.4 km west of WTP 400 m from premises boundary 2 300 m from WTP

<u>TECs/PECs</u> Tuart woodland TECs	 Within premises intersects with western boundary and southern boundary of RSA
Banksia woodland TEC	Within proposed Works Approval area to the southern boundary
Bankia woodland community within Tuart woodland	Within premises boundary and borders northwestern boundary of proposed works approval boundary.
Underlying groundwater (non-potable purposes)	5 m BGL
Cultural receptors	**Distance from activity / prescribed premises**
<u>Aboriginal heritage site</u> Wattleup Road Swamp Thomas Oval	 1.5km north of premises boundary 2.5km south of premises boundary

3.2 Risk ratings

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

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

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

Works approval W3105/2025/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 3 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

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

Table 3: Risk assessment of potential emissions and discharges from the premises during construction and operation

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Construction of hardstand and water treatment plant including vehicle movements (reversing beepers).	Dust	Air / windborne pathway causing impacts to health and amenity	Nearest residential receptor 150 m west of the RSA and approx. 1 300 m from WTP	Refer to Section 3.1	C = Minor L = Rare **Low Risk**	Y	N/A	Minimal dust is expected to be generated as earthworks are expected to be minor. The Delegated Officer considers the risk of dust to receptors during the construction phase is low and therefore no additional regulatory controls have been placed on the Works Approval
	Noise			Refer to Section 3.1	C = Minor L = Rare **Low Risk**	Y	N/A	The Delegated Officer notes the relatively short-term nature of the construction activities with completion of works scheduled for June 2026. Construction works are limited in nature and will not be appreciably different to noise emissions from recent historic activities at the site.
Operation **(including time-limited-operations operations)**								
WTP and associated transfer infrastructure Failure of treatment system Tank failure (Loss of containment)	Contaminated water (elevated pH, brine and metals)	Direct overland runoff to soil causing contamination of soil and groundwater.	TEC Adjacent to ROWS pond from 200 m from WTP Soils Ground water approximately 5 m below ground level Long Swamp 2 300 m from WTP	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	N	**Condition 12**	The WTP operates in a closed loop system. No discharges to the environment are expected. In the event of a major spill, water is immediately contained on the hardstand, which is graded to surrounding V-drains. From there, water is conveyed via an engineered drainage system to the RSA L perimeter table drain and then into L Oxalate Pond, which has significant freeboard and capacity to safely store the entire spill volume. The WTP is constructed within the boundary of the composite lined RSA L facility equipped with an

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
								underdrainage system which provides secondary containment for the WTP. Requirements to monitor WTP flows and water quality parameters during TLO have been added to the works approval to demonstrate the WTP is operating to as intended. Monitoring data will also inform decision making in the assessment of the anticipated Works Approval application for infiltration of treated wastewater.
WTP and associated transfer infrastructure	Noise	Air / windborne pathway causing impacts to health and amenity	Nearest residential receptor 150 m west of the RSA and approx. 1 300 m from WTP	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	N	**Condition 7-10**	Although noise emissions from the WTP are not expected to significantly affect nearby receptors, uncertainty exists regarding cumulative effects. Noise verification monitoring is required to demonstrate that cumulative noise emissions from evaporators and WTP do not exceed assigned levels at nearby residential receptors.
Storage of brine in existing Lake Water Pond Pond failure/seepage	Contaminated water (hypersaline)	Direct discharge causing contamination of soil and groundwater	TEC Adjacent to ROWS pond from 200 m from WTP Soils Groundwater approximately 5 m below ground level Spectacles wetland	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	N	**Condition 6**	Details on available freeboard for the Lake Water Cooling Pond were not specified in the application. The Delegated Officer considers a 500 mm freeboard at each water containment pond associated with the WTP is adequate to manage risk of overtopping. Consideration has been given to the intended role of the WTP, which is to support effective management of the site's water balance. A requirement for a 500 mm freeboard has been added to the Works Approval.
Pipelines for water, brine,	Contaminated water and/or	Overland runoff	Soils	Refer to	C = Minor	Y	Condition 1,	The Delegated Officer considers the design and construction controls and

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
centrifuge cake	centrifuge slurry		Groundwater approximately 5 m below ground level Long Swamp 2 300 m from WTP Spectacles Wetlands	Section 3.1	L = Rare **Low Risk**		Condition 6	operational controls proposed by the applicant are adequate to mitigate risk. As such they have been added to the Works Approval. The Delegated Officer considers spills are otherwise regulated by the general provisions of the Environmental Protection Act 1986, and the Environmental Protection (Unauthorised Discharges) Regulations 2004.
Centrifuge cake disposal	Dust (lift-off)	Air / windborne pathway causing impacts to health and amenity	Nearest residential receptor 150 m west of the RSA and approx. 1 300 m from WTP	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1, Condition 6	The Delegated Officer considers the location of RSA L and distance to sensitive receptors lowers risk. Relevant construction and operational controls proposed by the applicant have been added to the Works Approval to ensure any fugitive dust from the RSA L is identified and mitigated. Existing monitoring and management conditions within L5245/1967/14 otherwise regulate dust emissions from the RSA L. For example Condition A1: *The Licensee shall implement and maintain dust control measures to minimise the generation of airborne dust from the refinery, bauxite stockpiles, bulk loading facilities and the RSAs.*
Storage of treated water Loss of containment through loss of liner integrity Overtopping	Contaminated water	Overland runoff Contamination of soil and groundwater Vegetation damage	Groundwater approximately 5 m BGL TEC Adjacent to ROWS pond from 200 m from WTP Specatacles Wetland	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 1, 7 and	Consideration has been given to the intended role of the WTP, which is to support effective management of the site's water balance. A requirement for a 500 mm freeboard has been added to the Works Approval Requirements to monitor WTP flows and water quality parameters during TLO have been added to the works

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls / DWER comments
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
			Long Swamp 400 m from 2 300 m from WTP					approval to demonstrate the WTP is operating to as intended. Monitoring data will also inform decision making in the assessment of the anticipated Works Approval application for infiltration of treated wastewater.
Cleaning of WTP infrastructure Tank failure Spills	Sodium hydroxide, Sodium hypochlorite, Sulphuric Acid	Direct discharge to land, overland flow or seepage to groundwater	Soils Groundwater approximately 5 m BGL	Refer to Section 3.1	C = Minor L = Unlikely **Medium Risk**	Y	N/A	Chemical storage areas designed in accordance with AS3780, inclusive of secondary containment (double skinned tanks or bunding). Chemical storage areas are constructed within the boundary of the composite lined RSA L facility equipped with an underdrainage system which provides tertiary containment. In the event of a major spill, liquid is immediately contained on the hardstand. Waste bag filters are disposed of to the landfill or RSAs in accordance with Licence condition G6(a)(ii). The Delegated Officer considers spills are otherwise regulated by the general provisions of the Environmental Protection Act 1986, and the Environmental Protection (Unauthorised Discharges) Regulations 2004 so additional controls within the works approval are not required.

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

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

4. Consultation

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

Table 4: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 17 November 2025	Two public submissions were received from the Dwellingup Discovery Forest Defenders Inc. Their concerns are summarised below: • The application incorrectly calculated risk of indirect discharge of waste to groundwater as low • Seeks clarification on how the WTP will aid in remediation of the site and groundwater contamination in the area. • Seeks for several items to be made publicly available, including: a) monitoring and management plans, monitoring results, further information on the brine treatment plant, chemical parameters of treated water, chemical parameters of centrifuge cake, chemical parameters of brine, baseline monitoring data, • Seeks a risk assessment of sensitive environmental receptors applying the specific consequence criteria as set out in 2017 DWER Guideline – Risk Assessments , Part V, Division 3, Environmental Protection Act 1986; and • Expressed concerns regarding dust emissions from the site.	A request for further information (RFI) was sent to the applicant on 12 December 2025. The RFI requested detailed plans of surface water and under-drainage water balance and chemical parameters of centrifuge cake. The information, provided by the applicant, was used to inform the department's specific consequence criteria risk assessment in this Decision Report. It is outside the scope of this works approval assessment to mandate publishing of monitoring results obtained under monitoring required by the associated licence. The Delegated Officer considers that the other concerns in the submission have been addressed in this Decision Report, including an appropriate risk assessment.
Local Government Authority advised of proposal on 17 November 2025	No comments received	N/A
Applicant was provided with draft documents on 30 January	See Appendix 1	See Appendix 1

5. Conclusion

Based on the assessment in this Decision Report, the Delegated Officer has determined that a works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

The Delegated Officer determined that risk events related to the construction and operation of the WTP as a closed system are low to medium risk. Existing infrastructure controls are considered suitable for managing seepage and overflow from the infrastructure. Broader risks associated with dust from the RSA have been assessed previously and are regulated through the existing licence. Given the interim closed-circuit nature and the need for water balance solutions for the site as it progresses curtailment of activities towards closure, the Delegated Officer considers that the inclusion of the WTP will not pose unacceptable risk to heath or environment.

Monitoring results obtained during time limited operation of the WTP will assist in demonstrating to the Department the effectiveness of the WTP and are expected to inform future applications which are outside the scope of this assessment.

References

1. Alcoa of Australia 2025, *Kwinana Water Treatment Plant – Supporting Document*, Perth, Western Australia.
2. Alcoa of Australia 2025, *Response to Request for Further Information*, Perth, Western Australia.
3. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
5. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.

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

Condition	Summary of applicant's comment	Department's response
Front Page	As per email correspondence dated 6 November 2025 in response to DWER's initial RFI Alcoa requested Lot 115 be amendment to Lot 114 to rectify the error in the original submission	Lot number amended.
Condition 1	Minor wording changes, changes to descriptions to allow for flexibility in construction and operation.	Noted and accepted. Amended wording does not alter environmental risk.
Condition 6		
Condition 7(c)	Request for an alternative period to finalise the environmental noise assessment report.	Accepted.
Condition 12	Clarification of location of monitoring point	Accepted.
Condition 28	Minor wording changes	Accepted.
Condition 29		
Decision Report	Minor wording changes and corrections.	Accepted.