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	W3169/2025/1
Applicant	Coogee Chlor Alkali Pty Ltd
ACN	009 276 635
File number	INS-0003169
Premises	Coogee Chlor Alkali Kemerton Plant Marriott Road KEMERTON WA 6233 Legal description - Part of Lot 1 on Diagram 73196 and Part of Lot 254 on Plan 416516 as depicted in Schedule 1 As defined by the coordinates in Schedule 2 of the Works Approval
Date of report	07 April 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 W3169/2025/1 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 https://dwer.wa.gov.au/regulatory-documents.

2.2 Application summary and overview of premises

On 12 November 2025 the applicant submitted an 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 to establish four additional chemical storage tanks at the existing Coogee Chlor-Alkali Kemerton Plant which operates under licence L6036/1988/13. The Kemerton Plant services the adjacent Tronox Ltd titanium dioxide manufacturing plant, and produces chlorine on demand for use by Tronox. The premises is approximately 15 km north-east of Bunbury within the Kemerton Industrial Park.

The premises relates to the category 31 Chemical manufacturing and assessed production / design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W3169/2025/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020b) are outlined in works approval W3169/2025/1.

2.2.1 Proposed Chemical Storage tanks

The proposal includes the installation of three additional 125 m³ storage tanks for 32% hydrochloric acid (HCl) storage at the premises. The tanks are to be located within the existing containment bund on concrete plinths, adjacent to the two existing hydrochloric acid storage tanks (12VT02 and 12TV03). The product transfer line to the existing tanks will be extended to allow transfer to the new tanks from the Lurgi HCl buffer tank (12VT01) via pump 12PC01. HCl may also be transferred to the new tanks from the road tanker unloading gantry. Outlets from the new tanks will connect to the common suction line to the existing load out pump (12PC02), enabling transfer of HCl from both existing and new tanks to the Lurgi HCl buffer tank (12VT01), TREX HCl buffer tank (T-8102) and gantry road truck loading station.

The new storage tanks are to be constructed from fibre-reinforced plastic and designed in accordance with BS EN 13121, with Australian Standard AS3780:2023 *The storage and handling of corrosive* being incorporated into the project design. Vents from the new storage tanks will be connected to the Lurgi scrubber (10AP01), which vents via the existing licensed emission point (A1).

The applicant also proposes the installation of one additional 125 m³ sodium hypochlorite storage tank (10VT07) within the existing caustic storage bund, positioned on a new concrete plinth. Product may be transferred to the new tank from the two existing storage tanks (10VT04 and 10VT06), or from the TREX sodium hypochlorite tank (T-6101). A new pump (10PC07) will be installed for product load out to the gantry road truck loading station.

The tank will have the same construction as the hydrochloric acid storage tanks and be designed in accordance with BS EN 13121 and AS 3780:2023. The tank is proposed to be equipped with a 6" free vent, air emission screening conducted by the applicant in accordance with the DWER's draft Air Emission Guideline indicates that chlorine emissions from the tank are minor (0.013% of AGV).

Figure 1: Locations of new chemical storage tanks at 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 premises construction and operation 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	Tank installation inclusive of construction of	Air / windborne pathway	Water spraying will be conducted to wet down unsealed areas

Emission	Sources	Potential pathways	Proposed controls
Noise	concrete plinth within existing sodium hypochlorite tank bund (inclusive of concrete mixing and pouring)	Air / windborne pathway	Construction scheduled to avoid sensitive times Selection of construction equipment with noise dampening features
Operation			
Impacted stormwater (HCl and sodium hypochlorite)	Storage and transfers of HCl and Sodium Hypochlorite	Loss of containment leading to runoff and seepage to soil and groundwater	Tanks located in existing tank farm bunds new tanks will be fitted with automatic shut valves actuated via distribution control system (DCS) Tanks are designed according to BS EN 13121 Tanks will be stored and handled as per Australian standard AS3780:2023 *The storage and handling of corrosive substances.*
HCl vapours	Storage and transfers of HCl	Air / windborne pathway	Storage tank vents will be connected to the existing Lurgi scrubber (10AP01), which vents via the existing licensed emission point (A1).
Chlorine gas (Cl_2)	Storage and transfers of Sodium Hypochlorite		Equipped with a 6” free vent

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 prescribed activity
Residential Premises	2 km south-east of the Premises boundary
Industrial Premises	Directly adjacent
Environmental receptors	**Distance from prescribed activity**
Geomorphic Wetlands Swan Coastal Plain (management)	Immediately to the north-east, east and south-east of the Premises boundary

Ecological Communities (Threatened Ecological Communities and Priority Ecological Communities) Banksia Dominated Woodlands of the Swan Coastal Plain IBRA Region	Within and immediately to the north-east, east and south of the Premises boundary
Bunbury Groundwater Area	Within the 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 W3169/2025/1 that accompanies this decision report authorises construction. 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 risk assessment for the operational phase has been included in this decision report. Subject to the reporting requirements specified in Conditions 2 and 3, the tanks will be authorised to operate under the applicant's existing licence L6036/1988/13

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 and Installation of: • Four 125m^2 Chemical storage tanks • New concrete plinth for sodium hypochlorite tank	Dust	Air / windborne pathway causing impacts to health and amenity	Residences 2 km south east of the premises boundary and directly adjacent Industrial premises	Refer to Section 3.1	C = Slight L = Rare **Low Risk**	Y	Condition 1	The delegated officer has considered that given the separation distances to sensitive receptors (distance to closest residential receptor >2km) and the location of the works within Kemerton Industrial Park (zoned industrial), dust and noise emissions from the proposed works, anticipated to occur over a period of approximately 3 weeks (Coogee Chlor Alkali, 2025) and described in Section 2.2.1, are unlikely to result in unreasonable impacts to sensitive receptors. The applicants proposed control of wetting down unsealed areas during earthworks has been conditioned as a construction requirement. Additionally the *Environmental Protection (Noise) Regulations 1997* also apply.
	Noise				C = Slight L = Rare **Low Risk**	Y	N/A	
Operation								
Storage and transfers of HCl	Acid gas (HCl vapours	Air / windborne pathway causing impacts to health and amenity	Residences 2 km south east of the premises boundary and directly adjacent Industrial premises	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1	The Delegated Officer considers the applicant's proposal to connect the new storage tank vents to the existing scrubber to be appropriate to manage potential emissions to air associated with the additional storage of HCl. As routing gaseous emissions to the scrubber ensures treatment prior to discharge this has been included as a requirement under the construction /installation requirements. The Delegated Officer notes that operational controls under Licence L6036/1988/1 apply to the scrubber, including process monitoring of caustic flow rate and free hydroxide, which acts as an indicator for scrubber performance and considers this sufficient to manage risks related to gaseous emissions from the storage of HCl, therefore no additional operational controls are required.

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**				
Storage and transfers of Sodium hypochlorite	HCl, sodium hypochlorite and impacted stormwater (from loss of containment from new tanks)	Overland runoff potentially causing ecosystem disturbance or impacting surface water quality	Groundwater (Bunbury Groundwater Area) Banksia Woodlands	Refer to Section 3.1	C = Moderate L = Rare **Low Risk**	Y	Condition 1	The Delegated Officer considers that the applicant's proposed controls are appropriate to mitigate the risk of loss of containment. This includes construction of the tanks in accordance with BS EN 13121, ensuring the tanks are fit for purpose, and the implementation of measures consistent with Australian Standard AS 3780:2023, which provides a nationally recognised standard for containing corrosive substances including provision of secondary containment. These controls collectively reduce the likelihood of containment failure and limit potential impacts to sensitive receptors. Accordingly, these measures have been imposed through Condition 1 together with other proposed controls per section 3.1 as construction and installation requirements for all chemical storage tanks.
	Chlorine gas (Cl_2)	Air / windborne pathway causing impacts to health and amenity	Residences 2 km south east of the premises boundary and directly adjacent Industrial premises	None proposed	C = Moderate L = Rare **Low Risk**	N/A	N/A	As outlined in Section 2.2.1, the applicant undertook an air emission screening assessment in accordance with the Department's draft Air Emissions Guideline. The assessment indicated that potential chlorine emissions from the sodium hypochlorite storage tank are minor, representing 0.013% of the applicable air quality guideline value (AGV). On this basis, the emissions were screened as not significant and no additional controls on the storage of sodium hypochlorite are 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 21 January 2026	One public submission was received, commenting that new operations must only be approved if the operation provides rapid suppression assets, which must be permanently based at this site due to the extreme risk of chemical fire and risk of human health.	The storage and handling of dangerous goods, are regulated under the *Dangerous Goods Safety Act* 2004 and associated regulations, administered by the Department of Local Government, Industry Regulation and Safety (LGIRS). Coogee Chlor-Alkali Pty Ltd holds Dangerous Goods Licence DGS012178, and the applicant has advised that an amendment to this licence is required to accommodate the increased inventory of corrosive substances. The premises is also classified as a *Major Hazard Facility under the Dangerous Goods (Major Hazard Facilities) Regulations 2007* due to the manufacture and storage of chlorine. The Delegated Officer notes that this amendment does not alter the inventory of Schedule 1 materials (including chlorine) and therefore does not introduce new major incident events. On this basis, the Delegated Officer considers that the matters raised in the submission are appropriately regulated under the existing Dangerous Goods legislative framework and are not within the scope of this works approval.
Local Government Authority (Shire of Harvey) advised of proposal on 21 January 2026	No comments received.	N/A
Department of Local Government, Industry Regulation and Safety (LGIRS) advised of proposal on 21 January 2026	No comments received.	N/A
Applicant was provided with draft documents on 20 March 2026	The applicant responded on 27 March 2024, comments received are summarised in Appendix 1	See Appendix 1.

5. Decision

The delegated officer has determined the proposal to construct and operate four additional

chemical storage tanks at the premises for storage of sodium hypochlorite and hydrochloric acid does not pose an unacceptable risk of impacts to identified sensitive receptors. This determination is based on the following:

- Tanks will be constructed in accordance with BS EN 13121, ensuring they are fit for purpose, and will be designed and installed consistent with Australian Standard AS 3780:2023 The storage and handling of corrosive substances, including the provision of secondary containment to manage potential loss of containment.
- Hydrochloric acid vapours will be directed to and treated by an existing scrubber prior to discharge.
- Air emission screening undertaken in accordance with the Department's Air Emissions Guideline indicates that potential chlorine emissions from sodium hypochlorite storage are minor (0.013% of the applicable air quality guideline value) and not significant.

The applicant's containment and operational controls are considered critical to maintaining an acceptable level of risk of environmental impacts, and in accordance with the Guidance Statement: Setting Conditions (DER 2015) have been imposed on the works approval as infrastructure controls for construction and installation.

Works Approval W3169/2025/1 accompanying this report authorises the construction of four additional storage tanks in accordance with Condition 1. Subject to the reporting requirements specified in Conditions 2 and 3, the tanks will be authorised to operate under the applicant's existing licence L6036/1988/13.

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

References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
4. Coogee Chlor Alkali Pty Limited 2025, *Works Approval Application for Coogee Chlor Alkali*, Wellesley, Western Australia.

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

Condition	Summary of applicant's comment on Works Approval	Department's response
Cover Page	Correction to registered business address	Registered business address has been updated with the correct details
Condition 1 Table 1	• Correction to units of storage tanks • Request to change wording of shut valves to "shut off vales" for storage tank requirements	Table 1 has been updated with the requested changes.
Conditions 4-7	The works approval holder requested removal of the time limited operations conditions and references within the Decision Report, as the operation of the tanks is sufficiently covered by the existing licence L6036/1988/13.	Time limited operations and authorised discharge conditions have been removed as tanks will operate under the current licence L6036/1988/13.
Definitions	Request to revise the definition of a suitably qualified engineer to "Certified Engineer," which would permit a Coogee Certified Engineer to conduct the compliance audit. This Certified Engineer would hold an up-to-date certification from either the Institution of Engineers Australia (IEAust) or the Institute of Chemical Engineers (IChemE).	The Delegated Officer has revised the definition of "suitably qualified engineer" to remove the requirement for the engineer to be employed by an external third party, include the Institution of Chemical Engineers as a recognised professional body, and retain the requirement for a minimum of five years' relevant experience.
Section	**Summary of applicant's comment on Decision Report**	**Department's response**
Section 2 and Table 3	Requested amendment of the emission point reference from A2 to A1, reflecting the correct emission point for the Lurgi scrubber connected to the hydrochloric acid storage tanks.	Decision Report has been updated to reflect this change.
Section 3 and 5.	Removal of references to time limited operations as per comments on works approval.	Decision Report has been updated to reflect this change.
Section 3	Amend the process monitoring parameter from "water flow rate" to "caustic flow rate and free hydroxide" to align with the existing Lurgi scrubber (A1) monitoring requirements under licence L6036/1988/13.	Amendment report has been updated reflecting this correction.