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	W6906/2024/1
Applicant	Fremantle Ports Authority
ABN	78 187 889 472
File number	DER2024/000100
Premises	Fremantle Ports – Inner Harbour 1 Cliff Street Fremantle Legal description Lot 10 on Deposited Plan 69297 As defined by the premises map attached to the issued works approval
Date of report	15 May 2024
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 W6906/2024/1 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 March 2024, Fremantle Port Authority (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 relating to Category 86 Bulk material loading or unloading at the premises. The premises is approximately 765 m south of North Fremantle at the Fremantle Port Inner Harbour.

Construction Activities:

The Applicant is proposing to deliver bulk sugar to the premises which will require the construction of a temporary closed materials loading system equipment at Berth 11 and Berth 12 at the Inner Harbour premises (Figure 1). The equipment is proposed to be unloaded from vessel MV Pioneer and set up on the berth in one day and dismantled at the end of the operations (about five days). Four import operations proposed in one year.

Construction will involve unloading ten sections of the closed materials loading system equipment (including two containers tilt frames) from the vessel onto the berth using the ships cranes. The equipment will be assembled on the wharf using a mobile crane. The ship's feed conveyor and telescopic chute is attached to the feed hopper located on the berth. The ship will have an onboard dust collector which is connected to the closed materials loading system. Power and compressed air is supplied from the vessel.

The closed material loading system equipment will be dismantled following seven days of operation using a mobile crane (provided by the berth operator). The equipment will be loaded back on to the vessel using the ships cranes.

Proposed activities:

Sugar Australia (via vessel MV Pioneer) will deliver bulk sugar to Berth 11 and 12 at the Inner Harbour premises. Bulk sugar is proposed to be unloaded from the vessel into containers via the closed loading materials system. The containers will be stored on the berth for collection by trucks and transport from the site.

The proposed import volume is 10,000 tonnes / vessel with four import operations proposed in one year. Therefore, a maximum of 40,000 tonnes of sugar is planned to be imported within one year. The maximum production capacity is 2,400 tonnes / day. Each import is expected to take five days.

Receiving containers are loaded onto the container tilt frame by a reach stacker / container forklift. The container is tilted through 40 degrees and doors are opened. The operator connects the container liner chute to the conveyor filling chute. The loading commences and fills the container to the target weight, nothing the container tilt frames are on load cells. The conveyor

filing chute is disconnected, tied off and container doors are closed and seals attached. The container is lowered to horizontal and removed from the lift frame. The containers are stored on the berth and are collected and transported from site via trucks.

The premises relates to the category and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6906/2024/1. 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 2020) are outlined in works approval W6906/2024/1.

Sound levels during operation are expected to be between 47 – 50 db based on noise monitoring undertaken by the Port Authority of New South Wales at Glebe Island, New South Wales for the same unloading operation. The measured sound levels immediately adjacent to that unloading operation were:

- Day - 48 to 50 dBA LAeq 15 hour (no tonal characteristics)
- Night - 47 - 48 dBA LAeq 1 hour (no tonal characteristics)

The applicant considers that given the distance to the nearest sensitive receptor and the topography of the berth location being below that of the receptors, the noise levels at the receptor will be lower than those recorded at Glebe Island. However, the applicant plans to engage an acoustic consultant to undertake noise level monitoring of the operation on day 1 of cargo unloading, and implement controls as required.

Figure 1: Fremantle Ports Berth 11 and Berth 12

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 / 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	Construction of closed materials loading system	Air / windborne pathway	• Operations shall be managed by experienced stevedore crews with regular inspections undertaken. • FPA complaints management system.
Noise	Construction of closed materials loading system	Air / windborne pathway	• Construction Environmental Management Plan to be provided by contractor and approved by Fremantle Ports prior to works commencing. • Construction will involve assembly of Pre-constructed equipment only. • Inspection of equipment assembly activities to be conducted by Fremantle Ports Environmental Branch. If noise levels are observed that have the potential to cause a nuisance, an acoustic consultant will be engaged to undertake noise level monitoring of the construction works, and controls implemented if required. • Sugar Australia Operational Environmental Management Plan. • FPA complaints management system. • Fremantle Ports Inner Harbour Noise Management Strategy (2022).
Operation (including time limited operations)			

Emission	Sources	Potential pathways	Proposed controls
Dust	Materials handled via closed materials loading system	Air / windborne pathway	• The closed materials loading system fitted with dust extraction system used to unload sugar into containers. • Operations shall be managed by experienced stevedore crews with regular inspections undertaken. • Berth Operator Management Plan. • FPA complaints management system. • Preventative maintenance of infrastructure and equipment prior to import operations. • Sugar Australia Operational Environmental Management Plan. • Berth Operator sweeps berth in the event spillage on berth.
Noise	Materials handled via closed materials loading system	Air / windborne pathway	• Construction Environmental Management Plan to be provided by contractor and approved by Fremantle Ports prior to works commencing. • Fremantle Ports to undertake sound level monitoring on day 1 of unloading operations. • Sugar Australia Operational Environmental Management Plan. • FPA complaints management system. • Fremantle Ports Inner Harbour Noise Management Strategy (2022).
Bulk sugar	Materials handled via closed materials loading system	Direct discharge from loading system	• Closed materials loading system used to unload sugar into containers is fully contained. • Inspected by licensee personnel (Environmental Advisor) • Operations shall be managed by experienced stevedore crews with regular inspections undertaken. • Berth Operator Environmental Management Plan • FPA Incident response procedure including recording, investigation and actioning of incidents. • Preventative maintenance of infrastructure and equipment prior to import operation. • FPA Annual marine quality monitoring program of water quality, sediment and

Emission	Sources	Potential pathways	Proposed controls
			mussels for contaminants. • Material charcaterisation – physical and chemical properties of the cargo present a very low environmental risk to the marine environment.
Sugar-laden stormwater or wash-water	Spilled material on the berth / berth cleaning	Runoff and direct discharge from berth to river	• Spill kids on berth
Hydrocarbons	Spill on berth	Runoff and direct discharge to river from berth	• Spill kits on berth. • Inspected by a licensee personnel (Environmental Advisor) • Incident response procedure including recording, investigation and actioning of incidents. • FPA Annual monitoring of water quality, sediment for contaminants • Sugar Australia Operational Environmental Management Plan • Preventative maintenance of infrastructure and equipment prior to import operation • Berth operator environmental management plan.

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	310 m east of the prescribed activity
Residential Premises	300 m northeast of the prescribed activity
Swan Hotel	200 m east of the prescribed activity
Port Beach Brewery	300 m north of the prescribed activity

Environmental receptors	Distance from prescribed activity
Swan River: • Important Wetlands – Swan-Canning Estuary • Geomorphic Wetlands – Swan Coastal Plan (Management) • Aboriginal Sites and Heritage Places – Swan River	Immediately adjacent of 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 W6906/2024/1 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. Bulk material loading or unloading activities. 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
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
Construction								
Delivery and construction of closed materials loading system	Dust	Air / windborne pathway causing impacts to health and amenity	Residences approximately 300 m from unloading activities	Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 1	Installing the equipment in accordance with the design requirements is likely to reduce the risk of excess dust emissions. Installation is expected to occur over a short period.
	Noise			Refer to Section 3.1	C = Slight L = Unlikely **Low Risk**	Y	Condition 1	Construction of the material handling system involves assembly of pre-constructed equipment only. Therefore, noise levels during assembly of the equipment will be negligible. Installation is expected to occur over a short period (one day). Noise levels are not expected to rise above existing noise levels emitted from the wider Fremantle Port Inner Harbour during construction and demobilization. The *Environmental Protection (Noise) Regulations 1987* are considered sufficient in managing potential noise emissions.
Operation **(including time-limited-operations operations)**								
Materials handled via closed	Dust	Air / windborne pathway causing	Residences approximately	Refer to	C = Slight	Y	Condition 1 and 6	Installing the equipment in accordance with the design

Risk events					Risk rating [1] C = consequence L = likelihood	Applicant controls sufficient?	Conditions [2] of works approval	Justification for additional regulatory controls
Sources / activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Applicant controls**				
materials loading system		impacts to health and amenity	300 m from unloading activities	Section 3.1	L = Unlikely **Low Risk**			requirements is likely to reduce the risk of excess dust emissions. Operations are expected to occur over a short period.
	Noise	Air / windborne pathway causing impacts to health and amenity	Residences approximately 300 m from unloading activities	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	N/A	Operations are expected to occur over a short period. The *Environmental Protection (Noise) Regulations 1987* apply.
	Sugar-laden stormwater or wash-water	Direct discharge from the berth to Swan River adversely impacting marine water quality and species	Swan River ecosystem and species	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1 and 6	The applicant's controls have been conditioned to reduce the risk of contaminated water being discharged.
Hydrocarbon spill to berth / marine environment	Hydrocarbons	Direct discharge from the berth to Swan River adversely impacting marine water quality and species	Swan River ecosystem and species	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1 and 6	The applicant's controls have been conditioned to reduce the risk of hydrocarbon being discharged to the environment.

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 4 April 2024	N/A	N/A
Local Government Authority advised of proposal on 4 April 2024	N/A	N/A
Applicant was provided with draft documents on 18 April 2024	Response received on 13 May 2024. 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 works approval will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

The Delegated Officer notes that the applicant is proposing to operate for a total of about seven days during the initial import operation. Additional import operations may be undertaken under TLO, however should the applicant wish to operate beyond the authorised six-month TLO period, a Registration will be required under the *Environmental Protection Regulations 1987* (EP Regulations). An application for a registration can be made to the Department once a works approval has been granted and constructed for a premises listed in Schedule 1, Part 2 of the EP Regulations.

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.

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

Condition	Summary of applicant's comment	Department's response
Works Approval Condition 1, Table 1	Regarding the following design and construction / installation requirement: *'Any wash water generated on the berth is to be contained and discharged to an approved treatment facility.'* Following further discussions with Sugar Australia, Fremantle Ports advises that no wet washing of equipment will occur on the equipment at any time therefore no wash water will be generated. Only dry cleaning of equipment using vacuums and dry sweeping will be undertaken, with any cargo collected disposed of as general dry waste. Fremantle Ports requests this requirement is removed from Table 1.	Request accepted by the Delegated Officer
Decision Report Table 1: Proposed controls	<u>Construction – Noise</u> Construction of the material handling system involves assembly of pre-constructed equipment only. Therefore, noise levels during assembly of the equipment will be negligible. Note that no monitoring of noise levels during assembly of the equipment has previously been undertaken. Fremantle Ports requests that the proposed controls be updated as follows: • Inspection of equipment assembly activities to be conducted by Fremantle Ports Environmental Branch. If noise levels are observed that have the potential to cause a nuisance, an acoustic consultant will be engaged to undertake noise level monitoring of the construction works, and controls implemented if required.	Request accepted by the Delegated Officer
	<u>Operation – Noise</u> Fremantle Ports has been provided with noise monitoring data by Sugar Australia undertaken by the Port Authority of New South Wales for the same unloading operation at Glebe Island in Sydney. The measured noise levels immediately adjacent to the unloading operation were: • Day - 48 to 50 dBA LAeq 15 hour (no tonal characteristics) • Night - 47 - 48 dBA LAeq 1 hour (no tonal characteristics) Given the distance to the nearest sensitive	Request accepted by the Delegated Officer

Condition	Summary of applicant's comment	Department's response
	receptor (300m) and the topography of the berth location being below that of the receptors, the noise levels at the receptor will be lower than those shown above. As part of our due diligence, Fremantle Ports will engage an acoustic consultant to undertake noise level monitoring of the operation on day 1 of cargo unloading, and controls implemented as required. Fremantle Ports requests that the proposed controls be updated as follows: • Noise monitoring of operation at Glebe Island, Port Authority of NSW (47-50dBA). Fremantle Ports to undertake sound level monitoring on day 1 of unloading operations.	
	<u>Operation – Sugar-laden stormwater or wash water</u> Regarding the following design and construction / installation requirement: *'Any wash water generated on the berth is to be contained and discharged to an approved treatment facility.'* Following further discussions with Sugar Australia, Fremantle Ports advises that no wet washing of equipment will occur on the equipment at any time therefore no wash water will be generated. Only dry cleaning of equipment using vacuums and dry sweeping will be undertaken, with any cargo collected disposed of as general waste. Fremantle Ports also advises that no sugar-laden stormwater will occur on the berth as the equipment is completely closed and sealed, and not open during rain events. Fremantle Ports requests the requirement for sugar laden stormwater or wash water is removed from Table 1	Request accepted by the Delegated Officer