



## Application for Licence Amendment

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

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<b>Licence Number</b>	L4474/1976/14
<b>Licence Holder</b>	Fremantle Port Authority
<b>ABN</b>	78 187 229 472
<b>File Number</b>	DEC1712/5
<b>Premises</b>	Kwinana Bulk Jetty Port Road, KWINANA BEACH, WA 6167 City of Kwinana Lot 4552 on Plan 220690; Portion of Lot 497 on Plan 35196
<b>Date of Report</b>	11 March 2021
<b>Decision</b>	Revised licence granted

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A/MANAGER – RESOURCE INDUSTRIES

REGULATORY SERVICES

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

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# 1. Decision summary

Licence L4474/1976/14 is held by Fremantle Port Authority (licence holder) for the Kwinana Bulk Jetty (premises), located at Port Road, Kwinana Beach, WA 6167.

This amendment report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the premises. As a result of this assessment, revised licence L4474/1976/14 has been granted.

The revised licence issued as a result of this amendment consolidates and supersedes the existing licence previously granted in relation to the premises. The revised licence has been granted in a new format with existing conditions being transferred, but not reassessed, to the new format.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this amendment report, the department 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 Amendment summary

On 6 October 2020, the licence holder submitted an application to the department to amend licence L4474/1976/14 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). An overview of proposed products to be authorised to be handled and changes in tonnage is shown in Table 1.

The following operational amendments are being sought:

- Inclusion of nut coke handling
  - to cater for emergency shipments when the Kwinana Bulk Terminal premises (L4476/1984/12), held by the same licence holder, is in unplanned shutdown or similar
  - nut coke is identified as 'chemical treated material' which poses no major human health or environmental hazard (*Guideline: Port Authority bulk handling trials*)
- Inclusion of sodas ash handling:
  - currently exported under a trial (end of trial 28 December 2020)
  - one trial shipment undertaken, three monitoring reports submitted to the department
  - is identified as 'manufactured product' which can pose human toxicity and can result in lung, eye and skin irritation; and in eutrophication; (*Guideline: Port Authority bulk handling trials*)
- increase of the total approved tonnage of the licence from 3 485 800 tonnes to 3 560 800 tonnes per annum
  - increase of annual sulfur tonnage accommodating one additional shipment (to 675 000 tonnes);
  - decrease of annual cement clinker and silica sands tonnage;

Following administrative amendments are sought:

- grouping of similar product types which are handled with similar methods
- modifying the annual period to 1 July to 30 June to align with the financial year

As part of the amended annual period definition, condition 10 was updated to reflect the current wording of the new departmental template. Requirements for the Annual Audit Compliance Report have not changed.

**Table 1 Proposed products handled and tonnage**

Product	Current authorised volume [tonnes]	Proposed volume [tonnes]
Cement clinker	650,300	450,300
Granulated slag	300,600	340,600
Gypsum	40,000	
Nut coke	-	
Ammonium sulfate	20,900	1,460,900
Phosphates	600,000	
Potash	400,000	
Soda ash	-	
Urea	440,000	
Silica sands	624,000	484,000
Soya bean meal	150,000	150,000
Sulfur	600,000	675,000
Total	3,485,800	3,560,800

## 2.3 Trial for handling of soda ash

The licence holder notified the department of a trial to import soda ash via bulk material hoppers on 17 October 2019. The handling method which was determined appropriate for the trial was handling method 2, as described in the *Guideline: Port Authority bulk handling trials*. Soda ash was unloaded via ships grabs into bulk material hoppers and loaded into trucks. The bulk material hoppers which are fitted with dust grids, dust extraction units and truck loading chutes. Deflector plates are also fitted on the bulk material hoppers covering the grab swing zone during unloading sufficiently. The berth is bunded and sealed with stormwater containment infrastructure.

One trial shipment of 6,636 tonnes was undertaken on 28 December 2019. As part of the trial a Met One E-Sampler was temporary installed on a neighbouring premises to monitor fugitive dust emissions from soda ash handling. Three monitoring reports were submitted to the department to date. No exceedances were observed, and controls have shown to be effective.

### 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 *Guidance Statement: Risk Assessments* (DER 2017).

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 which have been considered in this amendment report are detailed in

Table 2 below.

also details the proposed control measures the licence holder has proposed to assist in controlling these emissions, where necessary.

**Table 2: Licence holder controls**

Emission	Sources	Potential pathways	Proposed controls
Dust	<u>Handling of nut coke:</u> Unloading from ships hatch via grabs to mobile hoppers on berth; loading product from mobile hoppers into trucks on berth and trucks departing site	Air/windborne pathway	<ul style="list-style-type: none"> <li>• Same handling method for nut coke as currently undertaken for granulated slag and gypsum:               <ul style="list-style-type: none"> <li>○ Unloaded by ship's grab into open truck via hopper</li> </ul> </li> <li>• Sweeper trucks removing spilt material from berth, jetty neck and other trafficable areas</li> <li>• No receptors in close proximity</li> <li>• Incident response procedures (recording, investigation, actioning)</li> <li>• Truck trailers fully covered prior to moving off the jetty and returning</li> <li>• Weather monitoring</li> </ul>
	<u>Handling of soda ash:</u> Unloading from ships hatch via grabs to hoppers on berth; unloading of product from ships hatch via Siwertell to CV01 import conveyor;		<ul style="list-style-type: none"> <li>• Sweeper trucks removing spilt material from berth, jetty neck and other trafficable areas</li> <li>• No receptors in close proximity</li> <li>• Incident response procedures (recording, investigation, actioning)</li> <li>• Truck trailers fully covered prior to moving off the jetty and returning</li> <li>• Weather monitoring</li> <li>• Bulk material hoppers fitted with dust grid at top of hopper and dust extraction system</li> <li>• Product specification- maximum of 3% fines (&lt;75µm)</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
	Increase of sulfur tonnage (one additional shipment)	Air/windborne pathway	<ul style="list-style-type: none"> <li>Trial undertaken, and no exceedances recorded</li> </ul>
			<ul style="list-style-type: none"> <li>Sweeper trucks removing spilt material from berth, jetty neck and other trafficable areas</li> <li>No receptors in close proximity</li> <li>Incident response procedures (recording, investigation, actioning)</li> <li>Truck trailers fully covered prior to moving off the jetty and returning</li> <li>Weather monitoring</li> </ul> <p><u>Dust from unloading of product from ship hatch to Siwertell:</u></p> <ul style="list-style-type: none"> <li>Siwertell fitted with dust suppression sprays</li> <li>Siwertell designed with enclosed vertical screw conveyor system</li> </ul> <p><u>Dust from unloading product from Siwertell to CV01 import conveyor:</u></p> <ul style="list-style-type: none"> <li>Enclosed conveyor system to storage sheds designed with steel clad walls and roof</li> <li>Enclosed transfer stations with fiberglass clad walls and roof and concrete flooring</li> </ul>
Noise	Handling of nut coke, soda ash, increase of sulfur handling		<ul style="list-style-type: none"> <li>No receptors in close proximity</li> <li>Complaints management system</li> </ul> <p>The Delegated Officer considers it unlikely a Risk Event for noise emissions will occur as a source pathway receptor linkage does not exist based on the distance from proposed activities. Given this fact, noise is not further assessed in the risk assessment.</p>
Odour	Increase of sulfur tonnage (one additional shipment)		<ul style="list-style-type: none"> <li>No receptors in close proximity</li> </ul> <p>The Delegated Officer considers it unlikely a Risk Event for odour emissions will occur from one additional shipment, based on the distance from proposed activities. Given this fact, odour is not further assessed in the risk assessment</p>

### 3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the licence holder's from its



assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 3 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 (*Guidance Statement: Environmental Siting* (DER 2016)).

**Table 3 Sensitive human and environmental receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
Residential premises	Closest 2.3 km south-west of premises
Industrial premises	Closest 1.2 km north-east of premises
Environmental receptors	Distance from prescribed activity
Cockburn Sound (State Environmental Policy Area)	Within and adjacent to the premises boundary. The current licence has an extensive Cockburn Sounds monitoring network. Therefore this receptor will not be further assessed below.



**Figure 1 Distance to sensitive receptors**

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change 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 licence holder 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 licence holder'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 licence holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 4.

The Revised Licence L4476/1984/12 that accompanies this amendment report authorises emissions associated with the operation of the premises i.e. handling of soda ash, nut coke and an increase of sulfur tonnage.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).



**Table 4. Risk assessment of potential emissions and discharges from the premises during operation**

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence holder's controls				
<b>Operation</b>								
<u>Handling of nut coke:</u> Unloading from ships hatch via grabs to mobile hoppers on berth; loading product from mobile hoppers into trucks on berth and trucks departing site	Dust	Air/windborne pathway causing impacts to health and amenity	Residential receptors (closest 2.3 km from premises) Industrial receptors (closest 1.2 km from premises)	Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Existing Schedule 3, Table 6 Infrastructure and equipment controls table applies (4. Bulk material hoppers, 5. Ship grab and hoppers, 9. Specified Action KBB3 and KBB4 and Jetty Neck)	Handling nut coke is proposed as contingency action only, when Kwinana Bulk Terminal is in shut down or similar.  Same handling methods as for granulated slag and gypsum will be used and existing controls in the licence are considered sufficient.
<u>Handling of soda ash:</u> Unloading from ships hatch via grabs to hoppers on berth; unloading of product from ships hatch via Siwertell to CV01 import conveyor	Dust		Residential receptors (closest 2.3 km from premises) Industrial receptors (closest 1.2 km from premises)	Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Existing Schedule 3, Table 6 Infrastructure and equipment controls table applies	Soda ash handling via existing infrastructure including bulk material hopper and ship grab were found adequate during the trial, and found sufficient for the soda ash handling.

Risk Event					Risk rating <sup>1</sup> C = consequence L = likelihood	Licence holder's controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence holder's controls				
Increase of sulfur tonnage (one additional shipment)	Dust	Air/windborne pathway causing impacts to health and amenity	Residential receptors (closest 2.3 km from premises) Industrial receptors (closest 1.2 km from premises)	Refer to Section 3.1.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	Existing Schedule 3, Table 6 Infrastructure and equipment controls table applies	Sulfur is currently handled via Siwertell, which requires specific controls when handling sulfur. Existing conditions are considered sufficient for one additional shipment.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

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

## 4. Consultation

Table 5 provides a summary of the consultation undertaken by the department.

**Table 5: Consultation**

Consultation method	Comments received	Department response
City of Kwinana advised of proposal (20/11/20)	N/A	N/A
Licence holder was provided with draft amendment on 28/01/21	Comments from licence holder received 22/2/21 Refer to Appendix 1	

## 5. Conclusion

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

### 5.1 Summary of amendments

Table 6 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

**Table 6: Summary of licence amendments**

Condition no.	Proposed amendments
Definitions	Annual Period definition now defined to reflect 1 July to 30 June.
Definitions and updated terms	'Licensee' was updated to 'licence holder' throughout the licence to align with the new template used by the department.
Condition 10	Amended to reflect the new annual period defined, and requesting the annual compliance report 60 days after the end of the annual period.
Schedule 2, Bulk materials loaded and unloaded	Nut coke and soda ash are now included.
	Cement clinker and silica sands tonnage reduced.
	Similar products with similar handling methods are grouped.
	Total volume handled now updated to 3 560 800 tonnes per annum.

## References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Fremantle Port Authority 2019, Trial notification for importing soda ash (DWERDT246965)
5. Fremantle Port Authority 2020, Trial notification monitoring reports (DWERDT246965, DWERDT276831, DWERDT349989)
6. Licence L4474/1976/14, available at <https://www.der.wa.gov.au/>

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

Condition	Summary of licence holder's comment	Department's response
Licence/Amendment report	Minor administrative corrections.	Text corrected to reflect correct product grouping and spelling.
Condition 10	<p>The licence holder requests the removal of the following updated condition 10:</p> <p>The licence holder must:</p> <p>(a) undertake an audit of their compliance with the conditions of this licence during the preceding annual period;</p> <p>Fremantle Ports advises that it monitors licence compliance through its internal environmental management system and incident reporting and investigation process. Fremantle Ports does not conduct a separate compliance audit. The AACR requirement is the primary instrument from Fremantle Ports that outlines its compliance with licence conditions over the reporting period, and we therefore request that the requirement to conduct a compliance audit ie. condition 10(a), is removed</p>	<p>Condition not amended.</p> <p>This condition was updated from the previous licence to align with the new departmental template and wording but does not alter the commitments and requirements from the updated condition.</p> <p>To clarify, following was inserted in Section 2.2 of the amendment report:</p> <p>'As part of the amended annual period definition, condition 10 was updated to reflect the current wording of the new departmental template. Requirements for the Annual Audit Compliance Report have not changed.'</p>

## Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY				
<b>Application type</b>				
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L4474/1976/14	
		Relevant works approval number:		N/A
Date application received		6/10/2020		
<b>Applicant and Premises details</b>				
Applicant name/s (full legal name/s)		Fremantle Port Authority		
Premises name		Kwinana Bulk Jetty		
Premises location		Lot 4552 on Plan 220690; and Portion of Lot 497 on Plan 35196		
Local Government Authority		City of Kwinana		
<b>Application documents</b>				
HPCM file reference number:		DEC1712/5		
Key application documents (additional to application form):		<ul style="list-style-type: none"> <li>• Application cover letter</li> <li>• Licence amendment-application form</li> <li>• Map site layout (Attachment 2)</li> <li>• Risk assessment for grouping sulfate, phosphates, potash, urea, and additional soda ash (Attachment 6a(i))</li> <li>• Risk assessment for grouping slag, gypsum, and additional nut coke (Attachment 6a(ii))</li> <li>• Risk assessment sulfur tonnage increase (Attachment 6a(iii))</li> <li>• Licence amendment supporting documentation (Attachment 8A)</li> <li>• Monitoring report – trial notification for soda ash (Attachment 8B)</li> <li>• Notification of trial for soda ash (Attachment 8C)</li> <li>• Commodities SDS files for products (Attachment 8D)</li> </ul>		
<b>Scope of application/assessment</b>				

Summary of proposed activities or changes to existing operations.

Licence amendment- operational

- Inclusion of nut coke on licence
  - To cater for emergency shipments when it cannot be handled at KBT (e.g. due to unplanned shutdown of KBT operations)
- Inclusion of soda ash on licence
  - Soda ash currently exported under trial notification (end of trial 28 Dec 2020)
  - One trial shipment undertaken, three monitoring reports submitted
- Increase of annual sulfur tonnage (to allow one additional shipment) – increase of overall total tonnage of licence

Commodity	Licensed volume (tonnes)	Proposed volume (& frequency)	Description of proposed amendment
Cement clinker	650,300	650,300 (20 vessels)	No change
Granulated slag	300,600	340,600 (11 vessels)	In order to ensure flexibility in facilitating trade of similar commodities, Fremantle Ports propose to group granulated slag, gypsum and nut coke. The total tonnage of these commodities remains at 340,600.
Gypsum	40,000		
Nut coke	0		
Ammonium sulfate	20,900		
Phosphates	600,000	1,460,900 (58 vessels)	In order to ensure flexibility in facilitating trade of similar commodities, Fremantle Ports propose to group fertilisers including ammonium sulfate, phosphates, potash, soda ash and urea. The total tonnage of these commodities remains at 1,460,900.
Potash	400,000		
Soda Ash	0		
Urea	440,000		
			Soda ash has been exported via the Bulk Material Hoppers under a trial notification that commenced on 28 December 2019 with the 12-month trial period due to end on 28 December 2020. There has been one trial shipment exported under this notification and

Licence amendment- administrative

- Grouping similar product types, being handled with similar methods
- Change of annual period to 1 July to 30 June to align with financial year



**Category number/s (activities that cause the premises to become prescribed premises)**

**Table 1: Prescribed premises categories**

Prescribed premises category and description	Assessed production or design capacity [tonnes]	Proposed changes to the production or design capacity
Category 58	<ul style="list-style-type: none"> <li>• Cement clinker: 650 300</li> <li>• Granulated slag: 300 600</li> <li>• Gypsum: 40 000</li> <li>• Ammonium sulfate: 20 900</li> <li>• Phosphates: 600 000</li> <li>• Potash: 400 000</li> <li>• Soda Ash: 0</li> <li>• Urea: 440 000</li> </ul>	<ul style="list-style-type: none"> <li>• Granulated slag, gypsum, nut coke: 340 600</li> <li>• Ammonium sulfate, phosphates, potash, soda ash, urea: 1 460 900</li> </ul>

**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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input type="checkbox"/>	N/A
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	N/A not required
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A No clearing is proposed.

Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Licence / permit not required. Valid licence applies (GWL65541(4))
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i> )	Yes <input type="checkbox"/> No <input type="checkbox"/>	Environmental Protection (Kwinana) (Atmospheric Wastes) Regulation 1992 State Environmental (Cockburn Sound) Policy 2015
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Environmental Protection (Kwinana) (Atmospheric Wastes) Regulation 1992
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input type="checkbox"/>	Ambient air quality standards and ambient air quality limits for concentration of atmospheric wastes; EPP defines 3 areas (A, B, C); premises is located within Area A (heavy industry); TSP standard & limit
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Classification contaminated – restricted use (C–RU) Date of classification: 29/05/2018