



Amendment Notice 1

Licence Number	L6744/1996/12
Licence Holder	Southern Ports Authority
Registered business address	Ground Floor 16 Parliament Place West Perth WA 6005
Date of amendment	28 September 2016
Prescribed Premises	Category 58: Bulk material loading or unloading
Premises	Southern Port Authority Lot 963 on Plan 220558 and Lot 962 on Plan 219848, Inner Harbour – Berth 5 and 8 BUNBURY WA 6230

Amendment

The Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) has amended the above licence in accordance with section 59 of the *Environmental Protection Act 1986* as set out in this Amendment Notice.

Date signed: 28 September 2016

Agnes Tay

Director Strategy and Reform

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

Amendment Notice

This notice is issued under section 59 of the *Environmental Protection Act 1986* (EP Act) to amend the licence issued under the EP Act for a prescribed premises as set out below. This notice of amendment is given under section 59B(9) of the EP Act.

Amendment Description

This amendment notice takes into consideration the licence amendment application lodged on 25 July 2016 by the Southern Ports Authority (the Licence Holder) under the EP Act. The application relates to the use of the following mobile infrastructure at Berth 5 at the Port of Bunbury (the Premises):

- TS850 Shiploader;
- Radial Telescopic Shiploading Conveyor; and
- 48" Superior RazerTail Truck Unloader.

The application states that Qube Ports Pty Ltd (Qube) will operate the mobile infrastructure. The Delegated Officer considers that the Southern Ports Authority are in overall control of, and have responsibility for, the emissions and discharges from the Premises and are therefore the appropriate Licence Holder.

The proposed initial export volumes as detailed in the application are approximately 80,000 tonnes per annum of mineral sands from one existing exporter plus potential export volumes and bulk granular products from other exporters. This additional tonnage will not cause the total throughput of the port to exceed the 75,000 tonnes per day nominal throughput stated within the existing licence.

The application states that the main product being loaded by the mobile ship loader will be mineral sands. Mineral sands are currently exported at Berth 5 under the existing licence. The current method of loading is via a rotabox loading system which has an inherently lower risk of dust emissions than the mobile equipment proposed for use.

Products will be transported to the ship loader by truck, discharged via the truck unloader, conveyed via the link conveyor to the ship loader and from there into the ship's hold.

DER is currently undertaking a separate review of the licensing arrangements for the Port of Bunbury in accordance with DER's risk-based regulatory framework described in the *Guidance Statement: Regulatory Principles* (July 2015).

Decision

This Amendment Notice authorises the use of mobile equipment for the loading of mineral sands on a trial basis until the end of the 2016 calendar year. A throughput limit of 80,000 tonnes will be applied to the Licence using this process, as well as other conditions considered necessary to control risks to air and marine water quality. Attachment 3 of the licence has been added to the Licence to show the locations of existing ambient air quality monitors.

Risk of Dust Emissions

The Delegated Officer considers the key emission arising from the use of the mobile infrastructure to be fugitive dust. Dust can represent a health hazard by increasing the concentration of airborne particulate matter (PM). The inhalable fraction (expressed as PM₁₀) has been linked to adverse health impacts on respiratory and cardiovascular systems with the most severe effects resulting from long term, sustained exposure.

Materials loaded or unloaded using the mobile infrastructure have the potential to cause an increase in PM through fugitive dust emissions. It is noted that the mineral sands material proposed to be loaded through the mobile equipment contains a crystalline silica content of between 1-35%. Due to the low levels of respirable crystalline silica, and the relative volume of mineral sands being handled using this process, the chronic health effects are unlikely.

The residential areas immediately adjacent to the Premises (approximately 60m to the west of the Premises boundary, 430m south-west of Berth 5) are the primary receptors for PM emissions.

The Licence Holder has proposed the following controls for dust as a part of the Application:

- fully covered conveyors (top, bottom and sides);
- fully enclosed transfer points;
- rubber baffels attached to end of chute to ensure cargo drops from inside the vessel and not above the combine where it could be exposed to cross winds;
- low angle of operation into boom transfer point;
- dust collection and fogging suppression system used at the truck unloader;
- dust suppression misting sprays are utilised; and
- ambient dust monitoring.

Having reviewed the information provided, including diagrams of the proposed mobile equipment supplied with the application, the Delegated Officer does not agree with the Licence Holder's assertion that the transfer points and truck unloading area are fully covered or enclosed. Consequently, the Delegated Officer considers that dust suppression water spraying will be required to effectively manage dust from these sources.

The Licence Holder currently undertakes ambient dust monitoring at the locations shown in Attachment 3.

Based upon the information provided in the Application and nature of the materials being loaded, the Delegated Officer considers the consequence of dust impacts to be **moderate**.

Based on the short term, trial nature of the proposed activities the Delegated Officer has determined that the likelihood of dust impacts occurring to be **possible**.

The Delegated Officer has compared the consequence and likelihood ratings and determined that the overall rating for the risk of dust impacts on sensitive receptors during operation of the mobile infrastructure is **moderate**.

Conditions will be applied to the Licence through this Amendment Notice to control the

risk of dust to acceptable levels. Dust monitoring requirements will also be included to verify that dust controls are effective.

Risk of Noise Emissions

Noise will be generated from the set-up, operation and packing for storage of the mobile infrastructure. Noise has the potential to impact the amenity and comfort of nearby residential receptors. The closest receptor is located approximately 60m to the west of the Premises boundary (430m south-west of Berth 5).

The current applicable criteria for noise emission levels are detailed in the *Environmental Protection (Noise) Regulations 1997 (Noise Regulations)*.

The Licence Holder has proposed the following controls for noise as a part of the Application:

- Use of low-level sirens; and
- Containment of the generator within a sealed, sound-proof unit.

The Licence Holder has also stated that a noise assessment will be undertaken by Qube as part of the Loader commissioning process to ensure that the operation of the Loader, including trucking and mobile plant movements, do not exceed assigned noise levels at locations outside the Premises boundary.

Cumulative noise modelling undertaken in 2010 indicates that there is potential for the assigned levels to be exceeded at certain receptors during the day, evening and night and the Premises has potential to cause high noise levels. This model also suggested that traffic noise is much higher than the noise contribution from any individual port activities at these receptors. Given the size, expected operation time and enclosure of the generator, it is unlikely that the Loader infrastructure will contribute to a material increase in the overall noise levels emitted from the Premises.

Based on the information provided in the Application, the Delegated Officer considers that the consequence of noise impacts from the operation of the Loader to be **moderate**.

Based on the short term, trial nature of the proposed activities, the Delegated Officers considers that unreasonable noise emissions resulting from the Loader operations are unlikely to occur. Therefore the likelihood rating is considered to be **unlikely**.

The Delegated Officer has determined that the overall rating for the risk of noise impacts on sensitive receptors during operation is **moderate**.

Noise from the Port of Bunbury and its potential to impact upon residential receptors will be considered further by DER through the ongoing review of the licensing arrangements for the Port of Bunbury. The Delegated Officer considers that a noise assessment of the mobile equipment proposed in the application will contribute to a cumulative assessment of noise emissions. Submission of this report prior to the end of September 2016, in order for it to be considered as part of DER's ongoing review, will therefore be included as a condition through this Amendment Notice.

Risk of Discharge to Water

Materials loaded or unloaded using the mobile infrastructure have the potential to enter the marine environment through contaminated stormwater or wash down water and through direct spills. The mineral sands proposed to be exported are insoluble but have the potential to cause turbidity, impacting water quality and visibility.

The Licence Holder has proposed the following controls for spill and stormwater management associated with the use of the Loader:

- ramps are raised on the truck unloader to form sides of the hopper to contain product;
- equipment interlocking to prevent spills due to infrastructure failure
- spill deflectors, dust covers/trays on outer and incline conveyor;
- spill trays put in position under the boom;
- regular use of sweeper truck and regular monitoring of released product on berth;
- vacuum truck utilised for spillage on conveyor when practical;
- trucks cleaned after tipping;
- cleaning of equipment is only performed over the Berth 5 wash pad; and
- the Berth 5 sump and wash pad are completely cleaned after each vessel, residue is collected into the sump and removed by a vacuum truck.

Based upon the nature of the materials handled at the berth and the short term, trial nature of the proposed activities, the Delegated Officer has determined that the consequence of material entering the marine environment will be **minor**.

Based upon the relevant factors discussed in this assessment, particularly in regards to the Licence Holder controls in place, the Delegated Officer has determined that the likelihood of impacts to water quality are **unlikely**.

The Delegated Officer has compared the consequence and likelihood ratings and determined that the overall rating for impacts to water during operation of the mobile infrastructure is **moderate**.

Subject to infrastructure and maintenance requirements being conditioned through this Amendment Notice, the Delegated Officer considers that the risk of impacts to the marine environment is acceptable.

Amendment History

Instrument	Issued	Amendment
L6744/1996/12	25/09/2015	Licence reissue
L6744/1996/12	DRAFT	Amendment Notice 1 Approval of mobile ship loading infrastructure at Berth 5

Licence Holder Comments

The Licence Holder was provided with the draft Amendment Notice 1 on 2 September 2016. Comments received by the Licence Holder have been reviewed and considered by the Delegated Officer. The comments and consideration made by the Delegated Officer is shown through Appendix 1.

Amendment

1. Condition 1 of the Licence is amended by deletion of the text shown in strikethrough below and insertion of the red text shown in underline below:

1. *The Licensee shall maintain interconnections on all belt to belt transfer points, ~~and~~ belt scrapers and mobile shiploading infrastructure at Berth 5 to prevent spillage of materials.*

2. The Licence is amended by insertion of the following conditions 7 to 19.

Mobile Shiploading Infrastructure Conditions

7. *The Licensee must only use mobile shiploading infrastructure at Berth 5 for the loading of mineral sands products at the Premises.*
8. *The Licensee must not use mobile shiploading infrastructure at Berth 5 at the Premises after 31 December 2016 and must not load more than 80,000 tonnes of minerals sands during that time.*
9. *The Licensee during mobile shiploading operations must attach rubber baffels to the end of the boom of the mobile shiploader at Berth 5.*
10. *The Licensee must maintain and continuously operate a fan forced dust suppression and extraction system capable of creating vacuum pressure and directing dust emissions to a transportable bag house at all times during truck unloading at the truck unloader at Berth 5.*
11. *The Licensee shall maintain sealed transfer points between the truck unloader and the link conveyor, the link conveyor and mobile shiploader and continuously operate dust suppression fogging sprays on the end of the shiploader boom during loading activities.*
12. *The Licensee during shiploading operations shall position spill trays under the boom of the mobile shiploader at Berth 5.*
13. *The Licensee shall maintain spill deflectors and dust trays on the outer and incline mobile conveyors at Berth 5.*
14. *The Licensee shall collect all spillage of bulk granular materials onto the berth in a manner and at a frequency which prevents the discharge of this material into the marine environment.*

Noise Conditions

15. *The Licensee shall undertake a noise assessment during commissioning of the mobile shiploader at Berth 5 to determine whether the operation of mobile unloading and loading infrastructure exceeds assigned noise*

levels at nearby residential receptors. The noise assessment should be carried out by a person competent in environmental noise assessment, being a person whose qualifications and experience qualifies them for membership of the Australian Acoustical Society or the Australian Association of Acoustical Consultants.

16. The Licensee shall provide a report of the findings of the noise assessment detailed in condition 15 to the CEO by 31 October 2016.

Ambient Air Quality Monitoring

17. The Licensee shall undertake the continuous monitoring of ambient air quality for the parameters as specified in Column 2 of Table 1 at the locations specified in Column 1 of Table 1 and depicted in Attachment 3. Emissions must be calculated as an average over the period specified in column 3, at the frequency specified in column 4 and using the method specified in column 5.

Table 1: Ambient Air Quality Monitoring

Column 1	Column 2	Column 3	Column 4	Column 5
Location	Parameter	Averaging Period	Frequency	Method
TEOM samplers at Estuary Dr, Stirling St, Workshop and Navel Cadets	Particulates as PM ₁₀	24 hours	Continuous	AS 3580.9.8
HVAS sampler at Stirling St	Dust as TSP	24 hours	Continuous	AS 3580.9.3

18. The Licensee shall provide a report to the CEO specifying the data from the monitoring undertaken in condition 17 quarterly on the following dates: the last day of December, March, June and September in any year.
3. Attachment 3 – Ambient Air Quality Monitoring Locations is inserted in the Licence as shown below:

ATTACHMENT 3 - AMBIENT AIR QUALITY MONITORING LOCATIONS



Appendix 1: Summary of Licence Holder comments

Comments received	Environmental risk	DER consideration of risk:
<p>Condition 10 be amended to read; <i>“The Licensee must maintain and continuously operate a fan forced dust suppression and extraction system at all times during truck unloading of the mobile truck unloader at Berth 5”.</i></p> <p>The justification for the above is that QUBE have advised that they are installing the fan forced dust suppression system in preference to water sprays as they believe it will be more effective and very importantly, not interfere with the moisture content of the mineral sands product being loaded.</p>	<p>The Delegated Officer notes that the proposed amendment relates to the operation of a hydraulic fan directing dust emissions towards the surge hopper which is connected to a transportable hopper. The delegated officer also notes that the hydraulic fan is also capable of fogging or misting with water.</p> <p>The proposed dust control is considered acceptable to address the risk of dust emissions during unloading.</p>	<p>The Delegated Officer accepts the proposed method to control dust emissions during truck unloading.</p> <p>The Delegated Officer has amended the condition to ensure that it is clear and enforceable.</p>
<p>Condition 11 be amended to read; <i>“The licensee shall maintain sealed transfer points between the truck unloader and the link conveyor, the link conveyor and mobile ship loader and continuously operate dust suppression fogging sprays on the end of the ship loader boom during loading activities”.</i></p> <p>The justification for the above is that QUBE have advised that they are installing sealed enclosures on the transfer points as these will more effectively contain any dust generated.</p>	<p>The proposed amendment by the Licence Holder to seal transfer points between the truck unloader and the link conveyor, the link conveyor and mobile ship loader will reduce the risk of dust emission during ship loading activities.</p>	<p>The Delegated Officer accepts the proposed wording by the Licence Holder.</p> <p>The Delegated Officer has amended the condition.</p>