Decision Report

Review of Existing Licence

Division 3, Part V *Environmental Protection Act 1986*

Licence Holder:	**Dampier Salt Limited**
ACN:	**008 706 590**
Licence Number:	**L7179/1997/11**
File Number:	**DER2014/000644**
Premises:	**Port Hedland Operations** **Gilbert Street, PORT HEDLAND WA 6721** **Part of Lot 6098 on Deposited Plan 35618 as defined by the coordinates specified in Schedule 1 of the Reviewed Licence** **Certificate of Title Volume 3118 Folio 752**
Date of report:	**Friday, 12 October 2018**
Status of Report	**Final**

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1. Definitions of terms and acronyms

In this Decision Report, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
AACR	Annual Audit Compliance Report
ACN	Australian Company Number
AER	Annual Environment Report
AS 4156.6 – 2000	Australian Standard AS 4156.6 – 2000: Determination of Dust/moisture Relationship for Coal.
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CS Act	*Contaminated Sites Act 2003* (WA)
Decision Report	refers to this document.
Delegated Officer	an officer under section 20 of the EP Act.
Department	means the department established under section 35 of the *Public Sector Management Act 1994* and designated as responsible for the administration of Part V, Division 3 of the EP Act.
DWER	Department of Water and Environmental Regulation As of 1 July 2017, the Department of Environment Regulation (DER), the Office of the Environmental Protection Authority (OEPA) and the Department of Water (DoW) amalgamated to form the Department of Water and Environmental Regulation (DWER). DWER was established under section 35 of the *Public Sector Management Act 1994* and is responsible for the administration of the *Environmental Protection Act 1986* along with other legislation.
EPA	Environmental Protection Authority
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Cth)
Existing Licence	The Licence issued under Part V, Division 3 of the EP Act and in force prior to the commencement of, and during this Review

Licence Holder	Dampier Salt Limited
m^3	cubic metres
Minister	the Minister responsible for the EP Act and associated regulations
MS	Ministerial Statement
mtpa	million tonnes per annum
NEPM	National Environmental Protection Measure
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
Occupier	has the same meaning given to that term under the EP Act.
PM	Particulate Matter
PM_{10}	used to describe particulate matter that is smaller than 10 microns (µm) in diameter
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	refers to the premises to which this Decision Report applies, as specified at the front of this Decision Report
Primary Activities	as defined in Schedule 2 of the Reviewed Licence
Review	this Licence review
Reviewed Licence	the amended Licence issued under Part V, Division 3 of the EP Act following the finalisation of this Review.
Risk Event	As described in *Guidance Statement: Risk Assessment*
UDR	*Environmental Protection (Unauthorised Discharges) Regulations 2004* (WA)
$\mu g/m^3$	micrograms per cubic metre
µg/L	micrograms per litre

2. Purpose and scope of assessment

This licence review (Review) of Licence L7179/1997/11 (Existing Licence) was initiated in April 2016 by the then Department of Environment Regulation (DER) [now Department of Water and Environmental Regulation, DWER[1]], with the agreement of Dampier Salt Limited (Licence Holder), as part of implementing DWER's regulatory framework program. However, following the submission of the *Port Hedland Dust Management Taskforce's 2016 Report to Government* in August 2016, DER took the position to prioritise the review other port operator licences that presented a greater dust risk to the Port Hedland community.

The Review applies a risk based assessment approach in accordance with DWER's *Guidance Statement: Regulatory Principles* (July 2015) to the regulation of the Dampier Salt Limited Port Hedland Operations (Premises) as well as taking into consideration other matters. One of these matters includes the release of the *Port Hedland Air Quality Health Risk Assessment for Particulate Matter* (January 2016) (HRA).

No works or operational changes are proposed by Dampier Salt Limited (Licence Holder) for the Port Hedland Operations (the Premises) in relation to this Review.

As a result of this Review, the Existing Licence is replaced by the Reviewed Licence (Attachment 1).

3. Background

The Licence Holder's Existing Licence L7179/1997/11 under the *Environmental Protection Act 1986* (EP Act) regulates Prescribed Premises Category 58A under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) as shown in Table 2.

The Licence Holder is a joint venture between Rio Tinto, Marubeni Corporation and Sojitz. The Licence Holder has two other salt operations in northern Western Australia located in Dampier and Lake MacLeod. The Premises was previously operated by Cargill Australia Limited, with the Licence Holder taking ownership in August 2001.

The Premises is situated within the municipality of the Town of Port Hedland. The Licence Holder operates out of a shared berth (Berth 3) which is leased from the Pilbara Ports Authority (PPA) and is used by other entities. Salt is processed at a separate solar salt manufacturing premises (operating under Licence L7183/1997/11) and the final product is brought to the Premises for storage prior to shipping. No solar salt manufacturing or other processing occurs under the Existing Licence.

Table 2 lists the prescribed premises categories that have been applied for.

Table 2: Prescribed Premises Categories in the Existing Licence

Classification of Premises	Description	*Approved Premises production or design capacity or throughput*
Category 58A	Bulk material loading or unloading: premises on which salt is loaded onto or unloaded from vessels by an open materials loading system.	75 000 tonnes per day

[1] DWER was formed on 1 July 2017, through the amalgamation of the Department of Water (DoW), Department of Environment Regulation (DER) and the Office of the Environmental Protection Authority (OEPA). DER is only referred to in this Decision Report when discussing correspondence and reference documents issued by, or to the former department.

4. Overview of Premises

4.1 Operational aspects

The Premises operates 24 hours a day, 7 days a week. Salt is trucked from the Port Hedland manufacturing premises licensed under L7183/1997/11 to the Premises via approximately 5 kilometres (km) of public roads. The salt is stockpiled at the Premises awaiting shipment. The stockpile is active with a variable volume, however the Licence Holder has indicated a nominal height of 18 meters (m).

The main trafficable areas on the Premises include an access road, dump bridge and exit road. The access and exit roads are sealed, however there is a single unsealed road surrounding the northern perimeter of the salt stockpile.

This road provides an access route for bulldozers to the salt stockpile and fuel farm from the workshop. The bulldozers operate on the salt stockpile. The unsealed road is also utilised by light vehicles to gain access to the workshop and office area, however the road receives low volumes of traffic as the activities conducted at the Premises vary subject to ship loading activities. The location of part of the unsealed road may change based on the volume of the stockpile.

The salt is reclaimed for ship loading by bulldozers, which feed the salt onto a conveyor system. The conveyor system feeds the salt onto the ship loader and then directly onto the ships. All ships depart from the PPA shared wharf (Berth 3). The Licence Holder does not have ownership of this wharf and other entities use the wharf from time to time. The Licence Holder does own and control the ship loading infrastructure and associated conveyor systems.

Key Finding:

It is considered that, notwithstanding the multi-user nature of the wharf area leased from the PPA, the Licence Holder can reasonably be considered the Occupier of the wharf (Berth 3) and ship loading infrastructure during periods of ship loading.

4.2 Infrastructure

The Premises infrastructure as it relates to Primary Activities situated within the Prescribed Premises, is detailed in Table 3 and with reference to the Site Map (attached in the Reviewed Licence). Table 3 lists infrastructure associated with the prescribed premises category.

Table 3: Port Hedland Operations Category 58A infrastructure

	Infrastructure	**Site Plan Reference**
	Prescribed Activity Category 58A Infrastructure	
1	Ship loading wharf and ship loader	Ship loader
2	Conveyor systems	CV200, CV300 and CV 700 Conveyor
3	Salt stockpiles	Salt stockpile
4	Twin Boom Stacker	Twin Boom Stacker
	Directly related activities	
5	Oily water separators	Humeceptor 1 & 2

	Infrastructure	Site Plan Reference
6	Water Truck	Not pictured
7	Dump bridge	Dump bridge
8	Sealed road	Sealed road
9	Unsealed road	Unsealed road

4.3 Exclusions to the Premises

The following infrastructure is not considered to form part of the Primary Activities at the Premises; either because it falls below a prescribed premises category threshold or is not representative of a prescribed premises as defined in Schedule 1 of the *Environmental Protection Environmental Regulations 1987* (EP Regulations).

Table 4: Excluded from Prescribed Premises

	Infrastructure	Rationale
1	Maintenance workshop	Not prescribed premises
2	42,500L diesel tank self-bunded diesel storage tank and refuelling area	Below threshold of category 73 (1000m^3 or 1,000,000L)
3	Crib room and Office	Not prescribed premises

Key Finding: The Delegated Officer has determined that the infrastructure detailed in Table 4 is excluded from the Prescribed Premises because it does not represent activities or thresholds defined in the EP Regulations. In addition, it is considered that any emissions caused from this infrastructure does not directly relate to emissions caused from the Primary Activity.

General provisions of the EP Act and subsidiary regulations are considered applicable for emissions associated with this infrastructure.

5. Legislative context

5.1 Part IV of the EP Act

The Premises has not been assessed by the Environmental Protection Authority. Expansions to the associated solar salt manufacturing premises licensed under L7183/1997/11 were assessed in 2001 and are subject to Ministerial Statement 147. No conditions or requirements of Ministerial Statement 147 relate to the Premises.

5.2 Port Hedland Dust and Noise Management Taskforce

The State Government established the Port Hedland Dust and Noise Management Taskforce (the Taskforce) in May 2009 to review existing reports and develop an integrated dust and noise management plan for Port Hedland. The Taskforce is coordinated by Department of Jobs, Tourism, Science and Innovation (DJTSI) and includes a range of industry and government members including DWER.

The Taskforce issued the *Port Hedland Air Quality and Noise Management Plan* (Management Plan) in 2010 to manage planning conflicts between industrial growth and adjacent residential areas. Relevant to this report, the Management Plan recommended:

- adoption of interim air management criteria of 70 micrograms per cubic metre (µg/m^3)(24-hour average) with allowance for 10 exceedances per calendar year at Taplin Street (residential street in Port Hedland); and
- the establishment of a State Environmental Policy for Port Hedland to monitor and manage noise using *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) regulation 17 exemptions where appropriate. This included the development of a cumulative noise model, defining the noise sensitive zones, clarifying planning measures and clarifying building standards.

5.2.2 Taskforce Report to Government

On 9 August 2017, the DJTSI released the *Port Hedland Dust Management Taskforce Report to Government (August, 2016)* (the Taskforce Report) for public comment. Recommendations of the Taskforce Report applicable to DWER and the regulation of industry in Port Hedland include the:

- current interim guideline of 24-hour PM_{10} of 70µg/m^3 (+10 exceedances to accommodate natural events) continues to apply to residential areas of Port Hedland and that measures should be introduced to cap the number of permanent residents in dust affected areas of Port Hedland;
- implementation of a coordinated risk-based review and assessment for all port facilities in Port Hedland licensed under Part V of the EP Act;
- development and implementation of dust management guidelines for bulk handling port premises licensed under Part V of the EP Act;
- oversight of the ambient air quality monitoring network including data verification, storage and publication. The monitoring network will continue to be maintained and operated by the Port Hedland Industries Council (PHIC); and
- assessment of unacceptable noise levels and assess whether additional controls can be introduced as part of its coordinated risk-based review of all port facilities.

The Taskforce Report further considered changes to Town Planning Scheme No. 5 for Port Hedland's West End area. These changes include the creation of a Special Control Area to all areas west of McGregor and Lukis streets to rezone existing residential areas of the West End to mixed use and short stay accommodation areas (Figure 1). The objective of the Special Control Area is to prevent further permanent residential development west of Taplin Street and limit new sensitive land uses between Taplin and McGregor streets (Department of Planning, Lands and Heritage, 2017).

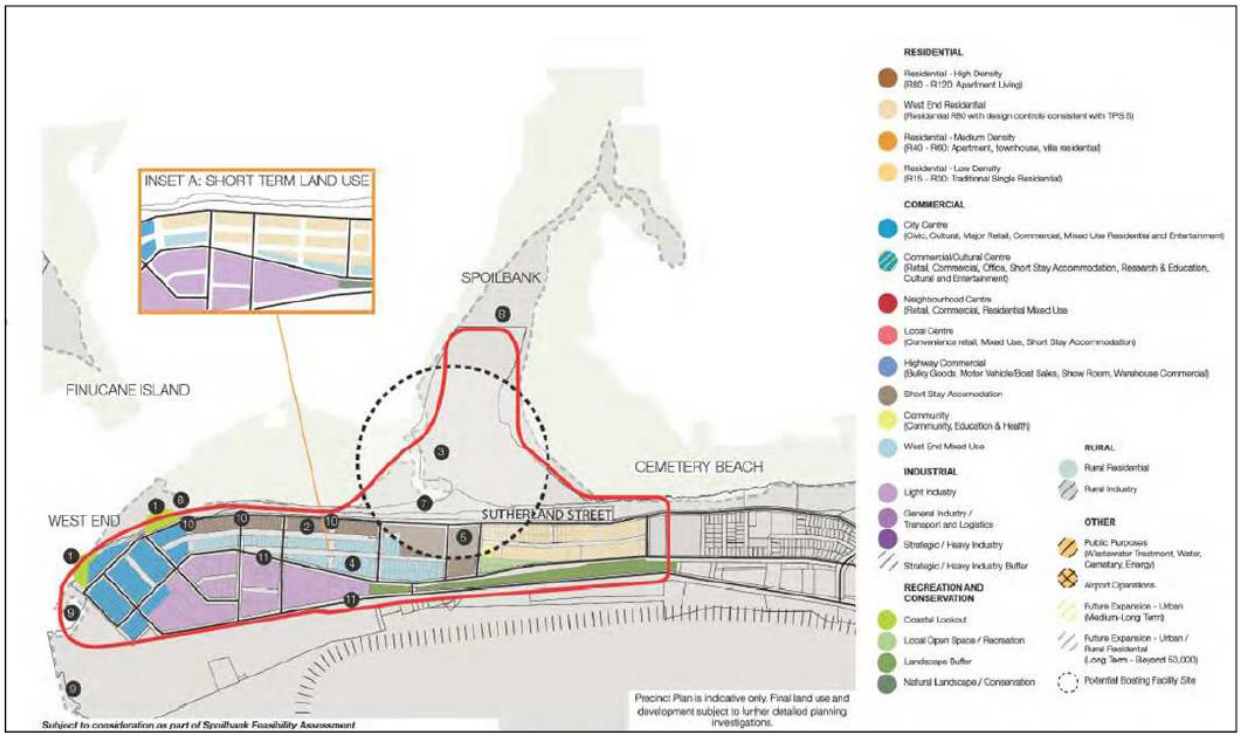

Figure 1: Proposed town planning scheme for Port Hedland's West End (Source: Town of Port Hedland, 2012)

Key Findings: DWER has had regard to the proposed approach outlined in the Taskforce Report from Taskforce members and notes that it is currently being considered by the Government.

DWER will implement any future recommendations of the Government following consideration of the Taskforce Report which may include future reviews of the premises.

5.3 Port Hedland Health Risk Assessment

The Department of Health's (DoH) HRA found that there is sufficient evidence of potential impacts on human health from dust and that the interim guidance of 24-hour average of 70 µg/m^3 PM_{10} with 10 exceedances per annum would be appropriate to manage the risk in residential areas in Port Hedland (DoH 2016).

The HRA noted that despite good dust management practices, weather events and local sources of dust can result in exceedances above the interim criteria. The HRA noted that the application of the interim guidance to residential areas west of Taplin Street will also require land use planning restrictions, and that a long term planning strategy may offer a tool for gradually moving residential areas from the port operational area.

The HRA notes that it should not be the only source of information guiding decisions and must be combined with other studies including the noise model, the air quality model and the source apportionment model. There have been other models including cumulative air quality impacts undertaken by Port Hedland Industries Council (PHIC) to date. DWER has not had access to all of the data used for the models and at the time of this assessment, these models have not been considered.

DWER has considered the findings of the HRA in undertaking the risk assessment for the Premises.

5.4 Contaminated sites

The Premises is located within a small portion of the larger Lot 6098 on Plan 35618 which is classified under the *Contaminated Sites Act 2006* as '*Contaminated – remediation required'*. As such, the site is subject to the CS Act.

The nature and extent of contamination on the lot is described as:

- Light non-aqueous phase liquids (such as from petrol and diesel) are present in groundwater beneath fuel storage spots on the central northern portion of the site.
- Manganese and hydrocarbons are present in soils, and hydrocarbons (such as from diesel), arsenic and manganese are present at elevated concentrations in groundwater in the southern and central areas of the site.
- Marine sediments adjacent to berths 1 and 2 of the port are impacted with elevated concentrations of metals.

As the premises does not handle metal concentrates or ores it is unlikely that activities at the Premises have led to elevated concentrations of metals.

Large portions of the lot have not been subject to any soil or groundwater investigations and the quality of the soil and groundwater in these areas of the site is unknown. The land is restricted to commercial/industrial use.

GHD was commissioned by the Licence Holder in 2014 to undertake groundwater monitoring in within areas of concern around the Premises. This monitoring re-confirmed the presence of hydrocarbon contamination.

5.5 State Agreement Acts

The Licence Holder's operations, including the port facility and salt production activities, are subject to the *Leslie Solar Salt Industry Agreement Act 1966* (State Agreement). Under the State Agreement the State Government is obliged to provide the Licence Holder with priority access to wharf facilities.

5.6 Planning

The relevant planning authority is the PPA. The Premises is located in an active industrial port zone that is leased out to the Licence Holder by PPA.

In accordance with section 30(1) of the *Port Authorities Act 1999*, PPA has legislative power "(c) to control business and other activities in the port or in connection with the operation of the port; and (f) to protect the environment of the port and minimise the impact of port operations on that environment."

However, for the purposes of regulation under Part V, Division 3 of the EP Act, the Licence Holder is responsible for maintaining compliance with the Licence.

5.7 Part V of the EP Act

5.7.1 Applicable regulations, standards and guidelines

The overarching legislative framework of this assessment is the EP Act, EP Regulations and the Noise Regulations.

The guidance statements which inform this assessment are:

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*

- *Guidance Statement: Land Use Planning (February 2017)*
- *Guidance Statement: Licence Duration (August 2016)*
- *Guidance Statement: Publication of Annual Audit Compliance Reports (May 2016)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessments (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

5.7.2 Works approval and licence history

No works approvals under the EP Act have been issued for the Premises as construction occurred prior to the commencement of the EP Act and no additional works have been undertaken.

5.7.3 Key and recent licence amendments

The licence was amended in February 2016 at the request of the Licence Holder to increase throughput from 40,000 tonnes per day to 75,000 tonnes per day as it was identified that although average throughput was below this threshold, on a number of occasions the daily throughput was above this value. The new throughput is based on the cargo tonnage of the largest vessel that can service Berth 3.

5.7.4 Compliance inspections and compliance history

DWER has undertaken two compliance inspections on 14 October 2014 and 1 June 2016 that have informed this Review.

The 2014 inspection identified that, during optimal conditions, up to 25,000 tonnes can be loaded in a 12 hour shift, with up to 48,000 tonnes loaded in a day. As this was higher than the approved throughput (40,000 tonnes per day) the Licence Holder sought a licence amendment to increase the throughput to 75,000 tonnes.

Annual Reporting

A requirement of the Existing Licence is the submission of an Annual Environmental Report (AER), which includes an Annual Audit Compliance Report (AACR) by 30 April each year. A review of the previous four AER/AACRs has been undertaken and reported non-compliances are detailed below.

2016 and 2017 Reports

The Licence was amended in February 2016 and contained no operational or monitoring requirements. Therefore the AACR did not identify any non-compliance with the licence conditions for the 2016 or 2017 annual periods.

2015 Reports

The AACR review re-iterated the non-compliance identified during the inspection carried out on 14 October 2014 relating to exceedance of throughput. This has since been addressed through a licence amendment.

2014 Reports

The AACR was submitted for the 2014 reporting period and included a non-compliance of condition 5.3.1 whereby salt was deposited along the road leading from the Premises. The report included actions taken to mitigate adverse effects and prevent recurrence.

Compliance history review

DWER's Incident and Complaints Management System (ICMS) is the system used to record complaints received and non-compliances requiring investigation. Two items were identified in ICMS in relation to the Premises and have been closed out with no further action required. These items related to a spill of salt from a truck on a public road and the exceedance of the approved throughput.

6. Port Hedland Dust Campaign using LiDAR

The Department carried out a five-month dust monitoring campaign in Port Hedland from February 2017 to June 2017. The campaign was undertaken using conventional monitoring methods for particles with an equivalent aerodynamic diameter smaller than 10 micrometres (µg) (PM_{10}) as well as a Light Detection and Ranging (LiDAR) instrument, which works by emitting a light beam and measuring the backscatter from particles or dust in the air.

The objective of the campaign was to determine the origins and movement of dust contributing to impacts experienced in and around Port Hedland and to assess the suitability of applying LiDAR technology.

The LiDAR was positioned atop the Town Centre Viewing Tower to allow for a largely unimpeded view of the surrounding landscape with some hard targets such as buildings within the landscape obscuring some of the LiDAR beam.

A review of LiDAR images suggest that the Premises is not a significant contributor to dust emissions.

Other port operators that near to the LiDAR equipment during the monitoring period, and that use similar ore handling methods, were identified as being significant contributors to dust. However, port operators that are known to significantly contribute to dust emissions in Port Hedland handle different products to the Licence Holder including but not limited to, iron ore, spodumene and manganese.

7. Consultation

DWER first referred the draft Licence and Decision Report in September 2016 to the Licence Holder. Comments were provided in October 2016. Additional consultation was undertaken in December 2016 with comments provided in January 2017. Due to prioritisation of higher-risk premises reviews, this Review was placed on hold for finalisation in 2018.

The comments specific to the Dampier Salt Licence are summarised in Appendix 2.

8. Location and siting

8.1 Siting context

The Premises is located within the Port of Port Hedland which is the world's largest volume port for bulk materials export. The Port of Port Hedland is currently utilised for the bulk loading of material, predominately iron ore by BHP Billiton Iron Ore, Fortescue Metals Group, Roy Hill Infrastructure, and PPA. Table 5 details current port operators within Port Hedland.

Table 5: Port of Port Hedland operators (Category 58 and 58A premises)

Operator & Premises	Bulk Granular Material	Scale of operation
BHP Billiton, Port Hedland Port Operations	Iron ore	Allocated capacity 290 Mtpa Four berths at Nelson Point Four berths at Finucane Island

Fortescue Metals Group, Anderson Point	Iron ore	Allocated capacity 175 Mtpa Three berths at Anderson Point
Roy Hill Infrastructure Pty Ltd,	Iron ore	Allocated capacity 55 Mtpa (with a pending application for 60 Mtpa at the time of this Decision Report)
Pilbara Ports Authority, Utah Multi-User Bulk	Iron ore, Manganese ore, Chromite ore	Allocated capacity 21.35 Mtpa (with a pending application for 24.1 Mtpa at the time of this Decision Report) Single berth at Utah Point
Pilbara Ports Authority, Eastern Operations	Copper concentrate, spodumene concentrate	Throughput approximately 1,170,000 tonnes per annum Two berths in Port Hedland (berth 1 and 2)
Dampier Salt Limited	Salt	Allocated capacity of 75,000 tonnes per day with an estimated average annual throughput of 3.2 Mtpa Single berth at Nelson Point

The Town of Port Hedland was reported in the HRA (2016) as having a permanent population of 4,590 people in 2012/13 and a larger fly-in-fly-out workforce.

The closest residential area to the Premises is the West End, located to the north of the Premises.

Figure 2 - Aerial image of the location of the Premises in comparison to the West End

8.2 Residential and sensitive Premises

The distances to residential and sensitive receptors are detailed in Table 6.

Table 6: Receptors and distance from activity boundary

Sensitive land uses	Distance from Prescribed Activity
Residential Premises (zoned West End Residential in Town of Port Hedland Planning Scheme No. 5)	250m to the north
Port Hedland Esplanade Hotel (zoned Town Centre in Town of Port Hedland Planning Scheme No. 5)	200m to the north
Taplin Street (zoned Residential in Town of Port Hedland Planning Scheme No. 5)	2,200m to the north-east

8.3 Specified ecosystems

Specified ecosystems are areas of high conservation value and special significance that may be impacted as a result of activities at or Emissions and Discharges from the Premises. The distances to specified ecosystems are shown in Table 7. Table 7 also identifies the distances to other relevant ecosystem values which do not fit the definition of a specified ecosystem.

The table has also been modified to align with the *Guidance Statement: Environmental Siting.*

Table 7: Environmental values

Specified ecosystems	Distance from the Premises
Parks and Wildlife tenure	No Parks and Wildlife managed lands are located within a 30km radius of the Premises
Threatened Ecological Communities and Priority Ecological Communities	There are no threatened ecological communities and priority ecological communities within a 30km radius of the Premises
Rare flora	There are no rare flora species recorded within a 30km radius of the Premises
RAMSAR wetland	No RAMSAR wetlands are located within a 30km radius of the Premises
Geomorphic Wetlands	No geomorphic wetlands are located within a 30km radius of the Premises
Mangrove community	Located on opposite side of Stingray Creek from the port and also within the harbour.

8.4 Groundwater and water sources

The distances to groundwater and water sources are shown in Table 8.

Table 8: Groundwater and water sources

Groundwater and water sources	Distance from Premises	Environmental value
Groundwater	Sampling in December 2013 showed groundwater levels to be 4-5m below ground level.	GIS data sets indicate groundwater has salinity of 1,000-3,000 mg/L which is considered brackish.
Port Hedland harbour – marine ecosystem	Within and directly adjacent to the premises boundary.	Identified as requiring a moderate level of ecosystem protection in the *Department of Environment's Pilbara Coastal Water Quality Consultation Outcomes: Environmental Values and Environmental Quality Objectives, March 2006*
Designated areas		**Distance**
Pilbara groundwater area (*Rights in Water Irrigation Act 1914* groundwater area)		Within the Premises boundary
Pilbara surface water area (*Rights in Water Irrigation Act 1914* groundwater area)		Within the Premises boundary
Public Drinking Water Source Area (PDWSA)		The Premises is not located within a PDWSA.

8.5 Soil type

The subsurface soil is typical mangrove sediment containing dark grey silty/clayey sands. The remaining soil is red/brown coarse grain sand to approximately two meters. Below this depth there are fine grain silty clays.

8.6 Meteorology

Port Hedland is located in a semi-arid environment. The region is characterised by warm to hot summers with frequent storms and cyclones and mild, dry winters.

8.6.1 Wind direction and strength

The following wind rose (Figure 2) provides the annual wind direction and strength averaged over the past five years. Wind vectors in the west to south-west vector place residents in Port Hedland downwind of Premises bulk handling activities at approximately 24.6% of the time.

Prevailing north and north-westerly winds and those between the east and south-east vectors are expected to remove the pathway for noise and dust emissions to receptors the majority of the time.

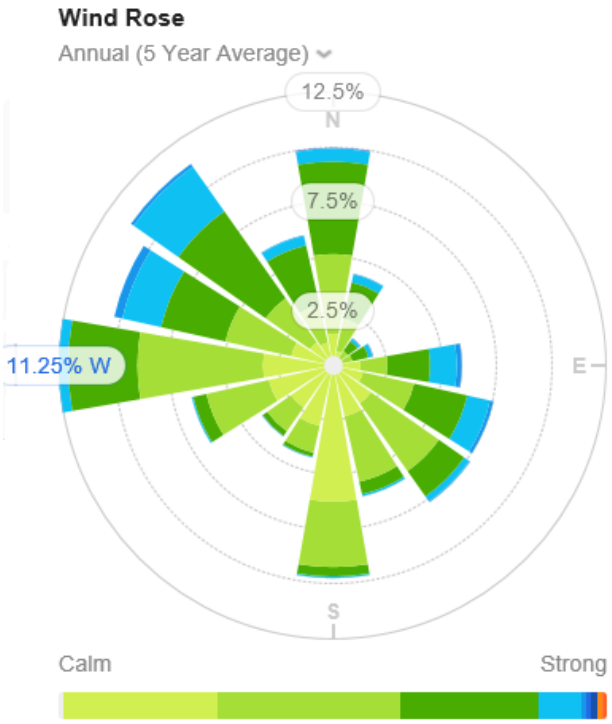

Figure 2: Wind rose for Port Hedland (WillyWeather, 2018)

8.6.2 Rainfall and temperature

The Bureau of Meteorology provides the mean rainfall and maximum temperature for Port Hedland shown through Figure 3 (mean maximum temperature 1948-2018 and mean rainfall 1942 to 2018). The Port Hedland region is hot to warm all year with rainfall predominantly during December to July.

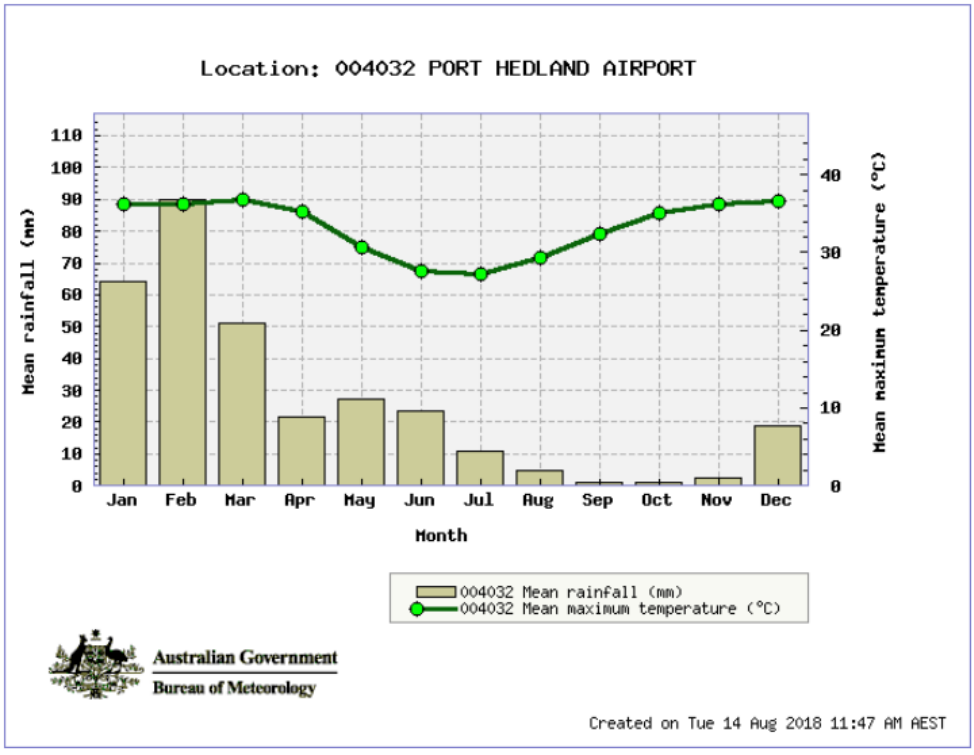

Figure 3: Mean temperature and rainfall Port Hedland

9. Risk assessment

9.1 Determination of emission, pathway and receptor

In undertaking its risk assessment, DWER will identify all potential emissions pathways and potential receptors to establish whether there is a Risk Event which requires detailed risk assessment.

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. Where there is no actual or likely pathway and/or no receptor, the emission will be screened out and will not be considered as a Risk Event. In addition, where an emission has an actual or likely pathway and a receptor which may be adversely impacted, but that emission is regulated through other mechanisms such as Part IV of the EP Act, that emission will not be risk assessed further and will be screened out through Table 9.

The identification of the sources, pathways and receptors to determine Risk Events are set out in Table 9 below.

Table 9: Identification of emissions, pathway and receptors

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**		
Category 58A Salt stockpiling and transfer of salt to ship via trucks and conveyors	Truck movement on unsealed and sealed roads.	Fugitive dust	Residences and short stay accommodation located approximately 200m to the north	Air / wind dispersion	Health and amenity impacts	Yes	See section 9.4
	Salt stockpile and movement including reclaiming of salt through the bulk loading of material.	Fugitive dust				No	Salt absorbs moisture and has large grain sizes (approximately 0.3mm). Therefore the generation of dust is unlikely.
	Truck, infrastructure and equipment movements.	Noise				Yes	See section 9.5
	Contaminated stormwater	salt and saline water	Vegetation	Direct discharge	Soil contamination inhibiting vegetation growth and survival	No	No receptor. No vegetation on the Premises. Land used for industrial purposes.

Risk Events						Continue to detailed risk assessment	Reasoning
Sources/Activities		Potential emissions	Potential receptors	Potential pathway	Potential adverse impacts		
			Groundwater	Migration through soils	Increase of groundwater salinity	No	No receptor. Groundwater is not used for drinking water or industrial sources.
	Contaminated stormwater and washwater	salt, sediment and hydrocarbon	Marine ecosystem	Direct discharge	Degrading the marine ecosystem	Yes	See section 9.6

9.2 Consequence and likelihood of risk events

A risk rating will be determined for risk events in accordance with the risk rating matrix set out in Table 10 below.

Table 10: Risk rating matrix

Likelihood	Consequence				
	Slight	Minor	Moderate	Major	Severe
Almost certain	Medium	High	High	Extreme	Extreme
Likely	Medium	Medium	High	High	Extreme
Possible	Low	Medium	Medium	High	Extreme
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	Medium	Medium	High

DWER will undertake an assessment of the consequence and likelihood of the Risk Event in accordance with Table 11 below.

Table 11: Risk criteria table

Likelihood		Consequence		
The following criteria has been used to determine the likelihood of the Risk Event occurring.		The following criteria has been used to determine the consequences of a Risk Event occurring:		
			Environment	Public health* and amenity (such as air and water quality, noise, and odour)
Almost Certain	The risk event is expected to occur in most circumstances	Severe	• **onsite impacts**: catastrophic • **offsite impacts local scale**: high level or above • **offsite impacts wider scale:** mid-level or above • Mid to long-term or permanent impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are significantly exceeded	• Loss of life • **Adverse health effects:** high level or ongoing medical treatment • Specific Consequence Criteria (for public health) are significantly exceeded • **Local scale impacts:** permanent loss of amenity
Likely	The risk event will probably occur in most circumstances	Major	• **onsite impacts**: high level • **offsite impacts local scale**: mid-level • **offsite impacts wider scale**: low level • Short-term impact to an area of high conservation value or special significance^ • Specific Consequence Criteria (for environment) are exceeded	• **Adverse health effects:** mid-level or frequent medical treatment • Specific Consequence Criteria (for public health) are exceeded • **Local scale impacts**: high level impact to amenity
Possible	The risk event could occur at some time	Moderate	• **onsite impacts**: mid-level • **offsite impacts local scale**: low level • **offsite impacts wider scale**: minimal • Specific Consequence Criteria (for environment) are at risk of not being met	• **Adverse health effects:** low level or occasional medical treatment • Specific Consequence Criteria (for public health) are at risk of not being met • **Local scale impacts:** mid-level impact to amenity
Unlikely	The risk event will probably not occur in most circumstances	Minor	• **onsite impacts**: low level • **offsite impacts local scale**: minimal • **offsite impacts wider scale**: not detectable • Specific Consequence Criteria (for environment) likely to be met	• Specific Consequence Criteria (for public health) are likely to be met • **Local scale impacts:** low level impact to amenity
Rare	The risk event may only occur in exceptional circumstances	Slight	• **onsite impact**: minimal • Specific Consequence Criteria (for environment) met	• **Local scale**: minimal to amenity • Specific Consequence Criteria (for public health) met

^ Determination of areas of high conservation value or special significance should be informed by the *Guidance Statement: Environmental Siting.*

* In applying public health criteria, DWER may have regard to the Department of Health's *Health Risk Assessment (Scoping) Guidelines.*

"onsite**"** means within the Prescribed Premises boundary.

9.3 Acceptability and treatment of Risk Event

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 12 below:

Table 12: Risk treatment table

Rating of Risk Event	Acceptability	Treatment
Extreme	Unacceptable.	Risk Event will not be tolerated. DWER may refuse application.
High	May be acceptable. Subject to multiple regulatory controls.	Risk Event may be tolerated and may be subject to multiple regulatory controls. This may include both outcome-based and management conditions.
Medium	Acceptable, generally subject to regulatory controls.	Risk Event is tolerable and is likely to be subject to some regulatory controls. A preference for outcome-based conditions where practical and appropriate will be applied.
Low	Acceptable, generally not controlled.	Risk Event is acceptable and will generally not be subject to regulatory controls.

9.4 Risk Assessment – Fugitive Dust

9.4.1 Description of Risk Event

Fugitive dust generated from vehicle movements on gravel roads, stockpiling and handling from bulldozer movement of salt at the Premises which migrates to Port Hedland residences and other sensitive land users at sufficient concentrations to cause health and amenity impacts.

9.4.2 Identification and general characterisation of emission

Particulate Matter (PM) may be generated by vehicle and bulldozer movement on the unsealed access road.

The Port Hedland HRA identifies that PM has the potential to impact public health and affects both the respiratory and cardiovascular systems following both long and short term exposures. PM may also cause nuisance impacts on the amenity of properties.

9.4.3 Description of potential adverse impact from the emission

The Port Hedland HRA found that the key parameter of concern was particles of 10 micrometres in diameter (PM_{10}) and smaller. PM_{10} has the ability to be drawn deep within the lungs and is associated with both respiratory and cardiovascular health impacts following both long and short term exposures. Long term repeated exposure can be much more detrimental than short term sporadic exposure. The most severe potential effects are reduced life expectancy due to long-term exposures.

The HRA (see page 30) summarised the findings of a comprehensive and detailed hazard assessment by Toxikos of PM_{10} health effects in Port Hedland resulting in increases in:

- Daily mortality;

- hospital admissions associated with respiratory disease, cardiovascular disease and pneumonia and bronchitis; and
- emergency room attendance for pre-existing respiratory conditions.

9.4.4 Criteria for assessment

The *Port Hedland Air Quality and Noise Management Plan 2010*, specifies an interim air quality guideline of 24-hour average PM_{10} of 70µg/m^3 (with allowance for 10 exceedances per calendar year) for residential areas east of Taplin Street.

The HRA recommendation in relation to air quality guideline is to '*apply the current interim guideline of 24-hour PM_{10} of 70 µg/m^3 (+ 10 exceedances to accommodate natural events) in residential areas of Port Hedland within a reasonable time frame that allows for local dust sources to be identified and managed (i.e. the spoil bank). A period of 5 years is suggested*' (HRA, 2016, p. 36). This recommendation is reflected in the *Port Hedland Dust Management Taskforce Report to Government, 2016*, which is currently being considered by Government.

DWER has applied the *Port Hedland Air Quality and Noise Management Plan 2010* interim guideline at Taplin Street, noting that this may be subject to change in the future following the Government's consideration of the *Port Hedland Dust Management Taskforce Report to Government, 2016*.

There are no current specific amenity criteria relevant to the Port Hedland community to quantify the point at which amenity impacts may be perceived. Alternative criteria used will consider complaints (number and nature).

9.4.5 Licence Holder controls

This assessment has reviewed the controls set out in Table 13 below.

Table 13: Licence Holder's proposed controls for fugitive dust

Site infrastructure	Description	Operation details
Unsealed road around perimeter of stockpile	Water truck	Dust suppression is applied on an as required basis[1]

Note 1: As determined by the Licence Holder.

9.4.6 Consequence

The Delegated Officer considers that dust emissions generated from the movement of vehicles on the unsealed roads within the Premises contributes (to an unknown extent) to ground level dust concentrations of PM_{10} in the West End of Port Hedland.

Based on historical monitoring including information in the Port Hedland HRA, it is clear that the cumulative PM_{10} consequence criterion (70 µg/m^3 at Taplin Street over a 24-hour period) has the potential to be exceeded.

As the Premises contributes to the cumulative concentrations of PM_{10} and based on the cumulative concentration of PM_{10} exceeding the specific consequence criteria the consequence rating is considered **major**.

9.4.7 Likelihood of Risk Event

The bulldozers mainly operate on the salt stockpile and do not generally generate dust during operation due to the absorption of atmospheric moisture by the salt. The unsealed road is also utilised by light vehicles infrequently to gain access to the workshop and office area. The

activities conducted at the Premises vary subject to ship loading activities. The Premises is unlikely to generate large volumes of dust given the limited use of the unsealed road.

The Delegated Officer has determined that given the infrequent use of the unsealed road, and the likely volumes of dust generated, the risk event will probably not occur in most circumstances. Therefore, the Delegated Officer considers that the likelihood of impacts from dust emissions caused by the Premises is **rare.**

9.4.8 Overall rating of Fugitive Dust

The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Matrix (Table 10) and determined that the overall rating for the risk of dust emissions on sensitive receptors is **Medium**.

9.5 Risk Assessment – Noise

9.5.1 Description of Risk Event

Noise emissions caused by the activities on the Premises significantly contribute to exceedance of assigned levels at sensitive receptors causing impacts to amenity.

9.5.2 Identification and general characterisation of emission

Noise is generated from normal operations through the delivery of bulk material to the Premises, the operation of the bulldozer and the ship loading infrastructure and equipment.

A cumulative noise study of Port Hedland undertaken in 2014 by PHIC and DER indicates that the assigned noise levels in the *Environmental Protection (Noise) Regulations 1997* (Noise Regulations) are regularly exceeded.

The Premises was included as one of the industrial operators in the assessment, however the final data is a cumulative representation and did not provide specific values for individual premises. DWER is considering alternative regulatory strategies for noise emissions from premises within the Port Hedland port area.

9.5.3 Description of potential adverse impact from the emission

Noise has the potential to impact on the amenity of the receptor. Where assigned noise levels are exceeded regularly health impacts may arise from stress and/or lost sleep.

9.5.4 Criteria for assessment

The applicable criteria for noise emissions are the assigned levels detailed in the Noise Regulations however these levels are often exceeded at sensitive residential receptors in Port Hedland.

9.5.5 Licence Holder controls

The Licence Holder has a noise management plan which includes suggestions regarding the procurement of ‘quiet’ equipment and processes for responding to breaches of noise levels and modelling of noise emissions for future works.

9.5.6 Consequence

The Delegated Officer has reviewed the information regarding noise emissions and has found that cumulative noise emissions from all industries in the area do not currently comply with the noise regulations levels at Port Hedland.

While the noise from the Premises may not be readily discernible due to the presence of other

dominant noise sources, it may still exceed the prescribed standards under certain conditions. Therefore DWER has conservatively assessed the consequence of noise emissions from the Premises as **moderate** as Assigned Levels are at risk of not being met due to Premises operations.

9.5.7 Likelihood of Risk Event

The Delegated Officer has determined that, based on the proximity of the Premises to sensitive receptors, noise emissions may impact upon sensitive receptors at some time. Therefore, the Delegated Officer considers the likelihood of impacts from noise emissions to be **possible**.

9.5.8 Overall rating of Noise

The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Matrix (Table 10) and determined that the overall rating for the risk of noise emissions on sensitive receptors is **Medium**.

9.6 Risk Assessment – Contaminated stormwater and spills to marine environment

9.6.1 Description of Risk Event

Contaminated stormwater and wash down water may be release into the marine environment causing increased turbidity and/or hydrocarbon contamination.

9.6.2 Identification and general characterisation of emission

Salt may spill directly into the marine environment from the wharf. Salt and sediment may also be picked up and transported to the marine environment via stormwater.

Spills and leaks of hydrocarbons from infrastructure and equipment may contaminate stormwater and enter stormwater infrastructure which is discharged to marine environment.

9.6.3 Description of potential adverse impact from the emission

Salt (namely sodium chloride) is not considered toxic or carcinogenic. The salt handled at the Premises is originally sourced from the local marine environment.

Sediment entering the marine environment has the potential to reduce light penetration and physically smother benthic ecosystems.

Hydrocarbon entering the marine environment has the potential to impact marine ecosystem process and function.

9.6.4 Criteria for assessment

The Premises is located within the Port Hedland Inner Harbour, which has been characterised by the Department of Environment's (2006) *Pilbara Coastal Water Quality Consultation Outcomes: Environmental Values and Environmental Quality Objectives* as requiring a moderate level of ecological protection. There are no relevant criteria available for maximum sediment values in a disturbed and tidal environment such as the Port Hedland Inner Harbour.

9.6.5 Licence Holder controls

This assessment has reviewed the controls set out in Table 14 below.

Table 14: Licence Holder's proposed controls for stormwater

Site infrastructure	Description and operational details
Drainage infrastructure	Drains around the perimeter of the workshop. Spoon drains connecting to oily water separators (currently Humeceptors)
Humeceptors (x2)	Pumped out and removed from the site on a quarterly basis by a contractor.

9.6.6 Consequence

Manufactured salt is originally sourced from the local marine environment and the additional sediment load originating from Premises is likely to be minimal relative to other port activities and natural fluctuations. Therefore no effect on ecosystem function is anticipated from the discharge of water containing salt or sediment.

The use of the land is not expected to be impacted by small hydrocarbon spills anticipated during normal operations. Stormwater could become contaminated with small amounts of hydrocarbons that may enter the marine environment via the berth, having a minimal impact to the ecosystem function at a local scale.

The Delegated Officer considers that the consequence of contaminated stormwater impacting the marine environment is **minor**.

9.6.7 Likelihood of Risk Event

Based on the separation distance between stormwater drainage systems and the marine environment, and Licence Holder controls specified in Table 14, stormwater from the stockpile area is not expected to enter the marine environment.

The Delegated Officer has determined that hydrocarbons on the berth are not expected to be present in significant concentrations under normal operating conditions. Therefore the likelihood of contaminated stormwater impacting upon the marine ecosystem has been assessed as **rare**.

9.6.8 Overall rating of contaminated stormwater and spills

The Delegated Officer has compared the consequence and likelihood ratings described above through the Risk Matrix (Table 10) and determined that the overall rating for the risk of contaminated stormwater impacting the marine environment is **Low** based on the effective operation of Licence Holder controls.

9.7 Summary of acceptability and treatment of Risk Events

A summary of the risk assessment and the acceptability or unacceptability of the risk events set out above, with the appropriate treatment and control, are set out in Table 15 below.

Table 15: Risk assessment summary

	Description of Risk Event			Licence Holder controls	Risk rating	Acceptability with controls (conditions on instrument)
	Emission	**Source**	**Pathway/ Receptor (Impact)**			
1.	Fugitive Dust	Open trafficable areas, unsealed roads	Amenity and public health	Dust suppression through water sprays	Major consequence Rare likelihood **Medium Risk**	Acceptable, subject to the conditioning of the Licence Holder controls with additional specificity.
2.	Noise	Vehicle movements, infrastructure and salt handling	Amenity and comfort	No specific noise controls	Moderate consequence Possible likelihood **Medium Risk**	Acceptable subject to application of alternative regulatory strategy outside of the requirements of this Licence.
3.	Contaminated stormwater and wash down water	Salt stockpiles, conveyor system and open areas	Impacts on water quality and visibility	Stormwater drainage infrastructure including oily water separators	Minor consequence Rare likelihood **Low**	Acceptable, subject to the conditioning of Licence Holder controls

10. Regulatory controls

A summary of regulatory controls determined to be appropriate for the Risk Event is set out in Table 16. The risks are set out in the assessment in section 9 and the controls are detailed in this section. DWER will determine controls having regard to the adequacy of controls proposed by the Licence Holder. The conditions of the Licence will be set to give effect to the determined regulatory controls.

Table 16: Summary of regulatory controls to be applied

		Controls (references are to sections below, setting out details of controls)	
		10.1.1 Infrastructure and equipment	**10.1.2 Specified Action**
Risk Items (see risk analysis in section 9)	**1. Dust**	●	●
	2. Noise	An alternative regulatory strategy will be required following the finalisation of Taskforce Report recommendations (refer to section 5.2).	
	3. Contaminated stormwater	●	

10.1 Licence controls

10.1.1 Dust infrastructure and equipment

The following environmental controls, infrastructure and equipment should be maintained and operated onsite for dust management:

Table 17: Controls for fugitive dust emissions

Site Infrastructure	**Operational requirements**
Unsealed roads	All vehicles observe a speed limit of 20 km/hr on unsealed trafficable areas. A water truck is operated for the purpose of preventing visible dust emissions from unsealed areas.

Note: Dust management controls differ from those proposed by the Licence Holder to align with DWER's *Guidance Statement: Setting Conditions*, which requires conditions to be clear and enforceable. Stockpiles are not included as a 'trafficable area' although the area for stockpiling may become trafficable where no storage is occurring.

10.1.2 Stormwater/wash water infrastructure and equipment

The following environmental controls, infrastructure and equipment should be maintained and operated onsite for the management of contaminated stormwater and wash water:

Table 18: Controls for potentially contaminated stormwater and wash water

Site infrastructure and equipment	Operational requirements
Oily water separators	Stormwater and washwater from the workshop and stockpile area must pass through an oily water separator prior to discharge to the environment or beyond the Premises boundary. Each oily water separator must be pumped out on a quarterly basis and the contents removed from the Prescribed Premises by a licensed contractor for disposal at an appropriately licensed facility.

10.1.3 Specified actions

A regulatory control has been applied to the Licence to ensure that Primary Activity does not generate visible dust which crosses the boundary of the Premises.

Grounds: There are no boundary monitors at the Premises for the measurement of dust. Therefore the Licence Holder must rely on visual triggers to ensure that Premises activities do not contribute to existing high ambient dust levels at adjacent sensitive receptors of in the Port Hedland airshed more generally.

11. Determination of Licence conditions

The conditions in the Reviewed Licence in Attachment 1 have been determined in accordance with the *Guidance Statement: Setting Conditions*.

Table 19 provides a summary of the conditions to be applied to this Licence.

Table 19: Summary of conditions to be applied

Condition Ref	Grounds
Emissions 1	This condition is valid, risk-based and consistent with the EP Act.
Infrastructure and Equipment 2	This condition is valid, risk-based and contain appropriate controls.
Operations 3	This condition is valid, risk-based and an appropriate control.
Record-keeping 4, 5, 6 and 7	These conditions are valid and are necessary administration and reporting requirements to ensure compliance.

DWER notes that it may review the appropriateness and adequacy of controls at any time and that, following a review, DWER may initiate amendments to the Licence under the EP Act.

12. Conclusion

This assessment of the risks of activities on the Premises has been undertaken with due consideration of a number of factors, including the documents and policies specified in this Decision Report (summarised in Appendix 1).

Based on this assessment, it has been determined that the Reviewed Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

James Milne
Manager, Resource Industries

Delegated Officer
under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

Document title	Availability
ANZECC & ARMCANZ, 2000. *Australian and New Zealand guidelines for fresh and marine water quality. Volume 1, The guidelines*. National Water Quality Management Strategy Paper No 4, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra.	ANZECC & ARMCANZ, 2000. *Australian and New Zealand guidelines for fresh and marine water quality. Volume 1, The guidelines*. National Water Quality Management Strategy Paper No 4, Australian and New Zealand Environment and Conservation Council and Agriculture and Resource Management Council of Australia and New Zealand, Canberra. Accessed at https://www.environment.gov.au/
City of Karratha Scheme 8	City of Karratha Scheme 8 Accessed at http://www.planning.wa.gov.au
Department of Health, Impact of Dust on Port Hedland, March 2010	Department of Health, Impact of Dust on Port Hedland, March 2010 accessed at http://www.public.health.wa.gov.au
DER *Guidance Statement on Regulatory principles* (July 2015)	DER *Guidance Statement on Regulatory principles* (July 2015)
DER *Guidance Statement on Setting conditions* (September 2015)	DER *Guidance Statement on Setting conditions* (September 2015)
DER *Guidance Statement on Licence duration* (November 2014)	DER *Guidance Statement on Licence duration* (November 2014)
DER *Guidance Statement: Land Use Planning (October 2015)*	DER *Guidance Statement: Land Use Planning (October 2015)*
DER *Guidance Statement: Publication of Annual Audit Compliance Reports* (May 2016)	DER *Guidance Statement: Publication of Annual Audit Compliance Reports* (May 2016)
DER *Guidance Statement: Decision Making* (November 2016)	DER *Guidance Statement: Decision Making* (November 2016)
DER *Guidance Statement: Risk Assessments* (November 2016)	DER *Guidance Statement: Risk Assessments* (November 2016)
DWER (2018) Mapping dust plumes at Port Hedland using a LiDAR – Technical series – Report No. 2.	Mapping dust plumes at Port Hedland using a LiDAR Accessed at: www.der.wa.gov.au/
Email: Request for additional information – Dampier Salt Limited's Port Hedland Port Operations (L7179/1997/11) dated 25/07/2016	Email: Request for additional information – Dampier Salt Limited's Port Hedland Port Operations (L7179/1997/11) dated 25/07/2016 DWER records (A1137773)
Licence L4432/1989/12	Licence L4432/1989/12 DWER records
Licence L6951/1997/13	Licence L6951/1997/13 Accessed at http://www.der.wa.gov.au

L6951/1997/13 Amendment Notice 1 – 17 June 2016	L6951/1997/13 Amendment Notice 1 – 17 June 2016 Accessed at http://www.der.wa.gov.au
Rio Tinto Noise Management Plan Version 1.0	Rio Tinto Noise Management Plan Version 1.0 DWER records (A1137774)
Port Hedland Cumulative Environmental Noise Study	Port Hedland Cumulative Environmental Noise Study DWER records
Port Hedland Air Quality Health Risk Assessment for Particulate Matter, Department of Health (January 2016)	Port Hedland Air Quality Health Risk Assessment for Particulate Matter, Department of Health (January 2016) DWER records
Email: Request for additional information – Dampier Salt Limited's Port Hedland Port Operations (L7179/1997/11) dated 25/07/2016	Email: Request for additional information – Dampier Salt Limited's Port Hedland Port Operations (L7179/1997/11) dated 25/07/2016 DWER records (A1137773)
WillyWeather (2018) Port Hedland Wind Forecast.	Wind Rose – Annual (5 Year Average) Accessed at: https://wind.willyweather.com.au/wa/pilbara/port-hedland.html

Appendix 2: Summary of Licence Holder's comments on risk assessment and draft conditions

Licence Holder comments provided on 14 October 2016

Condition	Summary of Licence Holder comment	DWER response
Condition 1: Environmental Compliance	The Licence Holder recommends the deletion of Condition 1 in the draft Licence on the basis that it replicates *Environmental Protection Act 1986* (**EP Act**) offences by requiring compliance with *"the EP Act and all regulations prescribed under the EP Act applicable to the Premises."* In our view, it is: • unnecessary and uncertain in its application; and • creates additional and unnecessary compliance burden on the Licensee without reference to the particular environmental risk profile of the premises. *Suggested Amendment* It is recommended that the condition is removed.	Noted. Condition 1 has been deleted. An explanatory note has been inserted as a preamble to the licence. The preamble provides additional information about legislative requirements generally under the EP Act and specific requirements for the Licence.
Conditions 2, 3 and 4 (and Definition Section): Notification of Material Change	The Licence Holder appreciates the intent behind this condition, however is concerned that the condition duplicates aspects of section 53 of the EP Act, which requires the occupier of prescribed premises to ensure that any changes to the premises (as prescribed in this section) be undertaken in accordance with a works approval or Licence. Therefore, changes to prescribed premises (of a nature that the legislature deemed relevant) require separate approval before that change takes place. Any additional requirements requiring notification of "Material Change" is the licence document could create uncertainty for licensees as to when further approval is required, or not. There are likely to be a range of activities that will not constitute a 'Material Change' (as defined in the draft Licence) but may	Noted. The intent of the condition was to allow for the Licence Holder to have increased flexibility in relation to requirements for works approval and licensing amendments when the changes were not material in nature and resulted in better environmental outcomes and/or reduced levels of risk. The 'Material Change' conditions (2-4) have been deleted and other references in the Licence to 'Material Change'.

Condition	Summary of Licence Holder comment	DWER response
	require approval under section 53 and vice versa. This therefore could create an additional compliance burden, uncertainty and risk for the Licensee. The definition of 'Material Change' also includes 'changes to the control or ownership of the infrastructure or equipment within the premises'. This aspect of the definition is not necessary as section 61 of the EP Act already imposes a duty on persons becoming occupiers of prescribed premises to apply for a transfer of or a new approval. *Suggested Amendment* It is recommended that this condition is removed.	
Conditions 5, 6 and 7: Specified Actions	The Licence Holder believes the sealing of the unsealed access road would be an unpractical solution to a low risk. Dozers are the main users of the unsealed road and to seal it with asphalt or concrete (as per the definition) would result in ongoing damage and maintenance of the road and the dozers. As the road is also located within the stockpile footprint the location of the road may change based on the volume of the stockpile. Given that there is a very low level of dust generated from the premises, dust suppression is currently applied via the site water truck on an as required basis. *Suggested Amendment* The Licence Holder has requested that the conditions are removed.	Noted. The conditions have been removed including the requirement to seal the road. Specific requirements have been inserted in the Infrastructure and Equipment conditions around ensuring that the road is wetted down at least once a day after use by the site water truck, except where it has rained within the last 12 hours.
Condition 10: Emissions	DER held discussions with Rio Tinto Limited on 17, 27 October and 10 November 2016. The Licence Holder has suggested alternative wording. To ensure consistency with the Licence Holder's comments above in relation to conditions 2, 3 and 4 (Notification of Material	Noted. This condition has been amended and moved to condition 1. The reference to Material Change has been removed from the licence and this condition.

Condition	Summary of Licence Holder comment	DWER response
	Change) the reference to Material Change should be removed from condition 10. *Suggested Amendment* The Licence Holder proposes the following amendments in relation to Condition 10 to clarify that the regulation of emissions under the licence are those that arise from Prescribed Premises activities. The Licence Holder must not cause any Emissions from **Prescribed Premises activities on** the Premises except for Specified Emissions and General Emissions described in column 1, subject to the exclusions, limitations or requirements specified in column 2, of Table 2. A new definition of **Prescribed Premises** is also requested to be included as per the below text: ***Prescribed Premises*** refer to the relevant categories of activities prescribed in Schedule 1 of the *Environmental Protection Regulations 1987* as specified at the front of this ***Licence.*** Proposed controls have been incorporated into Schedule 3 of the Licence.	The Delegated Officer has considered the proposed addition of the drafting "prescribed premises activities" in the context of authorised emissions (specified and general emissions). However, the Delegated Officer considers it more appropriate to refer to 'Primary Activities' as this is consistent with the published *Guidance Statement: Risk Assessments* and the emissions and discharges which have been considered through the risk assessment and subsequent setting of regulatory controls. Emissions that occur on the Premises but are unrelated to the Primary Activities have not been considered in this Licence and will be subject to the general provisions of the EP Act.
Condition 12: Information	The Licence Holder does not consider this condition is environmentally necessary or proportionate to the risk. It creates unnecessary administrative burden on the proponent and the Department in respect of emissions that are not material and may lower the threshold at which actions must be taken in respect of an emission.	Noted. Condition removed from the Licence. Provisions of the EP Act continue to apply through section 72 in relation to the discharges of waste (cause or likely to cause pollution, material environmental harm or serious environmental harm). In addition condition 7 requires the submission of an Annual Compliance Report which must specify the

Condition	Summary of Licence Holder comment	DWER response
		extent to which compliance with conditions of the Licence has been met.
Condition 13: Information	While the general objectives and requirements of this clause are acceptable, the Licence Holder requested that a clarification be added make it clear that only complaints relevant to the EP Act are required to be reported on. The Licence Holder must record the number and details of any complaints received by the Licence Holder relating to **prescribed activities undertaken at** the **Prescribed** Premises, and any action taken by the Licence Holder in response to the complaint.	Noted. This condition has been amended to provide additional clarity for the Licence Holder. The Licence Holder will be required to record and investigate any complaints as they relate to activities at the premises and their legal obligations under the Licence.
Condition 14: Information	The Licence Holder requested the following clarification regarding this condition. • Is the intent of this condition for the Licensee to report on compliance with every condition, rather than non-compliance 'by exception' as per the current practice? • Will the compliance report referenced in this condition expected to be a combination of the current AER and AACR? For example, do we need to provide: - Records of complaints e.g. information required by Condition 13 - Records of infrastructure maintenance e.g. cleaning up spilled ore (Condition 5, schedule 3) *Suggested Amendment* The Licence Holder requests that the submission date for the Compliance Report be 30 April. Anniversary date in definitions section to be amended to 31	Noted. The Delegated Officer responds to each of the questions as follows: • The Licence Holder will be required to report on the non- compliance(s), the details of the non-compliance and the management and mitigation measures implemented to address the non-compliance. *Guidance Statement: Publication of Annual Audit Compliance Reports* and *Guideline: Annual Audit Compliance Reports* provide further guidance on the content of Compliance Reports. • The Delegated Officer agrees to amend the anniversary date to 31 January of each year and the submission date for the Compliance Report to 30 April. The Delegated Officer agrees to amend the Annual Period in the definitions section.

Condition	Summary of Licence Holder comment	DWER response
	December which will mean the Annual Period will be from 1 January to 31 December.	

Licence Holder comments provided on 27 January 2017

<table>
<tr><th>Condition</th><th>Summary of Licence Holder comment</th><th>DWER response</th></tr>
<tr><td>Condition 1: Emissions
(previously Condition 10)</td><td>The Licence Holder requested additional ‘Specified Emissions’ as follows:
Discharge wash water and stormwater related to the Primary Activities
Minor spillage of hydrocarbon from storage vessels related to the Primary Activity
Minor spillage of salt from the bulk material loading of vessels
The Licence Holder proposed that these ‘Specified Emissions’ would be subject to compliance with Condition 2 (Infrastructure and Equipment Controls Table)<table><tr><th>Site Infrastructure and Equipment</th><th>Operational requirements</th></tr><tr><td>Concrete hardstand at workshop and refuelling apron at the port fuel farm</td><td>Spills and washdown water must be transmitted into the spoon drains leading to Humeceptor 1 and must not permeate to the underlying soil</td></tr><tr><td>Spoon drains leading to Humeceptor 1</td><td>Must contain and transmit potentially contaminated stormwater and washdown water originating from the workshop area to the humeceptor</td></tr><tr><td>Humeceptor 1</td><td>Must treat contaminated water</td></tr></table></td><td>Noted and partially accepted.

The Delegated Officer notes that the storage of hydrocarbon at the Premises is below the threshold specified in Schedule 1 of the Environmental Protection Regulations 1987 and therefore does not represent a prescribed premises/activity.
General provisions of the EP Act apply to these emissions.

The Delegated Officer considers that minor spills of salt into the marine environment can be considered through the ‘General Emissions’ section of Condition 1. It is considered that this emission represents minimal risk to the marine environment.</td></tr>
</table>

<table>
<tr><th>Condition</th><th>Summary of Licence Holder comment</th><th>DWER response</th></tr>
<tr><td></td><td>
<table>
<tr><td>Unsealed Road and Water truck</td><td>The unsealed road must be wetted down at regular intervals to prevent dust lift off. To verify the above action, an inspection of the port facility must be undertaken on a weekly basis, or additionally if required.</td></tr>
<tr><td>Premises salt spill cleanup (berth)</td><td>During ship loading activities any minor salt spillage on the berth must be dissolved with seawater and/or freshwater. To initiate and verify the action is complete, an inspection of the berth is undertaken after ship loading activities, or additionally if required</td></tr>
</table>
The Licence Holder provided additional rationale for the above proposed controls.
</td><td></td></tr>
<tr><td>Condition 3: Information
The requirements specified in row 4, of Table 2, including the frequency and use of the water truck</td><td>The Licence Holder considered this requirement should be amended to the requirements specified in row 4, of Table 2, which includes the frequency of the port facility inspections.</td><td>Noted.
The Delegated Officer has removed this requirement as a new condition has been applied as follows:

The Licence Holder must ensure that Primary Activities undertaken on the Premises do not generate visible dust which crosses the boundary of the Premises.</td></tr>
<tr><td>Definitions</td><td>The Licence Holder proposes that the Anniversary Date means 31 December of each year</td><td>Noted and accepted</td></tr>
<tr><td>Infrastructure and equipment</td><td>The Licence Holder proposes that the following infrastructure is added to the infrastructure and equipment table:
3,000L Liquid and chemical storage unit</td><td>Noted.
The Delegated Officer does not consider the storage of chemicals and hydrocarbon at the Premises forms part of the prescribed activities (Primary Activities). General provisions of the EP Act apply to any emissions caused from this infrastructure.</td></tr>
</table>

Licence Holder comments provided on 8 October 2018

Condition	Summary of Licence Holder comment	DWER response
Condition 1, Table 3 Infrastructure and equipment controls table	The following text replace the operational requirements of the oily water separators: *Stormwater and washwater originating from the workshop and stockpile area must pass through [an oily water separator] prior to discharge to the environment or beyond the Premises boundary.* *Each [oily water separator] must be pumped out as required to ensure the unit is adequately maintained in good working order and can be operated in accordance with the requirements.* *The contents are to be removed from the site by a licenced contractor for disposal at an appropriate licenced facility.* The Licensee request that Row 1, Column 2 of Table 3 is amended as per the conditions outlined in the above for the following reasons: • Only stormwater and washdown water originating from the workshop and stockpile area pass through an oily water separator (Humeceptor 1 and Humeceptor 2 respectively). • The current maintenance regime for Humeceptor 1 is to be pumped out on a quarterly basis; this regime ensures that the unit is adequately maintained in good working order. • Humeceptor 2 receives washdown water from the activity of dissolving salt spillage within the stockpile area; this activity poses no risk of hydrocarbon contamination. It would not be practical to pump this humeceptor out on a weekly basis.	Noted and partially accepted. The requirement to remove sediment and water from oily water separators has been changed from weekly to quarterly.
	Amend the wording of 'Humeceptor' to 'Oily water separator'. In the event that the Humeceptor is replaced, DSL will replace it with a suitable type of pollution control which may not be limited to a Humeceptor.	Noted and accepted. DWER notes that in the event that the Licence Holder wishes to replace a Humeceptor a works approval may be required and advice should be sought from the Department. In addition, the Licence Holder will be required to demonstrate that the oily water separator will be able to treat wash water and stormwater to an equal or better standard.

Condition	Summary of Licence Holder comment	DWER response
	The Licensee requests that Row 2 is removed from Table 3, as the proposed operational requirement is an unpractical control for a significantly low risk. • Results from the *Mapping dust plumes at Port Hedland using LiDAR, February 2018* dust monitoring campaign indicates that there is no dust originating from the DSL Port facility. • The unsealed road is for light vehicles only and has a speed limit of 20km/hr. This road receives very low volumes of traffic. • Haul trucks can only utilise the sealed road to enter and exit the Port facility. • All unsealed trafficable areas at the Port Facility fall within the stockpile footprint. Therefore, there are no unsealed trafficable areas outside of the stockpile area.	Noted. The risk assessment has found that Premises activities may contribute to the cumulative airshed in Port Hedland. Although the likelihood of dust emissions is significantly lower at the Premises when compared to other nearby Port operators, any contribution from prescribed activities to the already full airshed requires regulatory control. Requirements have been modified to align with proposed controls relating to vehicular speeds and water cart operation.
Condition 4	*The Licence Holder must maintain accurate and auditable Books including the following records, information, reports and data required by this Licence:* ~~*c) Logbook recordings of water truck deployment;*~~ The licence requests that condition 4 c) is removed from the licence. As dust is a significantly low risk at the DSL Port facility it is unnecessary and unpractical to log recordings of water truck deployment.	Noted. As a control relating to water trucks has been retained on the Reviewed Licence, the requirement to record water truck deployment dates is also retained.
Condition 6	The Licence Holder must submit to the CEO, no later than ~~*31 January*~~ *30 April*, a Compliance Report indicating the extent to which the Licence Holder has complied with the Conditions in this Licence for the preceding Annual Period. The Licensee requests that the date for the Compliance Report be changed to no later than the 30 April of each year. This will align the compliance report submission date with the current licence condition and other DSL licences.	Accepted.

Attachment 1: Reviewed Licence L7179/1997/11