Decision Report

Application for Works Approval

Division 3, Part V *Environmental Protection Act 1986*

Works Approval Number	W6206/2018/1
Applicant	Salt Lake Potash Limited
ACN	117 085 748
File Number	DER2018/001698
Premises	Salt Lake Potash Part of Mining Tenements M53/796 and M53/797 WILUNA WA 6646 As depicted and defined by the coordinates in Schedule 1 of the Works Approval
Date of Report	1 March 2019
Status of Report	Final

1. Definitions

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

Term	Definition
ACN	Australian Company Number
Category/ Categories/ Cat.	Categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
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.
DMIRS	Department of Mines, Industry Regulation and Safety
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.
Emission	has the same meaning given to that term under the EP Act.
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
Occupier	has the same meaning given to that term under the EP Act.
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
Risk Event	As described in *Guidance Statement: Risk Assessment*
Works Approval Holder	Salt Lake Potash Limited

2. Overview of premises

2.1 Classification of premises

Classification of Premises	Description	Approved Premises production or design capacity or throughput
Category 14	Solar salt manufacturing: premises on which salt is produced by solar evaporation.	25,000 tonnes over project

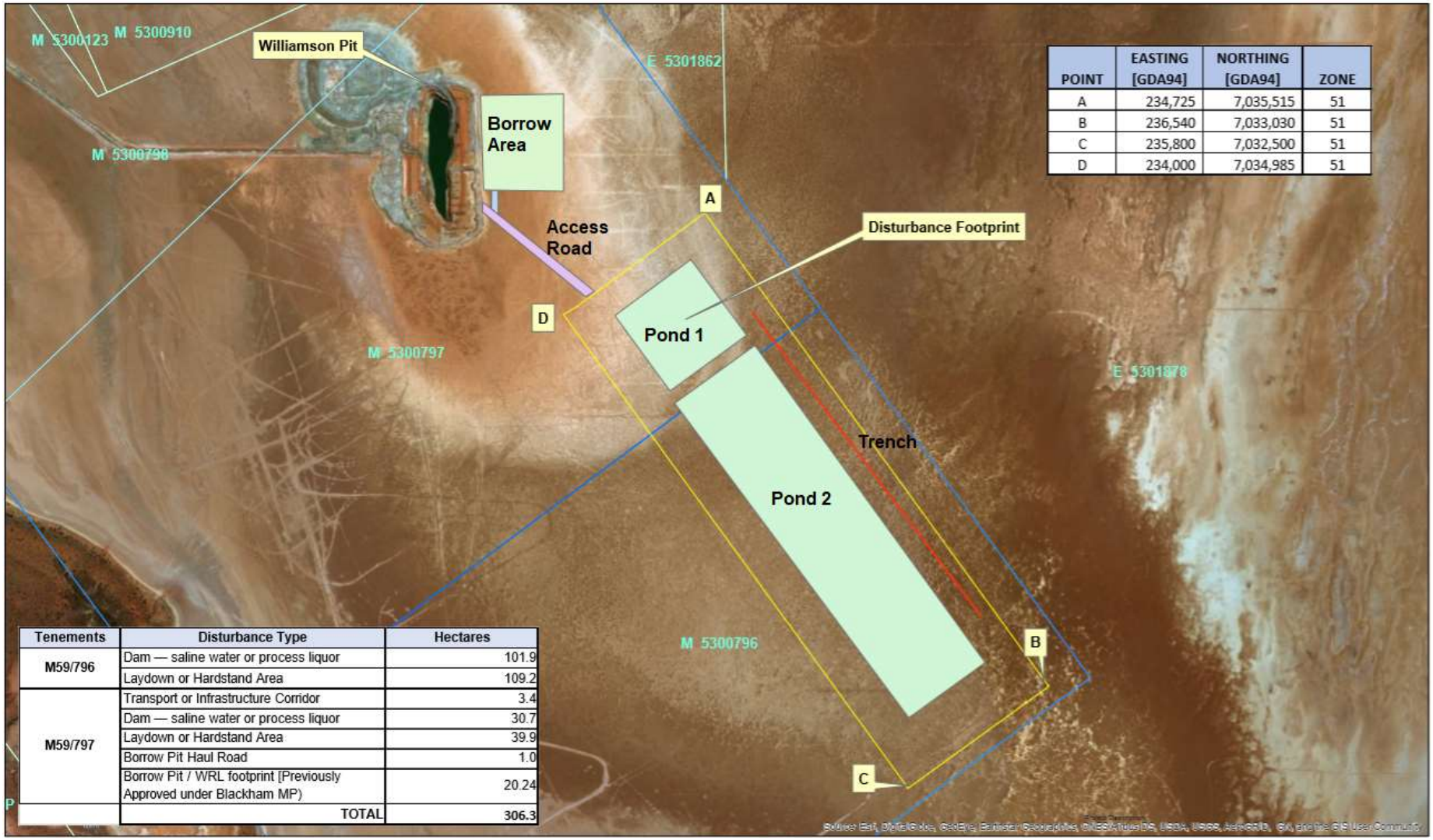
2.2 Description of proposed activity

Salt Lake Potash Ltd (the Applicant) has a legal agreement with Blackham Resources Limited (BRL) to dewater Williamson Pit (the Pit) prior to BRL mining it. The Delegated Officer considers that the Applicant has legal tenure for the purpose and extent of this proposal.

The Applicant proposes to pump up to 1.5GL of water from the Pit into a series of two holding ponds. Water in these holding ponds will evaporate and result in a residual solid of potash salt. The Applicant anticipates up to 25,000 tonnes of potash will be generated over the project which is anticipated to be operational for a period of 12 months.

The infrastructure associated with this project is outlined in the table below and the site layout is shown in Figure 1.

Ref	Infrastructure Prescribed Activity (Category 12)	Site Layout Plan Reference (Figure 1)
1	Temporary Holding Pond: consists of two ponds in series • Pond 1: 500m long x 500 wide x 2m deep; • Pond 2: 2000m long x 500m wide x 2m deep. The ponds will be construction from clay material extracted from the Borrow Area which has been tested onsite to meet a permeability of 1 x 10^{-9} m/s.	Pond 1 and Pond 2
2	Roadways: • Access road between Holding Pond and the Pit; • Haul road for access to borrow pit (clay material extraction)	The Haul road is detailed as Access Road. Access Road between Holding Pond and the Pit is not on image.
3	Trench 2000m long x 4m deep: collection of groundwater and seepage from Holding Pond	Trench
4	Pump within the Pit for extraction of water into Holding Pond	Within Williamson Pit



POINT	EASTING [GDA94]	NORTHING [GDA94]	ZONE
A	234,725	7,035,515	51
B	236,540	7,033,030	51
C	235,800	7,032,500	51
D	234,000	7,034,985	51

Tenements	Disturbance Type	Hectares
M59/796	Dam — saline water or process liquor	101.9
	Laydown or Hardstand Area	109.2
M59/797	Transport or Infrastructure Corridor	3.4
	Dam — saline water or process liquor	30.7
	Laydown or Hardstand Area	39.9
	Borrow Pit Haul Road	1.0
	Borrow Pit / WRL footprint [Previously Approved under Blackham MP)	20.24
	TOTAL	306.3

Figure 1: Site Layout Plan

Image provided as part of works approval supporting documentation with modifications by DWER Officer

3. Legislative context and other approvals

Approvals relevant to the premises are outlined in the table below.

Legislation	Number	Approval
Mining Act 1978	MP 7678	Mining Proposals managed by DMIRS Approval granted to screen up to 50,000 tonnes/year.
Land Administration Act 1997	N/A	The Applicant has advised that the proposal does not require development/planning approval.
Rights in Water and Irrigation Act 1914	• GWL 182329; • GWL 202044	• GWL 182329 authorises the extraction of 1,115,00 kL from the East Murchinson, Meekatharra Palaeochannel and is granted to Blackham Resources Ltd; • GWL 202044 authorises the extraction of 300,000 kL from the East Murchinson, Meekatharra Palaeochannel (from the Trench) and is granted to the Applicant.
Country Areas Water Supply Act 1947	CAW 202043(1)	Authorisation to construct the Trench

4. Emission sources, pathways and receptors

4.1 Emissions

The potential for emissions to impact on sensitive receptors has been assessed in accordance with the Department's Risk Framework. The key emissions considered in this report are **dust, noise and movement of hypersaline water (e.g. into surface water, groundwater and over land)** from activities such as earthworks during construction. Earthworks and associated vehicle movements are required for the construction of the ponds, trench and roads.

The Applicant has proposed measures to assist in controlling these emissions, where necessary. The control measures have been considered when undertaking the risk assessment detailed in Section 5.

Following completion and compliance with this works approval, a prescribed premises category 14 licence under Part V of the EP Act will be required to authorise emissions associated with the operation of the premises i.e. dewatering activities, including associated vehicle movements. A risk assessment for the operational phase has been included in this Decision Report, however licence conditions will not be finalised until DWER assesses the licence application.

4.2 Receptors

Risk is assessed as a combination of emission sources, the proximity and sensitivity of receptors to those emission sources and any pathways that can allow the emission to reach and potentially harm the receptor. Figure 2 and the table below provides a summary of human and environmental receptors in proximity to the premises and the risk assessment in Section 5 considers these receptors in the context of emissions and potential pathways.

Receptor	Distance from Prescribed Premises
Human receptors	
Wiluna townsite	Approximately 30km north of proposal area
Environmental receptors	
Lake Way	Premises is situated within Lake Way
Surface geology	Soil type is SV5: Saline soils associated with salt lakes
Groundwater	Located 200 to 300mm bgl

4.3 Pathways

As dust and noise are considered potential emissions, the prevailing wind direction has been considered. Using information available on the Bureau of Meteorology's website, the closest available weather station for climate data is Wiluna (No. 013012). Based on the climate data for Wiluna station (January 1957 to August 2018), the prevailing wind direction is north-easterly is the morning and easterly to south-easterly in the afternoon.

Hypersaline water movements from pond overtopping and infiltration/seepage from overland runoff may cause an increase in electrical conductivity in Lake Way and groundwater, resulting in impacts to water quality. These pathways have been considered in the risk assessment table in Section 5.

5. Risk Assessment

Risk ratings have been assessed for each key emission source and considers potential source-pathway-receptor linkages. The mitigation measures / controls proposed by the Applicant have been considered in determining the risk rating. Emissions during construction and operation have been assessed separately. This is because separate approvals are needed for each. The works approval that accompanies this report authorises construction only. A licence is required to operate the premises.

5.1 Risk assessment – construction

Risk Event				Consequence rating*	Likelihood rating*	Risk*	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	**Potential emissions**	**Potential receptors, pathway and impact**	**Applicant controls**					
Earthworks and construction of ponds, trench and access roads Vehicle movements (including reversing beepers)	Dust	Air/windborne pathway causing impacts to surface water quality within Lake Way (within Premises boundary)	Dust suppression on roads and surface stabilisation (such as sealing) in areas where dust emissions are expected to be significant.	Slight	Possible	Low	Impacts to surface water quality are expected to be minimal however with the project being located within Lake Way, it is possible that particulates from dust emissions could enter the surface water system.	N/A
		Air/windborne pathway causing impacts to health and amenity of closest human receptors (Wiluna townsite) approximately 30km from project area.		Slight	Rare	Low	The nearest human receptor is located a significant distance (30km) from the project area and not within the direction of the prevailing wind.	
	Noise	Air/windborne pathway causing impacts to health and amenity of closest human receptors (Wiluna townsite) approximately 30km from project area.	Use of noise attenuating equipment where feasible.	Slight	Rare	Low	The nearest human receptor is located a significant distance (30km) from the project area and not within the direction of the prevailing wind.	

**Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)*

5.2 Risk assessment – operation (information only)*

Risk Event				Consequence rating**	Likelihood rating**	Risk **	Reasoning	Regulatory controls (refer to conditions of the granted instrument)
Source/Activities	**Potential emissions**	**Potential receptors, pathway and impact**	**Applicant controls**					
Dewatering activities (pumping of water); Containment of hypersaline water; Vehicle movements	Dust	Air/windborne pathway causing impacts to surface water quality within Lake Way (within Premises boundary)	Dust suppression on roads and surface stabilisation (such as sealing) in areas where dust emissions are expected to be significant.	Slight	Rare	Low	Limited dust generating activities are expected to occur during operations. The Applicant's proposed controls appear to be sufficient at mitigating dust emissions.	To be determined at licensing assessment stage*
		Air/windborne pathway causing impacts to health and amenity of closest human receptors (Wiluna townsite) approximately 30km from project area.					The nearest human receptor is located a significant distance (30km) from the project area and not within the direction of the prevailing wind. The Applicant's proposed controls appear sufficient at mitigating dust emissions. Noise emissions are also regulated under the provisions of the Noise Regulations.	
	Noise	Air/windborne pathway causing impacts to health and amenity of closest human receptors (Wiluna townsite) approximately 30km from project area.	Use of noise attenuating equipment where feasible. Pump is situated within the Pit which provides a natural noise attenuation barrier.					
	Discharges of hypersaline water	Direct discharge via overland runoff and overtopping of ponds causing impacts to surface water quality. Seepage and infiltration through soil to groundwater.	Holding ponds to be constructed of clay material with a permeability of 1 x 10-9 m/s. The ponds have been designed to maintain a 500mm freeboard and capacity for a 1 in 100 year ARI event for 72 hour duration.				The receiving surface water and groundwater has similar chemical properties to the water within the holding ponds and any discharges are not expected to cause any changes to surface water or groundwater quality.	

**The works approval that accompanies this Report authorises construction only. A licence is required for operations. **Consequence ratings, likelihood ratings and risk descriptions are detailed in the Department's Guidance Statement: Risk Assessments (February 2017)*

6. Consultation

Method	Comments received	DWER response
Direct interest stakeholders notified (8/01/2019): DMIRS and Shire of Wiluna	DMIRS provided comment on 18/01/2019 to advise that "the project is considered to have low environmental risks due to the lack of environmental receptors and minor scale" and that as the project had been assessed under the *Mining Act 1978,* DMIRS had no specific comments or objections to the works approval application. No comments were provided by the Shire of Wiluna.	DMIRS comments were noted
Application advertised on DWER website (14/01/2019)	None received	N/A
Applicant notified of draft (28/02/2019)	Comments received 1/03/2019 requested waiver of the comment period	Works approval granted

7. Conclusion

This assessment of the risks of activities on the premises has been undertaken with due consideration of several factors, including the documents and policies specified in this decision report (summarised in Appendix 1).

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 approval under the EP Act.

Rebecca Kelly
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Date: 2019.03.01 08:44:15 +08'00'

Rebecca Kelly
MANAGER WASTE INDUSTRIES
Delegated Officer under section 20 of the *Environmental Protection Act 1986*

Appendix 1: Key documents

Document title	Availability
Works Approval (W6206/2018/1) application form and supporting documentation (December 2018)	DWER records (A1750530; A1750532)
DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	accessed at www.dwer.wa.gov.au
DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	
DER, August 2016. *Guidance Statement: Licence duration.* Department of Environment Regulation, Perth.	
DER, February 2017 *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	
DER, February 2017. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	