Government of Western Australia
Department of Water and Environmental Regulation

Amendment Notice 5

Licence Number	L8469/2010/2
Licence Holder	Galaxy Lithium Australia Limited
ACN	130 182 099
File Number:	DER2014/001110
Premises	Mt Cattlin Project RAVENSTHORPE WA 6346 Lot 31 on Plan 224145 and Lot 127 on Plan 145763 (part of Mining tenement M74/244) Newdegate-Ravensthorpe Road RAVENSTHORPE WA 6346
Date of Amendment	8 April 2019

Amendment

The Chief Executive Officer (CEO) of the Department of Water and Environmental Regulation (DWER) has amended the above Licence in accordance with section 59 of the *Environmental Protection Act 1986* (EP Act) as set out in this Amendment Notice. This Amendment Notice constitutes written notice of the amendment in accordance with section 59B (9) of the EP Act.

Digitally signed by Danielle Eyre
Date: 2019.04.08 11:49:37 +08'00'

Danielle Eyre
SENIOR MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES

Officer delegated under section 20
of the Environmental Protection Act 1986

Definitions and interpretation

Definitions

In this Amendment Notice, the terms in Table 1 have the meanings defined.

Table 1: Definitions

Term	Definition
ACN	Australian Company Number
AMMP	Airborne Materials Management Plan (2010) revised on 26 September 2017
Annual period	means the inclusive period from 1 September until 31 August in the following year.
Category/ Categories/ Cat.	categories of Prescribed Premises as set out in Schedule 1 of the EP Regulations
CEO	for the purpose of correspondence means; Chief Executive Officer Department Administering the *Environmental Protection Act 1986* Locked Bag 10 JOONDALUP DC WA 6919 Email: info@dwer.wa.gov.au;
Delegated Officer	an officer delegated under section 20 of the EP Act
DMIRS	means Department of Mines, Industry Regulation and Safety
DWER	means Department of Water and Environmental Regulation
EP Act	*Environmental Protection Act 1986* (WA)
EP Regulations	*Environmental Protection Regulations 1987* (WA)
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	Galaxy Lithium Australia Limited
m^3	cubic metres
mbgl	metre(s) below ground level
mg/L	milligrams per litre
m/s	metre(s) per second
Mtpa	Million tonnes per annum
Mining Act	*Mining Act 1978* (WA)

Noise Regulations	*Environmental Protection (Noise) Regulations 1997* (WA)
ONMP	Operational Noise Management Plan (2016) revision 5 dated 12 July 2017 reference 12843-5-10196
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*
RL	refers to the term 'Relative Level' and is the height or elevation above the point adopted as the site datum for the purpose of establishing levels.
TSF	Tailings Storage Facility

Amendment Notice

This amendment is made pursuant to 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.

This licence Amendment Notice (5) assesses the relocation of the optical sorter circuit approved under Amendment Notice 3 onto the Run of Mine (ROM) pad. It also includes the construction and operation of a two stage crushing circuit on the ROM, construction of acoustic noise barrier on the ROM and a realignment of the Premises southern boundary.

This proposal will not lead to an increase in annual production capacity of 2.0 million tonnes per annum (Mtpa) and the annual tonnage of TSF waste to be deposited will remain at 324,000 tonnes per annum.

The following DWER guidance statements have informed the decision made on this amendment*;*

- *Guidance Statement: Regulatory Principles (July 2015)*
- *Guidance Statement: Setting Conditions (October 2015)*
- *Guidance Statement: Decision Making (February 2017)*
- *Guidance Statement: Risk Assessment (February 2017)*
- *Guidance Statement: Environmental Siting (November 2016)*

Amendment description

On 15 January 2019, the Licence Holder submitted a licence amendment application which is the subject of this Amendment Notice. Supporting documents to the licence amendment application included project description, infrastructure maps, process plant flow diagram, key infrastructure and equipment, emissions and discharges risk assessment, commissioning commitment, monitoring processes during commissioning and Environmental Noise Assessment. Two further emails were received on 7 February 2019 (A1772915 & A1772981) requesting the construction of four (4) new TSF monitoring bores plus a realignment of the southern Premises boundary being an administrative change. On 19 March 2019 the request to construct 4 new monitoring bores was withdrawn by the Licence Holder.

The new key infrastructure and equipment to be relocated or installed on the ROM are:

- Two stage crushing circuit (new infrastructure)
- optical sorter circuit (to be relocated on the ROM pad)
- 6 m acoustic barrier (new infrastructure)

The crushing/optical sorting system will be relocated to an area located upon the ROM pad. The optical sorters will be located on a structure that also supports the crushing circuit. The circuits will include two optical sorters, a jaw crusher, cone crusher, wet/dry screens and conveyors. Basalt contaminated ore will be fed into the circuit, with the fines component (<25mm) separated out in the crushing area and stacked to be removed to the existing coarse reject stockpile. The coarse component (>25mm) will continue through to the optical sorting circuit where the basalt is removed from the ore and dry stockpiled with the coarse rejects. The processed ore will be stacked on the ROM and fed into the wet process plant.

Material from the waste dump will be reprocessed through the Optical Sorter circuit therefore improving waste to ore separation reducing ore loss to the waste dump, lower stripping ratios, resulting in more ore available for wet processing plant.

The optical sorter units will have an open bottom acoustically lined sheet metal enclosure with open end conveyor entrance. A 6 m noise barrier will be installed on the north side of the jaw crusher, nominally 2.5 m above the 'jaw' of the jaw crusher to assist in reducing nuisance noise received by sensitive receptors. Additional noise emissions may result from the installation of the secondary crushing circuit that was modelled by Herring Storer Acoustics who presented an Environment Noise Assessment (Attachment 8.1) that is provided as a supporting document with the application.

The throughput capacity of 2.0 Mtpa for Category 5 processing and beneficiation of metallic and non-metallic ore activities will not change due to this construction. Consideration of the second proposed TSF wall lift (4) approved in expired Works Approval W4533/2009/1 and reassessed in Amendment Notice 4 will be deferred pending receipt of information required by Improvement Condition 4.1.1, IR2 and IR3 of Amendment Notice 4.

DWER reviewed the Application and supporting documentation and confirmed the key infrastructure and equipment that will be assessed during construction, commissioning and operations. No clearing approval is required on the land where this proposal is located.

The emissions associated with the construction and operation of optical sorter and two stage crushing circuits will be risk assessed in this report to determine impacts upon the environment and public health (see Table 9 & 10 below). The boundary realignment as an administrative change, and therefore will not be assessed in this report.

Environmental Noise Assessment

Herring Storer Acoustics Environment Noise Assessment dated January 2019 and provided as a supporting document with the application was reviewed by DWER.

The noise assessment compared the new crushing circuit and relocated optical sorter system, in conjunction with the existing Galaxy operations. It predicted the noise emissions from the jaw crusher may emit 'tonal' noise characteristics during crushing of lumpy and hard ore and therefore a 6 metre high acoustic barrier on the north side of the jaw crusher to be constructed to attenuate nuisance noise emission particularly to protect receptor R5 see figure 1.

The Environment Noise Assessment was review by DWER with results summarised below and described in this reports in section titled "Risk Assessment".

1. The Environmental Noise Assessment completed by HSA dated January 2019 has acceptable data inputs, and the model predictions that demonstrate compliance with the *Environmental Protection (Noise) Regulation 1997*;

2. The noise emissions from the proposed TSF waste dump (not part of this application) and ROM crusher/optical sorter circuits will likely comply with the requirements of the Noise Regulations, alone and cumulative with the existing processing plant and mining operations during day time hours;
3. The ROM optical sorter (excluding the crushing circuit) is set to operate using stockpiled ore, until the stockpiled ore is exhausted or not later than 10 pm daily. . The noise emissions from the ROM optical sorter circuits will be compliant during the daytime and evening hours cumulative with the existing processing plant and mining operations as prescribed by the *Environmental Protection (Noise) Regulations 1997*.
4. The 6m high noise barrier proposed to be located north for the ROM jaw crusher is sufficient to ensure the noise compliance at receptor R5 during daytime and evening operation.

Other approvals

The Licence Holder has provided the following information relating to other approvals as outlined in Table 2.

Table 2: Relevant approvals

Legislation	Number	Approval
Mining Act 1978 (WA) *(Department of Mines, Industry Regulation and Safety)*	Registration Id: 22377 and 26415 (TSF) plus subsequent Amendments	Ravensthorpe Spodumene Project was granted mining approval on 4 November 2009 and Mining Tenement M74/244 was granted on 24 December 2009.
Environmental Protection Act 1986 (WA) *(delegated to Department of Mines, Industry Regulation and Safety)*	Native Vegetation Clearing Permit CPS #3045/5- Granted 22/08/2009 expiring on 31/07/2024.	Approval to clear 15 ha within part of Mining Tenement M74/244.
Environmental Protection Act 1986 (WA) *(Department of Water and Environmental Regulation)*	Environmental Protection Authority approval Part IV design capacity: (2 Mtpa)	Not assessed Part IV up to 2 Mtpa design capacity
Rights in Water and Irrigation Act 1914 (WA) *(Department of Water and Environmental Regulation)*	GWL167439(5) – expire 18/2/2026 CAW167437(1) - CAW169547(1) – CAW170586(1) -	Process plant – 1.095 GL/yr Construct wells Construct wells Construct wells

Amendment history

Table 3 provides the amendment history for L8469/2010/2.

Table 3 Licence amendments

Instrument	Issued	Amendment
W4533/2009/1	19/06/2009	New works approval for premises construction
W4533/2009/1	8/07/2010	Works approval amendment (removal of Phase 2)
W4533/2009/1	11/10/2010	Works approval amendment (removal of spill trays under conveyors)
L8469/2010/1	14/10/2010	New licence issued for premises operation
L8469/2010/1	7/07/2011	Licence amendment (noise management requirements)
L8469/2010/1	24/05/2012	Licence amendment (TSF manual revision)
W4533/2009/1	24/05/2012	Works approval amendment (extension to expiry for TSF lifts)
W4533/2009/1	17/01/2013	Works approval amendment (reflux classifier)
L8469/2010/2	3/10/2013	Licence reissue

L8469/2010/2	4/09/2014	Licence amendment (groundwater management and conversion to latest DER licence format).
L8469/2010/2	29/04/2016	Amendment Notice 1 granted to extend expiry date to 13 October 2029
L8469/2010/2	02/06/2016	Licence amendment application to include construction of temporary tailings stockpile area and inclusion of reflux classifiers and lithium belt filter into the wet process plant circuit.
L8469/2010/2	27/03/2018	Amendment Notice 2 granted to increased throughput capacity, remove construction Compliance Report requirements plus reference new acoustics reports and monitoring, minor changes to premise operation conditions, minor changes to monitoring of inputs and outputs and replace Premises maps in Schedule 1. This amendment includes the transfer of Licence from Galaxy Resources Limited to Galaxy Lithium Australia Limited.
L8469/2010/2	21/06/2018	Amendment Notice 3 granted to increase throughput capacity to 2.0 Mtpa, construct, install and commission the feed upgrade circuit, ultrafine dense mass separation (DMS) circuit including a wet high intensity magnetic separator (WHIMS) for tantalite recovery, secondary float re-liberation circuit including a dewatering screw classifier and upgrades to the product circuit.
L8469/2010/2	25/01/2019	Amendment Notice 4 granted to include TSF cell 1 wall lift 3 to final RL height of 280.3m.
L8469/2010/2	04/04/2019	Amendment Notice 5 granted to include ROM crusher and optical sorter circuits, 6m high noise barrier on ROM and Premises southern boundary realignment.

Location and receptors

Table 4 lists the relevant sensitive receptors in the vicinity of the primary activity with a location plan enclosed in Figure 1 of this report.

Table 4: Receptors and distance from prescribed activity

Residential and sensitive premises	Distance from Prescribed Premises
Farm residence #1	*Located 1.850 km north west of process plant and residence has been acquired by Galaxy.*
Demountable accommodation #2	*Located 2.160 km south-south-east of process plant*
Residence #4	*Located 3.430 km east of the process plant and residence owned by the Applicant.*
Farm residence #5	*Located 2.215 km north west of process plant*
Residence #6	*Located 2.560 km south east of process plant.*
Accommodation Camp #8	*Located 2.620 km south east of process plant.*
Farm residence #9	*Located 1.975 km south of process plant.*
Farm residence #10	*Located 2.320 km south west of process plant.*
Residential – Township of Ravensthorpe	*Located ~ 2.650 km east southeast of process plant.*

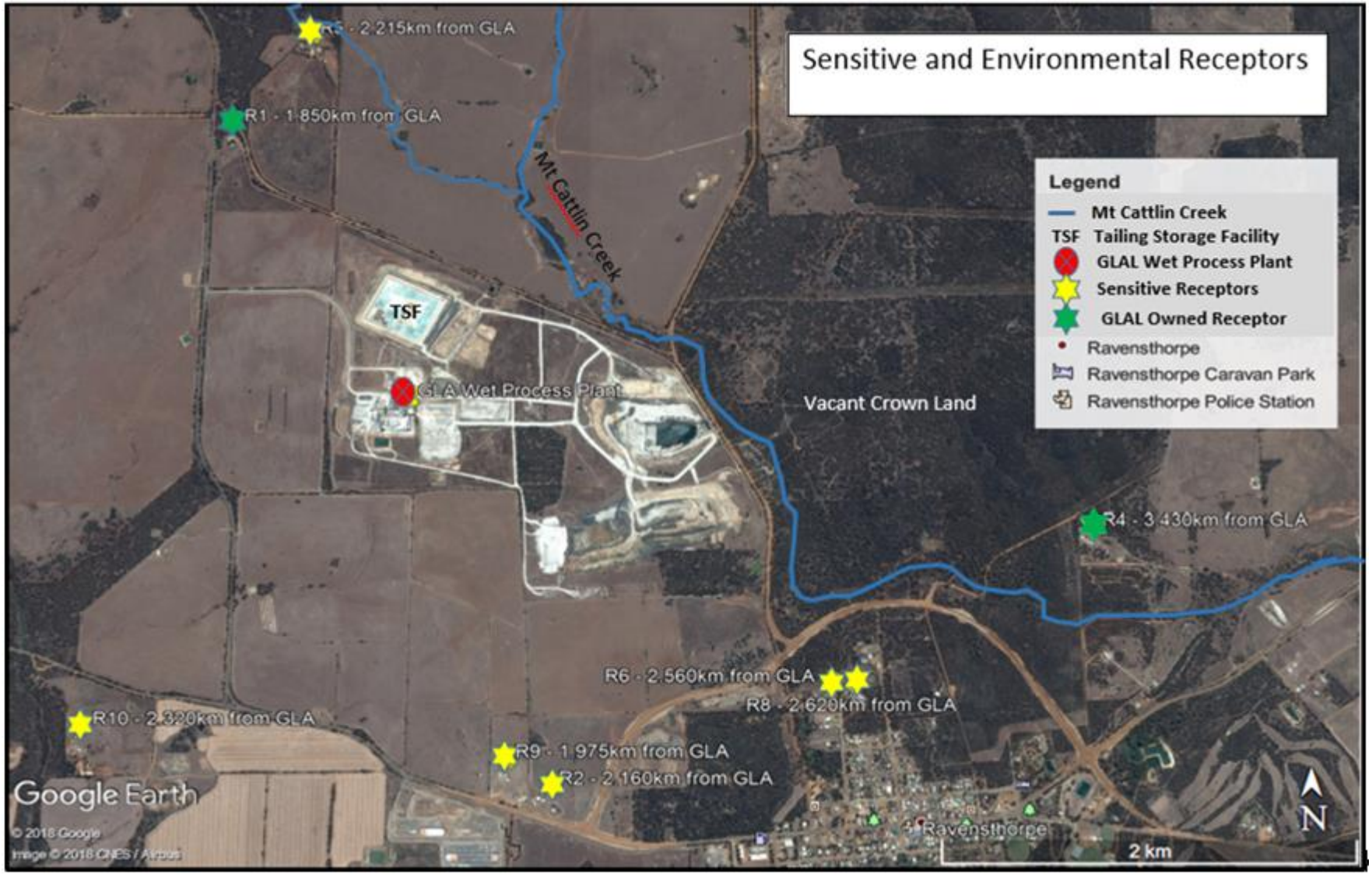
Table 5 below lists the closest relevant environmental receptors in the vicinity of the prescribed Premises relevant to the proposed amendment.

Table 5: Environmental receptors and distance from activity boundary

Environmental receptors	Distance from Prescribed Premises
Kondinin-Ravensthorpe Groundwater Area (GWA)	*Ravensthorpe Mt Cattlin Spodumene project is part located in the GWA*
Groundwater Production Bores	*There are no other registered groundwater users within 3 km of the Mt Cattlin Spodumene project.*
Mt Cattlin Creek	*Directly east of prescribed premises*
Remnant native vegetation (Habitat for threatened fauna species)	*Directly east of prescribed premises*
Esperance Coastal Hydrographic	*Ravensthorpe Mt Cattlin Spodumene Project is located in the Cattlin*

Catchment	*Creek catchment bounded by Jerdacuttup River and Phillips River.*
Native Title Claims	*Ravensthorpe Mt Cattlin Spodumene Project is located in the; Single Noongar Claim (Area 1) – Cth claim* *Wagyl Kaip – NNTT registered* *Southern Noongar – NNTT registered*
Clearing Regulation - Environmentally Sensitive Areas (ESA's)	*Premises is located 5.4 km south and 8.6 km north east of restricted clearing Environmentally Sensitive Area.*
Parks and Wildlife managed lands and water	*Overshot Nature Reserve located 2 km north north-west of the Mt Cattlin Spodumene project.* *Vacant Crown Lands located immediately east of the project.*
Ecological communities (TEC's and PEC's)	*Closest Threatened Ecological Community (TEC) is located 1.3km south of the prescribed Premises boundary and 3km south east of the TSF.* *Priority Ecological Community (PEC) is 6.7km east.*
Threatened / Priority Flora	*Threatened flora located 4km northeast of the prescribed Premises boundary (eastern boundary).* *Priority flora located 3.7km south east of the southern boundary.*
Threatened / Priority Fauna	*Closest Threatened fauna recorded immediately east in the vacant crown lands from the Prescribed Premises boundary.*

Figure 1: Plan indicating location of sensitive and environmental receptors



Risk Assessment Methodology

The risk assessment following utilizes the risk rating matrix as shown in Table 6. The risk criteria used in the matrix below is further defined in Table 7 below.

Table 6 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

Table 7: Risk criteria definitions (taken from DER's Guidance Statement: Risk Assessments)

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

Likelihood	
The following criteria has been used to determine the likelihood of the Risk Event occurring.	
Almost Certain	The risk event is expected to occur in most circumstances
Unlikely	The risk event will probably not occur in most circumstances
Rare	The risk event may only occur in exceptional circumstances

Consequence		
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)**
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
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
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.

DWER will determine the acceptability and treatment of Risk Events in accordance with the Risk treatment table 8 below:

Table 8: 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.

Risk assessment

Table 9 and 10 below describes the Risk Events associated with the amendment consistent with the *Guidance Statement: Risk Assessments*. This table identifies whether the emissions present a material risk to public health or the environment, requiring regulatory controls.

Table 9: Risk assessment for proposed amendments during construction

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 5 *Processing or beneficiation of metallic or non-metallic ore*	*Construction of ROM optical Sorter circuit, 6 metres high noise barrier north of jaw crusher, two stage crusher circuit, laydown areas earth works, plant and vehicle movements.*	***Dust:*** *Release of particulate matter from construction activities including earthworks, vehicle movements and civil works.*	***Nearby Residents:*** *Located greater than 1.8 km north west from ROM.*	***Air:*** *Wind dispersion*	*Health and amenity impacts*	*Slight*	*Possible*	*Low*	*Dust generated during construction will be managed in accordance with latest version of Airborne Material Management Plan (AMMP) 2018 conditioned by the licence (2.1.1 & 2.1.2) that includes a stop activity clause during inclement weather conditions.* *Water trucks will be utilized during construction activities plus speed limits imposed to reduce dust generation by vehicles and construction machinery on internal mine site roads and ROM laydown area.* *The general provisions of the EP Act will apply during construction activities.* *The overall risk rating of construction dust impacting residence and local flora is assessed as "low" because dust generated during construction will be short term and sufficient distance from receptors.*
			Local Flora species *Located greater than 1km east of ROM*		*Impact to native vegetation health*	*Slight*	*Possible*	*Low*	
		Noise: *Noise associated with equipment and machinery plus vehicles use during construction*	***Nearby Residents:*** *Located greater than 1.8 km north west from ROM.*	***Air:*** *Wind dispersion*	*Health and amenity impacts*	*Slight*	*Possible*	*Low*	*Noise generated during construction activities is expected to comply with the provisions of the* Environmental Protection (Noise) Regulations 1997 (WA). *Controls imposed by the Licence Holder during construction will be implemented as described in the latest version of the Operational Noise Management Plan (ONMP) 2018.* *The ROM optical sorter circuit will be housed in an acoustic insulation lined purpose built structure with a roof and three sides and one open end for conveyor infrastructure.* *Compliance Report requires the construction of a 6m high by 40m long noise barrier north of the jaw crusher.*

Table 10: Risk assessment for proposed amendment during commissioning and operation

Risk Event						Consequence rating	Likelihood rating	Risk	Reasoning
Source/Activities		**Potential emissions**	**Potential receptors**	**Potential pathway**	**Potential adverse impacts**				
Cat 5 *Processing or beneficiation of metallic or non-metallic ore*	*Commissioning and Operation of ROM optical sorter circuit and two stage crusher circuit.*	***Dust:*** *Release of particulate matter from commissioning and operational activities including crusher, screens, optical sorters and conveyors.*	***Nearby Residents:*** *Located greater than 1.8 km north west from ROM.*	***Air:*** *Wind dispersion*	*Health and amenity impacts*	*Slight*	*Possible*	*Medium*	*Dust generated during commissioning and operations is assessed as "Medium" because dust emissions can be controlled and monitored in accordance with latest version of Airborne Material Management Plan (AMMP) 2018 conditioned by the licence (2.1.1 & 2.1.2).* *The ROM Optical Sorter and Crushing circuits are greater than 1.8km from residents and 1km from local flora and is not expected to release fugitive dust during commissioning and operation because dust suppression systems (sprinklers using water), will be installed, inspected daily and maintained on optical sorters, screens, crushers, conveyors, material transfer points.* *A shut down or reduce operations clause is included in the AMMP which controls dust generating activity during inclement weather conditions.* *The general provisions of the EP Act apply during commissioning and operational activities.* *Conditions of the licence are sufficient to address dust control measures so no further regulation is required.*
			Local Flora species *Located greater than 1km east of ROM*		*Impact to native vegetation health*	*Slight*	*Possible*	*Medium*	
		Noise: *Noise associated with equipment and machinery plus vehicles use during construction*	***Nearby Residents:*** *Located greater than 1.8 km north west from ROM..*	***Air:*** *Wind dispersion*	*Health and amenity impacts*	*Slight*	*Possible*	*Medium*	*Noise generated during commissioning and operational activities is assessed as "Medium" risk as controls are required at the Premises to ensure noise emissions comply with the provisions of the* Environmental Protection (Noise) Regulations 1997 (WA). *DWER's review of the Environmental Noise Assessment dated January 2019 concluded that noise associated with the ROM Optical Sorter and Crusher circuits during the day will comply with the* Environmental Protection (Noise) Regulations 1997 (WA). *The processing plant day-time, evening and night-time noise levels will also comply with the Noise Regulations.* *Licence condition 1.2.11 will be amended to prevent the ROM two stage Crusher circuit*

									operations during evening and night time operations. *Pumps, blowers, bearings, pulleys, conveyors will be managed by Licence Holder employing plant maintenance and replacement program ensuring plant and ROM crusher noise emissions remain compliant with Noise Regulations.* *The 6 m high noise barrier 40 metres long will be located on the northern side of the jaw crusher to reduce noise to the north of the ROM. A new condition 1.2.14 to maintain this barrier will be included in the Licence.* *The ONMP dated May 2017 submitted and authorised in Amendment Notice 3 contains management commitments such as;* *Verification of sound power levels of installed equipment during commissioning;* *Monitoring key sensitive receptors during commissioning;* *Assessment and adjustments to monitoring of key receptors during operation; and,* *Annual noise emission monitoring.* *These requirements are expected to be completed and reported in the Commission Report required by new condition 5.1.10(d). Existing condition 2.2.1 includes the latest version (5) of Galaxy's ONMP dated 12 July 2017 and remains current.* *Licence Conditions 1.2.11, 1.2.12 & 1.2.13 will be amended to reference controls for the two stage crusher circuit and Optical Sorter circuit located on the ROM pad.*

Decision

The potential emissions associated with the construction of 6 metres high ROM noise barrier, construction, commissioning and operation of ROM optical sorters and two stage crushing circuit and are;

- Fugitive dust and nuisance noise during construction activities;
- Fugitive dust and nuisance noise generated from the commissioning and operation of ROM optical sorters and crushing circuits;

DWER has considered the overall risk of the emissions upon local receptors together with the Licence Holder's proposed management controls and determined the proposed amendments will not result in emissions which are unacceptable to public health or the environment and therefore grants the Licence amendment to complete installation of ROM optical sorters and two stage crushing circuits, ROM 6 m high noise barrier and the administrative changes to the southern boundary realignment of the Premises.

The Licence is amended by;

- Add definition for 'ROM', '
- New Condition 1.2.14 requiring the noise barrier to be maintained.
- New condition 1.2.19 and 1.2.20 is an administrative condition explaining the infrastructure that will be constructed at the ROM.
- New Condition 5.1.9 requiring compliance reporting once construction has been completed.
- New Condition 5.1.10 requiring compliance reporting once commissioning has been completed.
- Amend licence conditions 1.2.11, 1.2.12 & 1.2.13 to reference the ROM optical sorter circuit, crusher circuit and 6 m high ROM noise barrier.
- Replace the schedule 1 "premises plan" with south west boundary of premises realigned as an administrative change.

Changes to the Licence have been made in accordance with DWER administrative changes including the name, logo and contacts for the Department and redefining terms in the licence.

The DWER determined the Galaxy Premises risk remains unchanged following the completion of the upgrade and relocation to the ROM of the Optical Sorter circuit and the ROM two stage Crushing circuit within the plant processes, 6 m high ROM noise barrier and the southern boundary realignment.

Licence Holder's comments

The Licence Holder was provided with the draft Amendment Notice on 2 April 2019. Comments received from the Licence Holder have been considered by the Delegated Officer as shown in Appendix 2.

Amendment

1. New definitions

   Definitions of the Licence are amended by insertion of a new definition shown in red text below:

   'ROM' means the "run of mine" pad as indicated in Schedule 1 Premises map.

2. New Licence conditions

New conditions 1.2.14, 1.2.19, 1.2.20, 5.1.9 and 5.1.10 in red text are administrative conditions explaining what will be constructed at the ROM optical sorter circuit, ROM 6 metre high 40 metre long noise barrier and ROM two stage crusher circuit plus describes what construction needs to be certified and a compliance certificate submitted to the CEO following commissioning and construction.

1.2.14 The Licence Holder must maintain the 6m high and 40m long ROM noise barrier in the location as indicated in Schedule 2 plan titled "Location of 6m high Noise Barrier on the ROM pad".

1.2.19 The License Holder must install ROM optical sorter circuit, ROM 6 metres high noise barrier and ROM two stage crusher circuit in the location as indicated in Schedule 2 plan titled "ROM two stage crushing and optical sorter circuit plus 6 metre high noise barrier".

1.2.20 The License Holder must complete installation of ROM optical sorter circuit, ROM 6 metres high noise barrier and ROM two stage crusher circuit in accordance with the documentation listed in Table 1.2.17 and in the location depicted in Schedule 2 titled "ROM two stage crushing and optical sorter circuit plus 6 metre high noise barrier":

Table 1.2.17: Construction requirements[1]

Document	Parts	Date of Document
Galaxy Lithium Australia Limited: DWER Licence Amendment Application Attachment 3A by Tetris Environmental dated 15 January 2019	Attachment 3A	January 2019
1.2.2 Key Infrastructure optical sorter, two stage crusher & 6m high 40m long noise barrier	Section 1.2.2	
1.2.3 Feed upgrade circuit	Section 1.2.3	
1.5 Construction	Section 1.5	
1.6 Commissioning and Operation	Section 1.6	
1.6.6 Commissioning Report	Section 1.6.6	
1.6.7 Responsibilities	Section 1.6.7	
Application to amend the Ravensthorpe Spodumene Project prescribed Premises Licence L8469/2010/2 and Attachment 3A supporting document part;	Attachment 3A	11 April 2018
1. Equipment to be installed including optical sorter acoustic lined purpose built structure	Appendix 1	
Galaxy Lithium Australia Limited: Environmental Noise Assessment Mt Cattlin Operations, Crusher/Process system noise emissions in combination with ROM Crusher/Optical Sorter System by Herring Storer Acoustics dated January 2019 – reference 23882-4-18251	Appendix B	January 2019
Appendix B – 6m high 40m long Acoustic Barrier Map reference 16219 Run 4704B	16219 run 4704B	

5.1.9 The licence holder must within 30 days of each item of infrastructure required by condition 1.2.20 and table 1.2.17 being constructed:

a) undertake an audit of their compliance with the requirements of condition 1.2.17; and

b) prepare and submit to the CEO an audit report of that compliance.

5.1.10 The audit report required by condition 5.1.9, must:

(a) be certified by the supervising engineer that each item of infrastructure listed in Table 1.2.17 meets the corresponding specifications and at the locations set out in Table 1.2.17 and has been constructed with no material defects;
(b) contain an 'as constructed plan' for the works that show the infrastructure;
(c) be signed by a person authorised to represent the licence holder and contains the printed name and position of that person within the company; and,
(d) include a commissioning report demonstrating that the infrastructure operates as designed.

3. Licence condition 1.2.11, 1.2.12 & 1.2.13 are amended by the deletion of the text shown in strikethrough and the insertion of the bold red text shown below.

1.2.11 The License Holder must ensure the **ROM two stage crusher circuit** ~~modular crushing units~~ do not operate ~~at night~~ between **7:00** ~~10:00~~ pm till 7:00 am.

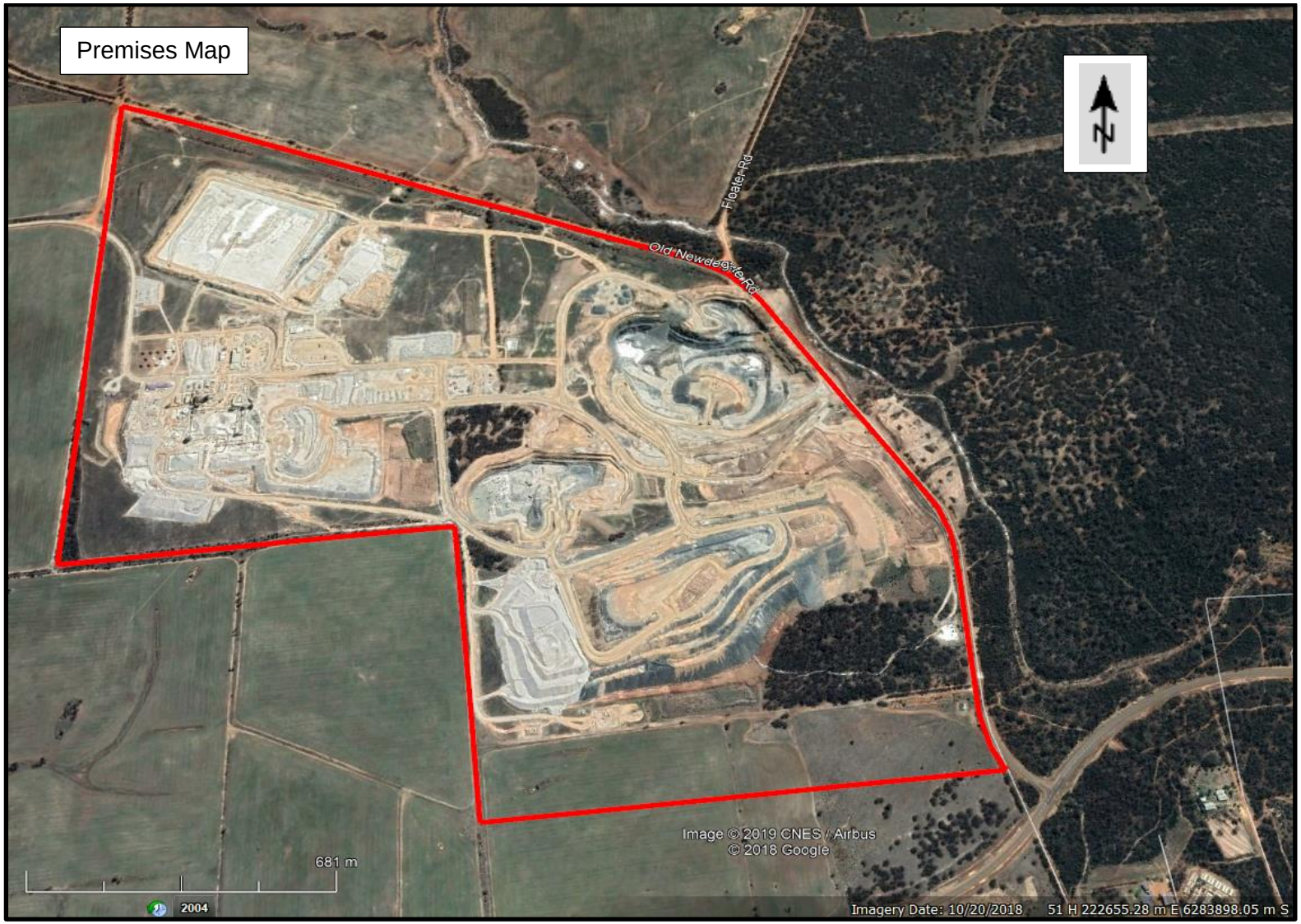
1.2.12 The License Holder must ensure the **ROM optical sorter circuit** do not operate ~~at night~~ between 10:00 pm till 7:00 am.

1.2.13 The License Holder must ensure the **ROM optical sorter circuit and ROM two stage crusher circuit** ~~modular crushing unit is~~ **are** located on the **ROM** ~~crusher~~ pad ~~between~~ **on** the southern side of the **ROM 6 metre noise barrier.** ~~processing plant within acoustics barrier.~~

4. Replace Schedule 1 "Premises Map" as shown following.

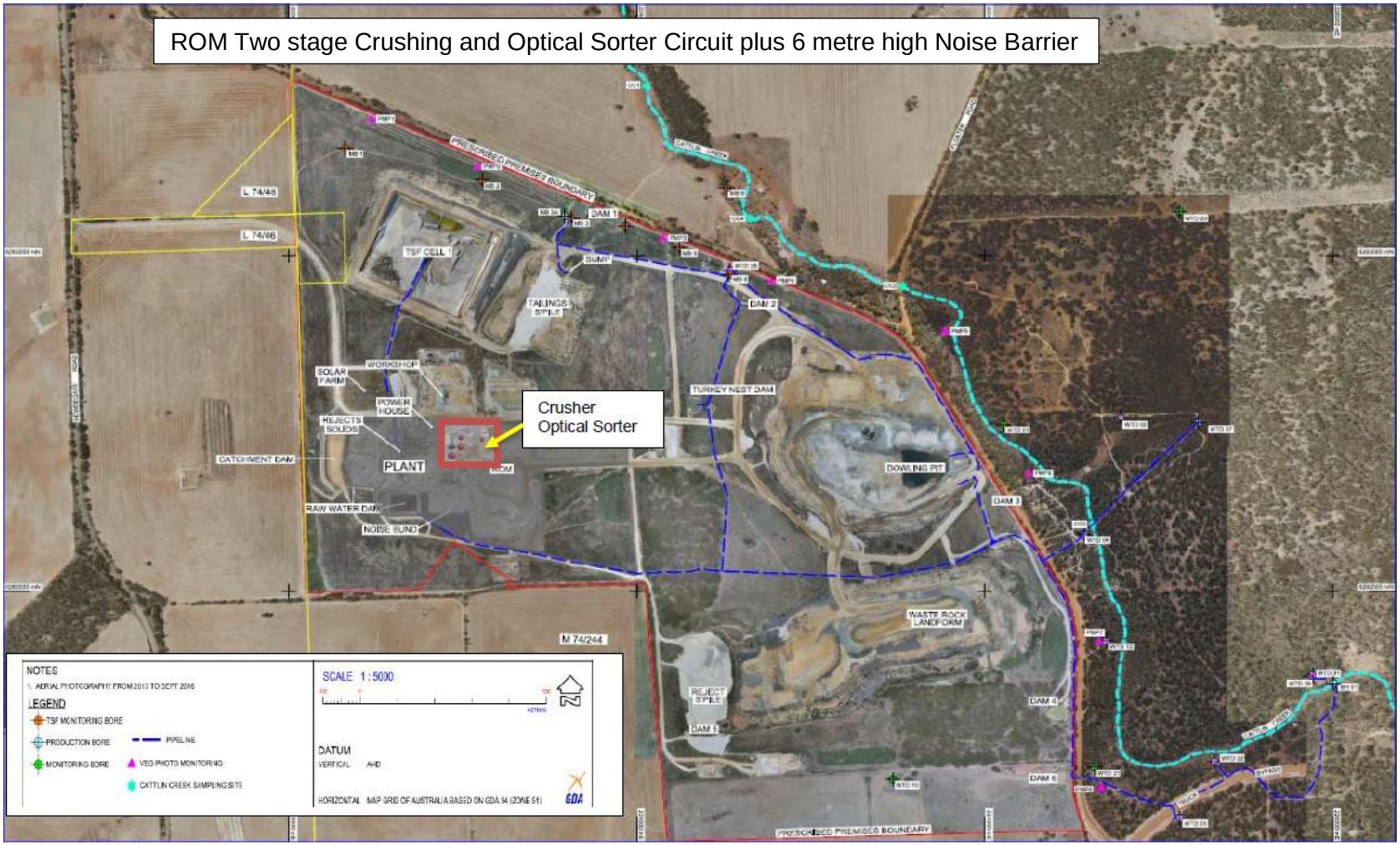
Schedule 1 – Premise Map

The Premises is shown in the map below. The red line depicts the Premises boundary.



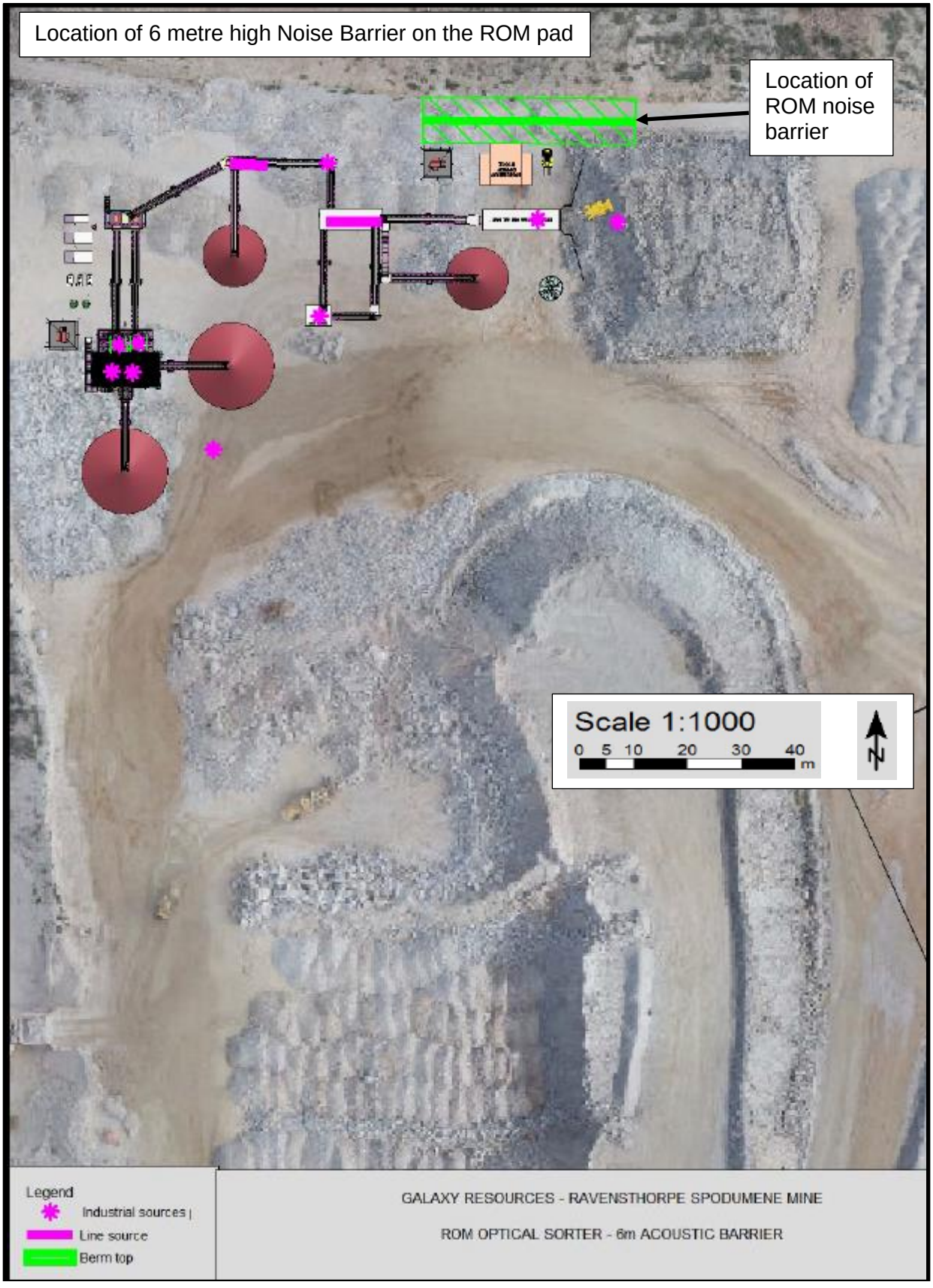
Schedule 2 – ROM Two stage Crushing and Optical Sorter Circuit and 6 metre high Noise Barrier

The relocation of the two stage crusher and optical sorter circuits as amendment from Amendment Notice 3 authorised on 20 June 2018.



Schedule 2 – Noise Barrier relocation onto the ROM pad

The location of ROM 6 metre high noise barrier.



Appendix 1: Key documents

	Document title	In text ref	Availability
1	Licence L8469/2010/2 – Ravensthorpe Spodumene Project issued 3 October 2013 and amended 2 June 2016	L8469/2010/2	accessed at https://www.der.wa.gov.au/our-work/licences-and-works-approvals/current-licences
2	Works Approval W4533/2009/1 – Ravensthorpe Spodumene Project amended 24 May 2012	W4533/2009/1	accessed at https://www.der.wa.gov.au/our-work/licences-and-works-approvals/current-licences
3	Application for amendment of Licence L8469/2010/2 dated 15 January 2019	Application	DWER records A1761576
4	Supporting documentation to the application to amend Licence L8469/2010/2 dated 15 January 2019 Attachments 3A, 6A & 8	Supporting documents	DWER records A1761577 to A1761579
5	Galaxy Lithium Australia Limited – Operational Noise Management Plan – 17 August 2018 – revision 5	ONMP	DWER record A1737713
6	Galaxy Airborne Material Management Plan (2010) revised September 2017, amended 20 August 2018 – reference GLA-MTC-AMMP-Rev 2.0-0917.	AMMP	DWER record A1737711
7	Amendment Notice 2 issued 27 March 2018, Amendment Notice 3 issued 20 June 2018 and Amendment Notice 4 issued 25 January 2019 to Galaxy Lithium Australia Limited	Amendment Notice 2, 3 & 4	accessed at https://www.der.wa.gov.au/our-work/licences-and-works-approvals/current-licences
8	Email titled “TSF Monitoring – bore location” created on 7 February 2019 by Galaxy.	Email 7 February 2019	DWER record A1772915 & A1772917
9	Email titled “GLAL L8469 PP Boundary amend” created on 7 February 2019 by Galaxy.	Email 7 February 2019	DWER record A1772981
10	Noise Regulation Branch advice provided in document titled “2019 02 14 Noise advice” dated 14 February 2019	DWER Noise advice	DWER record A1772910
11	Email titled “RE: L8469 amendment – optical sorters” created on 19 March 2019 by DWER and response by Galaxy	Email 19 March 2019	DWER record A1775404
12	DER, July 2015. *Guidance Statement: Regulatory principles.* Department of Environment Regulation, Perth.	DER 2015a	accessed at https://www.der.wa.gov.au/our-work/regulatory-framework
13	DER, October 2015. *Guidance Statement: Setting conditions.* Department of Environment Regulation, Perth.	DER 2015b	
14	DER, November 2016. *Guidance Statement: Environmental Siting.* Department of Environment Regulation, Perth.	DER 2016a	
15	DER, February 2017. *Guidance Statement: Risk Assessments*. Department of Environment Regulation, Perth.	DER 2017a	
16	DER, February 2017. *Guidance Statement: Decision Making*. Department of Environment Regulation, Perth.	DER 2017b	

Appendix 2: Summary of Licence Holder comments

The Licence Holder was provided with the draft Amendment Notice on 2 April 2019 for review and comment. The Licence Holder responded on 4 April 2019 with the following comments received about the draft Amendment Notice.

Condition	Summary of Licence Holder comment	DWER response
Figure 1	Requested that Figure 1 of the Amendment Notice be altered to reflect that Galaxy is the current owner of sensitive receptor number 4.	Agreed and Figure 1 was altered.