



Application for Licence Amendment

Division 3, Part V *Environmental Protection Act 1986*

Applicant:	Roy Hill Infrastructure Pty Ltd
ACN:	130 249 633
Licence Number:	L8967/2016/1
File Number:	DWER2016/000615
Premises:	<p>Roy Hill Port Bulk Handling Facility and Screening Plant</p> <p>Part of Lot 370 on Deposited Plan 35619 Certificate of Title Volume LR3118 Folio 753</p> <p>Part of Lot 372 on Deposited Plan 35620 Certificate of Title Volume LR3118 Folio 755</p> <p>Reserve 50892</p> <p>within coordinates as defined in Schedule 1 of the Issued Licence</p>
Date of report:	Tuesday, 7 April 2020
Status of Report	Final

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Attachment 1: Amended Licence L8967/2016/1

1. Definitions of terms and acronyms

Table 1: Definitions of terms and acronyms

Term	Definition
ACN	Australian Company Number
Amended Licence	means Reviewed Licence L8967/2016/1 as amended 7 April 2020 under Part V, Division 3 of the EP Act following the finalisation of this Decision Report.
Amendment Application	the application submitted to DWER by Roy Hill Infrastructure Pty Ltd 26 September 2019
Amendment Report	refers to this document.
Delegated Officer	An officer under section 20 of the EP Act.
DoH	Department of Health
DWER	Department of Water and Environmental Regulation
EP Act	<i>Environmental Protection Act 1986</i>
EP Regulations	<i>Environmental Protection Regulations 1987</i>
HRA	Port Hedland Air Quality Health Risk Assessment for Particulate Matter (published by DoH, January 2016)
Licence Holder	Roy Hill Infrastructure Pty Ltd
Mtpa	Million tonnes per annum
PHIC	Port Hedland Industries Council
PM	Particulate Matter
PM ₁₀	describes particulate matter that is equal to or smaller than 10µm in diameter.
Prescribed Premises	has the same meaning given to that term under the EP Act.
Premises	the Roy Hill Port Bulk Handling Facility and Screening Plant as listed on the cover page of the Licence as the Premises
Primary Activities	is defined in DWER's <i>Guidance Statement: Risk Assessments</i> to include the primary activities which fall within the description of the category of prescribed premises in Schedule 1 to the EP Regulations.
Risk Event	As described in <i>Guidance Statement: Risk Assessment</i>
µg/m ³	micrograms per cubic metre

2. Amendment description

Roy Hill Infrastructure Pty Ltd (the Licence Holder) operates the Roy Hill Port Bulk Handling Facility and Screening Plant (the Premises), which is a Prescribed Premises under the *Environmental Protection Act 1986* (EP Act).

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.

Environmental risks associated with the Premises were most recently assessed and Licence L8967/2016/1 amended on 3 December 2018, by the Department of Water and Environmental Regulation (DWER). The purpose of this amendment was to authorise an increase in production capacity at the Premises from 55 million tonnes per year (Mtpa) to 60Mtpa.

On 26 September 2019, the Licence Holder submitted an application (Amendment Application) to modify the Premises boundary and amend Improvement requirements specified in the licence amended 3 December 2018.

2.1 Improvement requirements

At the time of amending the Licence to authorise a throughput increase to 60 million tonnes per annum (Mtpa), the Delegated Officer determined it necessary to require the Licence Holder to revegetate the disused cleared area to the south of the stockyard, depicted as Stage 1 and Stage 2 in Figure 1.

On 18 December 2018, the Licence Holder completed the revegetation of the Stage 1 area, which was used as a trial to ensure the effectiveness of the rehabilitation program prior to revegetating the large Stage 2 area. Stage 1 revegetation involved compaction ripping, spreading of topsoil, scarification and seeding of native species. Although similar methods had been applied to successful rehabilitation programs elsewhere, the Licence Holder recorded no germination of plants seeded at the Premises. A review of the soil profile identified that the lack of germination is likely due to the capillary rise of salt through the topsoil.

The Licence Holder has committed to the long term objective of rehabilitating cleared areas at the Premises and will investigate alternate methods that promote germination. In the meantime, the Licence Holder has requested an amendment to Licence L8967/2016/1 to replace conditions for revegetation with requirement to apply surface binding agents across Stage 2.

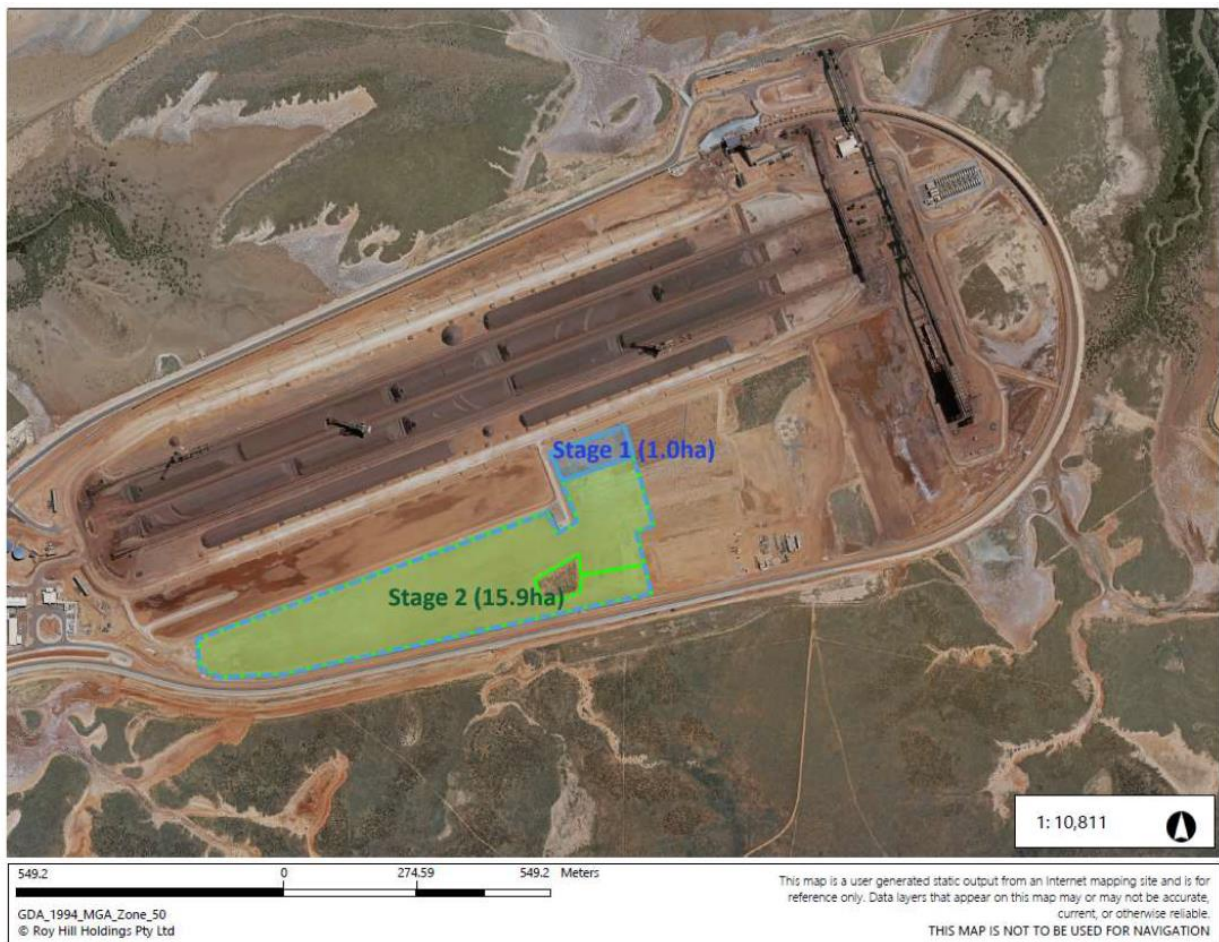


Figure 1: Cleared area for surface binding treatment (Stage 2)

2.2 Premises boundary amendment

The Roy Hill Port Facility is located on land vested in the Pilbara Port Authority, which has been leased to the Licence Holder since 30 June 2011 under the *Land Administration Act 1997*. Pilbara Ports Authority has recently changed the lease boundary and the Licence Holder has sought, through the Amendment Application, a change to the Premises boundary to align with the lease area.

Changes to the Premises boundary have been requested to include the area of the former Port Temporary Power Station that was previously excised from Licence L8967/2016/1 and regulated under a separate operating licence.

3. Decision

Revegetation conditions placed on the Licence were originally intended to ensure that dust from the Premises has no additional contribution to the cumulative airshed following the increase in throughput and fines content. However, trialled rehabilitation methods proved unsuccessful at the Stage 1 location (Figure 1) resulting in attempts to revegetate Stage 2 in its entirety being put on hold while further revegetation trials continue at Stage 1. Therefore the Delegated Officer has determined it necessary to replace revegetation conditions for Stage 2 with conditions to apply surface treatments to non-trafficable, unsealed, cleared areas, not intended for trial revegetation programs, using a surface binding treatment.

The intent of replacement conditions is to prevent dust lift off from cleared areas until the successful implementation of a revised revegetation plan. The selected application of a surface binding agent shall not adversely affect any potential rehabilitation works in this area in the future.

The revegetation of cleared, unused areas offers a number of benefits including the retention of nutrient and water, which can enhance the likely success of future revegetation programs. Revegetation also presents a more permanent measure to managing dust when compared to applying soil binding agents, which need to be maintained and re-applied, often based on visual determination. Therefore the Delegated Officer has added conditions requiring the revegetation program recommence at Stage 1, with continued programs required until successful.

At the request of the Licence Holder the Delegated Officer has also amended the Premises boundary to incorporate the previously excised area that marked the location of the former power station. This is an administrative amendment only and is not expected to impact the department's ability to regulate emissions and discharges from the Premises.

The assessment has resulted in DWER amending Licence L8967/2016/1 (Amended Licence).

3.1 Summary of amendments

Table 2 provides a summary of the proposed amendment and will act as record of implemented changes. All proposed changes have been incorporated into the Amended Licence as part of the amendment process.

Table 2: Amendments to Licence L8967/2016/1

Previous conditions	Amendment condition number	Changes made
Condition 19 – Improvement requirements	19– Improvement requirements	Condition amended to require only the application and maintenance of a surface binding treatment to all non-trafficable cleared areas excluding Stage 1, parts of Stage 2 and sediment ponds.
N/A – new condition	20 – Improvement requirements	Condition added to require the application of surface binding treatments to the Stage 2 area within 2 months from the issue of the Licence amendment.
N/A – new condition	21 – Improvement requirements	Condition added to require the monthly review of the treatment areas to ensure its ongoing maintenance.
N/A – new condition	22 – Improvement requirements	Condition added to require the submission of a revised Revegetation Plan.
Condition 20 – Improvement requirements	23 – Improvement requirements	Conditions amended to require the continuation of revegetation programs at Stage 1 and Stage 2 following the submission of a revised

		Revegetation Plan.
N/A – new condition	28(f) and (g) – Record keeping	Additional conditions to require records to be kept on the application and inspection of surface binding treatments at the Stage 2 area.

4. Applicant's comments on Risk Assessment and Draft Amended Licence

The applicant was provided with the draft Amended Licence and associated this Decision Report on 6 February 2020. Comments were submitted by the applicant on 21 February 2020.

Through consultation with the Licence Holder on proposed conditions of this amendment it was identified that it is the Licence Holder's intent to trial the revegetation of six plots (approximately 3 hectares) within the Stage 2 area.

The draft amendment provided to the Licence Holder for consultation contained measurable success criteria for each revegetation program that must be achieved to ensure that more broadscale revegetation minimises the likelihood of pollution and environmental harm, as defined by the EP Act. While the Licence Holder provided evidence that this criteria may not be appropriate for the local setting, suitable alternative measures of success were not provided to determine, with certainty, what could be deemed a successful revegetation program. Therefore conditions have been added to require the submission of objective and measurable success criteria through a Revegetation Plan. The Delegated Officer may at a later date determine it appropriate to initiate an amendment the Licence to incorporate success criteria.

The Delegated Officer's consideration of all comments are shown through Appendix 2.

5. 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 Amended Licence will be granted subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

Christine Hass

Manager, Licensing (Resource Industries)

Regulatory Services

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

Appendix 1: Key documents

	Document Title	Availability
1.	DWER <i>Guidance Statement: Licensing and works approvals process</i> (September 2015)	Accessed at: https://www.der.wa.gov.au/our-work/regulatory-framework
2.	DWER <i>Guidance Statement: Regulatory principles</i> (July 2015)	
3.	DWER <i>Guidance Statement: Setting conditions</i> (October 2015)	
4.	DWER <i>Guidance Statement: Licence duration</i> (November 2014)	
5.	DWER <i>Guidance Statement: Land Use Planning</i> (October 2015)	
6.	DWER <i>Guidance Statement on Licensing and works approvals processes</i> (September 2015)	
7.	Amendment application	DWER records (DWERDT205978)
8.	DoH (2016) <i>Port Hedland Air Quality Health Risk Assessment for Particulate Matter</i> , Department of Health, January 2016	Accessed at: http://ww2.health.wa.gov.au/Reports-and-publications/Port-Hedland-Health-Risk-Assessment
9.	Department of Jobs, Tourism, Science and Innovation (2018) <i>Port Hedland Dust Management Taskforce Report – Government response</i> .	Accessed at: https://www.jtsi.wa.gov.au/docs/default-source/default-document-library/port-hedland-dust-management---fact-sheet---government-response---october-2018.pdf?sfvrsn=af73721c_2
10.	Roy Hill (2019) <i>Roy Hill Infrastructure – Port Operating Licence Amendment Application – Lease Boundary Change and Improvement Condition (OP-APP-00065)</i> , Roy Hill Infrastructure Pty Ltd, 25 September 2019.	DWER internal (DWERDT205978)

Appendix 2: Summary of Applicant's Comments on Amended Licence and Decision Report

Draft Condition/ Decision Report section	Comments (verbatim)	DWER Response
Licence Holder comments on draft Licence conditions		
Premises description	<p>The Operating Licence should state 'Lot 372 of Deposited Plan 70562' and not 'Lot 37 of Deposited Plan 70562'.</p> <p><i>Further information provided:</i></p> <p>The following should be the updated Premise description:</p> <p>Lot 370 on Deposited Plan 35619 Certificate of Title Volume LR3118 Folio 753</p> <p>Reserve 50892: Lots 1199, 1200, 1201, 1203, 1279, 1280, 1281, 1301, 1302, 1303 and 1304 on Deposited Plan 70562</p> <p>Lot 372 on Deposited Plan 35620 Certificate of Title Volume LR3118 Folio 755</p> <p>within coordinates as defined in Schedule 1</p>	<p>Amended in part. Premises description also modified to remove additional cadastre provided with the application that no longer falls within the proposed premises boundary.</p> <p>Note that Lots 1201, 1203, 1279, 1280, 1281, 1302, 1303 and 1304, on Deposited Plan 70562, are located beyond the revised boundary. In addition, Lot 370 on Deposited Plan 35619 encompasses a large area that extends across areas not controlled by the Licence Holder. The words "Part of" have been included to note this.</p>
19 and 20	<p>Surface binding treatment on Stage 2 will occur in areas that are not utilised for rehabilitation trials. Trial areas will be cordoned off so as to not be impacted by surface binding treatments. Roy Hill request this condition should amended as such.</p> <p><i>Further information provided:</i></p> <p>A map has been enclosed.</p> <p>The trial is expected to consist of six plots located within the Stage 2 trial location area as per the attached map. Each plot will cover approximately 0.5ha. The proposed area also allows for tracks to access the plots. Surface binding treatments will not be applied to the proposed trial area.</p>	<p>Amended. Following receipt of additional information the condition has been amended and a new figure inserted to demonstrate an exclusion zone in Stage 2 area. However, the proposed exclusion zone covers approximately 50% of the total 15.9ha area, meaning that significant areas will remain unused and unsealed even after revegetation plots and access roads are developed.</p> <p>The condition has been amended to exempt additional revegetation trials and access roads from requiring the application of a binding agent.</p>

21	<p>Roy Hill request that condition should not refer to 'prevent dust lift off' as this is not measurable nor achievable. Rather Roy Hill believe this should state to 'ensure the minimum possible dust lift off'.</p>	Amended.
22 to 25	<p>Roy Hill is committed to undertaking rehabilitation over the staged areas. In December 2019 the Stage 1 rehabilitation trial area was re-seeded with a different native seed mix to that originally spread in December 2018. Photo points and Ecosystem Function Analysis transects were installed in April 2019 which Roy Hill plans to continually monitor to determine the success of the Stage 1 rehabilitation trial method. Roy Hill would prefer to keep the Stage 1 rehabilitation trial undisturbed to monitor success rather than undertake additional rehabilitation as outlined under Conditions 22 to 25.</p> <p>In addition to this, as outlined in the application, Roy Hill committed to undertaking research on rehabilitation methods or long-term dust management solutions in the Stage 2 area. As a result of this research, Roy Hill believe undertaking rehabilitation trials on a number of plots within the Stage 2 area will result in the best long-term outcome. Any area within Stage 2 which is not subject to a rehabilitation trial will have a surface binding treatment applied.</p> <p>Roy Hill can commit to providing a Rehabilitation Trial Plan by 30 April 2020 detailing the proposed trials to be undertaken in areas within Stage 2 area. The Rehabilitation Trial Plan will include but is not limited to a description of proposed:</p> <ul style="list-style-type: none"> (a) Trial methods, including: <ul style="list-style-type: none"> i. why methods were chosen; • area and soil preparation; ii. materials to be used; iii. seed lists; and iv. soil ameliorants. (b) Timing; (c) Performance and measurement criteria; (d) Monitoring programs and frequencies; (e) Remediation actions if performance criteria are not met in all of the 	<p>Noted. Conditions 22 to 25 were not intended to require Roy Hill to disturb existing rehabilitation trials. In the event that trials are unsuccessful, Condition 23 requires ongoing rehabilitation attempts at Stage 1.</p> <p>It is expected that a more permanent solution to reducing dust generated from disused cleared areas is identified. The purpose of this is to avoid the ongoing application of binding treatments, which rely on visual inspections to determine adequacy and may become less effective over time. It is possible that areas where surface treatments have worn may not be identified through visual inspections, leading to the potential for dust emissions.</p> <p>The revised submission date will be two months from the issue of the Licence amendment.</p>

	<p>trial plots; and</p> <p>(f) dust management measures undertaken during soil disturbance activities on Stage 2.</p> <p>This Rehabilitation Trial Plan can include details on the rehabilitation methods undertaken to date on the Stage 1 area but no additional rehabilitation works at Stage 1 are proposed at this time.</p> <p>The trials will run for a period of up to five years from commencement of trials, to take into consideration external factors such as cyclone rainfall or seed availability in the area which may impact trial implementation and the amount of data required to determine performance success.</p> <p>Roy Hill can provide information on the progress of the rehabilitation trials each year in the AER.</p> <p>Once a successful methodology is determined, Roy Hill will develop a Rehabilitation Plan to undertake rehabilitation across the whole staged area.</p> <p>Roy Hill does however note that Part V of the EP Act, and subsequent licence conditions, should be around management of emissions and therefore conditions should be outcome based and focus on dust mitigation rather than rehabilitation success.</p>	
23	<p>Roy Hill does not believe that the performance criteria detailed in condition 23 is appropriate to determine if the rehabilitation trials have been successful in minimising dust emissions. The performance criteria also needs to take into consideration the saline tidal zone environment (picture below is of the surrounding vegetation communities) and the perennial halophytic shrubs and grasses which will be utilised within the trials (i.e. will the criteria be achievable for these species and this criteria). For example if initial germination is 10 plants per m2 and by year 5 this has dropped to 5 plants (50% loss) this does not necessarily mean the rehabilitation is not working to minimise dust. This is also the case for the requirements for a total native stem density of one plant per square m2. In addition, pre-disturbance conditions did not have a 1m2 density over the site (see aerial below), the plant distribution was sporadic depending on vegetation community type . Roy Hill suggest that the performance criteria is included in the Rehabilitation Trial Plan and include both dust emission and</p>	<p>DWER cannot issue a licence condition requiring a licence holder to submit their own performance criteria after the licence is amended. Condition 23 has been removed and Condition 22 amended to require Roy Hill to provide alternate performance criteria for assessment of each rehabilitation attempt.</p> <p>Following a review of the Rehabilitation Plan, to be submitted in accordance with Condition 23, DWER may consider further amending the Licence to formalise specific success criteria through licence conditions. Note that performance criteria presented to DWER through the Revegetation Plan for consideration will need to be both objective and measurable.</p>

	<p> revegetation success criteria relevant to the specific trial methods.</p>	
	<p>Roy Hill proposes the following completion criteria;</p> <ul style="list-style-type: none"> •Off-site dust emissions from rehabilitated areas are mminimised (based on visual assessment of dust lift off); and •Vegetation density and percentage cover will be comparable to surrounding analogue sites (Low Sparse Chenopod Shrubland of Tecticornia spp. and Muellerolimon salicorniaceum with Sparse Tussock Grassland of Sporobolus virginicus on brown-red clays on tidal zones). 	<p>Proposed criteria cannot be objectively or accurately measured.</p> <p>Although the surface area is no longer subject to tidal movement it can reasonably be expected that vegetation coverage will be greater in the two Trial locations. These areas are no longer subject to tidal movement and it is therefore not acceptable to limit success criteria to achieve the sparse vegetation cover of an intertidal plain depicted below.</p>
	<div data-bbox="430 523 940 911" data-label="Image"> </div> <p>Low Sparse Chenopod Shrubland of Tecticornia spp. and Muellerolimon salicorniaceum with Sparse Tussock Grassland of Sporobolus virginicus on brown-red clays on tidal zones.</p>	



Occasional Mid and Low isolated Acacia shrub species over Low hummock grasslands dominated by *Triodia epactia* *Aristida* spp., *Chrysopogon fallax*, *Eriachne obtusa*, *Eragrostis eriopoda* on Red sand to sandy loam on dunes and midslope-plain areas.



Aerial of the Port Loop pre-disturbance (2010), orange outline is the Stage 2 area.

Attachment 1: Amended Licence L8967/2016/1