Amendment Report

Application for Licence Amendment

Part V Division 3 of the *Environmental Protection Act 1986*

Licence Number	L8861/2014/1
Licence Holder	Karratha Recycling Pty Ltd
ACN	163 991 106
File Number	DER2014/002439-1~5
Premises	Karratha Recycling Liquid Waste Facility Lot 111 Bedrock Turn and Lot 112 Exploration Drive GAP RIDGE WA 6714 Legal description: Lot 111 on Deposited Plan 75061 Certificate of Title Volume 2813 Folio 263; and Lot 112 on Deposited Plan 75062 Certificate of Title Volume 2813 Folio 264 As defined by the Premises map attached to the Revised Licence
Date of Report	22/12/2020
Proposed Decision	Revised licence granted

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MANAGER WASTE INDUSTRIES
REGULATORY SERVICES
an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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1. Decision summary

Licence L8861/2014/1 is held by Karratha Recycling Pty Ltd (Licence Holder) for the Karratha Recycling Liquid Waste Facility (the Premises), located at Lot 111 Bedrock Turn and Lot 112 Exploration Drive, Gap Ridge.

This Amendment Report documents the assessment of potential risks to the environment and public health from proposed changes to the emissions and discharges during the operation of the Premises. As a result of this assessment, a Revised Licence has been granted.

2. Scope of assessment

2.1 Regulatory framework

In completing the assessment documented in this Amendment Report, the department has considered and given due regard to its Regulatory Framework and relevant policy documents which are available at https://dwer.wa.gov.au/regulatory-documents.

2.2 Application summary

On 5 August 2020, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act). The application was to undertake construction works relating to two new evaporation ponds at the Premises.

During an inspection of the Premises by DWER (Compliance) on 21 September 2020 it was discovered that construction work on the ponds had been completed. As stated in the DWER *Guideline: Decision Making* (June 2019), for a works approval application DWER will identify and assess the risks to the environment, public health and amenity resulting from the construction works at the Premises. Since the construction works were complete at the time of the inspection and the works approval assessment was still underway, DWER determined that a works approval application was no longer required and the use of the ponds would need to be assessed under a Licence amendment. Subsequently, the Licence Holder withdrew the works approval application on 4 November 2020.

As a result of the status of works, on 6 November 2020, the Licence Holder submitted an application to the department to amend Licence L8861 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). This application is to authorise the acceptance of liquid waste into the two newly constructed evaporation ponds. While construction related works have already been completed, DWER has given regard to the design and construction of the ponds as part of this assessment (and as documented in this Amendment Report).

Any consequential action to be taken resulting from the non-compliance with Section 53(2)(a) of the EP Act through the construction of the ponds without a works approval will be determined by DWERs Compliance Branch, separate to this assessment.

2.3 Purpose of amendment

The ponds will facilitate an increase in the acceptance and treatment of the waste types currently accepted and processed at the Premises in accordance with the conditions outlined in the sites active Licence (L8861/2014/1).

It was identified during the Premises inspection on 21 September 2020 that conditions relating to anerobic pond cover only permitted less than 5% coverage across the surfaces, where anerobic ponds require almost 100% surface coverage to facilitate anerobic conditions. As such, the amendment will also incorporate administrative changes to the Licence in relation to the anerobic treatment ponds (1 and 2) at the Premises to reflect current operational practices.

This amendment is limited only to changes to Category 61 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 35, 36 and 61A have been requested by the Licence Holder.

Table 1 below outlines the proposed changes to the existing Licence.

Table 1: Proposed throughput capacity changes

Category	Current throughput capacity	Proposed throughput capacity	Description of proposed amendment
61	100,000 tonnes per annum	130,000 tonnes per annum	Increase in throughput requested to permit additional waste acceptance, as there is now an increased capacity to process liquid waste due to the construction of the two additional evaporation ponds.

2.4 Review of construction quality assurance documentation

The Licence Holder has submitted Construction Quality Assurance (CQA) documentation for the two new evaporation ponds to confirm that the ponds have been constructed to the specifications outlined in the original works approval application. Consideration of the design has also been factored into the assessment.

As a part of this amendment application, a review of the CQA documentation was undertaken and is summarised in Table 2 below.

Table 2: CQA conformance review

Infrastructure	Design and construction / installation requirements	Conformance with requirements
Evaporation pond 4 As defined on Figure 1	• Maximum storage capacity of 9,108 m^3; • Maximum dimensions of 69 m in length, 43 m in width and 3 m in depth; • Compacted base of in-situ soil; • Lined with 2mm thick HDPE; • Lined in accordance with the specifications of Water Quality Protection Notice (WQPN) 26, *Liners for containing pollutants, using synthetic membranes* (Department of Water, August 2013); • Separation distance of at least 2 m must be maintained between the base of the HDPE liner and the highest wet season water table; • Perimeter of pond must be bunded; • Constructed to contain rainfall resulting from a 1 in 100 year storm event of 24 hours duration; and • Constructed to allow for a 500 mm	• The ponds have been constructed to fall within the specified dimensions; • The in-situ soil of the pond areas was compacted; • The ponds have been lined with 2mm thick HDPE; • A CQA has been submitted for each pond to demonstrate that liner installation was completed with no material faults and as per the required specifications; • The water table at the ponds location varies between 9-10 mBGL according to sampling results obtained from an adjacent groundwater monitoring bore. The base of the HDPE liners installed are therefore approximately 7-8m from the water table; • The perimeter of the ponds are bunded utilising compacted in-situ soil excavated from the area of the

Infrastructure	Design and construction / installation requirements	Conformance with requirements
	freeboard to be maintained.	ponds; • The ponds capacity to contain rainfall resulting from a 1 in 100 year storm event of 24hrs duration, and to allow for a 500 mm freeboard to be maintained, have been demonstrated through water balance equations submitted in support of this application.
Evaporation pond 5 As defined on Figure 1	• Maximum storage capacity of 15,525 m^3; • Maximum dimensions of 72 m in length, 69 m in width and 3 m in depth; • Compacted base of in-situ soil; • Lined with 2mm thick HDPE; • Lined in accordance with the specifications of WQPN 26 (Department of Water, August 2013) • Separation distance of at least 2 m must be maintained between the base of the HDPE liner and the highest wet season water table; • Perimeter of pond must be bunded; • Constructed to contain rainfall resulting from a 1 in 100 year storm event of 24 hours duration; and • Constructed to allow for a 500 mm freeboard to be maintained.	

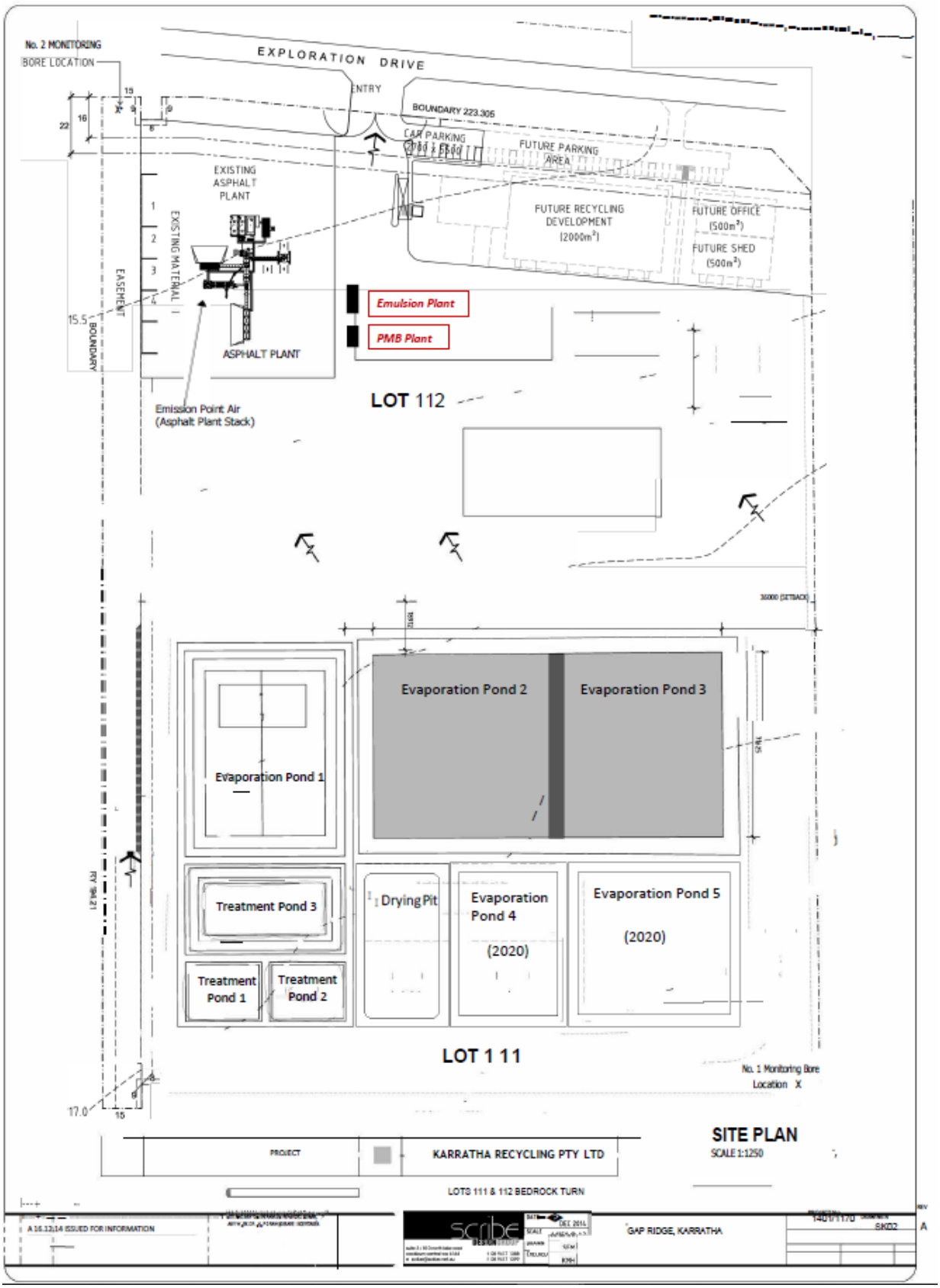

Figure 1: Premises map

3. Risk assessment

The department assesses the risks of emissions from prescribed premises and identifies the potential source, pathway and impact to receptors in accordance with the *Guidance Statement: Risk Assessments* (DER 2017).

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.

3.1 Source-pathways and receptors

3.1.1 Emissions and controls

The key emissions and associated actual or likely pathway during premises operation which have been considered in this Amendment Report are detailed in Table 2 below. Table 2 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 2: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Odour	Increased liquid waste acceptance and storage	Air/windborne pathway	Grease trap, sewage and septage wastes are deposited into the receival ponds (Treatment ponds 1 and 2) so as to not disturb the post crust, which assists in reducing odour emissions. Grease trap, sewage and septage wastes received to the evaporation ponds have already undergone treatment in anerobic conditions (Treatment ponds 1 and 2) and are less odour generating than when first received at the Premises
Liquid waste spills from general handling. Overtopping of liquids from evaporation ponds. Potential seepage from containment infrastructure (evaporation ponds).	Spillage of liquid waste, overtopping of evaporation ponds	Direct discharge to land	The two additional ponds have holding capacities of approximately 9,108 m^3 and 15,525 m^3. The ponds are constructed using a 2 mm HDPE liner and have been bunded to prevent overtopping. A 500 mm freeboard will be maintained and a managed through daily operations with regard to current pond capacity and potential inflows. The ponds have capacity to contain stormwater resulting from a 1 in 20 year storm event of 24 hours duration.
	Seepage of liquid waste from evaporation ponds	Direct discharge to land and subsequent infiltration to groundwater	The ponds are constructed using a 2 mm HDPE liner with a compacted base of in-situ soil. Ponds have been designed and constructed to achieve a separation distance of between 7-8m between the base of the HDPE liner and the highest wet

Emission	Sources	Potential pathways	Proposed controls
			season water table (based on historical records from on-site groundwater monitoring). The ponds are lined in accordance with the specifications of WQPN 26 (Department of Water, August 2013).

3.1.2 Receptors

In accordance with the *Guidance Statement: Risk Assessment* (DER 2017), the Delegated Officer has excluded employees, visitors and contractors of the Licence Holder's from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 2 below provides a summary of potential human and environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises *(Guidance Statement: Environmental Siting* (DER 2016)).

Table 2: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	**Distance from prescribed activity**
Commercial Premises	Adjacent to the Premises
Stayover Kingfisher Village	2.9 km south-east of the Premises
Cievo Karratha Village	2.06 km north-east of the Premises
Residential Properties	2.95 km north-east of the Premises
Environmental receptors	**Distance from prescribed activity**
Pilbara Groundwater Area (RIWI Act 1914) • Groundwater typically 6-10 m below existing ground level • Hyper saline brackish	Premises situated within this designated area
Pilbara Surface Water Area (RIWI Act 1914)	Premises situated within this designated area
Threatened ecological communities (TEC) • Roebourne Plains gilgai grasslands	TEC buffer zones are mapped within the general vicinity of the Premises.
Surface water lines • Seven Mile Creek • Minor non perennial water courses	660 m east of Premises

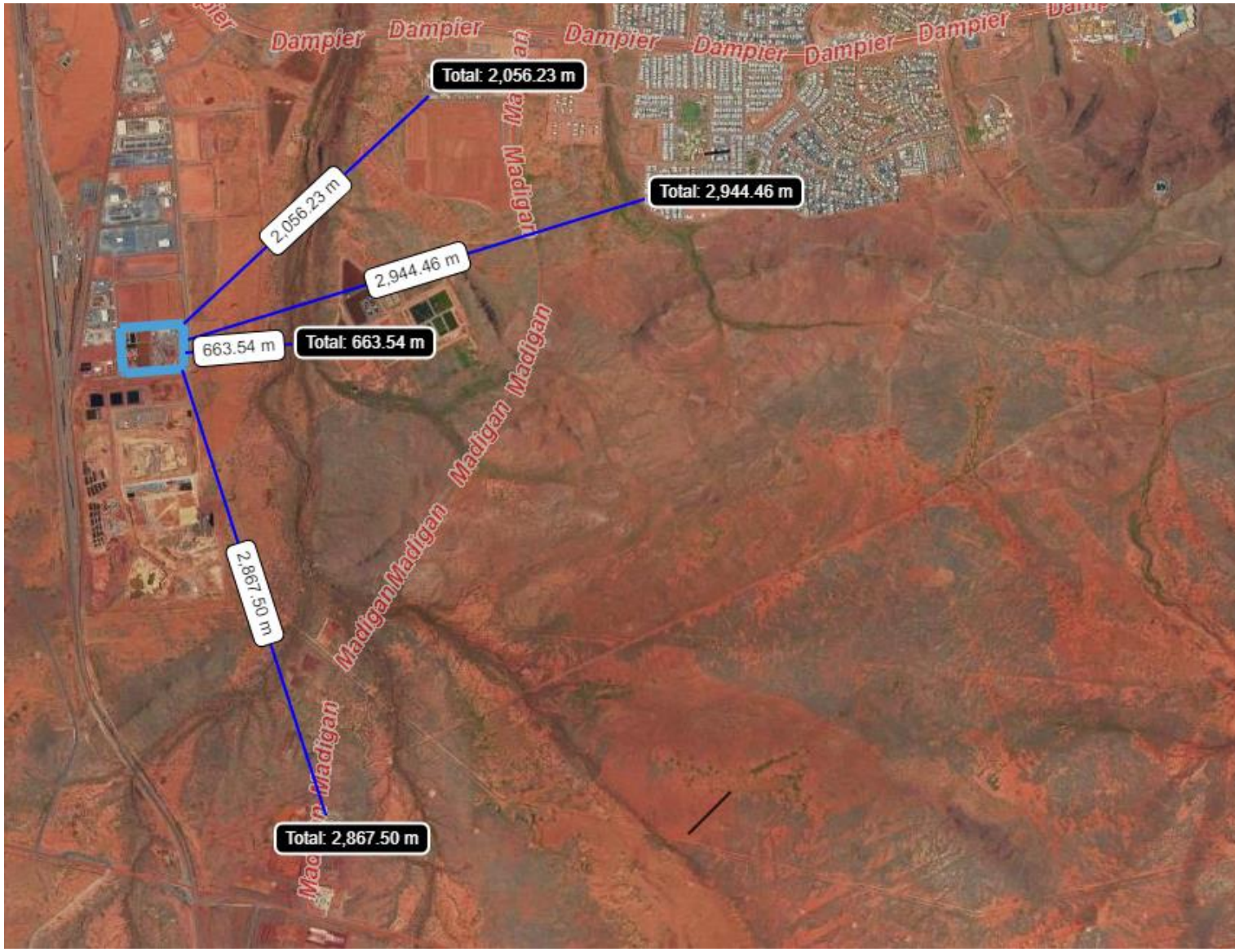

Figure 2: Distance to sensitive receptors

3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guidance Statement: Risk Assessments* (DER 2017) for those emission sources which are proposed to change and takes into account potential source-pathway and receptor linkages as identified in Section 3.1. Where linkages are in-complete they have not been considered further in the risk assessment.

Where the Licence Holder has proposed mitigation measures/controls (as detailed in Section 3.1), these have been considered when determining the final risk rating. Where the Delegated Officer considers the Licence Holder's proposed controls to be critical to maintaining an acceptable level of risk, these will be incorporated into the licence as regulatory controls.

Additional regulatory controls may be imposed where the Licence Holder's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

The Revised Licence L8861 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. liquid waste acceptance into the two additional evaporation ponds.

The conditions in the Revised Licence have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

Table 3. Risk assessment of potential emissions and discharges from the Premises during operation

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
Acceptance of liquid waste into additional ponds for disposal by evaporation	Odour	Air/windborne pathway causing impacts to health and amenity.	Adjacent commercial premises. Stayover Kingfisher Village 2.9 km south east of Premises. Civeo Karratha Village 2.06 km north-east of Premises. Residential properties 2.95 km north-east of Premises.	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1, 6, and 7	N/A
	Liquid waste	Spillage of liquid waste, overtopping of evaporation ponds resulting in a discharge of liquid waste to the environment, with the potential to impact stormwater and/orgroundwater (via subsequent infiltration).	Pilbara Groundwater and Surface water areas – Premises situated within defined areas. Threatened ecological community buffers within Premises area. Seven Mile creek 660 m east of Premises.	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1, 2, 3, 9	N/A
	Liquid waste	Seepage of liquid waste to land from evaporation ponds resulting in infiltration to groundwater	Pilbara Groundwater and Surface water areas – Premises situated within defined areas. Threatened ecological community	Refer to Section 3.1	C = Moderate L = Unlikely **Medium Risk**	Y	Condition 1, 3, 8, and 9 **Condition 16, 17 and 27**	The requirement for the installation of a third groundwater monitoring bore has been added to the Licence in light of the increase to annual premises throughput and the use of two additional evaporation ponds to facilitate

Risk Event					Risk rating[1] C = consequence L = likelihood	Licence Holder's controls sufficient?	Conditions[2] of licence	Justification for additional regulatory controls
Source/Activities	**Potential emission**	**Potential pathways and impact**	**Receptors**	**Licence Holder's controls**				
			buffers within Premises area. Seven Mile creek 660 m east of Premises.					an increase in accepted liquid waste. The bore will provide additional groundwater coverage across the site with respect to the newly constructed evaporation ponds. Having three bores on site will also allow the appropriate tri-angulating of local groundwater flow. Additional sampling parameters for the monitoring of ambient groundwater quality have been included in the Licence to encompass any impacts to groundwater resulting from the increased acceptance of liquid waste. The parameters added are also consistent with monitoring requirements across similar sites regulated by DWER.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guidance Statement: Risk Assessments* (DER 2017).

Note 2: Proposed Licence Holder's controls are depicted by standard text. **Bold and underline text** depicts additional regulatory controls imposed by department.

4. Consultation

Table 4 provides a summary of the consultation undertaken by the department.

Table 4: Consultation

Consultation method	Comments received	Department response
City of Karratha advised of proposal during withdrawn works approval application 10 September 2020	Karratha Recycling Pty Ltd have submitted an application for development approval for the construction of two additional evaporation ponds at the Karratha Recycling Liquid Waste Facility (our reference: DA20159). This development application is currently being assessed with a determination to be made under delegation in the coming weeks determination. At this stage of assessment the proposal is considered to be generally in line with the relevant objectives of the City's Local Planning Scheme No.8 and the Gap Ridge Industrial Estate Structure Plan.	The Licence Holder has submitted Development Approval for the two additional ponds in support of this application. The Approval was granted by the City or Karratha on 1 October 2020. The Delegated Officer considers that the City of Karratha original comments are relevant to this amendment application given that they refer to the same activities. Approval under Part V of the EP Act does not negate the need for the Applicant to have all relevant approvals in place prior to accepting additional waste at the Premises.
Licence Holder provided with draft amendment 15 December 2020	The Licence Holder has waved the comment period and requested the amended Licence be issued as soon as possible. Minor typographical errors have also been corrected.	Noted – the Delegated Officer will proceed to issuing the amended Licence.

5. Conclusion

Based on the assessment in this Amendment Report, the Delegated Officer has determined that a Revised Licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

5.1 Summary of amendments

Table 5 provides a summary of the proposed amendments and will act as record of implemented changes. All proposed changes have been incorporated into the Revised Licence as part of the amendment process.

Table 5: Summary of licence amendments

Condition no.	Proposed amendments
N/A Prescribed premises category description	Increase in assessed production throughput for Category 61 from 100,000 tonnes per annual period to 130,000 tonnes per annual period.
Condition 6	Increase in quantity limit for liquid waste types from 100,000 tonnes per annual period to 130,000 tonnes per annual period.

Condition no.	Proposed amendments
Table 2	Inclusion of reference to treatment ponds 1 and 2 in line with updated naming.
Condition 7 Table 3	Evaporation ponds renamed to align with new naming convention. Addition of new evaporation ponds 4 and 5 to process specifications. Scum rag condition removed. Treatment capacity for liquid waste types increased from 100,000 tonnes per annual period to 130,000 tonnes per annual period. Incorporation of condition regarding vegetation coverage limitation for the aerobic ponds only from condition 9.
Condition 8 Table 4	Treatment and evaporation ponds renamed to align with new naming convention. Addition of containment infrastructure specifications for new evaporation ponds 4 and 5.
Condition 9	Removal of vegetation coverage limitation for all ponds
Condition 16 Table 7	Requirements for the design, construction and installation of an additional groundwater monitoring bore.
Condition 17	Requirement for the submission of a bore construction report.
Condition 27 Table 10	Inclusion of additional parameters for ambient groundwater monitoring.
Condition 31	Inclusion of specifications for ambient groundwater monitoring reporting in line with updated condition requirements in use by DWER.
N/A Table 13	Inclusion of new relevant definitions.
N/A Schedule 1	Figure 2 replaced with updated map to reflect new naming conventions of the treatment and evaporation ponds.

References

1. Department of Environment Regulation (DER) 2016, *Guidance Statement: Environmental Siting*, Perth, Western Australia.
2. DER 2017, *Guidance Statement: Risk Assessments*, Perth, Western Australia.
3. DER 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
4. Department of Water 2013, *Water Quality Protection Notes 26 – Liners for containing pollutants, using synthetic liners,* Perth, Western Australia.

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
Application type					
Works approval	☐				
Licence	☐	Relevant works approval number:		None	☐
		Has the works approval been complied with?		Yes ☐ No ☐	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes ☐ No ☐ N/A ☐	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes ☐ No ☐	
		Date Report received:			
Renewal	☐	Current licence number:			
Amendment to works approval	☐	Current works approval number:			
Amendment to licence	☒	Current licence number:	L8861/2014/1		
		Relevant works approval number:	WA withdrawn	N/A	☒
Registration	☐	Current works approval number:		None	☐
Date application received		6 November 2020			
Applicant and Premises details					
Applicant name/s (full legal name/s)		Karratha Recycling Pty Ltd			
Premises name		Karratha Recycling Liquid Waste Facility			
Premises location		Lot 111 Bedrock Turn and Lot 112 Exploration Drive GAP RIDGE WA 6714			
Local Government Authority		City of Karratha			
Application documents					
HPCM file reference number:		DER2014/002439-1~5			
Key application documents (additional to application form):		Attachment 2 Plan Attachment 2A Plan Photo 1 Attachment 2B Plan Photo 2 Attachment 5 DA 20159 Development Approval Attachment 8A Water Balance Equation Attachment 8B Pond 4 Liner QA-QC Attachment 8C Pond 5 Liner QA-QC			
Scope of application/assessment					
Summary of proposed activities or changes to existing operations.		Addition of two new evaporation ponds onto the Licence.			

Category number/s (activities that cause the premises to become prescribed premises)

Table 1: Prescribed premises categories

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity
Category 35: Asphalt Manufacturing	40,000 tonnes per annual period	N/A
Category 36: Bitumen manufacturing	20,000 tonnes per annual period	N/A
Category 61: Liquid Waste Facility	100,000 tonnes per annual period	130,000 tonnes per annual period
Category 61A: Solid Waste Facility	20,000 tonnes per annual period	N/A

Legislative context and other approvals

Has the applicant referred, or do they intend to refer, their proposal to the EPA under Part IV of the EP Act as a significant proposal?	Yes ☐ No ☒	Referral decision No: Managed under Part V ☒ Assessed under Part IV ☐
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes ☐ No ☒	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes ☐ No ☒	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes ☒ No ☐	Certificate of title ☒ General lease ☐ Expiry: Mining lease / tenement ☐ Expiry: Other evidence ☐ Expiry:
Has the applicant obtained all relevant planning approvals?	Yes ☒ No ☐ N/A ☐	Approval: DA20159 Expiry date: N/A
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes ☐ No ☒	CPS No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing CAWS Act clearing licence in relation to this proposal?	Yes ☐ No ☒	Application reference No: N/A Licence/permit No: N/A No clearing is proposed.
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes ☐ No ☒	Application reference No: Licence/permit No: Licence / permit not required.

Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes ☒ No ☐	Name: Pilbara Groundwater Area/ Pilbara Surface water Area Type: Proclaimed Groundwater Area/Surface Water Area Has Regulatory Services (Water) been consulted? Yes ☐ No ☒ N/A ☐ Regional office: North West
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes ☐ No ☒	Name: N/A Priority: N/A Are the proposed activities/ landuse compatible with the PDWSA (refer to WQPN 25)? Yes ☐ No ☐ N/A ☒
Is the Premises subject to any other Acts or subsidiary regulations (e.g. *Dangerous Goods Safety Act 2004, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx*)	Yes ☒ No ☐	*Environmental Protection (Controlled Waste) Regulations 2004*
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes ☐ No ☒	
Is the Premises subject to any EPP requirements?	Yes ☐ No ☒	
Is the Premises a known or suspected contaminated site under the *Contaminated Sites Act 2003*?	Yes ☐ No ☒	Classification: N/A Date of classification: N/A