



Application for Licence Amendment

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

Licence Number	L5206/1987/10
Licence Holder	Wiluna Operations Pty Ltd
ACN	166 954 525
File Number	2012/006906-1
Premises	Wiluna Mine Site WILUNA WA 6646 Being Mining tenements M53/30, M53/32, M53/468, L53/62, L53/20, M53/64, G53/18 and G53/19 part tenements M53/40, M53/44, M53/50, M53/26, M53/6, M53/95, M53/96, M53/200, M53/69, M53/24 L53/50 and L53/77 as defined by the coordinates in Schedule 2.
Date of Report	19 May 2021
Decision	Revised licence granted

**A/MANAGER, RESOURCE INDUSTRIES
REGULATORY SERVICES**

An officer delegated by the CEO under section 20 of the EP Act

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1. Decision summary

Licence L5206/1987/10 is held by Wiluna Operations Pty Ltd (Licence Holder) for the Wiluna mine site (the Premises), located in Wiluna, Western Australia on mining tenements M53/30, M53/32, M53/468, L53/62, L53/20, M53/64 and part tenements M53/40, M53/44, M53/50, M53/26, M53/6, M53/95, M53/96, M53/200, M53/69 and M53/24.

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, Revised Licence L5206/1987/10 has been granted.

The Revised Licence issued as a result of this amendment consolidates and supersedes the existing Licence previously granted in relation to the Premises.

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://www.der.wa.gov.au>.

2.2 Application summary

On 30 November 2020, the Licence Holder submitted an application to the department to amend Licence L5206/1987/10 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act). The following amendments are being sought:

- Update the list of compliance groundwater monitoring bores in conditions 3.4.1 and 3.4.2 as a number of bores have been replaced due to them being blocked/collapsed or removed as a result of mine activities (such as pit development). Two bores are proposed to be removed from the monitoring schedule as there are adjacent bores in close proximity that are being monitored.
- Increase the Category 85 Sewage facility threshold from 52 m³ per day to 78 m³ per day to correct a calculation error made during the original licence amendment process for Category 85.
- Add Category 64 to the licence to include the mine sites' putrescible landfill onto the licence which has been previously authorised by a Registration (Category 89 landfill).
- Increase the throughput for Category 63 to 2,000 tonnes per annum to include up to 500 tonnes per annum of poly pipe disposal.

As part of this amendment, the premises boundary map has been updated to include the sewage treatment ponds and Wiluna Mine site accommodation village. Easting and northing GPS coordinates have been added to the licence to better define the premises boundary as it includes parts of mining tenements. The amendment of the premises boundary has resulted in Mining Tenements G53/18 and G53/19, and part tenements L53/50 and L53/77 being added to the Licence.

This amendment is limited only to changes to Category 89 (increased throughput now meets the category 64 threshold), Category 85 and Category 63 activities from the Existing Licence. No changes to the aspects of the existing Licence relating to Category 5, 6 and 57 have been requested by the Licence Holder. Table 1 below outlines the proposed changes to the existing Licence.

Table 1: Proposed throughput capacity changes

Prescribed premises category and description	Assessed production or design capacity	Proposed changes to the production or design capacity
Category 5: Processing or beneficiation of metallic or non-metallic ore.	2,200,000 tonnes per year	No change
Category 6: Dewatering	2,365,000 kL per year	No change
Category 57: Used tyre storage	300 tyres	No change
Category 63: Class I inert landfill site Disposal of tyres, mill liners and poly pipe into the waste rock dump as defined in licence.	1,500 tonnes or more per annum	Increase approved throughput to 2,000 tonnes per annum to include up to 500 tonnes per annum of poly pipe disposal.
Category 64: Class II landfill	1,500 tonnes per annum	The registration for the landfill (Category 89) was approved for 600 tonnes per annum. Increase approved throughput to 1,500 tonnes per annum.
Category 85: Sewage facility	52 m ³ per day	Increase approved throughput to 78m ³ /day.

2.2.1 Update to groundwater monitoring bores schedule

The Licence Holder has requested an update to the existing groundwater monitoring bores schedule at Wiluna Mine Site due to a number of bores becoming dysfunctional due to blockages/collapsing or requiring removal as a result of mining activities. Eleven monitoring bores were identified as being damaged, which were all replaced with the exception of two monitoring bores (IPT3 and SIPT11) which the Licence Holder has requested to be removed from the monitoring schedule.

Monitoring bore IPT3 has not been replaced due to the close proximity of monitoring bore TD14J and monitoring bores IPT-2 and TD15J-B being situated immediately downstream, which are considered to be sufficient for detecting any changes in groundwater quality or groundwater levels in this location of site. Monitoring bores SIPT11 and IPT5 are within recent or proposed mine pit expansions. IPT5 has been replaced with a new bore (IPT5-B) adjacent to the original bore location outside of the proposed pit footprint. SIPT11 was not replaced due to its close proximity to monitoring bores SIPT12-B and SIPT-13B which already provide adequate understanding of groundwater quality and levels of this area.

Table 2 below provides further detail on the locations of the new monitoring bores and the depth that the bores have been drilled to.

Table 2: New monitoring bore location detail

Damaged / Removed Bore	New Bore	New Northing	New Easting	Depth of New Bore
TD13J	TD13J - B	7051618	225429	89 m
TD15J	TD15J - B	7051838	226081	47 m
TD16J	TD16J - B	7051374	226228	29 m
IPT3	Not Replaced	-	-	-
IPT4	IPT4 - B	7052411	226017	53 m
IPT5	IPT5 - B	7052554	225749	71 m
SIPT10	SIPT10B	7053516	225512	65 m
SIPT11	Not Replaced	-	-	-
SIPT12	SIPT12 - B	7053283	225430	55 m
SIPT13	SIPT13 - B	7053230	225192	59 m
LH2	LH2 - B	7054057	224728	35 m

Figure 1 below illustrates the general design of the new monitoring bores which were gravel packed and bentonite sealed. Bores were drilled to 20 metres below the water table, with screens up to 2 metres below standing water level.

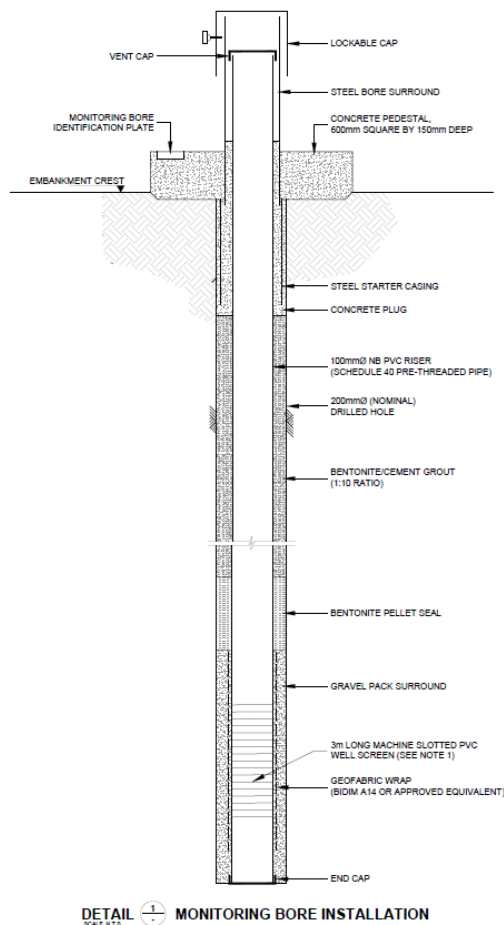


Figure 1: General design for new groundwater monitoring bores

Figure 2 provides an updated groundwater monitoring bores schedule for the Wiluna Mine Site.

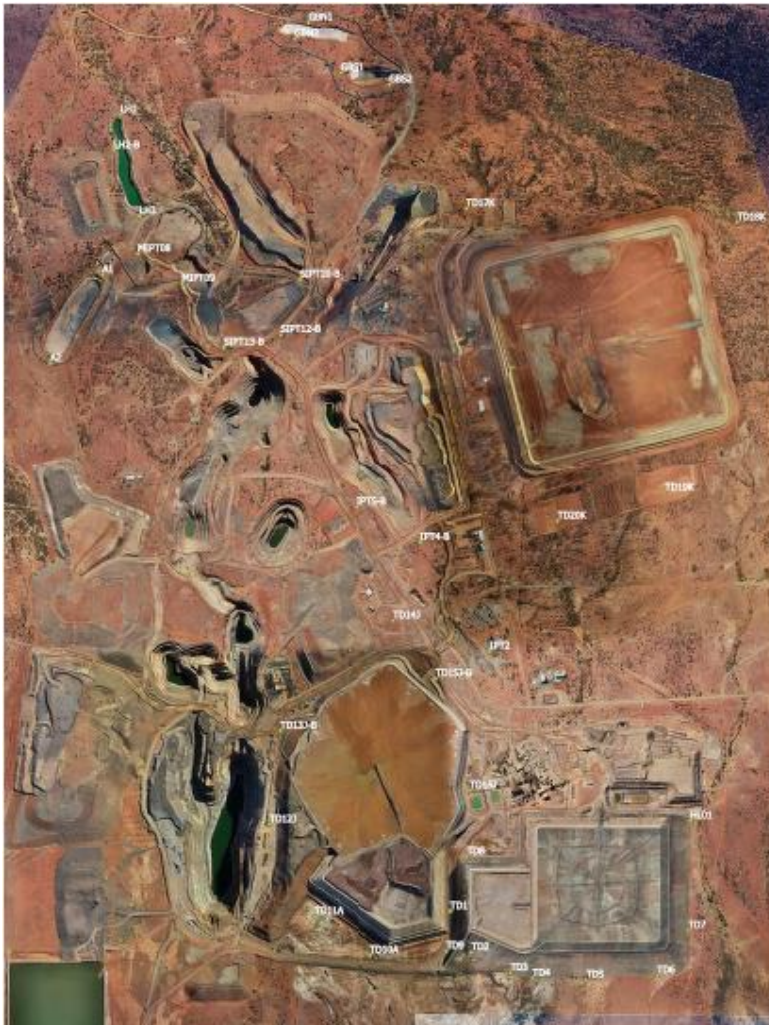


Figure 2: Updated groundwater bore monitoring schedule for Wiluna Mine Site

2.2.2 Amendment to Category 85 primary activities

The Licence Holder has requested an amendment to Category 85 to increase sewage production from 52 m³ per day to 78 m³ per day. The amendment has been initiated by the Licence Holder to correct a calculation error of the anticipated sewage production output made during the initial Licence application process for Category 85. Initially a rate of 180L/per person/per day was used to calculate the daily sewage production, however this calculation was underestimated and as a result the Licence Holder has exceeded the throughput limit for Category 85 on a number of occasions. A more accurate rate of 260L/per person/per day reflects the actual average sewage production at the site which is consistent with advice received by the Licence Holder from a wastewater treatment specialist.

The sewage facility associated to the Wiluna Mine Site Accommodation Village consists of six un-lined containment ponds and an emergency overflow pond. Wastewater from the containment ponds is not used for any other purposes on site and is left to evaporate. The facility has been already been operating sufficiently at the increased production level of 78 m³ per day for a number of years. The containment ponds have demonstrated sufficient capacity for the increased throughput and freeboard requirements on the existing Licence are currently being met.

2.2.3 Amendment to Category 63 primary activities

The Licence Holder currently has approval to dispose of up to 1,500 tonnes of tyres and mill liners per year into the defined areas within the waste rock dump as specified in Figure 7, Schedule 1 of the Licence. The Licence will be amended to increase the throughput for Category 63 to 2,000 tonnes per annum to include up to 500 tonnes per annum of poly pipe disposal. The poly pipe will be disposed of within the designated areas approved for tyre and mill disposal as specified on the Licence.

Dust and noise are considered to be the only emissions that may be generated from the disposal of poly pipe. As there are no human receptors in close proximity to the Premises, no pathway to these sensitive receptors has been identified. Leachate emissions are unlikely to be generated from the proposed activity noting the inert nature of the material. Given this, a detailed risk assessment has not been undertaken for the increased throughput to Category 63.

2.2.4 Inclusion of Category 64 primary activities to Licence

The Wiluna Mine Site Landfill Facility is situated within the historic Republic Open Pit and is currently approved under a Category 89 registration to accept 600 tonnes per annum of putrescible waste. The proposed licence amendment is to increase the throughput to 1,500 tonnes per annum which would meet the throughput production capacity of Category 64: Class II landfill. The putrescible Landfill Facility accepts a mixed putrescible waste stream which includes putrescible material, paper, cardboard, plastic, glass and non-controlled clinical wastes (clinical and pharmaceutical wastes not identified as being within Waste Category R – Waste Code R100). The Facility is fenced to contain incidental windblown rubbish and exclude stock from accessing the site. Signage is displayed at the Facility to ensure staff onsite are aware of the types of wastes acceptable at the Facility. There is approximately 18 months capacity remaining within the current landfill facility. A Licence Amendment will be required to construct a new landfill facility within a Waste Rock Landform at the Wiluna Mine Site prior to the current landfill reaching capacity.

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 3 below. Table 3 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

Table 3: Licence Holder controls

Emission	Sources	Potential pathways	Proposed controls
Odour	Putrescible waste disposed within the landfill facility	Air/windborne pathway	<ul style="list-style-type: none"> Cover material to a depth of 300mm will be applied on a weekly basis over putrescible waste. Putrescible waste to be covered entirely at the end of the life of the landfill facility. Putrescible landfill facility to remain in current location to minimise the detection of odours.
Noise	Disposal of waste within landfill facility Waste covering activities Vehicle movements	Air/windborne pathway	Licence Holder has not proposed controls.
Dust	Unloading and storage of material in landfill Waste covering activities Vehicle movements	Air/windborne pathway	Licence Holder has not proposed controls.
Leachate	Disposal of putrescible waste within landfill	Overland runoff potentially causing ecosystem disturbance or impacting surface water	<ul style="list-style-type: none"> Disposal of putrescible waste shall only take place within the Landfill Area (as shown in Schedule 1 on the Licence). Cover material to a depth of 300mm will be applied on a weekly basis over putrescible waste. Putrescible waste to be covered entirely at the end of life of the landfill facility.
	Leachate from potentially contaminated stormwater – generated from rainfall over landfill area		<ul style="list-style-type: none"> Clean surface water shall be diverted around putrescible waste landfill facility.
Windblown waste	Landfilling general waste	Air/windborne pathway	<ul style="list-style-type: none"> Boundary fencing will be maintained around the landfill facility to contain windblown waste. Cover material to a depth of 300mm will be applied on a weekly basis over putrescible waste. Putrescible waste to be covered entirely at the end of life of the landfill facility.

Emission	Sources	Potential pathways	Proposed controls
Untreated sewage (high in nutrients /pathogens)	Overtopping of treatment ponds	Discharges to land	The applicable controls from the existing licence are outlined below: <ul style="list-style-type: none"> Freeboard that is equal to or greater than 300mm is maintained in the containment ponds; Vegetation and floating debris is removed from within the containment ponds to maintain integrity of containment infrastructure; Ensure overtopping of ponds does not occur; Ensure carry-over of surface flow material is prevented. <p>The above controls will be implemented through visual inspections of the containment ponds.</p>
	Seepage of untreated sewage from treatment ponds		Licence Holder has not proposed controls.

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 4 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 4: Sensitive human and environmental receptors and distance from prescribed activity

Human receptors	Distance from prescribed activity
Town of Wiluna residences	Approximately 3.75km from the landfill facility
	Approximately 6km from sewage facility
Bondini aboriginal community	Approximately 3.5km north of sewage facility
	Approximately 4km north- east of landfill facility
Environmental receptors	Distance from prescribed activity
Major watercourses / waterbodies	Lake Violet (2.1km south of landfill and 1.4km south of sewage facility) and Lake Way (8.4km south of

	<p>landfill and 6.8km south of sewage facility).</p> <p>Lake Way is an episodic lake, approximately 270km² in size. It is one of the most northern lakes in the palaeodrainage system known as the 'Salinaland'. Sporadic high rainfall leads to overflow from surrounding lakes, including Lake Violet, into Lake Way.</p> <p>The majority of catchment inflow to Lake Way comes from the north of the lake. In times of sufficient flooding, this water continues from Lake Way, via outflow of the palaeoriver southeast, to Lake Maitland.</p>
Priority Ecological Communities	<p>Priority 1 - Stygofauna assemblages associated with the Wiluna BF calcrete. Buffer Zone edge over 250m east of sewage facility and over 3km east of landfill.</p> <p>Priority 1 - Stygofauna assemblages associated with Lake Violet Calcrete system. Buffer Zone edge 2.4km south of sewage facility and over 2km south of landfill.</p> <p>Priority 1 – Stygofauna assemblages associated with Uramurdah Lake Calcrete system. Buffer Zone edge 290m east of sewage facility and over 3km east of landfill.</p>
Underlying groundwater (non-potable purposes)	Depth to groundwater is approximately 22.9m below ground level.

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 5.

The Revised Licence L5206/1987/10 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises.

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

Table 5: 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				
Operation								
Operation of sewage facility at increased throughput	Noise	Air/windborne pathway causing impacts to health and amenity	No pathway as no human receptors in close proximity to landfill facility (other than Wiluna accommodation camp). Nearest residence is located 3.5km away.	No Applicant Controls outlined in submission.	N/A	N/A	N/A	N/A

	Untreated sewage (high in nutrients /pathogens) discharge	Overtopping of treatment ponds resulting in discharge to land	Soil and native vegetation	Refer to Section 3.1	C = Minor L = Possible Medium risk	Y	Condition 1.2.6 and Table 1.2.3 has been amended to include the requirement to visually assess the sewage treatment ponds to confirm integrity of ponds and if required freeboard capacity is available.	The Delegated Officer has taken into consideration that the sewage facility associated to the Wiluna Mine Site Accommodation Village has already been adequately operating at the increased throughput rate of 78 m ³ per day and that the freeboard requirements on the Existing Licence are currently being met. Noting this, the low annual rainfall of the region and high evaporation rate typical of this area, the Delegated Officer considers that the existing conditions stipulated on the Licence are sufficient in managing this risk event. No further regulatory controls are required.
		Spills/leaks from rupture of pipeline transporting untreated sewage to treatment ponds causing discharge to land	Soil and native vegetation	Pipelines inspected daily.	C = Minor L = Possible Medium risk	N	Condition 1.2.6 and Table 1.2.3 has been amended to include the requirement to visually inspect the sewage delivery pipelines at least once daily.	The Delegated Officer notes that the existing pipelines being utilised for the transportation of untreated sewage to the treatment ponds are not banded. The Licence Holder has advised that pipelines are being inspected on a daily basis. The Delegated Officer has determined that this control will be conditioned on the licence in line with the Department's <i>Guidance Statement: Risk Assessments</i> , as this control will lower the likelihood and consequence of uncontrolled discharges
	Seepage of untreated sewage	Seepage from treatment containment ponds	Groundwater	No Applicant Controls outlined in submission.	C = Minor L = Rare Low Risk	N/A	N/A	Although the treatment containment ponds receiving the untreated sewage are un-lined, the Delegated Officer considers that the risk of

								untreated sewage impacting groundwater through seepage of the treatment ponds to be 'low' given the depth to groundwater is 22.9 metres and therefore unlikely to have any interaction with groundwater. The Delegated Officer also notes that groundwater is not suitable for potable purposes, therefore has determined that groundwater monitoring bores are not required due to the significant distance to groundwater.
Operation of Category 64 putrescible landfill	Odour (waste handling and infilling activities)	Air/windborne pathway causing impacts to health and amenity	No human receptors in close proximity. Nearest residence is located 3.75km away from the landfill facility.	Refer to Section 3.1	C = Minor L = Rare Low Risk	Y	Condition 1.2.1 and Table 1.2.1 requires the coverage of waste with inert material to be carried out on a weekly basis and for waste to be disposed of in the dedicated landfill area.	Noting the closest sensitive residential receptor is located 3.75 kilometres from the landfill facility and in consideration of the Licence Holder's proposed controls as described in Section 3.1, the Delegated Officer considers that these measures are sufficient for managing odour and have been conditioned on the Licence.
	Noise (waste disposal, covering activities and vehicle movements)	Air/windborne pathway causing impacts to health and amenity	No human receptors in close proximity. Nearest residence is located 3.75km away from the landfill facility.	No Applicant Controls outlined in submission.	C = Slight L = Rare Low Risk	Applicant has proposed no controls. Risk assessment has shown that no additional licence controls are required to further reduce risk.	N/A	The Delegated Officer notes that there is sufficient separation from human receptors and as such, additional regulatory controls are not required to mitigate this risk. The provisions of the <i>Environmental Protection (Noise) Regulations 1997</i> are also applicable.
	Dust (unloading and storage of landfill material,	Air/windborne pathway causing impacts to health and amenity	No human receptors in close proximity. Nearest residence is located 3.75km away from the landfill facility.	No Applicant Controls outlined in submission.	C = Slight L = Unlikely Low Risk	Applicant has proposed no controls. Risk assessment	N/A	As minimal dust emissions are expected from the proposed activity and noting the distance to the nearest sensitive receptors, the risk of dust

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	waste covering activities and vehicle movements)					has shown that no additional licence controls are required to further reduce risk.		impacting receptors has been determined to be 'low'.
		Air/windborne pathway resulting in loss of amenity and nuisance impacts.	No human receptors in close proximity. Nearest residence is located 3.75km away from the landfill facility.		C = Minor L = Rare Low Risk		Condition 1.2.1 and Table 1.2.1 requires the coverage of waste with inert material to be carried out on a weekly basis and for waste to be disposed of in the dedicated landfill area. The maintenance of boundary fencing installed around the facility is also a requirement under this condition.	The Delegated Officer has determined that the Licence Holder's controls outlined in Section 3.1 and the regulatory controls that have been added to the Existing Licence are likely to be sufficient at mitigating windblown waste from the landfill facility and in turn mitigate the risk of potential impacts to fauna.
	Windblown waste	Fauna directly accessing and scavenging waste impacting health of fauna and encouraging increase of introduced pest species	Local Fauna	Refer to Section 3.1	C = Slight L = Almost certain Medium risk	Y	Condition 1.2.6 and Table 1.2.3 has been amended to include weekly inspections of the landfill facility.	
	Leachate (generated from disposal of putrescible waste or potentially contaminated stormwater – generated from rainfall over landfill area	Discharge to land – seepage of leachate into soil / groundwater	Groundwater Native vegetation	Refer to Section 3.1	C = Minor L = Rare Low Risk	Y	Condition 1.2.1 and Table 1.2.1 has been amended to include the requirement for stormwater to be managed during operation activities by ensuring clean surface water is diverted around	Noting that the depth to groundwater is approximately 22.9 metres, the landfill facility is located away from surface water drainage lines and in consideration of the high rate of evaporation typical of this region, the Delegated Officer considers that leachate emissions generated from the landfill site are considered to be minimal and that the risk of seepage of leachate to

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							the putrescible waste landfill facility and that potentially contaminated waters are retained onsite via bunds or surface diversions.	groundwater has been determined to be 'low'.
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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 6 provides a summary of the consultation undertaken by the department.

Table 6: Consultation

Consultation method	Comments received	Department response
Licence Holder was provided with draft amendment on (30 April 2021)	Comments from Applicant received on 10 May 2021 and 17 May 2021. Comments are summarised in Appendix 1.	Refer to Appendix 1.

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 7 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 7: Summary of licence amendments

Condition no.	Proposed amendments
1.2.1	<ul style="list-style-type: none"> • Table 1.2.1 amended to update the processing requirement for the Category 85 Sewage facility to be increased from 52 m3 per day to 78 m3 per day and to specify the location of the facility under Figure 3, Schedule 1. • Table 1.2.1 amended to include poly pipes as a waste type to be disposed of by burial in the Waste Rock Dump specified in Figure 7, Schedule 1. • Firewater containment condition in Table 1.2.1 updated to include poly pipe waste. • Table 1.2.1 amended to include the Category 64 Class II landfill site detailing the following processing requirements for the disposal of putrescible waste and stormwater management: <ul style="list-style-type: none"> - Disposal of waste by landfilling shall only take place within the Landfill Area shown in Figure X, Schedule 1. - No waste shall be temporarily stored or landfilled within 35 metres from the boundary of the premises. - Waste to be covered at least weekly with approximately 300mm of Type 1 inert waste or clean fill to ensure that no waste is exposed. - Waste to be covered entirely with cover material at the end of life of the landfill facility. - Boundary fencing shall be maintained around the landfill facility to contain windblown waste. - Clean surface water shall be diverted around putrescible waste landfill facility. - Potentially contaminated waters are retained onsite via bunds or surface diversions.
1.2.2	Containment infrastructure requirements for the sewage treatment ponds updated under Table 1.2.2.
1.2.4	All references to the term 'wastewater' have been updated to the term 'sewage' to provide clarity that this condition relates to the sewage treatment ponds.
1.2.6	Amended Table 1.2.3 to include the visual inspection of the sewage treatment ponds, sewage delivery pipelines, and landfill facility.

3.4.1 and 3.4.2	The compliance groundwater monitoring bores in Tables 3.4.3 (Ambient groundwater quality) and 3.4.4 (Management actions) have been amended to reflect the replacement of nine new monitoring bores in an adjacent location as depicted under Figure 3, Schedule 1). Monitoring bores IPT3 and SIPT 11 have been removed from the monitoring schedule in Tables 3.4.3 and 3.4.4.
4.2.1	The parameters listed under Table 4.2.1 that are required for the Annual Environmental Report (AER) have been updated to provide further clarity and eradicate duplication as they are listed in detail under Tables 3.2.1, 3.3.1, 3.4.1, 3.4.2 and 3.4.3. Table 1.2.1 has been amended to include the requirement for the flow meter data to be provided in the AER to support compliance for the sewage throughput.
Figure 3, Schedule 1	Figure 3 under Schedule 1 replaced with updated map showing the correct location of sewage treatment ponds, landfill and bioremediation facility.

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 and Environmental Regulation (DWER) 2019, *Guideline: Decision Making*, Perth, Western Australia

Appendix 1: Summary of Licence Holder's comments on risk assessment and draft conditions

Condition	Summary of Licence Holder's comment	Department's response
Amended Licence		
Instrument Log Table of the Amended Licence.	The Licence Holder has requested that the strikethrough text under the June 2016 Licence Amendment related to plant upgrades be included in the Instrument Log table.	Noted and updated the Instrument Log Table of the Amended Licence accordingly.
Figure 3, Schedule 1 of the Amended Licence – Locations of containment infrastructure, 2 of 3 DWER requested that the Licence Holder provide an updated map showing the correct location of sewage treatment ponds, landfill and bioremediation facility.	The Licence Holder provided an updated map with the information requested to replace Figure 3 on the Amended Licence.	Replaced Figure 3 under Schedule 1 of the Amended Licence with the map provided by the Licence Holder accordingly.
Amendment Report		
Figure 2, Page 4 of the Amendment Report DWER requested that the Licence Holder provide a shapefile or GPS coordinates (in GDA 94 format) of all groundwater monitoring locations so this information can be recorded in the Departments' GIS system.	The Licence Holder provided GPS coordinates of all groundwater monitoring locations at the Premises.	Noted and recorded in the Department's GIS system.

Condition	Summary of Licence Holder's comment	Department's response
<p>Table 3, Page 6 of the Amendment Report: Proposed controls for odour emissions.</p> <p>DWER requested that the Licence Holder advise of the depth of cover material and timeframe for when waste will be covered following deposition.</p> <p>DWER requested that the Licence Holder confirm if waste will be covered entirely by cover material.</p>	<p>The Licence Holder advised that the depth of cover material is approximately 300mm and waste will be covered on a weekly basis.</p> <p>The Licence Holder advised that the waste at the landfill facility will be covered entirely at the end of the landfill facility's life.</p>	<p>Noted and updated Table 3 of the Amendment Report and the operational requirements of Condition 1.2.1 under Table 1.2.1 of the Works Approval accordingly.</p>
<p>Table 3, Page 6 of the Amendment Report: Proposed controls for leachate emissions</p> <p>DWER requested that the Licence Holder advise of the frequency of visual inspections to identify any leaks or discharges from the landfill facility.</p> <p>DWER requested that the Licence Holder advise of the depth of cover material over the putrescible waste and timeframe for when waste will be covered following deposition. In addition, DWER requested the Licence Holder advise if the waste will be covered entirely by cover material.</p>	<p>The Licence Holder requested to remove the proposed control listed in Table 3 of the Amendment Report which required visual inspections of the landfill facility to identify discharges from the landfill facility. The Licence Holder advised that as the landfill is located within a pit, it is not practical or possible to visually inspect potential leachate.</p> <p>The Licence Holder advised that the depth of cover material is approximately 300mm and waste will be covered on a weekly basis.</p> <p>The Licence Holder advised that the waste at the landfill facility will be covered entirely at the end of the landfill facility's life.</p>	<p>The proposed control for visual inspections of the landfill facility to identify leaks or discharges has been removed from Table 3 of the Amendment Report. The Delegated Officer has determined that this will not affect the risk assessment and the remaining controls for managing leachate emissions are sufficient.</p> <p>Noted and updated Table 3 of the Amendment Report and the operational requirements of Condition 1.2.1 under Table 1.2.1 of the Works Approval accordingly.</p>

Condition	Summary of Licence Holder's comment	Department's response
<p>Table 3, Page 7 of the Amendment Report: Proposed controls for windblown waste.</p> <p>DWER requested that the Licence Holder advise of the depth of cover material over the putrescible waste and timeframe for when waste will be covered following deposition.</p>	<p>The Licence Holder advised that the depth of cover material is approximately 300mm and waste will be covered on a weekly basis.</p> <p>The Licence Holder advised that the waste at the landfill facility will be covered entirely at the end of the landfill facility's life.</p>	<p>Noted and updated Table 3 of the Amendment Report and the operational requirements of Condition 1.2.1 under Table 1.2.1 of the Works Approval accordingly.</p>

Appendix 2: Application validation summary

SECTION 1: APPLICATION SUMMARY						
Application type						
Works approval	<input type="checkbox"/>					
Licence	<input checked="" type="checkbox"/>	Relevant works approval number:		None	<input type="checkbox"/>	
		Has the works approval been complied with?			Yes	<input type="checkbox"/>
		Has time limited operations under the works approval demonstrated acceptable operations?			Yes	<input type="checkbox"/>
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?			Yes	<input type="checkbox"/>
		Date Report received:				
Renewal	<input type="checkbox"/>	Current licence number:				
Amendment to works approval	<input type="checkbox"/>	Current works approval number:				
Amendment to licence	<input checked="" type="checkbox"/>	Current licence number:	L5206/1987/10			
		Relevant works approval number:		N/A	<input type="checkbox"/>	
Registration	<input type="checkbox"/>	Current works approval number:		None	<input type="checkbox"/>	
Date application received		30/11/2020				
Applicant and Premises details						
Applicant name/s (full legal name/s)		Wiluna Operations Pty Ltd				
Premises name		Wiluna Gold Mine				
Premises location		Off Goldfields Hwy, Wiluna				
Local Government Authority		Shire of Wiluna				
Application documents						
HPCM file reference number:		2012/006906-1~3				
Key application documents (additional to application form):		Application form Attachment 1C- Authorization letter Attachment 2 – Premises maps Attachment 3B – Further detail on proposed activities Attachment 9 – Fee calculation				

Scope of application/assessment

Summary of proposed activities or changes to existing operations.

Monitoring Bores:

A number of monitoring bores have required replacement due to the existing bores being blocked/collapsed or removed as a result of mine activities (such as pit development).

Two bores are also proposed to be removed from the monitoring schedule. Adjacent bores in close proximity are being monitored, which are sufficient to detect changes in groundwater quality or levels in those areas.

Sewerage Facility Throughput

A Licence amendment is required to increase sewage production from 52 m³ per day to 78 m³ per day to correct a calculation error made during the original Licence application process for Category 85. This is an administrative change; there is no intention to increase the sewerage output at the accommodation village from that currently generated.

Initially a rate of 180L / per person / per day was used to calculate daily sewage production; however, this figure was underestimated and, as a result, Wiluna Operations have exceeded the Licence limit on multiple occasions. A more accurate rate is 260 L / per person / per day, which is consistent with recent advice from a wastewater treatment specialist and reflects the actual average sewage production at the site.

The current system consists of six wastewater containment ponds and an emergency overflow pond. This system is operating at the increased production level and has demonstrated sufficient capacity for the 78 m³ throughput.

Construction of a second accommodation village is being considered for future operations; however, this will involve installation of a new wastewater treatment system under a separate Licence amendment.

Landfill Facility

The Landfill Facility at the Wiluna Mine Site is licenced in L5206/1987/10 as Category 63 for Class I (Inert) waste. The Facility also has a Registration (R2015/2008/1) as a Class II (Putrescible) landfill consistent with Category 89 (although Category 89 is not presently included in L5206/1987/10).

Approximately 1380-1500 tonnes / annum of putrescible waste is currently disposed to the Landfill Facility. The Facility is situated within the Republic open pit, is fenced and has sufficient soil material to regularly cover waste, in accordance with the requirements of the *Environmental Protection (Rural Landfill) Regulations 1987*.

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 5: Processing or beneficiation of metallic or non-metallic ore.	2,200,000 tonnes per year	No change
Category 6: Dewatering	2,365,000 kL per year	No change
Category 57: Used tyre storage	300 tyres	No change
Category 63: Class I inert landfill site	1,500 tonnes or more per year	Change category to category 64 to reflect the Class II landfill registration that is held for the landfill. There are no other landfills onsite. No change to approved production capacity.
Category 85: Sewage facility	52 m ³ per day	Increase approved throughput to 78m ³ /day.

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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Referral decision No: Managed under Part V <input type="checkbox"/> Assessed under Part IV <input type="checkbox"/>
Does the applicant hold any existing Part IV Ministerial Statements relevant to the application?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Ministerial statement No: EPA Report No:
Has the proposal been referred and/or assessed under the EPBC Act?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Reference No:
Has the applicant demonstrated occupancy (proof of occupier status)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Certificate of title <input type="checkbox"/> General lease <input type="checkbox"/> Expiry: Mining lease / tenement <input type="checkbox"/> Expiry: Other evidence <input type="checkbox"/> Expiry:
Has the applicant obtained all relevant planning approvals?	Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>	Approval: Expiry date: If N/A explain why?

Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Type: Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Regional office:
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A Priority: N/A Are the proposed activities/landuse compatible with the PDWSA (refer to WQPN 25)? Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/>
Is the Premises subject to any other Acts or subsidiary regulations (e.g. <i>Dangerous Goods Safety Act 2004</i> , <i>Environmental Protection (Controlled Waste) Regulations 2004</i> , <i>State Agreement Act xxxx</i>)	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	<i>Mining Act 1972</i> <i>Dangerous Goods Safety Act 2004</i>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

<p>Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i>?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>	<p>Classification: possibly contaminated – investigation required (PC–IR) Date of classification: 30 May 2016</p>
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