



## Application for Licence Amendment

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

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<b>Licence Number</b>	L8667/2012/1
<b>Licence Holder</b>	Yilgarn Iron Pty Ltd
<b>ACN</b>	626 035 078
<b>File Number</b>	DER2014/003224-1
<b>Premises</b>	Windarling Range Mine Operations  Part Mining Lease M77/1001, M77/999, M77/1038, M77/1039, M77/1000, M77/1257, M77/1258, M77/1259 and L77/235 MOUNT JACKSON WA 6426
<b>Date of Report</b>	2/09/2024
<b>Decision</b>	Revised licence granted

**A/SENIOR MANAGER, RESOURCE INDUSTRIES**

an officer delegated under section 20 of the *Environmental Protection Act 1986* (WA)

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## 1. Decision summary

Licence L8667/2012/1 is held by Yilgarn Iron Pty Ltd (YIPL, the Licence Holder) for the Windarling Range Mine Operations (the Premises), located within Part Mining Lease M77/1001, M77/999, M77/1038, M77/1039, M77/1000, M77/1257, M77/1258, M77/1259 and L77/235, Mount Jackson, Western Australia.

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 L8667/2012/1 has been granted to expand the irrigation size for discharge of treated wastewater.

## 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 Amendment summary

On 22 April 2024, the Licence Holder submitted an application to the department to amend Licence L8667/2012/1 under section 59 and 59B of the *Environmental Protection Act 1986* (EP Act).

The existing licence authorises treated wastewater to be discharged into either a lined turkeys nest dam, for use in dust suppression, or to an irrigation area (emission point reference L2). The L2 emission point is depicted in Figure 2 of Schedule 1 and currently depicts two distinct sprinkler system areas. The current sprinkler system only allows discharge to be distributed to 1.1 ha of the irrigation area, underutilising the much larger area, and as identified by the Licence Holder, leading to potential pooling and nutrient overloading.

The Licence Holder is requesting an amendment to Figure 2 of Schedule 1 to allow treated wastewater to be discharged across the whole delineated irrigation area, being 24.3 ha. By updating the emission point to include the whole irrigation area, the Licence Holder has the flexibility to move the sprinklers as required to ensure treated wastewater is evenly distributed and doesn't pool.

This amendment is limited to changes to category 54 activities from the existing licence and no change to the assessed production capacity (210 cubic metres per day) of the wastewater treatment plant (WWTP). No changes to the aspects of the existing licence relating to Category 6, 12 and 64 have been requested by the Licence Holder.

#### 2.2.1 Nutrient loading rates

The Licence Holder has provided the department with calculations for nutrient loading rates for discharged treated wastewater. The Licence Holder has assigned the risk category as 'D' as outlined in the department's Water Quality Protection Note 22, *Irrigation with nutrient-rich wastewater* (July 2008)<sup>1</sup>, being fine grained soils typical of loam, clays or peat, and a low eutrophication risk to surface waters.

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<sup>1</sup> DWER 2008, *Water Quality Protection Note 22: Irrigation with nutrient-rich wastewater*, Perth, Western Australia.  
<https://www.wa.gov.au/system/files/2022-04/WQPN-22-Irrigation-with-nutrient-rich-wastewater.pdf>

Using the 'D' risk category, the relevant loading rates are 480 kg/hectare/year for nitrogen and 120 kg/hectare/year for phosphorus. These loading rates are also specified in the existing licence as emission to land limits.

As the existing licensed sprinkler system configuration limits irrigation to 1.1 ha, both nitrogen and phosphorus loading rates were exceeded in 2023. The existing licence authorises the discharge of up to 210 m<sup>3</sup> per day of treated wastewater. The Licence Holder has determined that a minimum irrigation size of 8 ha would be required for loading rates to remain within the licensed limits. The amended Figure 2 would allow treated wastewater to be discharged across the whole irrigation area, being 23.4 ha, allowing for licence limits to be achieved.

## 2.3 Part IV of the EP Act

Ministerial Statement No. 982 (MS982) was granted on 24 September 2014. Environmental Protection Authority (EPA) assessment no. 2011, under Section 46 (Part IV) of the EP Act stated that the Yilgarn Operations may be implemented at the Windarling Range, Mt Jackson Range and Deception Deposits located in the shires of Menzies and Yilgarn.

The EPA assessment and Ministerial Statement focused on biodiversity issues, particularly the conservation of significant fauna species including *Leipoa ocellata* (Maleefowl) and flora species *Calytrix viscida* (Myrtle) and *Tetratheca paynterae* (Paynter's Tetratheca). The ministerial statement requirements minimisation of direct/indirect impacts via a fauna and vegetation management plans.

## 2.4 Other approvals

The premises is covered by Native Title claim Marlinyu Ghoorlie (Tribunal file no. WC2017/007). There are also several lodged aboriginal heritage sites across the premises. DWER notes that the applicant is responsible for ensuring appropriate approvals and stakeholder engagement has taken place under the *Aboriginal Heritage Act 1972*.

## 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 *Guideline: Risk assessments* (DWER 2020).

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 1 below. Table 1 also details the proposed control measures the Licence Holder has proposed to assist in controlling these emissions, where necessary.

**Table 1: Licence Holder controls**

Emission	Sources	Potential pathways	Proposed controls
Treated effluent	Discharge of treated effluent to irrigation area	<p>Infiltration and runoff</p> <p>Direct discharge to soils and vegetation.</p> <p>Infiltration through soil to groundwater.</p>	<p>Reconfiguration of sprinkler layout within irrigation area to allow for a more even distribution of treated wastewater and reduce risk of pooling.</p> <p>In addition, existing licence conditions also control risk from irrigating treated wastewater:</p> <ul style="list-style-type: none"> <li>• no irrigation generated run-off, spray drift or discharge occurs beyond the boundary of the Premises;</li> <li>• wastewater is evenly distributed over the irrigation area;</li> <li>• wastewater is applied at a rate which avoids soil erosion and surface ponding; and</li> <li>• a healthy vegetation cover is maintained over the wastewater irrigation areas.</li> </ul>

### 3.1.2 Receptors

In accordance with the *Guideline: Risk assessments* (DWER 2020), 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.

There are no human receptors that will be impacted by the proposed change to irrigation area.

Table 2 below provides a summary of potential environmental receptors that may be impacted as a result of activities upon or emission and discharges from the prescribed premises (*Guideline: Environmental siting* (DWER 2020)).

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

Environmental receptors	Distance from prescribed activity
Threatened and/or priority fauna	Closest record (Visual sighting) to the WWTP irrigation area is 300 m East ( <i>Leipoa ocellata</i> , Vulnerable)
Threatened and/or priority flora	Closest record to the WWTP irrigation area is 600 m east ( <i>Eucalyptus formanii</i> subsp. <i>formanii</i> , P4)
Native vegetation	<p>Within the irrigation area (Figure 1 below)</p> <p>Vegetation survey results: <i>Scaevola spinescens</i> and <i>Enchylaena tomentosum</i> shrubs in the understory were showing signs of stress within spray fields.</p>

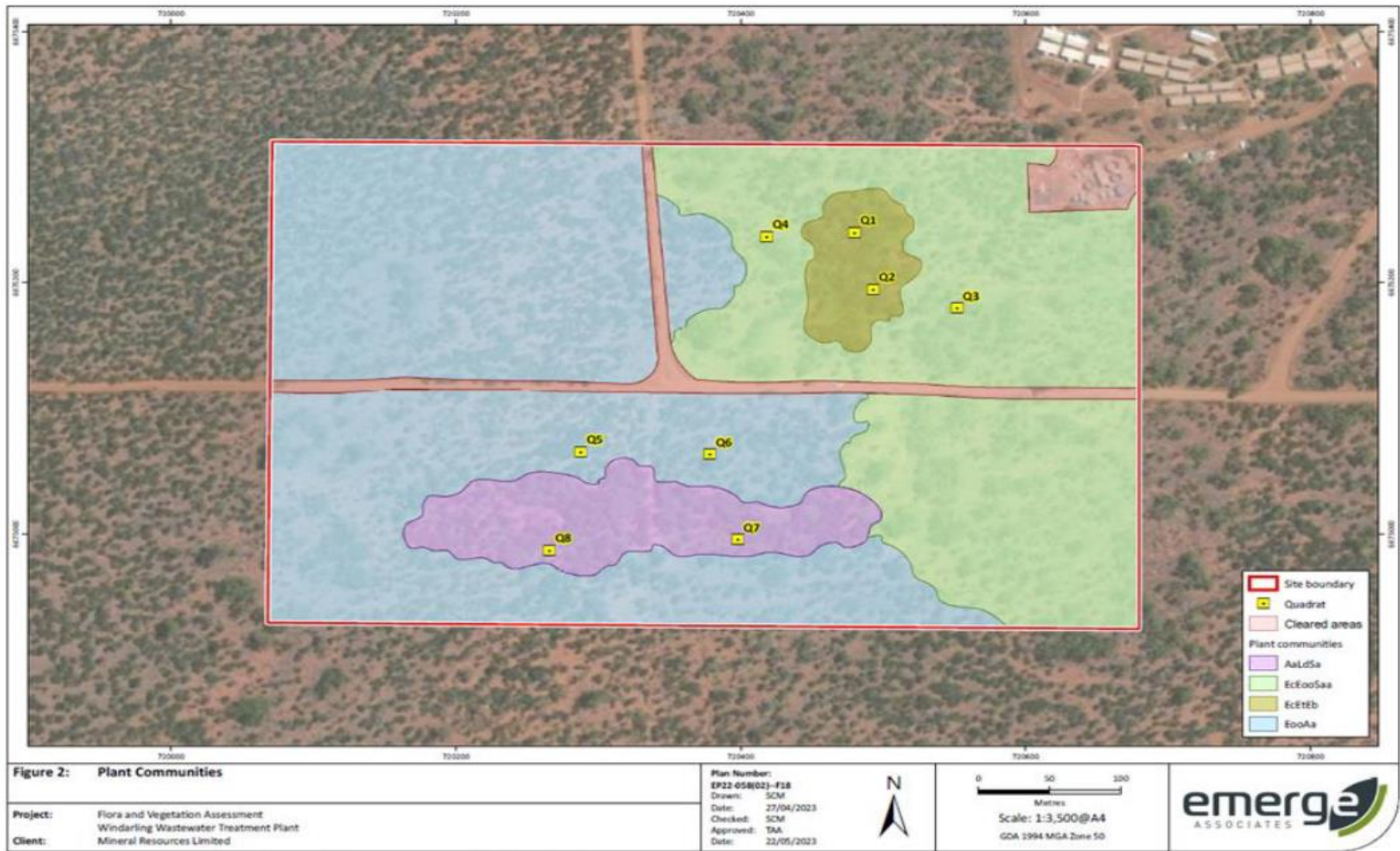


Figure 1: Native vegetation communities in Windarling WWTP irrigation field



### 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) 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 incomplete 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 L8667/2012/1 that accompanies this Amendment Report authorises emissions associated with the operation of the Premises i.e. category 54: Sewage facility activities. 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 <sup>1</sup> C = consequence L = likelihood	Licence Holder’s controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Source/Activities	Potential emission	Potential pathways and impact	Receptors	Licence Holder’s controls				
<b>Operation (Category 54: Sewage Facility)</b>								
Increased irrigation area (23.4 ha) for disposal of treated effluent.	Treated effluent	Infiltration and runoff Direct discharge of inadequately treated effluent to sprayfield with elevated nutrient and pathogen levels, potentially impacting native vegetation via root uptake; or degradation to surface water runoff	Native vegetation, including priority and threatened flora Fauna	Refer to Section 3.1 (Table 2)	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Condition 8: discharge requirements Condition 16: Emissions to land	The Licence Holder has provided information to demonstrate that the larger irrigation area is required to meet existing licence limits for nutrient loading rates.  Existing conditions for irrigation of treated wastewater are considered sufficient to mitigate the risk.

Note 1: Consequence ratings, likelihood ratings and risk descriptions are detailed in the *Guideline: Risk assessments* (DWER 2020).

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
Application advertised on the department's website on 28 June 2024	None received.	N/A
Licence Holder was provided with draft amendment on 19 August 2024	Applicant had no comments and waived the comment period on 28 August 2024.	Noted.

## 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
15 (Table 7)	Additional wording added to state where the emission point references are depicted in the licence.
16 (Table 8)	Additional wording added to state where the emission point references are depicted in the licence.
Schedule 1: Figure 2	Updated the map to delineate emission point L2 as the whole 23.4 ha irrigation area.

## References

1. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
  2. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
  3. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.
- Mineral Resources Limited (MRL) 2024, *Windarling Range Mine Operations, Environmental Protection Act 1986, Application for Part V Licence Amendment L8667/2012/1, Supporting Document*, Perth, Western Australia.