



## Application for Licence

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

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<b>Licence Number</b>	L9306/2021/1
<b>Applicant</b>	Mincor Resources NL
<b>ACN</b>	072 745 692
<b>File number</b>	DWER2021/000464
<b>Premises</b>	Casini-Redross Project Cassini Mine Site, Kambalda L15/235, M15/90 and M15/1457
<b>Date of report</b>	8 February 2022
<b>Decision</b>	Licence granted

**MANAGER, RESOURCE INDUSTRIES  
REGULATORY SERVICES**

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

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## 1. Decision summary

This decision report documents the assessment of potential risks to the environment and public health from emissions and discharges during the operation of the premises. As a result of this assessment, licence L9306/2021/1 has been granted.

## 2. Scope of assessment

### 2.1 Regulatory framework

In completing the assessment documented in this decision report, the Department of Water and Environmental Regulation (the department; DWER) 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 and overview of premises

On 11 August 2021, the applicant submitted an application for a licence to the department under section 57 of the *Environmental Protection Act 1986* (EP Act).

The application is to seek a licence relating to mine dewatering and a putrescible landfill site at the premises. The premises is approximately 20 km south of Widgiemooltha townsite.

The dewatering infrastructure and the putrescible landfill was constructed under works approval W6336/2019/1. The construction was completed in July 2021, and an Environmental Compliance Report (ECR) for these works was submitted on 5 August 2021, whereupon time limited operations commenced. As the time limited operation period is coming to an end, a licence application has been submitted to authorise the ongoing operation of the ponds. The department confirms that the applicant is compliant with the conditions of Works Approval W6336/2019/1.

The premises relates to the categories 6 and 89 and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in licence L9306/2021/1. The infrastructure and equipment relating to the premises category and any associated activities which the department has considered in line with *Guideline: Risk Assessments* (DWER 2020) are outlined in licence L9306/2021/1.

## 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 decision report are detailed in Table 1 below. Table 1 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

**Table 1: Proposed applicant controls**

Emission	Sources	Potential pathways	Proposed controls
<b>Category 6: Mine dewatering</b>			
<p>Mine dewater</p> <ul style="list-style-type: none"> <li>• Saline to hypersaline</li> <li>• Chemical composition dominated by sodium and chloride ions</li> <li>• Elevated metals and metalloids (e.g. Cobalt, Copper, Nickel and Zinc)</li> </ul>	<p>Mine dewatering from boxcut</p>	<p>Mine dewater discharged to environment:</p> <ul style="list-style-type: none"> <li>• Direct discharge to Lake Eaton South</li> </ul>	<p>Lake Eaton South outfall:</p> <ul style="list-style-type: none"> <li>• Energy dissipation infrastructure to minimise possible impacts on the lakeshore environment.</li> <li>• The discharge outlet is inspected daily and any defects to the rock bund rectified as required.</li> </ul> <p>Dewatering:</p> <ul style="list-style-type: none"> <li>• Daily cumulative flowmeter readings at discharge point to measure abstraction/discharge rate.</li> <li>• Comprehensive chemical analysis of discharge (analyte requirements and frequency based on licence specifications). First sampling occasion within first week of the commencement of discharge.</li> </ul> <p>Lake levels:</p> <ul style="list-style-type: none"> <li>• Pre-disposal: installation of lake level gauge and opportunistic monitoring following significant rainfall events.</li> <li>• During disposal: monthly photographic monitoring from the discharge point and measurement of lake water levels.</li> </ul> <p>Lake water and sediment quality:</p> <ul style="list-style-type: none"> <li>• Pre-disposal baseline sediment and water quality sampling has been conducted.</li> <li>• Comprehensive chemical analysis of discharge and sediments (analyte requirements and frequency based on licence specifications). First sampling occasion within first week of the commencement of discharge.</li> <li>• Monthly analysis of the discharge water for heavy metals (whilst dewatering occurring).</li> <li>• Annual sampling of sediment quality (dewatering occurring dewatering).</li> <li>• Collection of water samples at a number of locations across the lake annually (when there is a rainfall event large enough to have water on the playa).</li> <li>• Sampling of water and sediment quality on a control site (Lake Eaton North) conducted for comparative purposes.</li> </ul>

Emission	Sources	Potential pathways	Proposed controls
			<ul style="list-style-type: none"> <li>Measurement of salt crust thickness (frequency based on licence specifications).</li> </ul> <p>Lakeside vegetation:</p> <ul style="list-style-type: none"> <li>Photographic monitoring of vegetation fringing Lake Eaton South (within and outside of discharge extent area). Frequency based on licence specifications.</li> <li>Photographic monitoring of vegetation fringing Lake Eaton North (control site) conducted for comparative purposes. Frequency based on licence specifications.</li> </ul>
		<p>Mine dewater discharged to environment:</p> <ul style="list-style-type: none"> <li>Seepage through storage of mine dewater in settlement dams</li> <li>Overtopping of settlement dams</li> </ul>	<p>Storage dams:</p> <ul style="list-style-type: none"> <li>Water level sensors.</li> <li>Daily visual inspections of storage dams.</li> <li>Daily cumulative flowmeter readings at discharge point.</li> <li>Weekly measurement of total suspended solids (TSS) and total dissolved solids (TDS) at the point of discharge into Cassini storage dams.</li> <li>Comprehensive chemical analysis of discharge (analyte requirements and frequency based on licence specifications). First sampling occasion within first week of the commencement of discharge.</li> <li>Both dams are lined with a 1.5mm thick HDPE geomembrane.</li> </ul>
		<p>Mine dewater discharged to environment:</p> <ul style="list-style-type: none"> <li>Pipeline leak/rupture</li> </ul>	<p>Pipeline:</p> <ul style="list-style-type: none"> <li>Daily pipeline inspection and record in log book.</li> <li>Daily reconciliation of upstream and downstream cumulative flowmeter readings to identify leaks.</li> </ul>
<b>Category 89: Putrescible landfill site</b>			
Leachate	Landfill operation	Direct discharges to land or surface watercourses and infiltration to groundwater	The landfill trenches are approximately 2m deep, therefore the separation distance between the groundwater table and base of the landfill trenches is approximately 29m. Surface run-off water will be diverted away from the landfill facility by trenches or bunding to ensure the long-term integrity of the landfill facility. Landfill sites will be located at least 100m from ephemeral creek lines.
Odour from the degradation of putrescible waste	Landfill operation	Air/Wind dispersion	Compliance with DWER licence requirements. Regular covering of landfill.

<b>Emission</b>	<b>Sources</b>	<b>Potential pathways</b>	<b>Proposed controls</b>
(rotting food from meal scraps)			
Litter/Waste	Uncovered and/or accessible waste	Wind mobilised Access to landfill	The waste will be covered with a minimum of 20cm of stockpiled material on a weekly basis. The waste will be covered completed so that no waste is exposed. Only approved fill materials may be used. Weekly inspection of the landfill facilities shall be conducted to ensure that any litter control issues are identified and managed. All wind-blown rubbish will be contained within the boundary of the landfill facility and any wind-blown waste will be returned to the tipping area on at least a weekly basis. Steel fencing at least 1.8m high shall be maintained around the site where it is required to control access or where windblown litter control is identified as an issue.
Smoke and fumes from possible fires	Inadequate management of waste disposed in landfills	Air/Wind dispersion	No applicant controls provided.
Firefighting water runoff	Inadequate management of waste disposed in landfills	Direct discharges to land or surface watercourses and infiltration to groundwater	No applicant controls provided.

### 3.1.2 Receptors

In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors 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 and Figure 1 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 (*Guideline: Environmental Siting* (DWER 2020)).

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

Environmental receptors	Distance from prescribed activity
Lake Eaton South	<p>Located adjacent to Category 6 (mine dewatering) pipelines, which run along the north-east corner of the lake.</p> <p>Lake Eaton South is the proposed final discharge point for mine dewater following storage within the settlement dams.</p> <p>Lake Eaton South is a salt playa lake with historical water quality data showing a range in water salinity of 13,750 (highly saline) to 333,000 (hypersaline) mg/L TDS. The lower range in salinity results would relate to samples taken following significant rainfall events (Rockwater 2019).</p> <p>Lake surface water is slightly alkaline (pH 8.7) (Rockwater 2019).</p> <p>With average rainfall, the lake will remain dry most of the year due to high evaporation rates (MLC 2020).</p>
Unnamed salt playa (south of Lake Eaton South)	<p>Located approximately 800 m south of Lake Eaton South and adjacent to Category 6 (mine dewatering) pipelines, which run along the eastern side of the salt playa.</p>
Riparian vegetation	<p>Fringing samphire shrublands on the banks of Lake Eaton South.</p> <p>The risk of backflow of discharge water into the riparian zone of the tributary creeklines around Lake Eaton South is low given the low discharge volumes and large surface area of the lake (Botanica 2019).</p>
Groundwater	<p>Groundwater is considered saline with 30,000-40,000 mg/L TDS (works approval application form submitted by applicant, dated 23 September 2019).</p> <p>Groundwater pH is neutral (pH 6.7-6.9) (Rockwater 2019).</p> <p>Standing Water Level is approximately 25 metres below ground level (mbgl) (works approval application form submitted by applicant, dated 23 September 2019).</p> <p>The primary aquifer system within the premises area occurs within the Lefroy Paleochannel, which is located north-west of the premises. Groundwater flows eastwards in the direction of the original drainage (MLC 2020).</p>
Threatened and priority fauna	<p>The issued clearing permit (8636/1) indicates the presence of the following conservation significant fauna species within Mining Tenements M15/90, M15/1457 and L15/235:</p>

	<ul style="list-style-type: none"> <li>• Malleefowl, <i>Leipoa ocellate</i> (listed as Vulnerable at both state and federal level): <ul style="list-style-type: none"> <li>○ The application area is within the known breeding range of Malleefowl (<i>Leipoa ocellate</i>) and Malleefowl may potentially be breeding in the area.</li> <li>○ Three inactive Malleefowl mounds were recorded in 2019.</li> </ul> </li> <li>• Peregrine Falcon, <i>Falco peregrinus</i> (OS); and</li> <li>• Central Long-eared Bat, <i>Nyctophilus major</i> tor (P3).</li> </ul> <p>During targeted field surveys, no fauna pursuant to the <i>Biodiversity Conservation Act 2016</i> (BC Act) and the <i>Environment Protection Biodiversity Conservation Act 1999</i> (Cth) (EPBC Act) or Priority Fauna species as listed by the Department of Biodiversity, Conservations and Attractions (DBCA) were confirmed to occur within the survey area (MLC 2020).</p>
Native fauna	<p>The issued clearing permit (8636/1) indicates that Mining Tenements M15/90, M15/1457 and L15/235 fall within the area known as the Great Western Woodlands, which represents the largest and most intact eucalypt woodland remaining in southern Australia and is one of the best examples of its type in the world (DEC, 2010). The Great Western Woodlands covers a total area of approximately 16 million hectares and is recognised for its flora and fauna species richness.</p> <p>A total of 85 vertebrate fauna taxa have been recorded regionally within a 20 km radius of the 90.2 ha survey area including 45 bird species, seven mammals and 33 reptiles (MLC 2020).</p> <p>Two reptiles, 28 birds and seven mammal species (including five bat species) were recorded during targeted field surveys (MLC 2020).</p> <p>Waders, waterbirds or bats might encounter Lake Eaton South and may be exposed to the discharge of mine dewater through consuming aquatic organisms.</p>
Aquatic biota	<p>Aquatic biota recorded during a PhD study of Lake Eaton South in 2001 (prior to mine dewatering occurring) identified that none of the taxa are restricted to Lake Eaton and were identified across other salt lakes in the Kambalda region. According to DBCA's NatureMap database search (DBCA, 2019) there are no records of Threatened or Priority aquatic invertebrates at Lake Eaton South (Botanica 2019).</p>
Priority flora	<p>Priority 3 (P3) Flora taxon, <i>Pityrodia scabra</i> subsp. <i>dendrotricha</i> located adjacent to dewatering pipeline.</p>
Native vegetation	<p>The issued clearing permit (8636/1) indicates that the condition of vegetation located within Mining Tenements M15/90, M15/1457 and L15/235 is:</p> <ul style="list-style-type: none"> <li>• Very Good: Vegetation structure altered; obvious signs of disturbance; to</li> <li>• Good: Structure significantly altered by multiple disturbance; retains basic structure/ability to regenerate.</li> </ul>



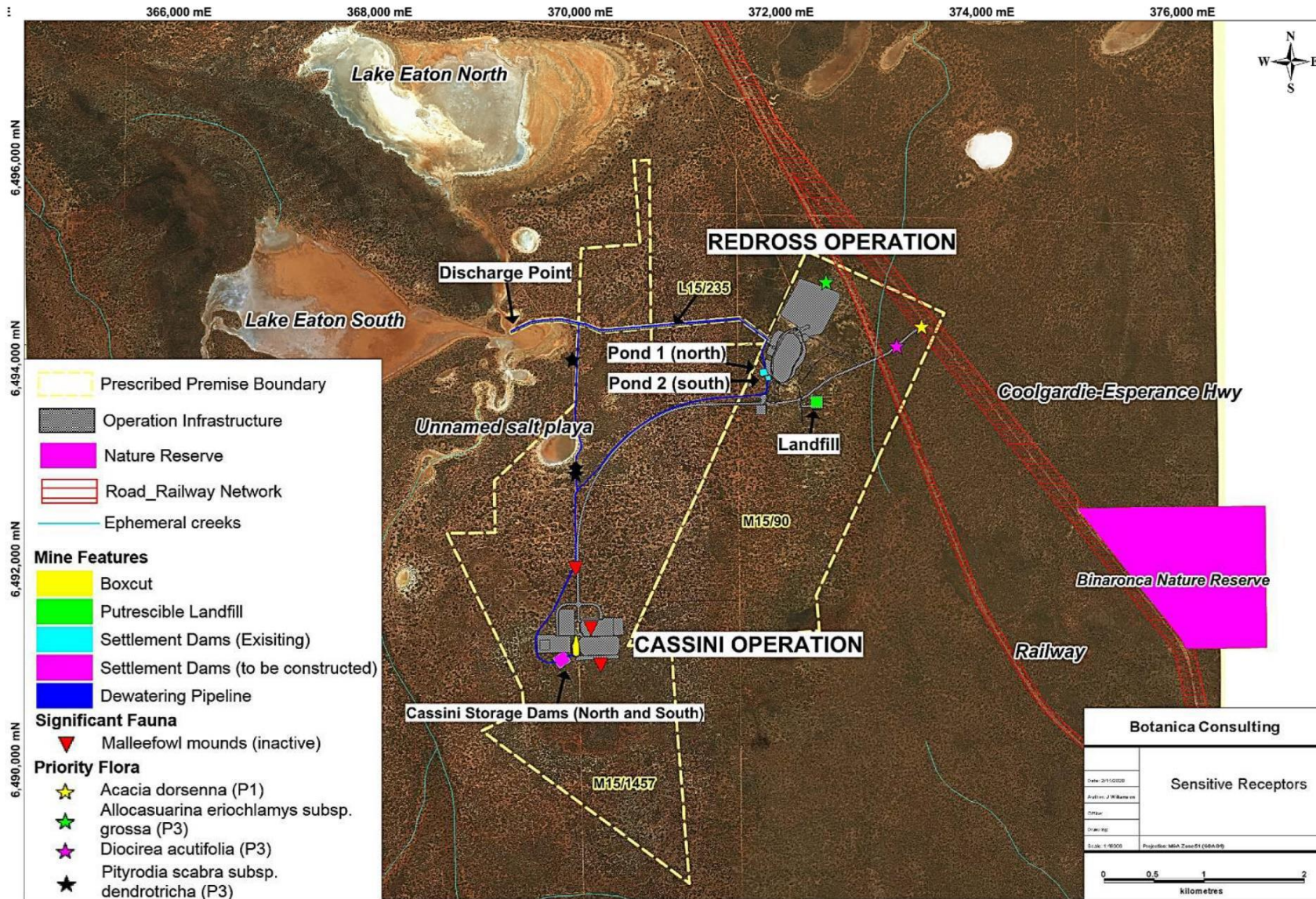


Figure 1: Location of sensitive receptors

## 3.2 Risk ratings

Risk ratings have been assessed in accordance with the *Guideline: Risk Assessments* (DWER 2020) for each identified emission source 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 applicant 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 applicant'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 applicant's controls are not deemed sufficient. Where this is the case the need for additional controls will be documented and justified in Table 3.

Licence L9306/2021/1 that accompanies this decision report authorises emissions associated with the operation of the premises i.e. dewatering and landfill activities.

The conditions in the issued licence, as outlined in Table 3 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 events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<b>Category 6: Mine dewatering</b>								
<p>Source:</p> <ul style="list-style-type: none"> <li>Mine dewater</li> </ul> <p>Activities:</p> <p>Mine dewatering from boxcut</p>	<p>Mine dewater:</p> <ul style="list-style-type: none"> <li>Saline to hypersaline</li> <li>Chemical composition dominated by sodium and chloride ions</li> <li>Elevated metals and metalloids (e.g. Cobalt, Copper, Nickel and Zinc)</li> </ul>	<p>Mine dewater discharged to environment:</p> <p>Direct discharge to Lake Eaton South</p> <p>Increased erosion, scouring, and sedimentation within salt lake</p> <p>Reduced quality or contamination of salt lake sediment, surface water and/or groundwater</p> <p>Increased turbidity in surface water</p> <p>Reduced riparian vegetation health or riparian vegetation death</p>	<p>Lake Eaton South (surface water and sediment)</p> <p>Riparian vegetation</p> <p>Groundwater</p>	<p>Refer to Section 3.1</p>	<p>C = Moderate</p> <p>L = Possible</p> <p><b>Medium Risk</b></p>	<p>Y</p>	<p>Conditions 1 to 5, 8 to 14</p>	<p>Regulatory controls applied to:</p> <ul style="list-style-type: none"> <li>Ensure dewatering infrastructure is operated in accordance with the applicant's proposal; and</li> <li>Monitor discharges to assess potential environmental impacts.</li> </ul>

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
	<p>Mine dewater:</p> <ul style="list-style-type: none"> <li>Saline to hypersaline</li> <li>Chemical composition dominated by sodium and chloride ions</li> </ul> <p>Elevated metals and metalloids (e.g. Cobalt, Copper, Nickel and Zinc)</p>	<p>Mine dewater discharged to environment:</p> <ul style="list-style-type: none"> <li>Seepage through storage of mine dewater in settlement dams</li> <li>Overtopping of settlement dams</li> </ul> <p>Reduced quality or contamination of soil, sediment, and/or groundwater</p> <p>Soil sodicity, discharged surfaces may become dispersive, causing increased erosion/sedimentation</p> <p>Reduced native vegetation health or native vegetation death</p> <p>Pipeline leak/rupture</p>	<p>Groundwater</p> <p>Land/Soil</p> <p>Native vegetation</p>	Refer to Section 3.1	<p>C = Moderate</p> <p>L = Possible</p> <p><b>Medium Risk</b></p>	Y	Conditions 1 to 5, 8 to 14	Regulatory controls applied to ensure settlement dams and dewatering pipelines are operated and maintained in accordance with the applicant's proposal.
<p>Source:</p> <ul style="list-style-type: none"> <li>Mine dewater</li> </ul> <p>Activities:</p> <p>Mine dewater stored in settlement dams</p>	<p>Mine dewater:</p> <ul style="list-style-type: none"> <li>Saline to hypersaline</li> <li>Chemical composition dominated by sodium and chloride ions</li> </ul> <p>Elevated metals and metalloids (e.g. Cobalt, Copper, Nickel and Zinc)</p>	<p>Fauna gaining access to settlement dams and ingestion affecting health of threatened/native fauna; and entrapment and potential drowning</p>	<p>Native fauna</p> <p>Threatened fauna (Mallee fowl)</p>	Refer to Section 3.1	<p>C = Moderate</p> <p>L = Rare</p> <p><b>Medium Risk</b></p>	Y	Conditions 1 to 4	The Delegated Officer notes that hypersalinity (>50,000 mg/L TDS) provides a natural barrier for wildlife exposure to the mine dewater as at this salinity, the solution is outside the physiologically safe drinking range of wildlife and wildlife seek to avoid its ingestion while foraging (MERIWA 2008).

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
		Seepage of contaminated water through base and embankments of Cassini settlement dams	Native vegetation Land/Soil Groundwater (approximately 25 mbgl) Native fauna	Refer to Section 3.1	C = Moderate L = Rare <b>Medium Risk</b>	Y	Conditions 1, 2, 4, 8, 12 and 13	Applicant proposed controls included as regulatory controls
Source: <ul style="list-style-type: none"> <li>Operation of generators and pumps</li> </ul> Activities: <ul style="list-style-type: none"> <li>Refuelling</li> </ul> Damage to equipment causing leaks	Hydrocarbons (e.g. hydraulic oil or diesel) and chemicals	Overland flow to soil/sediment, surface water and infiltration to groundwater  Reduced quality or contamination of surface water, groundwater and/or soil/sediment  Impacts to native/riparian vegetation health	Surface water (Lake Eaton South)  Groundwater (approximately 25 mbgl) Land/Soil  Native/Riparian vegetation	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	N/A	N/A
Source: <ul style="list-style-type: none"> <li>Mine dewater stored in Cassini settling dams</li> </ul> Activities: <ul style="list-style-type: none"> <li>Use of mine dewater for onsite dust suppression</li> </ul>	Mine dewater: <ul style="list-style-type: none"> <li>Saline to hypersaline</li> <li>Chemical composition dominated by sodium and chloride ions</li> </ul> Elevated metals and metalloids (e.g. Cobalt, Manganese, Nickel and Zinc)	Overspray or runoff from dust suppression operations (e.g. action of spraying saline to hypersaline water)  Impacts to native/riparian vegetation health  Reduced quality or contamination of soil/sediment, surface water and/or groundwater  Soil sodicity, sprayed surfaces may become dispersive, causing increased erosion/sedimentation	Native/Riparian vegetation Land/Soil Surface water (Lake Eaton South) Groundwater (approximately 25 mbgl) Threatened fauna (Malleefowl) Native fauna	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Conditions 1 to 5, 8 to 14	Applicant proposed controls included as regulatory controls

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
		Nickel bioaccumulation in vegetation and trophic transfer into food webs						
Source: <ul style="list-style-type: none"> <li>Mine dewater</li> </ul> Activities: Transport of contaminated water via pipelines	Mine dewater: <ul style="list-style-type: none"> <li>Saline to hypersaline</li> <li>Chemical composition dominated by sodium and chloride ions</li> </ul> Elevated metals and metalloids (e.g. Cobalt, Manganese, Nickel and Zinc)	Impacts to native vegetation health Reduced quality or contamination of soil/sediment and/or groundwater Groundwater mounding Nickel bioaccumulation in vegetation and trophic transfer into food webs	Native fauna Native vegetation Land/Soil Groundwater (approximately 25 mbgl)	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	Y	Conditions 1 to 5, 8 to 14	Applicant proposed controls included as regulatory controls
<b>Category 89: Putrescible landfill site</b>								
Source: <ul style="list-style-type: none"> <li>Putrescible waste</li> </ul> Activities: <ul style="list-style-type: none"> <li>Disposal of putrescible waste into landfill facility</li> </ul>	Leachate	Infiltration to groundwater via soil Overland runoff Reduced quality or contamination of soil/sediment and/or groundwater	Land/Soil Groundwater Surface water	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Conditions 1, 6 and 7	The Delegated Officer notes that the <i>Environmental Protection (Rural Landfill) Regulations 2002</i> (Rural Landfill Regs) are sufficient to regulate landfill activities.
Source: <ul style="list-style-type: none"> <li>Uncovered and/or accessible waste</li> </ul> Activities: <ul style="list-style-type: none"> <li>Disposal of putrescible waste into landfill facility</li> </ul>	Litter/Waste	Wind mobilised waste Access to landfill Ingestion affecting health of fauna Increase in vermin/scavengers	Threatened fauna (Mallee fowl) Native fauna	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y	Conditions 1 and 6	Applicant proposed controls included as regulatory controls.

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of licence	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
Source: <ul style="list-style-type: none"> <li>Inadequate management of waste disposed in landfill</li> </ul> Activities: <ul style="list-style-type: none"> <li>Disposal of putrescible waste into landfill facility</li> </ul>	Firefighting water runoff	Fire wastewater runoff to land, surface water and/or infiltration to groundwater via soil  Causing impacts to native vegetation health and reduced quality or contamination of soil/sediment and/or groundwater	Land/Soil Native vegetation  Groundwater  Surface water	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	N	Conditions 1 and 6	The Delegated Officer notes that the general provisions of the EP Act and UDRs are sufficient to regulate emissions from landfill fires.
Source: <ul style="list-style-type: none"> <li>Contaminated stormwater</li> </ul> Activities: Stormwater migrating through operational areas	Stormwater -sediment laden	Overland runoff  Impacts to native vegetation health  Reduced quality or contamination of soil/sediment and/or groundwater	Native vegetation  Land/Soil  Groundwater (approximately 25 mbgl)	Refer to Section 3.1	C = Moderate L = Possible <b>Medium Risk</b>	N	Condition 1, 6 and 7	Applicant proposed controls included as regulatory controls.

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

Note 2: Proposed applicant 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 14 October 2021 and West Australian on 18 October 2021.	None received	N/A
Local Government Authority advised of proposal on 14 October 2021	The Shire of Coolgardie replied on 18 October 2021 advising that they support the Mincor Resources NL application for a licence.	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 14 October 2021.	None received	N/A
Applicant was provided with draft documents on 2 February 2022.	The applicant advised that they had no comments on the draft licence or decision report and requested that the comment period be waived.	<p>On further review of the instrument, it was identified that monitoring conditions were omitted from the draft licence by mistake. Conditions relating to monitoring of ambient surface water, sediment, vegetation and lake levels have been added to the licence.</p> <p>The applicant was notified on 8 February 2022 of the changes and notified the department that they agreed to the additional changes.</p>

## 5. Conclusion

Based on the assessment in this decision report, the delegated officer has determined that a licence will be granted, subject to conditions commensurate with the determined controls and necessary for administration and reporting requirements.

## References

1. Botanica 2019, Botanica Consulting, 2019, *Memorandum: Dewatering Discharge From the Cassini/ Redross Project to Lake Eaton South*, Boulder, Western Australia.
2. Department of Environment Regulation (DER) 2015, *Guidance Statement: Setting Conditions*, Perth, Western Australia.
3. Department of Water and Environmental Regulation (DWER) 2020, *Guideline: Environmental Siting*, Perth, Western Australia.
4. DWER 2020, *Guideline: Risk Assessments*, Perth, Western Australia.



5. MERIWA 2018, Adams, M.D., Donato, D.B., Schulz, R.S. and Smith, G.B., 2008, *Influences of Hypersaline Tailings on Wildlife Cyanide Toxicosis; MERIWA Project M398 (II) 'Cyanide Ecotoxicity at Hypersaline Gold Operations' Final Report Volume 2 – Definitive Investigation.*
6. MLC 2020, Mine Lakes Consulting, McCullough, C.D., 2020, *Lake Eaton South–mine water discharge environmental risk assessment (ERA)*, Joondalup, Western Australia.
7. Rockwater 2019, Rockwater Hydrogeological and Environmental Consultants, 2019, *Assessment of Dewatering Discharge from Cassini Box-Cut to Lake Eaton South*, Jolimont, Western Australia.

## Appendix 1: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
<b>Application type</b>					
Licence	<input checked="" type="checkbox"/>	Relevant works approval number:	W6336/2019/1	None	<input type="checkbox"/>
		Has the works approval been complied with?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Has time limited operations under the works approval demonstrated acceptable operations?		Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input checked="" type="checkbox"/> TLO Report has not been provided	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
		Date report received:	5/08/2021		
Date application received		11 August 2021			
<b>Applicant and premises details</b>					
Applicant name/s (full legal name/s)		Mincor Resources NL			
Premises name		Cassini-Redross Project			
Premises location		Cassini Mine Site / Kambalda WA 6442. Located 43km south of Widgiemooltha and 67km north of Norseman. Mining Tenements: <ul style="list-style-type: none"> <li>L15/235, expiry: 16/12/2023</li> <li>M15/90, expiry: 05/08/2026</li> <li>M15/1457, expiry: 10/01/2033</li> </ul>			
Local Government Authority		Shire of Coolgardie			
<b>Application documents</b>					
HPCM file reference number:		DER2021/000464			
Key application documents (additional to application form):		<ul style="list-style-type: none"> <li>Lake Eaton South–mine water discharge environmental risk assessment (ERA) [A2034306]</li> <li>Memorandum: Dewatering Discharge to Lake Eaton South - Construction Details [A2034303]</li> <li>Prescribed Premises Map [A2034281]</li> <li>Environmental Sitting Map [A2034305]</li> <li>Monitoring Points Map [A2034302]</li> <li>Landfill Management Plan [Landfill Management Plan]</li> </ul> Cassini/Redross Project Mining Proposal [A2034304]			
<b>Scope of application/assessment</b>					

## SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)

<p>Summary of proposed activities or changes to existing operations.</p>	<p><b>New Licence</b></p> <p><u>Operations:</u></p> <p>Category 6: Mine dewatering:</p> <ol style="list-style-type: none"> <li>1. Dewatering of underground mine workings;</li> <li>2. Storage of mine dewater in two settlement dams at the Cassini Operation (both dams are lined with a 1.5mm thick HDPE geomembrane);</li> <li>3. Transport of mine dewater via pipeline from the Cassini settlement dams to Lake Eaton South; and</li> <li>4. Discharge of mine dewater to Lake Eaton South via energy dissipation infrastructure (Lake Eaton South outfall).</li> </ol> <p>Category 89: Putrescible landfill site:</p> <p>Disposal of putrescible waste into landfill facility.</p>
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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 (amendments only)
Category 6: Mine dewatering	473,040 tonnes per annum	
Category 89: Putrescible landfill site	200 tonnes per annum	

### Legislative context and other approvals

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

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
Has the applicant applied for, or have an existing EP Act clearing permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	CPS No: 8636/1 No clearing is proposed as part of the new licence application.
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
Has the applicant applied for, or have an existing RIWI Act licence or permit in relation to this proposal?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Application reference No: Licence/permit No: GWL1542135(5)
Does the proposal involve a discharge of waste into a designated area (as defined in section 57 of the EP Act)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Name: Goldfields Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Regional office: Goldfields
Is the Premises situated in a Public Drinking Water Source Area (PDWSA)?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Name: N/A
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"/>	<ul style="list-style-type: none"> <li>• <i>Environmental Protection (Noise) Regulations 1997</i></li> <li>• <i>Environmental Protection (Unauthorised Discharge) Regulations 2004</i></li> <li>• <i>Mining Act 1978</i></li> <li>• <i>Rights in Water and Irrigation Act 1914</i></li> </ul>
Is the Premises within an Environmental Protection Policy (EPP) Area?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises subject to any EPP requirements?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	N/A
Is the Premises a known or suspected contaminated site under the <i>Contaminated Sites Act 2003</i> ?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	M15/90 Classification: Awaiting classification Date of classification: N/A