



## Application for Works Approval

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

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<b>Works Approval Number</b>	W6762/2022/1
<b>Applicant</b>	Karara Mining Limited
<b>ACN</b>	070 871 831
<b>File number</b>	DWER2022/000570
<b>Premises</b>	Karara Minesite Beneficiation Plant  Mining Leases M59/649-I, M59/721, General Purpose Lease G59/38, Miscellaneous Licence L59/93 PERENJORI WA 6620 As defined by the premises maps attached to the issued works approval.
<b>Date of report</b>	23 March 2023
<b>Decision</b>	Works approval granted

**Alana Kidd**  
**Manager, Resource Industries**

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 installation and operation of the premises. As a result of this assessment, works approval W6762/2022/1 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 21 October 2022, the applicant submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

Existing dewater from the Karara Pit is deposited into Blue Hill North (BHN) Pit which is nearing its approved storage capacity of 345 m AHD. Some dewater is reused in the processing plant and for dust suppression on-site, however, excess water remains. This application is to undertake installation works to reroute dewater from BHN Pit at the premises to Terapod West Pit outside the existing premises boundary. The premises is approximately 60 km north-east of Perenjori.

The premises relates to the category and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6762/2022/1. 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 works approval W6762/2022/1.

#### 2.2.1 Additional Tenements

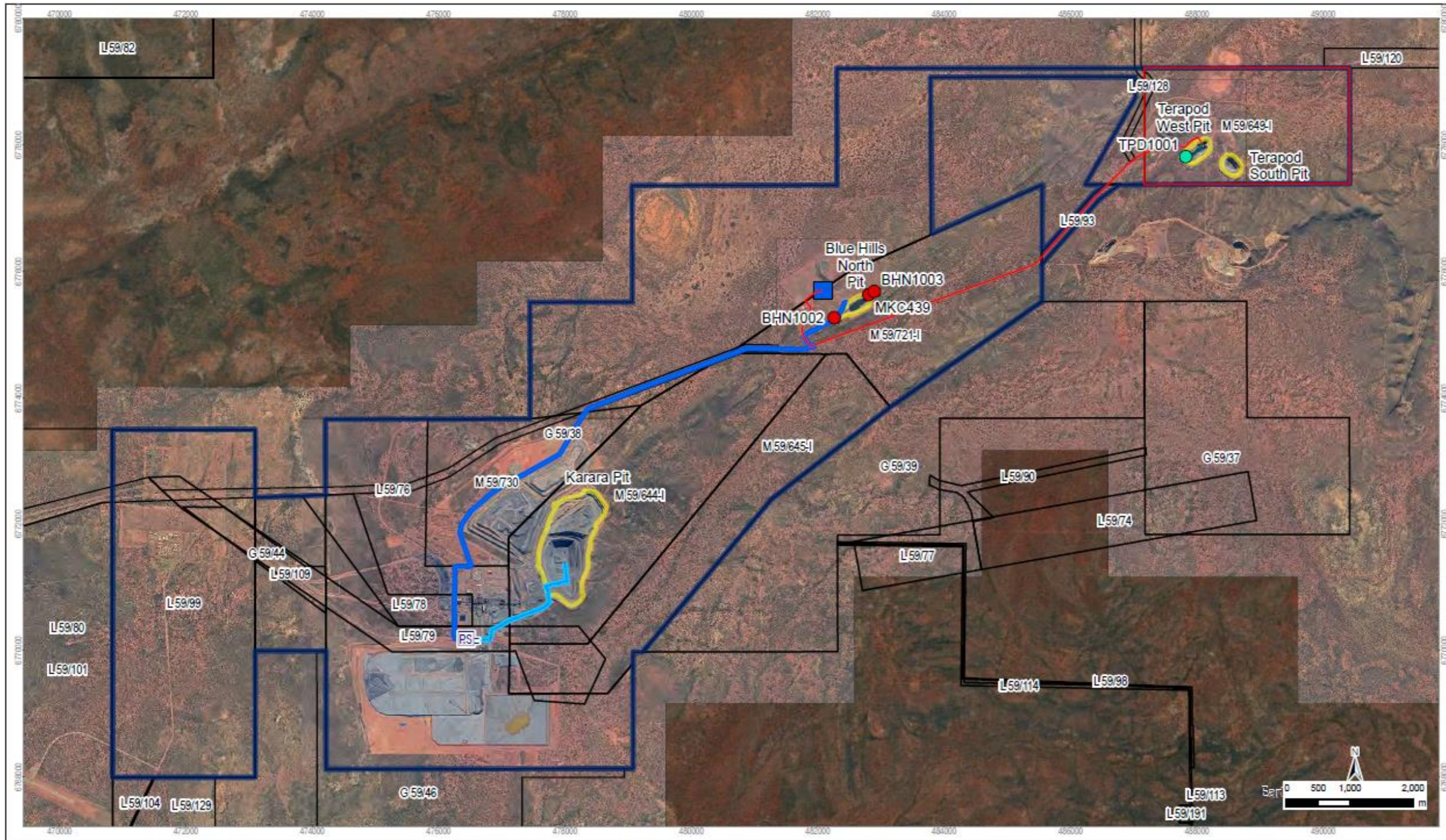
Terapod West Pit is not located within the existing licence premises boundary (L8721/2013/2), but on mining tenement M59/649-I owned by DSO Ventures Pty Ltd (Figure 1). DSO Ventures Pty Ltd is fully owned by Karara Management Services Pty Ltd which is fully owned by Karara Mining Ltd. Access to this tenement is via L59/93, also owned by Karara Mining Limited (Figure 1).

Works will commence on Karara owned tenements under this works approval, and once works is completed and compliant, the infrastructure on M59/649-I and L59/93 maybe operated under Time Limited operations, during which time a licence amendment application may be submitted to include the activity within Licence L8721/2013/2-

#### 2.2.2 Other Approvals

The off-take, pipeline and associated infrastructure will be installed in existing cleared areas including along Mungada Road. Clearing, should it be required, will be minimal and only undertaken within existing approved disturbance areas, and will only be undertaken for maintenance purposes and in order to strengthen spill containment measures.

Dewatering of Karara Pit is permitted under GWL171229.



L8721/2013/2

Proposed License Area

**KARARA**  
MINING LTD

KML Bores (Active)

- Monitoring
- Production
- PS Saline Water Pump Station
- Blue Hills North Turkeys Nest

— Proposed Pipeline

L8721/2013/2 License Area

Karara Tenements

Proposed Additional License Area

Open Pit

Saline Pipeline to BHN Pit

— KML Pit to Saline Water Pump Station

— Saline Water Pump Station to BH North Pit



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Scale: 1:80,000  
Size: A4

Figure 1: Mining tenements and leases

### 2.2.3 Characteristics of mine dewater

Recent water quality data from 2020 and 2022 was provided for the Karara pit. The data indicates a slightly alkaline pH and hypersaline water low in metals and some nutrients in Karara pit (Table 1).

Most water quality parameters in Karara Pit were within acceptable water quality parameters. Many metals were below the limit of detection including aluminium, arsenic, chromium, lead, mercury, phosphorus, selenium, and zinc (Table 1). Cadmium, iron, and lead were detected in trace amounts (Table 1). Manganese was observed to be above the ANZECC Australian and New Zealand Guidelines for Fresh and Marine Water Quality, 2000 (the guidelines) low trigger value (Table 1).

Nutrients such as ammonia was high (Table 1), and while usually toxic, hyper salinity reduces toxicity, and in cold water more of the non-toxic ammonium is likely to be present. Nitrate was also elevated against the guidelines (Table 1), so discharge should be monitored for algal growth.

**Table 1: Average water quality in Karara Pit against guideline values**

Parameters	Units	Karara pit average (2020-2022)	ANZECC (2000) DGV 80% (marine)
pH	pH units	7.95	NG
Alkalinity	µg/L	160.5	NG
Electrical Conductivity	µS/cm	26,791	NG
TDS (NaCl)	mg/L	42,155	NG
TSS		ND	NG
<b>Major Cations (dissolved)</b>			
Calcium, total as CaCO <sub>3</sub>	mg/L	6,160	NG
Calcium		365	NG
Potassium		1,082	NG
Sodium		10,075	NG
Magnesium		1,275	NG
Manganese (total)		0.303 (0.402)	0.08 <sup>1</sup>
Mercury		<0.0001	0.0014
<b>Major Anions (dissolved)</b>			
Chloride	mg/L	14,900	NG
Sulfate as SO <sub>4</sub> <sup>2-</sup>		3,315	NG
<b>Heavy metals and metalloids (dissolved)</b>			
Aluminium	mg/L	<0.05	0.0005 <sup>1</sup>
Arsenic		<0.005	0.0023
Cadmium (total)		0.001 (0.0011)	0.036
Chromium		<0.005	0.085
Iron (total)		0.45 (<0.25)	NG
Lead (total)		<0.005 (0.01)	0.012
Selenium		<0.05	0.003
Zinc (total)		<0.025 (<0.026)	0.08 <sup>2</sup>
<b>Nutrients</b>			
Nitrite + Nitrate as N	mg/L	27.9	NG
Ammonia (unionised)		16.5	NG
TAN: being the sum of [NH <sub>4</sub> <sup>+</sup> ] + [NH <sub>3</sub> ]		30	NG
Nitrate as N		25.7	13
Nitrite as N		2.18	NG
Total Kjeldahl Nitrogen		26.2	NG
Total Phosphate		0.2	NG
Total Phosphorus as P		<0.05	NG

ND – Not Determined

NG – Not Given

Note 1: Marine low reliability trigger value

Note 2: Recommended in literature for hypersaline conditions

## 2.2.4 Characteristics of the receiving environment

### **Terapod West Pit and associated groundwater**

Pre-mining groundwater levels in 2008 (Rockwater, 2008) indicate a static groundwater level of about 340 m AHD at the Terapod West and South pits, and groundwater flow to the south or southwest towards the saline Mongers Lake palaeodrainage south of the premises.

Recent (2022) water quality data was provided for the receiving Terapod West Pit and

groundwater from the adjacent production bore, TPD1001. Blue Hills North TN has no laboratory testing requirements as it is used for dust suppression on Mungada Road and is not considered any further in this discussion.

Terapod West Pit was observed to have acidic, low turbid, hypersaline water (Table 2). Many metals were observed including some above the guidelines such as manganese, aluminium, arsenic, cobalt, copper, nickel, selenium and zinc (Table 2). Trace metals include beryllium, boron, cadmium, chromium, iron and lead (Table 2). Metals which were tested and found to be below the limit of detection include antimony, molybdenum, silver, thallium, vanadium, and dissolved zinc (Table 2). No Nutrients were detected (Table 2).

The production bore TPD1001 had more acceptable water quality by comparison than to Terapod West Pit with slightly alkaline and brackish water. Most metals were lower apart from Boron and only manganese was elevated. Trace fluoride, phosphate and phosphorous were observed. The production bore results indicate that the water in Terapod West Pit does not mix well with the groundwater and is likely a groundwater sink.

The water quality testing overall indicates that the dewater from Karara Pit is unlikely to significantly impact the water quality of Terapod West Pit other than cause it to become hypersaline. An increase in pH and alkalinity may potentially benefit Terapod West Pit which is currently experiencing acidic water. Ammonia may increase in Terapod West Pit also, however, may not be significant given the existing elevated metals and acidic water in Terapod West Pit.

Currently, the production bore only reports elevated manganese in the groundwater and is low in other heavy metals, indicating Terapod West Pit is currently a groundwater sink.



**Table 2: Average water quality in Terapod West Pit against guideline values**

Parameters	Units	Terapod West Pit average (2022)	TPD1001 (2022)	ANZECC (2000) DGV 80% (marine)
pH	pH units	3.10	7.40	NG
Alkalinity	µg/L	<1	308	NG
Electrical Conductivity	µS/cm	59,300	7,655	NG
TDS (NaCl)	mg/L	4,706	7,760	NG
TSS		1	24	NG
<b>Major Cations (dissolved)</b>				
Calcium, total as CaCO <sub>3</sub>	mg/L	1,060	7,770	NG
Calcium		125	126	NG
Potassium		66	121	NG
Sodium		1,010	2,040	NG
Magnesium		182	319	NG
Manganese (total)		6.1 (5.91)	0.184 (0.179)	0.08 <sup>1</sup>
Mercury		<0.0001	<0.0001	0.0014
<b>Major Anions (dissolved)</b>				
Chloride	mg/L	1,520	3,400	NG
Fluoride		ND	0.7	NG
Sulfate as SO <sub>4</sub> <sup>2-</sup>		1,230	717	NG
<b>Heavy metals and metalloids (dissolved)</b>				
Aluminium (total)	mg/L	21.2 (22.6)	<0.01	0.0005 <sup>1</sup>
Antimony		<0.001	<0.001	0.27
Arsenic (total)		0.017 (0.02)	0.01	0.0023 <sup>1</sup>
Beryllium		0.001	<0.001	NG
Boron (total)		3.16 (3.36)	4.63 (4.53)	5.1
Cadmium (total)		0.0053 (0.0058)	0.0001	0.036
Chromium (total)		0.06 (0.061)	<0.001	0.085
Cobalt (total)		0.244 (0.251)	<0.001	0.15
Copper (total)		0.335 (0.357)	0.004	0.068 <sup>1</sup>
Iron (total)		16.8 (15)	2.28 (0.13)	NG
Lead		0.002	<0.001	0.012
Molybdenum		<0.001	<0.001	0.023
Nickel (total)		0.697 (0.729)	0.002 (0.002)	0.56
Selenium		0.01	<0.01	0.003 <sup>1</sup>
Reactive Silica		36.3	ND	NG
Silver		<0.001	<0.001	0.017
Thallium		<0.001	<0.001	0.017
Vanadium		<0.01	<0.01	0.28
Zinc (total)		<0.01 (0.192)	0.014 (0.012)	0.08 <sup>2</sup>
<b>Nutrients</b>				
Nitrite + Nitrate as N	mg/L	<0.01	<0.01	NG
Ammonia (unionised)		<0.01	<0.01	NG
Nitrate		<0.01	<0.01	NG
Nitrite		<0.01	<0.01	NG
TAN: being the sum of [NH <sup>4+</sup> ] + [NH <sub>3</sub> ]		<0.01	0.01	NG

Total Kjeldahl Nitrogen		0.1	<0.1	NG
Total Phosphate		<0.01	0.09	NG
Total Phosphorus as P		<0.10	0.03	NG

ND – Not Determined

NG – Not Given

Note 1: Marine low reliability trigger value

Note 2: Recommended in literature for hypersaline conditions

### **Root depths of conservation significant flora species relative to groundwater**

The applicant commissioned Curtin University to conduct a desktop study to investigate indicative rooting zones of Priority listed flora species and vegetation communities recorded in the vicinity of Blue Hills North pit, south of Terapod. The investigation indicated that the deepest-rooted species of conservation significance (*Acacia karina* P1 and *Melaleuca barlowii* P3) have estimated rooting depths of 5-20 m. Given that these same species in the Blue Hills area are shorter (shrubs to 1.8 m (*M. barlowii*) and up to 3.0 m (*A. karina*)), the applicant considers it is highly unlikely that their rooting depth would reach the upper limit of this estimate. The study also does not consider priority species in the area to be groundwater dependent.

Vegetation of the Blue Hills Priority Ecological Community on the BIF ridge and slopes at Terapod includes four vegetation associations mapped by Woodman Consultants. The investigation also indicated the deepest roots from only the largest Eucalyptus trees and possibly some Acacia species may exceed 20 m. Eucalyptus trees have been described in two vegetation associations and as low isolated clumps of mixed eucalyptus trees.

If the applicant limits the standing water level in Terapod West Pit to 330 m AHD the depth of water should exceed 40 m below the pit crest, about 20 m deeper than the deepest-rooted trees expected in the area. The closest vegetation to the pit is about 40 m south from the 330 m AHD water level. Floristic communities with Eucalyptus trees described are as close as about 120 m north of the 330 m AHD water line. Additionally, Terapod West Pit is likely to act as a groundwater sink with evidence supported by the difference in water quality from the pit and the production bore, which reduces the likelihood that hypersaline water would mix with the groundwater. Water levels in TPD1001 fluctuated in response to variations in pumping rate and whether or not the bore was operating and have ranged from about 275 m to 290 m AHD (95 m to 80 m below the pit crest) during 2021-22. Lower standing water levels are likely to prevent hypersaline water from penetrating the root zone of the deepest-rooted vegetation.

Recommendations from the investigation included a monitoring programme to monitor for impacts of dewater disposal into Terapod West Pit upon deep rooted vegetation. The monitoring programme would comprise of:

- Locating any large Eucalyptus or trees of other species within one kilometre of Terapod West Pit to monitor their condition.
- Expanding the current groundwater monitoring programme to measure standing water levels, salinity and pH of the Terapod South pit lake; and in any other bores in the Terapod area that still exist and are open to the water table.

### **2.2.5 Dewatering infrastructure**

The proposed dewatering will use the existing approved dewatering infrastructure between Karara Pit and BHN Pit and proposes new infrastructure between the BHN Turkeys Nest (TN) to Terapod West Pit (Figure 2). To redirect water to BHN TN, an off take is proposed to be installed at the turning point to BHN Pit (see Figure 3) on the existing pipeline and about 1.1 km of pipeline is proposed to be connected. Once installed, an existing pump (Figure 2) will pump water from Karara Pit to BHN TN. To connect BHN TN to Terapod West Pit for dewatering disposal, about 8.5 km of pipeline (250 mm poly pipe) is proposed to be installed, following Mungada Road between the two pits (Figure 3). To pump water from BHN TN to Terapod West Pit, a submersible pump and generator will be installed at the BHN TN. All pipelines will be installed above ground, within earthen windrows (to contain potential leaks). Pipelines at road or track crossings will be buried to minimise risk of vehicles driving over pipelines.

The dewatering discharge point at Terapod West Pit will be established at a location away from the pit crest to minimise erosion of the pit wall and any potential blow back. The applicant expects that Terapod West Pit has the capacity to store a maximum volume of approximately 1,196,169 m<sup>3</sup> at the current average dewatering rate (728 m<sup>3</sup>/d) for about 9.5 years (sum of cumulative days). This will result in the water level in Terapod West Pit to reach 330 m AHD allowing for a freeboard of 40 m to the pit crest to minimise the potential of significant mounding where saline water reaches the root zone of deep-rooted vegetation (Figure 4).

The applicant expects that upon ceasing of dewatering to the pit and pumping from TDP1001, the water level will decline to about 300 m AHD and the pit will become a groundwater sink (Figure 5), preventing saline, metal laden and possibly acidic water from dispersing into the groundwater.

A condition will be included in the Works Approval to ensure that if vegetation is observed to decline in health, management actions and investigation into the decline will be initiated. This will need to include installation of additional appropriately located monitoring bores between Terapod West Pit and the affected vegetation to monitor and recover seepage, as well as a reduction of discharge until vegetation has recovered to former health.

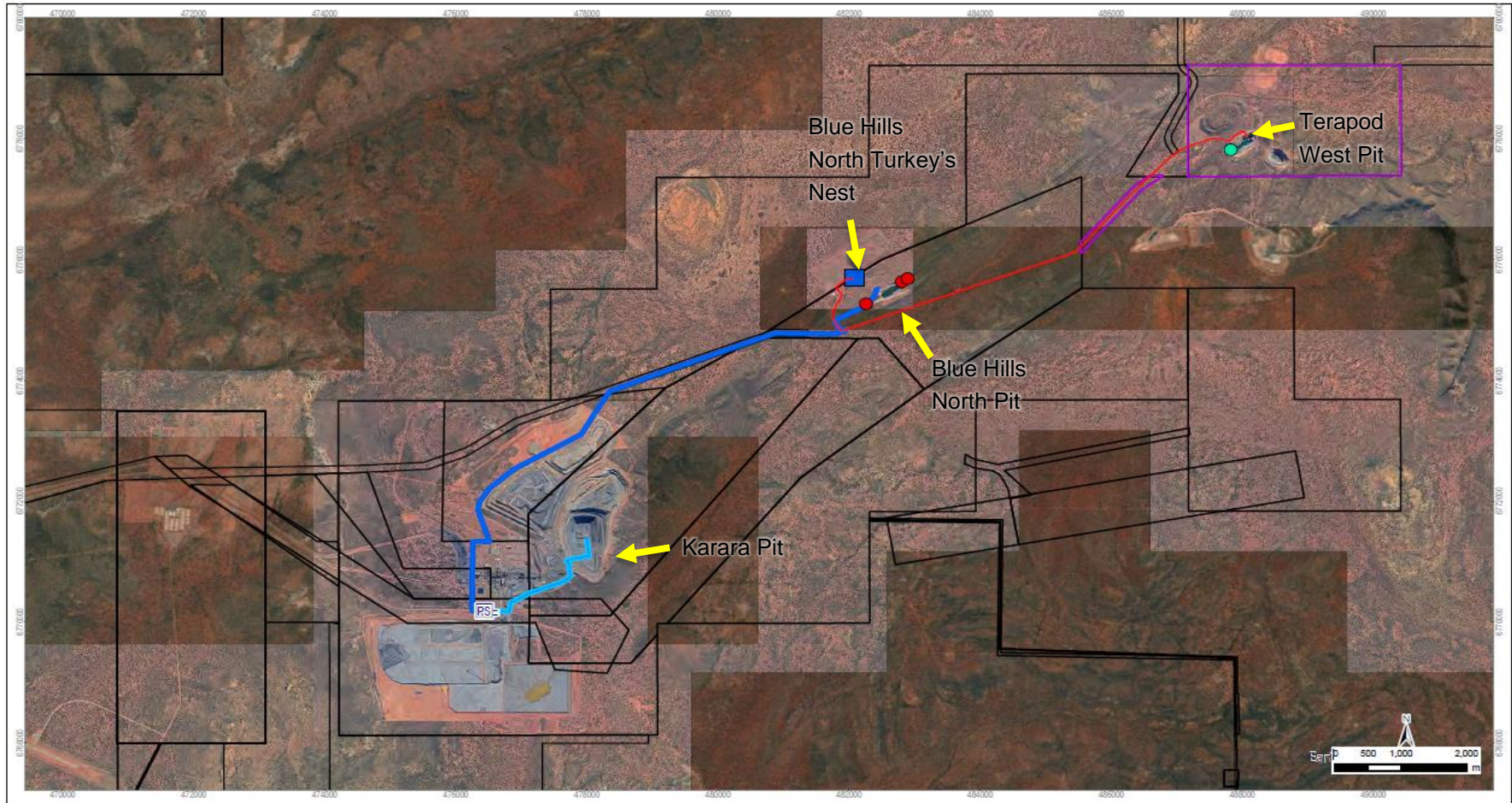
## 2.3 Part IV of the EP Act

The Karara Iron Ore Project (encompassing the Karara Beneficiation Plant infrastructure at Mount Karara) and Mungada Iron Ore Project (encompassing Blue Hills North and Terapod West and South pits) are subject to approved Ministerial Statements 805, MS 895 (which deletes condition 7 of Ministerial 805) and 806 respectively.

Ministerial Statement 805 no longer covers groundwater dependent vegetation including the development of groundwater trigger values. Remaining conditions in MS 805 regarding environmental receptors includes: minimising disturbance to Priority Ecological Community Blue Hills vegetation complex, applying fauna protection from trenches, spider monitoring for Shield-backed Trapdoor Spider (*Idiosoma nigrum*), maintaining a fauna mortality register and surveying for conservation significant reptiles.

Ministerial Statement 806 (MS 806) was issued for the adjacent Mungada Iron Ore Project which covers the Terapod West Pit. MS 806 addresses mostly the same receptors as in MS 805, except includes conditions related to groundwater dependent vegetation, and does not condition spider monitoring or surveying for conservation significant reptiles.

The Department's Environmental Impact Assessment south team determined that a s45C would not be required and MS 805 does not cover the impacts of groundwater mounding. The impacts of groundwater mounding have been assessed in section 3 below.



L8721/2013/2

Proposed License Area

**KARARA**  
MINING LTD

KML Bores (Active)

- Monitoring
- Production
- PS- Saline Water Pump Station
- Blue Hills North Turkey's Nest

- Proposed Pipeline
- ▭ L8721/2013/2 License Area
- ▭ Karara Tenements
- ▭ Open Pit

- Saline Pipeline to BHN Pit
- KML Pit to Saline Water Pump Station
- Saline Water Pump Station to BH North Pit
- ▭ Proposed Additional License Area



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29 November 2022 Size: A4

**Figure 2: Existing and proposed infrastructure and proposed additional licence area.**



L8721/2013/2

Proposed Infrastructure

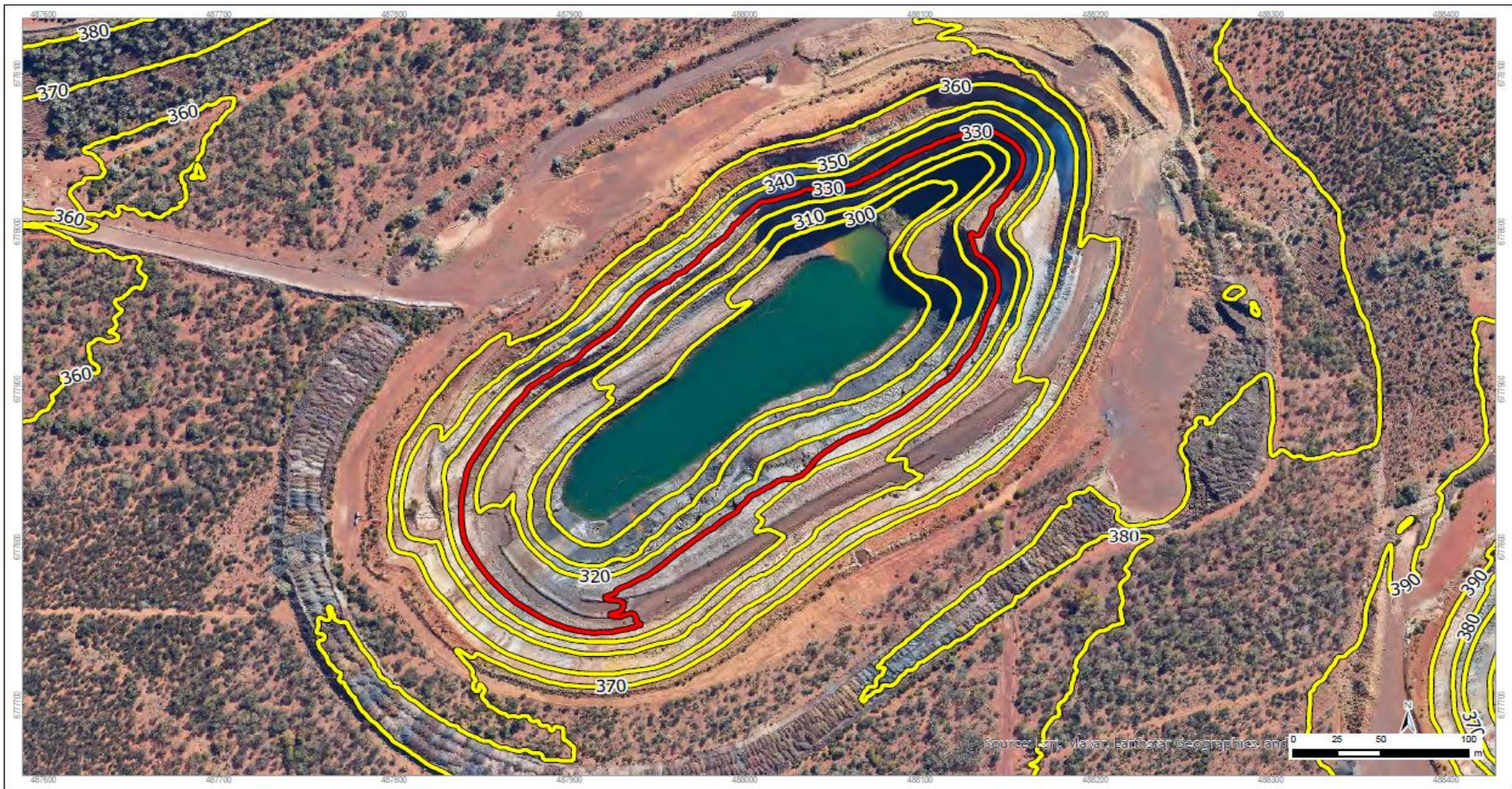
**KARARA**  
MINING LTD

- |  |  |
|--|--|
| <span style="color: blue;">■</span> Blue Hills North Turkey's Nest | <span style="color: green;">●</span> Production  |
| <span style="color: purple;">◆</span> Pipeline Off Take            | <span style="color: red;">—</span> Proposed Pipeline   |
| <span style="color: red;">●</span> KML Bores (Active)              | <span style="color: blue;">—</span> Saline Water Pump Station to BH North Pit                              |
| <span style="color: red;">●</span> Monitoring                      | <span style="border: 1px solid yellow; display: inline-block; width: 15px; height: 10px;"></span> Open Pit |



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Version: A Scale: 1:30,000  
18 October 2022 Size: A4

**Figure 3: Proposed pipeline from Blue Hills North Turkey's Nest to Terapod West Pit**



L8721/2013/2

Terapod Elevation

**KARARA**  
MINING LTD

— Contour (10m AHD)

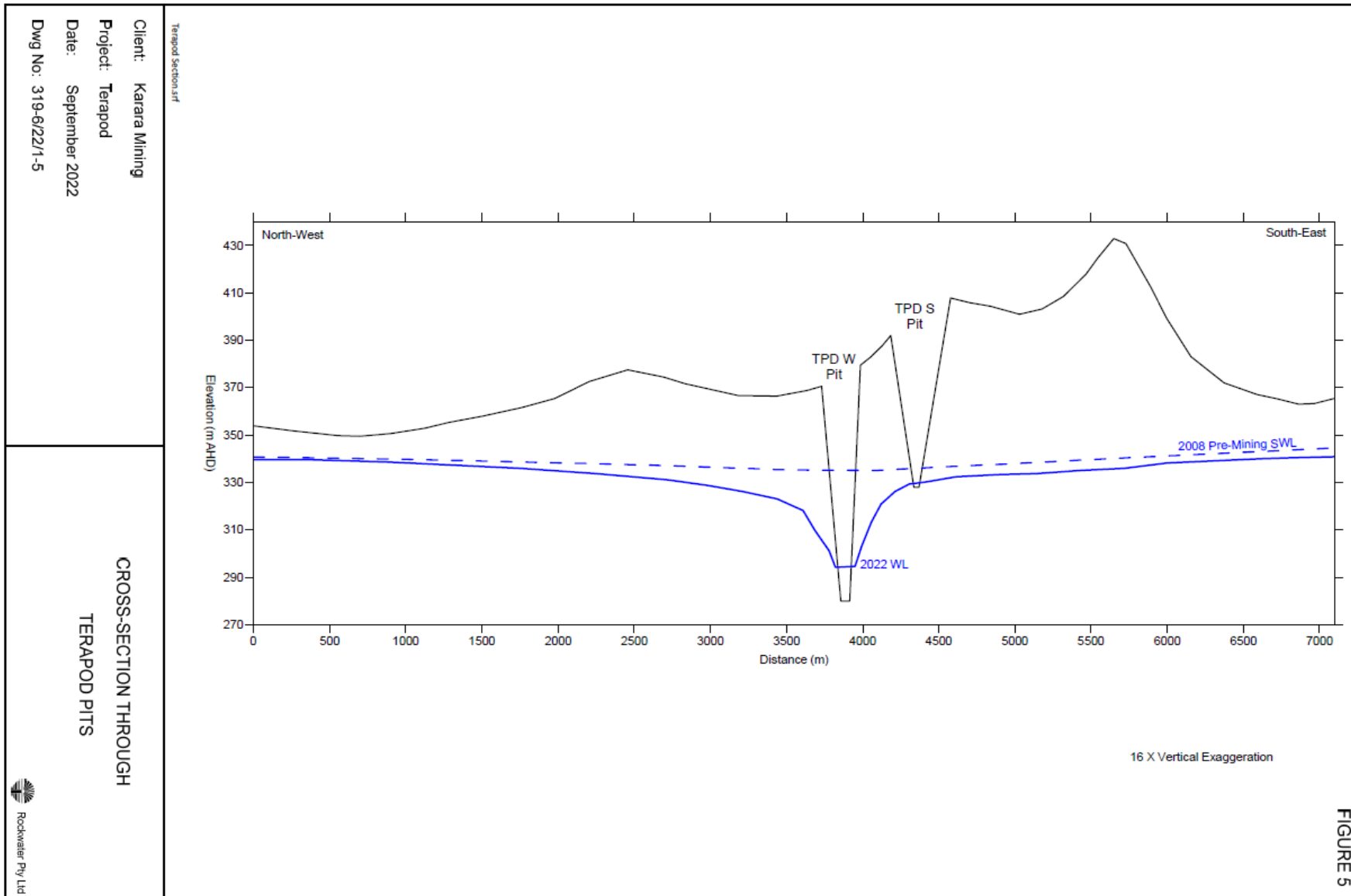


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Version: A Scale: 1:3,000  
20 October 2022 Size: A4

**Figure 4: Elevation within Terapod West Pit**

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IR-T13 Decision report template (short) v3.0 (May 2021)



**Figure 5: Cross-section of Terapod West Pit and standing water level**

### **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 construction and operation of stage one and stage two dewatering which have been considered in this decision report are detailed in Table 3 below. Table 3 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.



**Table 3: Proposed applicant controls**

Sources	Emission	Potential pathways	Proposed controls
<b>Construction</b>			
Installation of aboveground pipelines with windrow. Pipeline buried at vehicle crossings.	Dust	Air / windborne pathway	Water in Blue Hills North Turkey's Nest and Terapod Turkey's Nest are used for dust suppression on Mungada Road.
	Saline water from dust suppression	Overland runoff and air/windborne pathway causing impacts to vegetation health and amenity.	No proposed controls.
<b>Time-Limited Operations</b>			
Transfer of dewater from Karara Pit to from Blue Hills North Turkey's Nest and to Terapod West Pit.	Hypersaline water	Leaks, spills and bursts	<ul style="list-style-type: none"> <li>Pipelines to be buried at road or track crossings to minimise risk of vehicles driving over pipelines.</li> <li>Above ground pipelines to be windrowed to contain any leaks.</li> <li>Pipeline is designed to operate at greater flow than the current peak monthly average flow rate (22.2 L/s), which provides a technical reliability to prevent leaks in case of dewatering flows being pumped to Terapod West Pit at greater flow rate.</li> <li>Use of a pipeline with a higher-pressure rating than the expected pressure to prevent leaks.</li> <li>Flow meter to be installed to quantify discharge volumes.</li> <li>Daily inspections of the length of the pipeline will be undertaken to detect any leaks.</li> <li>If a leak is identified and it is determined that it could have an impact on surrounding vegetation then pumping will be ceased, the pipeline will be isolated and repairs will be made as soon as practicable.</li> </ul>
Disposal of dewater from Karara Pit to Blue Hills North Turkey's Nest.	Hypersaline water	Overtopping of Blue Hills North Turkey's Nest	<ul style="list-style-type: none"> <li>Instantaneous flows via submersible pump and generator from the BHN TN to Terapod West Pit is expected to be as high as 40 L/s to ensure the BHN TN does not overflow.</li> </ul>
Disposal of dewater into Terapod West Pit	Hypersaline water	Seepage from pit (base and walls)	<ul style="list-style-type: none"> <li>Investigations suggest vegetation species present in the vicinity are unlikely to be deep rooted and therefore unlikely to be impacted.<sup>1</sup></li> <li>Discharge to Terapod West Pit limited to 330 m AHD (40 m below pit crest) minimising mounding and seepage to</li> </ul>

Sources	Emission	Potential pathways	Proposed controls
			<p>surrounding aquifer.</p> <ul style="list-style-type: none"> <li>Monthly monitoring of water quality and review of data in Terapod West Pit and bore TPD1001 will continue to identify any potential impact to groundwater level and quality in vicinity of Terapod West Pit for unexpected GWL increases and potential impact of saline water.</li> </ul>
		Overfilling the Terapod West Pit beyond 330 m AHD (40 m below pit crest)	<ul style="list-style-type: none"> <li>Discharge to Terapod West Pit limited to 330 m AHD (40 m below pit crest) minimising mounding and seepage to surrounding aquifer.</li> <li>Monthly monitoring of pit lake water quality and groundwater level and quality at adjacent bores and review of data for unexpected GWL increases and potential impact of saline water.</li> </ul>
	Saline water in aerosol spray form	Air / windborne pathway	<ul style="list-style-type: none"> <li>Discharge point lowered deep into the Terapod West pit to minimise the potential risk of wind-blown saline water to surrounding vegetation.</li> <li>Discharge pipe sited at least 100m away from remnant vegetation and in windrows to contain any leaks.</li> <li>Above ground pipelines to be windrowed.</li> <li>Confirmatory inspections of the discharge point when discharging dewatering to Terapod West Pit.</li> <li>If blowback observed, discharge point to be modified or moved to mitigate any impact to vegetation.</li> <li>Scheduled inspections and audits.</li> <li>Incident reporting.</li> </ul>
Refuelling of the pumps to BHN TN and Terapod by mobile fuel truck	Diesel fuel	Leaks and spills	<ul style="list-style-type: none"> <li>All chemicals shall be stored in containment bunds, sea containers or chemical cabinets as appropriate for the volume and nature of the chemicals.</li> <li>All hydrocarbons to be stored within bunding that meets <i>Dangerous Goods Safety Act 2004</i>.</li> <li>Spill management equipment appropriate to the volume and type of hydrocarbons or chemicals being stored shall always be available, clearly labelled.</li> </ul>

Note 1: Vegetation root depth and groundwater depth is discussed in detail in section 2.2.4.

### 3.1.2 Receptors

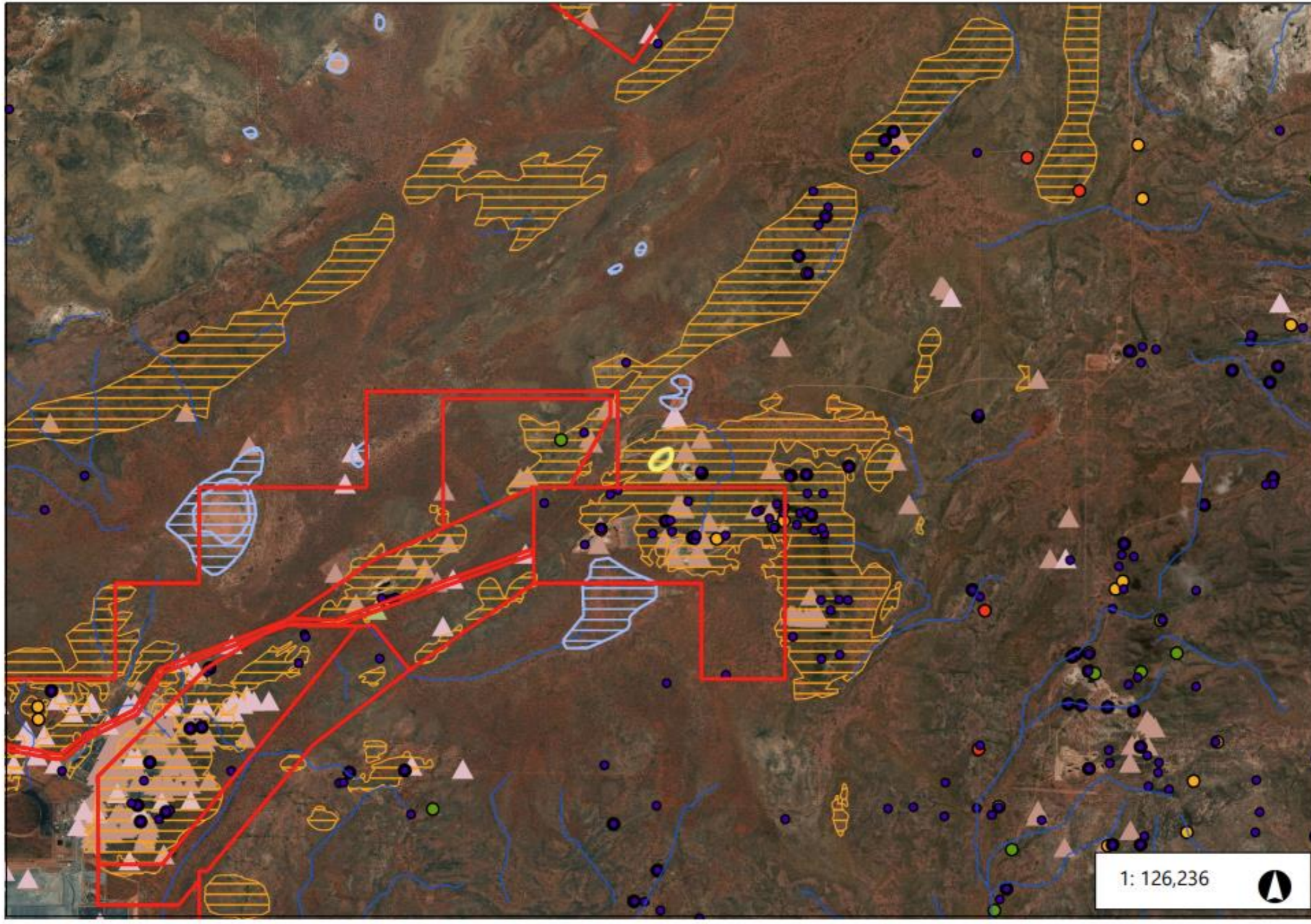
In accordance with the *Guideline: Risk Assessment* (DWER 2020), the Delegated Officer has excluded the applicant's employees, visitors, and contractors from its assessment. Protection of these parties often involves different exposure risks and prevention strategies, and is provided for under other state legislation.

Table 4 and Figure 6 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 4: Sensitive human and environmental receptors and distance from prescribed activity**

Human receptors	Distance from prescribed activity
Aboriginal Heritage site ID 28481 (MIOP32)	Approximately 300 m east of the Terapod West Pit.
Environmental receptors <sup>1</sup>	Distance from prescribed activity
Priority 1 PEC - Blue Hills (Mount Karara/Mungada Ridge/Blue Hills) vegetation complexes (banded ironstone formation)	Blue Hills PEC occurs within or in vicinity of the proposed premise extension boundary.
Threatened flora <i>Acacia karina</i> (P1) and <i>Acacia woodmaniorum</i> (T)	<i>Acacia karina</i> (P1) and <i>Acacia woodmaniorum</i> (T) occur within the proposed premise. Monitoring of impacts for dust, saline water application for dust control, fire and feral species are addressed in Ministerial Statement 805 and 806.
Groundwater	Depth is approximately 40 m below ground level. (~300 m AHD.)
Karara Rangeland Park	Overlaps the prescribed premises. Karara Iron Ore Project is located on formal pastoral land that has been incorporated into the Karara Rangeland Park.

Note 1: Baseline studies show no stygofauna in the vicinity of the open Terapod West Pit.



### Legend

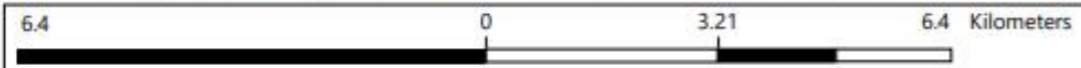
- Instruments - Works Approval
- 23. Hydrography WA 250K - Surface Waterbodies (GA 2015)
- 23. Hydrography WA 250K - Surface Water Lines (GA 2015)
- Watercourse
- Water Pipeline
- Canal Line
- Connector
- DEMConnector
- 20. Flora - WAHerb
- 20. Flora - TPFL
- 1
- 2
- 3
- 4
- T
- X
- 19. Threatened and Priority Ecological Communities (WA TEC/PEC)
- 21. Threatened Fauna
- ▲ Conservation dependent fauna
- ▲ Critically endangered species
- ▲ Critically endangered species, Migratory birds protected under an international agreement
- ▲ Endangered species
- ▲ Endangered species, Migratory birds protected under an international agreement
- ▲ Endangered species or P4
- ▲ Endangered species or Vulnerable species
- ▲ Presumed extinct species

### Notes

Terapod Pit in yellow

Author:  
Recipient:

1: 126,236



WGS\_1984\_Web\_Mercator\_Auxiliary\_Sphere  
© Government of Western Australia, Department of Water and Environmental Regulation

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.  
**THIS MAP IS NOT TO BE USED FOR NAVIGATION**

**Figure 6: Distance to 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 works approval 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 5.

Works approval W6762/2022/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 5 have been determined in accordance with *Guidance Statement: Setting Conditions* (DER 2015).

A licence is required following the time-limited operational phase authorised under the works approval to authorise emissions associated with the ongoing operation of the premises i.e. Mining operations. A risk assessment for the operational phase has been included in this decision report, however licence conditions will not be finalised until the department assesses the licence application.

**Table 5: Risk assessment of potential emissions and discharges from the premises during construction and operation**

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
<b>Construction</b>								
Installation of aboveground pipelines with windrows. Pipeline buried at vehicle crossings.	Dust	Air/windborne pathway causing impacts to vegetation health and amenity.	Blue Hills PEC, Threatened flora, Karara Rangeland Park	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	Y	N/A	Existing dust suppression activities along Mungada Road should be sufficient to maintain dust levels during installation. It should also be noted dust during installation will be temporary and progress along the pipeline route.
	Saline water from dust suppression	Overland runoff and air/windborne pathway causing impacts to vegetation health and amenity.		Refer to Section 3.1	C = Minor L = Likely <b>Medium Risk</b>	N	Condition <u>3</u>	<b>Condition 3:</b> Saline water for dust suppression not to run-off into vegetation.
<b>Time-Limited Operation</b>								
Transfer of dewater from Karara Pit to Blue Hills North Turkeys Nest and to Terapod West Pit.	Hypersaline water	Leaks, spills and bursts from incorrect installation or run over by vehicles causing saline water to enter the root zone of native vegetation, causing impacts to vegetation health and amenity.	Blue Hills PEC, Threatened flora, Karara Rangeland Park	Refer to Section 3.1	C = Slight L = Rare <b>Low Risk</b>	Y	Conditions 1, 2, <u>4-6</u> , 8, 9, 10, 13, <u>16, 17, 18c, 19, 20</u>	Condition 1: Installation of high-pressure pipeline and off-take. Condition 2: Secondary containment of pipeline. <b>Conditions 4-7:</b> Compliance of installation and commencement of TLO. Conditions 8 & 9: Immediately recover, or remove and dispose of spills, disposing the spill and

Risk events					Risk rating <sup>1</sup>	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood			
		Overtopping of Blue Hills North Turkeys Nest causing groundwater mounding where contaminated water infiltrates the root zone of native vegetation, impacting vegetation health and amenity and in extreme cases vegetation death.		Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	N	Conditions 1, 2, <b>4-7</b> , 8, 9, 10, <b>11</b> , 12, <b>20, 21</b> .	recovery materials at an appropriately authorised facility. Condition 10: Daily inspection for leaks, freeboard maintained. <b>Condition 11:</b> Authorised discharge. Condition 13: Monitor flow rate. <b>Condition 14:</b> <i>Table 7</i> Vegetation monitoring. <b>Condition 15:</b> record monitoring <b>Condition 18:</b> Monitoring intervals <b>Conditions 19 &amp; 20:</b> Compliance reporting and seepage recovery bores if vegetation affect.
Disposal of dewater into Terapod West pit		Seepage from pit (base and walls) resulting in contamination of local aquifer	Groundwater	Refer to Section 3.1	C = Minor L = Unlikely <b>Medium Risk</b>	Y	<b>Condition 15, 16, 17, 18c, 19</b>	<b>Condition 15:</b> Monitoring of ambient groundwater <b>Condition 16:</b> <i>Table 7</i> Vegetation monitoring <b>Condition 17:</b> record monitoring <b>Condition 18c:</b> bore installation and reduce dewatering. Condition 19: Reinstating dewatering volumes
			Blue Hills PEC, Threatened flora, Karara Rangeland Park	Refer to Section 3.1	C = Moderate L = Unlikely <b>Medium Risk</b>	Y		
		Overfilling the Terapod West Pit beyond 330 m AHD (40 m below pit crest) causing groundwater mounding where contaminated water infiltrates the root zone of native vegetation, causing impacts to vegetation health and amenity.	Blue Hills PEC, Threatened flora, Karara Rangeland Park	Refer to Section 3.1	C = Moderate L = Rare <b>Medium Risk</b>	Y	<b>Condition 16</b>	Operations under the works approval is likely to be too short amount of time for consideration. Long-term filling should be assessed under the licence. <b>Condition 16:</b> <i>Table 7</i> Vegetation monitoring
	Saline water in aerosol	Air/windborne pathway causing saline water to enter the root zone of native vegetation,	Aboriginal Heritage site ID	Refer to Section	C = Minor L = Unlikely	Y	Condition 8, <b>16</b>	Condition 8: If blowback is observed reaching surrounding native vegetation, discharge point

Risk events					Risk rating <sup>1</sup> C = consequence L = likelihood	Applicant controls sufficient?	Conditions <sup>2</sup> of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
	spray form	causing impacts to vegetation health and amenity.	28481 Blue Hills PEC, Threatened flora, Karara Rangeland Park	3.1	<b>Medium Risk</b>			to be modified or moved to mitigate any further impacts. <b>Condition 16:</b> <i>Table 7</i> Vegetation monitoring
Refuelling of the pumps to BHN TN and Terapod by mobile fuel truck	Diesel fuel	Leaks and spills causing diesel to enter the root zone of native vegetation, causing impacts to vegetation health and amenity.	Blue Hills PEC, Threatened flora, Karara Rangeland Park	Refer to Section 3.1	C = Slight L = Unlikely <b>Low Risk</b>	N	Condition 11, 12, <b>16</b>	Condition 11 & 12: immediately recover, or remove and dispose of spills, disposing the spill and recovery materials at an appropriately authorised facility. <b>Condition 16:</b> <i>Table 7</i> Vegetation monitoring

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 6 provides a summary of the consultation undertaken by the department.

**Table 6: Consultation**

Consultation method	Summary of comments received	Department response
Application advertised on the department's website on 20 August 2021	None received.	N/A
Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 16 December 2022.	<p>DMIRS replied on 19 December 2022 stating that:</p> <ul style="list-style-type: none"> <li>The proposal appears consistent with Mining Proposal Reg Id 114914.</li> <li>It is noted that no additional monitoring bores are proposed around the Terapod West Pit as the applicant plans to utilise the existing production bore TPD1001 for ongoing monthly monitoring of standing water level, pH, EC and TDS.</li> <li>DMIRS supports the monitoring programme recommended in the Rockwater Hydrogeological report and suggests DWER implements it.</li> <li>Via a request from DMIRS for additional information the applicant has stated that "All monitoring bores (e.g. MGC482, MGW441 and TPD1002) at Terapod are destroyed/lost and current access to Terapod South Pit is completely closed off with its abandonment bund. Therefore, no groundwater monitoring could be undertaken at those locations. Additional monitoring bores at Terapod will be installed as required."</li> </ul> <p>DMIRS requests if DWER could consider whether groundwater monitoring via a single bore (TPD1001) is appropriate for this operation.</p>	<p>Production bore TDP1001 is located at the southwest corner of Terapod West Pit which is in line with the predominate west to southwest groundwater flows. A map of groundwater flows was shown in figure 2 of the Rockwater Report.</p> <p>DWER has considered this advice and agrees, noting that an additional bore will need to be installed should seepage be detected at the production bore.</p>
Department of Biodiversity, Conservation and Attractions (DBCA) advised of proposal on 16 December 2022.	DBCA replied on 12 January 2023 stating they provided substantial input into the Part IV environmental impact assessment for the Karara and Mungada Iron Ore Projects and has no comments on the application.	Noted.
Shire of Perenjori advised of proposal on 16 December 2022.	None received.	N/A
Applicant was provided with draft documents on 2 March 2023	On 14 March 2023 the applicant replied with comments. Refer to Appendix 2	Refer to Appendix 2

## 5. Conclusion

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

## 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.
4. Karara Mining Limited (2022), *Karara Minesite Beneficiation Plant Licence L8721/2013/2 Supporting Document to Works Approval Application Discharge and Storage of Dewatering in Terapod West Pit*.
5. Rockwater (2008), *Karara Iron Ore Project, Groundwater impact assessment, Karara mine site*. Report to Karara Management Services.
6. Rockwater (2022), *Impacts of Disposing Water to Terapod Pits*. Report for Karara Mining Ltd.

## Appendix 1: Summary of stakeholder comments on the application

Consultation method	Comments received	Department response
<p>Department of Mines, Industry Regulation and Safety (DMIRS) advised of proposal 16 December 2022.</p>	<p>DMIRS replied on 19 December 2022 with the following:</p> <p>DMIRS has reviewed the application from Karara Mining Limited for a Works Approval W6762 under Division 3 Part V of the Environmental Protection Act 1986 (EP Act) at the Karara Iron Ore Project (KIOP), mining tenements M59/649, M59/721, G59/38 and L59/93.</p> <p>The proposed dewatering infrastructure and description of construction activities appears consistent with Mining Proposal Reg Id 114914 submitted to DMIRS for assessment under the Mining Act 1978. The following comment regarding the Works Approval is made;</p> <p>It is noted that no additional monitoring bores are proposed around the Terapod West Pit as KIOP plan to utilise the existing production bore TPD1001 for ongoing monthly monitoring of standing water level , pH, EC and TDS.</p> <p>In support of the mining proposal KIOP commissioned Rockwater Hydrogeological and Environmental Consultants to investigate the impacts of disposing water to Terapod pits (Sept 2022). Section 5 of the report prepared by Rockwater in support of disposing water to Terapod West made the following recommendations about monitoring;</p> <ul style="list-style-type: none"> <li>• Locate any large Eucalypts or trees of other species within one kilometre of Terapod West and monitor their condition; and</li> <li>• Expand the current groundwater monitoring programme to measure water levels, salinity and pH of the Terapod South pit lake; and in any other bores in the Terapod area that still exist and are open to the water table.</li> </ul> <p>Via a request from DMIRS for additional information KIOP have stated that “All monitoring bores (e.g. MGC482, MGW441 and TPD1002) at Terapod are destroyed/lost and current access to Terapod South Pit is</p>	<p>Production bore TDP1001 is located at the southwest corner of Terapod West Pit which is in line with the predominate west to southwest groundwater flows. A map of groundwater flows was shown in figure 2 of the Rockwater Report.</p> <p>DWER will consider the monitoring programme to incorporate into the Works Approval operations, and will do so based on the risk to the vegetation.</p>

Consultation method	Comments received	Department response
	<p>completely closed off with its abandonment bund. Therefore, no groundwater monitoring could be undertaken at those locations. Additional monitoring bores at Terapod will be installed as required.”</p> <p>Could DWER please consider whether groundwater monitoring via a single bore (TPD1001) is appropriate for this operation.</p>	
<p>Department of Biodiversity, Conservation and Attractions (DBCA) advised of proposal 16 December 2022.</p>	<p>DBCA replied on 13 January 2023 with the following:</p> <p>DBCA is of the understanding that the Karara Iron Ore Project and Mungada Iron Ore Project are the subject of existing approvals under Part IV of the EP Act, with environmental conditions issued under Ministerial Statements (MS) 805 and 806, respectively. DBCA provided substantial input into the environmental impact assessment for both projects. On this basis and noting the capacity for DWER to assess the application and apply appropriate measures to the prescribed premises under Part V of the EP Act, DBCA has no comments on the application.</p>	<p>Noted</p>

## Appendix 2: Summary of applicant's comments on risk assessment and draft conditions

Condition	Summary of applicant's comment	Department's response															
Department requests																	
Request 1	<p>Please find attached a map showing the proposed vegetation health photo monitoring sites and their co-ordinates are provided in the following table. Please note we suggest to remove the existing vegetation health monitoring site TP01MQ1 from the draft WA as it is on top of the ridge and only has low shrubs with shallow root, which are very unlikely to be impacted by the proposed dewatering activities. However, as shown in the attached map, we propose to set up four new photo monitoring points to the west, northwest and north of the Terapod West pit within 1km radius for monitoring of the tall Eucalypt trees with a height of up to 10 m (potentially deep-rooted trees) on lower landscape. Photo monitoring at all four sites will be facing southeast. Please note, as detailed in section 7.1 of Works Approval supporting document, it is very unlikely any deep-rooted trees (rooting depth over 20m) occur in vicinity of the Terapod West pit and therefore it is highly unlikely that any tree's rooting depth could reach 40m below ground within the zone of saline water around the pit.</p> <table border="1" data-bbox="392 991 1391 1350"> <thead> <tr> <th data-bbox="392 991 779 1086">Vegetation Health Photo Monitoring Site ID</th> <th data-bbox="779 991 1072 1086">Easting (MGA Zone 50)</th> <th data-bbox="1072 991 1391 1086">Northing (MGA Zone 50)</th> </tr> </thead> <tbody> <tr> <td data-bbox="392 1086 779 1150">TPDWM01</td> <td data-bbox="779 1086 1072 1150">487500</td> <td data-bbox="1072 1086 1391 1150">6777826</td> </tr> <tr> <td data-bbox="392 1150 779 1214">TPDWM02</td> <td data-bbox="779 1150 1072 1214">487415</td> <td data-bbox="1072 1150 1391 1214">6777724</td> </tr> <tr> <td data-bbox="392 1214 779 1278">TPDWM03</td> <td data-bbox="779 1214 1072 1278">487456</td> <td data-bbox="1072 1214 1391 1278">6778640</td> </tr> <tr> <td data-bbox="392 1278 779 1342">TPDWM04</td> <td data-bbox="779 1278 1072 1342">488271</td> <td data-bbox="1072 1278 1391 1342">6778695</td> </tr> </tbody> </table>	Vegetation Health Photo Monitoring Site ID	Easting (MGA Zone 50)	Northing (MGA Zone 50)	TPDWM01	487500	6777826	TPDWM02	487415	6777724	TPDWM03	487456	6778640	TPDWM04	488271	6778695	<p>Vegetation monitoring locations TPDWM01 and 02 are within the Blue Hills PEC so are covered under MS806 (condition 6). Vegetation monitoring locations TPDWM03 and 04 are not located within the Blue Hills PEC boundary and will be included on the licence.</p>
Vegetation Health Photo Monitoring Site ID	Easting (MGA Zone 50)	Northing (MGA Zone 50)															
TPDWM01	487500	6777826															
TPDWM02	487415	6777724															
TPDWM03	487456	6778640															
TPDWM04	488271	6778695															

Condition	Summary of applicant's comment	Department's response
Request 2	As previously communicated, the additional monitoring bores (MGC482, MGW441 and TPD1002) as recommended in Rockwater's report (Impact of Disposing Water to Terapod Pits, Sep 2022) are all destroyed/lost. Our water team will consider additional monitoring bore locations as needed. New monitoring bore (if needed) will be installed at the same time of installation of recovery bore should vegetation be impacted (as highlighted in Table 5 of the DR) and will be installed at an appropriate location outside of the abandonment bund of Terapod West Pit.	Noted – the Department will review monitoring data and consider this when it comes to licensing this discharge and managing risk to receptors.
Draft Works Approval		
Condition 15 and Table 6	In relation to monitoring location of Blue Hills North Turkeys Nest (BHN TN) and Terapod West Pit discharge point, we believe sampling at those two locations are duplicating as water was directly pumped from the BHN TN to Terapod West Pit through the new 8.5km windrowed dewatering pipeline and no transfer/temporary storage etc. of this water between the two locations (e.g. water quality is the same at the two locations). We appreciate if DWER could consider this and remove the monitoring location of Terapod West Pit discharge point from Table 6. It is also unsafe to access the discharge point as it will be lowered deep into the pit.	DWER recognises removing Terapod discharge monitoring point due to safety reasons. Sampling from the BH TN is safer, accessible, and will provide the same water quality results.  Updated.
Table 7	As detailed above in response to the first request in Schedule 1 of the decision letter, we appreciate DWER to consider removal of TP01MQ1 as a vegetation health monitoring location. We are still monitoring it for vegetation health on an annual basis as required under the Ministerial Statement 806.	Removal of TP01MQ1 which is covered by MS806. TPDM03-04 are outside of PEC boundaries and are in locations recommended by consultants.
Condition 7 and Condition 20	Regarding the time limited operations (TLO) duration, we understand it starts from the day that we submit the Environmental Compliance Report as required by Condition 4 and will not exceed 180 calendar days. We will need to submit a compliance report to DWER within 30 calendar days of the completion date of the TLO. For example, we submitted the Environmental Compliance Report required by Condition 4 on 01/05/2023 and the TLO will end on 27/10/2023 and we will need to submit the TLO compliance report to DWER by 26/11/2023 – can you please confirm it is correct? Also as discussed previously, to continue the TLO and start operations, do we need to apply for a Licence Amendment to incorporate the Terapod West Pit dewatering activities potentially a few months before the TLO ends? Or probably easier to add a condition for the TLO to continue until the Licence Amendment is	TLO provides the Department time to process you licence or licence amendment application submitted preferably with your Compliance Report required by condition 4, while you temporarily operate the item of works.  Your dates are correct. You will need to submit a licence amendment application and the TLO report can be submitted after this.

Condition	Summary of applicant's comment	Department's response
	approved in the WA as previously suggested?	The Department is no longer allowing TLO 'until a licence is issued' as TLO required a specified timeframe.
Condition 23 and 24	Just to clarify the reference of 'books' in the Condition 23 and 24, we assume it does not refer to an actual book, but copies of records/info/data as detailed in Condition 23 that we will need to provide to DWER when requested – can you please confirm?	Correct. Please refer to the definition of 'books' in the <i>EP Act 1986</i> .
Figure 1	Please double check L59/93, which is not within current Licence Area. L59/93 should be the proposed additional License Area – refer to Figure 2 of the DR.	Figure 1 has been replaced with Figure 2 from the Decision Report.
Draft Decision Report		
Section 2.3	A typo associated with MS 805 in the first and second paragraph.	Ministerial Statement 895 relates to the “Karara Iron Ore Project, 215 Kilometres East-Southeast of Geraldton and 320 Kilometres North-Northeast of Perth, Shire of Perenjori” and deletes condition 7 of Ministerial Statement 805.
Table 3	Discharge pipe sited at least 100m away from remnant vegetation and in windrows to contain any leaks. Please confirm. – Yes, the discharge pipeline will be over the pit wall and discharge point will be lowered deep into the Terapod West pit. It will be at least 100m away from remnant vegetation around the pit.  Above ground pipelines to be windrowed. – Yes, all above ground pipeline will be windrowed as the same previously constructed for the discharge to the Blue Hill North pit.	Noted.
Table 5	<i>Conditions 19 &amp; 20: Compliance reporting and seepage recovery bores if vegetation affect. (Applicant – note – you may wish to install an additional bore between the production bore and vegetation – rather than be conditioned to do so should veg be impacted (proactive rather than reactive).- Noted. Additional bore will be installed outside of the Terapod West pit abandonment bund between the existing production bore TPD1001 and vegetation should vegetation be impacted. Additional monitoring bores will be installed at the same time if needed.</i>	An additional monitoring bore will be considered during licencing stage, when data can be checked.  This will be considered once data is available and for the licensing stage if deemed necessary – noting the Department does not consider monitoring as a control.



## Appendix 3: Application validation summary

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)					
Application type					
Works approval	<input checked="" type="checkbox"/>				
Licence	<input type="checkbox"/>	Relevant works approval number:	Licence	<input type="checkbox"/>	Relevant works approval number:
		Has the works approval been complied with?		Yes <input 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 type="checkbox"/>	
		Environmental Compliance Report / Critical Containment Infrastructure Report submitted?		Yes <input type="checkbox"/> No <input type="checkbox"/>	
		Date Report received:			
Renewal	<input type="checkbox"/>	Current licence number:	Renewal		
Amendment to works approval	<input type="checkbox"/>	Current works approval number:	Amendment to works approval		
Amendment to licence	<input type="checkbox"/>	Current licence number:	Amendment to licence		
		Relevant works approval number:		N/A	Relevant works approval number:
Registration	<input type="checkbox"/>	Current works approval number:	Registration	<input type="checkbox"/>	Current works approval number:
Date application received		21/10/2022			
Applicant and premises details					
Applicant name/s (full legal name/s)		Karara Mining Limited (070 871 831)			
Premises name		Karara Minesite Beneficiation Plant			
Premises location		Mining Lease M59/649-I, expires 09/04/2027 Mining Lease M59/721, expires 15/07/2029 General Purpose Lease G59/38, expires 28/08/2029 Miscellaneous Licence L59/93, expires 07/12/2031 PERENJORI WA 6620			
Local Government Authority		Shire of Perenjori			
Application documents					
HPCM file reference number:		DER2018/001042-8~32			
Key application documents (additional to application form):		Attachment 8 Supporting document Attachment 2 Premises Maps			

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

**Scope of application/assessment**

Summary of proposed activities or changes to existing operations.	<i>Works approval</i> Construction of Dewatering infrastructure for dewatering of Karara Mine Pit to Terapod West Pit.
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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	Proposed production or design capacity	Proposed changes to the production or design capacity (amendments only)
Category 6: Mine dewatering: premises on which water is extracted and discharged into the environment to allow mining of ore.	573,600 tonnes/annum.	

**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 checked="" type="checkbox"/> No <input type="checkbox"/>	Ministerial statement No: 805, 895 and 806. 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 type="checkbox"/> No <input checked="" 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. If needed, clearing will occur within approved areas under MS806
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.

SECTION 1: APPLICATION SUMMARY (as updated from validation checklist)		
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: GWL171229
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: Gascoyne Groundwater Area Type: Proclaimed Groundwater Area Has Regulatory Services (Water) been consulted? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Regional office: Mid-West Gascoyne
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 <a href="#">WQPN 25</a> )? 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, Environmental Protection (Controlled Waste) Regulations 2004, State Agreement Act xxxx</i> )	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Mining Act 1978
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"/>	
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"/>	Classification: N/A Date of classification: N/A