



Application for Works Approval

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

Works Approval Number	W6892/2024/1
Applicant	Musgrave Minerals Limited
ACN	143 890 671
File number	DWERVT13704
Premises	Cue Gold Project Part of Mining Tenements L58/42, M21/106, M58/224, M58/366, M58/367 As defined by the coordinates and Map in Schedule 1 of the works approval
Date of report	12 September 2024
Decision	Works approval granted

Manager, Resource Industries

INDUSTRY REGULATION (STATE-WIDE DELIVERY)

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 construction and time limited operation of the premises. As a result of this assessment, works approval W6892/2024/1 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 10 January 2024 Musgrave Minerals Limited (the applicant) submitted an application for a works approval to the department under section 54 of the *Environmental Protection Act 1986* (EP Act).

The application is to undertake construction works relating to mine dewatering and a putrescible landfill at the Cue Gold Project (the Project). The premises is approximately 25 kilometers (km) south-west of Cue in the Shires of Mt Magnet and Cue and lies approximately 1km south of Lake Carey.

The Project will see the development and mining of five open pits, Break of Day, Lena, White Heat, Waratah, and Leviticus pits, as well as associated supporting infrastructure (see Figure 1). Ore processing will not occur on site, instead mined ore will be transported offsite to the Mt Magnet Gold Processing Facility which is regulated under Licence L5529/1988/12.

The current Life of Mine (LoM) of the Project is approximately three years, however it is expected mining will extend beyond current LoM predictions. Mining will commence at the Break of Day Pit (the largest deposit) and Leviticus Pits. Once mining levels intercept groundwater, pits will be dewatered with recovered water being used for onsite dust suppression. Mining at Leviticus Pit is expected to cease within 6 to 9 months of commencement and the remaining pit void will be utilised to store any excess groundwater intercepted by other pits for the LoM.

Waste rock will be deposited into four Waste Rock Landforms (WRLs) - East, West, Leviticus West and Leviticus South, and used for rock armouring and construction of surface water management infrastructure and abandonment bunds at the site. Landfills to dispose of site generated putrescible waste will be constructed within the East and West WRLs. The applicant anticipates waste generation rates will vary as active mining commences however a maximum tonnage of no more than 5,000 tonnes of waste is expected for the LoM. With limited tyre recycling options and the remote location of the Project, the proposal includes the burial of up to 100 used tyres on site within the WRLs.

The premises relates to categories 6 and 89 and assessed design capacity under Schedule 1 of the *Environmental Protection Regulations 1987* (EP Regulations) which are defined in works approval W6892/2024/1. 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 W6892/2024/1.

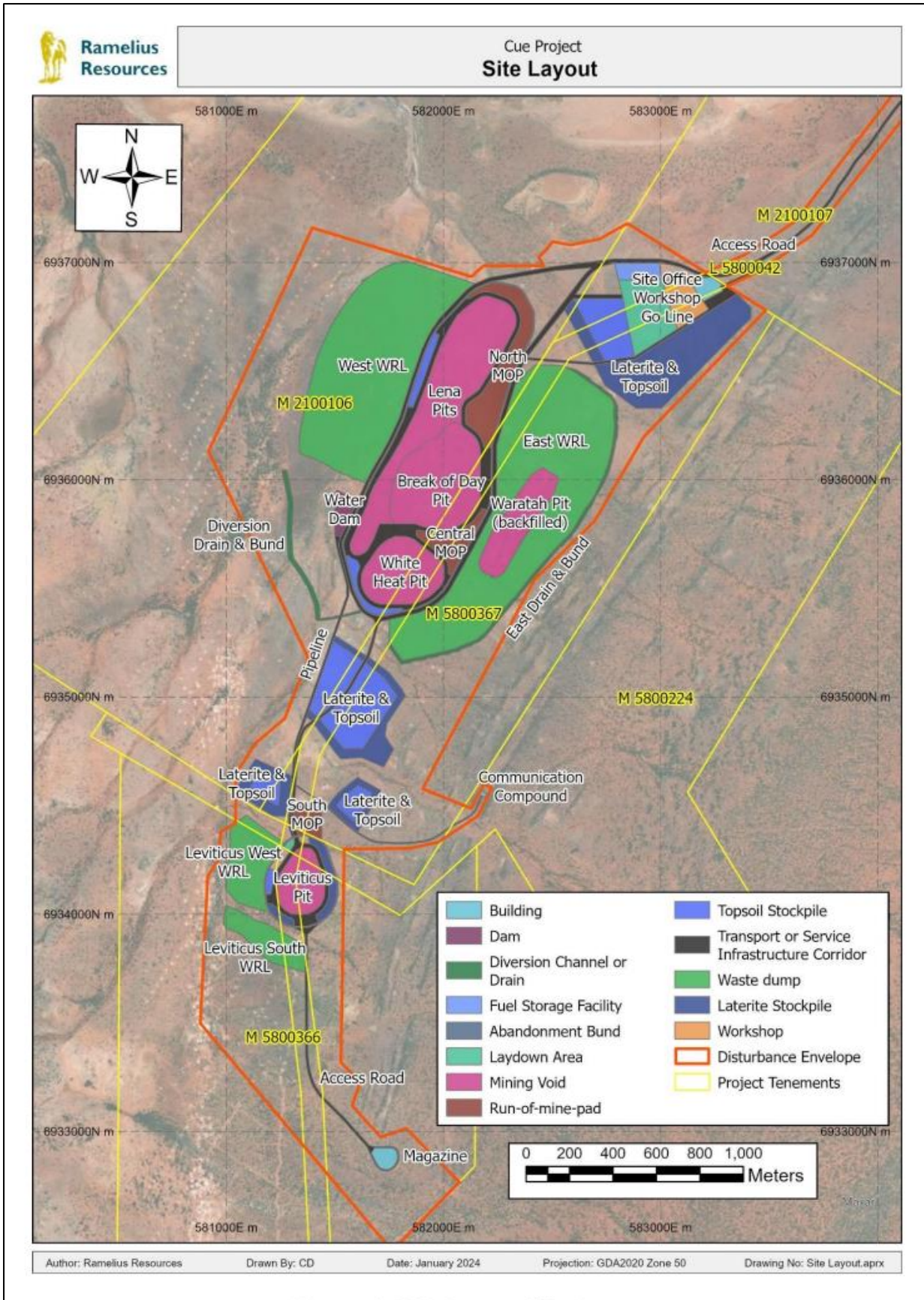


Figure 1: Cue Gold Project site layout

2.2.1 Category 6 activities

Dewatering and pipeline infrastructure

In 2023, MWES Hydrological Services prepared a report of the hydrogeology and hydrology of the Project based on groundwater investigations between 2012 to 2023. The investigation found Basement rock is mostly practically impermeable and because of this it is likely groundwater inflows to the pits will be almost entirely from fractures within basement rock. Numerical and analytical models (MODFLOW) were used to estimate pit groundwater inflows with results suggesting mine water inflow rates will be moderate and peak at approximately 13 litres a second (L/s) with an average of 5L/s over the 31 month LoM. Dust suppression requirements are estimated at 5 to 7L/s however due to the unpredictability of groundwater in the area (fractured rock), ongoing planning for water supply will be carried out to ensure adequate water supply.

The applicant have proposed 3 likely scenarios for water supply and subsequent water management practices;

- Low yield - where groundwater yield is insufficient for mining requirements water will be mitigated by previous groundwater exploration work.
- Moderate yield - dewatering yields will provide a supply which can be reasonably well matched to site demand. In this case water demand will be smoothed out by advance dewatering.
- High yield - excess water supply will be directed to the Leviticus Pit once mining in this pit has ceased (approximately 6 to 9 months after mining commences). Mine dewater will be reused for other mining activities including dust suppression. The Leviticus Pit provides a storage capacity of up to 650,000 kilolitres (kL) and modelling indicates that it can store excess water at an average rate of 10 L/sec.

A dewatering discharge pipeline to Leviticus Pit will be constructed in the event of a high yield water supply. The discharge pipeline will link with the Turkey's Nest at the northern pits to transfer excess mine dewater into the Leviticus Pit for later reuse via a standpipe.

The Leviticus Pit Dewatering Discharge Pipeline will be a high-density polyethylene (HDPE) pipeline approximately 5 kilometres (km) long extending between the Turkey's Nest and Leviticus Pit (see Figure 1). The pipeline will be constructed using poly welding, with flanged control valves to direct flow between discharge points. Proposed controls for the management of the pipeline are discussed further in Table 2.

Groundwater, surface water and monitoring

Groundwater

Hydrogeological and hydrological investigations indicate aquifers in the Project area are highly compartmentalised with strong hydraulic bounding from structural and lithological features. There is no direct hydraulic connection between the orebody aquifers and more distant aquifers which will limit long term groundwater inflow rate and the extent of drawdown. Aquifers are compartmentalized which will also limit transmissivity. Depth to water from surface at measured sites, ranges from 14m in the south to 4m in low lying areas in the north.

Groundwater quality across the Project area is highly variable, ranging from 1000 to nearly 3000,000 milligrams per litre (mg/L) and tends to increase in salinity to the north near Lake Austin. The groundwater is hard with elevated sulphate levels, typical of near salt lake environments, with dissolved metals concentrations generally low or below detection levels. Nitrogen, nitrite, and ammonia levels were also low. Dewatering bores will tend to be towards the deeper aquifer and therefore be hypersaline in nature (100,000mg/L).

Surface water

The Project is located within the Lake Austin catchment, with Lake Austin lying approximately 1 kilometre to the north. Climate in the catchment area is described as desert, with mean annual rainfall is mostly in the 200-250 millimetre range. The Project sits between two catchments, the majority of the Project’s facilities are located in the northern catchment, bounded by a natural ridge 60 m above Lake Austin. Runoff from this catchment drains into a creek “Central Creek” which passes through several of the proposed mine pits before discharging to Lake Austin.

Southern surface water flows across other ancillary facilities in the form of shallow sheet flows. Both northern and southern catchments will require diversion around the project area to minimize water inflow into mine pits and to divert clean, uncontaminated stormwater from the site. Planned diversion bunds are seen above in Figure 1.

Monitoring

Musgrave propose to monitor the quality of the water discharged to the Leviticus Pit on a monthly basis when water is being discharged (see Table 1). Water quality data will be routinely reviewed to confirm that there are no discernible changes in the pit lake water quality. The planned monitoring parameters and frequency are provided in Table 1 below. Proposed monitoring locations are in Figure 2.

Table 1. Groundwater Monitoring

Discharge Point	Frequency	Parameter	Units	Limit	Averaging Period
Leviticus Pit	Monthly ¹ (when discharging)	Cumulative Volume of Water Discharged	kL	NA	Continuous
		Standing Water Level	m AHD	423m AHD	Spot Sample
		pH ²	-	NA	
		Electrical Conductivity (EC) ²	µS/cm	NA	
<p>Note ¹: Monthly monitoring undertaken at least 15 days apart.</p> <p>Note ²: In-field not-NATA accredited analysis.</p>					

2.2.2 Category 89 activities

Two unlined Class II Landfill sites are proposed to be constructed, within the East and West WRLs (Figure 1). The landfills will be construction with a series of trenches up to approximately 5m depth by 5m width and 50m in length. The landfills will be located more than 100m from the WRL footprint perimeter and will sit more than 3m above ground level. Excavated inert waste rock will be used to construct windrows and for landfill cover as well as final capping.

Landfills will be used to dispose of the following types of waste;

- Clean and Uncontaminated Fill;
- Inert Waste Type 1 and Type 2;
- Putrescible Wastes; and
- Contaminated solid waste meeting waste acceptance criteria specified for Class II landfills.

The volume of each load of waste disposed in the landfill will be recorded in cubic metres. It is expected that up to 5000 tonnes per annum of waste will be disposed of across the two landfill

locations. Other wastes will be transported to an off-site and appropriately licenced waste disposal facility in accordance with the disposal requirements.

The Applicant propose the following operational and management measures for the landfills in line with the *Environmental Protection (Rural Landfill) Regulations 2002* (EP Landfill Regs);

- The active tipping area will be maintained to less than 30m in length and covered at a frequency and method consistent with the EP Landfill Regs.
- The landfill site will be fenced to exclude livestock and sign-posted with details of the types of wastes that can be disposed.
- A 3m trafficable firebreak will also be maintained around the landfill site, which will also allow emergency access in the event of a fire.
- Surface water run-off will be managed with windrows to divert water away from trenches. The top surface of the landfill will be slightly concave, and a crest bund will be constructed to minimise runoff down the outer slopes.
- A visual inspection of the landfill will be conducted weekly, and any windblown waste trapped along the fence line will be removed and disposed. A Waste Management Plan will be developed as part of the Project Environmental Management System (EMS).
- Landfill windrows will be installed as part of each trench development to prevent any surface water from flowing into the landfill. Incidental rainfall will be retained in the trench or in the worst case within the WRL crest bund and retained on site.

2.2.3 Used Tyres

The applicant proposes to bury no more than 100 used tyres at any designated location. The used tyre disposal location will be within the WRLs on a flat, level area that is free from obstructions or hazards, a minimum of 50m from other storage areas. Tyres will be buried;

- a minimum of 5m inside the final outer surface of a WRL.
- in batches of 20 with a minimum of 1m separation between tyres and a 10m horizontal and 5m vertical buffer zone between batches.

2.3 Other Approvals

2.3.1 Aboriginal Heritage Act 1972

A survey coordinated by the Badimia Aboriginal Land Corporation (BLAC) identified seven Aboriginal sites within the Project tenements (see also Table 2 below). The applicant was granted a Section 18 Ministerial Consent (Reference MIN-2023-0539) for the impact to the identified Aboriginal Heritage Sites at the Project subject to conditions. In August 2023, the salvage and relocation of cultural heritage material was undertaken by BLAC (with support from Horizon Heritage Management) and identified artifacts were relocated to an alternate heritage site. Following the completion of the relocation, the Badimia People submitted a report permitting the applicant to carry out mining activities over the land and sites detailed in the Section 18 consent.

2.3.2 Environmental Protection Act 1986 (Part V) - Clearing Permit

An application for a Purpose Permit (Reference CPS 10464/1) for the clearing of up to 320ha at the Project was submitted to Department of Energy Mines Industry Regulation and Safety (DEMIRS) On 22 December 2023. The application was granted on 23rd March 2024.

2.3.3 The Mining Act 1978

Musgrave Minerals submitted a Mining Proposal and Mine Closure Plan to DEMIRS on 8 December 2023 (MP Reg ID 122197). The application was approved on 24th May 2024.

2.3.4 Rights in Water Irrigation Act 1914

The Project is located within the Proclaimed East Murchison Groundwater Area. The applicant has been granted a licence to take water (GWL202638(1)) under the *Rights in Water Irrigation Act 1914* for the abstraction of 475,000kL (15.06L/s) of groundwater for dewatering and dust suppression purposes. An application to amend the licence to increase the abstraction volume to 800,000kL (25.37L/s) was submitted in November 2023, the application is still under assessment. The licence is valid until April 2029.

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 time limited operation which have been considered in this decision report are detailed in Table 2 below. Table 2 also details the control measures the applicant has proposed to assist in controlling these emissions, where necessary.

Table 2: Proposed applicant controls

Emission	Sources	Potential pathways	Proposed controls
Construction			
Dust	Construction of discharge pipeline, turkey's nest and discharge point, and water transfer route and infrastructure. Construction of landfill trenches Vehicle movements	Air / windborne pathway	<ul style="list-style-type: none"> Visual monitoring and implement appropriate dust controls as required. Watering using water carts across active work areas during construction and operation.
Operation/Time Limited Operation			
Dust	Unloading of waste material onto the landfill Vehicle movement	Air / windborne pathway	<ul style="list-style-type: none"> Visual monitoring and implement appropriate dust controls as required. Watering using water carts across active work areas during construction

Emission	Sources	Potential pathways	Proposed controls
Spill of dewatering water from rupture or leaks of dewatering pipeline	Transportation of dewatering water by pipeline	Direct discharge from pipe outfall and/or seepage to ground	<p>and operation.</p> <p>In the event of a pipeline failure the applicant will –</p> <ul style="list-style-type: none"> • Construct dewatering pipelines within earthen bunded corridors with scour pits or sumps constructed along the pipeline route at strategic locations and low points to ensure leaks or spills are contained within bunded areas. • Ensure secondary containment will be sufficient to contain any spill for a period equal to the time between daily inspection. • Ensure that the discharge pipe is located far enough over the pit crest or down the pit ramp to reduce exposure to wind and prevent scouring of pit walls. • Install telemetry systems and pressure sensors along the pipeline to allow the detection of leaks and failures; • Fit flow meters to measure discharge volumes. • Install isolation valves appropriate intervals. • Undertake daily inspections of the dewatering discharge pipeline to confirm visual integrity of pipelines, bunding and scour pits during operation. • Shutdown the required section of the dewatering system, if any leaks or spills from pumps or pipelines are detected, until the leak has been verified and/or repaired.
Sediment laden dewatering discharge	Mine dewater from the dewater bore pumped to Turkey's Nest or Leviticus Pit	Overtopping / overflowing causing direct discharge and potential overland runoff from Turkey's Nest or Leviticus Pit	<p>To minimize the risk of overtopping Musgrave Minerals propose to:</p> <ul style="list-style-type: none"> • Ensure that the Leviticus Pit lake is below the maximum water level of 423m AH, this will allow 5 metres of freeboard • Turkey's Nest will have 300mm freeboard and daily visual inspections. • Install flow meters and record the volume of water discharged each month. • Undertake monthly monitoring of pit

Emission	Sources	Potential pathways	Proposed controls
			lake water level (freeboard capacity) and quality.
Dewatering water		Seepage of water vertically through base and embankments of unlined pit or Turkey's Nest.	Musgrave propose to maintain a steady state water level in the Leviticus Pit. Ensuring water levels are maintained below this level will minimize water ingress into and out of the pit, and therefore the likelihood of any groundwater mounding in the pit area. Groundwater outflows from the pit are expected to be small due to generally low permeability crystalline bedrock.
Leachate	Disposal of waste into landfill	Seepage from base of landfill	<ul style="list-style-type: none"> • Routine covering of waste will be undertaken in accordance with the <i>Environmental Protection (Rural Landfill) Regulations 2002</i> based on the disposal volume. • Weekly visual inspections will identify any windblown litter, odour or vermin and identify if additional covering is required. • Low rainfall, arid environment so a dry landfill waste mass with negligible quantities of leachate expected
Windblown waste	Disposal of class II waste into landfill	Air/windborne	<ul style="list-style-type: none"> • Routine covering of waste in accordance with the EP Landfill Regs • Fencing around the landfill to contain the waste • Weekly visual inspections to determine whether additional covering is required
Contaminated stormwater	General operations of the landfill facility	Overland flow/runoff	<ul style="list-style-type: none"> • Installation of landfill windrows for every trench to reduce the incidence of surface water • Landfills are more than 50/100m from perimeter of WRLs
Fire	Storage within the premises and disposal of tyres within the waste rock landforms	Air / Windborne dispersion	<ul style="list-style-type: none"> • No more that 100 used tyres stored at the premises at any one time. • Disposal within the Waste rock landforms only and at 5m or more from the landform outer surface. • Tyres to be disposed of horizontally and individually with a minimum distance of 1m from the adjoining tyre. • A 3 m firebreak around the used tyre burial locations. • Emergency Management Plan to be

Emission	Sources	Potential pathways	Proposed controls
			followed in case of a fire.

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

Human receptors	Distance from prescribed activity
Wanarie homestead	Located approximately 11 km south east of the premises. Screened out due to distance.
Environmental receptors	Distance from prescribed activity
Aboriginal Sites	<p>Seven Aboriginal Sites were identified within the project area –</p> <ul style="list-style-type: none"> • 38877, 38878, 38889, 38891 all Artefact/scatter, quarries • 34017 and 38879 Artefact/scatter • 38886 Artefact/scatter, camp <p>In response to the discovery of Aboriginal Sites a Section 18 Application under the Aboriginal Heritage Act 1972 was submitted. On 12 July 2023, Musgrave were granted a Section 18 Ministerial Consent and in August 2023, the salvage and relocation of cultural heritage material was undertaken with identified artifacts were relocated to an alternate heritage site. Following the completion of the salvage operation, the Badimia Aboriginal People corporation submitted a report to DPLH acknowledging mining disturbance activities could now occur over the land and sites detailed in the Section 18 consent.</p> <p>Several Aboriginal Heritage Sites still exist adjacent to and within close proximity of the project area. The closest remaining sites about the north western corner of the project area near the West WRL and Lena pits (sites #38881, 38885, and 34019</p>
Groundwater	Local aquifers the area range in depth of 4m (north) to 14m below ground level. (south) sloping North East to the edge of Lake Austin. There is also an east to west static water level gradient reflecting the surface topography; however this is poorly defined due to the

	<p>limited drilling upslope of the premises.</p> <p>Water quality in the area is saline-hypersaline, neutral to slightly alkaline, with low dissolved metals, nitrates and ammonia.</p> <p>Samples collected from onsite bores indicate the presence of fresh and saline groundwater lenses sitting above the hypersaline aquifer. Mine dewater is expected to target the deeper higher saline aquifer with salinity in excess of 100,000mg/L.</p> <p>Six bores are recorded within a 5km radius of the premises, ranging in depth from 6-26mbgl, the 2 active bores are being used for livestock and production (Main Roads).</p>
<p>Threatened or Priority Flora</p>	<p>Priority flora were identified during a 2022/2023 spring/summer survey within the CGP area despite not being identified on any DBCA databases or any previous surveys of the project area. The <i>Hibiscus sp.</i> Perrinvale Station was found in 4 locations across the project area and another 50 plants in the local area. These plants are proposed to be removed and relocated under the current Clearing Permit application (see 2.3.2).</p>
<p>Threatened Ecological Communities (TEC)</p>	<p>Two TEC's were located in the project area, these being the Austin Land System (Priority 3) and Lake Austin Vegetation Complexes (Banded Ironstone Formation).</p>
<p>Heritage places</p>	<p>Local Registered Place (Place ID 06561 – Lake Austin) is located within the premises. Lake Austin is historically significant for it's association with early exploration of the area. Lake Austin is approximately 400m from the boundary of the project area (not including the access roads which pass through the Lake Austin site boundary).</p>

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 .

Works approval W6892/2024/1 that accompanies this decision report authorises construction and time-limited operations. The conditions in the issued works approval, as outlined in Table 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. dewatering activities and disposal of waste into the landfill. 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 4: Risk assessment of potential emissions and discharges from the premises during construction and time limited operations

Risk events					Risk rating ¹	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls	C = consequence L = likelihood			
Construction								
Construction of discharge pipeline, discharge point, and water transfer route and infrastructure.	Dust	Pathway – Wind / Airborne	Native vegetation, particularly priority flora	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	N/A	N/A
Construction of landfill trenches		Impact - photosynthetic activity for vegetation and excess dust covering artifacts	Aboriginal Sites and heritage places					
Vehicle movements								
Time-limited-operations								
Unloading of waste material onto the landfill Vehicle movement	Dust	Pathway – Air/windborne Impact – Ecosystem disturbance /degradation of vegetation	Adjacent native vegetation and priority flora species	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 Condition 6 Condition 7	Some dust emissions are expected from the proposed activity. The use of dewatering water for onsite dust suppression will be conditioned in the Works Approval. Applicant's controls have been conditioned within the works approval in accordance with <i>DWER Guideline: Risk Assessments</i>
Transportation of dewatering water by pipeline	Spill of dewatering water from rupture or leaks of	Pathway – Direct discharge from pipe outfall and/or seepage	Native vegetation, particularly priority flora	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 Condition 6	Applicant's controls have been conditioned within the works approval in accordance with <i>DWER</i>

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
	dewatering pipeline	to ground Impact – Deterioration in soils and inundation of vegetation and erosion						<i>Guideline: Risk Assessments</i>
Mine dewater from the dewater bore pumped to Leviticus Pit	Dewatering water (saline)	Pathway – Overtopping / overflowing causing direct discharge and potential overland runoff from Leviticus Pit Impact – Destruction of vegetation, erosion of surface land / soils, and impacts to local drainage channels/surface water bodies	Native vegetation, particularly priority flora (TECs) Soil / land Surface water and nearby drainage lines Aboriginal Sites and heritage places	Refer to Section 3.1	C = Moderate L = Unlikely Medium Risk	Y	Condition 1 Condition 8-10	Applicant's controls have been conditioned within the works approval in accordance with <i>DWER Guideline: Risk Assessments</i>
		Pathway – Seepage of water vertically	Native vegetation, particularly priority flora	Refer to Section 3.1	C = Moderate L = Unlikely	Y	Condition 1 Condition 8-	Applicant's controls have been conditioned within the works approval in accordance with <i>DWER</i>

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Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
		through base and embankments of unlined pit. Impact – Change in quality of groundwater and local groundwater lenses, groundwater mounding and vegetation death from impact to root zone.	(TECs) Groundwater		Medium Risk		10	<i>Guideline: Risk Assessments</i>
Use of mine dewater for dust suppression	Dewatering water (saline)	Pathway Direct discharge to land Impact vegetation health impacts such as decline or death	Native vegetation	N/A	C = Minor L = Unlikely Medium Risk	N	<u>Condition 7</u>	Additional regulatory control applied to ensure saline mine dewater used for dust suppression is applied in a manner that avoids impact to vegetation
Disposal of waste into landfill	Solid/liquid waste and leachate	Pathway – Solid and liquid waste leaching from unlined trench to land	Native vegetation, particularly priority flora (TECs) Groundwater	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 Condition 6	Applicant's controls have been conditioned within the works approval in accordance with <i>DWER Guideline: Risk Assessments</i>

Risk events					Risk rating ¹ C = consequence L = likelihood	Applicant controls sufficient?	Conditions ² of works approval	Justification for additional regulatory controls
Sources / activities	Potential emission	Potential pathways and impact	Receptors	Applicant controls				
		Impact – Contamination of groundwater or surface water						
	Windblown waste	Pathway – Air/windborne Impact - Solid waste blown into surrounding environment, destruction of native vegetation and ecosystem health	Native vegetation, particularly priority flora (TECs)	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 Condition 6	Applicant's controls have been conditioned within the works approval in accordance with <i>DWER Guideline: Risk Assessments</i>
	Contaminated stormwater	Pathway – Surface water run off and infiltration Impact – Contamination of ephemeral surface lines, groundwater and soil	Adjacent native vegetation and priority flora Groundwater, ephemeral surface lines	Refer to Section 3.1	C = Slight L = Unlikely Low Risk	Y	Condition 1 Condition 6	Applicant's controls have been conditioned within the works approval in accordance with <i>DWER Guideline: Risk Assessments</i>

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

Table 5: Consultation

Consultation method	Comments received	Department response
Application advertised on the department's website on 22 nd April 2024	None received.	N/A
The Local Government Authority (Shire of Cue) advised of the proposal on 22 nd April 2024	None received.	N/A
Department of Planning, Land, and Heritage advised of proposal on 22 nd April 2024	<p>Comments received 10 May 2024.</p> <p>A review of the Register of Places and Objects, as well as the DPLH Aboriginal Heritage Database, concludes that the subject area intersects with the actual boundary of:</p> <ul style="list-style-type: none"> • MG20-02 (ID 38878) – Registered site • MG20-11 (ID 38886) – Registered site • MG20-03 (ID 38879) – Stored Data/Historic site • SLAS12-01 (ID 34017) – Registered site • MG20-06 (ID 38881) – Heritage place <p>Therefore, based on the current information held by DPLH, approvals under the <i>Aboriginal Heritage Act 1972</i> (AHA) are required. It is noted that Musgrave Minerals Ltd (Musgrave) were granted a Section 18 Ministerial Consent in 2023, however the sites included in the consent differ from the above list. Musgrave should regularly check the Aboriginal Cultural Heritage Inquiry System (ACHIS) for any new Aboriginal Cultural Heritage reported within the subject area and seek appropriate approvals where required.</p> <p>It is also noted that MG20-03 (ID 38879) has been assessed by the Aboriginal Cultural Heritage Committee (ACHC) as not meeting</p>	<p>Comments from DPLH are noted. The application contained the following information regarding the AHA approvals for the project:</p> <p><i>'In 2021, a survey coordinated by the Badimia Aboriginal Land Corporation (BLAC) identified seven (7) Aboriginal sites within the CGP tenements. Subsequently, with the support of BLAC, a Section 18 Application was submitted. On 12 July 2023, Musgrave were granted a Section 18 Ministerial Consent (Reference MIN-2023-0539) for the impact to the identified seven (7) Aboriginal Heritage Sites at the CGP subject to the five (5) listed approval conditions.</i></p> <p><i>In August 2023, the salvage and relocation of cultural heritage material was undertaken by BLAC (with support from Horizon Heritage Management) with identified artifacts were relocated to an alternate heritage site. Following the completion of the salvage, the Badimia People submitted a report (prepared by Horizon Heritage Management) acknowledging that mining disturbance activities can now occur over the land and sites detailed in the Section 18 consent and that there are no further expectations or requirements relating to this consent'.</i></p> <p>It is the applicant's responsibility to ensure all required approvals under</p>

	<p>section 5 of the AHA and as such no approvals as required.</p> <p>It is noted that the proposed works are adjacent to a number of Aboriginal Sites and Heritage Places. When undertaking works, Musgrave should be made aware they are within the vicinity of Aboriginal Sites registered under the Act.</p>	<p>the AHA are granted prior to construction / operation of the proposal.</p>
<p>Bardimia Bandi Barna Aboriginal Corporation advised of proposal on 22nd April 2024</p>	<p>None received.</p>	<p>N/A</p>
<p>Applicant was provided with draft documents on 11th September 2024</p>	<p>Decision Report, Section 2.2 - The premises location is incorrect, the premises lies 25km south-west of Cue and approximately 1km south of Lake Austin.</p> <p>Comment period to be waived.</p>	<p>Section 2.2 updated.</p>

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. Musgrave Minerals Pty Ltd – Cue Gold Project – Works Approval Application – Supporting Information, Version 1.0 – 2024-01-09
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.