

Ramelius Resources Limited

ACN: 001 717 540



[REDACTED]

15 May 2024

[REDACTED]

[REDACTED]

[REDACTED]

To whom it may concern,

RE: Works Approval Application for Mount Magnet Gold Operations

Mt Magnet Gold Pty Ltd (ACN 008 669 556) (**MMG**) is a subsidiary of Ramelius Resources Ltd (**Ramelius**). MMG submits attached information in support of a Works Approval Application (**WAA**). The WWA is submitted under Part V of the *Environmental Protection Act 1986* (the **EP Act**). MMG proposes to conduct the works under Category 52 – Electric Power Generation, as described in Schedule 1 of the EP Act. It is further proposed that works will include construction and time limited operations of a power station.

Should you have any further questions, [REDACTED]
helenchernoff@rameliusresources.com.au.

[REDACTED]



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3. ATTACHMENT 1C: AUTHORISATION TO ACT AS REPRESENTATIVE OF THE OCCUPIER

Ramelius Resources Limited

ACN: 001 717 540

Ramelius Resources Limited
PO Box 6070
East Perth WA 6892
Level 1, 130 Royal Street, East Perth WA 6004
Tel: (08) 9202 1127



7 May 2024



RE: MY MACHINERY OPERATIONS WORKS APPROVAL APPLICATION

The purpose of this letter is to provide authority [redacted] to [redacted]

Authorisation includes submitting applications for permits and licences and respond to enquiries, providing information, meeting, corresponding and liaising with Department of Water & Environmental Regulation for the purpose of securing relevant permits and licences.





4. ATTACHMENT 2: PREMISES MAP





5. ATTACHMENT 3B: PROPOSED ACTIVITIES

5.1. POWER STATION

Ramelius is proposing to upgrade the existing power supply to Mt Magnet Operations. The upgrade will include gas turbines as well as renewable energy sources. In the interim, the existing diesel power plant will be upgraded to provide 13 MW of power to the Checkers Processing facility and underground mining operations.

The existing power plant includes diesel generators housed in a shed compound which are used to supply power to a critical subset of the site including the camp, offices and key pumps in the event other sources are unable to supply power. Diesel is stored in one 550 kL primary tank which feeds to two day tanks which then in turn supply fuel to the generators.

Ramelius proposes to increase the design capacity of the power plant to an aggregate 13 MW. Proposed works include the addition of 13 x KTA50 1.2 MVA containerised and self-bunded generators and 3 x 6.3 MVA self-bunded transformer substations to produce an aggregate capacity of 13 MW. It is envisaged that Mt Magnet Operations require 10 MW of power supply and therefore the additional 3 MW included in the design provides a contingency power supply during maintenance periods when individual generators are offline. This arrangement therefore provides 10 MW of duty generators and 3 MW of standby generators. The additional power supply will connect into the existing power corridor network.

Activity category details are summarised in Table 1 below.

Table 1: Works Approval Activities

Activity	Category	Production Capacity	Estimated Throughput	Fuel Source	Emissions
Power Station	52. Electric power generation: premises (other than premises within category 53 or an emergency or standby power generating plant) on which electrical power is generated using fuel.	13 MW	10 MW	Diesel	Greenhouse gases, Noise

Time Limited Operations

To streamline the approvals process and enable proposed activities to commence following construction, Ramelius requests that the prescribed activities are authorised as Time Limited Operations. The Time Limited Operations period is requested to be set at 180 calendar days to allow for an assessment of the Licence Application. It is noted that the planned Time Limited Operations activities will not be different from future licensed operations. Ramelius understands that conditions will be included in the Works Approval to regulate emissions and discharges that arise during the Time Limited Operations phase. These conditions will be based on an assessment of the Prescribed Premises design performance provided in this Works Approval Application.

Licence Amendment

Ramelius will submit a Licence Amendment following the completion of works in accordance with the conditions of the amended Works Approval. This Licence Amendment will be submitted once the Environmental Compliance Report is provided to the DWER and Time Limited Operations begin. Operation under Licence conditions will commence when the Licence is granted (prior to the expiry of the Works Approval).



6. ATTACHMENT 3C: MAP OF AREA PROPOSED TO BE CLEARED





7. ATTACHMENT 3D: ADDITIONAL INFORMATION FOR CLEARING ASSESSMENT

A maximum 3.3 ha of native vegetation will be cleared in preparation for construction and operation of the power station. Clearing will be conducted progressively on an as-need basis to ensure only the area required is cleared. The clearing and disturbance required has been assessed under CPS7445 and the risk of impact to these species during planned activities is low.

7.1. ECOSYSTEM

The Project is within the MUR01 bioregion as defined by the Interim Biogeographic Regionalisation for Australia (IBRA) classification system. Vegetation is dominated by Mulga Woodlands often rich in ephemerals; hummock grasslands, saltbush shrublands and Halosarcia shrublands. The subregion is rich and diverse in its flora and fauna, most species are wide ranging and usually occur in at least one (1), and often several, adjoining subregions (Cowan, 2001).

Threatened and Priority Ecological Communities

In WA, there are currently 66 listed Threatened Ecological Communities (TECs), and of these 29 are also listed in the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (DBCA, 2023a). An additional 417 ecological communities with insufficient information available to be considered a TEC, or which are rare but not currently threatened, have been placed on the Priority list and referred to as Priority Ecological Communities (PECs) (DBCA, 2023b).

Of the 66 TECs, one is located within the Murchison IBRA Region (Table 2) (DBCA, 2023a). This TEC is not located near the premises.

Table 2: TECs in the Murchison Bioregion

Community Identifier	Community Name	Category of Threat and WA Criteria	Category Under EPBC Act
Depot Springs	Depot Springs stygofauna community.	VU B3	Not listed

Table 3: PECs in the region

Boundary ID	Community Number	Community ID	Community Name	Community Description
1274	2592	Lake Austin BIF	Lake Austin vegetation complexes (banded ironstone formation)	Priority 1
1284	2611	Mount Magnet	Mount Magnet vegetation complexes (banded ironstone formation)	Priority 1
1443	3399	Yoweragabbie Calcrete	Yoweragabbie calcrete groundwater assemblage type on Moore palaeodrainage on Yoweragabbie Station	Priority 1

Environmentally Sensitive Areas

Environmentally Sensitive Areas (ESAs) have been declared in the Environmental Protection (*Environmentally Sensitive Areas*) Notice 2005, which was gazetted on 8 April 2005. A desktop regional search of ESAs using the dataset 'Clearing Regulations – Environmentally Sensitive Areas (DWER-046)' indicates that no listed ESAs are located within or near the premises.



Matters of National Environmental Significance

The EPBC Act (Cth) requires that a person must not take an action that has, will have, or is likely to have a significant impact on a Matter of National Environmental Significance (MNES) unless the action is taken with Commonwealth Government approval.

A desktop regional search of MNES was undertaken using the Protected Matters Search Tool using the project disturbance boundary with a 20km buffer. The 2024 Protected Matters Search Tool Report indicates that there are:

- No World Heritage Properties, National Heritage Places, Wetlands of International Significance or Threatened Ecological Communities;
- Five Threatened Bird Species;
 - *Aphelocephala leucopsis* (Southern Whiteface) – Vulnerable
 - *Calidris acuminata* (Sharp-tailed Sandpiper) – Vulnerable
 - *Calidris ferruginea* (Curlew Sandpiper) – Critically Endangered;
 - *Leipoa ocellata* (Malleefowl) – Vulnerable;
 - *Pezoporus occidentalis* (Night Parrot) – Endangered;
- One Threatened Reptile Species; and
 - *Egernia stokesii badia* (Western Spiny Tailed Skink) – Endangered
- Six Listed Migratory Species
 - *Apus pacificus* (Fork-tailed Swift)
 - *Motacilla cinerea* (Grey Wagtail)
 - *Actitis hypoleucos* (Common Sandpiper)
 - *Calidris acuminata* (Sharp-tailed Sandpiper) - Vulnerable
 - *Calidris ferruginea* (Curlew Sandpiper) – Critically Endangered
 - *Calidris melanotos* (Pectoral Sandpiper)

It should be noted that the listed threatened fauna and flora are indicative only and may not occur in the Project area, further flora and fauna survey information is provided in the following sections. The clearing and disturbance required for project works has been assessed under the approval of CPS7445 and the risk of impact to these species during planned activities is low.

Conservation Areas

A desktop regional search of conservation areas using datasets 'DBCA – Legislated Lands and Waters (DBCA-011)' and 'DBCA – Lands of Interest (DBCA-012)' indicates that no legislated or proposed DBCA conservation areas located within or near the premises.

7.2. FLORA

Generally, vegetation in the Mount Magnet area is significantly degraded due to past mining and pastoral activities. Heavy grazing by sheep and goats has had a major degrading effect in the locality. Several Flora and Vegetation Surveys have been conducted in the region including by E.M. Matisse and Associates (1993), Cockerton (1995) and Niche Environmental Services (2010). These studies provide baseline botanical information over a 17-year period. Vegetation and flora in the local area have been well surveyed (Botanica, 2018).



Threatened and Priority Flora

No listed threatened flora species have been identified in the area during previous Flora Surveys. Four Priority Flora species have been identified within the MMG mine site and all appear to have a wide local distribution:

1. *Acacia burrowsiana* (P3);
2. *Acacia speckii* (P3);
3. *Stenanthemum mediale* (P1); and
4. *Verticordia jamiesonii* (P3).

No priority flora species were recorded within the premises boundary. The proposed clearing has no increased risk of impact to these species during planned activities.

Weeds

Management of weeds within WA is regulated under the Agriculture and Related Resources Protection Act 1976 (ARRP Act). Under the ARRP Act a plant may be 'Declared' and requiring control. Four weed species Declared under the AARP Act; Tamarisk Tree (*Tamarix* sp.), Thornapples (*Datura* sp.), Saffron Thistle (*Carthamus lanatus*) and Prickly Pear (*Opuntia stricta*) have been previously recorded on MMG mining tenements. A number of other weed species have also been recorded on site that are not 'Declared' but have the potential to impact native ecosystems and these include Tree Tobacco (*Nicotiana glauca*) and Ruby Dock (*Rumex vesicarius*) which have been recorded on rehabilitated waste rock dumps at Mt Magnet.

7.3. FAUNA

While levels of disturbance have contributed to loss of several mammal species in the region, the area still provides habitat for key threatened species that require management. Particular species at risk include the Malleefowl (*Leipoa ocellata*), Western Spiny Tailed Skink (*Ergenia stokesii badia*) and the western species of the Slender-billed Thornbill (*Acanthiza iredalei redalei*). The region also supports several salt lakes and wetlands of national significance that provide habitat for migratory wetland bird species (Botanica, 2018).

A number of fauna surveys have been carried out over the mine life including studies by Murcox Biological Services (MBS) 1993 and 1994, Ecologia 1996, Lindbeck, 2000, Geoff Cockerton 2001, Outback Ecology 2009-2012 and Botanica 2016 (Botanica, 2018). Fauna species recorded include:

- Ten species of native mammals, including three dasyurid marsupials, one native rodent, three bats, two kangaroos and one monotreme;
- 24 species of reptiles, including five snakes, seven dragons, six skinks, three geckos, one legless lizard and two monitor species;
- Three amphibian species;
- 73 avian species;
- Five species of introduced mammals, including goats, rabbits, foxes, cats and house mice; and
- No stygofauna recorded.

Threatened and Priority Fauna

No listed threatened, migratory or priority fauna species were observed within the MMG survey areas during Fauna Surveys. Two fauna of conservation significance have been assessed as possibly occurring on the MMG Site including:



- Gilled Slender Blue-tongue Skink (*Cyclodomorphus branchialis*) – Vulnerable; and
 - Previously recorded at Mt Magnet in 2006, Fauna Surveys to date have not reported any sightings.
- Malleefowl (*Leipoa ocellata*) – Vulnerable.
 - A targeted Malleefowl survey was carried out in March 2012 by Outback Ecology on the MMG tenements. The survey yielded only one extinct mound that was unlikely to have been used for many years, possibly decades. There was no further evidence of Malleefowl within the survey area and overall, there was little suitable habitat present (Botanica, 2018).

The additional clearing and disturbance required has been assessed under CPS7445 and the risk of impact to these species during planned activities is low.

7.4. SHORT RANGE ENDEMIC AND SUBTERRANEAN FAUNA

Short range endemic (SRE) species are terrestrial and freshwater invertebrates that have naturally small distributions (which may be discontinuous or fragmented) of less than 10,000 km². Habitats most likely to support SRE species include rock faces and steep slopes, gullies, springs, deep litter beds, rocky outcrops, and undisturbed watercourses or various combinations of these features. These habitats support only small, localised populations and the low dispersal of SREs often lead to the populations being isolated. The risk of any impact to SREs during planned activities is low.

Subterranean fauna spend their entire lives below the surface of the earth. They are divided into two groups including stygofauna (aquatic and living in groundwater) and troglafauna (air-breathing and living in caves and voids). Calcrete deposits, other karstic areas and banded ironstone formations are regarded as likely to support both stygofauna and troglafauna. The fractured rock aquifer does not appear to contain significant pore spaces or fractures and has a very low permeability. Based on this, it is considered that the potential for suitable subterranean fauna habitat is unlikely.



8. ATTACHMENT 6A: EMISSIONS AND DISCHARGES

Construction and operation of the proposed power station will result in emissions of carbon dioxide and noise.

8.1. GREENHOUSE GASES

Emissions for the power station have been estimated using default generator specifications and considering diesel as the only fuel source. Ramelius anticipates using 15 x 500 kW generators and 3 x 1500 kW generators to reach the 13 MW station production capacity, however this is subject to change based on efficiency and availability.

Fuel consumption of a diesel generator working at 100% maximum power is estimated at 263 L/hr (6.3 kL/day) for a 1.2 MW generator. With 13 x 1.2 MW generators making up the power station, this equates to a combined total of 82 kL/day.

Maximum emissions generated from the power station is therefore estimated to be 5.6 t/day and 2042 t/year, predominantly consisting of nitrogen dioxide, carbon monoxide, and sulphur dioxide. Generators will rarely (if ever) be operating at maximum production capacity all at the same time and is more likely to operate between 50 and 75%.

Diesel will be the interim fuel source whilst Ramelius undertake work to incorporate gas and renewable sources which will reduce greenhouse gas emissions.

8.2. NOISE

Mt Magnet mining operations are located in close proximity to Mount Magnet Townsite which is therefore considered sensitive receptor to noise emissions. The proposed power station is situated approximately 4 km north-west of the Mount Magnet Townsite.

Noise emissions have been calculated based on a measured acoustic power level (Lwa) 50 Hz (75% power) of 116. It is therefore expected that at a distance of 4 km away from the power station, sound level will be <40 dB. This estimation does not include geographic features such as hills which will also reduce the sound level. Generators will also be situated within containers or buildings to further minimise noise emissions. Noise levels will not exceed assigned levels detailed in Regulations 7 and 8 of the *Environmental Protection (Noise) Regulations 1997*.

Ramelius maintains a record of complaints. If a noise complaint is raised, it is investigated and remedial actions implemented where necessary.



9. ATTACHMENT 7: SITING AND LOCATION





10. ATTACHMENT 8: ADDITIONAL INFORMATION

10.1. CLIMATE

Mount Magnet is situated within the Murchison region of Western Australia, experiencing an arid climate with predominantly winter rainfall (Cowan, 2001). The nearest Bureau of Meteorology (BOM) weather station is located at Mount Magnet Airport (007600) (BOM, 2024).

The area experiences average maximum temperature of 28.8°C, and average minimum temperature of 15.3°C. Annual average rainfall is 238.8 mm with a mean of 33.3 days of rain per year (≥1 mm). Rainfall is highest in March at 35.6 mm and lowest in October at 7.2 mm as shown in Figure 1 (BOM, 2024).

Annual Exceedance Probability (AEP) is defined as the chance that an extreme rainfall event will occur in any given year. Based on AEP calculations by BOM, there is a 1 in 100 (1%) chance that the Mount Magnet area will receive 55.4 mm of rain for a 1-hour period, 153 mm for a 24-hour period and 194 mm for a 72-hour period based on AEP calculations (BOM, 2023).

Morning wind conditions are predominantly easterlies between 14 and 21 km/hr. Average afternoon wind direction is variable between 16 and 20 km/hr. On average, maximum wind gusts are generally seen in September and December (BOM, 2023).

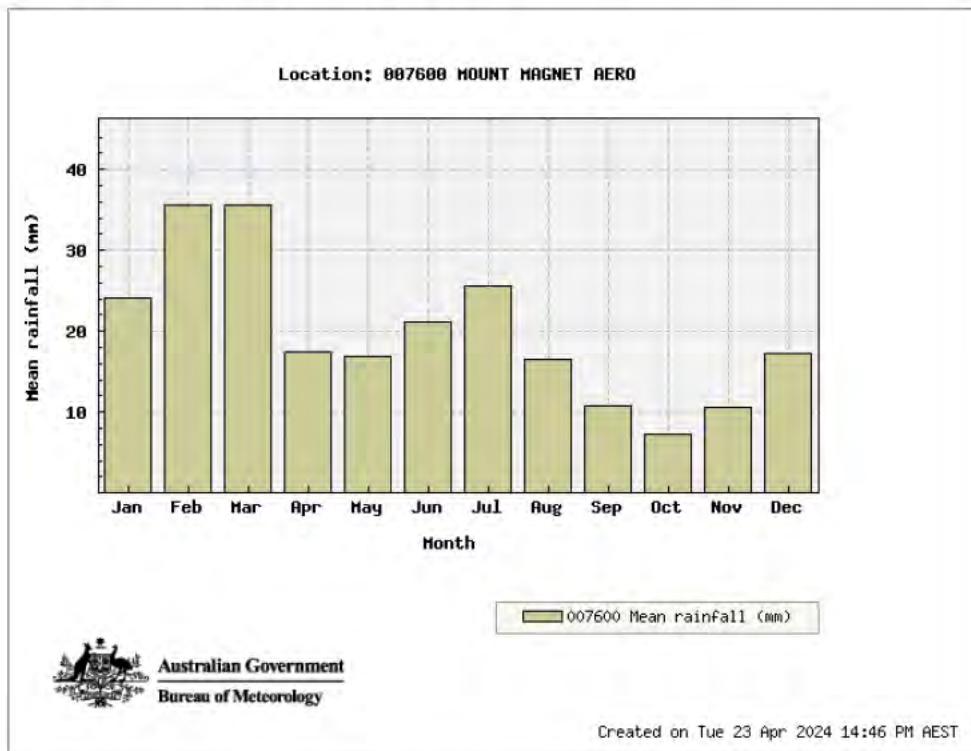


Figure 1: Mean Annual Rainfall

10.2. ABORIGINAL HERITAGE

Native Title is yet to be determined over the area and there is currently no registered Native Title claims. Ramelius maintains ongoing consultation with Aboriginal knowledge holders in the region.

Ramelius acknowledges its obligations under the *Aboriginal Heritage Act 1972*. Department of Planning, Lands and Heritage (DPLH) maintains an online database known as the Aboriginal Cultural Heritage



Inquiry System (ACHIS) which spatially provides information concerning Aboriginal heritage places in WA. A search of DPLH ACHIS in April 2024 identified one Aboriginal Cultural Heritage Site boundary within the works approval premises (Table 4) (DPLH, 2023). It's important to note that DPLH boundaries do not reflect actual site boundaries to maintain site sensitivity.

Previous Aboriginal Cultural Heritage surveys have not located any sites of Aboriginal Heritage significance in this area. A new survey has been commissioned and will be completed prior to works commencing to ensure compliance with the *Aboriginal Heritage Act 1972*.

Table 4: Aboriginal Heritage Sites

DPLH Place ID	Name	Type
18155	Warrambo Hill	Mythological

10.3. COST OF WORKS

Details regarding the projected cost of works associated with the construction of the diesel power plant are included in Table 5. This includes all estimated costs (inclusive of GST) associated with the construction and establishment of the premises infrastructure.

Table 5: Projected Cost of Works

Activity	Estimated Cost
Earthworks and site preparation	\$50,000
Mobilisation to site	\$40,000
Infrastructure connections and fittings	\$60,000
Hire of diesel generators (6 months)	\$1,560,000
Labour hire for installation and commissioning	\$60,000
Total	\$1,770,000



Works Approval Application

MMG

Environment

