PURPOSE CLEARING PERMIT APPLICATION:

Supporting information

M28/400

17 November 2025

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1. INTRODUCTION

1.1. PROJECT

AC Minerals Pty Ltd is proposing to develop the Rebecca Gold Project, a greenfield gold mining and processing project located in the eastern Goldfields region of Western Australia, approximately 150 km east-northeast of Kalgoorlie (Figure 1). AC Minerals Pty Ltd is a wholly owned subsidiary of Ramelius Resources Pty Ltd (Ramelius) The project will be managed by Ramelius personnel operating 24 hours a day, 7 days a week. The workforce will either drive in-drive out (DIDO) from local centres such as Kalgoorlie or fly in-fly out (FIFO) using the site aerodrome and be accommodated on site for the duration of their roster.

As a greenfield project all components need to be constructed to enable the project to commence. This comprises:

- Open pit mining from Four pits (Rebecca, Cleo, Duchess and Duke) and construction of waste rock landforms (WRLs).
- Construct and operate a 3 million tonne per annum (Mtpa) Carbon in Leach (CIL) processing plant.
- Construct and operate a power station.
- Construct and operate a Tailings Storage Facility (TSF). The TSF will ultimately comprise a two-cell paddock storage of total area 215 hectares, formed by multi-zoned earthfill embankments. The facility is designed to store a total of 30.0 Mt of tailings over the life of the project.
- Construct and operate a borefield to provide process water.
- Upgrade and maintain an existing pastoral access track to provide site access.
- Construct and operate ancillary infrastructure to support the project. This includes accommodation village, aerodrome, workshops, administration buildings, communications infrastructure, laydown areas, water storage / turkey nest dams and other items.

The main project components (open pits, WRL's, TSF, process plant and power station) and some ancillary infrastructure (mine complex, water diversion structures, service corridors, topsoil stockpiles etc) are located on granted tenement M28/400.

The mine schedule is for a total mine life of 9 years. Open pit mining will occur at four open pits. For most of the schedule, two areas will be mined concurrently. Mining in Rebecca pit will be separated into Stage 1 and Stage 2 phases. Mining will commence in Rebecca – stage 1. Rebecca is the largest of the four pits and will be mined for the first 5 years of the project. Duchess is a collection of four small pits; Duchess West, Duchess Central, Duchess East and Duchess South.

1.2. SCOPE AND PURPOSE

The scope of this native vegetation clearing permit application is for works confined to granted tenement M28/400. Clearing will be required to support construction and operation of a greenfield gold mining and processing project. This application has been prepared to support a Mining Development and Closure Proposal (MDCP) application to the Department of Mines, Petroleum and Exploration (DMPE).

Figure 1: Location or Ramelius Resources projects

Environmental approvals and permits from other regulatory agencies are also required. These are listed in Table 1. Some have already been obtained. Separate applications will be made to these agencies for the required permits.

Table 1: Other approvals required

Agency	Approval Required	Outcome
DMPE	Mine Development and Closure Proposal (MDCP)	Enable construction and operation of gold mine and processing operation
DWER	Works Approval (WA) for Prescribed Premises activities	W3013/2025/1 issued 8/9/2025. Enable construction of prescribed premises
DWER	Operating Licence	Enable operation of constructed plant. Issued after construction and commissioning phase completed
DWER	Groundwater abstraction Licence: (GWL) mine dewatering	GWL 211598(1) issued 17/3/2025. Enable dewatering of open pits on M28/400
DoH	Wastewater treatment plant: accommodation village	To be prepared. Enable treatment and disposal of sewage/wastewater.

Site establishment

As a greenfield project no previously developed infrastructure exists at the site. The general sequence of mine activity is as follows:

1. Vegetation clearing. Implemented as per Native Vegetation Clearing Permit (NVCP) conditions and internal clearing procedure. Footprints of proposed mine features, access roads and ancillary infrastructure are marked out by survey. Vegetation and topsoil stockpiles constructed in nominated locations.
2. Topsoil stripping. Implemented as per NVCP conditions and internal clearing procedure. 100 – 150mm surface soil is stripped and stockpiled in nominated locations.
3. Initial civil work and infrastructure constructed. Service corridors (access roads, pipeline corridors), laydown areas, turkey nest dams and standpipe, temporary power source(s)/gensets, pads for infrastructure levelled and compacted.
4. Commence construction of mine features as per design.

1.3. LAND OWNERSHIP

AC Minerals Pty Ltd is a wholly owned subsidiary of Ramelius Resources Ltd. The tenement covering this clearing permit application is granted M28/400. Expiry 10/1/2044.

2. DESCRIPTION OF CLEARING ACTIVITY

Vegetation clearing will be required for the activity types listed in Table 2. Clearing of native vegetation will be undertaken using standard earthmoving equipment such as bulldozers, front end loaders and graders to provide a surface free of vegetative matter. Mitigation measures to reduce the impact of clearing are described in Table 3. Figure 2 shows the infrastructure layout of the site.

IBSA packages will be provided to DMPE with the clearing permit application.

Table 2: Disturbance Area

Mine activity type	MDCP Type	M28/400 (ha)
Mine void	Key	105
WRL	Key	279
ROM /MOP	Key	57
TSF	Key	185
Other mining activities	Other	530
Total		1,156

Table 3: Clearing mitigation measures

Category	Aspect	Mitigation measure
Key	Open pits	NA. Location and size of this feature cannot be moved.
Key	WRL's	WRL for Duchess and Duke pits located to avoid stony rise habitat.
Key	ROM/MOP	MOP for Duke pit located to avoid stony rise habitat
Key	TSF	No mitigation measure required
Other	Water diversion drainage line	Relocated drainage line south to provide buffer for P2 plant in exclusion zone
Other	Topsoil and vegetation stockpiles	Allocated areas designed to avoid malleefowl nest sites
Other	Topsoil and vegetation stockpiles	Allocated areas on site plans are 'indicative'. Minor adjustments can be made to avoid specific aspects on the periphery of polygons
Other	Solar field	Allocation is indicative. Exact area to be determined through the power supply tender process

3. BASELINE ENVIRONMENT

3.1. BIODIVERSITY

Document Reference	Appendix
Botanica Consulting July 2023. Lake Rebecca Project: Detailed Flora and Vegetation Survey	Appendix **1**
Maia Environmental Consultancy (2022) Lake Rebecca Project: Detailed Flora and Vegetation Assessment	Appendix **2**
Western Wildlife. July 2022. Lake Rebecca Gold Project: Detailed Vertebrate Fauna Survey 2021 – 2022	Appendix **3**
Bennelongia. April 2020. Assessment of Short-Range Endemic fauna in the Rebecca Gold Project	Appendix **4**
Bennelongia. May 2025. Rebecca Gold Short Range Endemic Invertebrate Assessment *Relevance: update on 2020 survey*	Appendix **5**

3.1.1. Flora and vegetation

A detailed flora and vegetation survey was conducted by Botanica Consulting Pty Ltd (Botanica) between 16th to 20th May 2023 over the proposed mine, access road and ancillary infrastructure areas (Appendix **1**). IBSA-2024-0476 has been provided to DMPE previously. The survey area is approximately 4,897 ha in extent. A summary of key survey findings is presented below.

Flora

- No Threatened flora was located.
- The survey identified 230 vascular flora taxa, represented 102 genera across 38 families.
- Three species of Priority flora were identified, *Eremophila praecox* (P2), *Eremophila arachnoides* subsp. *tenera* (P3) and *Hibiscus krichauffianus* (P3). These are shown in Figure 2.
- One *Eremophila praecox* (P2) plant was observed in the survey area. This single plant was also recorded in an earlier Maia survey in 2022 and confirmed by Botanica in quadrat 77. *E. praecox* is known from approximately 13 populations in the general Kalgoorlie area. Twelve of these populations are within a 50 km radius of Kalgoorlie-Boulder, one of these populations is approximately 40 km southeast of Kambalda. It is It is also known to occur in the western part of the Eyre Peninsula in South Australia. One other plant was recorded during the targeted survey. This plant is outside the mining tenement boundary and will not be impacted.

  The one plant inside the activity envelope has been identified on site maps as an Exclusion Area.

- More than 2000 *Eremophila arachnoides* subsp. *tenera* (P3) plants were recorded within the survey area. Maia also recorded more than 500 plants in their 2022 survey.

  Figure 2 shows that the majority of plants are outside infrastructure areas and will be avoided.

- Maia (2022) recorded approximately 472 *Acacia eremophila* var. Numerous-nerved variant (A.S. George 11924) (P3) plants in the south east corner of tenement M28/400. 356 were recorded inside the tenement and the remainder outside.

  This area is outside the project activity envelope and will not be disturbed.

- *Hibiscus krichauffianus* (P3) has been recorded in the Carlisle, Central, Eastern Murchison, Nullarbor Plain and Western Murchison IBRA subregions. Two plants were recorded in quadrat 33 in the Botanica survey.

  This quadrat is outside tenement M28/400 boundary and will not be disturbed.

- A total of three introduced (weed) species were recorded. None of the recorded weed species are listed as a Declared Pest on the Western Australian Organism List (WAOL) under the Biosecurity and Agriculture Management (BAM) Act 2007 or as a Weed of National Significance.

Vegetation

- No Threatened Ecological Communities (TECs) or Priority Ecological Communities (PECs) were identified.
- The survey area is not located within an Environmentally Sensitive Area (ESA).
- There are no wetlands of international importance (Ramsar Wetlands) or national importance (Australian Nature Conservation Agency Wetlands) within the survey area.
- There are no proposed or gazetted conservation reserves within the survey area.
- A total of 16 broad-scale vegetation communities were identified.
- Based on the vegetation condition rating scale adapted from Keighery (1994) and Trudgen, (1988), native vegetation within the survey area was categorized as ‘very good’ to ‘poor’. Disturbance areas within the survey area include exploration access tracks, grazing, pastoral infrastructure and cumulative historical impacts.

AC Minerals has developed a Constraints Map for the project (Figure 2). The map shows the following categories:

Constraint Area – defined as locations where baseline surveys have identified a significant aspect is likely to occur (flora, vegetation, fauna, habitat, heritage), but detailed, site specific survey, has not occurred to confirm presence or absence. Prior to any proposed disturbance in these areas, detailed surveys must be completed to confirm presence or absence.

Exclusion Area – defined as known location of significant aspect, with buffer as required.

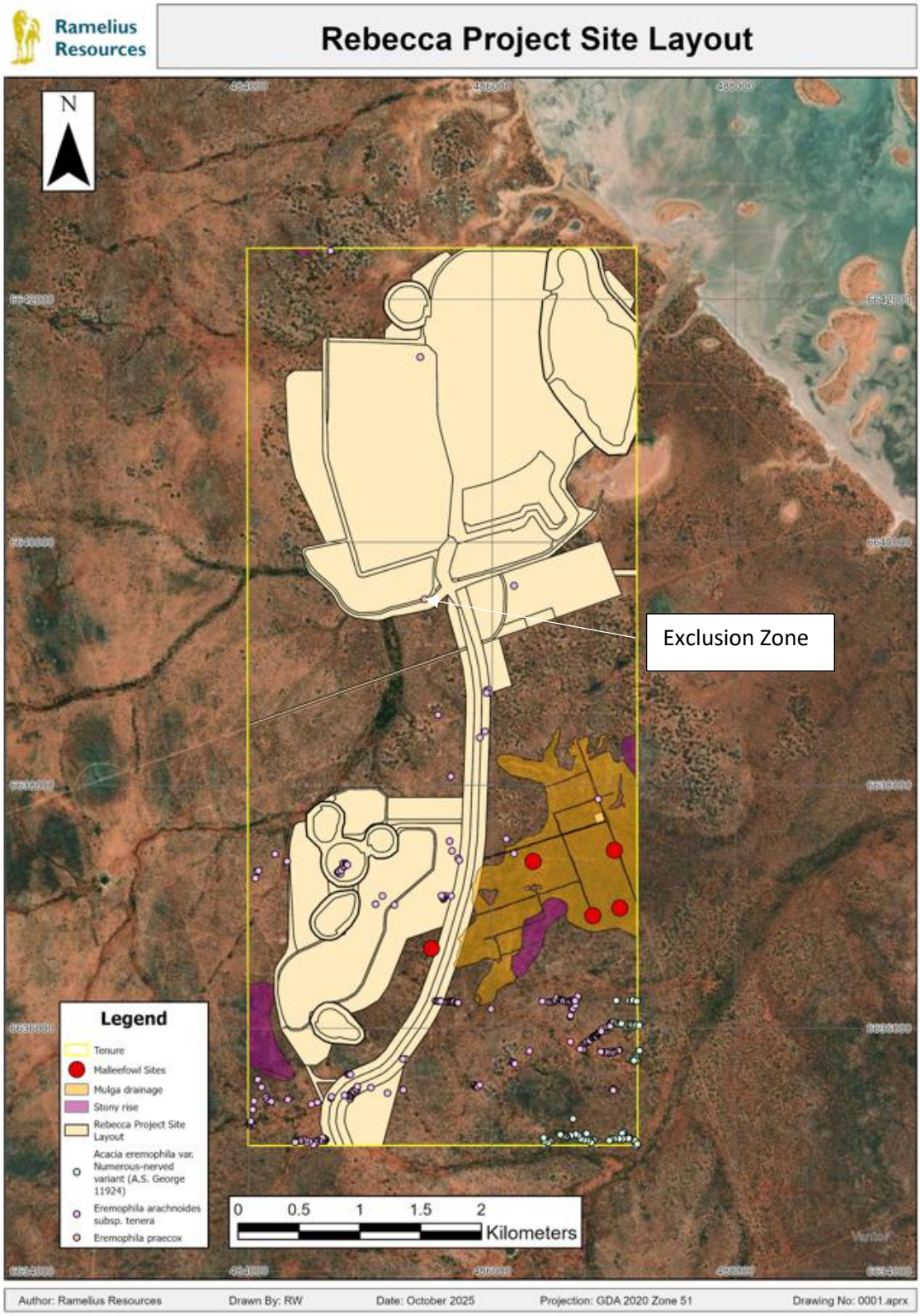

Figure 2: Constraints Map

3.1.2. Fauna

3.1.3. Terrestrial fauna

A terrestrial fauna survey was undertaken by Western Wildlife on 4 – 15th November 2021 and 22nd February – 2nd March 2002 over the mining tenement, that included:

- Identification of fauna habitats.
- Trapping at eight sites for at least seven nights in each phase, each with ten pitfall traps 10 funnel traps, 15 Elliott traps and two cage traps.
- Bird surveys.
- Bat surveys with acoustic detectors and mist-netting on one night.
- Camera trap survey at 48 sites, targeting rocky areas and conservation significant fauna.
- Targeted transects for fauna and evidence of conservation significant species, such as burrows, tracks and scats.
- Targeted survey for the host ant of the Arid Bronze Azure Butterfly (*Ogyris subterrestris petrina*).
- Keeping opportunistic records of fauna

Seven fauna habitats were identified in the study area:

1. Eucalypt woodland
2. Sheoak – chenopod shrubland
3. Mulga drainage
4. Stony rise
5. Sandy lake margins
6. Salt pan
7. Disturbed

The report is attached in Appendix 3. A summary of the key survey findings is presented below.

- The habitats are relatively common in the bioregion and unlikely to act as important ecological linkages.
- The observed assemblage included 0 frogs, 40 reptiles, 73 birds, 17 native mammals and 6 introduced mammals.
- No frogs were recorded during the survey, despite rain occurring on several days during the survey period. The species that potentially occur are common and widely distributed in the semi-arid zone.
- There are 82 species of reptile that potentially occur in the study area, of which 40 were recorded during the survey. Most of the species that are likely to occur have a widespread distribution across the semi-arid and arid regions of Western Australia
- There are 147 species of bird that potentially occur in the study area, of which 73 species were recorded during the survey. Most species are likely to occur across several habitats. The bird assemblage is likely to include a core suite of species that is resident in the study area, a second group that makes regular or nomadic movements into and through the study area and a third group of vagrants, that may occur in the study area on occasion. There is likely to be significant overlap in the bird assemblage of each habitat, with many species occurring in all habitats.
- Four old malleefowl nest sites (*Leipoa ocellata)* have been identified in the mining tenement, in this and other surveys. All are located within the Mulga drainage line habitat shown in Figure 3 and are outside the proposed disturbance area.

This habitat type is recorded on site maps as a Constraint Area (Figure 2).

- No comprehensive literature review or field survey was conducted for invertebrates. No invertebrates of conservation significance are recorded within 70km of the study area on DBCA's Threatened and Priority Fauna Database but the study area is within the area of potential habitat for the Arid Bronze Azure Butterfly (DBCA 2020). This species is reliant on an attendant ant, the sugar ant *Camponotus* sp. nr. *terebrans*, as the butterfly larvae live in the nest and the ants protect the larvae. As a thorough search for the attendant ant failed to find any colonies, it is considered unlikely that the Arid Bronze Azure Butterfly currently occurs in the study area.
- There are 40 species of mammal that have the potential to occur in the study area, 30 native and ten introduced. A total of 23 species have been recorded from the study area thus far, of which 17 are native (including six species of bat) and six are introduced. Most species are likely to be widespread across the semiarid regions of Western Australia.
- One conservation significant species is known to occur: the Long-tailed Dunnart (*Sminthopsis longicaudata*; Priority 4). This species was recorded on the stony rise habitat shown in Figure 3 and likely to be restricted to this habitat. This location is outside the disturbance area of the project.

As a precaution, all occurrences of this habitat type have been recorded as a Constraint Area on the site map. Mine infrastructure has been redesigned to avoid this habitat type.

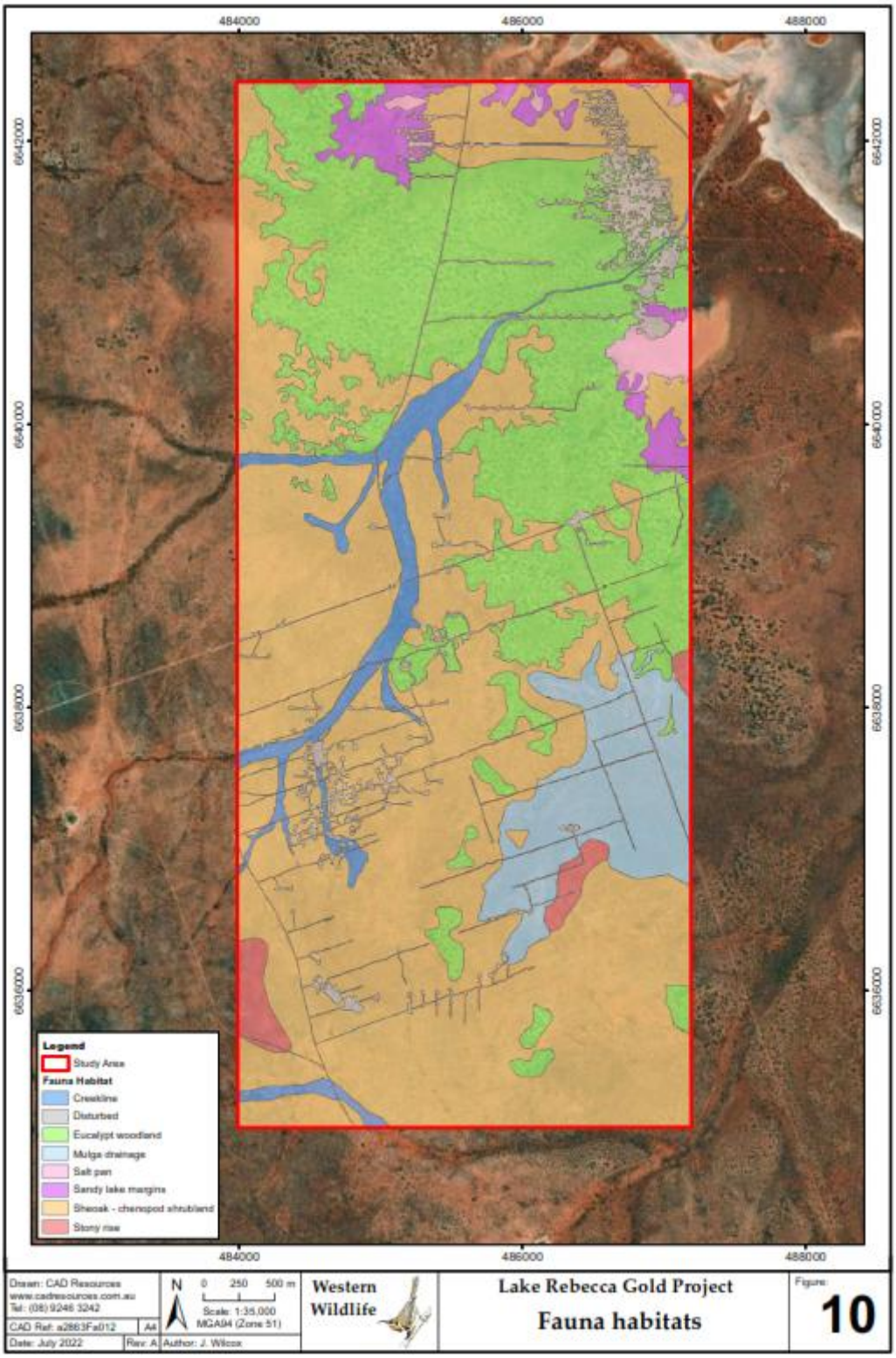

Figure 3: Fauna habitat

Source: Western Wildlife 2022 – Figure 10

3.1.4. Short range endemic fauna

A short range endemic (SRE) invertebrate survey was conducted from 12-16 April 2021. A total of 15 sites were sampled with methods that varied according to site. The sites selected for survey were distributed across each of the habitats present. The survey targeted species of seven SRE Groups: spiders (Araneae), pseudoscorpions (Pseudoscorpiones), scorpions (Scorpiones), centipedes (Chilopoda), millipedes (Diplopoda), slaters (Isopoda) and snails (Gastropoda). The report is attached in Appendix **4**.

The SRE classification used by the Western Australian Museum (WAM), has been used in this assessment, where a species can be classified into one of the following categories:

1. **Confirmed SREs** have a known distribution range smaller than 10,000 km^2. The taxonomy is well known, and the group well represented in collections and/or via comprehensive sampling.
2. **Potential SREs** belong to a group with gaps in our knowledge, either because the group is not well represented in collections, taxonomic knowledge is incomplete, or the distribution is poorly understood due to insufficient sampling.
3. **Widespread (not SRE**) species have a known distribution range larger than 10,000 km^2. The taxonomy is well known, and the group well represented in collections via comprehensive sampling.

DNA sequencing was attempted on 28 specimens belonging to 19 different species from the study area, and nine additional reference specimens from the Bennelongia collection for comparisons.

The field survey collected 234 specimens of 37 different species from SRE Groups (Table 2). Groups represented include spiders (at least 14 species), pseudoscorpions (7 species), scorpions (five species), centipedes (one species), millipedes (three species), isopods (three species) and snails (four species).

A summary of conclusions from the survey is provided below:

- No Confirmed SRE's were identified.
- Eighteen species are considered Potential SREs.
- One potential SRE (the pseudoscorpion Cheiridiidae `BPS344`) has been collected only within the impact footprint of the project area, on the north east edge of the Rebecca pit.
- The other seventeen potential SREs are either known only from locations outside the proposed impact areas of the Project or are known from locations both outside and inside impact areas.
- Fifteen species collected were known or likely to be widespread.

The report concluded given that the largest proposed mine pit in the project area has an approximate area of only 1 km^2 and that the disturbance associated with surface infrastructure will be similarly small, the likelihood of the distribution of the pseudoscorpion Cheiridiidae `BPS344` being encompassed by the project impact footprint (or even the project) is extremely low. Therefore, the likelihood of project development having conservation-significant impact on SREs is low.

However, since the 2021 survey, the mine layout has changed. Figure 4 shows the layout as documented in the 2021 report and shows only two survey sites (9 and 14) were in impact areas (dark grey in Table 4). Figure 5 shows the 2025 mine layout where sites 3, 11,12,13 and 15 are now

within or adjacent to impact areas (light grey in Table 4). Table 4 shows that there are five more species recorded as a singleton that are now in the impact area (blue cells).

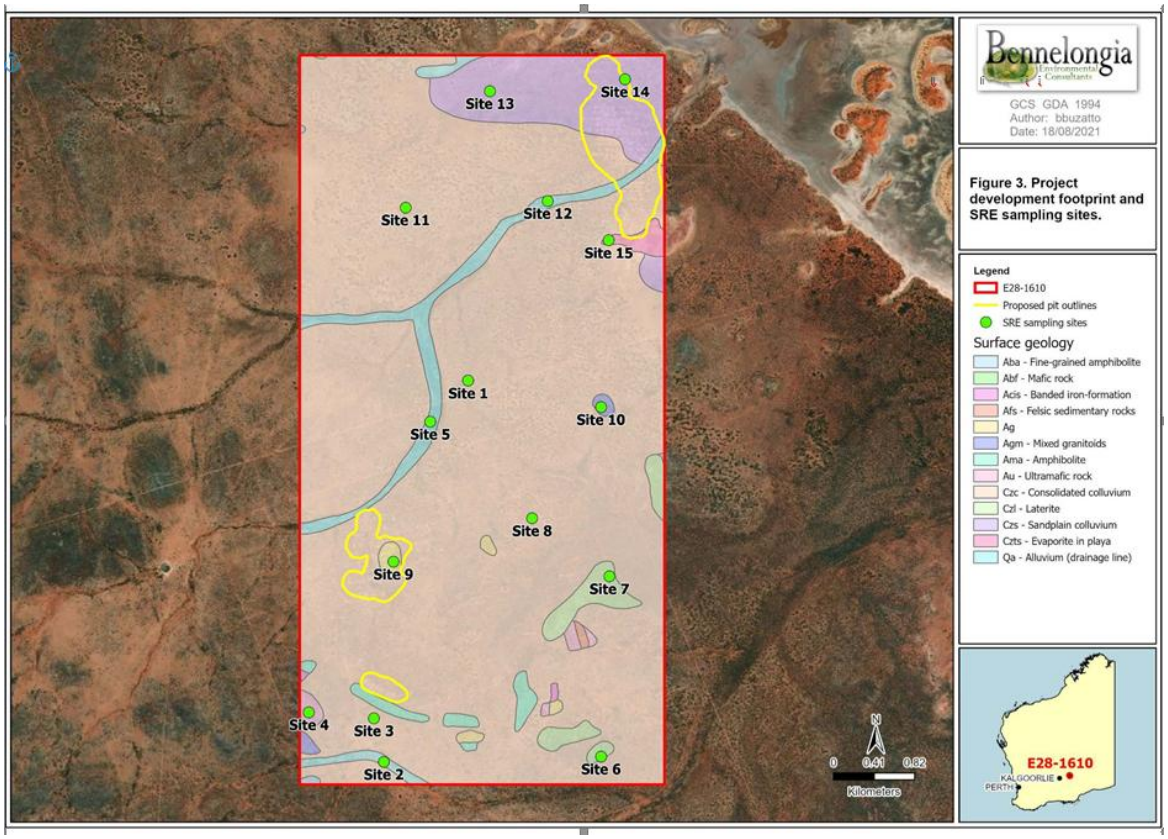

Figure 4: 2021 survey mine layout

Source Bennelongia 2021: Figure 3

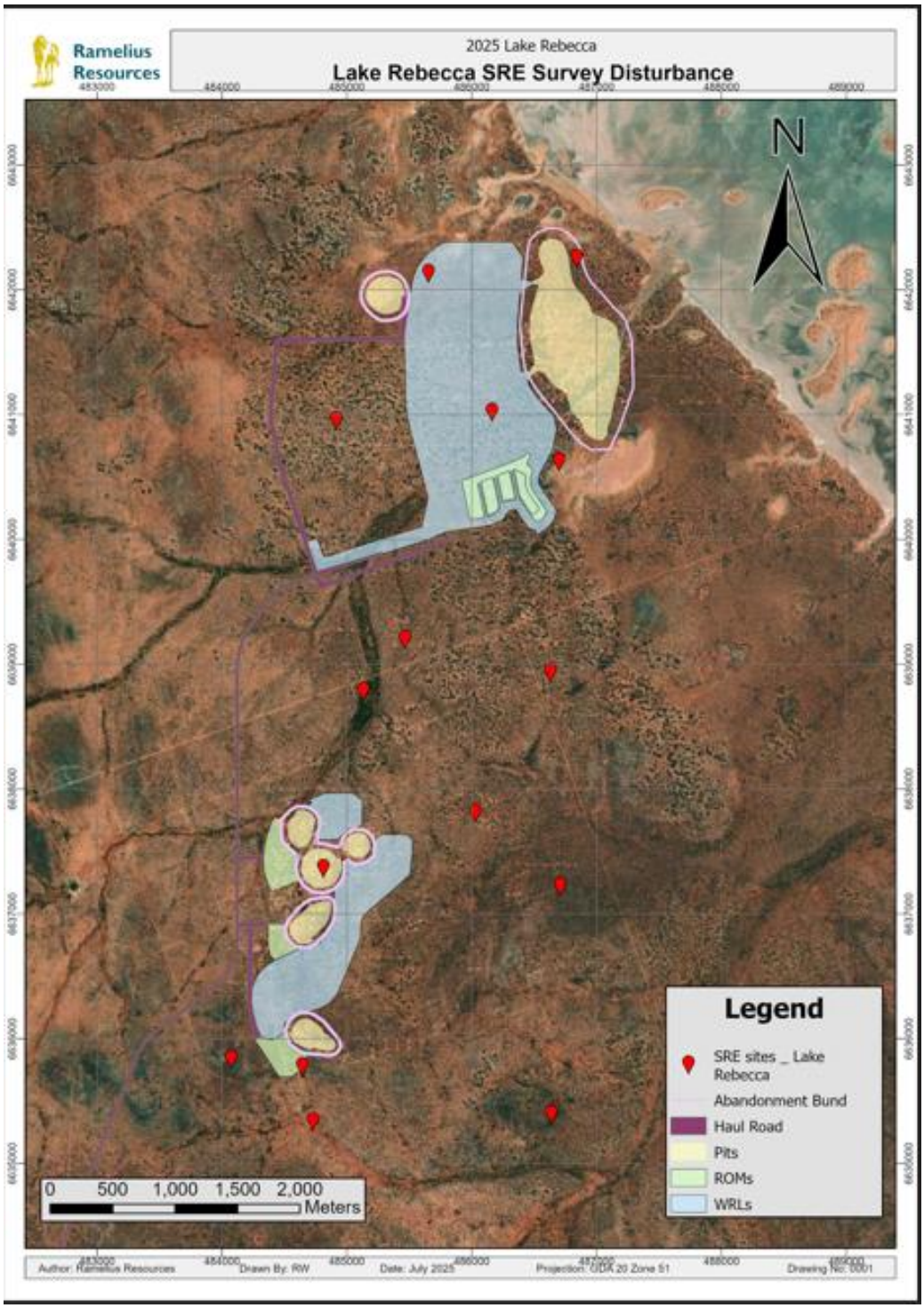

Figure 5: 2025 mine layout

Table 4: 2021 SRE report extract

Higher Classification	Lowest Identification	Sites															Distribution and SRE status
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Mygalomorphae	Kwonkan `BMYG180`*			1													New species, from two locations 6.8km apart, in and outside impact areas. Potential SRE.
	Proshermacha `BMYG179`*			1				1									New species, from two locations 2.5km apart, outside impact areas. Potential SRE.
Barychelidae	Idiommata `BMYG181`*	1												1			New species, from two locations 3km apart, outside impact areas. Potential SRE.
	Mandjelia `BMYG182`*													1			New species, Singleton, known from only 1 location, outside impact areas. Potential SRE.
	Synothele `BMYG172`*							1	1								New species, from two locations 900m apart, outside impact areas. Potential SRE.
	Idiosoma `BMYG168`*					1											New species, singleton, known from only 1 location, outside impact areas. Potential SRE.
Cheiridiidae	Cheiridiidae `BPS344`														1		New species, singleton, known from only 1 location within an impact area. Potential SRE. Potential conservation significance.
Cheliferidae	Cheliferidae `BPS354`					1											New species, singleton, known from only 1 location, outside impact areas. Potential SRE.
Chernetidae	Chernetidae `BPS343`*	1	2	2											1		New species, from three locations up to 3.9km apart, outside impact areas. Potential SRE.
	Chernetidae `BPS351`*		1														New species, Singleton, known from only 1 location, outside impact areas. Potential SRE.
	Chernetidae `BPS352`*											1					New species, singleton, known from only 1 location, outside impact areas. Potential SRE.
	Chernetidae sp.					1						1					Higher order identification, could represent one of the species above.

Higher Classification	Lowest Identification	Sites															Distribution and SRE status
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Garypidae	Synsphyronus `BPS353`			1													New species, singleton, known from only 1 location, outside impact areas. Potential SRE.
Olpiidae	Beierolpium 8/4 `BPS345`						2							1			New species, from two locations 6.8km apart, outside impact areas. Potential SRE.
Scorpiones	Lychas `BSCO067`*	2															Known from only 1 location, outside impact areas. Potential SRE.
	Urodacus `BSCO066`*							2	1						4		New species, from three locations up to 5km apart, from within and outside impact areas. Potential SRE.
	Urodacus sp.														1		Higher order identification, could represent one of the species above.
Armadillidae	Buddelundia `BIS434`	1									1						New species, from two locations 1.2km apart, outside impact areas. Potential SRE.
	Buddelundia `BIS435`											1					New species, singleton, known from only 1 location, outside impact areas. Potential SRE.
	Buddelundia `BIS436`										1						New species, singleton, known from only 1 location, outside impact areas. Potential SRE.
	Buddelundia sp.										1						Higher order identification, could represent one of the species above.

Note: Blue cells show sites recorded as outside disturbance areas in the initial survey but are now inside disturbance areas.

A follow up SRE survey was undertaken in November 2024 (report dated 2025) to update the SRE information based on current project footprints. The report is attached in Appendix **5**.

In many surveys, most species fit the **Potential SRE** category, but the likelihood of species within the category actually becoming Confirmed SREs varies substantially. In an attempt to increase the accuracy of categorisation, Bennelongia propose the Potential SRE category is further sub-divided into three categories:

A. **Data Deficient Potential SRE**, indicating that insufficient data are available to determine SRE status. Insufficiency of data may be caused either by a lack of geographic or taxonomic information, or because the individuals sampled are not identifiable to species level (e.g. nondiagnostic sex, juvenile, damaged). This category is applied only to those species that belong to a known SRE Group, rather than being applied to any undescribed species in the records.
B. **Unlikely Potential SRE** species status is applied in one of two cases. First, the species belongs to an SRE Group but has been collected from many sites and/or multiple habitats. Second, the species belongs to a smaller taxonomic group within the SRE Group that tends not to contain SREs.
C. **Likely Potential SRE** species are from taxonomic groups in which SREs are likely, and when specimens have been collected from one or very few sites and/or habitats.

A total of 10 sites were sampled, with the aim to collect invertebrates from the eight habitats identified in the project area. 80 specimens were collected belonging to SRE Groups including land snails, pseudoscorpion, scorpion, mygalomorph spider, isopod (slater) and centipede.

No Confirmed SREs, Likely Potential SREs, Priority or Threatened species were identified.

Out of the 15 identifiable species collected, one has been categorised as an Unlikely Potential SRE (*Beierolpium* 8/4 `BPS345`) and one as Data Deficient Potential SRE (*Indolpium* `BPS587`). The remaining 13 species recovered are all Widespread.

- *Beierolpium* 8/4 `BPS345` recorded from 2 sites in two widespread habitats. Neither site is within a project disturbance area. Given the widespread nature of the habitats, it is not expected to be restricted to the project area.
- *Indolpium* `BPS587` is an undescribed species known only from a singleton specimen collected outside of the development area.

This survey added five species to the previously recorded SRE species from the 2021 survey. With these additions, the total number of species from SRE Groups recorded now stands at 43. Out of these, 12 species are only known from within the project area. None have been categorised as Confirmed or Likely Potential SREs; however, four species have been categorised as Unlikely Potential SREs and eight as Data Deficient Potential SREs.

Additionally, four species recorded both within and/or outside the project area have also been assigned a SRE category of Unlikely Potential SRE and three as Data Deficient Potential SREs.

None of the 12 species known only from the project area are expected to have distributions restricted to the project's activity envelope as they have been recovered from habitats also widespread outside the project. The report concluded "*given the widespread nature of suitable SRE habitats in the project area, along with the low prospectivity for some SRE Groups and the limited scale of the proposed disturbance footprint, any potential impacts of the project on SRE species populations are considered to be minor*".

3.1.5. Analysis of biodiversity data

Table 5 provides a summary interpretation of biodiversity data, with implications for the project.

Table 5: Analysis of biodiversity data

Factor	Implication for the project	Outcome
Flora; vegetation	No high conservation botanically significant factors were identified in the baseline surveys. 'High conservation' being defined as Threatened flora species, Threatened Ecological Community (TEC), Environmentally Sensitive Area (ESA), wetlands of international or national importance (Ramsar or Australian Nature Conservation Agency) and gazetted conservation reserves.	No impact to high conservation values
Flora	One Priority 2 (P2) and three Priority 3 (P3) species were recorded in the surveys. • The P2 species identified in the mining lease will be protected in an Exclusion Zone. • One P3 species is abundant and has a wide distribution in the locality. Some plants will be directly impacted by mine disturbance while most will be avoided. • Two other P3 species identified are outside the activity envelope and will be avoided.	• No direct impact to P2 species • Overall, the percentage of 'take' by mine disturbance is not considered to be significant for the population at a local level. • No direct impact to these two species
Fauna	One conservation significant species was recorded: the Long-tailed Dunnart (*Sminthopsis longicaudata*; P4). This species was recorded on the stony rise habitat, outside the activity envelope, and likely to be restricted to this habitat.	No direct impact to this location. This habitat type has been identified on site maps as Constraint Areas. Mine infrastructure has been redesigned to avoid this habitat.
Fauna	Four old (non-active) malleefowl nest sites have been identified in this and other surveys. All are located within the Mulga drainage line habitat.	No direct impact to these locations. This habitat has been identified on site maps as a Constraint Area.
SRE	No confirmed SRE species have been recorded in the project area. Of the 12 species known from within the project area, none have been categorised as Confirmed or Likely Potential SREs. Four species have been categorised as Unlikely Potential SREs and eight as Data Deficient Potential SREs.	No direct impact to confirmed SRE species. All of the 12 species known only from the project area are not expected to have distributions restricted to the project's activity envelope as they have been recovered from habitats also widespread outside the project.

3.2. INLAND WATERS

3.2.1. Hydrology

Document	Location
AQ2 (June 2021) Memo report: Mine Surface Water Management Phase 1 Scoping Study.	Appendix **6**
Knight Piesold (June 2025). Rebecca mining area surface water management. Memo report	Appendix 7

The project is located to the southwest of Lake Rebecca, the closest point of the lake being approximately 400m away from the northern end of Rebecca Pit. This salt lake is part of a system of connected lakes that drain towards the southeast. A small unnamed basin is located at the southern end of the proposed Rebecca Pit which does not have a defined outflow drainage channel into Lake Rebecca. All surface flow would discharge either to Lake Rebecca or the small unnamed basin as indicated by the direction of flow arrows in Figure 6.

The main surface water risk for the project is a natural drainage line which is intercepted by the Rebecca Pit, Tailings Storage Facility and WRL and, to a lesser degree, a smaller tributary drainage line intercepted by some of the Duchess and Duke mine infrastructure. Ramelius propose to construct a series of diversion drains and bunds to redirect flow from these natural drainage lines around mine infrastructure and direct it to the unnamed basin. The design details of the surface water management structures are provided in Appendix 7. The 1% Annual Exceedance Probability (AEP) storms were used to design drainage infrastructure.

The size of the natural catchment reporting to this small basin is approximately 2.5km^2. The redirected catchment feeding into this small basin will have an approximate size of 34km^2. In order to avoid overfilling the basin, an outlet drain will also be constructed to connect it to the original main drainage channel that flows into Lake Rebecca. Figure 7 shows the overall surface water management layout.

Within the mine complex and process plant area, surface drainage will be directed to sediment sumps with supernatant water recovered for use in the process plant. This ensures no release of potentially contaminated water to the environment.

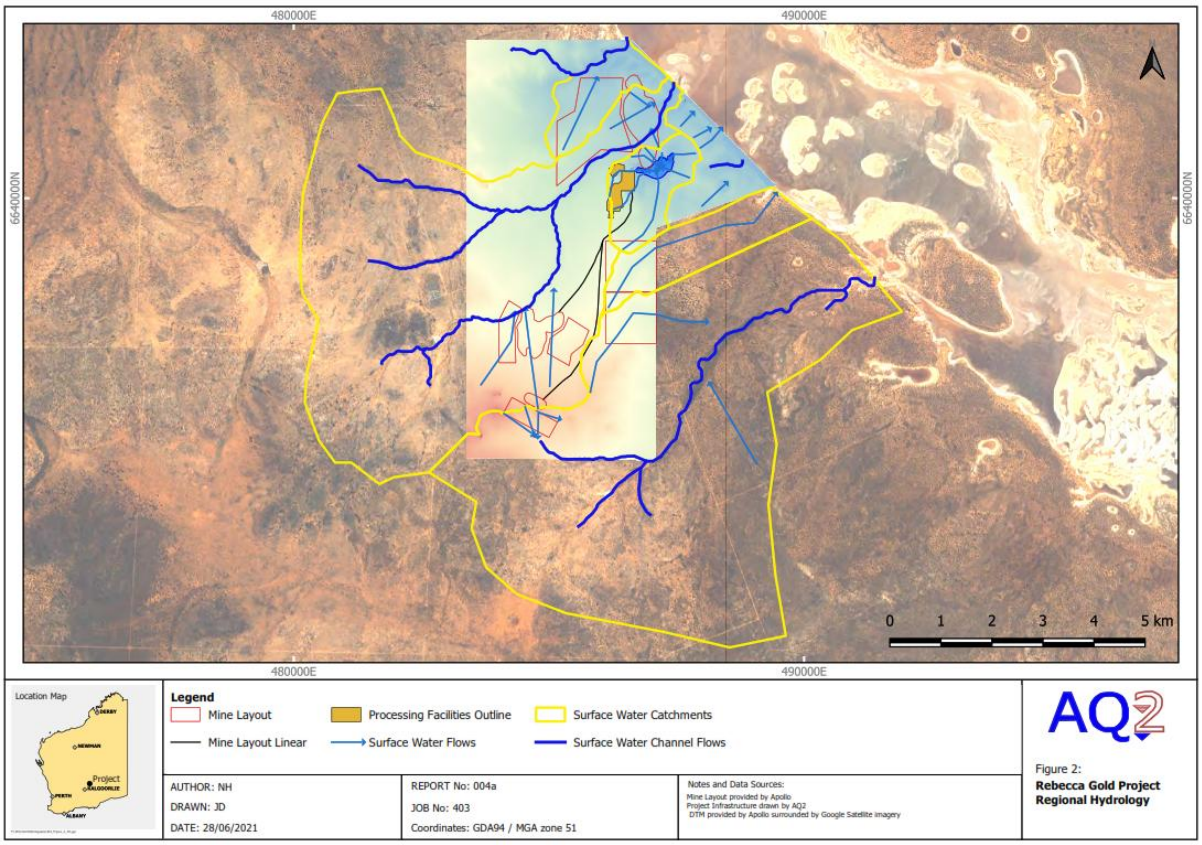

Figure 6: Surface drainage

Source: AQ2 2021: Figure 2

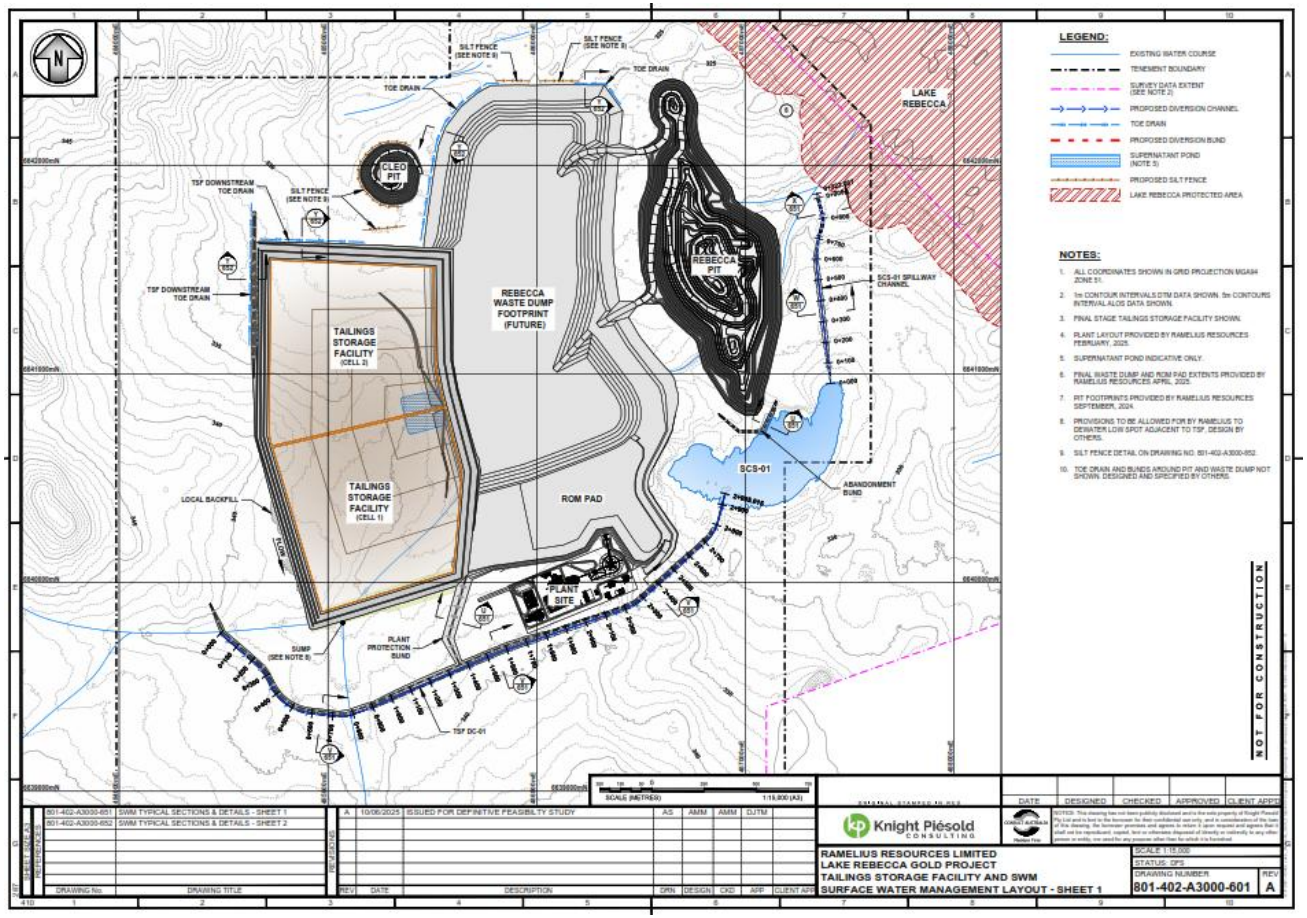

Figure 7: Surface water management layout

Source: KP 2025. PE25-00659

3.2.2. Hydrogeology

Document	Location
AQ2 Feb 2025. H2 level of assessment: Groundwater abstraction for mine dewatering	Appendix **8**

An investigation was undertaken to assess the hydrogeological conditions of the project area, to examine site-specific aquifer characteristics to inform a conceptual hydrogeological model and to derive quantitative estimates of aquifer parameters.

Groundwater levels were measured in 5 test holes. Depth to water ranges from approximately 29 mbtoc in the southern part of project area (at Duke Pit) to 2.3 mbtoc in the north (at Rebecca Pit). The groundwater level slopes in a north north-eastern direction, which closely reflects the topography of the project area, towards Lake Rebecca.

Water samples were collected and submitted for chemical analysis. The results are considered to represent ambient groundwater quality in the project area and indicate the following:

- Groundwater is hypersaline, with salinity ranging from 140,000 mg/L TDS (DTB01) to 230,000 mg/L TDS (RTB01 and RMB02).
- Groundwater is circum-neutral, ranging from slightly acidic to slightly alkaline (pH range of 6.3 to 7.6).
- Very high hardness (25,000 to 38,000 mg/Las as CaCO3).
- Groundwater is a sodium chloride type, with moderate concentrations of sulphate and magnesium, and low calcium and bicarbonate concentrations. The low calcium and bicarbonate and high salinity indicates that the groundwater at the Project is “end-point water” type with little to no recent rainfall recharge.
- Concentrations of metals were mostly low, with iron and manganese concentrations being elevated.

Owing to the high salinity of the groundwater, the only possible beneficial use for this water is ore processing for mining, as the water is far too saline for any agricultural or domestic use.

3.2.3. Analysis of inland waters data

Table 6 provides a summary interpretation of inland waters data, with implications for the project.

Table 6: Analysis of inland waters data

Factor	Implication for the project	Outcome
Hydrology	Diversion drains and structures have been designed to redirect natural flow paths around mine infrastructure and return it to the natural flow path downstream.	No Impact to the hydrological regime from the project
Hydrology	Surface drainage in the mine complex will be directed to sediment sumps with supernatant water recovered for use in the process plant.	No release of potentially contaminated water to the environment

Factor	Implication for the project	Outcome
Hydrogeology	Groundwater in the project area is hypersaline, with no known beneficial use. The project will use all abstracted groundwater in the processing plant and for dust suppression.	No direct impact to groundwater from the project

4. ASSESSMENT AGAINST THE 10 CLEARING PRINCIPLES

Table 7 provides an assessment against the 10 clearing principles. The assessment indicates the clearing proposed may be at variance to clearing principles (f) and (i).

f) it is growing in, or in association with, an environment associated with a watercourse or wetland.

The ephemeral creeks in the region only flow for short periods after rainfall events. Mine features comprising the tailings storage facility (TSF), waste rock landform (WRL) and open pits will intersect a number of ephemeral drainage lines. Diversion drains will be constructed to redirect surface flow around these features and return the flow back into the original drainage path downstream. These diversion drainage lines will become permanent new features in the landscape.

i) the clearing of vegetation is likely to cause deterioration in the quality of surface or underground water.

Natural groundwater in the region is extremely hypersaline with total dissolved solids (TDS) values in the range 150,000 – 200,000 mg/L. This is approximately 5 -7 times that of seawater. This water has no other beneficial uses. The project is unlikely to cause deterioration in the quality of groundwater.

Surface drainage from active mine areas can contain suspended solids (sediment) and other contaminants. The mine complex area has been designed to drain to detention basins to settle sediment load. Pumps will harvest this supply of fresh water for use in the process plant. No surface water from the mine complex area will be discharged to the environment

Table 7: Assessment Against the Clearing Principles

No.	Principle Native vegetation should not be cleared if-	Existing Environment	Potential Impact	Management Action	Outcome
Biodiversity Significance					
a)	it comprises a high level of biological diversity.	Vegetation communities and flora species in the project area are also well represented in the wider region. No DRF, P1, TEC or PEC will be impacted. Some P3 species will be impacted	The project will result in only minor biodiversity loss through localised clearing	Implement clearing procedure to keep clearing to defined areas	Project is not at variance with this principle
b)	it comprises the whole or part of, or is necessary for the maintenance of, a significant habitat for fauna indigenous to WA.	The habitats are relatively common in the bioregion and unlikely to act as important ecological linkages.	The project will result in only minor local habitat loss in a region that is well covered in native vegetation.	Rehabilitation at the completion of operations will return habitat to all of the disturbed area.	Project is not at variance with this principle
c)	it includes, or is necessary for the continued existence of, rare flora.	No Threatened Flora taxa has been located in the project area	No impact to DRF	No specific management measures necessary for this principle	Project is not at variance with this principle
d)	it comprises the whole or a part of or is necessary for the maintenance of a threatened ecological community.	No Threatened Ecological Community (TEC) is located in the project area	No impact to TEC	No specific management measures necessary for this principle	Project is not at variance with this principle
e)	it is significant as a remnant of native vegetation in an area that has been extensively cleared.	All vegetation associations retain over 99% of their Pre-European extent.	No remnant vegetation communities in the project area	No specific management measures necessary for this principle	Project is not at variance with this principle
f)	it is growing in, or in association with, an environment associated with a watercourse or wetland.	Several ephemeral drainage lines were identified within the survey area. These drainage lines extend into Lake Rebecca, which is adjacent to the survey area.	Mine features intersect ephemeral drainage lines.	Diversion drains and bunds installed to re-direct surface flow around mine features and return to natural drainage path downstream of mine features	Project may be at variance with this principle
Land Degradation					
g)	the clearing of vegetation is likely to cause appreciable land degradation.	The region is predominantly covered by native vegetation.	The clearing associated with the project, in a region extensively covered by native vegetation, is unlikely to cause appreciable land degradation.	Clearing procedure is to be implemented as a control measure.	Project is not at variance with this principle
Conservation Estate					
h)	the clearing of vegetation is likely to have an impact on the environmental values of any adjacent or nearby conservation area.	The nearest conservation area is over 20 km to the east of the project area	No impact to the conservation estate	No specific management measures necessary for this principle	Project is not at variance with this principle
Ground and Surface Water Quality					
i)	the clearing of vegetation is likely to cause deterioration in the quality of surface or underground water.	Several ephemeral drainage lines were identified within the survey area. These drainage lines extend into Lake Rebecca, which is adjacent to the survey area. Groundwater is hypersaline with no other beneficial users	Turbid water from intense rainfall events may enter local watercourses. Saline water impacting adjacent vegetation	Detention basins in the mine complex area contain sediment off disturbed areas prior to collection and use in the process plant. Drainage from natural catchment upstream of the development area will be redirected around mine infrastructure and returned to natural flow path downstream. No discharge of saline mine dewatering water. All saline water used in ore processing	Project may be at variance with this principle
j)	clearing the vegetation is likely to cause, or exacerbate, the incidence of flooding.	Only localised clearing is proposed in a region predominantly covered by native vegetation.	Additional runoff from cleared areas will not significantly change the local hydrological regime	Detention basins contain sediment off disturbed areas prior to water discharge to the environment.	Project is not at variance with this principle

Appendices

Appendix 1:Botanica 2023 Mine survey

Appendix 2:Maia 2022 Mine survey

Appendix 3: Terrestrial fauna Mine survey

Appendix 4: 2020 Short range endemic Mine survey

Appendix 5: 2025 Short range endemic Mine survey

Appendix 6: AQ2 (June 2021) Memo report on surface water

Appendix 7: Knight Piesold 2025 surface water report

Appendix 8: AQ2 H2 groundwater report