

18<sup>th</sup> August 2025

**EnergyAustralia Yallourn**

PO Box 444  
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Dear Sir/Madam,

**RE: Declared Mine Rehabilitation Plan (DMRP) Submission**

Thank you for the opportunity for ID Ecological Management to provide a response to EnergyAustralia Yallourn's (EAY) Draft Declared Mine Rehabilitation Plan (DMRP) for Mining Licenses MIN 5003, MIN 5216 & MIN 5304.

This submission includes technical and ecological input to support the Draft DMRP and is intended to provide constructive feedback that can strengthen the ecological outcomes of the rehabilitation planning process. We would welcome the opportunity to discuss these further.

1. Background

ID Ecological Management has partnered with EAY since 1997, working collaboratively to deliver a range of environmental projects that have enhanced the local environment while supporting EAY in meeting regulatory obligations arising from past mine development. Looking ahead, we see significant opportunities for post-mining land use within the mine void and its surrounds, with potential to generate additional conservation benefits through industry-leading rehabilitation practices, local knowledge and strong environmental governance.

2. Past Conservation Efforts

EAY has maintained a strong commitment to its conservation areas, which cover over 600 hectares, since 2005. Ongoing works to enhance these sites include fencing, site security, signage, pest and weed control, supplementary planting, and regular monitoring to ensure compliance with regulatory requirements. Additional survey programs have been undertaken to better understand native fauna use of the sites, with habitat provision and connectivity forming key considerations for targeted improvements and protection. The conservation areas comprise those included in the EAY Conservation Management Plan (CMP) blocks, with both remnant native vegetation and large-scale revegetation initiatives, such as those along the Morwell River and adjacent constructed wetlands, with a total of 364,000 plants established.

EAY's long-term investment in this conservation management and revegetation has restored areas of native habitat and created ecosystems that support a diverse range of threatened and native species. The conservation sites also provide important habitat for several threatened species, including Strzelecki gum (*Eucalyptus strzeleckii*), dwarf galaxias (*Galaxiella pusilla*), swamp skink (*Lissolepis coventryi*), glossy grass skink (*Pseudemoia rawlinsonii*), and various migratory and wetland birds such as the white-bellied sea eagle (*Haliaeetus leucogaster*) and Australasian bittern (*Botaurus poiciloptilus*).

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The Strzelecki gum population along the Morwell and Latrobe Rivers is part of known Important Populations (as defined in the National recovery Plan) and the species is protected listing under both State and federal legislation. These rivers provide contiguous habitat that supports the species' ecological needs and contain a large number of individuals. Conservation efforts by EAY have contributed to the species' persistence by controlling known threats such as grazing and weed competition and undertaking revegetation and habitat protection to increase the species' resilience and long-term viability within the site.

Fauna monitoring over recent years has identified a number of positive findings including agile antechinus (*Antechinus agilis*) recorded for the first time in several revegetation and old-growth areas in blocks G and H, as well as in block 28, where it had not been detected despite extensive past survey effort. This indicates either colonisation of restored habitats or improved detectability due to enhanced habitat structure. Krefft's glider (*Petaurus notatus*), eastern ringtail possum (*Pseudocheirus peregrinus*), bush rat (*Rattus fuscipes*) and swamp rat (*Rattus lutreolus*) populations continue to persist in multiple blocks, including those impacted by the 2014 wildfire. The well-structured revegetation in blocks G and H, incorporating canopy, understory, and shrub layers, continues to support a diverse range of birds, from woodland to water and migratory species. The success of these efforts is evident in the presence of threatened waterbirds such as Lewin's rail (*Lewinia pectoralis*), blue-billed duck (*Oxyura australis*), hardhead (*Aythya australis*), spotless crake (*Porzana tabuensis*) and Australian little bittern (*Ixobrychus dubius*).

The recorded return and persistence of native fauna reflects the value of long-term habitat restoration, the effectiveness of the conservation areas, the importance of adaptive management in responding to disturbance and the value of on-going monitoring. These outcomes demonstrate that well-planned rehabilitation, in conjunction with conservation can deliver lasting biodiversity benefits within an active mining landscape, an achievement for which EAY deserves recognition.

### 3. Past Mine Rehabilitation Efforts

Rehabilitation works undertaken at the site have advanced significantly in technique and complexity over the past 10–15 years. Notable achievements for EAY include:

- Successful use of direct seeding of native species without a topsoil medium in the Township and East Fields, transforming an area previously devoid of vegetation and with minimal habitat value, into a functioning ecosystem. Using locally adapted native species enhances biodiversity, supports habitat creation for wildlife, and increases the likelihood of long-term vegetation persistence without intensive management. Native species are well-suited to the local environment including soil, climate, and hydrological conditions. This landscape now delivers multiple environmental benefits, including the formation of a soil layer, reduction of erosion and dust, improved water filtration, and habitat for local fauna.
- The Township Lake translocation of reeds such as common reed (*Phragmites australis*) and club rush (*Schoenoplectus sp.*), which has successfully established native vegetation along the lake's edge. This vegetation provides shoreline protection, while also establishing habitat for fauna, particularly waterbirds. Utilizing translocation as a revegetation tool enabled the rapid

establishment of these species, which may be a useful case study for assisting the stabilisation of shoreline of the pit lake in years to come.

- Landscape Function Analysis (LFA) has been used at EAY within its rehabilitated landforms since 2005. LFA is used to assess how well a landscape is functioning in terms of its stability, water infiltration, and nutrient cycling. It provides a quantitative measure of ecosystem health and resilience, to identify areas that are stable and self-sustaining versus those that are degraded and in need of intervention. This has been valuable for EAY to track rehabilitation progress, compare different land management practices, and guide adaptive management to address areas of concern.

#### 4. Post Mining Landform and Land Use

##### Lake Yallourn

Populations of eastern grey kangaroo (*Macropus giganteus*), swamp wallaby (*Wallabia bicolor*) and common wombat (*Vombatus ursinus*) populations in the Township and East Fields will require active management as Lake Yallourn is created. As the flooding progresses and the area that is suitable for these species decreases, the populations will attempt to disperse. With the perimeter fence on the western boundary still in place, there is no thoroughfare that allows fauna to move out of the EAY land. Overpopulation in confined areas (particularly of kangaroos) can lead to:

- Food shortages, water stress, disease outbreaks, and higher mortality;
- Degradation of vegetation, compaction of soils, and reduction in habitat quality from concentrated browsing;
- Increased pressure on rehabilitation areas, with newly planted or regenerating vegetation particularly vulnerable;
- Issues with adjacent landowners due to accidental or intentional fence breaches from escaping animals;
- Potential for increased safety risks to motorists on the adjacent Princes Freeway; and
- Reputational and management challenges if the animals are perceived as being poorly managed or responsible for impacts beyond EAY landholdings.

Other fauna currently observed and recorded in the footprint of Lake Yallourn include amphibians and reptiles and notable species such as Lewin's rail, glossy grass skink and White's skink (*Egernia whitii*). Although fauna have potential to move as the water level increases, some species have limited movement and small home ranges and others specific habitat requirements that may not be present on the batters or in the unfloded surrounding environment. Limited surveys have been completed within the Lake Yallourn footprint, and therefore additional surveys should be undertaken to determine fauna species presence and the habitat types being utilized.

How fauna will be managed as the lake level rises should be detailed in a Fauna Management Plan to provide mitigation strategies for potentially trapped fauna, including fauna movement and dispersal to suitable habitat. This could include addressing issues such as dispersal strategies, shaping of suitable landforms and creation of additional habitat, such as small wetlands, above the high-water mark that can be colonized.

The two interconnected pit lakes will be large, deep, and slow-flowing, conditions that could favour pest fish such as European carp (*Cyprinus carpio*), redbfin perch (*Perca fluviatilis*), and eastern gambusia (*Gambusia holbrooki*). Without active management, these species could dominate and degrade habitat, increasing turbidity, uprooting vegetation, altering nutrient dynamics, and outcompeting native fauna. Potential stocking of recreational fishing species, either native or exotic species also poses potential risks to the wider catchment and management consideration requirements. Other ecological risks include:

- Entrapment of riverine species during inflows;
- Colonisation by pest fish via unprotected or poorly screened inflows;
- Increased susceptibility to harmful algal blooms (HABs) due to nutrient accumulation, slow water turnover, and thermal stratification; and
- Loss of riparian and emergent vegetation establishment opportunities during the extended filling period (estimated at 10–25 years), as the gradual water-level rise will prevent stable littoral zones from forming until the lakes reach their final levels.

These risks are particularly relevant during the filling process, when proactive management will be critical to prevent future irreversible ecological impacts.

It is recommended that the following be incorporated into the detailed design and any Lake Operations Plans:

- Designing the lake edge with habitat complexity that favour native species (e.g. shallow vegetated margins, woody debris, varied bathymetry);
- Pest exclusion measures (e.g. screened inflows, physical barriers);
- Protocols to prevent entrapment of riverine species during inflows;
- Early-detection and rapid-response protocols for pest species;
- Strategies to manage nutrient inputs and reduce HAB risk; and
- Specific ecological risk management measures tailored to the extended filling phase.

To address the loss of riparian and emergent vegetation establishment during and initially post filling, floating ecosystems positioned along the shorelines could enhance biodiversity by providing refuge, breeding, and roosting areas for waterbirds, reptiles, and amphibians, as well as fish feeding and spawning sites. Incorporating predator-proof designs would help protect vulnerable species, while these structures could also reduce wave fetch, minimise erosion, and improve overall shoreline stability.

Strzelecki gum needs moist, well-drained soils and is sensitive to prolonged drought. While the species can tolerate occasional short-term waterlogging, extended flooding or saturated soils can weaken roots, impact tree health and reduce survival rates. This has been demonstrated previously when flooding events have resulted in inundation within areas containing Strzelecki gums. Monitoring revealed that trees did not die from water logging (although there were signs of tree stress observed in the canopy), but rather saturated soils reduced the structural stability of the soil, causing trees to topple. The National Recovery Plan for the species identifies the reliance of Strzelecki gum on damp sites, especially along small watercourses, which makes it susceptible to any alteration of local hydrology, such as draining or impounding streams, or altering upstream water sources. The impact of Lake Yallourn on

groundwater availability and soil saturation remains uncertain, and further research is needed to understand the effects on the broader groundwater-dependent ecosystems (GDEs) and implications on Strzelecki gum itself. It is recommended that the following be incorporated into the GDE program or considered as additional investigations:

- Investigate historic groundwater data from the period of previous extended flooding events and compare to the dates of known tree fall events to determine what length of time and depth of inundation contributed to the tree fall events, so that it can be considered in future planning;
- Evaluate the proposed changes to hydrological conditions of the site once Lake Yallourn is full on the Strzelecki gum population in the Morwell West Drain and the Morwell River; and
- Ensure Strzelecki gum populations are thoroughly monitored to ensure no Significant Impacts occur.

Additional closure criteria are recommended to incorporate the above into the DMRP (see below).

#### Morwell River Diversion

The DMRP proposes retaining the Morwell River Diversion (MRD) between the two final pit lakes which will continue the connection of the Morwell River, retain low and high flow channels, and spill larger events to the pit lakes via engineered spillways. This reduces catastrophic failure risk and better supports ecological processes in the short to medium term. However, information is lacking on the expected end of life for the MRD and ecological implications of failure.

Maintaining effective fish passage between the Morwell and Latrobe Rivers is required to support native fish populations and sustain healthy aquatic ecosystems. This involves identifying existing physical barriers or other impediments that restrict movement, such as weirs, culverts or spillways and either removing or engineering fish passageways. Continued connectivity between these waterways will allow for migration, breeding, and dispersal of aquatic fauna. In addition, these improvements to connectivity can help re-establish historical movement patterns, supporting the recovery of threatened and migratory fish species.

Further detail will be required on maintaining baseflows; preventing loss of benthic processes; providing full fish passage functionality across the operating flow range; and removing existing impediments such as the triple culverts in the MRD, replacing them with fish and fauna friendly structures, for the retained connection of the MRD between the Morwell and Latrobe Rivers. Currently within the draft DMRP, fish passage is primarily addressed in relation to potential MRD failure and the design of water off-take infrastructure. It does not explicitly set out the broader requirement to design the mine rehabilitation, the two lakes, and the Morwell River to ensure fish passage is achieved as an integrated, whole-of-system outcome. We recommend this requirement be made explicit, including consideration of fish passage in all final designs and monitoring programs, and embedding it as a binding design criterion with measurable performance targets to confirm ecological functionality. This should also be linked to closure criteria and cover the removal of significant existing barriers where they constrain connectivity. We acknowledge that the DMRP includes a knowledge gap specific to KG16; Review of fish passage structures on spillways, which will address this issue.

Additional closure criteria are recommended to incorporate the above into the DMRP (see below).

## Conservation Land Use

Conservation Land Use should reflect existing commitments under previous mining and development approvals and the EAY CMP program. The CMP sites have various management actions, timing of works and monitoring and reporting, all detailed in the EPBC Offset Management Plan, associated on-title agreements (Landowner Agreements), the CMP and DEECA lease documents. Continued maintenance works within the CMP sites will need to focus on their long-term protection and continued maintenance. Access to most of these sites by the general public would be considered a threat and have the potential to negatively impact their status as conservation areas.

Key future works required within these sites include:

- Meeting on-going maintenance commitments once the active management period has ended for Landowner Agreement sites such as pest plant and animal management targets, including a suitable monitoring regime. This work is required in perpetuity, regardless of landowner;
- Annual monitoring and reporting to DEECA for current Landowner Agreement sites (only until 10 year active management phase is completed);
- Monitoring of CMP sites that have achieved maintenance phase to ensure they are maintained relative to their 10 year completion status;
- On-title protection for EAY CMP sites that are freehold land for their on-going future protection first committed to in the 2012 CMP, prior to the cessation of the mining license; and
- EPBC annual monitoring and reporting (until expiration of the approval).

Conservation areas can also provide habitat creation and conservation planning opportunities tailored toward specific threatened and/or priority species (such as growling grass frog (*Litoria raniformis*)). The potential to partner with universities or other local organizations to re-introduce species into restored ecosystems once environment is stable and established should be explored.

Revegetation activities that are designed to support conservation areas, such as supplementary planting for lack of structure and connection corridors should also be implemented as detailed in the EAY's Conservation Strategy (see comments below).

Additional closure criteria are recommended to incorporate the above actions into the DMRP (see below).

The current closure criteria for Conservation Land Use should include these requirements in the *Measurement* component and the *Timeframes* expanded to highlight the commitment that is in place for future landholders to maintain vegetation quality and manage threats in perpetuity. A suggested rework of this closure criteria is provided below.

**Objective:** Maintain and improve biodiversity values and habitat quality within conservation areas.

**Criteria:** Existing ecological and biodiversity commitments are met; and Habitat quality scores for flora and fauna remain stable or improved.

**Measurement:** Conduct biodiversity assessments, including flora and fauna monitoring and compare results to baseline data collected prior to closure.

**Timeframe:** As per existing commitments specified in approval documents and as part of an assessment program conducted every three years.

#### Environment & Recreation

The EAY Conservation Strategy was developed in 2021, with the overall aim to enhance conservation outcomes by identifying opportunities to create linkages between CMP sites that offer the best outcomes for flora and fauna. It was based on the premise that larger habitat blocks with protected cores should be linked by corridors, ensuring greater resilience and species movement. Two “umbrella species” were identified, the koala (*Phascolarctos cinereus*) and Strzelecki gum and their habitat modelled within and surrounding the EAY site. Connections were identified between the best and largest portions of habitat to identify proposed “corridors”, with four identified: The Maryvale, Marretts Road, DeCampo Drive and Latrobe River (*Figure 1*). A nominal width of 100 m was used along the corridors as a consistent and rounded way of estimating the area of revegetation required to make an effective corridor. Each corridor passes through a different assortment of CMP blocks and other land uses, with 31.5 kilometres proposed of which 12.8 kilometres (41%) already occur within CMP blocks.

Recommendations were made for each corridor as to whether revegetation would be required (where native vegetation is largely absent), some supplementary revegetation is required (where there is some presence of native vegetation, but it is lacking in a critical life form) or no revegetation is required (where there is existing native vegetation).

Whilst the Conservation Strategy is mentioned in the DMRP, there is no information on implementation of the corridors it identifies, their location or revegetation requirements. Given the CMP sites are included in the Conservation Land Use, connecting corridors may fit better in the Environment & Recreation Land Use.



Figure 1: Corridors identified in the Conservation Strategy

Outside of the corridors recommended in the Conservation Strategy, additional revegetation for mixed uses should also be considered. Clear objectives for these plantings should be identified such as ground stabilization, water filtration, salinity remediation, integration with recreational activities, provision of shade and shelter, landscape aesthetics or future use (i.e. shelterbelts and wood lots), and consideration given to working with traditional owners to look at restoring culturally significant plant species back into these areas or incorporated into recreational areas such as along walking tracks.

Revegetation activities should use locally sourced native species and incorporate diverse structural layers such as canopy, understory, and groundcover within conservation corridors. Outside of these areas, structural layers will change with the required use (i.e. open canopy for shade / recreation with

no shrub, ground layer installed). Management of these areas should be adaptive, responding to changes in climate and site conditions by monitoring which species are thriving and adjusting planting strategies accordingly. It is recommended that a site revegetation plan is completed that specifies species to use in revegetation areas, to ensure that potentially invasive ornamentals (such as willows, silver birch, poplars, oyster plant, agapanthus, etc.) are not used, even for horticultural reasons within the site.

The current closure criteria for Environment and Recreation with the objective for rehabilitated landforms mentions a Vegetation Monitoring Program in the *Timeframe* column is not defined nor mentioned elsewhere throughout the DMRP. A suggested rework of this closure criteria is provided below.

**Objective:** Rehabilitated landforms are congruent with the surrounding landscape as far as practicable.

**Criteria:** Plant density, species selection and diversity to be consistent with the Conservation Strategy, EVC's and identified revegetation targets designated for Open Woodland, Closed Woodland and Wetland.

**Measurement:** Conduct revegetation monitoring and progression against the Conservation Strategy actions.

**Timeframe:** As part of a Vegetation Monitoring Program.

Additional closure criteria are recommended to incorporate the Conservation Strategy into the DMRP (see below).

#### Agriculture

The DMRP identifies various activities currently undertaken annually as part of current agricultural leases including: fencing repair and construction; weed and pest control. It is recommended that future lease agreements include mandatory control targets and fencing expectations that should align with regulatory requirements and best practice, for example, frequency of fence inspections and timeliness of repairs; *Catchment & Land Protection Act 1994* listed weeds present and control targets.

#### 5. Closure Criteria

Closure criteria should be considered and developed to cover the issues and topics raised in this submission and included in the final DMRP, such as:

##### Lake Yallourn

- Ensure adequate fauna management protocols are employed during lake filling that protect and maintain biodiversity values in surrounding habitats.
- Establish a stable, pest-minimised aquatic habitat that supports native species and avoids long-term ecological degradation.

##### MRD

- Ensure functional fish passage and ecological connectivity between the Morwell and Latrobe Rivers, whilst the MRD is operational.

#### Conservation Land Use

- Maintain and protect CMP sites in perpetuity, in accordance with existing commitments under the EAY CMP, EPBC Offset Management Plan, DEECA leases, and on-title agreements.
- Ensure GDE's and Strzelecki Gum are not negatively impacted by ground water changes due to Lake Yallourn.

#### Environment and Recreation Land Use

- Implement the EAY Conservation Strategy to enhance connectivity between CMP sites creating functional biodiversity corridors that support long-term species movement and ecosystem resilience.

Examples of these additional closure criteria have been suggested in *Table 1* below.

Table 1 – Examples of additional DMRP Closure Criteria for consideration

End Land Use	Objective	Criteria	Measurement	Timeframe
Lake Yallourn	Ensure adequate fauna management protocols are maintained during lake filling that protect and maintain biodiversity values in surrounding habitats.	Functional dispersal corridors identified and habitat/landform in place to facilitate fauna movement. No decline in habitat quality scores in adjacent rehabilitation / conservation areas due to concentrated grazing.	Baseline and ongoing fauna surveys (including amphibians, reptiles, threatened species). Fauna Management Plan implemented prior to flooding. Population density monitoring of key species. Condition assessments of created habitat. Visual/camera monitoring of dispersal pathways and fence integrity.	Baseline surveys and dispersal infrastructure in place before lake filling. Annual monitoring during filling. Annual monitoring for 3 years post-filling or until criteria are met.
Lake Yallourn	Establish a stable, pest-minimised aquatic habitat that supports native species and avoids long-term ecological degradation.	Prevent or minimize native riverine species from entering Lake system. Pest fish species remain below detection thresholds or within acceptable ecological limits. Riparian/emergent vegetation established along ≥50% of shoreline within 5 years of final water level. Floating ecosystems or equivalent installed where natural riparian establishment is limited.	Inflow monitoring for pest and native species entrapment. Pest species monitoring within Lake (netting, electrofishing, eDNA). Vegetation mapping of Lake edges (aerial imagery, on-ground).	Inflows monitored during high flow events. Pest exclusion and created habitat design measures in place before significant water rise. Pest fish and water quality monitoring during filling and 5 years post-final level. Vegetation establishment assessment at years 3 and 5 post-final water level.
MRD	Ensure functional fish passage and ecological connectivity between the Morwell and Latrobe Rivers, whilst the MRD is operational.	Continuous fish passage between the Morwell and Latrobe Rivers across the full operating flow range (low to high flow). No physical barriers to native fish migration, breeding, and dispersal within the MRD reach and associated lake outlets. Existing barriers (e.g., triple culverts in MRD) removed or replaced with fish- and fauna-friendly structures.	Baseline and post-construction fish passage monitoring. Implement outcomes from KG16: Review of fish passage structures on spillways. Verification that baseflows meet ecological thresholds for benthic health. Independent ecological audit confirming performance against fish passage targets.	Fish passage designs incorporated into final rehabilitation and lake system designs before commencement of major earthworks. Barrier removal or replacement completed prior to or during commissioning of final river-lake system.

End Land Use	Objective	Criteria	Measurement	Timeframe
		<p>Engineered spillways and off-take structures designed to allow for aquatic fauna movement.</p> <p>Baseflows maintained to support benthic processes and habitat continuity.</p>		<p>Post-closure fish passage and ecological connectivity monitoring at years 1, 3, and 5, or until targets are met.</p>
<b>Conservation Land Use</b>	<p>Maintain and protect CMP sites in perpetuity, in accordance with existing commitments under the EAY CMP, EPBC Offset Management Plan, DEECA leases, and on-title agreements.</p>	<p>All CMP sites maintain ecological condition relative to their 10-year completion status.</p> <p>All pest plant and animal control targets for Landowner Agreement sites met in perpetuity.</p> <p>On-title protection mechanisms in place for all freehold CMP sites, as committed to in the 2012 CMP.</p> <p>No unauthorised public access resulting in measurable negative ecological impacts.</p> <p>Supplementary revegetation completed in identified areas to improve structure, connectivity, and corridor function, as per the EAY Conservation Strategy.</p>	<p>Annual monitoring and reporting to DEECA for Landowner Agreement sites during active management phase.</p> <p>EPBC Offset monitoring and reporting until expiration of approval.</p> <p>Post-10-year monitoring to confirm CMP sites maintain condition relative to their 10-year completion status.</p> <p>Photopoint monitoring, vegetation condition assessments, and pest plant/animal surveys.</p>	<p>Active management phase: monitoring and reporting as per EPBC and Landowner Agreement commitments.</p> <p>Maintenance phase: site inspections and ecological monitoring every 2–3 years in perpetuity.</p> <p>On-title protection confirmed prior to closure sign-off.</p>
<b>Conservation Land Use</b>	<p>Ensure GDE’s and Strzelecki Gum are not negatively impacted by ground water changes due to Lake Yallourn during filling, operation, and post-closure.</p>	<p>No net decline in Strzelecki Gum condition or GDE floristic/structural scores relative to baseline.</p> <p>Recruitment present (seedlings/saplings) of Strzelecki gum.</p> <p>No increase in tree toppling incidents attributable to lake-induced saturation.</p> <p>Natural floodplain wetting–drying timing and duration maintained.</p>	<p>Strzelecki gum health and stability assessments.</p> <p>GDE vegetation condition assessment (such as Habitat Hectare or equivalent)</p> <p>Photopoint monitoring, vegetation condition assessments.</p>	<p>Minimum 3 years pre-closure data.</p> <p>Filling Phase -bi-annual vegetation surveys.</p> <p>Post-Filling - Vegetation surveys every 5years (or until regulator agrees criteria are demonstrably stable).</p>
<b>Environment and</b>	<p>Implement the EAY Conservation</p>	<p>All four identified corridors (Maryvale, Marretts Road, DeCampo Drive, Latrobe</p>	<p>Baseline mapping and condition assessment of corridor vegetation.</p>	<p>Corridor works initiated within 3 years of closure plan approval.</p>

End Land Use	Objective	Criteria	Measurement	Timeframe
<p><b>Recreation Land Use</b></p>	<p>Strategy to enhance connectivity between CMP sites creating functional biodiversity corridors that support long-term species movement and ecosystem resilience.</p>	<p>River) established based on the 2021 Conservation Strategy recommendations.</p> <p>Revegetation completed along all corridor sections requiring planting, with nominal corridor width of 100 m unless constrained by land use or approvals.</p> <p>Supplementary planting completed in sections with only partial native vegetation to achieve structural diversity targets.</p> <p>At least 70% of corridor length supports continuous or near-continuous native vegetation cover within 10 years of planting completion.</p>	<p>Monitoring of revegetation success rates (survival, growth, and structural diversity).</p> <p>Fauna utilisation surveys (e.g., koala monitoring, bird surveys, trail cameras) at years 5 and 10.</p>	<p>Revegetation completed within 5 years of project commencement.</p> <p>Annual monitoring during establishment phase (years 1–5), then every 3 years until year 10.</p> <p>As part of Vegetation Monitoring Program.</p>

## 6. Monitoring

The monitoring framework should incorporate:

- Pest flora and fauna species monitoring with defined control triggers related to regulatory requirements (ie CaLP Act 1979) or best practice;
- Early-warning indicators for algal blooms (e.g. chlorophyll-a, cyanobacteria cell counts);
- Fish passage performance monitoring, benthic processes, and floodplain connectivity;
- Strzelecki gum and GDE health assessments pre, during and post fill of Lake Yallourn;
- Baseline and on-going fauna presence and utilisation surveys;
- Condition assessments for native vegetation;
- Revegetation success rates; and
- Photopoint monitoring to document change.

Opportunities could also be pursued to engage local schools, Landcare groups, and residents in community science and citizen ecology programs, fostering ongoing environmental monitoring while building community connection and a sense of ownership for the site.

## 7. Knowledge Gaps

The following knowledge gaps have been identified within the draft DMRP:

- Conduct further research on the potential impacts of Lake Yallourn and other hydrological modifications on groundwater availability, soil saturation, and the health of Strzelecki gum populations and associated GDE's;
- Fauna management as part of loss of habitat associated with the filling of Lake Yallourn;
- Defined fish passage barrier removal and incorporation of fish- and fauna-friendly structures as part of MRD reinstatement;
- Investigation into options for maintaining ecological value during the extended filling stage (10–25 years), recognising that rapid water-level rise will likely prevent establishment of fringing emergent aquatic or riparian vegetation;
- Aquatic vegetation establishment trials to establish and promote native habitat resilience under projected final lake levels; and
- A Vegetation Monitoring Program is referenced in the DMRP but no detail provided.

## 8. Conclusion

ID Ecological Management acknowledges the significant progress made by EAY in mine rehabilitation, conservation, and environmental management over the past decades. The draft DMRP requires additional planning and detail, particularly in relation to fauna management, fish passage, habitat restoration, GDE's and pest species control. By including these measures, along with the integration of the Conservation Strategy, the DMRP can deliver ecological and recreational benefits, while fulfilling regulatory obligations.

Please feel free to contact me if you would like any clarification in regard to our submission. We look forward to continuing our long term relationship with EAY as the mine closure process evolves.

Regards,



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