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Re: Lake Cowal Foundation submission
Exhibition of State Significant Development Application
Cowal Gold Operations Open Pit Continuation
Application No: SSD-42917792
Location: Lake Cowal Road, Lake Cowal
Applicant: Evolution Mining (Cowal) Pty Limited
Council Area: Bland Shire
Consent Authority: Minister for Planning and Public Spaces or Independent Planning Commission

The Lake Cowal Foundation (LCF) submission offers comment to inform assessment of Evolution Mining's (EVO) Cowal Gold Operations (CGO) Open Pit Continuation (OPC) Development Application. LCF notes the Environmental Impact Statement (EIS) Executive Summary describes its current operations as being "adjacent to the western foreshore of Lake Cowal, an ephemeral water body." Lake Cowal is New South Wales' largest natural inland lake (~13,500ha) forming part of the extensive Wilbertroy wetland system in the Lachlan River catchment. Lake Cowal is an ephemeral wetland ecosystem with its natural resources and diverse vegetation communities providing habitat for fauna including the recorded 277 bird species.

Project Design
Resources: EIS - Appendix A
- Existing footprint of mining area disturbance within Lake Cowal (Lake) is approximately 132ha (~ 1% of Lake surface area).
- Proposed development mining area disturbance footprint within Lake Cowal is approximately 367.4ha (~ 2.7% of Lake surface area), or a Lake disturbance footprint increase of ~275%.
- **Total area of mining** as proposed within Lake is approximately 499.4ha (~3.7%), a significant area of impact in a Nationally significant wetland ecosystem.
- LCF notes some consultation by EVO and EMM consultants relating to physical elements of project design to protect a woodland/grassland habitat and make amendments to planned site structural works to be more sympathetic to Lake landscape context.

Surface Water & Groundwater
Resources: EIS Appendices G and H
- LCF raises concern with regard to the Lake Protection Bund (LPB) construction phase and Mitigation measures (SW06, SW07 & SW8) particularly the potential for Lake contamination as a result of undefined chemical properties of inert waste rock and escape of silts and fine sediment.
- LCF notes unaccounted consequences of LPB and Pit expansion over long term beyond Life of Mine (LOM) for the Lake water resource and ecosystem. OPC structures within Lake are permanent and will be subject to degrading forces of nature (erosion etc.) in the context of increasingly intense weather events because of predicted and modelled changing climate processes.

- LCF notes the impact potential of expansion of LPB footprint by more than 275% on surface water regimes during the filling/flooding and drying cycles of the Lake and subsequent influences on function of Lake all ecological systems. More extensive and detailed hydrological modelling is required to account for the inherent system complexities and identify appropriate mitigation/s.
- Applicable groundwater licensing terms have changed over the CGO lifespan inclusive of an increasing level of take available. This doesn't appear to be considered in overall groundwater water resource planning or modelling in the context of long-term resource security and changing climate processes. Long term impacts for Groundwater Dependent Ecosystems (GDE) and consumptive water users inclusive of agriculture and mining must be addressed more adequately.

Biodiversity

Resources: EIS Appendices J and O

- The OPC Development proposes expansion of the CGO footprint to a total 499.4ha, an impact area increase of ~275%. The increased impact area includes expansion towards all recorded colonial waterbird breeding sites (refer Figure 5.20, pp174), encompassing part site B8 and with increased immediate proximity to breeding sites B4, B5, B6, B7 and B8. Increased spatial extent of light & noise pollution generated by expanded construction phase and operations per the OPC development are key issues, particularly in the context of the initiation and expansion phases for colonial waterbird breeding events typically occurring during September/October to November/December. Colonially breeding species require considerable resources to raise chicks in large colonies and there are probably relatively few wetlands that provide sufficient food and nesting resources (Brandis K., 2010). Colonial waterbird breeding events are critical to these species as they may occur 2 to 4 times in any individual species' life cycle, are initiated by very specific sequences of events, and circumstances related to ecosystem function including flooding and abundance of supporting, broader landscape resources.
- Mitigation measures TE01, TE04 and TE06 raise particular concerns in relation to impacts on the Lake's biodiversity. The scale of the Lake impact area is potentially problematic in relation to Mitigation measure TE01 during breeding and nesting phases for waterbirds as removal will have significant impact on future populations.
-Mitigation measures TE04 and TE06 appear arbitrary measures as stated "Where feasible", Adaptive Management (Table 8.4) measures listed tend more reactive in nature. A proactive management plan scheduling Construction and Operations outside the typical 12 week (Oct, Nov, Dec) timeframe for initiation and expansion of colonial waterbird breeding is a more sustainable option in terms of the Lake and its ecosystem function and values.
-Through a Biodiversity Offsets framework, CGO intends biodiversity values that are lost in one location (at a development site) can be compensated for by maintaining and improving another habitat location with use of their existing landholdings as the first tier in the framework. Planning and management of the proposed offset/stewardship areas, as set out in the BDAR, will require a higher level of commitment than currently apportioned to similar current offset areas to achieve the desired environmental (offset) outcomes. Management plans and actions require higher levels of landscape scale rehabilitation, pest animal and weed control, bushfire management, monitoring and evaluation rather than a continuation of existing management approaches.

Social

EIS Appendix M

-Provision of ongoing support for LCF is noted in the context of minimising impacts/disturbance to Lake Cowal and the surrounding environment. Social Impact Assessment (SIA) indicates a continuation of the status quo and does not provide any indication of enhancement of support for local organisations and community in relation to increased environmental impacts (refer Appendix J - BDAR) of the OPC development.

-Increased CGO scale and activity through the OPC development will generate more scrutiny from community, particularly those with an interest in the Lake and its biodiversity values. LCF currently experiences enquiries from the community and will require enhancement of resources and capacity to address an increased scale of enquiry. LCF's InHabitat Lake Cowal glamping development and environmental education centre will be key contributors to meeting this demand and the general interest of the broader community.

Mine Closure and Rehabilitation Strategy

Resources: EIS Appendix Z

- The Rehabilitation Management Plan (RMP) and Mine Closure and Completion (MCC) apply specifically to Mining Lease (ML) areas ML 1535 and ML 1791. The RMP incorporates a range of risk management strategies to ensure the long-term integrity of the mine site rehabilitation and the resultant final landforms on ML areas. LCF raises concern about the potential for unforeseen impacts emanating from the mine site in the longer term (> 50 years) outside the ML areas and within Lake Cowal due to increasingly intense weather events because of predicted and modelled changing climate processes. LCF recommends establishment of a managed Fund/Bond facility to address any future external (to the ML areas) environmental issues generated as a legacy of mining operations in a sensitive wetland ecosystem.

Evolution Mining's (EVO) Cowal Gold Operations (CGO) Open Pit Continuation (OPC) Development Application is being assessed under Part 4 of the Environmental Planning and Assessment Act 1979 and in accordance with the Bilateral Agreement between NSW and the Commonwealth, made under the EPBC Act. The exhibition process as part of the application allows for the relevant assessment components to be addressed via an elemental approach which does not identify or reflect the inherent complexities and resultant sensitivities of a Nationally significant wetland ecosystem, Lake Cowal. An integrated systems-based assessment process would be more appropriate in this circumstance, inclusive of a cumulative impact assessment, to identify and mitigate the potential for enduring landscape scale impacts.

Daniel Mattiske

Chair – Lake Cowal Foundation

Reference: Brandis K., 2010. Colonial waterbird breeding in Australia: wetlands, water requirements and environmental flows.