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15 January 2016

NSW Department Planning and Environment
23-33 Bridge Street
SYDNEY NSW 2000

Attention: Mike Young

Dear Mike,

RE: Eleventh Annual Report of the Independent Monitoring Panel for the Cowal Gold Project (September 2015)

In response to your letter dated 27 October 2015, please find below Evolution Mining (Cowal) Pty Limited's (Evolution's) responses to the recommendations made by the Cowal Gold Operations (CGO) Independent Monitoring Panel (IMP) in their *Eleventh Annual Report for the Cowal Gold Project – September 2015* (2015 IMP Report).

2015 IMP Recommendation 1: ***CGM should establish a research trial to investigate the most efficient method of controlling rye grass allowing for the successful establishment of native plant species by direct seeding.***

Evolution, with assistance from independent revegetation/rehabilitation specialists DnA Environmental, has prepared a preliminary design for a trial to investigate the most efficient method of controlling rye grass allowing for the successful establishment of native plant species by direct seeding.

The trial will be established on the southern slopes of the Southern Waste Rock Emplacement adjacent to the existing surface treatment trial.

The trial will involve two experiments:

- **Experiment 1** will involve immediate native seed mix application onto the newly profiled waste rock emplacement surface prior to any germination or establishment of Rye Grass. Experiment 1 will assess the effectiveness of pre-emergent and post-emergent herbicide treatments.
- **Experiment 2** will involve application of native seed mix once a Rye Grass cover and mulch/litter layer has been established. Experiment 2 will assess the effectiveness of post-emergent herbicide treatment and cultivation (i.e. shallow ripping) of the surface to create bare gaps amongst the Rye Grass for seedling establishment whilst retaining the protective mulch/litter cover.

Evolution has sought the advice of a local agronomist regarding a suitable pre-emergent herbicide that will not affect native species.

Evolution is currently finalising the trial design with DnA Environmental and it is anticipated that the trial will commence in April/May 2016, subject to suitable conditions and seed mix availability. The final design of the trial (including a conceptual view of the trial plots) will be included in the CGO's 2016 Annual Review.

Monitoring of the trial area will be conducted by DnA Environmental in accordance with the CGO's existing rehabilitation monitoring programme methodology (as detailed in the CGO's Rehabilitation Management Plan). Results of the trial will be reported in DnA Environmental's annual rehabilitation monitoring report and in the CGO's Annual Reviews.

2015 IMP Recommendation 2: ***Every effort should be made to commence the waste rock component of the Substrate Profile Trial as soon as weather conditions permit in order to gain additional information about the value of including subsoil in future rehabilitation.***

Evolution is finalising the design of the waste rock component of the Substrate Profile Trial with DnA Environmental and anticipates commencing the trial in June 2016. Commencement of the trial will be subject to availability of the select tubestock for the trial. Evolution has commissioned Jayfields Nursery (Evolution's existing supplier for revegetation tubestock) to propagate the tubestock required for the trial.

As described in the CGO's response to the IMP's Ninth Annual Report, given the CGO waste rock emplacements and tailings storage facilities are operational and dynamic landforms, the opportunity to implement rehabilitation trials on the top surfaces of these landforms is currently unavailable.

The proposed Substrate Profile Trial will therefore involve placing large boxes (approximately 1 m x 1 m wide and 2 m high) proximal to the waste rock emplacements and tailings storage facilities which include various depths of substrate materials including tailings, waste rock, subsoil and topsoil. Select native tree and shrub species would be planted in the substrate treatments and the trial monitored to assess plant growth, with root system development analysed at the completion of the trial.

2015 IMP Recommendation 3: ***CGM should obtain an analysis of the gypsum product from the suppliers and additionally send a representative sample to an analytical laboratory for (1) a Ca and S analysis to confirm the percentage of gypsum in the product and (2) an X-ray diffraction analysis to identify any mineral contaminants.***

Evolution will obtain an analysis of the gypsum product from ECOGypsum (the CGO's existing gypsum supplier) and send a representative sample of the gypsum to ALS Minerals in Brisbane for:

- Calcium (Ca) and Sulphur (S) analysis to confirm the percentage of gypsum in the product; and
- an X-ray diffraction analysis to identify any mineral contaminants.

Should the results indicate a poor gypsum product, Evolution will source a number of gypsum samples from various suppliers and will conduct the analyses above on each of the gypsum samples. Evolution will then select the most appropriate/best quality gypsum product. If necessary, Evolution may seek advice from McKenzie Soil Management regarding suitable suppliers of quality gypsum products.

2015 IMP Recommendation 4: ***CGM should calculate, for the current spacing between berms on the waste rock dumps, the runoff for different recurrence intervals and compare this with the estimated berm capacity to provide confidence in the current design parameters for erosion control and dump stability.***

The final landform design concepts for the outer batter slopes of the waste rock emplacements include:

- wide, reverse graded berms and berm bunds to reduce the potential for longitudinal runoff downslope;
- rock armouring of slopes (and berms) to stabilise the slope, reduce runoff velocity downslope and reduce erosion potential in the long-term;
- cross-ripping the rock mulch and gypsum-treated soil along the contour of the slope to create 'troughs and banks' to minimise the potential for erosion downslope and enhance vegetation establishment within the troughs; and

- revegetation with native and/or endemic Eucalypt woodland, shrubland and grassland species suited to slope and elevated positions similar to remnant vegetation in the surrounding landscape.

Monitoring results of rehabilitation trial plots and rehabilitated areas on waste rock emplacement slopes using the final landform design concepts above have demonstrated that this landform design is likely to stabilise landform slopes and provide a suitable plant growth medium.

Site Environmental Department staff note that no significant instability is occurring on waste rock emplacement slopes which have been rock mulched and cross-ripped along the contour with gypsum-treated soil. Further Environmental Department staff note that no overtopping of the waste rock emplacement berms has occurred to date.

Although in the past berm ponding and downslope erosion has occurred on exposed oxide waste rock surfaces that have not been covered with a rock mulch layer, detailed research and rehabilitation trials have since been undertaken and the landform design concepts described above have been implemented as standard practice for rehabilitation of waste rock emplacement slopes at the CGO.

Evolution notes that the IMP's comment/observation regarding ponding on the berms of the Southern Waste Rock Emplacement was in relation to areas of incomplete rehabilitation (i.e. on slopes where the rock mulch cover had not yet been cross-ripped, nor had topsoil been applied or revegetation established).

2015 IMP Recommendation 5: ***CGM should continue to liaise with Assoc Prof Stephen Cattle, University of Sydney, who conducts the dust analyses for the mine, to ensure that the matter of apparently high metal analyses in dust samples is resolved.***

To resolve the matter of apparently high metal analyses in dust samples, Evolution will engage Dr Barry Noller, Principal Research Fellow with the Centre for Mined Land Rehabilitation at the University of Queensland, to conduct an expert review of:

- the effectiveness of the dust sample collection procedures and dust sample analysis procedures in the determination of metal concentrations in dust samples; and
- the metal concentrations in depositional dust samples collected by the CGO to date against metal concentrations of regolith materials, geochemical testwork results of CGO waste rock material and Lake Cowal surface water and sediment monitoring results.

Dr Noller has extensive experience in the field of environmental chemistry and industrial toxicology.

Evolution will continue to engage Associate Professor Cattle to review and interpret the CGO's annual air quality monitoring results and Dr Noller's review will consider the air quality monitoring reports prepared by Associate Professor Cattle thus far.

Evolution anticipates Dr Noller's expert review will be complete in the third quarter of 2016. The results of Dr Noller's review will be reported in the CGO's 2016 Annual Review.

As requested, a copy of the IMP's 2015 Report has been placed on Evolution's website, and implementation of the IMP's recommendations will be reported in the CGO's 2016 Annual Review.

Please do not hesitate to contact me on 0408 745 397 should you wish to discuss.

Yours faithfully,
Evolution Mining (Cowal) Pty Limited

BRONWYN FLYNN
Environmental Superintendent

Copies:
Emer. Prof. L. Clive. Bell (IMP)
Dr. Craig Miller (IMP)