

Evolution
MINING

**Community
Environmental
Monitoring &
Consultative
Committee**

Cowal Gold Operations - 5 December 2018

Environment and Sustainability Policy



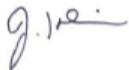
Evolution Mining Limited ("Evolution Mining" or the "Company") is committed to attaining an outstanding level of environmental performance in all of our workplaces.

Evolution Mining shall incorporate environmental considerations into all areas of our business to effectively manage environmental impacts and risks.

Our environmental care and culture will be formed on the basis of:

- Commitment to this Policy, with supportive funding and a belief that the majority of environmental incidents are preventable and controllable with foresight, relevant training, purposeful attitude and appropriate equipment
- Accountability of Management with the support of all personnel to ensure that the workplace and the practices comply with statutory and license conditions
- Implementing leading industry practices and environmental management systems at all levels; including exploration, development, operations, decommissioning, closure and rehabilitation
- Regular assessment of the environmental performance of the Company's activities to ensure compliance with the Company's commitments and conditions; and to report findings to stakeholders, the community and regulatory authorities
- Continually striving to identify opportunities to effectively manage energy and water whilst minimising waste and reducing our environmental footprint
- Increasing awareness of personnel on the potential environment impacts of activities in which we are involved, and how those impacts can be minimised or controlled
- Maintaining appropriate emergency and critical incident response programs, and to notify the relevant authority in the event of any reportable environmental incident; and
- Contribute to conservation of biodiversity and integrated approaches to land use.

Periodical review shall ensure that Company targets and objectives are being achieved in regards to environmental performance.



Jake Klein
Executive Chairman

Issue Date:
February 2015

Our Environmental care and culture will be formed on the basis of:

- Regular assessment of the environmental performance of the Company's activities to ensure compliance with the Company's commitments and conditions; and to report findings to stakeholders, the community and regulatory authorities

Legal Obligations

Development Consent (DA 14/98) – granted February 1999

- MOD12 granted May 2016
- MOD13 granted February 2017
- **MOD14 granted October 2018 (*awaiting EPBC Act conditions*)**

Mining Lease 1535 – granted June 2003

- MOP (Sept 2016 - August 2018) variation approved September 2017
- Extension granted on 23 August 2018, until 29 February 2019
- Amendment granted on 25 October 2018, to allow for GRE46 exploration decline

Environmental Protection Licence 11912 – granted Dec 2003

- EPL variation approved April 2018

Water Access Licences (2025/ 2026)

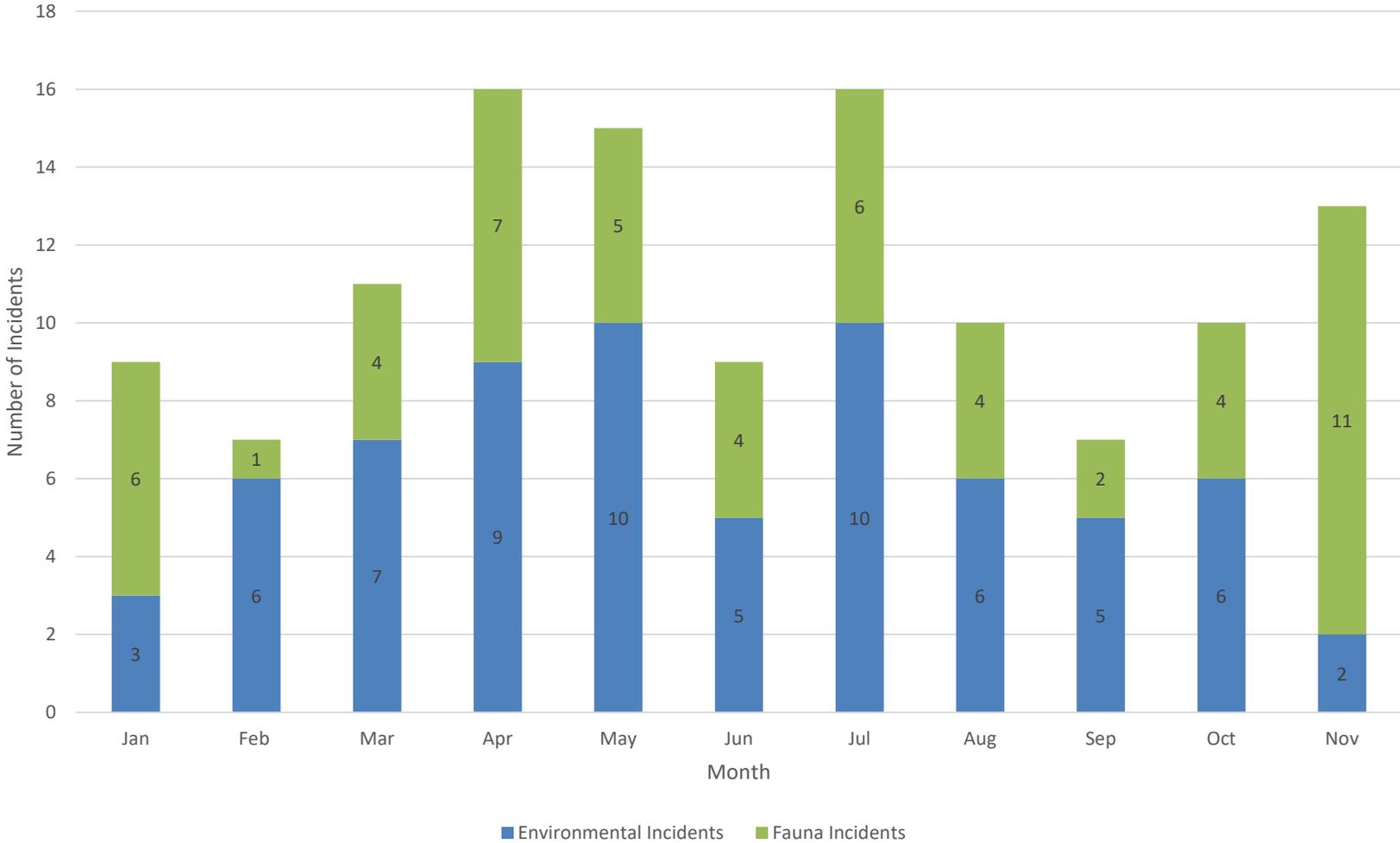
- WAL 31864 (BCPC 3,650 ML)
- WAL 36569 (ESB zero allocation)
- WAL 36615 E42 Pit (366 ML, includes lake floor bores)
- WAL 36617 E42 Pit lower MDB (3,294 ML/annum)

Compliance Audits

✓ Evolution Group HSE Assurance Audit	January	2018
✓ International Cyanide Code Audit	February	2018
✓ Independent Environmental Audit	May	2018
✓ Bunding Integrity Audit	July	2018
✓ ISO14001 Recertification Audit	August	2018
✓ Evolution Group HSE Assurance Audit	August	2018
✓ Independent Monitoring Panel Audit	September	2018
✓ Evolution Group HSE Systems Audit	October	2018
✓ Evolution Group HSE Assurance Audit	November	2018



Environmental Incidents



Fauna Incidents

■ September 2018

- Employee driving private vehicle hit emu whilst driving to work
- Whilst conducting survey work, noticed deceased crow in middle of road between Rom 6 and D9

■ October 2018

- Deceased turtle spotted near pipework at D9
- Kangaroo found deceased on the main access road
- Deceased Pink Ear Duck found on mining hard stand

■ November 2018

- Juvenile raven collected from haul road, rehydrated and successfully released
- Brown snake run over in Stage H
- Bird flew into side of moving vehicle and killed
- Abandoned eggs found on crane boom
- Contractor travelling to site made contact with unidentified bird, causing his front windscreen to smash. Bird deceased
- Deceased juvenile plover found near ERT shed
- Kangaroo rescued from underneath D9 transfer pipes
- During routine inspections operator noticed deceased bird in water in tank
- Grass Parrot was noticed caught underneath a vehicle in the car park
- Deceased bird reported to Environment Department
- Blue-tongue found deceased on isolation bund road

Lake Cowal

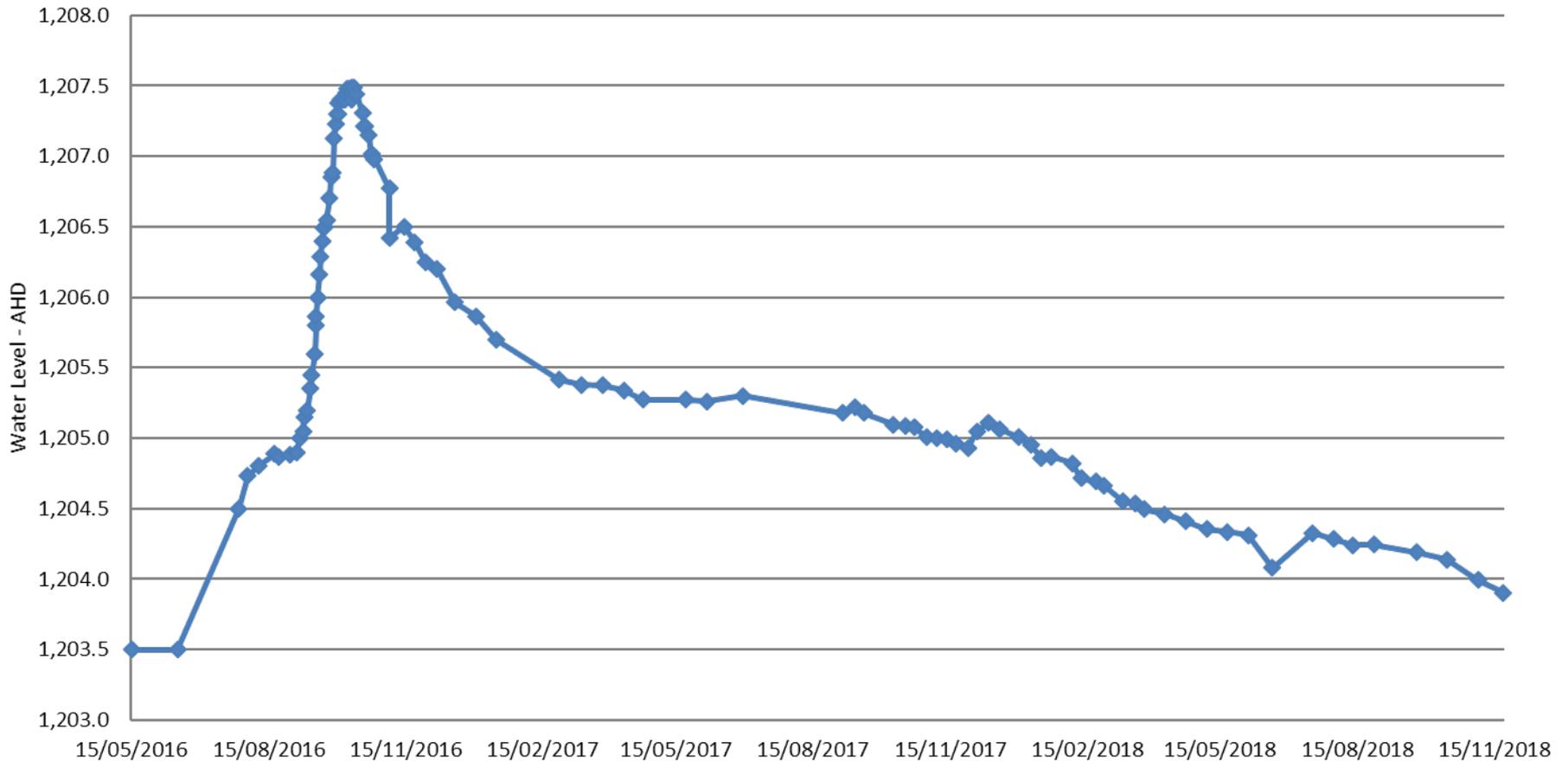
- Currently 203.90m RL (↓3.57m since peak in October 2016)



Lake Cowal – 2016-2018



Lake Levels 2016 - Current



Note 1203.5 the Lake is Dry

Environmental Management

- **Approved environmental management plans:**

- Soil Stripping Management Plan
- Air Quality Management Plan
- Blast Management Plan
- Rehabilitation Management Plan including Rehabilitation Strategy
- Indigenous Archaeology Management Plan
- Land Management Plan
- Biodiversity Offset Management Plan
- Flora and Fauna Management Plan
- Heritage Management Plan
- Water Management Plan
- Addenda to the Transport of Hazardous Materials Study
- Environmental Management Strategy
- SGWMB Monitoring Programme
- Noise Management Plan
- Cyanide Management Plan
- Hazardous Waste & Chemical Management Plan
- Erosion and Sediment Control Management Plan
- Emergency Response Plan
- Monitoring Programme for Detection of any Movement of Lake Protection Bund, Water Storage and Tailings Structures and Pit Void Walls

All EMPs are now approved by DPE

CGO Environmental Management

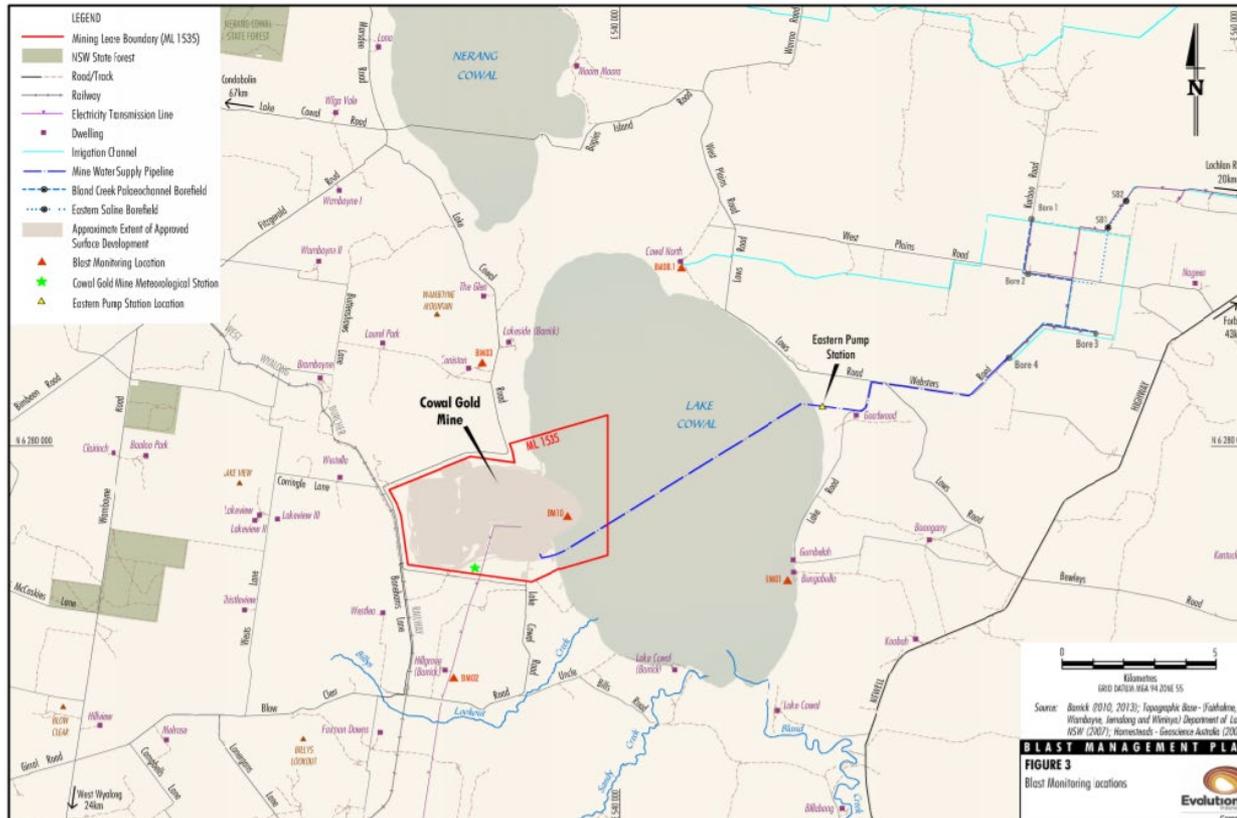
Air Quality

- No complaints were received relating to dust at the CGO during the reporting period
- No exceedances of the Development Consent air quality impact assessment criteria occurred during the reporting period
- Compliance with the assessment criterion of $4 \text{ g/m}^2/\text{month}$ average annual deposited dust was achieved at all privately-owned residences, and at all bird-breeding and native fauna areas



Blasting

- Once blast related event exceeded the maximum compliance level of 95 dB(L) at BM01 on Sunday 15 July 2018. Level recorded at 95.9 dB(L)
- No other blast related events exceeded the maximum compliance level of 120 dB(L), or the 115 dB(L) level (normal weekdays and Saturdays)
- Compliance remains with the allowable exceedance of 5% of the total number of blasts over a 12 month period



Operational Noise

- Noise monitoring for Q3 conducted in August 2018
- No non-compliances of the noise impact assessment criteria were reported during the reporting period
- No community complaints received during the reporting period relating to operational noise
- Several properties triggered for noise mitigation works, in progress
- Noise monitoring for Q4 scheduled to be conducted in December 2018



Surface Water and Lake Water

- No environmental incidents or complaints were received relating to surface water or lake water at the CGO during the reporting period
- pH values in on-site water quality monitoring data has remained fairly stable, consistent with previous years results. Electrical Conductivity of all sampling sites reflective of lower dam volumes (lack of rainfall)
- Lake water quality testing ceased, as below 204.5 m AHD level



Groundwater

- No environmental incidents or complaints were received relating to groundwater at the CGO during the reporting period
- Groundwater quality results and trends illustrate that the water management control measures appear to have successfully prevented groundwater contamination
- The volume extracted from the Bland Creek Palaeochannel was within licence conditions of 15 ML/day



Fauna and Flora

- No deaths of animals by cyanide in the CGO Tailings Storage Facilities area since operations began in April 2006
- No environmental incidents or complaints were reported or received at the CGO relating to threatened flora or fauna during the reporting period
- Fauna deaths on ML 1535 reported as required under Development Consent (DA 14/98)
 - *Approval of MOD14 resulted in an amendment to this condition. Fauna death notifications are now only required following confirmation of the fauna death by cyanide.*



Cyanide

- No environmental incidents or complaints were received relating to cyanide at the CGO during the reporting period
- No non-compliances of CNWAD levels of the aqueous component of the tailings slurry stream - 20 mg/L CNWAD (90 percentile over six months) and 30 mg/L CNWAD (maximum permissible limit at any time)
- No cyanide related fauna deaths

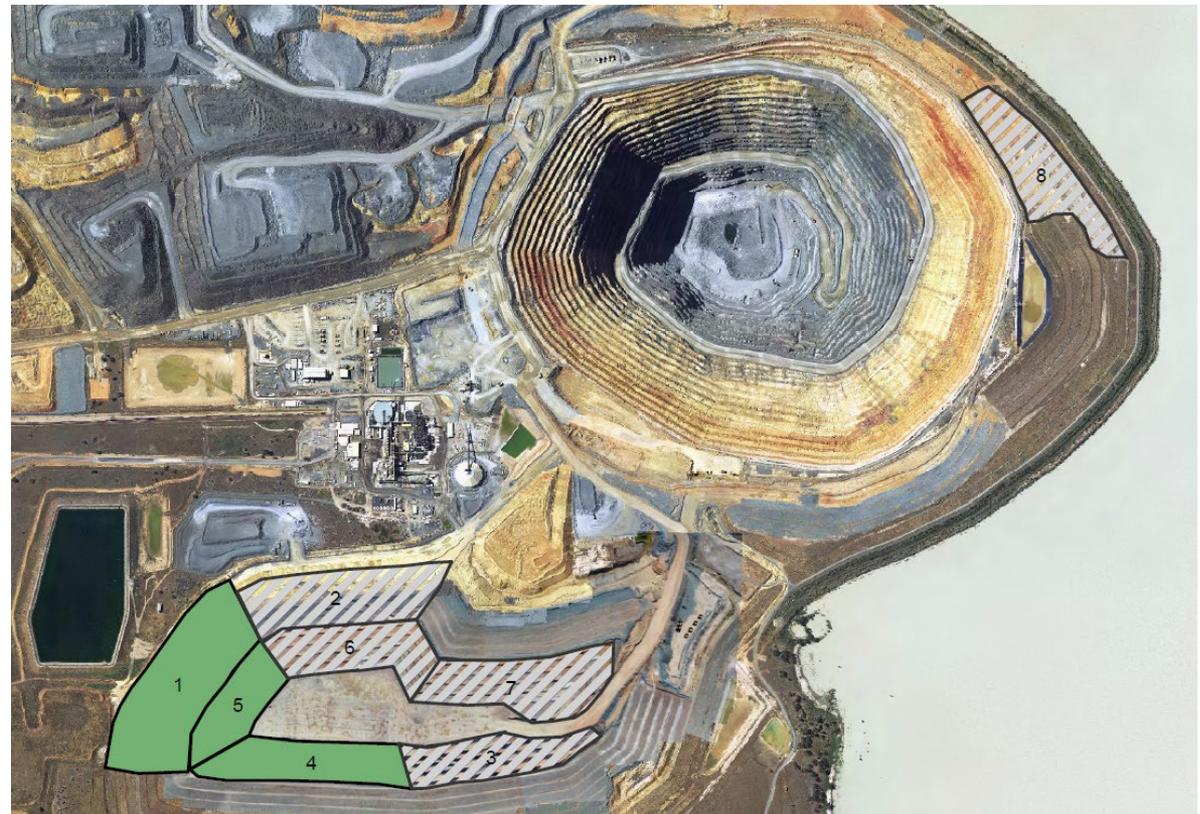


Rehabilitation

- Rehabilitation bulk earth movements completed in all required areas under the MOP (and/or as agreed by DRG) for end August 2018
- New MOP Amendment approved by DRG in October 2018
- Map on right indicates rehab for completion by end August 2019

Proposed areas for rehab 2018-2019 MOP

-  Shape Oxide Only
-  Shape, Apply Rock Mulch, Apply Topsoil



Reportable Incidents – NTSF Update

Reportable Incidents - NTSF

- On 21 April 2018, a minor seepage incident was observed on the eastern wall of the NTSF during route monitoring
- The seepage was predominately comprised of water with some tailings slurry material and clay also deposited
- The seepage was contained within the bund at the bottom of the current lift
- The processing plant was immediately shut down and pumping into the NTSF ceased
- Evolution notified EPA within 24 hours, and made notifications to DPE, DRG, DSC, DI-Water and other groups as required by the Development Consent (DA 14/98)
- Regulator inspections undertaken, and reporting provided
- **No material harm to people or the environment**
- Pumping into STSF was commenced following approval from the Engineer of Record

Reportable Incidents - NTSF



Reportable Incidents - NTSF



Tailings on Stage 4 NTSF berm, looking south



Droppers near the discharge point on eastern wall, Stage 5



Approximate location of tailings breach (red oval)

Reportable Incidents - NTSF



Clay liner with wet tailings exposed on eastern wall, Stage 5



Example of reinstatement of clay liner (above and below)



Reportable Incidents - NTSF

- On 14 May 2018, Evolution received a Section 240(1)(c) Notice under the *NSW Mining Act, 1992* from the NSW Resources Regulator (within DPE)
- The notice(s) required Evolution to prepare a response and investigation report by 31 July 2018
- On 26 July 2018, Evolution provided a response to the Resources Regulator, including an investigation report prepared by AECOM (Engineers of Record)
- The investigation concluded that the seepage was the result of erosion of the clay liner as a direct result of cutting the droppers around the stage 5 lift of the NTSF
- The spigots were cut back to maintain subaerial deposition (instead of below the surface) and allow the layers of tailings to dry in an effort to enhance stability
- **On 14 August 2018 the Resources Regulator finalised their investigation and confirmed that there had been no breach of the *NSW Mining Act, 1992***
- **Remediation works on the NTSF have now been completed.**
- **NTSF was partially recommissioned in late September, and is moving towards full recommissioning in consultation with AECOM and the Dam Safety Committee.**

CGO Social Responsibility

Complaints Report

- September 2018 – One (1) incident of vehicle driving erratic on Lake Cowal Road. The following investigation by ESR Superintendent the vehicle and driver could not be identified with certainty. Site –wide reminder email sent regarding driver behaviour to and from work.
- October 2018 – nil
- November 2018 – nil



Sponsorships and Donations

- Cowal Partnering Program – Round 2 2018
 - Throughout September-November CGO have been assisting recipients of CPP Round 2 2018 applications
 - Through the program CGO donated over \$92,000 to 25 local community groups and organisations within the Bland, Lachlan and Forbes shires



2018 Round 2 CPP – Samuel Johnson Gala Dinner, Forbes, October 2018

Sponsorships and Donations

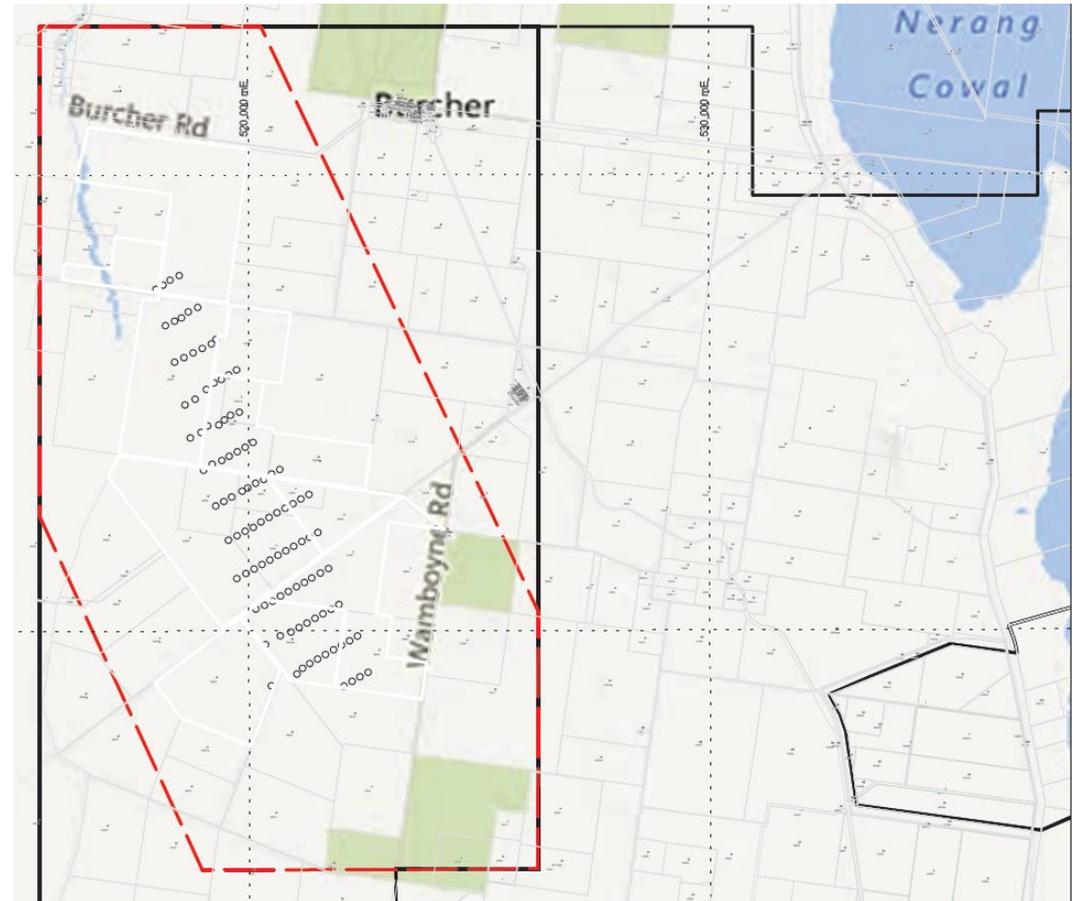
- Cowal Cares Program
 - During Q2 FY19 CGO donated \$6,000 to local sporting groups through the Cowal Cares Program
 - The program allows any CGO employee, or their spouse/partner, who volunteers a minimum of 25 hours of personal time over a 12-month period to a registered community group or sporting club to earn the club a donation of \$250



Forbes High School CPP Round 2, 2018

Community Consultation – East Girral

- CGO has commenced landholder consultation in relation to the proposed FY19 East Girral exploration program
- Aerial surveys have been completed and follow up exploration drilling has commenced and is due to be completed by March 2019
- Community consultation is currently ongoing



Proposed FY19 East Girral exploration program

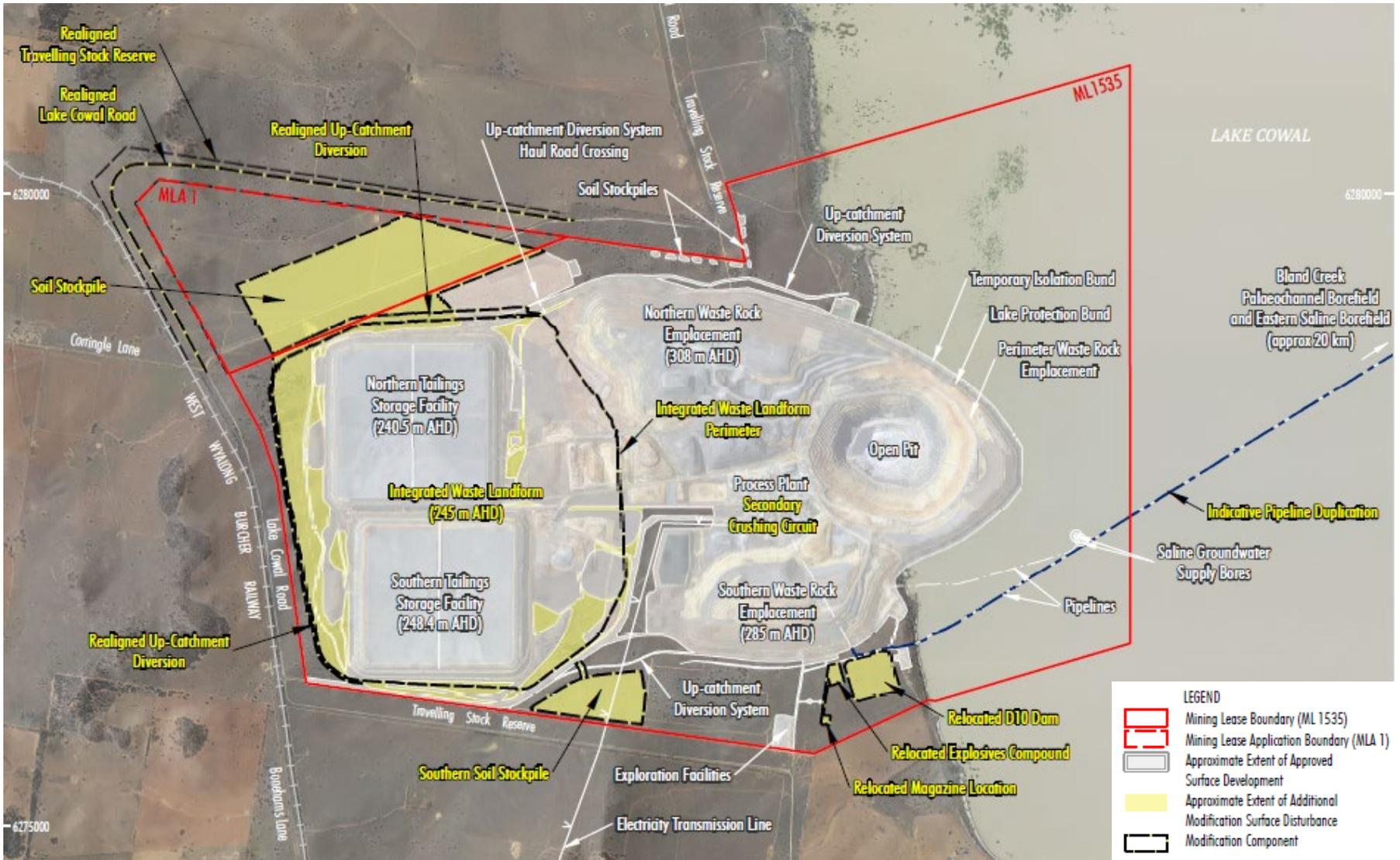
Modification 14

Processing Rate Increase Modification

MOD14 – Summary

- Evolution has recently received approval for the Processing Rate Increase Modification to support an increase to the throughput rate of the processing plant from 7.5 Mtpa to 9.8 Mtpa
 - The key aspects of the approved Modification are:
 - Increasing the processing rate from 7.5 Mtpa to 9.8 Mtpa;
 - Development of an Integrated Waste Landform (IWL) surrounding the existing Tailings Storage Facilities for tailings and waste rock placement;
 - Duplicating the existing water supply pipeline across Lake Cowal;
 - Relocation of water management, soil stockpiles and other ancillary infrastructure (displaced by the larger IWL footprint) in a new Mining Lease Application (MLA) area;
 - Realignment of Lake Cowal Road around the new MLA;
 - Increased annual extraction of water from external water sources (e.g. surface water from Lachlan River);
 - Increase in the average and peak workforce employed at the CGO; and
 - Provision of crushed gravel to local Shire Councils and RMS
 - This Modification was referred to the DoEE, and was subsequently determined to be a “Controlled Action”. **EVN is currently awaiting the EPBC Act conditions.**
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MOD14 – General Arrangement



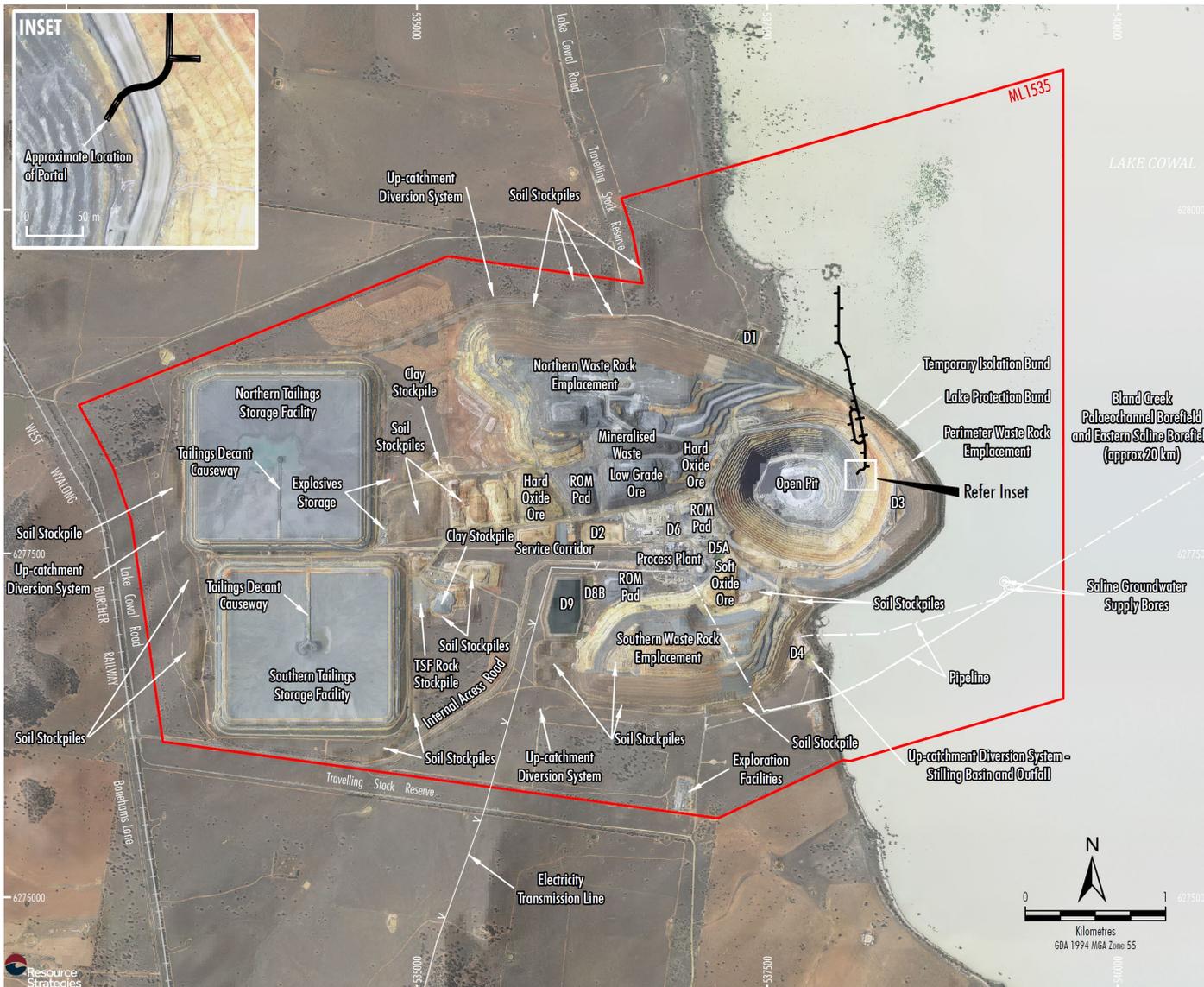
Review of Environmental Factors (REF) Exploration Decline

REF – Exploration Decline



- **Evolution has received approval to construct an exploration decline within ML 1535 from the existing CGO open pit to allow underground exploration drilling and bulk sampling of the Galway, Regal and E46 resources**
 - The Activity will be located entirely within ML 1535
 - The Activity will involve construction of a portal on an existing bench located off the main ramp of the open pit
 - The exploration decline will extend from the portal to the north for approximately 1.4 km and would remain within the ML 1535 boundary
 - The portal would be located so that no mining haul road realignment will be required in front of the portal
 - Existing surface laydown areas at the CGO would be used, therefore, no additional surface disturbance areas would be required
 - **The information obtained from the Activity is essential to determine the technical, environmental and financial viability of any future open pit or underground mining associated with development of the CGO**
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REF – Exploration Decline



- Legend
- Mining Lease Boundary (ML 1535)
 - Proposed Exploration Decline

Source: Evolution (2018); © NSW Department of Finance, Services & Innovation (2017)
 Orthophoto: Evolution (Oct 2017)



CGO EXPLORATION DECLINE REF
 Current Status of CGO and
 Location of Proposed Exploration Decline

Figure 2

Feedback



Environmental management plans and monitoring data are publically available

<http://evolutionmining.com.au/cowal/>