Forward Program

Cowal Gold Operations

Version	Date	Description	Prepared By	Approved By	Position
1.0	202208	First Issue (FY23-25)	G. Derrick	J. Penhall	General Manager
2.0	202308	Second Issue (FY24-26)	G. Sellings	J. Mammen	General Manager
3.0	202309	Third Issue (FY24-26)	G. Sellings	I. Arcayo	Sustainability Manager

SUMMARY TABLE

Table 1: Summary table required for the annual rehabilitation report and Forward Program

Requirement	Response
Name of mine	Cowal Gold Mine (Referred to as Cowal Gold Operations throughout)
Forward Program commencement date	1 July 2023
Forward Program revision dates and version numbers	V1: 1 August 2022 (FY23-25) V2: 30 August 2023 (FY24-26) V3: 29 September 2023 (FY24-26)
Mining leases (lease number(s)) and expiry date(s)	ML 1535: 12 June 2024 ML 1791: 20 Jun 2040
Name of lease holder(s)	EVOLUTION MINING (COWAL) PTY LIMITED
Date of submission	12 October 2023

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Cowal

PURPOSE

This document sets out the Forward Program for the Cowal Gold Operations (CGO), for the period FY24-FY26, in accordance with Clauses 9 and 13 of Schedule 8A to the *Mining Regulation 2016*.

1 PART 1 – ANNUAL REHABILITATION REPORT

Refer to separate document.

2 PART 2 – FORWARD PROGRAM

2.1 Applicant Details

Evolution Mining (Cowal) Pty Limited (Evolution) is the lease holder for the CGO.

2.2 Three-Year Forecast – Surface Disturbance Activities

2.2.1 Project Description

The CGO is an open cut and underground gold mining operation located approximately 38 kilometres (km) north-east of West Wyalong in New South Wales (NSW). Evolution is the owner and operator of the CGO. Mining operations for the CGO are conducted within Mining Lease (ML) 1535, while additional ancillary mining operations are conducted within ML1791. Mining of the open pit will continue using existing drill, blast, load, and haul mining methods, 24 hours per day, seven days per week. Underground production commenced March 2023, utilising long hole open stoping methods. Major components of the current CGO include the following:

- an open pit (E42) and underground mine;
- perimeter, northern and southern waste rock emplacements;
- northern and southern tailings storage facilities (TSFs), encompassed by an Integrated Waste Landform (IWL);
- a lake protection bund (LPB) and isolation system;
- a processing plant and paste plant precinct;
- mineralised waste and low grade ore stockpiles;
- hard and soft oxide ore stockpiles;
- run-of-mine (ROM) pads;
- soil (including clay) stockpiles;
- an Internal Catchment Drainage System (ICDS) (including contained water storages);
- an Up-Catchment Diversion System (UCDS);
- buried water supply pipelines and associated borefields and pump stations; and
- an electricity transmission line (ETL).

Mining within the E42 open pit is proposed to occur up to ~FY2026 and mining of the underground until 2038. Ore processing is proposed to be undertaken until 2040, at a maximum rate of 9.8 million tonnes per annum (Mtpa).

2.2.2 Description of surface disturbance activities

2.2.2.1 Exploration activities

Exploration and resource definition activities proposed to occur within the mining leases over the next three years (FY24-FY26) are described below.

The main resource definition activities are focussed on increasing the confidence in our knowledge of grade distribution and continuity of the underground orebodies to convert from Inferred to Indicated Mineral Resource. This drilling is planned to be undertaken from drill sites in the underground mine. The general schedule for underground drilling activities will focus on the following targets:

- Regal: FY25-FY26
- Manna: FY24-FY25
- Dalwhinnie: FY24-FY26

Surface exploration on ML1535 will focus on the Talisker target in FY24. This drilling will take place from pre-existing drill pads. Above-ground sumps and temporary bunds will be utilised to minimise disturbance. Rehabilitation will involve cementing of the entire hole and cutting of the collar below surface. Any Exploration success at Talisker may be followed up either from surface or the underground mine. Talisker is an early-stage exploration target and plans may change as information from current drilling programs come to hand.

All other exploration activities are planned for the exploration leases outside of ML1535, and ML1791.

2.2.2.2 Construction activities

Construction activities during FY24-FY26 will primarily be associated with the Underground Development Project and continued construction of the IWL. Ancillary activities to be conducted in FY24 to support the development of the underground mine will include:

- Commissioning of the desliming plant / paste fill plant, the delivery of paste fill underground via service holes and the backfilling of underground stopes with the paste.
- Continued development of dewatering infrastructure, secondary ventilation system, electrical reticulation, vehicle servicing infrastructure and compressed air/water systems.
- Ongoing Mining Infrastructure Area (MIA) upgrades.
- Various relocations of existing operational facilities.

The following sub-sections provide a general summary of the construction activities that are proposed.

Desliming Plant

A new desliming plant will be commissioned during early FY24 to feed a portion of the tailings stream slurry at the correct rate and composition to the paste plant. It will be located within the existing process plant. The balance of the tailings stream will continue to be directed to the IWL for disposal.

The desliming plant will use desliming cyclones to remove slimes (clay-sized fraction) from the detoxed tailings slurry (i.e., post-cyanide destruction circuit). At the paste plant, the deslimed solids will be mixed with a binder and fed underground via a pipeline to backfill stopes.

The desliming plant and paste plant feed transfer pumps are planned to be located adjacent to the existing Carbon in Leach (CIL) tailings thickener, with necessary electrical drives housed within a new process plant substation / Motor Control Centre (MCC).

Paste Plant

The paste plant is located on the north-east side of the E42 open pit and will be commissioned during early FY24.

At the paste plant, a portion of the tailings will be dewatered using a belt filter, then transferred to the paste mixer via conveyor, while another tailings stream (filter bypass slurry) is pumped directly to a vortex mixer positioned over the paste mixer.

A General Portland Cement (GPC) silo and Ground Granulated Blast Furnace Slag (slag) silo provide binder storage infrastructure at the paste plant. The GPC and slag are blended in the required proportions and transferred to the vortex mixer. The deslimed tailings slurry and the filter cake are mixed in the paste mixer in readiness for delivery underground via pipeline and underground reticulation system.

Mine Infrastructure Area (MIA)

The existing MIA will be progressively modified to facilitate the underground mining activities. Modifications to the MIA include, but are not limited to:

- Heavy and light vehicle workshops for underground mining fleet;
- Upgrades to the park-up areas for open pit and underground mining fleets;
- Relocation of administration building (including office space, change houses and supporting services); and
- Minor repairs and upgrades to mine access roads and supporting infrastructure may also be made during the term where required.

Southern Soil Stockpile

The Southern soil stockpile area was constructed to accommodate IWL construction and is located south of the Internal Mine Access Road (within ML 1535).

The stockpile currently stores salvaged topsoil resources stripped from the IWL footprint area and soil stocks removed from existing soil stockpiles located within the IWL. The Southern soil stockpile may have additional soil deposited during the term where appropriate.

Integrated Waste Landform

IWL foundation/basement preparation and underdrainage system installation

IWL foundation/basement preparation work associated with the north wall buttress, including finalisation of the IWL underdrainage system, pipework and pumping facilities, will be completed during FY24 to assist with water recovery (for reuse within the process plant) and the mitigation of seepage.

IWL pipework and associated infrastructure

Ongoing pipework modifications associated with IWL development will continue throughout the Forward Program term. Activities include modification of the existing pipework and associated infrastructure, in addition to the installation of new IWL pipework.

Fencing of IWL perimeter

The perimeter of the IWL will be progressively fenced to restrict the entry of fauna into the IWL. These works are scheduled to be completed in early FY24.

Realignment of Up-Catchment Diversion System

Limited sections of the existing UCDS will continue being realigned and modified during early FY24.

2.2.2.3 Mining schedule

Mining Operations - Open Pit

The E42 Stage H open pit will be developed within its approved extent of approximately 131 ha during the term. The open pit is accessed via a haul road system excavated as a spiralling ramp. The pit layout includes water management structures (including face seepage collection drains) and in-pit sumps in the floor of the pit to capture, hold and redirect seepage, runoff and incidental rainfall for reuse. The open pit has been developed through both surficial (soil/weathered rock) and hard rock materials.

The open pit mining method used is typical of hard rock open pit mining operations. Waste rock and ore is broken through a routine sequence of drilling and blasting. Broken rock is then loaded into off-road dump trucks using hydraulic excavators and hauled from the pit to the dedicated waste rock emplacements or, in the case of ore, directed to the primary crusher or stockpiles. Dewatering of the open pit is undertaken via a series of horizontal bores (drains) and pumps, which extract water for use in ore processing.

Over the next three years Open Pit mining activities are limited to E42.

Activities in year one (FY24) will include:

- Mining of surficial materials on the south-eastern corner of the pit.
- Mining of primary material from approximately -133AHD to -214AHD.
- Standard open-pit operational activities including but not limited to installation of temporary sumps, dewatering activities, installation of water management infrastructure and ground support.
- Haulage rates will be in the range of approximately 15-22Mt.

Activities in year two (FY25) will include:

- Mining of primary material from approximately -214AHD to -310AHD.

- Standard open-pit operational activities including but not limited to installation of temporary sumps, dewatering activities, installation of water management infrastructure and ground support.
- Haulage rates will be in the range of approximately 6-14Mt.

Activities in year three (FY26) will include:

- Mining of primary material from approximately -310AHD to -331AHD. Pit void maximum depth at approximately -331AHD.
- Standard open-pit operational activities including but not limited to installation of temporary sumps, dewatering activities, installation of water management infrastructure and ground support.
- Haulage rates will be in the range of approximately 2-6Mt.

Mining Operations - Underground

The Cowal Underground Project is accessed by a portal within the existing E42 open pit. The orebody is oriented sub-parallel with the western shore of Lake Cowal, commencing at a depth of approximately 80 metres below surface. The orebody is accessed via decline with ore and waste haulage by truck. Sub-levels are spaced at approximately 30m increments, from which production occurs.

During the term a total of six access points (including existing) will be mined. The access points will be established to the main decline for access, ore haulage, ventilation circuit, underground services, and emergency egress via lateral and vertical development.

Conventional underground development drill and blast methods will continue to be used to develop the lateral development. Vertical development is anticipated to be undertaken using drill and blast or mechanical excavation methods such as raisebore drilling and reaming. Production will be conducted through long hole open stoping with paste backfill.

Over the next three years, underground mining activities will consist of both development and production.

Activities in year one (FY24) will include:

- Development of decline tunnels to access the lateral extent of the orebody.
    - The decline will progressively be deepened to an expected depth of approximately -400AHD.
- Extension of primary ventilation system including horizontal and vertical development.
- Further development of tunnels for ore access, haulage, underground services, and emergency egress.
- Production activities in the south of the orebody progressing in a generally top-down manner, and haulage, will be of both waste and ore materials.
- Installation of underground services to support the operation including but not limited to:

- Electrical reticulation
- Vehicle servicing infrastructure
- Dewatering infrastructure
- Secondary ventilation system
- Communications
- Paste backfill system
- Compressed air system
- Mine water system

Activities in year two (FY25) will include:

- Further development of decline tunnels to access the lateral extent of the orebody.
  - The Southern decline will progressively be deepened to an expected depth of approximately -490AHD. The Northern decline will progressively be deepened to an expected depth of approximately -310AHD.
- Commencement of second decline from surface to provide additional underground access and ventilation.
- Extension of primary ventilation system including horizontal and vertical development.
- Further development of tunnels for ore access, haulage, underground services, and emergency egress.
- Production activities in the south of the orebody progressing in a generally top-down manner, and haulage, will be of both waste and ore materials.

Activities in year three (FY26) will include:

- Development of decline tunnels to access the lateral extent of the orebody.
  - The Northern decline will progressively be deepened to an expected depth of approximately -370AHD.
- Extension of primary ventilation system including horizontal and vertical development.
- Development of tunnels for ore access, haulage, underground services, and emergency egress.
- Production activities in both the south and north of the orebody progressing in a top-down manner, and haulage, will be of both waste and ore materials.

Waste Rock Emplacements

Waste rock emplacements on site include, the IWL, Northern Waste Rock Emplacement (NWRE), Southern Waste Rock Emplacement (SWRE) and Perimeter Waste Rock Emplacement (PWRE).

Northern Waste Rock Emplacement

The NWRE has been designed to contain most of the remaining waste rock to be generated at CGO. At its full extent, the NWRE final landform will have a roughly rectangular plan shape and will integrate with the IWL at its western extent. The current proposed maximum height is 308m AHD. The outer batters of the emplacement are designed to have a final profile with an overall 1(V):5(H) slope.

The NWRE is designed and built to meet the long-term goal of containing potentially saline seepage generated from waste rock emplacement areas during operation and post-closure. Construction involved surface preparation works to facilitate the direction of any permeating waters towards the open pit. The existing topography of the footprint has been altered by placing compacted oxide waste rock within the footprint. The resulting basement for the emplacement slopes towards the open pit and provides drainage control. Any waters permeating through the emplacement are expected to be intercepted by this layer and preferentially flow towards the open pit.

Southern Waste Rock Emplacement

The SWRE will be used for waste rock emplacement from underground and open pit sources as required. The emplacement will remain within the approved footprint and below the approved height of 283m AHD. Rehabilitation has been partially completed on the north-western face of the SWRE (Ecosystem and Land Use Establishment). The outer batters of the emplacement are designed to have a final profile with an overall 1(V):5(H) slope.

The SWRE is designed and built to meet the long-term goal of containing potentially saline seepage generated from waste rock emplacement areas during operation and post-closure. Construction involved surface preparation works to facilitate the direction of any permeating waters towards the open pit. The existing topography of the footprint has been altered by placing compacted oxide waste rock within the footprint. The resulting basement for the emplacement slopes towards the open pit and provides drainage control. Any waters permeating through the emplacement are expected to be intercepted by this layer and preferentially flow towards the open pit.

Perimeter Waste Rock Emplacement

The PWRE has been constructed to its final height of approximately 223m AHD and surrounds the pit to the north, east and south. During the term of the Forward Program, sections of the PWRE will be reformed to facilitate mining and construction activities.

The PWRE forms part of the series of embankments (i.e. Temporary Isolation Bund and Lake Protection Bund) between the open pit and Lake Cowal. The emplacement is located behind the Lake Protection Bund and has been constructed from oxide mine waste rock with the outer face constructed from low salinity soils. The emplacement elevation has been designed to reduce potential noise and light impacts of mining and processing on the surrounding environment.

The PWRE has been constructed in approximately 5m to 10m lifts (Plan 5B). The outer batter profiles are 1(V):5(H) with reverse graded berms installed at vertical height intervals of approximately 5m. Surface preparation works to facilitate drainage of any infiltrating waters towards the open pit have been constructed at a gradient of 1(V):200(H).

Emplacement of Waste Rock at IWL

Development of IWL Stage 3a basement (eastern side of the North TSF and north of the Stage 1 IWL) will be completed during early FY24. Over the next three years waste will be mined from both open pit and underground operations. Waste from the open pit will primarily be placed on the IWL during construction with the remainder being placed in the Northern and Southern Waste Rock Emplacements. Waste rock produced from the Cowal Underground Project will be contained within the NWRE and SWRE areas.

Activities in year one (FY24) will include:

- Open pit waste will preferentially be emplaced on the IWL.
    - Oversize and excess material not used for construction will be placed on the NWRE and SWRE.
- Underground waste will be placed on the NWRE and SWRE.
- The NWRE is at maximum height and footprint on the north-western edge. Emplacement will continue toward the east and west to raise the area from 258m AHD.
- The SWRE is at maximum footprint to the south and west. The emplacement will be extended toward the northeast from 212m AHD.
- Clay/transported materials will be stockpiled for use in construction and rehabilitation.

Activities in year two (FY25) will include:

- Open pit waste will preferentially be emplaced on the IWL.
    - Oversize and excess material not used for construction will be placed on the NWRE and SWRE.
- Underground waste will be emplaced preferentially on the SWRE.
    - Excess material not able to be placed on the SWRE will be placed on the NWRE.
- The NWRE is at maximum height and footprint on the north-western edge. Emplacement will continue toward the east and west to raise the area from 278m AHD.
- The SWRE is at maximum footprint to the south and west. The emplacement will be extended toward the northeast from 212m AHD toward the approved height of 283m AHD.
- Clay/transported materials will be stockpiled for use in construction and rehabilitation. Minimal movement of these materials is expected.

Activities in year three (FY26) will include:

- Transport of suitable waste from the NWRE to be emplaced on the IWL.
- Underground waste will be emplaced preferentially on the SWRE.
    - Excess material not able to be placed on the SWRE will be placed on the NWRE.
- The NWRE is at maximum height and footprint.
- The SWRE is at maximum footprint to the south and west. The emplacement will be extended toward the northeast from 212m AHD toward the approved height of 283m AHD.

- Clay/transported materials will be stockpiled for use in construction and rehabilitation. Minimal movement of these materials is expected.

Ore Processing and Tailings Management

Broken ore from the mine is either stockpiled or hauled to the primary crusher located in the processing plant area. Following crushing, ore is stored in an intermediate stockpile for the processing plant known as the Coarse Ore Stockpile (COS). The crushed ore is then conveyed to the grinding circuit which reduces the ore to a finely ground slurry. The processing plant currently processes a mixture of oxide and primary ore. After grinding, the mixed ore passes through a flotation circuit where the gold in sulphide ore is floated off as concentrate. This is then fine ground and transferred to a leaching circuit where cyanide is used to leach gold from the concentrate. The flotation circuit reduces the amount of mass required to be fine ground for efficient leaching by about 90% (and hence, greatly reduces power usage). The residual ore from the flotation circuit goes directly to the Float Tails Leach (FTL) circuit. A lesser concentration of cyanide is added to leach the residual gold from the ore through the FTL circuit. The gold extracted from the two cyanide leaching circuits is recovered and poured as gold bars or doré.

The finely ground rock residue left after the flotation and leaching processes (tailings) is treated to destroy cyanide to prescribed limits and then pumped to the IWL for disposal or the paste plant for reuse underground. The tailings after cyanide destruct is at slightly elevated pH of around 8 which provides some buffering capacity for any potential acid generation in the tailings. Further detail regarding the desliming and paste plant is provided in Section 2.1.2.2 above.

Over the next three years tailings will be placed in the IWL or disposed underground as paste backfill.

Activities in year one (FY24) will include:

- Deposition primarily into the eastern side of the IWL (Stage 3).
- Completion of IWL construction to 1235mRL.
- Paste backfill underground is expected to commence in H1 FY24.

Activities in year two (FY25) will include:

- Deposition into eastern and western sides of the IWL.
- No IWL clay construction during FY25.
- Paste backfill underground will continue to regularly fill voids created underground in the process of production.

Activities in year three (FY26) will include:

- Progressive lifting of IWL clay liner from 1235mRL to 1239mRL.
- Deposition into IWL between 1233mRL and 1239mRL.
- Paste backfill underground will continue to regularly fill voids created underground in the process of production.

Waste Disposal and Materials Handling Operations

Materials handling operations have been described above under the relevant Waste Rock Emplacement sections. Handling and disposal of all general and trackable waste streams are managed in partnership with a suitably qualified and licenced third-party waste contractor. Off-site landfills, recycling and treatment facilities are utilised by the CGO, with an on-site bioremediation facility available for the management of contaminated soils.

Table 2: Material production schedule during the next three years

MATERIAL	UNIT	YEAR 1 (FY24)	YEAR 2 (FY25)	YEAR 3 (FY26)
Stripped topsoil (if applicable)	(e.g. m^3)	0	0	0
Open Pit Rock/overburden	(Mt)	~5.9	~2.9	~0.9
Open Pit Ore	(Mt)	~12.4	~6.8	~2.6
Underground Rock/overburden	(Mt)	~0.7	~1.0	~0.6
Underground Ore	(Mt)	~1.0	[2]NA	[2]NA
Reject material	(Mt) Tailings	~8.68	~8.00	~8.10
[1]Product	(Au koz)	[1]320	[2]NA	[2]NA

[1]Evolution provided FY24 production guidance for Cowal of 320,000 ±5% ounces in the ASX releases titled "2023 Investor Day Presentation Session 1" released to the ASX on 05 June 2023. The release is available via this link: https://evolutionmining.com.au/wp-content/uploads/2023/06/2561166_2023-Investor-Day-Session-1.pdf

[2] Not available for public release

2.3 Three-year rehabilitation forecast

2.3.1 Rehabilitation planning, studies and stakeholder consultation schedule

Planning activities in year one (FY24) will include:

- Annual review (minimum) of the CGO rehabilitation risk assessment in line with current and proposed activities.
- Quarterly consultation with the Community Environmental Monitoring and Consultative Committee (CEMCC).
- Ongoing review of rehabilitation planning associated with the Feasibility Study and Environmental Impact Assessment process for the proposed Open Pit Continuation (OPC) project. Preliminary regulator consultation under the proposed OPC State Significant Development application process.
- Further specialist studies and modelling (as required) to support revised rehabilitation strategy under the OPC Project.
- Hydro Mulching along the western edge of the UCDS.
- Infill Planting on northern face of the SWRE.

Planning activities in year two (FY25) will include:

- Annual review (minimum) of the CGO rehabilitation risk assessment.
- Quarterly consultation with the CEMCC.
- Ongoing stakeholder consultation for the proposed OPC project.
- Detailed regulator consultation under the proposed OPC project State Significant Development assessment process.
- Further specialist studies and modelling (as required) to support revised rehabilitation strategy under the OPC project.
- Environmental management system / Rehabilitation planning overhaul pending OPC determination.

Planning activities in year three (FY26) will include:

- Annual review (minimum) of the CGO rehabilitation risk assessment.
- Quarterly consultation with the CEMCC.
- Ongoing stakeholder consultation for the proposed OPC project.
- Further specialist studies and modelling (as required) to support revised rehabilitation strategy under the OPC project.

2.3.2 Rehabilitation maintenance and corrective actions

Rehabilitation at the CGO will continue to be an iterative process, whereby the results of rehabilitation trials and annual monitoring will continue to inform and refine the rehabilitation maintenance programme in consultation with relevant regulatory agencies. Areas of poor

vegetation establishment on the northern face of the SWRE have been identified for reseeding/revegetation during FY24. Stockpile maintenance and amelioration (gypsum treatment and/or seeding) will be completed on an ongoing basis throughout the Forward Program period.

2.3.3 Rehabilitation schedule

Rehabilitation activities in year one (FY24) will include (Plan 2A):

- Shaping and preparation of lower IWL batters for rehabilitation. Initial shaping campaign to focus on south-western boundaries (land prepared for rehabilitation).
- Reseeding and/or revegetation on northern face of SWRE.
- Ongoing rehabilitation maintenance as required.

Rehabilitation activities in year two (FY25) will include (Plan 2B):

- Final landform preparation and topsoil spreading along the south-western IWL lower batters (land prepared for rehabilitation).
- Ongoing rehabilitation maintenance as required.

Rehabilitation activities in year three (FY26) will include (Plan 2C):

- Reseeding and/or revegetation along the south-western IWL lower batters.
- Ongoing rehabilitation maintenance as required.

2.3.4 Subsidence remediation for underground operations

An assessment of surface deformation due to underground mining and continued mining by Beck Engineering (2020) indicates that surface displacement is potentially modelled to be around 10–15 mm of subsidence and around 25 mm of upsidence. Upsidence is where the land surface rises slightly due to elastic deformation effects from removing large volumes of material from the pit. The movement is modelled inwards toward the pit and upwards. These potential movements are consistent with natural ranges of shrink and swell during wetting and drying cycles.

The assessment also identified stoping on the upper levels of the underground mine near major faults could result in potential unravelling and chimney type failure to the surface if appropriate controls were not in place. CGO modified the underground mine design to not mine any stopes above 80m AHD. All stopes will be filled with cemented pastes made from CGO tailings, using fully supported overhead drives.

As per the requirements of SSD 10367, a Subsidence Monitoring Program has been implemented and a specialist review of the paste fill material performance has been conducted for the underground operation.

2.3.5 Rehabilitation research and trials

Numerous rehabilitation investigations and trials have been undertaken since construction of the CGO commenced in 2005 to determine the most appropriate rehabilitation methods, rehabilitation

materials and revegetation species likely to achieve the rehabilitation objectives for the CGO's final landforms. The results of rehabilitation studies and trials undertaken to date have informed the rehabilitation objectives and completion criteria for the CGO. Rehabilitation trial designs and annual rehabilitation monitoring reports are continually reviewed by the CGO Sustainability Department. Trial designs and/or rehabilitation methods and practices at the CGO are modified where necessary to incorporate relevant findings and recommendations.

Rehabilitation at the CGO will continue to be an iterative process, whereby the results of rehabilitation trials and annual monitoring would continue to be used to inform and refine the rehabilitation programme in consultation with relevant regulatory agencies. During the Forward Program period, rehabilitation capping trials will be conducted over the original Tailings Storage Facilities, which are no longer used for deposition and are in the process of being encompassed by the IWL.

Rehabilitation investigations and trials that have been undertaken to date have focused on the following key aspects relevant to the CGO.

Rehabilitation Media

- Investigations and trials assessing the effectiveness of different surface cover treatments (e.g. rock mulch, native pasture hay, woodchips) and different substrate types (e.g. oxide waste, subsoil and topsoil) in stabilising landform slopes and providing effective vegetation growth medium.

- Investigation into the geochemical suitability of rock armour material for the outer batters/embankments of mine landforms.

Water Management and Erosion Control on Landform Slopes

- Investigation into water management and erosion control concepts including hydrological and hydraulic modelling of different CGO landform slope designs (i.e. single slope compared with tiered slope) and different surface treatments (i.e. rock mulch or without rock mulch surface treatments) under various rainfall events.

Material Characterisation and Amelioration

- Investigation into the chemical and physical properties of soil resources and the optimum rates of gypsum application to improve suitability for plant growth and use on rehabilitation areas.

Revegetation

- Ongoing trials and research to determine the most appropriate revegetation species suited to substrate materials of the CGO's final landforms.

2.4 Plan 2 – Mining and rehabilitation three-year forecast

2.4.1 Submission of Plan 2 spatial data to the mine rehabilitation portal

All spatial theme data listed in Table 3 below has been submitted to the NSW Resources Regulator through the mine rehabilitation portal prior to submission of the Annual Rehabilitation Report and Forward Program to support Plan 2 – Mining and Rehabilitation Three-Year Forecast (Plan 2). Spatial data was submitted on 29 August 2023.

Table 3: Spatial data themes submitted to support Plan 2

MINE REHABILITATION PORTAL SPATIAL DATA THEMES
Forecast Data – Year 1
Forecast Data – Year 2
Forecast Data – Year 3

2.4.2 Submission of Plan 2 electronic copy (PDF)

The following section includes electronic copies (PDF) of Plans 2A, 2B and 2C, which have been prepared using the spatial data submitted to the mine rehabilitation portal in accordance with Section 2.3.1.

- Plan 2A Mining and Rehabilitation – Year 1 (ID: 6012)
- Plan 2B Mining and Rehabilitation – Year 2 (ID: 6013)
- Plan 2C Mining and Rehabilitation – Year 3 (ID: 6014)

COWAL GOLD OPERATIONS

Plan 2A:
Mining and Rehabilitation Year 1 (2024)

Submission ID: 6012

29/08/2023

Forecast_Data_Year_1

- Forecast Disturbance
- Forecast Land Prepared for Rehabilitation
- Project Approval Boundary
- Current Authorisations

0 0.5 1 km

Evolution MINING

COWAL GOLD OPERATIONS

Plan 2B:
Mining and Rehabilitation Year 2 (2025)

Submission ID: 6013

29/08/2023

Forcast_Data_Year_2

- Forecast Disturbance
- Forecast Land Prepared for Rehabilitation
- Project Approval Boundary
- Current Authorisations

0 0.5 1 km

Evolution MINING

COWAL GOLD OPERATIONS

Plan 2C:
Mining and Rehabilitation Year 3 (2026)

Submission ID: 6014

29/08/2023

Forecast_Data_Year_3

- Forecast Disturbance
- Forecast Land Prepared for Rehabilitation
- Project Approval Boundary
- Current Authorisations

0 0.5 1 km

Evolution MINING

2.5 Progressive mining and rehabilitation statistics

2.5.1 Three-year forecast cumulative disturbance and rehabilitation progression

Based on the information presented in Plan 2, this section provides a summary of the forecast cumulative disturbance and rehabilitation progression during the next three years in Table 4. Table 4 will be populated using data submitted to the NSW Resources Regulator's mine rehabilitation portal.

Table 4: Predicted cumulative disturbance and rehabilitation progression during the term

	FY24	FY25	FY26
TOTAL DISTURBANCE FOOTPRINT – SURFACE DISTURBANCE (A1) (hectares)	1601.5	1610.22	1622.98
TOTAL ACTIVE DISTURBANCE (B) (hectares)	1409.82	1403.19	1400.61
TOTAL NEW AREA OF LAND PROPOSED FOR ACTIVE REHABILITATION (P) (hectares)	15.34	30.69	46.03

2.5.2 Rehabilitation key performance indicators

At CGO, a range of Key Performance Indicators (KPI's) have been previously determined and are quantified by data obtained from replicated reference sites, which are representative of the agreed final land use. All ecological performance indicators are quantified by range values measured annually from these reference sites which form *upper* and *lower* KPI targets. The same ecological performance indicators are measured in the rehabilitation sites, and these should equal or exceed these values or demonstrate an increasing trend.

However, based on the proposed mining and rehabilitation schedules included in Table 4, this section identifies progressive rehabilitation key performance indicators outlined in Table 5 using data generated using the mine rehabilitation portal and data submitted for Plan 2.

Table 5: Progressive rehabilitation key performance indicators during the next three-year term

	1	2	3
TOTAL NEW ACTIVE DISTURBANCE AREA DURING REPORTING PERIOD (O) (hectares)	3.8	8.72	12.76
AREA OF LAND PROPOSED FOR ACTIVE REHABILITATION DURING REPORTING PERIOD (P) (hectares)	15.34	15.34	15.34
ANNUAL REHABILITATION TO DISTURBANCE RATIO (Q)	4.03	1.76	1.2

2.6 Rehabilitation Cost Estimate

This section includes a Rehabilitation Cost Estimate (RCE) prepared in accordance with the NSW Resources Regulator's Rehabilitation Cost Estimation Tool. The estimated closure costs were calculated based on the maximum disturbance within the nominated term (FY24). Evolution engaged Xenith Consulting Pty Ltd to conduct a review and update of the Cowal Gold Operations (CGO) RCE. This review utilised the updated RCE tool, released by the Department of Regional New South Wales (NSW) Resources Regulator (RR), including added granularity and recent inputs from Evolution's internal review process.

A review of cost modelling, modifications and rates has been undertaken to reflect an update of the GIS data consistent with changes to site infrastructure since the 2022 Rehabilitation Cost Estimation (RCE), developed for CGO by Klohn Crippen Berger Australia Pty Ltd (KCB), in the RCE tool. The 2022 RCE was developed to be compliant with NSW regulations to update the CGO rehabilitation security bond considering the approved Modifications 16 (MOD16) to CGO's Development Consent and State significant development 10367 (SSD 10367).

Xenith reviewed the CGO 2022 RCE report, prepared by KCB, which provided an RCE to reflect the maximum approval footprint. CGO has since updated the RCE context to include only the next 12 months of disturbance and, therefore, some assumptions and GIS inputs required updating from the previous proposed RCE.

Where relevant, the CGO 2022 RCE report, including its rates and assumptions, was used to update the RCE. The 2022 RCE included extensive references to the 2021 cost estimate, which were largely removed to reflect current costings and site operations. Xenith Consulting applied additional provisions or contingencies where potential changes based on modifications were identified. Xenith Consulting used cost estimation principles accepted within the industry to undertake this review and update of the RCE in consideration of the RR requirements and expectations.

2.6.1 Overview of Changes

The 2023 CGO RCE included the approval of MOD16, comprising:

- An extension of the life of mining operations from 2032 to 2040;
- Transport of ore by truck from the underground mine to the run-of-mine (ROM) stockpile, a primary crusher and/or temporary stockpiles;
- Modification of the existing ore processing facility to accommodate ore from the underground mine;
- Transport and emplacement of waste rock from the underground mine to existing emplacement areas;
- An increase in the final height of the integrated waste landform; and
- Minor upgrades to the existing mine infrastructure area.

For this RCE, the MOD14 and MOD15 aspects were included; however, only the MOD16 aspects based on the period covered by this RCE (disturbance planned within the next 12 months) have been included. The changes from the 2022 RCE (supported by GIS review by site) include:

- Inclusion of detailed infrastructure breakdown due to decoupling from 2021 cost estimate.
- Addition of new underground associated buildings and concreted areas including workshops, offices and paste plant.
- Removal of inappropriate capping rate from overburden and tailings domains.
- Changes in rehabilitation present on SWRE
- Reallocation of Lake Protection / Temporary Isolation Bund to PWRE domain
- Reverting to default post closure monitoring provision from 6% to 10%.

2.6.2 Cost Summary

The previous closure cost for the CGO, as at September 2017, was $64,504,167. The 2017 closure cost estimate reflects the Mine Life Modification project (MOD13). Based on a review of the CGO RCE using the current NSW RR tool, the rehabilitation liability for the site is estimated at **$127.9 M**, an increase of approximately $62.4 M. Variance from the approved RCE is largely due to:

- Inclusion of MOD14 changes including:
    - IWL

  - Additional stockpiles
  - Slight increase in WRE footprints
  - Underground services
- Inclusion of MOD16 changes including:
  - Underground infrastructure e.g. Paste plant.
  - Underground development of portals and adits.
- Addition of rehabilitation maintenance for site disturbance and rehabilitation.
- Updates of disturbance for current and planned infrastructure, UCDS development, dams, etc.
- Minor changes to rates/costings based on the updated RCE Tool.

GLOSSARY

TERM	DEFINITION
Active	In the context of rehabilitation, land associated with mining domains is considered 'active' for the period following disturbance until the commencement of rehabilitation.
Active mining phase of rehabilitation	In the context of rehabilitation, the active mining phase of rehabilitation constitutes the rehabilitation activities undertaken during mining operations such as land clearing, salvaging and managing soil resources, salvaging habitat resources, and native seed collection. This phase also includes management actions taken during operations to manage risks to rehabilitation and enhance rehabilitation outcomes such as selective handling of waste rock and management of tailings emplacements.
Analogue site	An area of land and/or water that is a 'reference site' that represents an example of the defining values and characteristics (such as vegetation composition and structure or agricultural productivity) of the final land use. An analogue site is a selected location surrounding or within a proposed/existing mine site. The location is usually an undisturbed area or a self-sustaining vegetation community that demonstrates the existing environment without any impact of disturbance (i.e. acts as a baseline for the surrounding undisturbed environment). Characteristics of analogue sites can be assessed to develop the rehabilitation objectives and rehabilitation completion criteria for final land use domains.
Annual rehabilitation report	As defined in the Mining Regulation 2016.
Annual reporting period	As defined in the Mining Regulation 2016.
Closure	A whole-of-mine-life process, which typically culminates in the relinquishment of the mining lease. It includes decommissioning and rehabilitation to achieve the approved final land use(s).
Decommissioning	The process of removing mining infrastructure and removing contaminants and hazardous materials.
Decommissioning phase of rehabilitation	Activities associated with the removal of mining infrastructure and removal and/or remediation of contaminants and hazardous materials. In the context of the rehabilitation management plan (for large mines only) this phase of rehabilitation may also include studies and assessments associated with decommissioning and demolition of infrastructure or works carried out to make safe or 'fit for purpose' built infrastructure to be retained for future use(s) following lease relinquishment.

Department	Department of Regional NSW.
Disturbance	See Surface Disturbance.
Disturbance area	An area that has been disturbed and that requires rehabilitation. This may include areas such as exploration areas, stripped areas ahead of mining, infrastructure areas, water management infrastructure, sewage treatment facilities, topsoil stockpile areas, access tracks and haul roads, active mining areas, waste emplacements (active/unshaped/in or out-of-pit), tailings dams (active/unshaped/uncapped), and areas requiring rehabilitation that are temporarily stabilised (e.g. managed to minimise dust generation and/or erosion).
Domain	An area (or areas) of the land that has been disturbed by mining and has a specific operational use (mining domain) or specific final land use (final land use domain). Land within a domain typically has similar geochemical and/or geophysical characteristics and therefore requires specific rehabilitation activities to achieve the associated final land use.
Ecosystem and land use development	This phase of rehabilitation consists of the activities to manage maturing rehabilitation areas on a trajectory to achieving the approved or, if not yet approved, the proposed: ✓ rehabilitation objectives, and ✓ rehabilitation completion criteria, and ✓ for large mines – final landform and rehabilitation plan For vegetated land uses, this phase may include processes to develop characteristics of functional self-sustaining ecosystems, such as nutrient recycling, vegetation flowering and reproduction, increasing habitat complexity, and the development of a productive, self-sustaining soil profile. This phase of rehabilitation may include specific vegetation management strategies and maintenance such as tree thinning, supplementary plantings and weed management.
Ecosystem and land use establishment	This phase of rehabilitation consists of the processes to establish the approved final land use following construction of the final landform (as per the approved final landform and rehabilitation plan for large mines). For vegetated land uses, this rehabilitation phase includes establishing the desired vegetation community and implementing

	land management activities such as weed control. This phase of rehabilitation may also include habitat augmentation such as installation of nest boxes.
Exploration	Has the same meaning as that term under the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007.
Final landform and rehabilitation plan	As defined in the Mining Regulation 2016.
Final land use	As defined in the Mining Regulation 2016.
Final land use domain	A land management unit with a final land use. A mining lease may have one final land use (e.g. returning the entire mining lease to native vegetation) or several final land use units (e.g. a mix of pasture areas and native ecosystems). Each final land use unit represents a separate final land use domain.
Form and way	Means the form and way approved by the Secretary. Approved form and way documents are available on the Department's website.
Forward Program	As defined in the Mining Regulation 2016.
Growth medium development	This phase of rehabilitation consists of activities required to establish the physical, chemical and biological components of the substrate required to establish the desired vegetation community (including short-lived pioneer species) to ensure achievement of the approved or, if not yet approved, the proposed: ✓ rehabilitation objectives ✓ rehabilitation completion criteria ✓ for large mines – final landform and rehabilitation plan. This phase may include spreading the prepared landform with topsoil and/or subsoil and/or soil substitutes, applying soil ameliorants to enhance the physical, chemical and biological characteristics of the growth media, and actions to minimise loss of growth media due to erosion.
Habitat	Has the same meaning as that term under the Biodiversity Conservation Act 2016 and the Fisheries Management Act 1994 (as relevant).
Indicator	An attribute of the biophysical environment (e.g. pH, topsoil depth, biomass) that can be used to approximate the progression of a biophysical process. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation

	towards a desired completion criterion (defined end point). It may be aligned to an established protocol and used to evaluate changes in a system.
Land	As defined in the Mining Act 1992.
Landform establishment	This phase of rehabilitation consists of the processes and activities required to construct the approved final landform (as per the development consent and, for large mines, the approved final landform and rehabilitation plan). In addition to profiling the surface of rehabilitation areas to the approved final landform profile, this phase may include works to construct surface water drainage features, encapsulate problematic materials such as tailings, and prepare a substrate with the desired physical and chemical characteristics (e.g. rock raking or ameliorating sodic materials).
Large mine	As defined in the Mining Regulation 2016.
Lease holder	The holder of a mining lease.
Life of mine	The timeframe of how long a mine is approved to mine, from commencement to closure.
Mine rehabilitation portal	Means the NSW Resources Regulator's online portal that lease holders must use (via a registered account) to: ✓ upload rehabilitation geographical information system (GIS) spatial data ✓ develop rehabilitation GIS spatial data (using online tracing functions) ✓ generate rehabilitation plans and rehabilitation statistics using the map viewer and Rehabilitation Key Performance Indicator functionalities. Data submitted to the mine rehabilitation portal is collated in a centralised geodatabase for use by the NSW Resources Regulator to regulate rehabilitation performance of lease holders.
Mining area	As defined in the Mining Act 1992.
Mining domain	A land management unit with a discrete operational function (e.g. overburden emplacement), and therefore similar geophysical characteristics, that will require specific rehabilitation treatments to achieve the final land use(s).

Mining lease	As defined in the Mining Act 1992.
Native vegetation	Has the same meaning as that term under the Local Land Services Act 2013.
Overburden	Material overlying coal or a mineral deposit.
Performance indicator	An attribute of the biophysical environment (e.g. pH, slope, topsoil depth, biomass) that can be used to demonstrate achievement of a rehabilitation objective. It can be measured and audited to demonstrate (and track) the progress of an aspect of rehabilitation towards a desired completion criterion, that is, a defined end point. It may be aligned to an established protocol and used to evaluate changes in a system.
Phases of rehabilitation	The stages and sequences of actions required to rehabilitate disturbed land to achieve the final land use. The phases of rehabilitation are: ✓ active mining ✓ decommissioning ✓ landform establishment ✓ growth medium development ✓ ecosystem and land use establishment ✓ ecosystem and land use development ✓ rehabilitation completion (sign-off).
Progressive rehabilitation	The progress of rehabilitation towards achieving the approved or, if not yet approved, the proposed: ✓ rehabilitation objectives ✓ rehabilitation completion criteria ✓ for large mines – final landform and rehabilitation plan. This may be described in terms of domains, phases, performance indicators and rehabilitation completion criteria.
Rehabilitation	As defined in the Mining Act 1992.
Rehabilitation completion	The final phase of rehabilitation when a rehabilitation area has achieved the final land use for the mining area: ✓ as stated in the approved rehabilitation objectives and the approved rehabilitation completion criteria

	✓ for large mines – as spatially depicted in the approved final landform and rehabilitation plan. Rehabilitation areas may be classified as complete when the NSW Resources Regulator has determined, in writing, that rehabilitation has achieved the final land use following submission of the relevant application by the lease holder.
Rehabilitation completion criteria	Rehabilitation completion criteria set out the criteria the achievement of which will demonstrate the achievement of the rehabilitation objectives.
Rehabilitation cost estimate	As defined in the Mining Regulation 2016.
Rehabilitation management plan	As defined in the Mining Regulation 2016.
Rehabilitation objectives	Means the rehabilitation objectives required to achieve the final land use for the mining area.
Rehabilitation outcomes	Means the final land use for the mining area as stated in the approved rehabilitation objectives, the approved rehabilitation completion criteria and (for large mines) the approved final landform and rehabilitation plan.
Rehabilitation risk assessment	As defined in the Mining Regulation 2016.
Rehabilitation schedule	The defined timeframes for progressive rehabilitation set out in the Forward Program.
Relevant stakeholders	Means any persons or bodies who may be affected by the mining operations, including rehabilitation, carried out on the lease land, and includes: a. the relevant development consent authority b. the local council c. the relevant landholder(s) d. community consultative committee (if required under the development consent) or equivalent consultative group e. affected landholder(s) f. government agencies relevant to the final land use g. affected infrastructure authorities (electricity, telecommunications, water, pipeline, road, rail authorities)

	h. local Aboriginal communities i. any other person or body determined by the Minister to be a relevant stakeholder in relation to a mining lease.
Risk	The effect of uncertainty on objectives. It is measured in terms of consequences and likelihood (AS/NZS ISO 31000:2018).
Secretary	The Secretary of the Department.
Security deposit	An amount that a mining lease holder is required to provide and maintain under a mining lease condition, to secure funding for the fulfilment of obligations under the lease (including obligations that may arise in the future).
Surface disturbance	Includes activities that disturb the surface of the mining area, including mining operations, ancillary mining activities and exploration.
Tailings	A combination of the fine-grained (typically silt-sized, in the range from 0.001 to 0.6 mm) solid materials remaining after the recoverable metals and minerals have been extracted from mined ore, together with the water used in the recovery process.
Waste	Has the same meaning as that term under the Protection of the Environment Operations Act 1997.